



# Maryland

## Department of the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

December 5, 2019

Mr. Paul N. De Santis  
Chief of Legal & Regulatory Affairs  
Baltimore City, Department of Public Works  
Abel Wolman Municipal Building, 6<sup>th</sup> Floor  
Baltimore, Maryland 21202

Re: Request for Permit Modification of the Back River Wastewater Treatment Plant (WWTP)  
Discharge Permit, State No. 15-DP-0581, NPDES No. MD0021555

Dear Mr. De Santis:

In response to your letter dated November 27, 2019 requesting elimination of the footnote 8, as it applies to discharges from Outfall 002A, the Maryland Department of the Environment has revised footnote 8 on page 9 of 37 of the discharge permit to clarify that the dechlorination requirement is not applicable to effluent sent through Outfall 002A to be used for reclamation usage at Trade Point Atlantic.

Modified copy of the Page 9 of the discharge permit is attached with this letter. The effective date of this modification is also indicated on enclosed cover Page 1 of the discharge permit.

If you have any questions concerning this modification, please contact me at (410)-537-3363 or Mahendra Chawla of my staff at (410) 537-3679.

Sincerely,

A handwritten signature in blue ink, appearing to read "Yen-Der Cheng".

Yen-Der Cheng, Chief  
Municipal NPDES Permits Division  
Water and Science Administration  
Maryland Department of the Environment

cc: Sharon Talley, MDE  
Matthew Zimmerman, MDE  
Yosef Kebede, DPW  
Michael Gallagher, DPW



**Maryland**  
Department of  
the Environment

Larry Hogan, Governor  
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APR 11 2018

**CERTIFIED MAIL**

Mr. Marshall Phillips, Plant Manager  
Wastewater Facilities Division  
City of Baltimore, Department of Public Works  
Bureau of Water and Wastewater  
Back River Wastewater Treatment Plant  
8201 Eastern Boulevard  
Baltimore, Maryland 21224

RE: Discharge Permit for the Back River WWTP  
State Discharge Permit 15-DP-0581, NPDES Permit MD0021555

Dear Mr. Phillips:

Enclosed is the above discharge permit with the effective date indicated on the cover page. The permittee is responsible for complying with all permit conditions. You are therefore advised to read the permit carefully and become thoroughly familiar with the requirements in order to maintain compliance with the permit.

The Enhanced Nutrient Removal (ENR) upgrade schedule listed in the permit includes deadlines for the construction completion and the corresponding effective date of the nutrients limits. The annual maximum loading rate limits for Total Nitrogen, Total Phosphorus and Total Suspended Solids (TSS) are included in the permit. Attached please find a copy of blank and sample forms for your use to calculate monthly load, year-to-date cumulative load and annual maximum load for these parameters. At the end of each calendar year, the permittee will be required to fill out and submit this form along with the Discharge Monitoring Report (DMR) for the month of December. You may contact the Project Manager to obtain this form in an electronic version (EXCEL SPREADSHEET).

Your facility has been approved by MDE to electronically submit Discharge Monitoring Report (DMR) through NetDMR. Therefore you are required to submit monthly DMRs by the 28<sup>th</sup> of the following month and all other documents as listed in the discharge permit electronically through NetDMR. Should you encounter problems in electronic submission for any month, please consult the MDE's Compliance Program by calling at (410) 537-3510 to avoid missing the deadline for submission of the above stated documents.

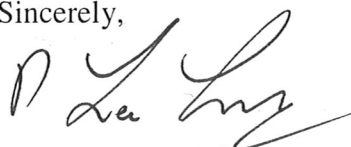
Mr. Marshall Phillips, Plant Manager  
Page 2

You will also find enclosed a copy of the Federal Register published on August 28, 2017 with final rule to update the Code of Federal Regulations (CFR), Title 40, Part 136 - "Guidelines Establishing Test Procedures for Analysis of Pollutants" which is in effect from September 27, 2017. For future reference, please be advised to visit the U.S Government Publishing Office (USGPO) website ([http://bit.ly/40CFR\\_Part136](http://bit.ly/40CFR_Part136), this link is case-sensitive) regularly to obtain updated guidelines. Unless otherwise specified, the most updated guidelines in 40 CFR Part 136 are required to be used for the analyses of pollutants specified in this permit.

In addition, we have also enclosed a copy of the table of the Minimum Monitoring Requirements, a copy of Department's "Toxic Pollutant Monitoring Protocol and Reporting Requirements for Toxic Chemical Testing Analytical Data (amended on 05/18/2011)" a copy of Effluent Biototoxicity Testing Protocol for Industrial and Municipal Effluents, and a copy of the WWTP Effluent Toxic Chemical Monitoring Data Transmittal Cover Sheet.

If you have any questions, please contact Mahendra Chawla, Project Manager, Surface Discharge Permits Division, at (410) 537-3679.

Sincerely,



D. Lee Currey, Director  
Water and Science Administration

Enclosures

cc: Mr. Mark Smith, U.S. Environmental Protection Agency (through electronic copy)  
Ms. Leana S. Wen, Commissioner, Baltimore City Health Department, 1001 E. Fayette Street, Baltimore, Maryland 21202  
Compliance Program's Central Division Chief  
Ms. Chantelle Watkins (Permit cover page only)  
Mr. Bill Lee (through electronic copy)  
Mr. Matt Rowe, WSA  
Mr. Dennis Rasmussen





## DISCHARGE PERMIT

<b>NPDES Discharge Permit Number:</b> MD0021555	<b>State Discharge Permit Number:</b> 15-DP-0581A
<b>Effective Date:</b> 05/01/2018	<b>Expiration Date:</b> 04/30/2023
<b>Modification Date:</b> 01/01/2020	<b>Reapplication Due Date:</b> 10/31/2021

Pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, and regulations promulgated thereunder, and the provisions of the Clean Water Act, 33 U.S.C. Section 1251 et seq., and implementing regulations 40 CFR Parts 122, 123, 124 and 125, the Department of the Environment hereby establishes conditions and requirements pertinent to the wastewater treatment plant and collection system and authorizes:

Mayor and City Council of Baltimore  
City Hall, 100 North Holiday Street  
Baltimore, Maryland 21202

**TO DISCHARGE FROM:** Back River Wastewater Treatment Plant

**LOCATED AT:** 8201 Eastern Boulevard, Baltimore County  
Baltimore, Maryland 21224

**THROUGH OUTFALL:** 001A -- Facility Effluent to Back River  
002A -- Facility Effluent discharge to High Head Lake at the Sparrows Point, Trade Point Property, and from there, is pumped to the existing outfalls to Bear Creek

**TO:** the Back River and Baltimore Harbor, designated as Use II waters protected for Estuarine and Marine Aquatic Life; in accordance with the following special and general conditions and a map incorporated herein and made a part hereof.



## I. DEFINITIONS

- A. "Ambient temperature" of the effluent receiving stream means the water temperature that is not impacted by a point source discharge, and it shall be measured in areas of the stream representative of typical or average conditions of the stream segment in question.
- B. "Bypass" means the intentional diversion of pollutants from any portion of a treatment or collection facility.
- C. "BOD<sub>5</sub> (Biochemical Oxygen Demand)" means the amount of oxygen consumed in a standard BOD<sub>5</sub> test without the use of a nitrification inhibitor at 20 degree centigrade on an unfiltered sample.
- D. "Clean Water Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251 et seq.
- E. "CFR" means the Code of Federal Regulations.
- F. "COMAR" means the Code of Maryland Regulations.
- G. "Department" means the Maryland Department of the Environment (MDE).
- H. Discharge Limits
1. "Daily *maximum* (or *minimum*)" limitation means the *highest* (or *lowest*) allowable the daily averages in a calendar month. The daily discharge expressed as concentration (in mg/l) shall be calculated by dividing total of measurement readings by number of sample collected during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge expressed as loading rate (in pounds/day) is calculated by using this formula {daily average concentration (mg/l) x the same day total flow (in million gallons) x 8.34}.
  2. "Weekly average (*maximum* or *minimum*)" limitation means the *highest* or *lowest* allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. Each of the following 7-day periods is defined as a calendar week: Week 1 is Days 1 - 7 of the month; Week 2 is Days 8 - 14; Week 3 is Days 15 - 21; and Week 4 is Days 22 - 28. *For weekly average maximum*, if the "daily discharge" on days 29, 30 or 31 exceeds the "weekly average" discharge limitation, MDE may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28. *For weekly average minimum*, if the "daily discharge" on days 29, 30 or 31 is lower than the "weekly average" discharge limitation, MDE may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28.

