



**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS**

Permittee Name: **Towamencin Municipal Authority**

Permit No.: **PA0039004**

Pollutant(s) identified by DEP that may require WQBELs: **Chlorodibromomethane, Chloroform, Dichlorobromomethane, Selenium, Zinc**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☐ No ☒ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Chlorodibromomethane, Chloroform, and Dichlorobromomethane are Trihalomethanes, reasoned to be Disinfection Byproducts generated through the addition of sodium hypochlorite (NaOCl) to the final effluent. Selenium & Zinc are thought to be attributed to Industrial User discharges.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☒ Yes ☐ No

If Yes, describe prior studies and results:

TMA instituted mass-based limits for Zinc, total as part of its EPA-approved Industrial Pretreatment Program for individual Significant Industrial Users (SIUs), which were adopted April 12, 2017, and are currently enforced in all TMA Industrial Wastewater Discharge Permits. § 127-59 Local Limits, of Towamencin Township Ordinance No. 16-15, last amended March 24, 2021, provides a discharge control limit for "Selenium, total".

Does the permittee believe it can achieve the proposed WQBELs now? ☒ Yes ☒ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

TMA believes it is presently in compliance with the proposed WQBELs for Zinc and Selenium. The Average and Maximum Effluent Concentrations for the nine (9) Zinc and Selenium samples presented in the attached Table 1, "Proposed WQBELs Evaluation for Zinc and Selenium", are lower than the DEP-Anticipated Average Monthly, Maximum Daily, and Instantaneous Maximum WQBELs, respectively.

Regarding the proposed WQBELs for Chlorodibromomethane, Chloroform, and Dichlorobromomethane, the nine (9) sampling results presented in Table 2, "Proposed WQBELs Evaluation for Chlorodibromomethane, Chloroform, and Dichlorobromomethane", and prior effluent testing for these parameters demonstrate the following:

- TMA believes that they will be unable to attain or consistently attain compliance with the proposed WQBELs for Chlorodibromomethane, and Dichlorobromomethane without a process modification or change, or the installation of new disinfection facilities.**
- TMA believes that compliance with the proposed WQBELs for Chloroform can be met at this time.**

Process changes or upgrades will require study and/or examination, then confirmation with pilot plant studies where appropriate. Compliance may also require construction of new facilities, or both. Further study and examination of alternatives would be required.

Estimated date by which the permittee could achieve the proposed WQBELs: **59th month from effective date of Permit issuance** ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☒ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐ Discharge pollutant concentration coefficient(s) of variability

Year(s) Studied:

<input checked="" type="checkbox"/>	Discharge and background Total Hardness concentrations (metals)	Year(s) Studied:	2001 - 2019 (Discharge) 2016 - 2017 (Background)
<input checked="" type="checkbox"/>	Background / ambient pollutant concentrations	Year(s) Studied:	2016 - 2017
<input checked="" type="checkbox"/>	Chemical translator(s) (metals)	Year(s) Studied:	2010 - 2011 (Copper) 2016 - 2017 (Copper)
<input type="checkbox"/>	Slope and width of receiving waters	Year(s) Studied:	
<input type="checkbox"/>	Velocity of receiving waters at design conditions	Year(s) Studied:	
<input type="checkbox"/>	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:	
<input type="checkbox"/>	Volatilization rates (highly volatile organics)	Year(s) Studied:	
<input checked="" type="checkbox"/>	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:	2011 (Copper Ligand Study) 2015 (TDS/Osmotic Study) 2018 (Copper Ligand

Please submit this survey to the DEP regional office that is reviewing the permit application within 30 days of receipt.

25-Jan-22

Table 1 TMA NPDES Permit No. PA0039004 Pre-Draft Permit Survey Proposed WQBELs Evaluation for Zinc and Selenium						DEP-Anticipated WQBELs		
Pollutant	No. Effluent Samples ¹	Sample Date	Sample Result (µg/L)	Avg. Effluent Conc. (µg/L)	Max. Effluent Conc. (µg/L)	Avg. Monthly (µg/L)	Max. Daily (µg/L)	IMAX (µg/L)
Selenium	9	12/27/2021	<1	<1.0	<1.0	5.2	8.12	13
		12/28/2021	<1					
		12/29/2021	<1					
		1/4/2022	<1					
		1/6/2022	<1					
		1/7/2022	<1					
		1/11/2022	<1					
		1/12/2022	<1					
		1/14/2022	<1					
Zinc	9	12/27/2021	23	37.6	45	122	128	128
		12/28/2021	36					
		12/29/2021	36					
		1/4/2022	42					
		1/6/2022	36					
		1/7/2022	40					
		1/11/2022	45					
		1/12/2022	45					
		1/14/2022	35					

Notes:

1. The data presented above, used for the evaluation of Average and Maximum Effluent Concentrations for Zinc and Selenium, were sampled during TMA regular effluent testing days for the weeks of December 26, 2021 & January 2 & 9, 2022. Laboratory analytical reports are available upon request.

25-Jan-22

Table 2 TMA NPDES Permit No. PA0039004 Pre-Draft Permit Survey Proposed WQBELs Evaluation for Chlorodibromomethane, Chloroform, and Dichlorobromomethane						DEP-Anticipated WQBELs		
Pollutant	No. Effluent Samples ¹	Sample Date	Sample Result (µg/L)	Avg. Effluent Conc. (µg/L)	Max. Effluent Conc. (µg/L)	Avg. Monthly (µg/L)	Max. Daily (µg/L)	IMAX (µg/L)
Chlorodibromomethane	9	12/27/2021	2.9	3.49	8.5	1.08	1.69	2.71
		12/28/2021	1.84					
		12/29/2021	2.01					
		1/4/2022	2.53					
		1/6/2022	2.54					
		1/7/2022	1.25					
		1/11/2022	6.2					
		1/12/2022	8.5					
		1/14/2022	3.6					
Chloroform	9	12/27/2021	1.64	1.24	4.14	7.73	12.1	19.3
		12/28/2021	0.78					
		12/29/2021	0.8					
		1/4/2022	4.14					
		1/6/2022	1.42					
		1/7/2022	0.81					
		1/11/2022	0.51					
		1/12/2022	0.6					
		1/14/2022	0.48					
Dichlorobromomethane	9	12/27/2021	2.11	1.29	2.11	1.29	2.01	3.22
		12/28/2021	1.79					
		12/29/2021	2.07					
		1/4/2022	0.67					
		1/6/2022	1.94					
		1/7/2022	0.72					
		1/11/2022	0.39					
		1/12/2022	0.6					
		1/14/2022	<0.195					

Notes:

1. The data presented above, used for the evaluation of Average and Maximum Effluent Concentrations for Chlorodibromomethane, Chloroform, and Dichlorobromomethane, were taken on the same days of the week as TMA's regular effluent testing for the weeks of December 26, 2021 & January 2 & 9, 2022. Laboratory analytical reports are available upon request.