pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0013714**
Facility Type	**Industrial**	APS ID	**991766**
Major / Minor	**Major**	Authorization ID	**1270579**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Exelon Generation Co. LLC**	Facility Name	**Eddystone Generating Station**
Applicant Address	300 Exelon Way	Facility Address	#1 Industrial Highway
	Kennett Square, PA 19348-2473		Eddystone, PA 19022
Applicant Contact	Joseph Dick	Facility Contact	Joseph Kuklinski
Applicant Phone	(267) 533-1149	Facility Phone	(610) 595-8199
Client ID	147686	Site ID	239482
SIC Code	4911,5171	Municipality	Eddystone Borough
SIC Description	Trans. & Utilities - Electric Services,Wholesale Trade - Petroleum Bulk Stations And Terminals	County	Delaware
Date Application Received	April 3, 2019	EPA Waived?	No
Date Application Accepted		If No, Reason	Major Facility

Purpose of Application: Permit Renewal.

Summary of Review

The applicant requests approval for renewal of an NPDES permit to discharge treated industrial wastewater, non-contact cooling water, once through cooling water, stormwater and hydrostatic test water from the Eddystone Generating Station.

Eddystone generates electricity to meet the demands of power within the area served by the PJM Interconnection, LLC. Over the past years, the Station has only operated to provide power on peak demand days, typically, the coldest winter days and the hottest summer days or to address other constraints on the system.

The facility's wastewater treatment plant treats a combination of low volume wastewater and stormwater runoff. The influent is coming from the following sources: reverse osmosis unit wastewater, Units 3 and 4 boiler wash water, boiler chemical wash water, Units 3 and 4 oily water, sample cooler water and miscellaneous stormwater runoff from plant operation and maintenance areas. The only treatment occurs is oil/water separation. It is also possible for the wastewater treatment plant to receive water from their hydrostatic testing of their holding tanks. Hydrostatic test water could be discharged through either outfall 008 or 010. If there is a risk of contamination, the test water will be run through an oil/water separator before discharge. The groundwater remediation system (oil/water separator treatment) at the site also discharges to the Outfall 008 via MP108.

Outfall 005, previously discharging stormwater from equipment and roof drains associated with Units 1 and 2 is eliminated from this permit. All equipment and associated structures that contributed to the discharge from 005 have been removed.

No significant changes in facility operations, no changes in the quality of waste water.
The facility is in compliance with the permit requirements.
The recommended limits for the new permit are similar to the existing permit.
The frequency of stormwater monitoring is changed to semi-annually, which is consistent with the general stormwater permit.

Approve	Deny	Signatures	Date
X		*Sara Abraham* Sara Reji Abraham, E.I.T. / Project Manager	06-22-2020
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	06/23/2020

Summary of Review

The facility has been using the following chemical additives: ZETAG 7565, Polyfloc AP, Citric Acid, Sodium Bisulfite, Kathon (Isothiazolin), PW 76AS, Versine 100XL, Hypersperse MDC 772, Trisodium phosphate dodecahydrate, Disodium phosphate anhydrous, Sodium Sulfite (CORTROL IS1050), Anodamine HPFG, ChemTreat B120, ChemTreat Uranine Dye, ChemTreat A103G, ChemTreat C2189G, ChemTreat CL2005, SPECTRUS OX 1200, SPECTRUS CT1300, SPECTRUS DT1400. Sodium Hydroxide, Sulfuric Acid, Hydrochloric Acid, and Ammonium Hydroxide are also used for pH adjustments.

PCB Monitoring and PMP requirements are continued similar to the existing requirement.

The special condition related with the chemical metal cleaning in the current permit is also continued. According to the permittee chemical metal cleaning is performed on an as needed basis. For the past many years the chemical metal cleaning was not performed at the facility.

Clean Water Act § 316(b) – Cooling Water Intake Structures:

On August 15, 2014, EPA promulgated Clean Water Act Section 316(b) regulations applicable to cooling water intake structures. The regulations established best technology available (BTA) standards to reduce impingement mortality and entrainment of all life stages of fish and shellfish at existing power generating and manufacturing facilities. The Final Rule took effect on October 14, 2014. Regulations implementing the 2014 Final Rule (and the previously promulgated Phase I Rule) are provided in 40 CFR Part 125, Subparts I and J for new facilities and existing facilities, respectively. Associated NPDES permit application requirements for facilities with cooling water intake structures are provided in 40 CFR Part 122, Subpart B – Permit Application and Special NPDES Program Requirements (§ 122.21(r)).

Applicability Criteria for Existing Facilities

As an existing facility, Exelon Eddystone falls under 40 CFR part 125, Subpart J – Requirements Applicable to Cooling Water Intake Structures for Existing Facilities Under Section 316(b) of the Clean Water Act (§§ 125.90 – 125.99). Pursuant to the applicability criteria given by § 125.91(a), Exelon Eddystone would be subject to the requirements of §§ 125.94 – 125.99 if:

(1) The facility is a point source;

(2) The facility uses or proposes to use one or more cooling water intake structures with a cumulative design intake flow (DIF) of greater than 2 million gallons per day (mgd) to withdraw water from waters of the United States; and

(3) Twenty-five percent or more of the water the facility withdraws on an actual intake flow basis is used exclusively for cooling purposes.

Exelon Eddystone is a point source as defined in 40 CFR § 122.2 and withdraws water for industrial use from a cooling water intake structure (CWIS) on the Delaware River Estuary. The facility is an “existing facility” as defined in in 40 CFR § 125.92(k). The intake structure has four separate intake bays that each house a cooling water pump (CWP) with a rated capacity of 198 MGD and a river water pump (RWP) with a rated capacity of 10.8 MGD. The facility has a total DIF of 835.2 MGD with an AIF of 262.6 MGD between 2013 – 2017, 99.9% of which is used for cooling purposes, which exceeds the 25% applicability threshold and, therefore, Exelon Eddystone is subject to the requirements of 40 CFR §§125.94 – 125.99.