## I. DEFINITIONS

3. “Monthly average *maximum* (or *minimum*)” limitation means the *highest* (or *lowest*) allowable monthly average concentration or waste load of a parameter over a calendar month. The monthly average is calculated as the sum of all daily discharges for a parameter sampled and/or measured in that calendar month divided by the number of days on which monitoring was performed.
4. “Minimum or maximum” limit means the lowest or highest allowable value measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
5. “Monthly loading rate (in pounds/month)” means the total load of a parameter calculated for that calendar month. It is calculated using this formula  $\{(\text{monthly average concentration in mg/l}) \times (\text{Total monthly flow in Million Gallons}) \times 8.34\}$ .
6. “Year-to-date cumulative load (pounds)” value means cumulative load of a pollutant in the effluent through each reporting month in a calendar year. It is calculated as a sum of the individual total monthly loads from January through the reporting month in a calendar year.
7. “Annual Maximum Loading Rate (in pounds/year)” limit means the maximum load allowed for a pollutant in the effluent to be discharged in a calendar year. The Year-to-date cumulative load (as defined above in Definition I.H.6) shall be used to determine the compliance status of this requirement.
8. “Monthly log mean (Monthly geometric mean)” limit means the highest allowable value calculated as the logarithmic or geometric mean of all samples taken in the calendar month. The geometric mean is the antilogarithm of the mean of the logarithms.

### I. Discharge Monitoring

1. “Composite sample” means a combination of individual samples obtained at hourly or smaller intervals over a time period. Either the volume of each individual sample is proportional to discharge flow rates or the sampling interval (for constant volume samples) is proportional to the flow rates over the time period used to produce the composite.
2. “Grab sample” means an individual sample collected over a period of time not exceeding 15 minutes.
3. “Estimated flow” value means a calculated volume or discharge rate which is based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters, and batch discharge volumes.

**I. DEFINITIONS**

4. "Measured flow" value means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.
  5. "Recorded flow" means any method of providing a permanent, continuous record of flow including, but not limited to, circular and strip charts.
  6. "Monthly average flow" means the total flow for a calendar month divided by the number of days in the same month.
- J. "i-s (immersion stabilization)" means a calibrated device immersed in the effluent or stream, as applicable, until the temperature reading is stabilized.
- K. "NetDMR" means a nationally-available electronic reporting tool, initially designed by states and later adapted for national use by EPA, which can be used by NPDES-regulated facilities to submit discharge monitoring reports (DMRs) electronically to EPA through a secure Internet application over the National Environmental Information Exchange Network (NEIEN). EPA can then share this information with authorized states, tribes, and territories.
- L. "NPDES (National Pollutant Discharge Elimination System)" means the national system for issuing permits as designated by the Clean Water Act.
- M. "Nondetectable Level" for total residual chlorine means a residual concentration of less than 0.10 mg/l as determined using either the DPD titrimetric or chlorimetric method or an alternative method approved by the Department.
- N. "Outfall" means the location where the effluent is discharged into the receiving waters.
- O. "Overflow" means any loss of wastewater or discharge from a sanitary sewer system, combined sewer system or wastewater treatment plant bypass (as defined in I.B) which results in the direct or potential discharge of raw, partially treated wastewater into the waters of the State.
- P. "Permittee" means an individual or organization holding the discharge permit issued by the Department.
- Q. "POTW" means a publicly owned treatment works.
- R. "Sampling Point" means the effluent sampling location in the outfall line(s) downstream from the last addition point or as otherwise specified.
- S. "Sanitary Sewer Overflow (SSO)" means a discharge of untreated or partially treated sewage from a separate sewer system before the sanitary wastewater reaches the headworks of a wastewater treatment facility, pursuant to COMAR 26.08.10.01.



## I. DEFINITIONS

- T. "Significant Industrial User (SIU)" is defined as any industrial user (IU) that:
1. is subject to national categorical standards; and
  2. any other IU that:
    - a. discharges an average of 25,000 gallons per day or more of process wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater); or
    - b. contributes a process wastestream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW; or
    - c. is designated as such by the POTW on the basis that the IU has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement; or
    - d. is found by the POTW, the Department, or the Environmental Protection Agency (EPA) to have significant impact either individually or in combination with other contributing industries to the POTW, on the quality of the sludge, the POTW's effluent quality, or air emissions generated by the system.
- U. "TKN (Total Kjeldahl Nitrogen)" means organic nitrogen plus ammonia nitrogen.
- V. "TSS (Total Suspended Solids)" means the residue retained on the filter by an analysis done in accordance with Standard Methods or other approved methods.
- W. "Upset" means the exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

## II. SPECIAL CONDITIONS

### A.1 Effluent Limitations, Outfall 001A <sup>(1)(2)(3)</sup>

The quality of the effluent discharged by the facility at a discharge point location- 001A shall be limited at all times as shown below:

<u>Effluent Characteristics</u>	<u>Maximum Effluent Limits</u>					
	<u>Monthly Average Loading Rate, Pounds/day</u>	<u>Weekly Average Loading Rate, Pounds/day</u>	<u>Daily Average Loading Rate, Pounds/day</u>	<u>Monthly Average Concentration, mg/l</u>	<u>Weekly Average Concentration, mg/l</u>	<u>Daily Average Concentration, mg/l</u>
BOD <sub>5</sub>	11,000	16,000	N/A	10	15	N/A
TSS	11,000	16,000	N/A	10	15	N/A
Total Ammonia Nitrogen as N (5/1 - 10/31)	2,200	3,300	N/A	2.0	3.0	N/A
(11/ - 4/30)	5,529	N/A	N/A	5.1	N/A	N/A
Total Phosphorus	220	330	N/A	0.20	0.30	N/A

<u>Effluent Characteristics</u>	<u>Maximum Effluent Limits</u>		
	<u>Total Monthly Loading Rate, Pounds/Month</u>	<u>Annual Maximum Loading Rate, Pounds/Year</u>	<u>Monthly Average Concentration, mg/l</u>
TSS <sup>(4)</sup> <sub>a</sub>	REPORT	3,959,228 lbs/year	REPORT
Total Phosphorus-P <sup>(4)(6)(7)</sup> <sub>a</sub> (5/1- 10/31)	REPORT	6,652 lbs/month	REPORT
Total Phosphorus-P <sup>(4)(5)(6)(7)</sup> <sub>a</sub>	REPORT	79,277 lbs/year	REPORT
Total Nitrogen-N <sup>(4)(6)(7)</sup> <sub>a</sub> (5/1- 10/31)	REPORT	99,782 lbs/month	REPORT
Total Nitrogen-N <sup>(4)(5)(6)(7)</sup> <sub>a</sub>	REPORT	1,582,055 lbs/year	REPORT
Total Polychlorinated Biphenyls (tPCBs) <sup>(4)</sup> <sub>b</sub>	REPORT Grams/Quarter (Quarterly Average) REPORT Grams/Year (Annual Maximum)		REPORT ng/l (Quarterly Average) REPORT ng/l (Annual Average)

<u>Effluent Characteristics</u>	<u>Effluent Limits</u>	
	<u>Maximum</u>	<u>Minimum</u>
E. coli	126 MPN/ 100 ml monthly geometric mean	N/A
Total Residual Chlorine <sup>(8)</sup>	0.011 mg/l	N/A
pH	8.5	6.5
Dissolved Oxygen (All Year) (2/1 - 5/31)	N/A N/A	5.0 mg/l at anytime 6.0 mg/l weekly average
WET Acute Toxicity <sup>(9)</sup>	TUa < 1.00	N/A
WET Chronic Toxicity <sup>(9)</sup>	TUc < 1.02	N/A

An annual average flow of 130.0 million gallons per day (mgd) was used in waste allocation calculations (expressed as waste loading rate limit), and this unit shall be used when reporting on the Discharge Monitoring Report (DMR) as required by General Condition III.A.2. Notification is to be provided to the Department at least 180 days before the annual average flow is expected to exceed this flow level or when the sum of flows from outfall 001A and 002A is expected to exceed 180.0 mgd. The facility shall meet an annual load limit of 2,192,800 lbs/yr for total nitrogen, 109,600 lbs/yr for total phosphorus and 8,548,254 lbs/yr for total suspended solids for flows from outfall 001A and 002A combined together. The ENR limits into effect on the effective date of this permit.

## II. SPECIAL CONDITIONS

### A.2 Effluent Limitations, Outfall 002A <sup>(1)(2)(3)</sup>

The quality of the effluent discharged by the facility at a discharge point location- 002A shall be limited at all times as shown below:

<u>Effluent Characteristics</u>	<u>Maximum Effluent Limits</u>					
	<u>Monthly Average Loading Rate, Pounds/day</u>	<u>Weekly Average Loading Rate, Pounds/day</u>	<u>Daily Average Loading Rate, Pounds/day</u>	<u>Monthly Average Concentration, mg/l</u>	<u>Weekly Average Concentration, mg/l</u>	<u>Daily Average Concentration, mg/l</u>
BOD <sub>5</sub> (5/1-10/31)	8,340	12,520	N/A	20	30	N/A
BOD <sub>5</sub> (11/1- 4/30)	12,520	18,770	N/A	30	45	N/A
TSS	12,520	18,770	N/A	30	45	N/A
Total Ammonia Nitrogen as N (5/1 - 10/31)	830	1,250	N/A	2.0	3.0	N/A
(11/1- 4/30)	2,130	N/A	N/A	5.1	N/A	N/A
Total Phosphorus	83	125	N/A	0.20	0.30	N/A

