pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office

CLEAN WATER PROGRAM

Application Type	**Amendment, Major**	**NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER**	Application No.	**PA0008281 A-1**
Facility Type	**Industrial**		APS ID	**326722**
Major / Minor	**Major**		Authorization ID	**1294016**

Applicant and Facility Information

Applicant Name	**Brunner Island LLC**	Facility Name	**Brunner Island**
Applicant Address	PO Box 221 (1400 Wago Road)	Facility Address	1400 Wago Road - Brunner Island
	York Haven, PA 17370		York Haven, PA 17370-0221
Applicant Contact	Thomas Clisham	Facility Contact	Marcia Thiess
Applicant Phone	(717)266 -7510	Facility Phone	(717)268-1531
Client ID	141473	Site ID	447501
SIC Code	4911	Municipality	East Manchester Township
SIC Description	Trans. & Utilities - Electric Services	County	York
Date Application Received	October 29, 2019	EPA Waived?	No
Date Application Accepted	November 12, 2019	If No, Reason	Major Facility

Purpose of Application .Permit amendment to address concerns in a consent decree

Summary of Review

1.0 General Discussion

This permit amendment application was submitted by Brunner Island LLC. to request an amendment to their existing NPDES permit. Brunner Island LLC, a subsidiary of Talen Energy owns and operates the 1,490-Megawatt coal and natural gas-fired power plant known as the Brunner Island Steam Electric Station (BISES) located along the western shore of the Susquehanna River in East Manchester Township, York County, Pennsylvania. BISES uses three boiler units. Unit 1 began operation in 1961 and has a generating capacity of 325 megawatts; Unit 2 began operation in 1965 and has a generating capacity of 384 megawatts; and Unit 3 began operation on 1969 with a generating capacity of 781 megawatts. BISES discharges various wastewater and stormwater flows under NPDES Permit No. PA0008281. The BISES site treats a variety of industrial wastewaters and flow from ash basin 5 is being pumped for treatment. Sewage is treated on-site. The permit has an outfall for sewage discharge, 7 industrial wastewater outfalls and 22 stormwater outfalls. Other than the areas of the permit affected by this amendment, the factsheet developed in support of the July 27, 2018 permit is valid. The permit was reissued on July 27, 2018 with effective date of August 1, 2018 and expiration date of July 31, 2023. On September 27, 2018 three third party groups consisting of Lower Susquehanna Riverkeeper Association, Waterkeeper Alliance and PennEnviroment appealed the NPDES permit and filed a notice of intent to sue Brunner Island LLC for permit violations. To address the concerns in the appeal and the notice of intent to sue, DEP, Brunner Island LLC, and the third-party groups signed a consent decree which was lodged on July 31, 2019 and entered on November 8, 2019. The permit amendment will address the following concerns raised with the issued NPDES permit per paragraphs 18, 39, and 41 of the consent decree.

Approve	Deny	Signatures	Date
X		*J. Pascal Kwedza* J. Pascal Kwedza, P.E. / Environmental Engineer	February 2, 2021
X		Maria D. Bebenek Maria D. Bebenek, P.E./ Program Manager	February 2, 2021

Summary of Review

- As required in paragraph 41 in the consent decree, DEP conducted reasonable potential analysis for Outfall 001 to determine if limitation or monitoring requirement was needed in the permit.
- DEP revised coordinates for stormwater Outfall 021 in the permit as required in paragraph 39(a) of the consent decree.
- Outfall 006 was removed from the permit as required in paragraph 39(b) of the consent decree.
- Pursuant to paragraphs 18 and 39(c) of the consent decree, the amended permit accounts for Total Nitrogen and Total Phosphorus diverted from Outfall 007 to Outfall 008.
- Brunner identified new stormwater outfalls and re-grouped of some of the existing stormwater outfalls as required in paragraph 39(d) of the consent decree.
- In addition, foot notes 16 and 17 have been revised pursuant to EPA revisions of the Steam Electric Effluent Limitation Guidelines 40 CFR Part 423.

1.1 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.

2.0 Water Quality-Based Limitations

2.1 Stream Flow

The United States Geologic Survey (USGS) maintains a stream gauging station on the Susquehanna River at Marietta, gauging station no. 01576000. This stream gauging station is the closest station downstream of the BISES site at approximately 8.5 miles away. The previous protection report used a Q_{7-10} flow of 3,283 cubic feet per second (cfs), which was reported by the Susquehanna River Basin Commission (SRBC) and the USGS for the period from 1972-2004.

The Q_{7-10} value closely matches the calculated Q_{7-10} value of 3,200 cfs, obtained from the USGS Pennsylvania Stream Stats GIS application on September 14, 2011. The USGS PA Stream Stats Q_{7-10} value of 3,200 cfs is an average value for the entire Susquehanna River up to the Marietta gauging station. Therefore, because the two values are consistent and the USGS PA Stream Stats value is up to date, the USGS PA Stream Stats Q_{7-10} is considered the most appropriate flow for the BISES NPDES renewal. The USGS PA Stream Stats' watershed delineation tool, used at the BISES site, produces a Q_{7-10} value of 3,100 cfs with a drainage area of 25,500 mi^2.

The Q_{7-10} of 3,100 cfs produces a chronic or 30-day (Q_{30-10}) and an acute or 1-day (Q_{1-10}) exposure stream flows of:

$$Q_{7-10} = 3{,}100 \text{ cfs}$$

$$Q_{30-10} = 1.36 * 3{,}100 \text{ cfs} = 4{,}216 \text{ cfs}$$

$$Q_{1-10} = 0.64 * 3{,}100 \text{ cfs} = 1{,}984 \text{ cfs}$$

2.2 Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	795
Latitude	40º 5' 36.85"	Longitude	-76º 41' 4.55"
Quad Name		Quad Code	
Wastewater Description:	IW Process Effluent without ELG, Noncontact Cooling Water (NCCW)		

Receiving Waters	Susquehanna River (WWF)	Stream Code	06685
NHD Com ID	57464297	RMI	54.27
Drainage Area	25,500 mi^2	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	3,100	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-G	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBS)		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Other Comments:

2.3 Toxic Screening Analysis for Outfall 001

As required in the consent decree paragraph 41, Brunner Island submitted and received approval for a sampling plan for Outfall 001 that avoids interferences from the discharges from Outfall 007 and 008. Following the approved sampling plan, Brunner Island conducted and submitted sampling results from Outfall 001 to DEP for analysis. DEP conducted reasonable potential analysis on the sample from Outfall 001 using DEP's Toxic screening analysis spreadsheet. All pollutants that were reported from Brunner Island were entered into the Toxics Screening Analysis spreadsheet to determine if any pollutants required PENTOXSD modeling. All pollutants reported above water quality criteria are considered parameters of concern and require PENTOXSD modeling. This also includes samples that are reported as non-detect, but the method detection limit utilized is less sensitive than DEP's target quantitation limit.

When the first set of data for Outfall 001 was screened, Hexavalent Chromium was determined as a pollutant of concern and required PENTOXSD modeling. However, Hexavalent Chromium was reported as non-detect using a less sensitive detection method. Brunner Island had an opportunity to resample using a more sensitive detection method. Brunner Island chose to resample for Hexavalent Chromium and submitted the result to DEP. The updated result was screened with the original data and presented on the table below. Following the resampling of Hexavalent Chromium, none of the parameters sampled required PENTOXSD modeling. Therefore, no monitoring or limitation is needed in the permit.

Note: DEP used the reported Hardness of 85 mg/l in addition to the design flow of 795 MGD and the reported pH of 8.16 for the toxic screening analysis.