The CWIS forebay was built 13 ft into the river rather than flush with the bulkhead. Water passes under a curtain wall and through vertical-bar trash racks prior to the installed conventional traveling screens with 3/8 in. mesh. Through screen velocity at DIF is 0.88 fps. Screens are rotated once each 8-hour shift, once every 4 hours if freezing conditions, or continuously as need during fall leaf season. Debris is removed by a high-pressure spray wash for disposal. Lateral fish passages upstream and downstream in the forebay, which can be sealed off if needed for maintenance, are located between the trash racks and the traveling screens.

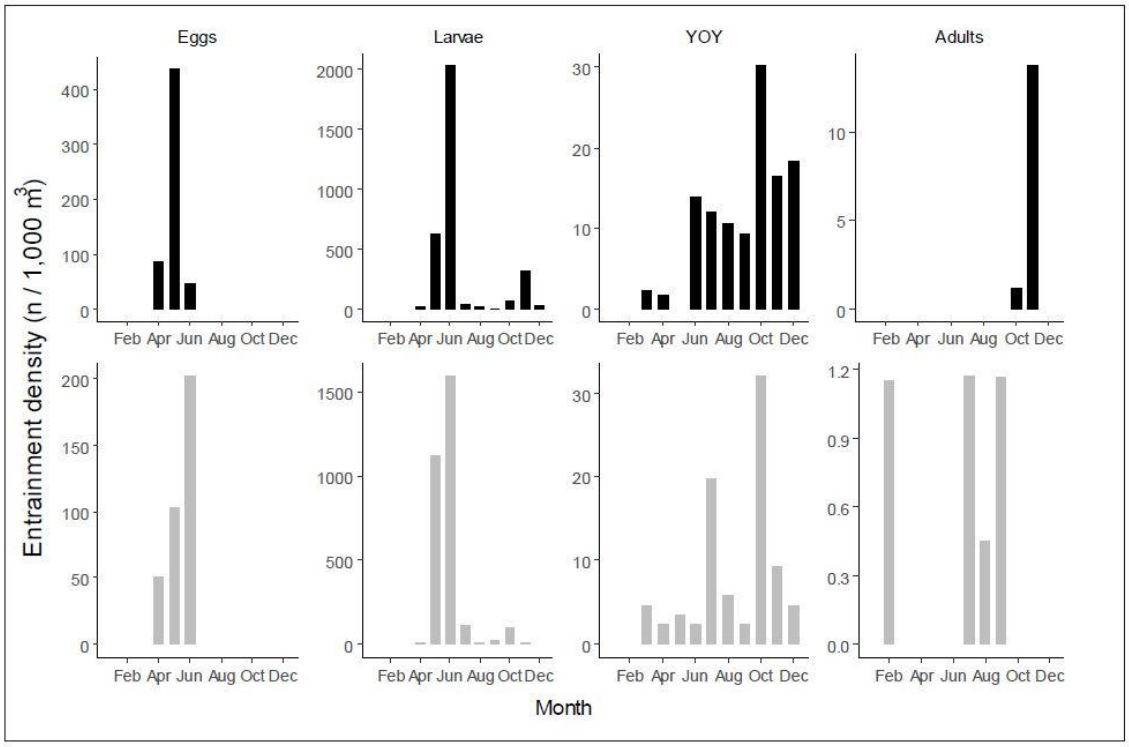
Eddystone is a dual-fueled (natural gas and oil), steam electric generating station that operates when notified by PJM Interconnection, LLC during periods of peak demand. For the 24-month contiguous period from 2016-2017 the facilities capacity utilization rate (CUR) was 1.7%. The past 5 years average CUR was 1.9% with an annual minimum of 0.7% and a maximum of 3.4%.

Summary of Review

Based on a CUR less than 8 percent averaged over a 24 month block contiguous period and site-specific data, impingement mortality BTA less stringent than one of the 7 technologies described in the rule, as specified in §125.94(c)(12), will be used for Exelon Eddystone. This includes permit conditions to maintain a CUR below 8% and implementing a Flow Reduction Alternative SOP proposed in the permit application which will further reduce withdrawals by limiting CWP usage. These permit conditions will also serve as site specific entrainment BTA based on the alternatives analysis and the totality of the information provided in the facility's 316(b) report provided with the permit application. In addition, two years of impingement sampling will be required, as allowed by 40 CFR §125.96(a), to demonstrate compliance and ensure impacts to shellfish and other fish have not significantly changed since the last impingement study.

1.) Numbers and types of organisms entrained

The facility conducted entrainment sampling for two years between 2016 and 2017. During that time sampling events were conducted every month with weekly samples taken during expected peak abundance times March – July. Sample ports were located directly behind the traveling screens at two locations in the water column (deep and shallow). Four diel sample periods collecting approximately 100 cubic meters of water were collected each day according to the sampling plan. Below are tables and a chart submitted by the permittee showing monthly entrainment densities, numbers and types of organisms collected during sampling for each year, and total entrainment estimates based on densities and AIF for each year.



Monthly distribution of ichthyoplankton entrainment densities observed at Eddystone during the 2016 (black) and 2017 (gray) entrainment studies. Densities are summed across all ichthyoplankton species for each of the four life stages.