<u>Effluent Characteristics</u>	<u>Maximum Effluent Limits</u>		
	<u>Total Monthly Loading Rate, Pounds/Month</u>	<u>Annual Maximum Loading Rate, Pounds/Year</u>	<u>Monthly Average Concentration, mg/l</u>
TSS <sup>(4)</sup> <sub>a</sub>	REPORT	4,589,026 See footnote 4 <sub>(a)</sub> *	REPORT
Total Phosphorus-P <sup>(4)(6)(7)</sup> <sub>a</sub> (5/1-10/31)	REPORT	15,353 lbs total (5/1- 10/31)	REPORT
Total Phosphorus-P <sup>(4)(5)(6)(7)</sup> <sub>a</sub>	REPORT	30,363 lbs/year	REPORT
Total Nitrogen-N <sup>(4)(6)(7)</sup> <sub>a</sub> (5/1-10/31)	REPORT	230,294 lbs total (5/1-10/31)	REPORT
Total Nitrogen-N <sup>(4)(5)(6)(7)</sup> <sub>a</sub>	REPORT	610,748 lbs/year	REPORT
Total Polychlorinated Biphenyls (tPCBs) <sup>(4)</sup> <sub>c</sub>	REPORT Grams/Quarter (Quarterly Average)		REPORT ng/l (Quarterly Average)
	REPORT Grams/Year (Annual Maximum)		REPORT ng/l (Annual Average)

<u>Effluent Characteristics</u>	<u>Effluent Limits</u>	
	<u>Maximum</u>	<u>Minimum</u>
E. coli	126 MPN/ 100 ml monthly geometric mean	N/A
Total Residual Chlorine <sup>(8)</sup>	N/A	N/A
pH	8.5	6.5
Dissolved Oxygen (All Year) (2/1 - 5/31)	N/A	5.0 mg/l at anytime 6.0 mg/l weekly average

An annual average flow of 50.0 million gallons per day (mgd) was used in waste allocation calculations (expressed as waste loading rate limit), and this unit shall be used when reporting on the Discharge Monitoring Report (DMR) as required by General Condition III.A.2. Notification is to be provided to the Department at least 180 days before the annual average flow is expected to exceed this flow level or when the sum of flows from outfall 001A and 002A is expected to exceed 180.0 mgd. The facility shall meet an annual load limit of 2,192,800 lbs/yr for total nitrogen, 109,600 lbs/yr for total phosphorus and 8,548,254 lbs/yr for total suspended solids for flows from outfall 001A and 002A combined together. The ENR limits go into effect on the effective date of this permit.



## II. SPECIAL CONDITIONS

### Footnotes for limitations:

- (1) When this permit is renewed, the new limitations may not be equal to the above limitations.
- (2) There shall be no discharge of floating solids or visible foam other than trace amounts. See Special Condition II.M.
- (3) The permit may also be reopened in accordance with the requirements of MDE's Watershed Permitting Plan under which all discharge permits in a watershed are issued the same year.
- (4)<sup>(a)</sup> The Back River (basin number 02130901) has been identified on the 303(d) list as impaired by PCBs in both, sediment (1998) and fish tissue (2008), sediments (1996), chlordane (1996), nitrogen and phosphorus (1996), chlorides (2012), and sulfates (2012).

Following Waste Load Allocations (WLAs) have been assigned:

For Outfall 001A to Back River, per Back River TMDL for 130.0 mgd flow\*:

Total Nitrogen = 99,782 lbs/month (5/1-10/31) and 1,582,055 lbs/year\*

Total Phosphorus = 6,652 lbs/month (5/1-10/31) and 79,277 lbs/year\*

tPCB = 48.5 g/year

For 50.0 mgd flow thru Outfall 002A to Baltimore Harbor per Chesapeake Bay TMDL\*:

Total Nitrogen = 230,294 lbs/ season (5/1-10/31) and 610,748 lbs/year\*

Total Phosphorus = 15,353 lbs/season (5/1-10/31) and 30,363 lbs/year\*

tPCB = 18.66 g/year

- \* The facility shall meet an annual load limit of 2,192,800 lbs/yr for total nitrogen, 109,600 lbs/yr for total phosphorus and 8,548,254 lbs/yr for total suspended solids for flows from outfall 001A and 002A combined together. The ENR limits go into effect on the effective date of this permit.

This permit is in conformance with the "Chesapeake Bay TMDL for Nitrogen, Phosphorus and Sediment" established on December 29, 2010. When TMDLs for other remaining parameters are completed, limits may be imposed, after the public participation process, to incorporate any TMDL requirements. Until the facility's ENR upgrade to the treatment is complete and fully operational, the permittee is to operate the Biological Nutrient Removal (BNR) process on a year round basis. Total Nitrogen is the sum of ammonia-N, organic-N and (nitrite + nitrate)-N based on samples collected on the same day.

- (4)<sup>(b)</sup> The TMDL for PCBs for Back River approved by the EPA on 10/1/2012, has included a tPCBs annual waste load allocation (WLA) of 48.5 grams/year (0.107 pounds/year) for Outfall 001A (that is based on the design flow of 130.0 mgd and the water column TMDL endpoint tPCBs concentration of 0.27 nanograms per liter (ng/l)).
- (4)<sup>(c)</sup> The TMDL for the Baltimore Harbor approved by the EPA on 10/1/2012, included a tPCBs WLA of 18.66 g/year (0.0411 pound/year) for the Back River WWTP Outfall 002A (that is based on the design flow of 50.0 mgd and the water column TMDL endpoint tPCBs concentration of 0.27 nanograms per liter (ng/l)).

The above stated WLAs of tPCBs included in the TMDL does not impose effluent limits for tPCBs in the discharge permit until the effluent tPCBs data collected after the completion of the ENR upgrade are evaluated by the Department. Upon completion of the ENR upgrade, if the facility's annual tPCBs load exceeds the WLA, the permittee shall submit a plan to the Department for approval to track the sources and Best Management Practice (BMP) implementation within 180 days of exceedence of the above stated annual load for tPCBs.

## II. SPECIAL CONDITIONS

*Footnotes for limitations, Continued:*

- (5) The permittee shall operate the ENR facility in a manner that optimizes the nutrient removal capability of the facility as stipulated in the Grant Agreement for ENR upgrade. The first exceedance of the permit limit shall be counted and reported as daily exceedances beginning from the first exceedance, determined to the nearest day, through December 31. In addition, after any such exceedance, the permittee shall demonstrate to the Department's satisfaction that the facility is optimizing its nutrient removal capability, and neither the arrival of the next calendar year nor the issuance of a permit renewal during a period of noncompliance shall obviate continuance of any noncompliance status related to treatment optimization requirements.
- (6) At the end of each calendar year, the permittee shall comply with the *concentration-based* limitations for the Annual Maximum Loading Rate defined below or the *Tributary Strategy-based* loading rate limitation listed in above in the effluent limitations table, whichever is lower:
- (a) TN Limitation (lbs/year):  $4.0 \text{ mg/l} \times \text{annual total flow (calendar year based in million gallons per year)} \times 8.34$ . To the extent that the permittee alleges that temperature levels of 12 degrees C or lower have diminished the treatment system's capability of complying with this *concentration-based* loading rate limitation for Total Nitrogen, the permittee shall provide notification beginning with the calendar year report under the "Upset" provision in Section III.B.6 of this permit. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- (b) TP Limitation (lbs/year):  $0.20 \text{ mg/l} \times \text{annual total flow (calendar year based in million gallons per year)} \times 8.34$ .

The details and results of all required annual calculations shall be submitted to the Department with the Discharge Monitoring Report for December. See Special Condition II.K for further details.

The *concentration-based* loading requirements may be revised if the limits are determined to be impracticable based on actual performance and the Department re-opens the permit as a major modification (which requires public participation) to impose (an) alternate effluent limitation(s) or revised schedule.

- (7) The permittee may request that the permit be reopened and modified to include nutrient trading consistent with the most current "Maryland Policy for Nutrient Cap Management and Trading in Maryland's Chesapeake Bay Watershed" in effect at that time.
- (8) When chlorine or any chlorine containing compound is used in the treatment work, the effluent directly discharged from the Back River WWTP into the receiving water shall be de-chlorinated to reduce effluent total residual chlorine concentration to the non-detectable level (see definition I.M.). This requirement for non-detectable chlorine does not apply to effluent sent to Tradeport Atlantic (TPA) for reclamation usage through Outfall 002A.
- (9) TU<sub>a</sub> is defined as 100 divided by the LC<sub>50</sub> value resulting from the first 48 hours of a valid acute or chronic toxicity test. Compliance with the LC<sub>50</sub> requirements shall be determined through testing performed in accordance with Special Condition II.D. TU<sub>c</sub> is defined as 100 divided by the IC<sub>25</sub> value resulting from a valid chronic toxicity test. Compliance with the IC<sub>25</sub> requirements shall be determined through testing performed in accordance with Special Condition II.D.

## II. SPECIAL CONDITIONS

### B.(1) Minimum Monitoring Requirements:

The effluent characteristics listed below in Table B(1) shall be monitored at the sampling point (Definition I.R). If the sampling point is other than the outfalls- 001A and 002A, the permittee shall ensure that the effluent samples are representative of the effluent quality being discharged at the outfalls 001A and 002A.