2.4 Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0
Latitude	40º 5' 14.32"	Longitude	-76º 41' 41.06"
Quad Name		Quad Code	
Wastewater Description:	Spring Discharge		
Receiving Waters	Hartman Run	Stream Code	
NHD Com ID	57464851	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-H	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status			
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

2.4.1 Outfall 006

Outfall 006 was identified in the existing permit as a spring discharge to Hartman Run near the railroad tracks, which appears to originate in the areas of the retired Ash Basins Nos. 1 and 3. However, Brunner Island conducted a comprehensive site survey and determined that Outfall 006 and its drainage area are outside their property line and requested for the outfall to be removed from the permit. DEP conducted a follow-up site visit and concurred with Brunner Island's conclusion and agreed to remove the outfall from the permit. Outfall 006 and all related monitoring requirements are removed from the permit.

3.0 Stormwater

Brunner Island conducted a comprehensive audit of all of BISES stormwater outfalls per the requirement of the consent decree. Five additional Outfalls 030,031,032,033, and 034 have been added, and the existing outfalls were updated and regrouped. The updated stormwater outfalls with their respective coordinates and drainage areas, activities conducted in the drainage areas, and receiving stream are presented on Table 1. Stormwater Outfall 021 and all other outfall coordinates and receiving streams in the existing permit were reviewed and have been revised. Brunner Island proposed new representative storm water sampling locations after the audit. The proposed six sampling locations are Outfalls 017, 021, 026, 027, 030, and 032 are shown on attachment C. The existing permit has five representative stormwater sampling locations. All stormwater locations are presented in attachment B. Stormwater Outfalls 012, 013 and 014 have been combined and will be monitored at Outfall 030. All three Outfalls 012, 013, and 014 flow through Outfall 030.

Table 1

Outfall	Drainage Area(ft2)	Latitude	Longitude	Description of activities conducted in the Area	Receiving Stream
006				Will be removed from Permit per Consent Decree Paragraph 39(b)	
009	2,042,150	40°05'40"	76°42'08"	Wooded area, golf course, gravel roadway and railroad tracks	Conewago Creek
O10	1,940,920	40°05'09"	76°41'03"	Basin 005 drainage and old basin 005 discharge	Susquehanna River
011	353,704	40°05'18"	76°41'36"	Railroad tracks, gravel laydown area	Hartman Run
012 013 014	These outfalls are being combined and permitted under a new outfall 030				
015	28,721	40°05'31"	76°41'20"	Gravel road way, basin 005	Susquehanna River
016	590,437	40°05'16"	76°41'39"	Basin 003 drainage, gypsum storage area, railroad tracks	Hartman Run
017	182,579	40°05'12"	76°41'30"	Roadway and railroad tracks drainage	Hartman Run
018	40,720	40°05'09"	76°41'28"	Roadway and railroad tracks drainage	Hartman Run
019	69,823	40°05'03"	76°41'23"	Roadway and railroad tracks drainage	Hartman Run
020	301,920	40°04'57"	76°41'17"	Basin 003 drainage, railroad tracks, roadway	Hartman Run
021	236,386	40°04'49"	76°41'16"	Roadway and meadow discharge, basin area	Hartman Run
022	32,379	40°04'44"	76°41'08"	Roadway and meadow discharge	Hartman Run
023	251,763	40°04'42"	76°41'02"	Roadway and meadow discharge	Hartman Run
024	68,219	40°04'33"	76°40'45"	Roadway and meadow discharge	Hartman Run
025	135,007	40°04'54"	76°40'49"	Meadow discharge area, basin area	Susquehanna River
026	965,555	40°05'54"	76°42'07"	Meadow area and gypsum storage area	Conewago Creek
027	1,086,686	40°05'32"	76°41'21"	Wastewater treatment plant, gravel areas, meadows	Susquehanna River
028	267,119	40°05'37"	76°41'30"	Laydown area, roadway	Susquehanna River
029	30,200	40°05'35"	76°41'27"	Roadway, cooling tower equipment	Susquehanna River
030	613,232	40°05'49"	76°41'32"	Former outfalls 012, 013, 014 being combined. Gravel laydown area, hillside	Susquehanna River
031	33,509	40°05'26"	76°41'13"	Fishing area parking lot, roadway, hillside	Susquehanna River
032	1,276,092	40°06'28"	76°42'20"	Meadow, storm basin	Susquehanna River
033	488,509	40°06'20"	76°42'10"	Soccer field and parking lot	Susquehanna River
034	463,769	40°06'19"	76°42'06"	Soccer field	Susquehanna River

4.0 Total Phosphorus Total Nitrogen Audit

Brunner Island is required to account for the Total Nitrogen and Total Phosphorous from Outfall 007 that will be redirected and discharged from Outfall 008, along with any other modifications to effluent limits needed to account for the re-routing of the discharge from Disposal Area 8 to the facility's Auxiliary Wastewater Treatment Plant (AWWP). Brunner Island proposed to add an Internal Monitoring Point (IMP) at the AWWP for sampling of the influent pipe from Disposal Area 8 before it mixes with other influent streams. This location was chosen to ensure representative sampling of the Disposal Area 8 leachate and detection zone flows. The proposed IMP will be located at 40° 5' 26.91" N, 76° 41' 31.64" W. A sampling port with a check valve will be installed on an existing influent pipe from Disposal Area 8. There is a flow meter currently in place at this location to measure flow. The flow at this location is rain driven and is therefore intermittent. One grab sample shall be collected twice per week at minimum. If there is no flow for a reporting period, Brunner Island shall report Total Nitrogen and Total Phosphorus loading as zero. Sampling is expected to begin when the leachate from Disposal Area 8 has been redirected to the AWWP. Leachate from Disposal Area 8 will be redirected to the AWWP within 60 days of Brunner Island's receipt of the amended permit as required in the consent decree. Total Nitrogen and Total Phosphorus loadings at the proposed IMP will be calculated based on grab sample concentration and average daily influent flow on the day(s) of sample collection. Flow rate will be monitored continuously. The results will be reported on a monthly basis to determine the required nutrient credits for compliance.

5.0 ELG Modification

EPA published revisions to the September 30, 2015 Steam Electric Effluent Limitation Guidelines (40 CFR Part 423) in the Federal Register on October 13, 2020. Prior to the 2015 rule, regulations for the industry had last been updated in 1982. The revised rule establishes a new subcategory for unit owners that certify they will cease combustion of coal no later than December 31, 2028 pursuant to 40 CFR 423.19(f). For facilities in this subcategory, permit conditions at 40 CFR 423.13(g)(2)(i) apply for Flue Gas Desulfurization (FGD) wastewater and permit conditions in 40 CFR 423.13(k)(2)(ii) apply for Bottom Ash Transport Water (BATW). Brunner Island provided Notice of Planned Participation, to cease combustion of coal for all 3 units no later than December 31, 2028 presented in attachment 9.D.

5.1 Permit Limits

For electric generating units permanently ceasing combustion of coal by December 31, 2028, the final rule establishes Best Available Technology (BAT) limitations equal to Best Practicable Control Technology (BPT) limitations for total suspended solids (TSS) in FGD wastewater and BATW discharge pursuant to 40CFR 423.12(b)(11) and 40CFR 423.12(b)(4) respectively. The treatment system for BATW and FGD wastewater at Brunner Island will not need any retrofits to comply with the recommended limitations for Total Suspended Solids and Oil and Grease. The recommended limits are already in the permit and Brunner Island is already complying with the limits.