Figure VI-1

Summary of Review

	Life Stage							
Taxon	Eggs	YSL	PYSL	YOY	YROL	Unid.	Post-larva	Total
Alewife	0	0	0	5	0	0	0	5
American Eel	0	0	0	13	0	0	0	13
American Shad	2	0	17	1	0	0	0	20
Atlantic Croaker	0	0	200	36	0	4	0	240
Atlantic Menhaden	0	0	84	0	0	0	0	84
Atlantic Silverside	0	0	1	0	0	0	0	1
Banded Darter	0	0	1	0	0	0	0	1
Bay Anchovy	0	0	28	6	0	4	0	38
Black Crappie	0	0	2	0	0	0	0	2
Blue Crab	0	0	0	0	0	0	9	9
Blueback Herring/Alewife	26	1	8	0	0	0	0	35
Blueback Herring/Hickory Shad/Alewife	206	2	137	0	0	0	0	345
Blueback Herring/Hickory Shad/Alewife/Gizzard Shad	0	1	3966	0	0	2	0	3969
Bullhead Catfish Family	0	0	0	2	0	0	0	2
Carp and Minnow Family	1	9	58	0	0	23	0	91
Channel Catfish	0	0	0	8	0	0	0	8
Common Carp	0	0	2	0	0	0	0	2
Darter Species	0	0	0	0	0	1	0	1
Flathead Catfish	0	0	0	1	0	0	0	1
Gizzard Shad	133	74	0	0	0	0	0	207
Grass Shrimp	0	0	0	0	0	0	6	6
Herring Family	4	0	96	0	0	0	0	100
Hogchoker	0	0	1	7	1	0	0	9
Inland Silverside	0	0	4	0	0	0	0	4
Lepomis Species	0	0	4	0	0	0	0	4
Morone Species	0	0	99	0	0	5	0	104
Naked Goby	0	0	1	3	0	0	0	4
New World Silverside Family	0	0	1	0	0	0	0	1
Striped Bass	6	35	386	10	0	0	0	437
Striped Killifish	0	1	0	0	0	0	0	1
Summer Flounder	0	0	1	0	0	0	0	1
Tessellated Darter	0	33	3	0	0	1	0	37
Unidentified Osteichthyes	0	0	2	0	0	8	0	10
White Perch	677	3	570	15	0	1	0	1266
Yellow Perch	0	0	1	0	0	0	0	1
Total	1055	159	5673	107	1	49	15	7059

2016 entrainment sampling data

Summary of Review

Table 5.2-2. Total number of each life stage of fish and shellfish collected in Eddystone Generating Station entrainment samples during 2017.

	Life Stage							
Taxon	Eggs	YSL	PYSL	YOY	YROL	Unid.	Post-larva	Total
American Eel	0	0	0	14	1	0	0	15
American Shad	0	1	54	2	0	0	0	57
Atlantic Croaker	0	0	46	23	0	11	0	80
Atlantic Menhaden	0	0	30	4	0	0	0	34
Atlantic Sturgeon	0	1	0	0	0	0	0	1
Bay Anchovy	0	0	60	3	0	0	0	63
Carp and Minnow Family	0	80	64	1	0	11	0	156
Channel Catfish	0	0	0	23	1	0	0	24
Common Carp	0	5	5	0	0	4	0	14
Crappie Species	0	0	1	0	0	0	0	1
Flathead Catfish	0	0	0	3	0	0	0	3
Gizzard Shad	390	104	0	0	0	0	0	494
Herring Family	0	0	150	0	0	0	0	150
Hogchoker	0	0	0	1	1	0	0	2
Lepomis Species	0	0	10	0	0	0	0	10
Morone Species	0	0	227	0	0	184	0	411
Mummichog	0	0	1	0	0	0	0	1
New World Silverside Family	0	0	3	0	0	0	0	3
Rough Silverside	0	0	1	0	0	0	0	1
Striped Bass	7	63	1195	0	0	0	0	1265
Tessellated Darter	0	26	11	0	0	0	0	37
White Perch	250	8	381	10	0	0	0	649
Yellow Perch	0	1	0	0	0	0	0	1
Blueback Herring/Alewife	3	0	0	1	0	0	0	4
Blueback Herring/Hickory Shad/Alewife/Gizzard Shad	2	0	2754	0	0	0	0	2756
Blueback Herring/Hickory Shad/Alewife	12	1	0	0	0	0	0	13
Blue Crab	0	0	0	0	0	0	8	8
Grass Shrimp	0	0	0	0	0	0	2	2
Unidentified Osteichthyes	8	0	2	0	0	3	0	13
Total	672	290	4995	85	3	213	10	6268
Percent Composition	10.7	4.6	79.7	1.4	0.0	3.4	0.2	100.0

2017 entrainment sampling data

Summary of Review

Table VI-1a
Annual entrainment for taxa and lifestages collected in the 2016 entrainment study at Eddystone based on the actual volume of water withdrawn during 2016

	Life stage							
	Eggs		Larvae		YOY		Adults	
Taxon	No. entrained	Std. dev.	No. entrained	Std. dev.	No. entrained	Std. dev.	No. entrained	Std. dev.
Alewife	0	0	0	0	158,649	113,302	0	0
American eel	0	0	0	0	222,078	51,248	0	0
American shad	21,278	21,278	480,528	92,576	22,229	22,229	0	0
Atlantic croaker	0	0	8,404,409	664,219	1,697,784	336,699	0	0
Atlantic menhaden	0	0	1,932,455	330,005	0	0	0	0
Atlantic silverside	0	0	115,540	45,381	0	0	0	0
Bay anchovy	0	0	1,997,157	504,022	402,314	247,987	0	0
Black crappie	0	0	37,523	37,523	0	0	0	0
Blue crab	0	0	0	0	522,449	147,369	0	0
Bluegill	0	0	96,120	53,304		0	0	0
Catfish	0	0	0	0	516,805	118,904	0	0
Grass shrimps	0	0	0	0	0	0	246,242	111,624
Gizzard shad	3,363,138	615,823	1,545,025	215,591	0	0	0	0
Goby	0	0	45,051	45,051	297,898	297,898	0	0
Herrings	5,863,864	1,024,726	97,894,946	12,948,818	0	0	0	0
Hogchoker	0	0	45,051	45,051	402,176	145,029	30,867	30,867
Killifish	0	0	21,605	21,605	0	0	0	0
Minnows	29,335	29,335	2,360,292	253,081	0	0	0	0
Striped bass	140,176	37,773	13,783,332	889,646	265,338	109,901	0	0
Summer flounder	0	0	40,120	18,054	0	0	0	0
White perch	17,307,307	1,119,538	13,545,632	1,632,582	447,289	86,615	0	0
Yellow perch	0	0	10,168	10,168	0	0	0	0
Other species[1]	0	0	1,025,180	477,285	222,078	103,391	0	0
Unidentified	0	0	421,314	0	0	0	0	0

[1] 'Other Species' includes common carp, darters, and *Lepomis* spp.