<u>Effluent Characteristics</u>	<u>Monitoring Period</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
BOD <sub>5</sub> <sup>(10)</sup>	All Year	One/day	24-hour composite
Total Suspended Solids <sup>(10)</sup>	All Year	One/day	24-hour composite
Total Ammonia Nitrogen as N <sup>(10)(12)</sup>	All Year	One/day	24-hour composite
Total Phosphorus as P <sup>(10)(13)</sup>	All Year	One/day	24-hour composite
Total Nitrogen as N <sup>(10)(12)(13)</sup>	All Year	One/day	Calculated
(Nitrite + Nitrate) as N <sup>(10)(11)(12)</sup>	All Year	One/day	24-hour composite
Organic Nitrogen as N <sup>(10)(11)(12)</sup>	All Year	One/day	24-hour composite
Orthophosphate as P <sup>(10)(11)</sup>	All Year	One/week	24-hour composite
E. coli <sup>(10)</sup>	All Year	One/day	Grab
Total Residual Chlorine <sup>(10)(14)(15)</sup>	All Year	Three per day, One per shift	Grab
Dissolved Oxygen <sup>(10)(15)</sup>	All Year	Three per day, One per shift	Grab
pH <sup>(10)(15)</sup>	All Year	Three per day, One per shift	Grab
Cyanide, Free <sup>(10)(16)</sup>	All Year	One/month	Grab
Chromium (Hex) <sup>(10)(16)</sup>	All Year	One/month	Grab
Total Polychlorinated Biphenyls (tPCBs) <sup>(10)(16)</sup>	All Year	One/quarter	24-hour composite
Whole Effluent Toxicity <sup>(10)(17)</sup> Acute and Chronic	All Year	One/Quarter	24-hour composite
Flow <sup>(10)(18)(19)</sup>	All Year	Continuous	Recorded <sup>(19)</sup>
Total Monthly Flow <sup>(10)(20)</sup>	All Year	Monthly	Calculated <sup>(20)</sup>



## II. SPECIAL CONDITIONS

### B (1) Minimum Monitoring Requirements:

*Footnotes for the monitoring requirements, continued:*

- (10) "STORET" (short for STOrage and RETrieval) is a widely-used repository for water quality data reporting and monitoring. The STORET codes for the effluent characteristics described as limitations and/or monitoring requirements are: BOD<sub>5</sub> (00310), Total Suspended Solids (00530), Total Ammonia Nitrogen as N (00610), Total Phosphorus as P (00665), Total Nitrogen as N (00600), (Nitrite + Nitrate) as N (00630), Organic Nitrogen as N (00605), Orthophosphate as P (04175), E. coli (51040), Total Residual Chlorine (50060), Dissolved Oxygen (00300), pH (00400), Cyanide (Free) (00722), Chromium (Hex) (78247), tPCBs (79819), WET Acute Toxicity (TS000), WET Chronic Toxicity (TT000), Flow (50050), and Total monthly flow (82220).
- (11) This parameter (without effluent limitations) must be monitored, and it shall be reported on the Monthly Operating Report (MOR) as individual results and on the Discharge Monitoring Report (DMR) as monthly average concentrations.
- (12) Total nitrogen as N (in mg/l) is a calculated parameter as the sum of individual results for total ammonia nitrogen as N, organic nitrogen as N and (nitrite + nitrate) as N. All the nitrogen species must be sampled on the same day.
- (13) The permittee shall also calculate and report on the DMR the TN and TP total monthly loads (Definition I.H.5) plus year-to-date cumulative loads (Definition I.H.6) for the calendar year in question for the outfalls- 001A and 002A.
- For each calendar year, the year-to-date cumulative loads of TN and TP for the month of December shall represent the total annual loads, and they must be incorporated toward complying with the respective annual maximum load limits. Refer to Special Condition II.K for "Reporting TN and TP total annual loads for compliance to the Concentration-based maximum annual loading rate limits".
- (14) The Minimum monitoring requirements of three per day (one per shift) grab samplings for total residual chlorine shall be applicable, when chlorine or any chlorine compound is used in any treatment process(es), including but not limited to disinfection, that could become a potential constituent of the effluent discharged from the Back River WWTP. The minimum level (quantification level) for total residual chlorine is 0.10 mg/l. The permittee may report all results below the minimum level as <0.10 mg/l. All results reported below the minimum level shall be considered in compliance.
- (15) The monitoring of parameters (total residual chlorine, pH and dissolved oxygen) by three per day – grab samplings shall be distributed on a daily basis during the entire the staffed period in accordance with the representative sampling requirements as stated in the General Condition III.A1.

## II. SPECIAL CONDITIONS

*Footnotes for the monitoring requirements, continued:*

- (16) All toxic chemical monitoring required by this permit shall be performed in accordance with MDE's Water Management Administration Toxic Substance Analytical Protocol. This includes analytical methodology, detection levels, holding times, preservation methods, sample types and reporting.

The permittee shall measure and report tPCBs in picograms/L (pg/L). To incorporate the TMDL of PCBs for Back River approved by the EPA on 10/1/2012, the effluent tPCBs monitoring and annual totals PCBs reporting shall be initiated upon completion and beginning operation of the ENR upgrades at Back River WWTP. The permittee shall use the approved EPA testing Methods in accordance with MDE's protocol titled "Reporting Requirements for Total PCBs ( PCB Congeners) by EPA Method 1668 C or A". The tPCBs monitoring shall be once per quarter for at least one year beginning the ENR operation. The quarter shall end on March, June, September and December. The annual average concentration for tPCBs shall be calculated using the following formula:

$$\text{Average Concentration (pg/l)} = 264172 \times \frac{\text{Total Annual Cumulative load discharged (Grams)}}{\text{Total Annual Flow (MG) at 001A and 001B}}$$

Based on the tPCBs monitoring results, the Department will determine whether to continue tPCBs monitoring or change the tPCBs monitoring frequency after the tPCBs sources are identified and eliminated through BMP as stated in footnote 4<sub>(b)</sub>. Any changes to the effluent tPCBs limits and/or monitoring requirements shall be addressed through the permit modification process.

- (17) Whole Effluent Toxicity (WET) samples shall be collected quarterly , analyzed, and reported in accordance with the MDE Water Management Administration's "Effluent Biototoxicity Testing Protocol for Industrial and Municipal Effluents" and Special Condition II.D.
- (18) Flows shall be reported in millions gallons per day (mgd) to at least the nearest 10,000 gallons per day. (Example: A flow of 1,524,699 gallons per day shall be reported as 1.53 mgd.). For each calendar month, flows shall be reported on the MOR as daily individual results and on the DMR as monthly average (mgd) and daily maximum (mgd)).
- (19) Continuous electronic flow measurement and recording which can produce a permanent record are acceptable to the Department.
- (20) "Total monthly flow" is a calculated parameter equal to sum of the daily flow results in a calendar month. It shall be reported on the monthly DMR as Total monthly flow in millions gallons (MG) to at least the nearest 10,000 gallons. (Example: A flow of 1,524,699 gallons shall be reported as 1.53 MG).

## II. SPECIAL CONDITIONS

### B(2) Report Submittal Requirements

Report Description	Reporting Frequency	Report Submittal Deadline
Effluent Biomonitoring Study Plan and Toxic Chemical Testing Plan <sup>(21)(22)</sup>	See footnote - 22	See footnote - 22
Effluent Biomonitoring Study Report <sup>(21)(23)</sup>	See footnotes- 23 & 25	See footnote- 25
Effluent Toxic Chemical Testing Report <sup>(21)(23)(25)</sup>	See footnotes – 24 & 25	See footnote- 25
Wastewater Capacity Management Plan (WCMP) <sup>(21)(26)</sup>	See footnote – 26	See footnote- 26
Flow Capacity Report (FCR) <sup>(21)(27)</sup>	See footnote - 27	See footnote- 27

- <sup>(21)</sup> If the permittee has selected a third party for submitting reports to the Department, the permittee must provide to the third party with a document of authorization for report submission which is required with the report.
- <sup>(22)</sup> Within three months from the effective date of this permit, the permittee shall submit the Study Plans for effluent biomonitoring as well as toxic chemical testing and obtain approval from the Department. For further details, refer to Special Condition II.D.1 for Effluent Biomonitoring Study Plan and Special Condition II.F.1 for Effluent Toxic Chemical Testing Study Plan.
- <sup>(23)</sup> After MDE's approval of the Effluent Biomonitoring Study Plan, the permittee shall perform the effluent biomonitoring study and submit the results in a comprehensive report to the Department as per requirements of the Special Condition II.D.
- <sup>(24)</sup> After MDE's approval of the Effluent Toxic Chemical Testing Plan, the permittee shall perform the effluent toxic chemical testing and submit the results in a comprehensive report to the Department as per requirements of the Special Condition II.F.
- <sup>(25)</sup> The reports (a) for each biomonitoring study test performed as per the Special Condition II.D.2 and (b) for each analytical testing for toxic chemicals performed as per Special Condition II.F.3 shall be submitted to the Department by a mail or attached and submitted to the Department along with DMR for the month during which the test was completed, using NetDMR tool no later than 28th of the month following the test completion month. (Example: If the test is completed in March, the comprehensive report shall be submitted with the March DMR no later than 28<sup>th</sup> April).
- <sup>(26)</sup> Unless the permittee has previously submitted the WCMP to the Department; the permittee shall submit the WCMP one time within 90 (Ninety) days of the effective days of this permit.
- <sup>(27)</sup> The permittee shall submit the FCR to the Department as per the Special Condition II.C. This report shall be submitted once per year along with the DMR for the month of December.