5.2 Foot Notes 16 and 17 Revision

Brunner Island requested revision to foot notes 16 and 17 in their existing permit for consistency with the new subcategory. Pursuant to 40 CFR 122.62(a)(3), foot notes 16 and 17 in the existing permit have been revised as follows:

(16) The term bottom ash transport water ("BATW") means water carrying ash, including boiler slag, which settles in the furnace or is dislodged from the furnace walls to areas outside the furnace. The term includes economizer ash when collected with the bottom ash. On October 13, 2020, the US Environmental Protection Agency ("EPA") published revisions to the Steam Electric Effluent Limitation Guidelines at 40 CFR 423. These revisions became effective on December 14, 2020. Pursuant to this revision, Brunner may discharge BATW until December 31, 2028 pursuant to the ceasing combustion of coal subcategory 40 CFR 423.13(k)(2)(ii). Brunner shall continue to implement best management practices and provide annual progress reports documenting progress made towards cessation of coal burning pursuant to 40 CFR 423.19 (f)(3) and (f)(4).

(17) Pursuant to the revisions to the Steam Electric Effluent Limitation Guidelines at 40 CFR 423, effective on December 14, 2020, Brunner may discharge Flue Gas Desulfurization ("FGD") wastewater until December 31, 2028 pursuant to the ceasing combustion of coal subcategory 40 CFR 423.13(g)(2)(i). Brunner shall continue to implement best management practices and provide annual progress reports documenting progress made towards cessation of coal burning pursuant to 40 CFR423.19 (f)(3) and (f)(4).

6.0 Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality. The permittee is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports (DMRs).

6.1 Effluent Monitoring Frequency

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples can be used for averaging if they are conducted using EPA-approved test methods (generally found in 40 CFR 136) and if the Method Detection Limits are less than the effluent limits. The sampling location must be after the last treatment unit and prior to discharge to the receiving water. If no discharge occurs during the reporting period, "no discharge" shall be reported on the DMR.

7.0 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Calculation
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
TRO	XXX	XXX	XXX	0.2	XXX	0.5	1/day	Grab
Temperature (ºF)	XXX	XXX	Report Avg Mo	Report Daily Max	XXX	110	Continuous	I-S
Temperature (ºF) Intake	XXX	XXX	XXX	Report	Report	XXX	Continuous	I-S
Hourly Temp Change (ºF) Instream Monitoring	XXX	XXX	XXX	XXX	XXX	2.0	Continuous	I-S
Heat Rejection Rate (MBTUs/day) Dec 1 - Feb 29	XXX	167040	XXX	XXX	XXX	XXX	1/day	Calculation
Heat Rejection Rate (MBTUs/day) Mar 1 - Apr 30, Nov 1 - 30	XXX	91870	XXX	XXX	XXX	XXX	1/day	Calculation
Heat Rejection Rate (MBTUs/day) May 1 - 31, Oct 1 - 31	XXX	83520	XXX	XXX	XXX	XXX	1/day	Calculation
Heat Rejection Rate (MBTUs/day) Jun 1 - Sep 30	XXX	75170	XXX	XXX	XXX	XXX	1/day	Calculation
Trihalomethanes	XXX	XXX	XXX	Report	Report	XXX	1/week	Grab

Compliance Sampling Location: At Outfall 001

7.1 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 002, 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	Daily Maximum	Average Monthly	Daily Maximum	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Min	XXX	XXX	9.0	1/day	Grab
TSS	Report	Report	30.0	50.0	XXX	50.0	1/week	Grab
Oil and Grease	Report	Report	15.0	20.0	XXX	30.0	1/week	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Arsenic	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Boron	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Cadmium	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Chromium	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Mercury	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Molybdenum	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Outfall 002, Continued (from 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	Daily Maximum	Average Monthly	Daily Maximum	Daily Maximum	Instant. Maximum		
Total Nickel	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Selenium	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Compliance Sampling Location: At Outfall 002

7.2 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 003, 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		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.63	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000	XXX	10000	2/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200	XXX	1000	2/month	Grab
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite

Compliance Sampling Location: At Outfall 003

Other Comments

7.3 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 005, 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	Daily when Discharging	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TSS	XXX	XXX	XXX	XXX	XXX	100.0	Daily when Discharging	Grab
Oil and Grease	XXX	XXX	XXX	20.0 Daily Max	XXX	30.0	Daily when Discharging	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Arsenic	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Boron	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Cadmium	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Chromium	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Mercury	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab

Outfall 005, Continued (from 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		
Total Molybdenum	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Nickel	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Selenium	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab

Compliance Sampling Location: At Outfall 005

7.4 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 007, 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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
TSS	Report	Report	XXX	30.0	100.0	100	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
Oil and Grease	Report	Report	15.0 Avg Mo	20.0 Daily Max	XXX	30.0	1/week	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Nitrate-Nitrite (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen Intake	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs) Intake	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite

Outfall 007 , Continued (from 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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Phosphorus Intake	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Phosphorus (lbs) Intake	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Aluminum	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Antimony	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Arsenic	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Boron	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Cadmium	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Chromium	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Copper	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Fluoride	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Iron	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Lead	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Manganese	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Mercury	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Molybdenum	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite

Outfall 007 , Continued (from 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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Nickel	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Selenium	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Sulfate	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Thallium	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Zinc	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Chloride	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Bromide	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite

Compliance Sampling Location: At Outfall 007

7.5 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

IMP 701, 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	Daily when Discharging	Measured
Nitrate-Nitrite	Report	XXX	XXX	Report	XXX	XXX	2/week	Grab
TKN	Report	XXX	XXX	Report	XXX	XXX	2/week	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	2/week	Grab

Compliance Sampling Location: At IMP 701

7.6 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TSS	Report	Report	XXX	30.0	50.0	50	1/week	24-Hr Composite
Oil and Grease	Report	Report	15.0 Avg Mo	20.0 Daily Max	XXX	30.0	1/week	Grab
Total Aluminum	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Arsenic	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Boron	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Cadmium	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Chromium	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Copper	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Iron	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Lead	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Manganese	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Mercury	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite

Outfall 008, Continued (from 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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Molybdenum	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Nickel	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Selenium	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite
Total Zinc	XXX	Report	XXX	XXX	Report	XXX	1/month	24-Hr Composite

Compliance Sampling Location: At Outfall 008

7.7 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

IMP 801, 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	Daily when Discharging	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	9.0	XXX	Daily when Discharging	Grab
TSS	XXX	XXX	XXX	30	100	XXX	Daily when Discharging	Grab
Oil and Grease	XXX	XXX	XXX	15	20	XXX	Daily when Discharging	Grab
Total Copper	XXX	XXX	XXX	1.0	1.0	XXX	Daily when Discharging	Grab
Total Iron	XXX	XXX	XXX	1.0	1.0	XXX	Daily when Discharging	Grab

Compliance Sampling Location: At IMP 801

7.8 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

Outfall 007, 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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Total Nitrogen (lbs) Effluent Net	XXX	0 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Ammonia (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs) Effluent Net	XXX	0 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: At Outfall 007

Other Comments: Total Phosphorus and Total Nitrogen load calculation from IMP 701 shall be added to Total Phosphorus and Total Nitrogen load calculation from Outfall 007 to determine Total annual load compliance for Total Phosphorus and Total Nitrogen

7.9 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 017, 021, 026, 027, 030, and 032, 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)	XXX	Report Daily Max	XXX	XXX	XXX	XXX	1/year	Estimate
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Aluminum, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Arsenic, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Boron, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Cadmium, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Chromium, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Copper, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Lead, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Manganese, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Mercury, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Molybdenum, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Nickel, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

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		
Selenium, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Zinc, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

Compliance Sampling Location: at Outfalls 017, 021, 026, 027, 030, and 032

8.0 Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Toxics Screening Analysis Spreadsheet (see Attachment **A**)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☒	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