Table VI-1b
Annual entrainment for taxa and lifestages collected in the 2017 entrainment study at Eddystone based on the actual volume of water withdrawn during 2017

	Life stage							
	Eggs		Larvae		YOY		Adults	
Taxon	No. entrained	Std. dev.	No. entrained	Std. dev.	No. entrained	Std. dev.	No. entrained	Std. dev.
Alewife	0	0	0	0	0	0	0	0
American eel	0	0	0	0	304,608	90,109	33,457	33,457
American shad	0	0	1,017,877	334,301	33,068	33,068	0	0
Atlantic croaker	0	0	2,897,566	458,087	1,008,639	204,411	0	0
Atlantic menhaden	0	0	453,158	167,585	70,103	32,708	0	0
Atlantic silverside	0	0	117,447	55,622	0	0	0	0
Bay anchovy	0	0	1,956,490	342,688	99,163	99,163	0	0
Black crappie	0	0	17,674	17,674	0	0	0	0
Blue crab	0	0	0	0	177,297	81,557	0	0
Catfish	0	0	0	0	835,592	71,977	23,192	23,192
Grass shrimps	0	0	0	0	0	0	77,678	35,732
Gizzard shad	8,065,547	2,106,926	2,076,389	454,198	0	0	0	0
Goby	0	0	0	0	0	0	0	0
Herrings	236,409	75,831	55,892,920	4,926,822	16,889	16,889	0	0
Hogchoker	0	0	0	0	17,061	17,061	33,382	33,382
Killifish	0	0	0	0	17,049	17,049	0	0
Minnows	0	0	3,133,496	595,059	16,885	16,885	0	0
Striped bass	119,914	72,262	36,358,380	7,036,848	0	0	0	0
Summer flounder	0	0	0	0	0	0	0	0
White perch	4,011,201	528,135	8,064,494	871,863	253,728	80,019	0	0
Yellow perch	0	0	6,589	6,589	0	0	0	0
Other species[1]	0	0	1,183,942	544,613	304,608	140,120	33,457	15,390
Unidentified	123,789	67,760	141,116	83,442	0	0	0	0

[1] 'Other Species' includes Atlantic sturgeon, common carp, *Lepomis* spp., and tessellated darter

Summary of Review

The entrainment report concludes that an estimated 345,809,051 fish eggs and larvae would be entrained annually based on DIF and 108,565,660 based on AIF, which is a 68.6% reduction. The most abundant group of taxa entrained during the study included blueback herring/hickory shad/alewife/gizzard shad from the Clupeid family making up 53.4% of the abundance. Other more abundant taxa included white perch, Atlantic Croaker, and striped bass. The Assessment of Potential Effects of Entrainment on Sustainability of Fish Stocks report provided with the application concludes that based on the entrainment study and Spawning Potential Ratios, the magnitude of effects of entrainment at Eddystone on Delaware River fish populations at DIF is likely too small to jeopardize the sustainability of those fish populations. Additionally, one Atlantic sturgeon, a federally endangered species, larvae was entrained during the study. Exelon subsequently evaluated the susceptibility of the species to entrainment as part of an Individual Incidental Take Permit (IITP) with NMFS and found that AIF conditions would not be expected to jeopardize the population. Further details are provided in the entrainment BTA Worksheet.

2.) Impact of changes in particulate emission or other pollutants

Exelon evaluated several technology alternatives which showed varying changes in particulate matter (PM) and other pollutants. Exelon concluded that their proposed Flow Reduction Alternative would result in a reduction in emissions of these pollutants due to decreased energy use while the other alternatives would increase these emissions due to increased energy use and installation. The smallest increase would result with the installation of coarse cylindrical wedge wire screens (CWWS). Further details are provided in the entrainment BTA Worksheet.

3.) Land Availability

Installation of CWWS would require a modification to the facility's existing Submerged Lands License Agreement. Installation of plume-abated mechanical draft cooling towers would require adjacent property by lease or purchase and was deemed feasible in the application.

4.) Remaining useful plant life

Exelon provides an anticipated retirement date of 2033. Based on installation requirements Exelon estimates that the evaluated technologies would be in service ranging from 9-14 years. The longest being the proposed Flow Reduction Alternative (14 years), and the shortest being a closed cycle recirculating system (CCRS) (9 years).

5.) Social Benefits and Cost of Technologies

Social benefits and costs for the evaluated technologies were presented and appear robust. The proposed Flow Reduction Alternative results in a net savings when calculating cost and results in the greatest monetized benefits. The costliest technology would be installation of the CCRS. Further details are provided in the entrainment BTA Worksheet.

Other Discretionary factors

1.) Exelon indicates that current estimated entrainment at DIF is likely too small to jeopardize the sustainability of fish populations. They also show that the technologies evaluated would further reduce entrainment, with the CCRS having the greatest impact with a 98.6% decrease assuming 0% survival through the system.
2.) Exelon concludes there are no significant benefits to water quality or aquatic biota resulting from reduced thermal discharge effects of the evaluated technologies.
3.) Flow reductions due to retirements of Units 1 and 2 in 2011 and 2012, respectively, resulted in 633.6 MGD or 43.1% less cooling water withdrawn from combined DIF.
4.) Exelon concludes that a CCRS or fine mesh modified traveling screens would result in reduced reliability of local energy delivery, but the likelihood was not quantified.
5.) The operation of a CCRS is the only technology that would result in significant water consumptive losses due to evaporation and would require a DRBC consumptive use replacement plan.
6.) Exelon concludes that there are no sufficient alternative water sources available.