## II. SPECIAL CONDITIONS

### C. Wastewater Capacity Management

The permittee shall report the total cumulative flow for the each calendar year for the above referenced facility. The total cumulative flow shall be reported in million gallons for the entire calendar year to the nearest ten thousand gallons. The annual total cumulative flow determination shall be provided to the Department using NetDMR no later than January 28<sup>th</sup> of the following year.

Because the most recent three-year average flow for this facility is over 80% of its design capacity, unless it has already been submitted, a Wastewater Capacity Management Plan (WCMP) must be submitted to the Department using NetDMR no later than 90 days of the issuance date of this discharge permit.

In addition, the permittee shall also submit a “Wastewater Flow Capacity Report (WFCR)” and “worksheet for WFCR” for the previous calendar year to the Department using NetDMR tool no later than January 28<sup>th</sup> of each year. If the permittee has not previously submitted the WCMP or the annual WFCR, the first WFCR and “worksheet for WFCR” shall be submitted within 90 days from the effective date of this permit. The permittee can obtain the WCMP guidance document and forms from the Department’s web site links listed below: (a) <http://9nl.at/MD-CMPGuidance> for WCMP guidance document, (b) <http://9nl.at/MD-CMPFlowCapReport> for WFCR, (c) <http://9nl.at/MD-CMPWorksheet1> for WFCR’s Worksheet # 1, and (d) <http://9nl.at/MD-CMPWorksheet2> for WFCR’s Worksheet # 2 (these links are case-sensitive).

If the permittee prefers to provide the above documents in hard copies, they shall be provided to the Department postmarked by January 28<sup>th</sup> of the following year to the address below:

Attention: Calendar Year Total Cumulative Flow  
WSA – Wastewater Discharge Permits Program  
Maryland Department of the Environment  
1800 Washington Boulevard, STE-455  
Baltimore, MD 21230-1708

The permittee is advised to notify the Department at the above address immediately upon electronic submission of reports through NetDMR tool.

## II. SPECIAL CONDITIONS

### D. Biomonitoring Program

1. Within three months of the effective date of the permit, the permittee shall submit to the Department for approval a study plan to evaluate wastewater toxicity at Outfall 001A by using biomonitoring. Flow from Outfall-002A is used by Tradepoint Atlantic, LLC (formerly known as Sparrows Point Terminal, LLC) as process water and then discharged under the terms and conditions in NPDES No. MD0001201. Since Tradepoint Atlantic, LLC is required to monitor at their outfalls and since wastewater at Outfall-002A has received same treatment as Outfall-001A at Back River WWTP, no biomonitoring requirements are set for Outfall-002A in the Back River WWTP discharge permit. Testing for Outfall-001A shall be initiated no later than three months following the Department's acceptance of the study plan or according to an approved schedule in the study plan. The study plan should include a discussion of:
  - a. wastewater and production variability
  - b. sampling & sample handling
  - c. source & age of test organisms
  - d. source of dilution water
  - e. testing procedures/experimental design
  - f. data analysis
  - g. quality assurance/quality control
  - h. report preparation
  - i. testing schedule
2. The testing program shall consist of quarterly definitive chronic testing. This testing shall be initiated within the first quarter following the Department's acceptance of the study plan.

Testing shall include the sheephead minnow (*Cyprinodon variegatus*) or inland silverside (*Menidia beryllina*) larval survival and growth tests and mysid shrimp (*Americamysis bahia* AKA *Mysidopsis bahia*) survival, growth, and fecundity tests. Testing must include one vertebrate species and one invertebrate species. Test results shall be expressed as NOEC, LOEC, ChV, and IC<sub>25</sub>.
3. The samples used for biomonitoring shall be collected at the same time and location as the samples analyzed for the effluent limitations and monitoring requirements for this outfall. For chlorinated effluents, samples shall be collected after dechlorination. The permittee shall collect 24-hour flow-proportioned composite samples unless the Department has given prior approval of an alternative sampling type.

## II. SPECIAL CONDITIONS

4. The following EPA document discusses the appropriate methods:  
  
For Estuarine Receiving Stream: Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms Third Edition, EPA-821-R-02-014, October 2002
5. Test results shall be submitted to the Department within one month of completion of each set of tests.
6. Test results shall be reported in accordance with the Department's "Effluent Biototoxicity Testing Protocol for Industrial and Municipal Effluents, Appendix E, Reporting Requirements for Effluent Biomonitoring Data," 12/4/12.
7. As a minimum, the reported chronic results shall be expressed as NOEC, LOEC, ChV, and IC<sub>25</sub>.
8. If a 50% mortality or greater occurs in one or more effluent concentrations during the first 48 hours of the chronic tests, 48-hour LC<sub>50</sub>s shall be calculated and reported along with the chronic results
9. If testing is not performed in accordance with MDE-approved study plan, additional testing may be required by the Department.
10. If the test results of any two consecutive valid toxicity tests show acute or chronic toxicity (LC<sub>50</sub> equal to or less than 100% for acute tests and an IC<sub>25</sub> equal to or less than the in-stream waste concentration for chronic tests), the permittee shall repeat the test within 30 days to confirm the findings of acute or chronic toxicity. Intermittent toxicity or other concerns may require additional testing or limits. If acute and/or chronic toxicity is confirmed, the permittee shall:
  - a. Eliminate the source of toxicity through operational changes as soon as possible but in any case not longer than within three months, or
  - b. Perform a TRE. If the permittee repeats the toxicity testing as stated above and the results of the repeat test do not confirm the acute or chronic toxicity, the Department will require the permittee to repeat the toxicity testing as stated above to reconfirm a finding of no acute or chronic toxicity. After reconfirmation, the permittee shall complete any remaining quarterly testing required.

## II. SPECIAL CONDITIONS

11. If the permittee completes a TRE in accordance with II.D.10.b and unacceptable toxicity is confirmed, the Whole Effluent Toxicity (WET) permit limit shall continue, and a compliance schedule will be required which shall become discharge permit conditions through a Department initiated permit modification or through a permit renewal.
12. When a WET test result shows reasonable potential for toxicity, unless it can be demonstrated that the source of toxicity has been eliminated, inappropriate test procedures were utilized, or the source has been controlled via a chemical specific permit limitation, WET limits shall continue. The permit may be modified to remove the WET limit if the six follow-up quarterly tests show no toxicity.
13. If plant processes or operations change so that there is a significant change in the nature of the wastewater, the Department may require the permittee to conduct a new set of tests.
14. If a significant industrial user locates within the service area so that significant change in the nature of the wastewater might be anticipated, MDE may require the permittee to conduct a new set of tests.
15. The biomonitoring program study plan, WET test results and related materials shall be submitted electronically to the Department if the permittee has already been approved for the NetDMR process. Otherwise, the permittee shall submit all pertinent physical documents to:

Attention: Whole Effluent Toxicity Coordinator  
Compliance Program  
Water and Science Administration  
Maryland Department of the Environment  
1800 Washington Blvd., Suite 420  
Baltimore, MD 21230-1708

The permittee is advised to notify the Department at the above address immediately upon electronic submission of reports through NetDMR tool.

## II. SPECIAL CONDITIONS

### E. Toxicity Reduction Evaluation

The permittee shall conduct a Toxicity Reduction Evaluation (TRE) when a review of toxicity test data by the Department indicates unacceptable acute or chronic effluent toxicity. A TRE is an investigation conducted to identify the causative agents of effluent toxicity, isolate the source(s), determine the effectiveness of control options, implement the necessary control measures and then confirm the reduction in toxicity.

1. Within 90 days of notification by the Department that a TRE is required, the permittee shall submit for approval by the Department a plan of study, schedule and completion date for conducting a TRE. The permittee shall conduct the TRE study consistent with the submitted plan and schedule.
2. This plan shall follow the framework presented in Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants (EPA/833B-99/002) August 1999.

Additional Guidance documents on the TRE process are shown below:

- Methods for Aquatic Toxicity Identification Evaluations Phase I Toxicity Characterization Procedures Second Edition United States Environmental Protection Agency Office of Research and Development, Washington, DC 20460, EPA/600/6-9 1/003 February 1991
- Methods for Aquatic Toxicity Identification Evaluations Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity, United States Environmental Protection Agency Office of Research and Development, Washington DC 20460, EPA/600/R-92/080 September 1993
- Methods for Aquatic Toxicity Identification Evaluations Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, United States Environmental Protection Agency Office of Research and Development, Washington DC 20460, EPA /600/R-92/08 1 September 1993
- Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program, March 27, 2001, U.S. Environmental Protection Agency, Office of Wastewater Management , Office of Regulatory Enforcement, Washington, DC 20460



## II. SPECIAL CONDITIONS

3. Beginning 60 days from the date of the Department's acceptance of the TRE study plan and every 60 days thereafter, the permittee shall submit progress reports including all relevant test data to the Department. This shall continue until completion of the toxicity reduction confirmation.
4. Within 60 days of completion of the toxicity identification or the source identification phase of the TRE, the permittee shall submit to the Department a plan, schedule and completion date for implementing those measures necessary to eliminate acute toxicity, an  $LC_{50}$  greater than 100%, and/or eliminate chronic toxicity, an  $IC_{25}$  greater than the in-stream waste concentration (IWC). The implementation of these measures shall begin immediately upon submission of this plan.
5. Within 60 days of completing the implementation of the control measures to eliminate or reduce toxicity, the permittee shall submit to the Department for approval a study plan to confirm the elimination or reduction of toxicity by using biomonitoring.
6. If, for any reason, the implemented measures do not result in compliance with the Department's toxicity limitations, the permittee shall continue the TRE and a Whole Effluent Toxicity (WET) permit limit and a compliance schedule will be required.
7. All the TRE-related materials shall be submitted electronically to the Department if the permittee has already been approved for the NetDMR tool. Otherwise, the permittee shall submit all pertinent physical documents to:

Attention: Whole Effluent Toxicity Coordinator  
Compliance Program  
Water and Science Administration  
Maryland Department of the Environment  
1800 Washington Blvd., Suite 420  
Baltimore, MD 21230-1708

The permittee is advised to notify the Department at the above address or via email at [mde.biomonitoring@maryland.gov](mailto:mde.biomonitoring@maryland.gov) immediately upon electronic submission of reports through NetDMR tool.

## II. SPECIAL CONDITIONS

### F. Toxic Chemical Testing

1. Concurrent with the biomonitoring study plan, the permittee shall submit to the Department for approval, a study plan to perform analytical testing for toxic chemicals.
2. The toxic chemical testing study plan shall include a description of:
  - a. sampling methods;
  - b. analytical methods;
  - c. practical detection levels; and
  - d. quality control procedures.
3. Concurrently with the first biomonitoring toxicity test (Special Condition II.D.2), during the first four years of the permit cycle, the permittee shall perform analytical testing for the toxic chemicals identified in the Department's "Toxic Pollutant Monitoring Protocol and Reporting Requirements for Toxic Chemical Testing Analytical Data" (05/18/2011).
4. Toxic chemical testing shall be performed in accordance with 40 CFR Part 136 and the Department-approved toxic chemical testing plan. Also after completion and beginning operation of the ENR upgrades at the Back River WWTP, when analyzing effluent samples for Total Polychlorinated Biphenyls (total PCBs) using Method 1668 A or C, the total PCBs concentration is the summation of all individually measured congeners; and both the individual congeners and the total PCBs concentrations shall be reported. Grab samples must be used for cyanide, phenols, and volatile organic compounds. All other pollutants shall be collected using 24-hour flow-proportioned composite samples unless the Department has given prior approval of an alternative sampling type.
5. Substances other than those identified in Section 3 above may be detected in the effluent. If so, the permittee shall identify and quantify the ten present in highest concentration for those compounds for which standards are available.
6. Results of each toxic chemical test performed as per Sections II.F.3 and II.F.4 shall be submitted to the Department with results of the concurrent biomonitoring toxicity test.
7. Toxic chemical testing results shall be reported in accordance with the Department's "Toxic Pollutant Monitoring Protocol and Reporting Requirements for Toxic Chemical Testing Analytical Data" (05/18/2011).

## II. SPECIAL CONDITIONS

8. If testing is not performed in accordance with the Department's approved study plan, additional testing may be required by the Department.
9. All the toxic chemical testing results and related materials shall be submitted electronically to the Department if the permittee has already been approved for the NetDMR tool. Otherwise, the permittee shall submit all pertinent physical documents to:

Attention: Toxic Chemical Testing Coordinator  
Compliance Program  
Water and Science Administration  
Maryland Department of the Environment  
Montgomery Park Business Center  
1800 Washington Boulevard, STE 420  
Baltimore, MD. 21230-1708

The permittee is advised to notify the Department at the above address or via email at [mde.biomonitoring@maryland.gov](mailto:mde.biomonitoring@maryland.gov) immediately upon electronic submission of reports through NetDMR tool.

### G. Pretreatment Program

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.

### H. Protection of Water Quality

It is a violation of this permit to discharge any substance not otherwise listed under the permit's "Effluent Limitations and Monitoring Requirements" special conditions at a level which would cause or contribute to any exceedance of the numerical water quality standards in COMAR 26.08.02.03 unless the level and the substance were disclosed in writing in the permit application prior to the issuance of the permit. If a discharge regulated by this permit causes or contributes to an exceedance of the water quality standards in COMAR 26.08.02.03, including but not limited to the general water quality standards, or if the discharge includes a pollutant that was not disclosed or addressed in the public record for the permit determination, the Department is authorized to modify, suspend or revoke this permit or take enforcement action to address unlawful discharges of pollutants.

## II. SPECIAL CONDITIONS

### I. Reapplication for a Permit

No later than 18 months before the expiration date of this permit, unless permission for a later date has been granted by the Department, the permittee shall submit a new application for a permit or notify the Department of the intent to cease discharging by the expiration date. In the event that a timely and complete reapplication has been submitted and the Department is unable, through no fault of the permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit continue and remain fully effective and enforceable. The renewal application is required by that date in accordance with the requirements of MDE's Watershed Permitting Plan under which all discharge permits in a watershed should be issued in the same year.

### J. Wastewater Discharges to Groundwater

This permit does not authorize the permittee to discharge any type or quantity of the wastewater to the groundwater of the State. The permittee must make every effort to prevent any type of leakage or discharges to the groundwater system from the wastewater treatment lagoon(s) and/or other conveyance system.

### K. Reporting Nutrient Total Annual Loads to Comply with Concentration-based Annual Loading Rate Limits

The Permittee shall report the concentration-based (also known as Floating Cap) annual loading requirements for TN and TP on the December DMR designated "001-Z". The permittee shall submit to the Department the Discharge Monitoring Report for the month of December with this designation. For each calendar year, the permittee shall calculate the annual concentration-based loads for TN and TP as per the footnote- 6 of the Special Condition II.A, and report these loadings along with the total annual cumulative flow on the December month DMR in accordance with the General Condition III.A.2.a of this discharge permit. If the Back River WWTP discharges effluent at more than a single outfall, the total annual loads for TN, TP and total annual discharge flow shall be reported as a sum of the individual results from each outfall.

### L. Combined Sewer Overflows (CSOs)

There are no known combined sewer overflows in the Back River wastewater collection system service areas at the time of issuance of this permit (last CSO Point Source # 013P, Forest Park area in Baltimore City area was eliminated on June 20, 2006). However, since parts of the Baltimore City's collection system are old and the system serves an urban area, there may be secluded and hidden CSOs, which are not known at this time. In order to address this potential, the following CSO reopener clause will apply to any CSO that subsequently comes to the knowledge of the Department. If a CSO is identified in the collection system contributing to this facility, this permit may be reopened to incorporate the CSO requirements developed in accordance with the National Combined Sewer Overflow Strategy promulgated in October 8, 2001 by the EPA.

### III. GENERAL CONDITIONS

#### A. Monitoring and Reporting

##### 1. Representative Sampling

Samples and measurements shall be taken at times that are representative of the quantity and quality of the discharge, and at evenly spaced intervals.

##### 2. Monthly Monitoring Results

###### a. Discharge Monitoring Reports

Monitoring results obtained during each calendar month shall be summarized and submitted electronically using the NetDMR tool. Results shall be submitted to the Department via NetDMR no later than the 28th of the month following the end of the reporting month.

###### b. Monthly Operating Reports (MORs)

The permittee shall submit monthly operating reports on a form acceptable to the Compliance Program. For each calendar month, the permittee shall submit to the Department a signed original of the MOR as an attachment to Copy of Record (COR) via NetDMR in electronic format concurrently with the Discharge Monitoring Report submission postmarked no later than the 28th day of the month following the reporting month.

###### c. Toxic Chemical Reporting

Any data collected according to the Department's "Toxic Pollutant Monitoring Protocol and Reporting Requirements for Toxic Chemical Testing Analytical Data" (05/18/2011) being submitted to the Department, either in fulfillment of Special Conditions II.B or pursuant to the toxic chemical testing requirement, pretreatment requirements or toxic metals or organic data collected on a voluntary basis, must be accompanied by laboratory data reports. At a minimum, these reports shall include, the name of the facility, the date(s) of sampling, beginning and ending sample time,



### III. GENERAL CONDITIONS

c. Toxic Chemical Reporting, continued

place of sampling collection, the sample type (grab, composite, etc.), the sample description (influent or effluent), the preservation method, the analytical method used for each parameter, the analytical method detection limit, the date of analysis, the name of person performing the analysis, the analytical result, and the name and address of the laboratory performing the analyses. Chain-of-custody forms shall also be submitted.

If the permittee prefers to submit hard copy of this information along with the supporting documentations instead of the electronic submission using NetDMR tool, they shall be submitted to:

Attention: Toxic Chemical Data  
WSA – Compliance Program  
Maryland Department of the Environment  
1800 Washington Boulevard, STE 420  
Baltimore, Maryland 21230-1708

3. Sampling and Analysis Methods

Analytical and sampling methods shall conform to test procedures for the analysis of pollutants as identified in 40 CFR Part 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants."

4. Analytical Laboratory

Within 30 days after the effective date of this permit, the permittee shall submit to the Department the name and address of the analytical laboratory (including the permittee's own laboratory) which is used to perform the monitoring required by this permit.

If the laboratory changes during the effective period of this permit, the permittee shall notify the Department of the new laboratory within 30 days after the change.

### III. GENERAL CONDITIONS

5. Monitoring Equipment Maintenance

- a. The permittee shall calibrate and maintain all monitoring and analytical instrumentation to ensure accuracy of measurements.
- b. Environment Article, Section 9-343 provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

6. Recording of Results

For each measurement or sample taken pursuant to the requirements of the permit, the permittee shall record the following information:

- a. the date, exact place and time of sampling or measurement;
- b. the person(s) who performed the sampling or measurement;
- c. the dates analyses were performed;
- d. the person(s) who performed each analysis;
- e. the analytical techniques or methods used; and
- f. the results of such analyses.

7. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. The increased frequency shall also be reported. The results of any other monitoring performed by the permittee shall be made available to the Department upon request.

8. Record Retention

All data used to complete the permit application and all records and information resulting from the monitoring activities required by this permit, including all records of sampling and analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instruments, shall be retained for a minimum of three years. This period shall be extended automatically during the course of litigation or when requested by the Department.

### III. GENERAL CONDITIONS

#### B. General Requirements

##### 1. Permit Noncompliance - Notification Requirements

All discharges authorized herein shall be consistent with the terms and conditions of this permit. If, for any reason, the permittee does not comply with or will be unable to comply with any permit condition, the permittee shall, within 24 hours, notify the Department by telephone at (410) 537-3510 during work hours or at (866) 633-4686 during evenings, weekends, and holidays. The permittee shall provide the Department with the following information in writing within five days of such oral notification.

- a. a description of the noncomplying discharge including the name of the stream and the impact upon the receiving waters;
- b. cause of noncompliance;
- c. the duration of the period of noncompliance and the anticipated time the condition of noncompliance is expected to continue;
- d. steps taken by the permittee to reduce and eliminate the noncomplying discharge;
- e. steps to be taken by the permittee to prevent recurrence of the condition of noncompliance;
- f. a description of the accelerated or additional monitoring to determine the nature and impact of the noncomplying discharge; and
- g. the results of the monitoring described in f. above.

##### 2. Change in Discharge

The permittee shall report any anticipated facility expansions, production increases, or process modifications which will result in new, different or an increased discharge of pollutants by submitting a new application at least 180 days prior to the commencement of the changed discharge except that if the change only affects a listed pollutant and will not violate the effluent limitations specified in this permit, by providing written notice to the Department. Following such notice, the permit may be modified by the Department to include new effluent limitations on those pollutants.

### III. GENERAL CONDITIONS

3. Facility Operation and Quality Control

All waste collection, control, treatment and disposal facilities shall be operated in a manner consistent with the following:

- a. Facilities shall be operated efficiently to minimize upsets and discharges of excessive pollutants.
- b. The permittee shall provide an adequate operating staff qualified to carry out operation, maintenance and testing functions required to ensure compliance with this permit. Superintendents and operators must be certified by the Board of Waterworks and Waste Systems Operators located at Montgomery Park Business Center, 1800 Washington Boulevard, STE- 410, Baltimore, Maryland 21230 in accordance with Title 12 of Environmental Article, Annotated Code of Maryland, and Section 26.06.01 of the COMAR.
- c. Facility maintenance work, which adversely affects or may adversely affect the discharge quality, shall be scheduled during non-critical water quality periods.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of this State, human health or the environment resulting from noncompliance with any effluent limitations specified in this permit, and must perform accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

Any bypass of treatment facilities is prohibited unless the bypass does not cause any violations of the effluent limitations specified in Special Condition II.A, and is for essential maintenance to assure efficient operation, or unless the permittee can prove that:

- a. the bypass is unavoidable to prevent loss of life, personal injury, or substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources; and
- b. there are no feasible alternatives to the bypass; and

### III. GENERAL CONDITIONS

- c. the Department receives notification pursuant to General Condition III.B.1 above. Where the need for a bypass is known (or should have been known) in advance, this notification shall be submitted to the Department for approval at least ten days before the date of the bypass or at the earliest possible date if the period of advance knowledge is less than ten days; and
- d. the bypass is allowed under conditions approved by the Department to be necessary to minimize adverse effects.

#### 6. Conditions Necessary for Demonstration of Upset

An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based effluent limitations only if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

- a. an upset occurred and that the permittee can identify the specific cause(s) of the upset;
- b. the permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
- c. the permittee submitted a 24-hour notification of upset in accordance with the reporting requirements of General Condition III.B.1 above;
- d. the permittee submitted, within five calendar days of becoming aware of the upset, documentation to support and justify the upset; and
- e. the permittee complied with any remedial measures required to minimize adverse impact.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

#### 7. Sewage Sludge Requirements

The permittee shall comply with all State and federal laws and regulations regarding Sewage Sludge Management, and with any regulations promulgated pursuant to Environment Article, Section 9-230 et seq. or to the Clean Water Act, Section 405 (d). A Sewage Sludge Utilization Permit is required for the collection, handling, burning, storage, treatment, land application, disposal, or transportation of sewage sludge, processed sewage sludge, or any product containing these materials in Maryland. If the sludge is hauled out of the State for disposal, a transportation permit must be obtained from the Department.



### III. GENERAL CONDITIONS

8. Power Failure

The permittee shall maintain compliance with the effluent limitations and all other terms and conditions of this permit in the event of a reduction, loss or failure of the primary source of power to the wastewater collection and treatment facilities.

9. Right of Entry

In accordance with 40 CFR §122.41(i), the permittee shall allow the Secretary of the Department, the Regional Administrator of the Environmental Protection Agency, and their authorized representatives (including an authorized contractor acting as a representative), upon presentation of credentials and other documents as required by the law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Property Rights/Compliance with Other Requirements

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property, invasion of personal rights, or any infringement of federal, State or local laws or regulations.

11. Reports and Information

- a. Upon request, the permittee shall provide to the Department, within a reasonable time, copies of records required to be kept by this permit. The permittee shall also furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit.
- b. All applications, reports or information submitted to the Department shall be signed and certified as required by COMAR 26.08.04.01 and 40 CFR 122.22.

### III. GENERAL CONDITIONS

- c. Except for data determined to be confidential under COMAR 26.08.04.01, all data shall be available for public inspection at the Department and the Office of the Regional Administrator of the Environmental Protection Agency. Effluent data shall not be considered confidential.
- d. Environment Article, Section 9-343 provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall upon conviction be punished by a fine of not more than \$10,000 or by imprisonment for not more than six months or by both.

#### 12. Transfer of Ownership or Control

In the event of any change in ownership or control of facilities from which the authorized discharge emanates, the permit may be transferred automatically to another person only if:

- a. the current permittee notify the Department, in writing, of the proposed transfer at least 30 days prior to the proposed transfer date;
- b. the notice includes a written agreement between the existing permittee and a new permittee containing the specific date of proposed transfer of permit coverage, and of responsibilities and liabilities under the permit; and
- c. neither the current permittee nor the new permittee receive notification from the Department, within 30 days of the Department's receipt of the agreement, of its intent to modify, revoke, reissue or terminate the existing permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 12(b) above.

#### 13. New Effluent Standards

This permit shall be revoked and reissued or modified to meet any effluent standard, water quality standard or prohibition established under the Environment Article, the Clean Water Act, or regulations promulgated thereto, and the permittee shall be so notified.

### III. GENERAL CONDITIONS

14. Industrial Users

The permittee shall require all industrial users of the wastewater treatment facility to comply with user charges as established by the permittee, pursuant to Section 9-326(a)(i) of the Environment Article.

15. Noncompliance

Nothing in this permit shall be construed to preclude the institution of any legal action for noncompliance with State, federal or local laws and regulations.

16. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action against the permittee or to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or under the Environment Article.

17. Waterway Construction and Obstruction

The permit does not authorize the construction or placing of physical structures, facilities, debris, or the undertaking of related activities in any waters of this State including the 100 year flood plain.

18. Construction Permit

This permit is not a permit to construct. For a new facility, in order to make this permit valid, a construction permit shall be obtained to meet the requirements of COMAR 26.03.12.03(A) and Environment Article, Section 9-204(d).

19. Storm Water Pollution Prevention

- (a) The permittee shall maintain coverage under the "General Permit for Discharges from Storm Water Associated with Industrial Activities" in accordance with Part II A of the State NPDES Permit No. MDR0000, and
- (b) Industrial storm water is not authorized under this individual permit.

20. Severability

If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provisions shall be considered severed and deleted from this permit.

### **III. GENERAL CONDITIONS**

#### **C. Wastewater Collection System**

This permit shall not authorize discharges from the wastewater collection system for this facility.

##### **1. Reporting Requirements**

Pursuant to Environment Article Sub title 9-331.1, the permittee must report sanitary sewer overflows (SSOs) which result in the direct or potential discharge of raw or diluted sewage into the surface waters or ground waters of the State to the Water and Science Administration's Compliance Program. Concurrently, the permittee shall also notify the local health department. Such reports must be made via telephone as soon as practicable, but no later than 24 hours after the time that the permittee became aware of the event. Reportable SSOs include, but are not limited to, overflows into the surface of the ground, into waterways, storm drains, ditches or other manmade or natural drainage conveyances to surface or ground waters which are reasonably likely to reach waters of the State. Overflows that are wholly contained within buildings and not likely to discharge to waterways need not be reported. Treatment plant bypasses shall be reported under General Condition III.B.1. Telephone reports shall be made to (410) 537-3510 on weekdays between 8:00 a. m. and 5:00 p.m. After hours telephone notification shall be made to emergency response number at (866) 633-4686.

### III. GENERAL CONDITIONS

#### C. 1. Reporting Requirements, Continued

When the incident is reported to the Department, the following information needs to be included:

- a. the location of the overflow, including city or county,
- b. the name of the receiving water, if applicable;
- c. an estimate of the volume of sewage discharged;
- d. a description of the sewer system or treatment plant component from which the overflow was released (such as manhole, crack in pipe, pumping station wet well or constructed overflow pipe);
- e. an estimate of the overflow's impact upon public health and to waters of the State;
- f. the cause or suspected cause of the overflow;
- g. the estimated date and time when the overflow began and stopped or the anticipated time the overflow is expected to continue;
- h. if known at the time of reporting, the steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps; (if unknown at the time the telephone report is made, the steps must be included in the written reports submitted under general conditions III.C.2).
- i. if known at the time of reporting, measures taken or planned to mitigate the adverse impact of the overflow and a schedule of major milestones for those steps (if unknown at the time the telephone report is made, the steps must be included in the written reports submitted under general conditions III.C.2);  
and
- j. whether there has already been a notification to the public and other City or County Agencies or Departments and how notification was done.



### III. GENERAL CONDITIONS

C. 2. Written Reports

Within 5 calendar days following telephone notification of the event, the permittee shall provide MDE with a written report regarding the incident that includes, at a minimum, the information cited above. The permittee shall maintain copies of all overflow records and reports, work orders associated with investigation of overflows, a list and description of complaints from customers or others related to overflows (including backups of sewage in to houses or businesses), and documentation of performance and implementation measures for minimum period of three years and shall make this information available to MDE for review upon written request.

This wastewater collection system provision may be superseded by a general permit for collection systems, when such a permit is issued by MDE and the permittee have been accepted for registration under the permit.

3. Other Requirements

The permittee, as directed by the State or local health department, shall also be responsible for posting notification in close proximity to the affected area/stream and for conducting appropriate water quality sampling as deemed necessary.

D. Permit Expiration, Modification, or Revocation

1. Expiration of Permit

This permit and the authorization to discharge shall expire at midnight on the expiration date of the permit unless the permittee has submitted a timely and complete reapplication pursuant to Section II.I.

2. [Reserved.]

3. Permit Modification - Request of Responsible Permittee

A permit may be modified by the Department upon the written request of the permittee and after notice and opportunity for a public hearing in accordance with the provisions set forth in COMAR 26.08.04.10.

4. Permit Modification, Suspension, Revocation - Violation of Laws

A permit may also be modified, suspended or revoked by the Department, in the event of a violation of the terms or conditions of the permit, or of State or federal laws and regulations and in accordance with the provisions set forth in COMAR 26.08.04.10. This permit may be suspended or revoked upon a final, unreviewable determination that the permittee lacks, or is in violation of, any federal, state, or local approval necessary to conduct the activities authorized by this permit.

#### **IV. CIVIL AND CRIMINAL PENALTIES**

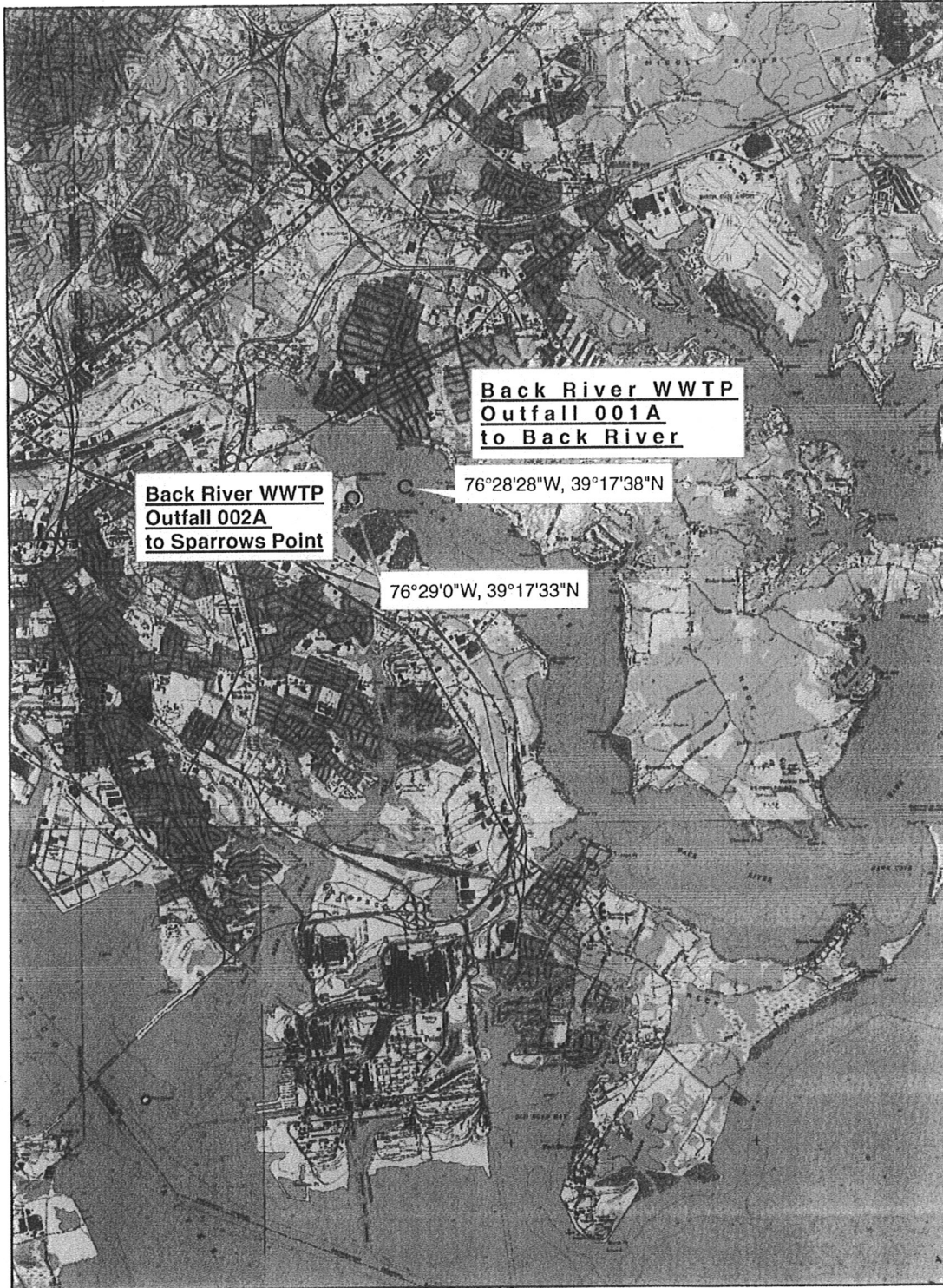
A. Civil Penalties for Violations of Permit Conditions

In addition to civil penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland, the Permittee shall be subject to civil penalty set forth in 33 U.S.C. § 1319 (d) of the Clean Water Act as adjusted for inflation according to 40 CFR, §19.4.

B. Criminal Penalties for Violations of Permit Conditions

In addition to criminal penalties for violations of State water pollution control laws set forth in Section 9-343 of the Environment Article, Annotated Code of Maryland, the Permittee shall be subject to criminal penalty set forth in 33 U.S.C. § 1319 (c).

### V. MAP SHOWING DISCHARGE POINT LOCATION



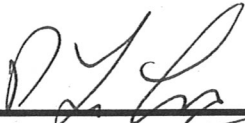
**SCALE** 0 0.35 0.7 1.4 2.1 2.8 Miles

**BALTIMORE COUNTY**

## VI. NPDES PROGRAM

On September 5, 1974, the Administrator of the U.S. Environmental Protection Agency approved the proposal submitted by the State of Maryland for the operation of a permit program for wastewater discharges pursuant to Section 402 of the Clean Water Act.

Pursuant to the aforementioned approval, this discharge permit is both a State of Maryland discharge permit and an NPDES permit.



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D. Lee Currey, Director  
Water and Science Administration