9. Attachments

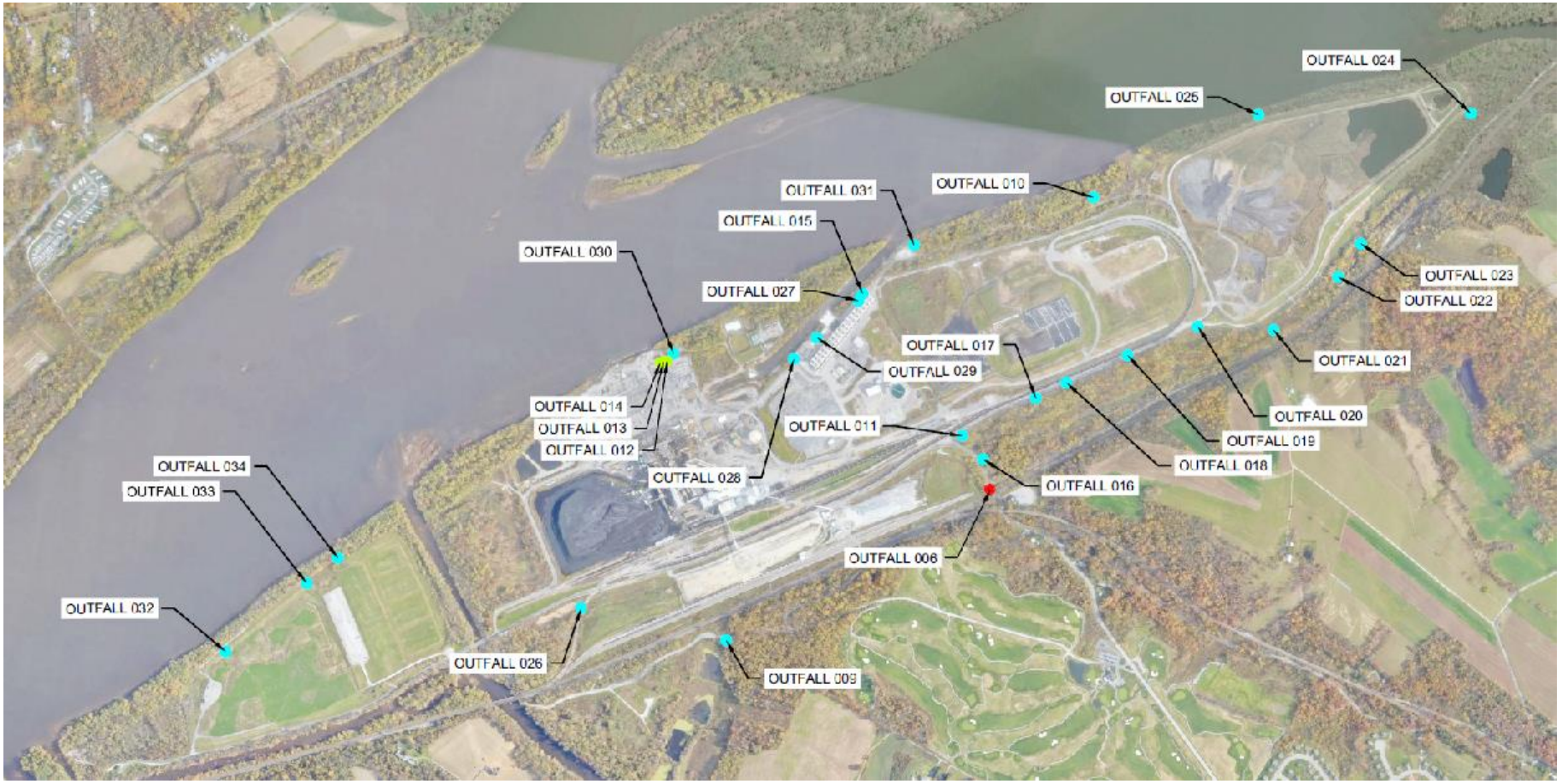
A. Toxic Screening Analysis Results

TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.7

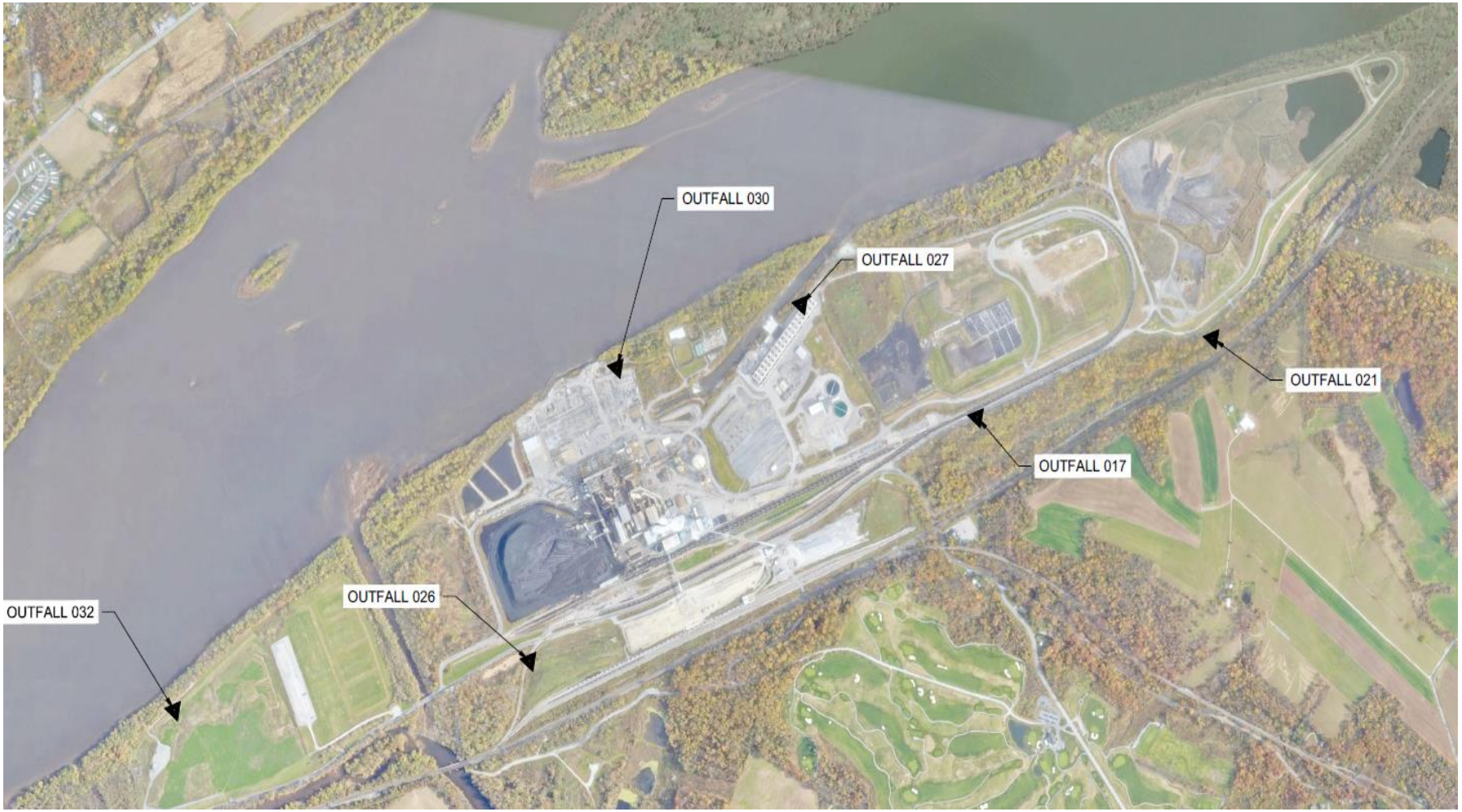
Facility: **Brunner Island** NPDES Permit No.: **PA0008281** Outfall: **001**
Analysis Hardness (mg/L): **85** Discharge Flow (MGD): **795** Analysis pH (SU): **8.16**
Stream Flow, Q_{7-10} (cfs): **3100**

Parameter	Maximum Concentration in Application or DMRs (µg/L)		Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation
Total Dissolved Solids			500000			
Chloride		16100	250000	No		
Bromide		500	N/A	No		
Sulfate		16800	250000	No		
Fluoride		500	2000	No		
Total Aluminum		91	750	No		
Total Antimony		1	5.6	No		
Total Arsenic		1.5	10	No		
Total Barium		24	2400	No		
Total Beryllium		0.5	N/A	No		
Total Boron		50	1600	No		
Total Cadmium	<	0.2	0.24	No (Value < QL)		
Total Chromium		1	N/A	No		
Hexavalent Chromium		0.037	10.4	No		
Total Cobalt		2.5	19	No		
Total Copper		2.5	8.1	No		
Total Cyanide		2	N/A	No		
Total Iron		200	1500	No		
Dissolved Iron		60	300	No		
Total Lead		1	2.6	No		
Total Manganese		18	1000	No		
Total Mercury	<	0.2	0.05	No (Value < QL)		
Total Molybdenum		2.5	N/A	No		
Total Nickel		2.5	45.5	No		
Total Phenols (Phenolics)	<	5	5	No (Value < QL)		
Total Selenium	<	2	5.0	No (Value < QL)		
Total Silver	<	0.5	2.9	No		
Total Thallium	<	0.5	0.24	No (Value < QL)		
Total Zinc		8.3	104.4	No		

B. Current Storm Water Outfalls



C. Storm Water Sampling Locations



D. Request for Permit Modification and Notice of Planned Participation

Thomas S. Clisham • Plant Manager – Brunner Island SES • Talen Generation, LLC
PO Box 221 • York Haven, PA 17370-0221
(717) 266-7510 • Thomas.Clisham@talenenergy.com

November 20, 2020

Ms. Maria Bebenek
Clean Water Program
PA Department of Environmental Protection
909 Elmerton Avenue
Harrisburg, Pennsylvania 17110-8200

BRUNNER ISLAND, LLC – NPDES Permit No. PA0008281
Submission of Supplemental Information for Permit Modification Request

Dear Ms. Bebenek:

Brunner Island, LLC is providing the attached information to supplement its existing permit modification request for Permit No. PA0008281, which became effective on August 1, 2018. This request is based upon EPA's revisions to the Steam Electric Effluent Limitation Guidelines (40 CFR Part 423) that were published in the Federal Register on October 13, 2020. 85 Fed. Reg. 64,650 (Reconsideration Rule).

As provided in Part A Footnotes (16) and (17) of Brunner's current NPDES permit, the permit anticipated potential revision of the relevant steam electric effluent limitation guidelines (ELG) and authorizes revisions to the current permit's ELG requirements for bottom ash transport water (BATW) and flue gas desulfurization (FGD) wastewater should EPA publish changes to those requirements. As noted above, EPA has published changes to both ELG requirements.

Specifically, the Reconsideration Rule establishes a new subcategory for units whose owners certify they will cease combustion of coal no later than December 31, 2028. See 40 CFR 423.11(w), 85 Fed. Reg. at 64,716, and revised §§423.13(g)(2)(i) (FGD wastewater) and §423.13(k)(2)(ii) (BATW), 85 Fed. Reg. at 64,717, 64,719. As provided in the attached Notice of Planned Participation, Brunner is providing documentation of its requirement to cease combustion of coal for all Brunner units no later than December 31, 2028.

As is discussed on Pages 64660 and 64661 of the October 13, 2020 Federal Register, for units that cease combustion of coal by December 31, 2028, EPA is establishing Best Available Technology (BAT) limitations equal to the Best Practicable Control Technology (BPT) limitations for Total Suspended Solids (TSS) based on the use of surface impoundments for both FGD wastewater and BATW.

BATW:

Based on the revised ELG and the eligibility of all of Brunner's units for inclusion in the ceasing combustion of coal subcategory, Brunner requests that Footnote (16) be revised to: (1) remove the requirement that Brunner's units cease the discharge of pollutants in BATW generated after December 31, 2021; and (2) state that Brunner may discharge BATW until December 31, 2028 pursuant to the ceasing combustion of coal subcategory and without any system retrofits. Brunner is currently obligated to continue operating its Auxiliary Waste Water Treatment system to process discharges for its BATW system which discharge through Outfall 008. Those current obligations would not be changed by this revision.

FGD Wastewater:

As to FGD wastewater, Brunner requests that Footnote (17) be similarly revised to: (1) remove the requirement that Brunner's units meet the BAT limits for FGD wastewater by December 31, 2023; and (2) state that Brunner may discharge FGD wastewater until December 31, 2028 pursuant to the ceasing combustion of coal subcategory, and without any system retrofits. Brunner is currently obligated to continue operating its existing physical-chemical wastewater treatment system to meet its current permit limits for FGD wastewaters that are discharged through Outfall 007. Those current obligations are not changed by this revision.

The BATW and FGD wastewater revisions sought in this modification request are justified for the following reasons:

- EPA's promulgation of the Reconsideration Rule amends the BATW and FGD wastewater provisions of the 2015 ELG Rule. The BATW and FGD wastewater ELG requirements in the current permit have not yet taken effect, and the current permit contemplates that they will be revised based on amendment of the applicable 2015 rule provisions. Therefore, the requested modification aligns with the current permit.

- Ceasing coal combustion on December 31, 2028 is consistent with an existing, enforceable Consent Decree that Brunner is already subject to (included with the enclosed Notice of Planned Participation), and this is an "other factor" that can be considered under §423.11(t). See 85 Fed. Reg. at 64,708 ("Upon a receipt of a [Notice of Planned Participation, or NOPP], the NPDES permitting authority can properly consider that NOPP in the 'other factors' of 40 CFR

423.11(t)(4).”). Applying any other cessation of coal burning date to the Brunner units would result in minimal environmental benefits and would be very disruptive to our system.

- A cessation of coal burning date of December 31, 2028 allows our system time to transition to dependence on solely gas-fired units. Also, gas pipelines and equipment can be subject to interruptions due to weather and system breakdowns, so a period of transition would help alleviate any problems of this nature. See, e.g., the Energy Information Administration’s discussion of gas pipeline interruptions due to weather conditions. (https://www.eia.gov/energyexplained/natural-gas/factors-affecting-natural-gas-prices.php). The risk of service interruptions and overall system reliability is a factor that can be considered under §423.11(t). See 2015 ELG Rule, 80 Fed. Reg. at 67,854 (EPA’s approach is designed to allow for coordination to maintain grid reliability and prevent potential impacts to electricity availability). See also 2015 Response to Comments, p. 8-138.

- It is important to have the onsite fuel (coal) to ensure reliability to provide power to the grid especially in the winter months. In a 2018 report, PJM notes that “key elements such as on-site fuel inventory, oil deliverability, availability of non-firm natural gas service, location of a pipeline disruption and pipeline configuration become increasingly important as the system comes under more stress.” The Consent Decree provides for wintertime coal burn through 2028.”

Brunner Island would like to discuss this revision to our existing permit modification request with PA DEP. Please let me know if you can arrange such a discussion in the very near future. You may contact me at 717-266-7510 (Thomas.Clisham@TalenEnergy.com), Craig Shamory at 610-657-2729 (craig.shamory@talenergy.com), or Marcia Thiess at 717-268-1531 (Marcia.thiess@talenenergy.com).