Summary of Review

See the attached BTA worksheet:

BTA worksheet

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Act 14 Notifications:

Eddystone Borough - March 21, 2019
Delaware County - March 21, 2019

Permit Conditions:

A. Acquire Necessary Property Rights
B. Proper Sludge Disposal
C. WQM Permit Condition
D. BAT/ELG Reopener
E. Chlorine Discharge
F. Thermal Impact
G. Mixing Zone
H. Delaware Estuary Study
I. No Intake Trash Return
J. Chemical Metal Cleaning Condition
K. Spectrus CT 1300 Test Method
L. TMDL/WLA Analysis
M. Non-Stormwater Discharges
N. Hydrostatic Test Water
O. Chemical Additive Condition
P. Stormwater Condition
Q. PCBs Requirement
R. Cooling Water Intake Condition

Discharge, Receiving Waters and Water Supply Information

Outfall No.	010	Design Flow (MGD)	0
Latitude	39º 50' 57.61"	Longitude	-75º 19' 19.32"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	stormwater, groundwater seepage, condensate storage tank overflow and hydrostatic test water		
Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25591411	RMI	84.7
Watershed No.	3-G	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final, 12/30/2006	Name	Delaware River Estuary PCB TMDLs

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0
Latitude	39º 51' 41.22"	Longitude	-75º 19' 23.65"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	Stormwater		
Receiving Waters	Crum Creek (WWF)	Stream Code	00692
NHD Com ID	25590671	RMI	0.17

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	0
Latitude	39º 51' 34.52"	Longitude	-75º 19' 19.26"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	Stormwater		
Receiving Waters	Crum Creek (WWF)	Stream Code	00692
NHD Com ID	25590671	RMI	0.132

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0
Latitude	39º 51' 41.22"	Longitude	-75º 19' 23.65"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	Stormwater		
Receiving Waters	Crum Creek (WWF)	Stream Code	00692
NHD Com ID	25590671	RMI	0.26

Discharge, Receiving Waters and Water Supply Information

Outfall No.	014	Design Flow (MGD)	0
Latitude	39º 50' 57.58"	Longitude	-75º 19' 11.87"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	Stormwater		
Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25591411	RMI	84.88

Discharge, Receiving Waters and Water Supply Information

Outfall No.	008	Design Flow (MGD)	835.2
Latitude	39º 50' 57.62"	Longitude	-75º 19' 22.14"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	Once through cooling water, boiler blow down, river water from intake sump area, industrial wastewater treatment plant effluent, and hydrostatic test water.		
Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25591411	RMI	84.65
Watershed No.	3-G	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final, 12/30/2006	Name	Delaware River Estuary PCB TMDLs

Discharge, Receiving Waters and Water Supply Information

Outfall No.	013	Design Flow (MGD)	0
Latitude	39º 50' 57.59"	Longitude	-75º 19' 14.91"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	Stormwater		
Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25591411	RMI	84.9

Discharge, Receiving Waters and Water Supply Information

Outfall No.	108	Design Flow (MGD)	3.045*
Latitude	39º 50' 57.61"	Longitude	-75º 19' 20.56"
Quad Name	Bridgeport	Quad Code	2043
Wastewater Description:	IW Process Effluent with ELG		
Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25591411	RMI	84.62
Watershed No.	3-G	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final, 12/30/2006	Name	Delaware River Estuary PCB TMDLs

* this is the current permitted flow from the previous permit; the renewal application reported a design flow of 3.744 mgd based on the maximum pump design capacity.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	007	Design Flow (MGD)	0
Latitude	39º 50' 57.62"	Longitude	-75º 19' 23.12"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25591411	RMI	84.62

Treatment Facility Summary

Treatment Facility Name: Eddystone Generating Station

WQM Permit No.	Issuance Date
2389201	08/03/1990
2389201-A1	03/01/2018

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Other Processes (Industrial Waste)	Oil and Grease Removal (Skim/Septr)	No Disinfection	3.045

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
3.7		Not Overloaded		

Compliance History

DMR Data for Outfall 001 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
PCBs (Wet Weather) (pg/L) Daily Maximum						928.53						

DMR Data for Outfall 004 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
pH (S.U.) Daily Maximum						7.9						
CBOD5 (mg/L) Daily Maximum						< 2						
COD (mg/L) Daily Maximum						73						
TSS (mg/L) Daily Maximum						9						
Oil and Grease (mg/L) Daily Maximum						< 5						
TKN (mg/L) Daily Maximum						0.55						
Total Phosphorus (mg/L) Daily Maximum						0.10						
Total Iron (mg/L) Daily Maximum						0.85						

DMR Data for Outfall 008 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	65.35	83.4	14.10	21.6	21.61	21.69	82.39	170.02	363.43	414.14	453.95	421.57
Flow (MGD) Daily Maximum	219.6	208.8	21.6	21.6	22.05	76.8	219.6	219.6	417.6	417.6	835.2	637.2
pH (S.U.) Instantaneous Minimum	7.3	7.5	7.6	7.3	7.3	7.2	7.3	7.4	7.4	7.35	7.2	6.9

pH (S.U.) Instantaneous Maximum	7.6	7.7	7.8	7.8	7.7	7.7	7.6	7.6	7.5	7.6	7.8	7.7
TRC (mg/L) Instantaneous Maximum	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Temperature (ºF) Average Monthly	65.5	59.9	52.7	49.6	51.2	52.3	52.0	65.4	76.8	83.0	89.2	80.3
Temperature (ºF) Intake Average Monthly	62.4	54.4	43.6	37.9	39.4	42.0	47.25	62.0	73.8	77.6	80.5	73.1
Delta T (ºF) Average Monthly	3.1	5.5	9.1	11.7	11.8	10.3	4.75	3.4	3.0	5.4	8.8	7.2
TSS (mg/L) Average Monthly	3	7	4	4	3	1	2	< 1	9	10	9.5	4
TSS (mg/L) Effluent Net Average Monthly	2	6	< 3	3	< 2	< 00	1	< 00	6	5	7.5	-2
TSS (mg/L) Intake Average Monthly	1	1	< 1	1	< 1	< 1	1	1	3	5	2	6
TSS (mg/L) Daily Maximum	3	7	4	4	3	1	2	< 1	9	10	9.5	4
TSS (mg/L) Effluent Net Daily Maximum	2	6	< 3	3	< 2	< 00	1	< 00	6	5	7.5	-2
TSS (mg/L) Intake Daily Maximum	1	1	< 1	1	< 1	< 1	1	1	3	5	2	6
Ammonia (mg/L) Average Monthly	0.30	0.42	GG	GG	GG	GG	GG	GG	GG	GG	< 0.10	< 0.10
Bromide (mg/L) Daily Maximum			< 0.200			< 0.2			< 0.2			< 0.2
Spectrus CT 1300 (mg/L) Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG

DMR Data for Outfall 010 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Flow (MGD) Daily Maximum	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005

pH (S.U.) Instantaneous Minimum	7.0	7.7	7.6	7.5	7.6	7.5	7.5	7.6	7.5	7.51	7.5	7.7
pH (S.U.) Instantaneous Maximum	7.0	7.7	7.6	7.5	7.6	7.5	7.5	7.6	7.5	7.51	7.5	7.7
Temperature (ºF) Instantaneous Maximum	59.3	55.7	44.7	46.4	49.4	50.9	58.4	70.7	74.8	73.9	86.5	77.9
CBOD5 (mg/L) Daily Maximum						< 2						
COD (mg/L) Daily Maximum						41						
TSS (mg/L) Average Monthly	19	11	11	4	6	5	5	3	21.5	22.5	10	17
TSS (mg/L) Daily Maximum	19	11	11	4	6	5	5	3	37	38	10	17
Oil and Grease (mg/L) Average Monthly	< 6	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Oil and Grease (mg/L) Daily Maximum	< 6	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
TKN (mg/L) Daily Maximum						1.20						
Total Phosphorus (mg/L) Daily Maximum						0.19						
Total Aluminum (mg/L) Average Monthly	0.24	0.10	0.10	0.16	0.54	0.10	0.12	0.13	6.07	2.51	0.16	0.29
Total Aluminum (mg/L) Daily Maximum	0.24	0.10	0.10	0.16	0.54	0.10	0.12	0.13	6.07	2.51	0.16	0.29
Dissolved Iron (mg/L) Average Monthly	0.06	0.15	0.53	0.39	0.39	0.05	0.27	0.02	< 0.02	< 0.02	< 0.02	< 0.02
Dissolved Iron (mg/L) Daily Maximum	0.06	0.15	0.53	0.39	0.39	0.05	0.27	0.02	< 0.02	< 0.02	< 0.02	< 0.02
Total Iron (mg/L) Daily Maximum						2.02						

DMR Data for Outfall 013 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
pH (S.U.) Daily Maximum						7.15						

CBOD5 (mg/L) Daily Maximum						< 2						
COD (mg/L) Daily Maximum						< 25						
TSS (mg/L) Daily Maximum						4						
Oil and Grease (mg/L) Daily Maximum						< 5						
TKN (mg/L) Daily Maximum						0.50						
Total Phosphorus (mg/L) Daily Maximum						< 0.05						
Total Iron (mg/L) Daily Maximum						0.68						

DMR Data for Outfall 014 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
pH (S.U.) Daily Maximum						6.6						
CBOD5 (mg/L) Daily Maximum						< 2						
COD (mg/L) Daily Maximum						28						
TSS (mg/L) Daily Maximum						< 1						
Oil and Grease (mg/L) Daily Maximum						< 5						
TKN (mg/L) Daily Maximum						1.23						
Total Phosphorus (mg/L) Daily Maximum						< 0.05						
Total Iron (mg/L) Daily Maximum						2.14						

DMR Data for Outfall 108 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	0.091	0.060	0.043	0.062	0.086	0.077	0.070	0.103	0.096	0.085	0.191	0.146

Flow (MGD) Daily Maximum	0.484	0.608	0.337	0.490	0.502	0.612	0.653	0.778	0.788	0.717	0.809	0.817
pH (S.U.) Instantaneous Minimum	6.7	7.32	6.28	6.52	6.54	6.63	6.54	6.98	7.12	7.05	7.09	6.41
pH (S.U.) Instantaneous Maximum	8.54	8.72	8.31	7.81	8.7	8.24	8.30	7.66	7.9	8.35	8.1	7.91
CBOD20 (lbs/day) Average Monthly						3	< 2	< 4	< 2	4	3	7
TSS (mg/L) Average Monthly	1	2	4	4.5	5	4.5	3.5	1	< 9	5	4.2	1
TSS (mg/L) Daily Maximum	1	3	5	7	8	7	6	1	17	6	10.5	1
Total Dissolved Solids (mg/L) Average Monthly	320.5	333.5	401	415.5	206.5	256	238.5	150.5	147.5	157.5	374.3	280.5
Total Dissolved Solids (mg/L) Daily Maximum	329	368	494	516	269	352	295	151	161	194	440	293
Oil and Grease (mg/L) Average Monthly	< 6	< 5	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5.5
Oil and Grease (mg/L) Daily Maximum	7	< 5	12	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	6
Total Copper (mg/L) Average Monthly	0.034	0.034	0.284	0.011	0.012	0.006	0.011	0.007	0.006	0.009	0.012	0.011
Total Copper (mg/L) Daily Maximum	0.039	0.034	0.284	0.011	0.012	0.006	0.011	0.007	0.006	0.009	0.015	0.011
Total Iron (mg/L) Average Monthly	0.24	0.17	0.54	0.72	1.29	0.72	0.58	0.26	0.19	0.27	0.44	0.26
Total Iron (mg/L) Daily Maximum	0.30	0.17	0.54	0.72	1.29	0.72	0.58	0.26	0.19	0.27	0.57	0.26
PCBs (Dry Weather) (pg/L) Daily Maximum						1850.53						

DMR Data for Outfall 110 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
pH (S.U.) Instantaneous Minimum			7.48			7.33			7.26			6.8

pH (S.U.) Instantaneous Maximum			7.48			7.33			7.26			6.8
CBOD5 (mg/L) Daily Maximum						< 2						
COD (mg/L) Daily Maximum						42						
TSS (mg/L) Daily Maximum						4						
Oil and Grease (mg/L) Average			9			< 5			< 5			< 5
Oil and Grease (mg/L) Instantaneous Maximum			9			< 5			< 5			< 5
TRPH (mg/L) Average			< 5			< 5			< 5			< 5
TRPH (mg/L) Instantaneous Maximum			< 5			< 5			< 5			< 5
TKN (mg/L) Daily Maximum						0.73						
Total Phosphorus (mg/L) Daily Maximum						0.07						
Total Iron (mg/L) Daily Maximum						2.12						

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0
Latitude 39º 51' 41.00" **Longitude** -75º 19' 24.00"
Wastewater Description: Stormwater

Outfall No. 002 **Design Flow (MGD)** 0
Latitude 39º 51' 41.00" **Longitude** -75º 19' 24.00"
Wastewater Description: Stormwater

These discharges consist of stormwater runoff from parking lot areas. No potential sources of pollutants. Monitoring is not required similar to the previous permit, except for PCB, Wet Weather analysis at outfall 001.