Sincerely,

Thomas S. Clisham
Plant Manager

Enclosures

Cc: M. Thiess TALEN (BRUPT)
K. Potter TALEN (CORP)
C. Shamory TALEN (CORP)
Env Files

Enclosures

Brunner Island, LLC
Notice of Planned Participation—Cessation of Coal Combustion Category Documents

Brunner Island LLC – Brunner Island Steam Electric Station NPDES Permit No. PA0008281
NOTICE OF PLANNED PARTICIPATION
IN CESSATION OF COAL COMBUSTION SUBCATEGORY
(pursuant to 40 CFR §423.19(f)(1),(2) - 85 Fed. Reg. at 64722)

Brunner Island LLC (Brunner) is an independent power producer which owns and operates three steam electric generating units – Unit 1, Unit 2, and Unit 3 – located at Brunner Island in York County, Pennsylvania. Brunner is in the process of transitioning each of the units from use of coal-to sole use of natural gas. EPA published amendments to the steam electric effluent limitations on October 13, 2020. 85 Fed. Reg. 64,650. The amended regulations establish a new subcategory for units that permanently cease coal combustion. See 40 CFR §§423.13(g)(2)(i) and 423.13(k)(2)(ii), 85 Fed. Reg. at 64,717, 64,719. Brunner is supplying this Notice of Planned Participation in the subcategory for cessation of coal combustion.

Supporting Documentation:

As an independent power producer, Brunner is not required to submit integrated resource plans documenting plans for unit conversions and does not need approval of a public utility commission or similar regulatory body for such conversions.

However, in May 2018, Sierra Club and Brunner lodged a Consent Decree with the United States District Court for the Middle District of Pennsylvania which requires Brunner to cease combustion of coal by December 31, 2028. The Court entered the Consent Decree on August 31, 2018. See attached Consent Decree and Court Order. (Attachments 1 and 2). Brunner submits these documents as "other documentation supporting that the electric generating unit[s] will permanently cease the combustion of coal by December 31, 2028." 40 CFR 423.19(f)(2).

Timeline to Achieve Permanent Cessation:

Under the Consent Decree, Brunner is obligated to cease the combustion of coal from all of its units by December 31, 2028. Consent Decree at 7, para. 8. Brunner will accomplish this through fuel conversion of each unit.

Also, the Consent Decree requires Brunner to cease combustion of coal during Ozone Season "by the end of the Ozone Season of 2022." Consent Decree at 7, para. 7. The Consent Decree defines the "Ozone Season" as "May 1 through September 30 of any calendar year." Consent Decree at 6. For the reasons set forth in the accompanying permit modification request, for each of Brunner's coal-fired units the phase-in of transition to cessation of coal combustion should be consistent with the Consent Decree's timelines, with a final cessation date for each unit of December 31, 2028.

Attachment 1

Talen / Brunner Island – Sierra Club Consent Decree

May 17, 2018

UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

SIERRA CLUB,

Plaintiff,

v.

TALEN ENERGY CORPORATION and BRUNNER ISLAND LLC,

Defendants.

CONSENT DECREE

Case No.: 1:18-cv-01042-CCC

Date lodged in Court: May 17, 2018

Date entered in Court:

CONSENT DECREE

WHEREAS, Sierra Club ("Plaintiff") brought this action against Talen Energy Corporation ("Talen") and Brunner Island LLC (collectively with Talen, "Defendants," and collectively with Plaintiff, the "Parties"), the owners and operators of the Brunner Island Steam Electric Plant ("Brunner Island" or the "Facility") pursuant to Section 505 of the Clean Water Act ("CWA"), 33 U.S.C. § 1365, Section 601 of the Pennsylvania Clean Streams Law ("CSL"), 35 P.S. § 391.601, and Section 7002(a)(1) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6972(a)(1), for injunctive relief and assessment of civil penalties for certain alleged violations of the above referenced statutes and their implementing regulations at Brunner Island (the "Complaint");

WHEREAS, Defendants deny Plaintiff's allegations and maintain that they have been and remain in compliance with the CWA, CSL and RCRA and are not liable for civil penalties or injunctive relief, and nothing herein shall constitute an admission of liability;

WHEREAS, the Parties desire to settle all matters by Consent Decree and avoid the costs, delay, and uncertainty of litigation;

WHEREAS, the Parties agree that the settlement of this action through this Consent Decree without further litigation is in the public interest, and is a fair, reasonable, and appropriate means of resolving the matter;

WHEREAS, pursuant to Section 505(b)(3) of the CWA, this Consent Decree is being forwarded to the United States Department of Justice and to the United States Environmental Protection Agency ("EPA") for the statutorily-mandated forty-five (45) day review period; and

WHEREAS, the Parties consent to the entry of this Consent Decree without trial of any issues.

NOW, THEREFORE, it is hereby ORDERED AND DECREED as follows:

I. JURISDICTION, VENUE AND APPLICABILITY

1. This Court has jurisdiction over the Parties to and the subject matter of this action under Section 505 of the CWA, 33 U.S.C. § 1365, Section 7002 of RCRA, 42 U.S.C. § 6972, and under 28 U.S.C. §§ 1331.

2. Venue is proper in this Judicial District under Section 505(c) of the CWA, 33 U.S.C. § 1365(c), Section 7002 of RCRA, 42 U.S.C. § 6972, and under 28 U.S.C. § 1391.

3. Upon the Date of Entry, the provisions of this Decree shall apply to, be binding upon, and inure to the benefit of the Parties, as well as to each individual Party's successors and assigns.

4. The Parties consent to entry of this Consent Decree without further notice.

II. DEFINITIONS

5. Unless otherwise expressly provided herein, terms used in this Consent Decree that are defined in the Clean Air Act, 42 U.S.C. § 7401, *et seq.*, or regulations implementing the Clean Air Act, shall have the meaning set forth in the Clean Air Act or those regulations. Similarly, unless otherwise expressly provided herein, terms used in this Consent Decree that are defined in the CWA, 33 U.S.C. §§ 1251 *et seq.*, or regulations implementing the CWA, shall have the meaning set forth in the CWA or those regulations. Terms used in this Consent Decree that are defined in RCRA, 42 U.S.C. §§ 6901 *et seq.*, or regulations implementing RCRA, shall have the meaning set forth in RCRA or those regulations. Terms used in this Consent Decree

that are defined in the CSL, 35 P.S. §§ 391.101 *et seq.*, or regulations implementing the CSL, shall have the meaning set forth in the CSL or those regulations.

6. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. "30-Day Rolling Average NOx Emission Rate (for Brunner Island Units 1-3) " during the Ozone Season shall be determined using the methodology found in PA Code 129.100 (a)(1)(i)-(iii) (for units measuring emissions with continuous emissions monitors (CEMs)), with total NOx emissions and total heat input from Brunner Island Units 1-3 used in the calculation. Furthermore, an operating day shall be defined as one with emissions reported from any one of the three units.

b. "Brunner Island" means all real and personal property owned or operated by Brunner Island LLC, together with all on-site and off-site locations to which hazardous substances, pollutants or other contaminants generated, released or disposed by Brunner Island are located or come to be located.

c. "Clean Air Act" or "CAA" means the federal Clean Air Act, 42 U.S.C. §§ 7401 *et seq.*, and its implementing regulations.

d. "Clean Water Act" or "CWA" means the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*, and its implementing regulations.

e. "Connecticut and Delaware 126 Petitions" shall mean the petitions filed with EPA, pursuant to Clean Air Act Section 126, by the states of Connecticut and Delaware, titled, respectively, "Petition to the United States Environmental Protection Agency Pursuant to Section 126 of the Clean Air Act for Abatement of Emissions from the Brunner Island Coal

Fired Generating Units in Pennsylvania, as Such Generating Units Significantly Contribute to Nonattainment of, and Interfere with Maintenance of, the 2008 Ozone National Ambient Air Quality Standard in the State of Connecticut" and "Delaware CAA 126 Petition" and dated, respectively, June 1, 2016 and July 7, 2016.

f. "Clean Streams Law" or "CSL" means the Pennsylvania Clean Streams Law, 35 P.S. §§ 391.101 *et seq.*, and its implementing regulations.

g. "Date of Entry" shall mean the date this Consent Decree is approved or signed by the United States District Court Judge.

h. "Date of Lodging" shall mean the date this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Middle District of Pennsylvania.

i. "Day" shall mean, unless otherwise specified, calendar day.

j. "Environmental Laws" shall mean any existing or future federal environmental statute or regulation, including without limitation, the Clean Water Act, Safe Drinking Water Act, Clean Air Act, Resource Conservation and Recovery Act (including the CCR Rule) and the Comprehensive Environmental Response Compensation and Liability Act, or any existing or future Pennsylvania or local environmental law, regulation or common law cause of action, including without limitation, the Pennsylvania Constitution, Clean Streams Law, Air Pollution Control Act, Solid Waste Management Act, Hazardous Sites Cleanup Act and the Land Recycling and Environmental Remediation Standards Act.

k. "EPA" shall mean the United States Environmental Protection Agency.

l. "Interim Period" shall mean the period from January 1, 2023 to December 31, 2028.

m. "Ownership Interest" means part or all of any Defendant's legal or equitable ownership interest in Brunner Island.

n. "Ozone Season" shall mean May 1 through September 30 of any calendar year.

o. "PADEP" shall mean the Pennsylvania Department of Environmental Protection.

p. "Parties" shall have the meaning set forth in the recitals.

q. "Term" of the Consent Decree shall mean the period of time between the Date of Lodging and the date the Consent Decree is terminated in accordance with Section XI (Termination).

r. "RACT 2 Regulations" means the Reasonably Available Control Technologies regulations and regulatory revisions contained in Pennsylvania Environmental Quality Board's 2016 Regulatory Rulemaking #7-485, Additional RACT Requirements for Major Sources of NOx and VOCs.

s. "Resource Conservation and Recovery Act" or "RCRA" means the federal Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 *et seq.*, and its implementing regulations.

III. ACTIONS OF THE PARTIES

7. By the end of the Ozone Season of 2022, Defendants shall cease combustion of coal at Brunner Island during the Ozone Season, except that such combustion shall be allowed during each Ozone Season in the Interim period as long as the following conditions are met:

a. The 30-Day Rolling Average NOx Emission Rate (for Brunner Island Units 1-3) is at or below 0.12 lbs./MMBtu, calculated at the end of each operating day during each Interim Period Ozone Season when coal has been burned, with the first compliance demonstration made at the end of the 30th operating day in each Ozone Season during which coal has been burned. Defendants shall notify Plaintiff of each operating day when coal was burned during the Ozone Season, within thirty (30) days after the end of any Ozone Season during which coal was burned.

b. Brunner Island shall emit less than 6,800,000 tons of carbon dioxide ("CO2") from Brunner Island Units 1-3 per calendar year during which coal has been burned during the Ozone Season during the Interim Period.

8. By December 31, 2028, Defendants shall cease combustion of coal at Brunner Island, other than during periods of time (including time required for startup and shutdown) when PJM has declared an *Emergency Action* as defined in PJM Manual 13 (Emergency Operations) or an equivalent standard, and when gas is not available or the supply of gas to Brunner Island is interrupted. Notwithstanding termination of this Consent Decree pursuant to Section XI, the requirements of this paragraph are permanent and shall survive termination of this Consent Decree.

9. Plaintiff shall not initiate or participate in any judicial or administrative proceeding, or submit written comments, challenging any permit modifications or changes necessary for Defendants to effectuate the commitments in Paragraphs 7 or 8, or permit

modifications or changes necessary to effectuate, or required as a result of, discontinuation of coal-fired operations at Brunner Island.

IV. NOTIFICATIONS AND RECORDKEEPING

10. All notifications, submittals, and other information required by this Consent Decree shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing.

For Plaintiff:

Mark Kresowik, Eastern Region Deputy Director
Sierra Club's Beyond Coal Campaign
50 F St NW Eighth Floor
Washington, DC 20001

Zachary Fabish, Senior Attorney
Sierra Club Environmental Law Program
50 F St NW Eighth Floor
Washington, DC 20001

For Defendants:

Tom Hickes, Plant Manager
Brunner Island, LLC
P.O. Box 221
York Haven, PA 17370-0221

David Paulin, Assistant General Counsel
Talen Energy
835 Hamilton St., Ste. 150
Allentown, PA 18101

V. EFFECT OF SETTLEMENT

11. This Consent Decree represents full and final settlement between the Parties.

12. Pursuant to this Consent Decree Plaintiff releases and waives any and all civil claims, causes of action, demands, actions and/or rights of action, that Plaintiff may have, as of the Date of Entry, against Defendants for alleged violations of the CWA, CSL, RCRA, and/or the Pennsylvania Solid Waste Management Act, 35 P. S. § 6018.101, *et seq.*, and all regulations promulgated thereunder, including but not limited to those violations alleged in the Complaint or in the Notice of Intent, dated February 14, 2018, and attached hereto as Exhibit A. Notwithstanding termination of this Consent Decree pursuant to Section XI, the requirements of this paragraph are permanent and shall survive termination of this Consent Decree.

13. Plaintiff releases Defendants from any and all past and present, as of the Date of Entry, legal or equitable claims arising under any Environmental Laws, based on the same or similar allegations contained in the Complaint or the Notice of Intent, or otherwise related to coal combustion operations at Brunner Island. "Claims" is used in this Consent Decree in its broadest sense, including without limitation any and all causes of action for damages, penalties, attorneys' fees, declaratory and injunctive relief, or other rights of action. Notwithstanding termination of this Consent Decree pursuant to Section XI, the requirements of this paragraph are permanent and shall survive termination of this Consent Decree.

14. Plaintiff shall not fund any third party litigation, whether brought by the government or private parties, involving any claims settled, released or waived by this Consent Decree. Notwithstanding termination of this Consent Decree pursuant to Section XI, the requirements of this paragraph are permanent and shall survive termination of this Consent Decree.

15. Without limiting the generality of Paragraphs 11-14, Plaintiff shall not:

a. Initiate or participate in any judicial or administrative proceeding or submit written comments challenging the Commonwealth of Pennsylvania's State Implementation Plan (SIP) submittal that includes its RACT 2 Regulations, as pertains to limits or requirements applicable to Brunner Island; additionally, Plaintiffs shall not, for the duration of this Consent Decree, initiate or participate in any judicial or administrative proceeding or submit written comments advocating for a NOx emission limit of less than 0.10 lbs. NOx/MMBtu at Brunner Island when the facility is firing gas;

b. Initiate or participate in any judicial or administrative proceeding or submit written comments opposing any and all existing and future applications and permit renewals for National Pollution Discharge Elimination System ("NPDES") permits, Residual Waste permits, Water Quality Management Permits, Water Obstruction and Encroachment Permits, Corp of Engineers 404 Permits, Title V permit, or Plan Approvals as pertains to coal combustion-related operations at Brunner Island. In lieu of withdrawing Plaintiff's previously submitted comments on Brunner Island's draft NPDES permit, the Parties agree to provide PaDEP with a copy of this Consent Decree after it is entered by the Court.

c. Advocate in any judicial, legislative, or administrative proceeding for any additional obligations, controls, or restrictions specific to coal combustion-related operations at Brunner Island under any Environmental Law.

16. Plaintiff regards compliance with the terms of Paragraphs 7 and 8 as satisfactorily addressing the ozone transport issues identified in the Connecticut and Delaware 126 Petitions. If Case No. 3:17-cv-00796 before the United States District Court for the District of Connecticut has not yet reached a final order on summary judgment by the Date of Entry, Plaintiffs will withdraw from that case.

17. Nothing in this Consent Decree shall restrict or control Plaintiff's comments, litigation, or any other activity related to facilities other than Brunner Island.

18. Nothing in this Consent Decree relieves Defendant of its obligations to comply with applicable federal, state, or local laws, regulations, or permits.

19. The failure of any Party to comply with any requirement contained in this Consent Decree will not excuse that Party from obligation to comply with other requirements contained herein. If any requirement contained in this Consent Decree is determined by the Court to be illegal or otherwise unenforceable, the remaining requirements contained herein shall still apply.

VI. SALES OR TRANSFERS OF OWNERSHIP INTERESTS

20. If Brunner Island LLC proposes to sell or transfer an Ownership Interest in Brunner Island to any entity unaffiliated with Talen (a "Third Party Purchaser"), Defendants shall advise the Third Party Purchaser in writing of the existence of this Consent Decree prior to such sale or transfer, and shall send a copy of such written notification and, upon request and execution of an appropriate confidentiality agreement, a copy of any written agreement proposing the transfer of an Ownership Interest to the Plaintiff pursuant to Section IV (Notification) of this Consent Decree at least 60 Days before the close of such proposed sale or transfer. Recipients of this notice shall treat it as confidential until the potential transfer becomes publicly available information.

21. No sale or transfer of an Ownership Interest, whether in compliance with the procedures of this Section or otherwise, shall relieve Defendants of their obligations to ensure that the terms of this Consent Decree are implemented, unless the transferee agrees to undertake

all of the obligations required by this Consent Decree that may be applicable to the transferred or purchased Ownership Interests, and to be substituted for the transferring Defendant as a Party under the Decree pursuant to Section IX (Modification) and thus be bound by the terms thereof.

22. This Consent Decree shall not be construed to impede the transfer of any Ownership Interests between either Defendant and any Third Party Purchaser so long as the requirements of this Consent Decree are met. This Consent Decree shall not be construed to prohibit a contractual allocation – as between Defendants and any Third Party Purchaser of Ownership Interests – of the burdens of compliance with this Consent Decree.

VII. DISPUTE RESOLUTION

23. The dispute resolution procedure provided by this Section VII shall be used to resolve disputes arising under this Consent Decree, provided that the Party invoking such procedure has first made a good faith attempt to resolve the matter with the other Party. The provisions of this Section VII shall be the sole and exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree.

24. In the event of a dispute between the Parties concerning the interpretation or implementation of any aspect of this Consent Decree, the disputing Party shall provide the other Parties with a written notice outlining the nature of the dispute and requesting informal negotiations. If the Parties cannot reach an agreed-upon resolution within thirty (30) business days after receipt of the notice, any Party may move the Court to resolve the dispute.The Court shall decide all disputes pursuant to applicable principles of law for resolvingsuchdisputes. The Court shall not draw any inferences nor establish any presumptions adverse to either Party as a result of invocation of this Section or the Parties' inability to reach agreement.

25. No party shall be entitled to money damages for any breach of this Consent Decree. Specific performance shall be the sole remedy for any breach of this Consent Decree.

VIII. ATTORNEYS' FEES AND COSTS

26. Each Party shall bear their own attorneys' fees and costs related to this Consent Decree and any disputes under the Consent Decree.

IX. MODIFICATION

27. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by Plaintiff and Defendants. Where the modification constitutes a material change to any term of this Consent Decree, such subsequent written agreement signed by Plaintiff and Defendants shall be effective only upon approval by the Court.

X. RETENTION OF JURISDICTION

28. Until termination of this Decree, this Court shall retain jurisdiction over both the subject matter of this Decree and the Parties to this Decree to enforce the terms and conditions of this Decree. Following termination, the Court shall retain jurisdiction to enforce the provisions and obligations set forth herein that are permanent.

XI. TERMINATION

29. This Decree shall automatically terminate on January 1, 2029. However, if any Party has invoked the Dispute Resolution provisions in Section VII of this Decree asserting prior to January 1, 2029 that the other Party has not fulfilled any obligation under this Consent Decree, the Consent Decree shall terminate upon the resolution of the dispute and, if required, the fulfillment of any outstanding obligations under the Consent Decree. Termination of this Decree shall not affect any matter expressly set forth in this Consent Decree that is to survive

as an agreement between the Parties.

XII. LODGING AND ENTRY OF DECREE

30. The Parties agree to cooperate in good faith in order to obtain the Court's review and entry of this Consent Decree.

31. Pursuant to Section 505(b)(3) of the CWA, this Consent Decree will be lodged with the Court and simultaneously presented to the United States for its review and comment for a period of 45 days. After the review period has elapsed, the Decree may be entered by the Court. If the Decree is not entered by the Court, the Parties shall retain all rights they had in this litigation before the Date of Lodging.

32. The Parties agree to cooperate in good faith in order to expeditiously obtain EPA and United States Attorney General (Department of Justice, or "DOJ") review and District Court approval. In the event that DOJ or EPA comments upon the terms of this Decree, the Parties agree to discuss and address such comments to support the entry of the Consent Decree or to make any revisions to the Decree as the Parties determine may be appropriate.

XIII. SIGNATORIES

33. Each undersigned representative of a Party to this Decree certifies that he or she is fully authorized to enter into the terms and conditions of this Decree and to execute and legally bind such Party to this Decree.

34. The Parties hereby agree not to oppose entry of this Decree by this Court or challenge any provision of this Decree.

XIV. COUNTERPARTS

35. This Decree may be signed in counterparts.

THE UNDERSIGNED Parties enter into this Decree and submit it to this Court for approval and entry.

IT IS SO ORDERED:

DATED this ____ day of _____, 2018.

_____
J.

For Plaintiff Sierra Club:

_____ Date: 16 MAY 2018

By: Zachary M. Fabish

Title: Senior Attorney

For Defendant Talen Energy Corporation:

_____ Date: May 16, 2018

By: DEBRA L. RAGGIO

Title: SVP, REG. + EXT. AFF. COUNSEL

For Defendant Brunner Island LLC:

Date: May 16, 2018

By: DEBRA L. RAGGIO

Title: SVP, REG. + EX AFF. COUNSEL

Attachment 2

Talen / Brunner Island – Sierra Club Consent Decree Entry Document

August 31, 2018

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

SIERRA CLUB,	:	**CIVIL ACTION NO. 1:18-CV-1042**
	:	
Plaintiff	:	**(Chief Judge Conner)**
	:	
v.	:	
	:	
TALEN ENERGY CORPORATION	:	
AND BRUNNER ISLAND, LLC,	:	
	:	
Defendants	:	

ORDER GRANTING JOINT MOTION FOR ENTRY OF PROPOSED CONSENT DECREE AND STIPULATION EXTENDING DEFENDANTS' TIME TO RESPOND TO COMPLAINT

Upon consideration of the Parties' Joint Motion (Doc. 17) for Entry of Proposed Consent Decree and Stipulation Extending Defendants' Time to Respond to Complaint and all associated papers and filings thereto, it is hereby ORDERED that said motion is GRANTED and the Consent Decree (Doc. 3, Attachment No. 1] is ENTERED.

/S/ CHRISTOPHER C. CONNER
Christopher C. Conner, Chief Judge
United States District Court
Middle District of Pennsylvania