Outfall No. 004 **Design Flow (MGD)** 0
Latitude 39º 51' 34.00" **Longitude** -75º 19' 20.00"
Wastewater Description: Stormwater

This is mainly just stormwater discharge from yard drains and the following stormwater parameters are included in the permit: Oil and Grease, BOD5, COD, TSS, Total Nitrogen, Total Phosphorus and pH. Based on the sample analysis Total Iron is also included.

Outfall No. 007 **Design Flow (MGD)** 0
Latitude 39º 51' 23.00" **Longitude** -75º 19' 27.00"
Wastewater Description: stormwater

This is a stormwater discharge from Unit 1 & 2 screen house roof drains. Similar to the existing permit, monitoring is not required.

Outfall No. 013 **Design Flow (MGD)** 0
Latitude 39º 51' 26.00" **Longitude** -75º 19' 20.00"
Wastewater Description: Stormwater

This outfall discharges from the boom dock area. The following stormwater parameters are included: Oil and Grease, BOD5, COD, TSS, Total Nitrogen, Total Phosphorus and pH.

Outfall No. 014 **Design Flow (MGD)** 0
Latitude 39º 51' 25.00" **Longitude** -75º 19' 22.00"
Wastewater Description: Stormwater

This outfall discharges from Unit 1 & 2 screen house roof drains. The following stormwater parameters are included: Oil and Grease, BOD5, COD, TSS, Total Nitrogen, Total Phosphorus and pH. Based on the sample analysis Total Iron is also included.

Development of Effluent Limitations

Outfall No.	010	**Design Flow (MGD)**	0
Latitude	39º 51' 23.00"	**Longitude**	-75º 19' 28.00"

Wastewater Description: stormwater, groundwater, condensate storage tank overflow, hydrostatic tank testing water.

Facility requests to reroute the non-contact cooling water from the sample coolers previously discharging through this outfall to Outfall 008. 0.075 mgd of non-contact cooling water will be rerouted to the sumps located within the area of Units 3 and 4 boilers and then to the industrial wastewater treatment plant before passing through monitoring point 108. The groundwater seepage is a very insignificant contributor to this outfall and is intermittent. The condensate storage tank overflow only occurs during failure of the tank level control system. An overflow has not occurred in the last ten years.

The following stormwater parameters are included: Oil and Grease, BOD5, COD, TSS, Total Nitrogen, Total Phosphorus and pH. Based on the sample analysis Total Iron is also included. The requirement for the hydrostatic test water discharge is also added in Part C of the permit.

MP 110: This monitoring point was established at the last permit renewal to monitor the stormwater runoff from the Eddystone Rail Company's (ERC) rail unloading containment system. ERC receives crude oil deliveries by rail and offload the oil into a 200,000-barrel tank at the rail unloading area. The rail unloading containment area is located within the drainage area of outfall 010. From the tank the crude oil is pumped through an aboveground pipeline onto barges where it is transported to various customers. Effluent limits for MP110 are pH-6.0 to 9.0 SU, TRPH-15 mg/l and Oil and Grease-15 mg/l/ similar to the existing permit limits. Stormwater parameters BOD5, COD, TSS,Total Nitrogen, and Total Phosphorus are included. Based on the sample analysis, Total Iron is also included.

Outfalls 001, 002, and 004 are also getting stormwater from rail car staging areas.

Development of Effluent Limitations

Outfall No. 008 **Design Flow (MGD)** 835.2
Latitude 39º 51' 23.00" **Longitude** -75º 19' 27.00"
Wastewater Description: Once-through cooling water, boiler blow down, industrial wastewater treatment plant effluent, river water from intake sump area and hydrostatic test water.

Technology-Based Limitations

EFFLUENT PARAMETER	TECHNOLOGY BASED LIMITS								BASIS FOR LIMIT
	BPT				BAT				
	DAILY AVERAGE		DAILY MAXIMUM		DAILY AVERAGE		DAILY MAXIMUM		
	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/ DAY)	
TRC							0.2		40 CFR:423.13(b)1

Water Quality-Based Limitations

EFFLUENT PARAMETER	WATER QUALITY BASED LIMITS					BASIS FOR LIMIT
	MONTHLY AVERAGE		DAILY MAXIMUM		INST. MAX.	
	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	
Temperature, Delta (ºF)	21*					DRBC docket # D-1992-066 CP-2
Temperature					110	DRBC/ Public Safety
PH	6.0 to 9.0 STD					Chapter 95
TSS	30		100			Existing**
TDS						Limit at MP108
NH3-N	Monitor/Report					
Spectrus CT1300			0.05			Existing / MDL of the available analytical method
Bromide			Report			existing

* A CORMIX modeling study conducted by the permittee in 2014, determined that the heat dissipation area required during maximum flow and a temperature rise of 21 ºF from Intake No. 2 to Outfall 008 is 420 feet by 400 feet. This requirement is incorporated into Part C of the permit.

** based on the technology limit at MP 108.

A Reasonable Potential Analysis determined the following parameters are of concern:

Parameter	Maximum Concentration in Application	Most Stringent Criterion (ug/l)	Max. Allowable Concentration using dilution factor	Comments
Total Dissolved Solids	198000	500000	No dilution available	*
Fluoride	<1000	2000		No concern since no public water supply intake downstream.
Total Copper	7	9.3		Monitor**
Total Lead	2	3.2		Monitor**
Acrylamide	< 10	0.07		*** No monitoring
Total Phenols (Phenolics)	27	5		No concern since no public water supply intake downstream.

Discharge is to tidal Delaware Estuary, Q7-10 = 25 cfs =16.18 mgd.

Qd = 835.2mgd

* DRBC's basin wide effluent limit is 1000 mg/l at the end of pipe and it was determined that since the NCCW that comingles with the industrial wastewater at MP 108 contains no additional TDS, the permittee may monitor TDS at MP 108 as a surrogate. This is similar to the existing permit requirement.

** the amount of discharge is very high compared to the flow available for dilution. Only two sample analyses are provided. Recommend monitoring.

*** reported as non-detectable using a QL of 10 ug/l and there is no TQL established for acrylamide.

Anti-Backsliding

N/A

Development of Effluent Limitations

Outfall No. 108 **Design Flow (MGD)** 3.045
Latitude 39º 51' 23.00" **Longitude** -75º 19' 27.00"
Wastewater Description: IW Process Effluent with ELG

Technology-Based Limitations

EFFLUENT PARAMETER	TECHNOLOGY BASED LIMITS								
	BPT				BAT				BASIS FOR LIMIT
	MONTHLY AVERAGE		DAILY MAXIMUM		DAILY AVERAGE		DAILY MAXIMUM		
	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/DAY)	
TSS	30		100						423.12 (b)3, 4, 5
Oil and Grease	15		20						" "
Copper, Total	1		1						" "
Iron, Total	1		1						" "
pH	6.0 to 9.0								423.12(b) 1

Copper and Iron limits are based on metal cleaning wastewaters. Chemical metal cleaning wastewater is permitted to discharge to the treatment plant. But the facility rarely does chemical metal cleaning. It is believed that the last time a chemical metal cleaning was performed was in the late 1980's. However, the facility wants to keep this option in their permit in case there is a need in the future. Recommend continuing existing Copper and Iron monitoring.

Water Quality-Based Limitations

EFFLUENT PARAMETER	WATER QUALITY BASED LIMITS					
	MONTHLY AVERAGE		DAILY MAXIMUM		INST. MAX.	BASIS FOR LIMIT
	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	LOAD (LBS/DAY)	CONC. (MG/L)	
TDS	1000		2000		2500	DRBC *
TSS	Recommend BPT					
Oil and Grease						
PCB, Dry Weather			Monitor			Existing

*Docket No. D-1992-066 CP-2

A Reasonable Potential Analysis determined the following parameters are of concern:

Parameter	Maximum Concentration in Application	Most Stringent Criterion (ug/l) (a)	Max. Allowable Concentration using dilution factor (a* 227)	Comments
Total Dissolved Solids	742000	500000		Existing limit recommended to continue
Total Copper	15	9.3	2111	**
Total Phenols	24	5	1135	**
Acrylamide	<10	0.07	15.89	**
Chlorodibromomethane	2.7	0.4	90.8	**
Chloroform	6.2	5.7	1294	**
Dichlorobromomethane	4.6	0.55	124.85	**

Discharge is to tidal Delaware Estuary, Q7-10 = 25 cfs =16.18mgd.

Qd = 3.045 mgd

**The 3.045 mgd wastewater from IWTP mixes with cooling water and a total flow of 835.08 mgd discharges to the Delaware River. With this high available dilution (dilution factor=280.56) none of these parameters are a concern.

Anti-Backsliding

N/A

Proposed Effluent Limitations and Monitoring Requirements

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
PCBs (Wet Weather) (pg/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Proposed Effluent Limitations and Monitoring Requirements

Outfall 002, Effective Period: Permit Effective Date through Permit Expiration Date.

No Monitoring Required

Proposed Effluent Limitations and Monitoring Requirements

Outfall 004, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Daily Maximum	Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
BOD5	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab

Proposed Effluent Limitations and Monitoring Requirements

Outfall 007, Effective Period: Permit Effective Date through Permit Expiration Date.

No Monitoring Required

Proposed Effluent Limitations and Monitoring Requirements

Outfall 008, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	See Permit	Calculation
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	See Permit	Grab
TRC	XXX	XXX	XXX	XXX	XXX	0.2	See Permit	Grab
Temperature (ºF) Intake	XXX	XXX	XXX	Report	XXX	XXX	See Permit	I-S
Temperature (ºF)	XXX	XXX	XXX	Report	XXX	110	See Permit	I-S
Delta T (ºF)	XXX	XXX	XXX	21	XXX	XXX	See Permit	Calculation
TSS Intake	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
TSS	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
TSS Effluent Net	XXX	XXX	XXX	30	100	XXX	1/month	Calculation
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	See Permit	24-Hr Composite
Total Copper	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Total Lead	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Bromide	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Spectrus CT 1300	XXX	XXX	XXX	XXX	0.05	XXX	1/day	Grab

Proposed Effluent Limitations and Monitoring Requirements

Outfall 010, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Daily Maximum	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
BOD5	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab

Proposed Effluent Limitations and Monitoring Requirements

Outfall 013, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Daily Maximum	Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
BOD5	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab

Proposed Effluent Limitations and Monitoring Requirements

Outfall 014, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Daily Maximum	Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
BOD5	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab

Proposed Effluent Limitations and Monitoring Requirements

Outfall 108, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	Report Inst Min	XXX	XXX	Report	1/day	Grab
TSS	XXX	XXX	XXX	30	100	XXX	2/month	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	1000.0	2000.0	2500	2/month	24-Hr Composite
Oil and Grease	XXX	XXX	XXX	15	20	30	2/month	Grab
Total Copper	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
Total Iron	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
PCBs (Dry Weather) (pg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	24-Hr Composite

Proposed Effluent Limitations and Monitoring Requirements

Outfall 110, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Daily Maximum	Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
BOD5	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	15 Avg Qrtly	XXX	30	1/quarter	Grab
TRPH	XXX	XXX	XXX	15.0 Avg Qrtly	XXX	30.0	1/quarter	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab