

Minor Modification, Page 3: Changed "six months"  
in b.1) to "twelve months".

Minor Modification Effective Date: February 10, 2016

Major Modification, 1) Revised discharge authorization period, and  
total nitrogen & total phosphorus load limits. 2) Removed  
compliance schedule for total nitrogen & copper. 3) Revised  
the compliance schedule for total phosphorus. 4) Added  
special condition 15.

Major Modification Effective Date: March 30, 2019

State Permit Number: WPCC 3161F/74

NPDES Permit Number: DE 0020265

Effective Date: November 1, 2015

Expiration Date: October 31, 2020

AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
AND THE LAWS OF THE  
STATE OF DELAWARE

In compliance with the provisions of the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251 et seq.) (hereinafter referred to as "the Act"), and pursuant to the provisions of 7 Del. C., §6003,

City of Seaford  
P.O. Box 1100  
414 High Street  
Seaford, Delaware 19973


is authorized to discharge from the facility (Point Source 001) located at

403 Nanticoke Avenue  
Seaford, Delaware

to receiving waters named

Nanticoke River

The effluent limitations, monitoring requirements and other permit conditions are set forth in Parts I, II and III hereof.

  
Bryan A. Ashby, Manager  
Surface Water Discharges Section  
Division of Water  
Department of Natural Resources and Environmental Control

  
Date Signed

## Part I

### A. General Description of Discharges and Facilities

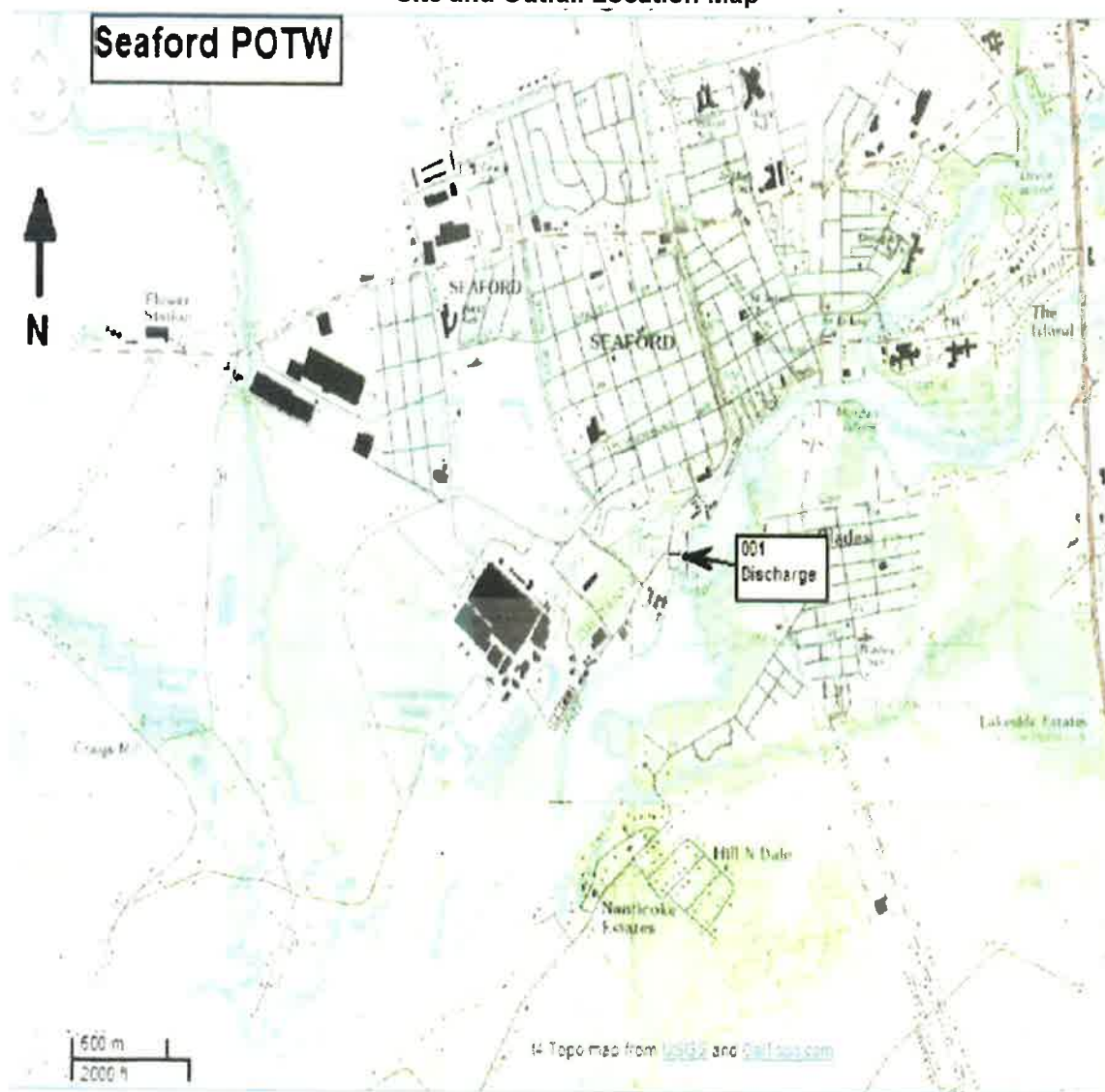
#### 1. Discharge Descriptions and Site Location Map

Outfall 001 -- Discharge from the wastewater treatment plant to the Nanticoke River.

"hydraulic train" -- Screening and grit removal, primary clarification, flow equalization, biological nitrogen removal treatment, chemical feed for phosphorus removal, secondary clarification, sand filtration and chlorination - dechlorination prior to discharge.

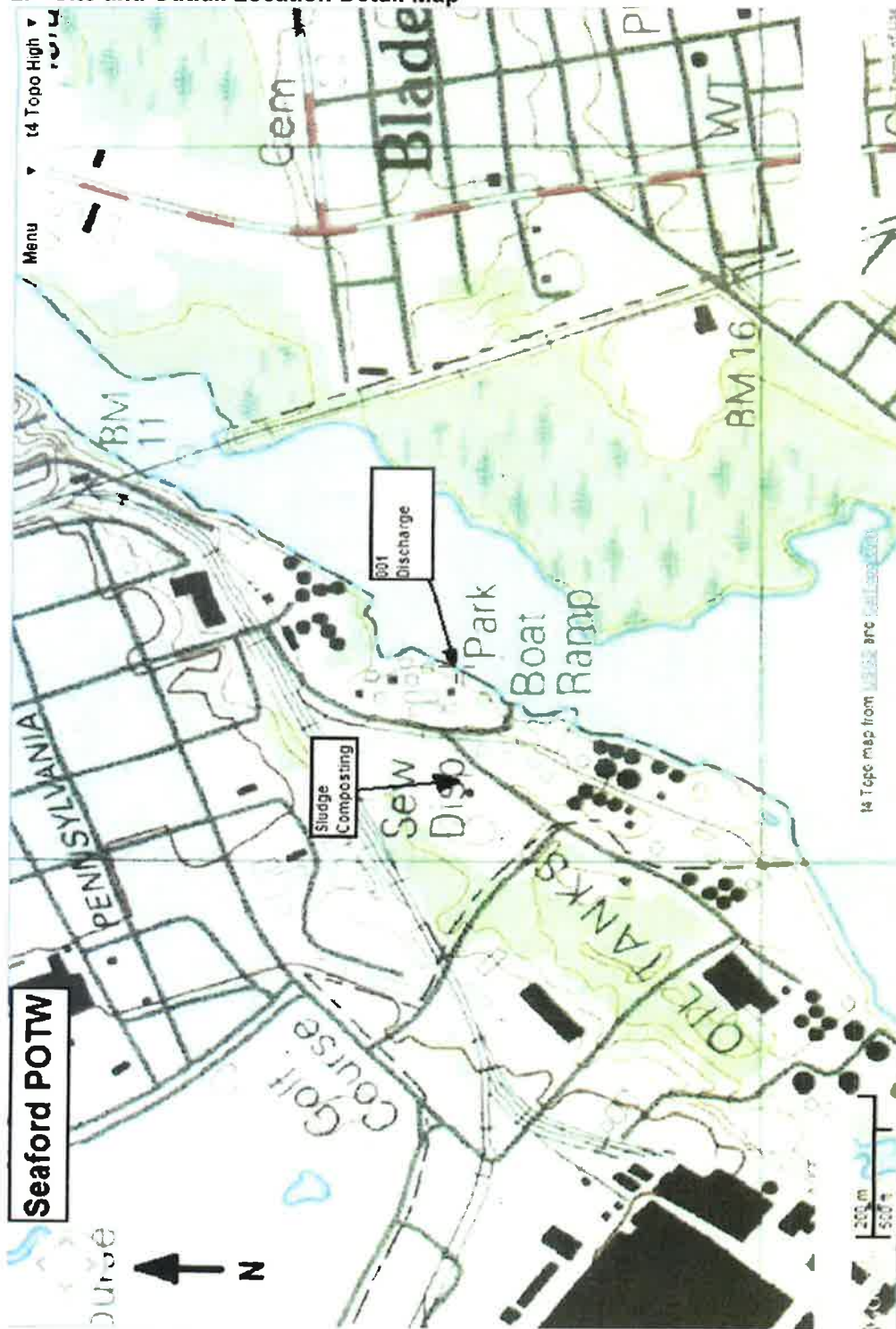
"solids train" -- Underflow from primary and secondary clarifiers is blended, followed by polymer addition, dewatering by belt filter press and sludge composting.

Site and Outfall Location Map

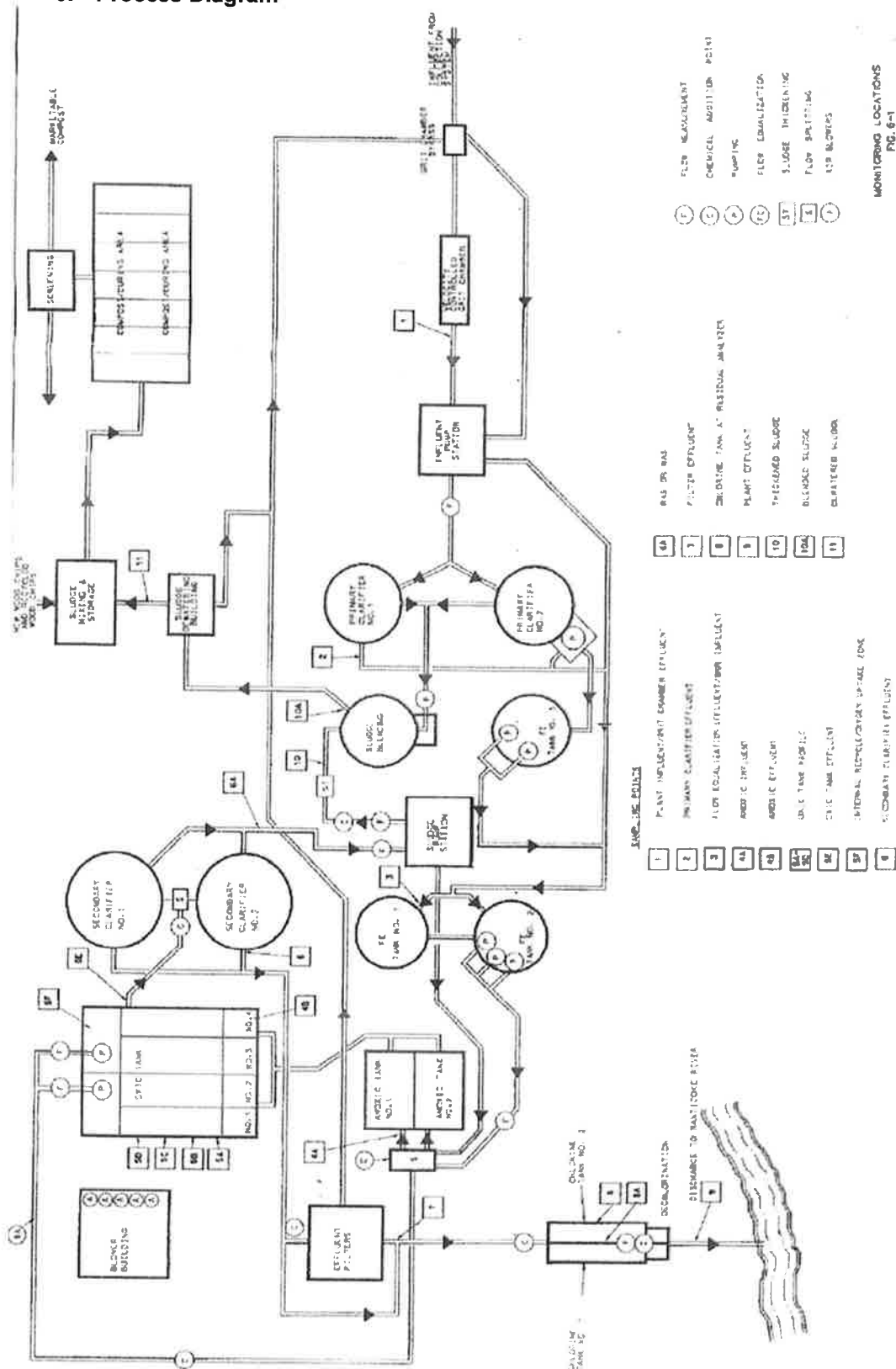


**A. General Description of Discharges and Facilities (continued)**

**2. Site and Outfall Location Detail Map**



### 3. Process Diagram



## B. Effluent Limitations and Monitoring Requirements

### 1. INTERIM<sup>1</sup> EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS for Outfall 001, Nitrogen-Phosphorus Trade Agreement in Effect<sup>2</sup>

Beginning March 30, 2019 and lasting through March 30, 2020, the permittee is authorized to discharge from point source 001<sup>3</sup> the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements <sup>4</sup>	
	Load			Concentration			Measurement Frequency	Sample Type <sup>5</sup>
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow <sup>6</sup>			mgd	---	---	---	Continuous	Record/ Totalize
Total Residual Chlorine	---	---	---	---	None Detectable <sup>7</sup>	mg/L	Once per day	Grab
pH	The pH shall be between 6.0 S.U. and 9.0 S.U. at all times					S.U.	Once per day	Grab
Enterococcus	---	---	---	100 <sup>8</sup>	185	col/100mL	3 days per week	Grab
BOD <sub>5</sub>	198.0	297.0	lbs/day	12.0	18.0	mg/L	3 days per week	Composite
Total Suspended Solids (TSS)	135.0	207.0	lbs/day	8.0	13.0	mg/L	3 days per week	Composite
Total Nitrogen (May 1 through Sep 30)	135.0		lbs/day			mg/L	Twice per month	Composite
Total Nitrogen (October 1 through April 30)			lbs/day			mg/l	Twice per month	Composite
Total Nitrogen, Moving 12-month Cumulative Load <sup>9</sup>	The twelve month cumulative discharge load shall not exceed 51,795 lbs.						Once per month	Composite
Total Phosphorus	22.6		lbs/day			mg/L	Twice per month	Composite
Total Phosphorus, Moving 12-month Cumulative Load <sup>9</sup>	The twelve month cumulative discharge load shall not exceed 7,159 lbs						Once per month	Composite
Total Hardness (as CaCO <sub>3</sub> )			lbs/day			mg/L	Once per month	Composite
Copper, dissolved	0.088	0.17	lbs/day	5.3	10.1	ug/L	Once per month	Composite
Zinc, dissolved			lbs/day			mg/L	Once per quarter	Composite
Biomonitoring	See Part III.A., Special Condition No. 8.						Once per year	Composite
The discharge shall be free from floating solids, sludge deposits, debris, oil and scum.								

**Note:** In the table above, a blank box indicates that a value must be reported, but there is no effluent limitation.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: downstream of weirs.

The hydraulic design discharge rate of 2.0 million gallons per day was used in determining the effluent limitations for this outfall.

- 1 See Part I.C.1.a, Schedule of Compliance on page 10 of this permit.
- 2 See Part III.A., Special Condition No. 5.
- 3 See Discharge Description on page 2 of this permit.
- 4 Report "nondetected" testing results on the discharge monitoring report (DMR) as "<" and the applicable test MDL. For example, if BOD<sub>5</sub> is "nondetected" using a test method with an MDL of 2.4 mg/L, report "< 2.4 mg/L" on the DMR.
- 5 See Part III.A., Special Condition No. 6.
- 6 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).
- 7 See Part III.A., Special Condition No. 4.
- 8 The Daily Average Concentration limit for Enterococcus is based on a geometric mean.
- 9 See Part III.A., Special Conditions Nos. 5, 6 and 7.



## B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

### 2. INTERIM<sup>1</sup> ALTERNATE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS for Outfall 001, Nitrogen-Phosphorus Trade Agreement NOT in Effect<sup>2</sup>

Beginning March 30, 2019 and lasting through March 30, 2020, the permittee is authorized to discharge from point source 001<sup>3</sup> the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements <sup>4</sup>	
	Load			Concentration			Measurement Frequency	Sample Type <sup>5</sup>
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow <sup>6</sup>			mgd	---	---	---	Continuous	Record/ Totalize
Total Residual Chlorine	---	---	---	---	None Detectable <sup>7</sup>	mg/L	Once per day	Grab
pH	The pH shall be between 6.0 S.U. and 9.0 S.U. at all times					S.U.	Once per day	Grab
Enterococcus	---	---	---	100 <sup>8</sup>	185	col/100mL	3 days per week	Grab
BOD <sub>5</sub>	198.0	297.0	lbs/day	12.0	18.0	mg/L	3 days per week	Composite
Total Suspended Solids (TSS)	135.0	207.0	lbs/day	8.0	13.0	mg/L	3 days per week	Composite
Total Nitrogen (May 1 through Sep 30)	118.7		lbs/day			mg/L	Twice per month	Composite
Total Nitrogen (October 1 through April 30)			lbs/day			mg/l	Twice per month	Composite
Total Nitrogen, Moving 12-month Cumulative Load <sup>9</sup>	The twelve month cumulative discharge load shall not exceed 24,364 lbs.						Once per month	Composite
Total Phosphorus	26.6		lbs/day			mg/L	Twice per month	Composite
Total Phosphorus, Moving 12-month Cumulative Load <sup>9</sup>	The twelve month cumulative discharge load shall not exceed 8,619 lbs						Once per month	Composite
Total Hardness (as CaCO <sub>3</sub> )			lbs/day			mg/L	Once per month	Composite
Copper, dissolved	0.088	0.17	lbs/day	5.3	10.1	ug/L	Once per month	Composite
Zinc, dissolved			lbs/day			mg/L	Once per quarter	Composite
Biomonitoring	See Part III.A., Special Condition No. 8.						Once per year	Composite
The discharge shall be free from floating solids, sludge deposits, debris, oil and scum.								

**Note:** In the table above, a blank box indicates that a value must be reported, but there is no effluent limitation.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: downstream of weirs.

The hydraulic design discharge rate of 2.0 million gallons per day was used in determining the effluent limitations for this outfall.

- 1 See Part I.C.1.a, Schedule of Compliance on page 10 of this permit.
- 2 See Part III.A., Special Condition No. 5.
- 3 See Discharge Description on page 2 of this permit.
- 4 Report "nondetected" testing results on the discharge monitoring report (DMR) as "<" and the applicable test MDL. For example, if BOD<sub>5</sub> is "nondetected" using a test method with an MDL of 2.4 mg/L, report "< 2.4 mg/L" on the DMR.
- 5 See Part III.A., Special Condition No. 6.
- 6 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).
- 7 See Part III.A., Special Condition No. 4.
- 8 The Daily Average Concentration limit for Enterococcus is based on a geometric mean.
- 9 See Part III.A., Special Conditions Nos. 5, 6 and 7.

**B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)**

**3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS for Outfall 001**

During the period beginning effective date and lasting through expiration date, the permittee is authorized to discharge from point source 001<sup>1</sup> the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements <sup>2</sup>	
	Load			Concentration			Measurement Frequency	Sample Type <sup>3</sup>
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Ammonia Nitrogen (as N)			lbs/day			mg/L	Once per month	Composite
Dissolved Oxygen			lbs/day			mg/L	Once per month	Grab
Total Nitrates + nitrites (as N)			lbs/day			mg/L	Once per month	Composite
Total Organic Nitrogen (as N)			lbs/day			mg/L	Once per month	Composite
Total Kjeldahl Nitrogen (as N)			lbs/day			mg/L	Once per month	Composite
Total Organic Phosphorus (as P)			lbs/day			mg/L	Once per month	Composite
Phosphate, Ortho (as P)			lbs/day			mg/L	Once per month	Composite

**Note:** In the table above, a blank box indicates that a value must be reported, but there is no effluent limitation.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: downstream of weirs.

The hydraulic design discharge rate of 2.0 million gallons per day was used in determining the effluent limitations for this outfall.

- 1 See Discharge Description on page 2 of this permit.
- 2 Report "nondetected" testing results on the discharge monitoring report (DMR) as "<" and the applicable test MDL. For example, if BOD5 is "nondetected" using a test method with an MDL of 2.4 mg/L, report "< 2.4 mg/L" on the DMR.
- 3 See Part III.A., Special Condition No. 6.

## B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

### 4. FINAL<sup>1</sup> EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS for Outfall 001, Nitrogen-Phosphorus Trade Agreement in Effect<sup>2</sup>

Beginning March 31, 2020 and lasting through the permit expiration date, the permittee is authorized to discharge from point source 001<sup>3</sup> the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements <sup>4</sup>	
	Load			Concentration			Measurement Frequency	Sample Type <sup>5</sup>
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow <sup>6</sup>			mgd	---	---	---	Continuous	Record/ Totalize
Total Residual Chlorine	---	---	---	---	None Detectable <sup>7</sup>	mg/L	Once per day	Grab
pH	The pH shall be between 6.0 S.U. and 9.0 S.U. at all times					S.U.	Once per day	Grab
Enterococcus	---	---	---	100 <sup>8</sup>	185	col/100mL	3 days per week	Grab
BOD <sub>5</sub>	198.0	297.0	lbs/day	12.0	18.0	mg/L	3 days per week	Composite
Total Suspended Solids (TSS)	135.0	207.0	lbs/day	8.0	13.0	mg/L	3 days per week	Composite
Total Nitrogen (May 1 through Sep 30)	135.0		lbs/day			mg/L	Twice per month	Composite
Total Nitrogen (October 1 through April 30)			lbs/day			mg/l	Twice per month	Composite
Total Nitrogen, Moving 12-month Cumulative Load <sup>9</sup>	The twelve month cumulative discharge load shall not exceed 51,795 lbs.						Once per month	Composite
Total Phosphorus	22.6		lbs/day			mg/L	Twice per month	Composite
Total Phosphorus, Moving 12-month Cumulative Load <sup>8</sup>	The twelve month cumulative discharge load shall not exceed 4,631 lbs						Once per month	Composite
Total Hardness (as CaCO <sub>3</sub> )			lbs/day			mg/L	Once per month	Composite
Copper, dissolved	0.088	0.17	lbs/day	5.3	10.1	ug/L	Once per month	Composite
Zinc, dissolved			lbs/day			mg/L	Once per quarter	Composite
Biomonitoring	See Part III.A., Special Condition No. 8.						Once per year	Composite
The discharge shall be free from floating solids, sludge deposits, debris, oil and scum.								

**Note: In the table above, a blank box indicates that a value must be reported, but there is no effluent limitation.**

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: downstream of weirs.

The hydraulic design discharge rate of 2.0 million gallons per day was used in determining the effluent limitations for this outfall.

- 1 See Part I.C.1.a., Schedule of Compliance on page 10 of this permit.
- 2 See Part III.A., Special Condition No. 5.
- 3 See Discharge Description on page 2 of this permit.
- 4 Report "nondetected" testing results on the discharge monitoring report (DMR) as "<" and the applicable test MDL. For example, if BOD<sub>5</sub> is "nondetected" using a test method with an MDL of 2.4 mg/L, report "< 2.4 mg/L" on the DMR.
- 5 See Part III.A., Special Condition No. 6.
- 6 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).
- 7 See Part III.A., Special Condition No. 4.
- 8 The Daily Average Concentration limit for Enterococcus is based on a geometric mean.
- 9 See Part III.A., Special Conditions Nos. 5, 6 and 7.



## B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

### 5. FINAL<sup>1</sup> ALTERNATE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS for Outfall 001, Nitrogen-Phosphorus Trade Agreement NOT in Effect<sup>2</sup>

Beginning March 31, 2020 and lasting through the permit expiration date, the permittee is authorized to discharge from point source 001<sup>3</sup> the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements <sup>4</sup>	
	Load			Concentration			Measurement Frequency	Sample Type <sup>5</sup>
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow <sup>6</sup>			mgd	---	---	---	Continuous	Record/ Totalize
Total Residual Chlorine	---	---	---	---	None Detectable <sup>7</sup>	mg/L	Once per day	Grab
pH	The pH shall be between 6.0 S.U. and 9.0 S.U. at all times					S.U.	Once per day	Grab
Enterococcus	---	---	---	100 <sup>8</sup>	185	col/100mL	3 days per week	Grab
BOD <sub>5</sub>	198.0	297.0	lbs/day	12.0	18.0	mg/L	3 days per week	Composite
Total Suspended Solids (TSS)	135.0	207.0	lbs/day	8.0	13.0	mg/L	3 days per week	Composite
Total Nitrogen (May 1 through Sep 30)	79.1		lbs/day			mg/L	Twice per month	Composite
Total Nitrogen (October 1 through April 30)			lbs/day			mg/l	Twice per month	Composite
Total Nitrogen, Moving 12-month Cumulative Load <sup>9</sup>	The twelve month cumulative discharge load shall not exceed 24,364 lbs.						Once per month	Composite
Total Phosphorus	26.6		lbs/day			mg/L	Twice per month	Composite
Total Phosphorus, Moving 12-month Cumulative Load <sup>8</sup>	The twelve month cumulative discharge load shall not exceed 6,091 lbs						Once per month	Composite
Total Hardness (as CaCO <sub>3</sub> )			lbs/day			mg/L	Once per month	Composite
Copper, dissolved	0.088	0.17	lbs/day	5.3	10.1	ug/L	Once per month	Composite
Zinc, dissolved			lbs/day			mg/L	Once per quarter	Composite
Biomonitoring	See Part III.A., Special Condition No. 8.						Once per year	Composite
The discharge shall be free from floating solids, sludge deposits, debris, oil and scum.								

**Note:** In the table above, a blank box indicates that a value must be reported, but there is no effluent limitation.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: downstream of weirs.

The hydraulic design discharge rate of 2.0 million gallons per day was used in determining the effluent limitations for this outfall.

- 1 See Part I.C., Schedule of Compliance on page 10 of this permit.
- 2 See Part III.A., Special Condition No. 5.
- 3 See Discharge Description on page 2 of this permit.
- 4 Report "nondetected" testing results on the discharge monitoring report (DMR) as "<" and the applicable test MDL. For example, if BOD<sub>5</sub> is "nondetected" using a test method with an MDL of 2.4 mg/L, report "< 2.4 mg/L" on the DMR.
- 5 See Part III.A., Special Condition No. 6.
- 6 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).
- 7 See Part III.A., Special Condition No. 4.
- 8 The Daily Average Concentration limit for Enterococcus is based on a geometric mean.
- 9 See Part III.A., Special Conditions Nos. 5, 6 and 7.

**C. *Schedule of Compliance***

1. The permittee shall comply with the requirements herein as soon as possible, but in no event later than the dates set forth in the following schedule:
  - a. Final Phosphorus twelve month cumulative discharge load Limits
    - 1) No later than March 30, 2019, the permittee shall begin to implement the necessary treatment system process and operational changes in order to meet the Total Phosphorus daily average load limits in Part I B. above.
    - 2) No later than March 31, 2020, the permittee shall be in compliance with the "Final Effluent Limitations and Monitoring Requirements for Outfall 001" on pages 11 and 12 above.
2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

#### **D. Monitoring and Reporting**

##### **1. Representative Sampling**

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

##### **2. Reporting**

Monitoring results obtained during the previous one (1) month shall be summarized for each month and reported on a Discharge Monitoring Report Form ("DMR", EPA Form No. 3320-1),

- a. The permittee shall submit results postmarked no later than the 28th day of the month following the completed reporting period. Electronically-generated DMR forms may be used, if approved by the Department in writing. Signed copies of these, and all other reports required herein, shall be submitted to the Department at the following address:

State Of Delaware Dept. Of Natural Resources And Environmental Control,  
Division of Water, Surface Water Discharges Section,  
R & R Building, 89 Kings Highway, Dover, Delaware 19901  
TELEPHONE: (302) 739-9946; FACSIMILE: (302) 739-8369

- b. The Department may provide written requirements for the permittee to submit DMR electronically (eDMR), no later than the 28th day of the month following the completed reporting period. These submittals must be electronically signed.

##### **3. Definitions**

- a. "Average daily loading" means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
- b. "Average monthly discharge" or "daily average discharge" is the arithmetic mean of all daily discharges during a calendar month, calculated as the sum of all daily discharges sampled and/or measured during the month divided by the number of daily discharges sampled or measured during such month.
- c. "Average monthly effluent limitation" or "daily average effluent limitation" means the highest allowable average of daily discharges over a calendar month.
- d. "Best management practices" or "BMP's" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices or measures to prevent or reduce the discharge of pollutants. BMP's include, but are not limited to: structural and nonstructural controls; treatment requirements; operating procedures and practices to control spills or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs can be applied before, during and after pollution generating activities to reduce or eliminate the introduction of pollutants into receiving waters.
- e. "Biosolids" refers to the biomass or biological sludge generated or produced by biological wastewater treatment processes.
- f. "Bypass" means the intentional diversion of wastes from any portion of a treatment facility.
- g. "Composite sample" means a combination of individual samples obtained at specified intervals over a given time period, generally 24 hours.

In collecting a composite sample of a discharge other than a discharge of storm water or storm runoff (a non-storm water discharge), either: a) the volume of each individual sample is proportional to the discharge flow rate or b) the sampling interval is proportional to the discharge flow rate and the volume of each individual sample is constant. For a continuous non-storm water discharge, a minimum of 24 individual grab samples shall be collected and combined to constitute a 24 hour composite sample. For intermittent non-storm water discharges 4 hours or more in duration, the number of individual grab samples collected and combined to constitute a composite sample shall at a minimum be equal to the duration of the discharge in hours but not less than 12. For intermittent non-storm water discharges of less than 4 hours, the minimum number of individual grab samples collected and combined to constitute a composite sample shall be equal to the duration of the discharge in hours times 3 but not less than 3 samples.

- h. "Daily discharge" means the total discharge measured during a calendar day or any 24-hour period that reasonably represents the calendar day for sampling purposes. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of a pollutant discharged over a calendar day or the equivalent 24-hour period. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over a calendar day or the equivalent 24-hour period.
- i. "Daily maximum effluent limitation" is the highest total mass of a pollutant allowed to be discharged during a calendar day or, in the case of a pollutant limited in terms other than mass, the highest average concentration or other measurement of the pollutant specified during the calendar day, or any 24-hour period that reasonably represents the calendar day for sampling purposes.
- j. "Daily maximum temperature" is the highest arithmetic mean of the temperature observed for any two (2) consecutive hours during a 24-hour day, or during the operating day if flows are of shorter duration.
- k. "Direct Responsible Charge" or "DRC" means on-location accountability for, and on-location performance of, active daily operation (including Technical Supervision, Administrative Supervision, or Maintenance Supervision) for a Wastewater Facility, an operating shift of a system or a facility, or a major segment of a system or facility.
- l. "Estimate" is that based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.
- m. "Grab sample" is an individual sample collected in less than 15 minutes.
- n. "I/S" (immersion stabilization) means the immersion of a calibrated device in the effluent stream until the reading is stabilized.
- o. "Maximum instantaneous concentration" or "MIC" is the highest allowable measured concentration of a pollutant, obtained by analyzing a grab sample of the discharge.
- p. "Measured flow" is any method of liquid volume measurement the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.
- q. "Method Detection Limit" or "MDL" means the lowest concentration of a substance which can be measured with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.
- r. "Minimum analytical level" or "MAL" means the lowest concentration of a substance that can be quantified within specified limits of interlaboratory precision and accuracy under routine laboratory operating conditions in the matrix of concern. When there is insufficient interlaboratory study data, the

"MAL" may be determined through the use of a multiplier of 5 to 10 times the method detection level or "MDL".

- s. "Monthly average temperature" is the arithmetic mean of temperature measurements made on an hourly basis, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar month, or during the operating month if flows are of shorter duration.
- t. "Non-contact cooling water" is that which is contained within a leak-free system, i.e. has no contact with any gas, liquid or solid other than the container used for transport.
- u. "Nuisance condition" is any condition that, as a result of pollutant addition to a surface water, causes unreasonable interference with the designated uses of the waters or the uses of the adjoining land areas.
- v. "Operator" means any person employed or appointed by any owner, and who is designated by such owner to be the person controlling the operations of the treatment works, including direct actions, decisions or evaluations which affect the quality of the discharge, and whose duties include testing or evaluation to control treatment works operations.
- w. "Pollution prevention" means any practice which results in a lesser quantity of emissions released or discharged prior to out-of-process recycling, treatment or control, as measured on a per-unit-of-production basis.
- x. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- y. "Sewage" means the water carried human or animal wastes from septic tanks, water closets, residences, buildings, industrial establishments or other places together with such ground water infiltration, subsurface water, storm inflow, admixture of industrial wastes, or other wastes as may be present.
- z. "Sewage sludge" means any solid, semi-solid or liquid residue removed during the treatment of municipal wastewater or domestic sewage including, but not limited to, solids removed during primary, secondary or advanced wastewater treatment, scum, septage, portable toilet pumpings and sewage sludge products.
- aa. "Sludge" means the accumulated semi-liquid suspension, settled solids, or dried residue of these solids removed by any surface water or ground water treatment facility or any liquid waste treatment facility or works, whether or not such solids have undergone treatment.
- bb. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. The basis for specific effluent limitations can be found in this permit's fact sheet. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- cc. "Whole effluent toxicity" means the aggregate toxic effect of an effluent or discharge measured directly by a toxicity test.

#### 4. Test Procedures

Test procedures for the analysis of pollutants shall conform to the applicable test procedures identified in 40 C.F.R., Part 136, unless otherwise specified in this permit.

## 5. Quality Assurance Practices

The permittee is required to show the validity of all data by requiring its laboratory to adhere to the following minimum quality assurance practices:

- a. Duplicate<sup>1</sup> and spiked<sup>2</sup> samples must be run for each constituent in the permit on 5% of the samples, or at least on one sample per month, whichever is greater. If the analysis frequency is less than one sample per month, duplicate and/or spiked samples must be run for each analysis.
- b. For spiked samples, a known amount of each constituent is to be added to the discharge sample. The amount of constituent added should be approximately the same amount present in the unspiked sample, or must be approximately that stated as maximum or average in the discharge permit.
- c. The data obtained in a and b shall be summarized in an annual report in terms of precision, percent recovery, and the number of duplicate and spiked samples run, date and laboratory log number of samples run, and name of analyst. The report shall cover the calendar year, January 1 through January 31, and shall be submitted to the Department, postmarked no later than the February 15 following the fourth quarter of reporting.
- d. Precision shall be calculated by the formula, standard deviation  $s = (\sum d^2/k)^{1/2}$ , where d is the difference between duplicate results, and k is the number of duplicate pairs used in the calculations.
- e. Percent recovery shall be reported on the basis of the formula  $R = 100 (F-I)/A$ , where F is the analytical result of the spiked sample, I is the result before spiking of the sample, and A is the amount of constituent added to the sample.
- f. The percent recovery, R, in e above shall be summarized yearly in terms of mean recovery and standard deviation from the mean. The formula,  $s = (\sum (x-\bar{x})^2/(n-1))^{1/2}$ , where s is the standard deviation around the mean  $\bar{x}$ , x is an individual recovery value, and n is the number of data points, shall be applied.
- g. The permittee or its contract laboratory is required to annually analyze an external quality control reference sample for each pollutant. These are available through the EPA Regional Quality Assurance Coordinator, or other EPA-approved supplier. Results shall be included in the annual report, required in paragraph c above.
- h. The permittee and/or its contract laboratory is required to maintain an up-to-date and continuous record of the method used, of any deviations from the method or options employed in the reference method, of reagent standardization, of equipment calibration and of the data obtained in a, b and f above.
- i. If a contract laboratory is utilized, the permittee shall report the name and address of the laboratory and the parameters analyzed together with the monitoring data required.

## 6. Records

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

<sup>1</sup> Duplicate samples are not required for the following parameters: color, temperature, and turbidity.

<sup>2</sup> Spiked samples are not required for the following parameters: acidity, alkalinity, bacteriological, benzidine, chlorine, color, dissolved oxygen, hardness, pH, oil & grease, radiological, residues, temperature, turbidity, BOD<sub>5</sub>, and total suspended solids. Procedures for spiking samples are available through the EPA Regional Quality Assurance Coordinator.



- 1) The date, exact place and time of sampling or measurements;
  - 2) The person(s) who performed the sampling or measurements;
  - 3) The date(s) and time(s) analyses were performed;
  - 4) The individual(s) who performed each analysis;
  - 5) The analytical techniques or methods used;
  - 6) The results of each analysis; and
  - 7) The quality assurance information as stated above.
- b. An operator log must be kept on site at all times. This log should include time spent at the treatment facility on any date, and the nature of operation and maintenance performed.

7. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1). Such increased frequency shall also be indicated.

8. Records Retention

All records and information resulting from the monitoring activities required by this permit including hard copies of any electronically generated Discharge Monitoring Reports, all records of analyses performed, records of calibration and maintenance of instrumentation, and recording from continuous monitoring instrumentation shall be retained for three (3) years. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.

## Part II

### A. Management Requirements

#### 1. Duty to Comply

- a. The permittee must comply with all the terms and conditions of this permit. All discharges authorized herein shall be consistent with the terms and conditions of this permit.
- b. The discharge of any pollutant more frequently than, or at a level in excess of that identified and authorized herein, shall constitute a violation of the terms and conditions of this permit. The violation of any effluent limitation or of any other condition specified in this permit is a violation of 7 *Del. C.* Chapter 60, and the Act and is grounds for enforcement as provided in 7 *Del. C.* §§6005, 6013, and 6018, for permit termination or loss of authorization to discharge pursuant to this permit, for permit revocation and reissuance, or permit modification, or denial of a permit renewal application. The Department may seek voluntary compliance by way of warning, notice or other educational means, pursuant to 7 *Del. C.* §6019, or any other means authorized by law. However, the Law does not require that such voluntary means be used before proceeding by way of compulsory enforcement.
- c. Any person violating Sections 301, 302, 306, 307, 318, or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative, and/or criminal penalties as set forth in 40 C.F.R., Parts 122.41(a)(2) and 122.41(a)(3).

#### 2. Notification

##### a. Notification of Planned Changes

The permittee shall notify the Department in writing of any anticipated expansion or alteration of this permitted facility, any production increases, process modifications, or other changes which could result in new, different or increased discharges of pollutants. Notice is required only when such alteration, addition or change:

- 1) may justify the application of permit conditions that are different from those specified in this permit, or
- 2) may justify the application of permit conditions that are absent from this permit, or
- 3) meets any one of the following criteria:
  - a) The alteration or addition to this permitted facility may meet one of the criteria for determining whether a facility is a new source, as defined in the section, "New Source", of Delaware's *Regulations Governing the Control of Water Pollution*, or
  - b) As a result of the alteration or addition, the nature of the discharge is or could be substantially different from that represented in the application originally submitted for the discharge(s) authorized herein, upon which this permit is based; or
  - c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, including any uses or disposal sites not identified in the application for this permit or during this permit's issuance process; or
  - d) The planned change in permitted facility or activity may result in noncompliance with the requirements of this permit.

Upon notification of a planned change, the Department may require the submission of a new application. The permittee is encouraged to notify the Department and submit any application well in advance of the scheduled date for the anticipated alteration or addition to allow sufficient time to process any modifications of this permit necessitated by the change and to avoid any resultant project delays.

b. Notification of Noncompliance

The permittee shall report all instances of noncompliance with this permit to the Department as outlined herein:

- 1) If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation or maximum instantaneous concentration specified in this permit, the permittee shall report such incident within 24 hours and provide the Department with the following information, in writing, within five (5) days of becoming aware of such conditions:
  - a) A description of the discharge and cause of noncompliance;
  - b) The period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time when the discharge will return to compliance; and
  - c) Actions taken or to be taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.
- 2) If, for any reason, the permittee does not comply with any daily average or average monthly effluent limitation or standard specified in this permit, the permittee shall provide the information outlined above in paragraph b.1) with the discharge monitoring report (DMR) submitted in accordance with Part I.D.2. of this permit.
- 3) In the case of any upset or unanticipated bypass that exceeds any permitted effluent or discharge limitation, the permittee shall notify the Department within 24 hours. If this notification is provided orally, a written report shall be submitted within 5 days.
- 4) In the case of any discharge subject to any toxic pollutant effluent standard under Section 307(a) of the Act, the permittee shall notify the Department within 24 hours from the time the permittee becomes aware of a noncomplying discharge. Notification shall include the information outlined above in paragraph b.1). If this information is provided orally, a written submission covering these points shall be provided within five days of the time the permittee becomes aware of the circumstances covered by this paragraph.
- 5) In the case of any other discharges which could constitute a threat to human health, welfare, or the environment, the information required above in paragraph b.1) shall be provided as quickly as possible upon discovery and after activating the appropriate emergency site plan, unless circumstances exist which make such a notification impossible. A delay in notification shall not be considered a violation of this permit when the act of reporting may delay the mitigation of the discharge and/or the protection of public health and the environment. A written submission covering these points must be provided within five days of the time the permittee becomes aware of the circumstances covered by this paragraph.
- 6) The permittee shall report all instances of noncompliance not otherwise reported under the preceding paragraphs at the time the discharge monitoring report (DMR) is submitted. The report shall contain the information outlined above in paragraph b.1).

- 7) The Department may waive the written report as required herein on a case-by-case basis, if an oral report was provided within 24 hours.
- c. Reporting Discharge(s) of Pollutants Pursuant to 7 *Del. C.*, "Report of discharge of pollutant or air contaminant"

Any person who causes or contributes to the discharge of a pollutant into waters of the State or the United States either in excess of any conditions specified in this permit or in absence of a specific permit condition shall report such an incident to the Department as required under 7 *Del. C.*, "Report of discharge of pollutant or air contaminant".

### 3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all collection and treatment facilities and systems (and related appurtenances) installed or used by the permittee for water pollution control and abatement to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective performance (based upon the facilities' design), adequate funding, effective management, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, when necessary, to achieve compliance with the terms and conditions of this permit.

### 4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to State waters resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and extent of the noncomplying discharge.

### 5. Failure

The permittee, in order to maintain compliance with this permit, shall control production and all discharges as necessary upon reduction, loss, or failure of the treatment facility until the treatment facility is restored or an alternative method of treatment is provided. The need to halt or reduce the permitted activity in order to maintain compliance with this permit shall not be a defense for a permittee in any enforcement action.

### 6. Alternative Power Source

In order to ensure compliance with the terms and conditions of this permit, the Department may require that the permittee provide an alternative power supply which is sufficient to operate the permittee's wastewater collection, conveyance and treatment facilities.

### 7. Removed Substances

Any solids, sludges, filter backwash, or other pollutants removed in the collection, conveyance or treatment of wastewater shall be disposed of in such manner as to prevent any pollutant from such materials from entering surface waters or ground waters.

### 8. Bypass

- a. The Secretary may prohibit the intentional diversion or bypass of waste streams from any portion of the facility regulated herein in consideration of the adverse effect of the proposed bypass or where the proposed bypass does not meet the conditions set forth below in Part II.A.8.b.

- b. The intentional diversion or bypass of waste streams from any portion of the facility regulated herein is prohibited unless:
  - 1) The bypass is necessary to perform essential maintenance and auxiliary equipment, a redundant or back-up system or an alternate mode of operation is utilized to maintain treatment performance; or
  - 2) The following four conditions are met:
    - a) Bypass is unavoidable to prevent loss of human life, personal injury or severe property damage;
    - b) There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, plant shutdown or maintenance during normal periods of equipment down-time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent the bypass;
    - c) The permittee notifies the Department of the bypass or of the need to bypass as outlined below in paragraph 8.c below; and
    - d) The permittee is utilizing or will utilize all available alternative operating procedures or interim control measures to reduce the impact of the bypass on State waters.
- c. Notice
  - 1) If the permittee knows in advance of the need for a bypass, the permittee shall notify the Secretary, in writing, at least ten days before the date of the bypass, if possible.
  - 2) In the event of an unanticipated or unintentional bypass, the permittee shall notify the Department within twenty-four hours of discovery. Notice may be provided orally, but shall be followed up with submission of a written report that provides the information outlined in Part II.A.2.b.1) within five (5) days.
  - 3) The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible.

#### 9. Upset

- a. An upset shall constitute an affirmative defense to an action brought for noncompliance with any technology based permit effluent limitations established herein, if the requirements of Part II.A.9.b below are met.
- b. To establish an affirmative defense for an upset, the permittee shall demonstrate, through properly signed and authenticated, contemporaneous operating logs, or by other relevant evidence that:
  - 1) An upset occurred and that the permittee can identify the specific cause(s) of the upset;
  - 2) The permitted facility was at the time being operated in a prudent and workman like manner and in compliance with proper operation and maintenance procedures;
  - 3) The permittee submitted notice of the upset as required in Part II.A.2.b.3) (i.e., within 24 hours of becoming aware of the upset); and
  - 4) The permittee took all reasonable measures necessary to minimize any adverse impact to State waters.

- c. Burden of proof. The permittee shall have the burden of proving an upset in any case where an upset is claimed as a defense.

## **B. Responsibility**

### **1. Right of Entry**

The permittee shall allow the Secretary of the Department, the EPA Regional Administrator, or their authorized representatives, jointly and severally, upon the presentation of his or her credentials:

- a. To enter upon the permittee's premises where the regulated facility, treatment works, or discharge(s) is located or the regulated activity is conducted or where any records required to be kept under the terms and conditions of this permit are located;
- b. To have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
- c. To inspect at reasonable times any monitoring equipment or monitoring method required in this permit;
- d. To inspect at reasonable times any facilities, equipment, management or control practices, or operations regulated or required under this permit; and
- e. To sample at reasonable times any discharge or substance at any location for the purpose of assuring compliance with this permit or otherwise determine whether a violation of the Law or these regulations exists, as provided in 7 Del. C., "Right of Entry".

### **2. Duty to Provide Information Requested by the Department**

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit or to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit. The permittee shall also furnish, upon request, copies of records required to be kept by this permit.

### **3. Duty to Provide Information Found to be Missing or Inaccurate**

When the permittee discovers that it failed to submit any relevant facts in a permit application or that it submitted any incorrect information in any permit application or in any report to the Department, it shall promptly submit such facts or information.

### **4. Availability of Reports**

Except for any data and information that is deemed to be confidential and claimed as such when submitted, and that is entitled to protection as trade secrets under State law, all reports prepared in accordance with the terms and conditions of this permit shall be available for public inspection at the Department's offices. This permit, the permit application and any information submitted to support the application (other than information entitled to protection as trade secrets pursuant to State law) and any effluent or discharge monitoring data shall not be deemed confidential and any claims of confidentiality will be denied. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided under 7 Del. C., Chapter 60, "Criminal penalties".

### **5. Signatory Requirements**



All applications, reports, or information submitted to the Department shall be signed and certified as required in the section "Identity of Signatories to NPDES Forms" of Delaware's *Regulations Governing the Control of Water Pollution*.

6. Permit Transfer

- a. This permit is not transferable to any person, except after notice to and with the concurrence of the Secretary.
- b. In the event of a change in ownership or control of the facilities from which the authorized discharge(s) emanate(s), this permit may be transferred if:
  - 1) The permittee notifies the Department, in writing, of the proposed transfer, in advance; and
  - 2) The permittee submits to the Department a written agreement signed by all parties to the transfer, containing a specific date for transfer of permit responsibility, coverage and liability to the new permittee. The written agreement shall expressly acknowledge the current permittee is responsible and liable for compliance with the terms and conditions of this permit up to the date of transfer and the new permittee is responsible and liable for compliance from that date on; and
  - 3) The Department within thirty (30) days of receipt of the notification of the proposed transfer does not notify the current permittee and the new permittee of its intent to modify, to revoke and reissue or to terminate this permit and require that a new application be submitted.
- c. The permittee is encouraged to provide as much advance notice as possible of any proposed transfer, to allow sufficient time for the Department to modify this permit to identify the new permittee and to incorporate such other requirements as may be necessary under the Law or the Act.

7. Modification, Termination, or Revocation and Reissuance

This permit may be modified, terminated or revoked and reissued in whole or in part, during its term, for cause as provided in the section "Modification, Revocation and Reissuance, and Termination" of Delaware's *Regulations Governing the Control of Water Pollution*. The filing of a request for permit modification, or revocation and reissuance, or termination, or a notification of any planned changes or anticipated noncompliance does not stay any permit condition.

8. Reapplication for a Permit

- a. The permittee must apply for and obtain a new permit if the permittee wishes to continue the activity regulated by this permit beyond its expiration date;
- b. At least 180 days before the expiration date of this permit, the permittee shall submit a new application or notify the Department of the permittee's intent to cease discharging by the expiration date;
- c. In the event that a timely and sufficient reapplication has been submitted and the Department is unable, through no fault of the permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit are continued and remain fully effective and enforceable;

9. Compliance with Effluent Standards for Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish such standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

#### 10. Construction Authorization

This permit does not approve or authorize the construction, installation or modification of any wastewater/liquid waste collection, transmission or treatment facilities, system, or any other pollution control equipment or device necessary to achieve or to maintain compliance with the terms and conditions of this permit. Separate authorization for the construction, installation or modification of such pollution control facilities must be obtained from the Secretary.

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in navigable waters.

#### 11. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privileges.

#### 12. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under 7 Del. C. Chapter 60, or any other State law or regulation.

#### 13. Severability

The provisions of this permit are severable. If any provision of this permit is held invalid, the remainder of this permit shall not be affected. If the application of any provision of this permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

## **Part III**

### **A. Special Conditions**

1. Supersedes previous permit

This permit supersedes NPDES Permit DE0020265 and State Permit WPCC 3161E/74 issued on May 13, 2008 with an effective date of June 1, 2008.

2. Permit Reopener Clause

The Department or agencies under its supervision may perform or direct the performance of analyses or biosurveys on the receiving waters in the immediate vicinity of the permittee's discharge or further downstream, after the issuance of this permit. Such analyses or biosurveys may include evaluating impingement, entrainment, and thermal impacts the permittee's facility poses on its intake and receiving waters. If the results of these analyses or biosurveys suggest that the permittee's discharge is causing, or has the potential to cause, diminished attainment of designated protected uses (as defined by the State of Delaware's "Surface Water Quality Standards") then this permit may be reopened and modified after notice and opportunity for a public hearing. At that time, additional effluent limitations, monitoring requirements and/or special conditions may be included in the permit. If it is determined that additional equipment is needed to meet the revised permit conditions, the permittee shall install the necessary equipment.

3. Permit Re-opener Clause Regarding Chesapeake Bay Tributary Strategy

The effluent limitations set forth in this permit for nitrogen and phosphorous shall be modified if

- a. the Department determines, on the basis of information not available at the time of permit issuance and in accordance with applicable law, that the effluent limitations for nitrogen and phosphorous are not protective of applicable water quality standards for the Nanticoke River and the Chesapeake Bay, or
- b. the State of Delaware establishes a Chesapeake Bay Tributary Strategy in accordance with applicable law that provides reduced nitrogen and phosphorous loadings applicable to the permittee that are necessary in order to achieve applicable water quality standards.

A compliance schedule may be established for meeting any such modified limits in accordance with the provisions of Section 6, Part V of the State of Delaware Regulations Governing the Control of Water Pollution. The permit modification provisions set forth in this Special Condition are in addition to, and in no way limit or restrict, the provisions of 40 CFR 122.62; Section 6, Part V of the Delaware Regulations Governing the Control of Water Pollution; Part II.B.7. of this Permit and/or Part III.A.2. of this Permit.

4. Compliance with "none detected" Total Residual Chlorine (TRC) Limits

Compliance with the "none detected" Total Residual Chlorine (TRC) limit shall be demonstrated by the permittee using Standard Methods test procedures 4500-Cl B, 4500-Cl F, and 4500-Cl G, respectively. TRC concentrations less than or equal to the minimum detection level for each of the referenced test procedures shall be considered in compliance with the TRC limit.

5. Trade of Total Nitrogen (TN) and Total Phosphorus (TP) between the City of Seaford and INVISTA (Respectively, NPDES Permit Nos. DE0020265 and DE0000035)

Pursuant to 7 Del. Admin. C. §7201-8.3.3, this special condition authorizes the "Moving 12-Month Cumulative Load" TN and TP effluent limitations delineated in Part I.B.1 of this permit, which

Effective Date: November 1, 2015  
Expiration Date: October 31, 2020  
Minor Modification Effective Date: February 10, 2016  
Major Modification Effective Date: March 30, 2019

Part III  
State Permit Number WPCC 3161F/74  
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limits are based on 'Delaware's Phase II Chesapeake Bay Watershed Implementation Plan' (WIP) dated March 30, 2012 and the express terms and conditions of that certain TMDL Nitrogen-Phosphorus Trading Agreement (NPTA) entered into between the City of Seaford (Seaford) and INVISTA S.a.r.l. (INVISTA) dated August 15, 2014, and amended on August 12, 2015. Thus, the permit, as reissued, will include the following provisions:

- a. The basic terms of the NPTA that affect the permit Part I.B.1 "Rolling 12-month cumulative load" TP and TN limits are as follows:
  - 1) Seaford accepts an enforceable permit limit for TP that is 1,460 lbs/year less than it would be assigned under the WIP TMDL and transfers its rights to this 1,460 lbs/year of TP to INVISTA ("Traded TP").
  - 2) INVISTA accepts an enforceable limit for TN that is 27,431 lbs/year less than what it would be assigned under the WIP TMDL and transfers its rights to this 27,431 lbs/year of TN to Seaford ("Traded TN").
- b. If the NPTA is terminated by either the permittee or Invista,
  - 1) The "Traded TP" and the "Traded TN" amounts under the NPTA revert back to the respective permittees under the terms of the NPTA.
  - 2) The limits in Part I.B.2 become effective immediately, without any requirement for the Department to modify or reissue this permit and without any obligations by Seaford or the Department to seek a permit modification of reissuance to impose the alternative TN or TP Limits.
- c. **In the event of termination of the NPTA**, Seaford shall notify the Department in accordance with Part II.A.2 of this permit. Further, that notification shall include
  - 1) The date of termination,
  - 2) The reason for termination per the terms of the NPTA and
  - 3) An explanation of any issues Seaford anticipates as of the date of the notification for meeting the Alternative TN and TP Limits in Part I.B.2.

In the event that a conflict exists between any provision of the NPTA and this permit, the provisions of this permit shall control.

#### 6. Reporting Nitrogen and Phosphorus Species

Pursuant to the achieving compliance with the requirements of the Chesapeake Bay TMDL, Part I.B. of this permit requires reporting for the following nitrogen and phosphorus species:

<b>Nitrogen Species</b>					
Abbreviation:	<b>TN</b>	<b>TKN</b>	<b>NO23</b>	<b>NH3</b>	<b>TON</b>
Parameter:	Total Nitrogen (as N)	Total Kjeldahl Nitrogen (as N)	Nitrates plus Nitrites (as N)	Ammonia Nitrogen (as N)	Total Organic Nitrogen (as N)

<b>Phosphorus Species</b>			
Abbreviation:	<b>TP</b>	<b>TOP</b>	<b>PO4</b>
Parameter:	Total Phosphorus (as P)	Total Organic Phosphorus (as P)	Phosphate, Ortho (as P)

The Department may approve or direct reporting of results for the species above, based on the following equations (with all nitrogen species "as N" and all phosphorus species "as P"):

"Total Nitrogen (as N)" = "Total Kjeldahl Nitrogen (as N)" + "Nitrates plus nitrites (as N)"

"Total Kjeldahl Nitrogen (as N)" = "Ammonia Nitrogen (as N)" + "Total Organic Nitrogen (as N)"

"Total Phosphorus (as P)" = "Total Organic Phosphorus (as P)" + "Phosphate, Ortho (as P)"

"Total Organic Phosphorus (as P)" = "Total Phosphorus (as P)" - "Phosphate, Ortho (as P)"

#### 7. Moving 12-month Cumulative Loads

The "Moving 12-month Cumulative" loads shall be calculated by adding the individual monthly discharge loads for the most current twelve months of operation. Individual monthly loads shall be calculated by using the following formula:

$$\text{average monthly concentration (mg/l)} \times \text{total monthly flow (MG)} \times 8.34 \text{ (lb/gal)} = \text{monthly total discharge load (pounds/month)}$$

This load for the month will be added to the calculated loads for the previous eleven (11) months and reported on the DMR as the moving 12-month cumulative load.

#### 8. Acute Biomonitoring

The permittee shall conduct biomonitoring tests once per year in accordance with the following requirements. This testing shall at a minimum include the performance of "Screening Static Acute Toxicity Tests" as outlined in 8.a below. Dependent on the results of the screening test, the permittee may be required to perform a confirmatory "Definitive Static Acute Toxicity Test" as outlined in 8.b below. Dependent on the results of the definitive test, the permittee may be required to perform a Toxicity Reduction Evaluation as outlined in 8.c below.

Biomonitoring tests shall be conducted on representative effluent composite samples. All testing shall be performed in accordance with the test procedure requirements under 40 CFR 136. At a minimum these tests shall include the following:

- a. The permittee shall perform a "48-hour Screening Static Acute Toxicity Test" with 24-hour renewal. This test shall be performed using 100% representative composite effluent sample. Each test shall be initiated no later than 36 hours after the collection of the representative composite effluent sample. The biomonitoring tests shall be conducted on two (2) species, one fish and one invertebrate, as approved by the Department. If the control sample survival rate for any test is less than 90%, the tests will be considered invalid and the entire series of tests shall be conducted again.

Within 30 days of the completion of these tests, the results of the "Screening Static Acute Toxicity Tests" shall be reported to the Department. The report shall include at a minimum (i) a summary of test conditions, (ii) sample collection and test performance dates, and (iii) the individual, average, and control sample survival rates, (iv) the percent of test organisms killed by each concentration of effluent tested; and (v) the LC50 of the effluent.

- b. If the survival rate is less than 80% whole waste for either of the two (2) species tested under the requirements of 8.a, the permittee shall perform a confirmatory 48-hour "Definitive Static Acute Toxicity Test" on the species which was found to be most sensitive in 8.a. This testing shall commence within 60 days of the completion date of the testing described in 8.a.

Within 30 days of the completion of this test, the results shall be reported to the Department. At a minimum, this report shall include the information requirements referenced in 8.a.

- c. If the confirmatory 48-hour "Definitive Static Acute Toxicity Test" results indicate that the LC50 is less than 100% whole waste, then the permittee shall submit a plan for reducing the effluent toxicity to the Department within 60 days of receipt of the test results. This plan shall outline a schedule, as well as identify the test methods to be used for performing a Toxicity Reduction Evaluation.

For the purpose of these tests, a representative composite sample is a 24-hour composite sample as defined in Part I, Section D.3.g. If the instantaneous flow rate does not vary by more than +/- 15 percent of the average flow rate, a time-interval composite will be an acceptable representative sample. Otherwise, a flow-weighted composite sample must be used. All composite samples shall be representative of 24 hours of typical operations.

The Department shall be notified in writing at least thirty (30) days in advance of the day when any biomonitoring test is to commence. The permittee shall split samples used to perform a bioassay test with the Department upon request. All documentation pertaining to these tests shall be maintained at the facility as required in Part I.D, "Monitoring and Reporting", of this permit and shall be made available for inspection, upon request.

#### 9. Storm Water Plan

The permittee shall continue to implement and maintain a Storm Water Plan (SWP) that is designed to limit the exposure of industrial materials and activities to precipitation and to minimize the discharge of contaminated storm water from the permittee's facility. The SWP shall be implemented and maintained in accordance with the requirements detailed in Section 9 of the Department's *Regulations Governing the Control of Water Pollution*. A copy of the updated Storm Water Plan for this facility shall be submitted to the Department within sixty days of the effective date of this permit.

#### 10. Wastewater Treatment Plant Operator Licensing

The wastewater treatment facility shall be under the direct supervision of a Delaware licensed/certified wastewater treatment plant operator(s) in Direct Responsible Charge, whose competency is licensed by the Secretary in a classification corresponding to, or higher than, the classification of the wastewater treatment plant. All operators who perform duties of a wastewater treatment plant operator, shall be licensed by the Secretary. All activities and licensing shall comply with the "State of Delaware Regulations for Licensing Operators of Wastewater Facilities".



#### 11. Sludge Disposal – Requirements

The permittee shall comply with all existing Federal and State laws and regulations that apply to its sludge use or disposal practice(s) including, but not limited to, federal regulations outlined in 40 C.F.R., Part 258, Section 28, *Liquids Restrictions*, 40 C.F.R., Part 503, *Standards for the Use and Disposal of Sludge* (February, 1993) and the Department's *Guidance and Regulations Governing the Land Treatment of Wastes*, including Part III.B., *The Regulations Governing the Use and Disposal of Wastewater Sludge* (October, 1999). If the Department determines that additional requirements or permit conditions are needed to insure compliance with the referenced regulations, or if the Federal Government promulgates new regulations under Section 405(d) of the Act governing, (a) the treatment or disposal of sewage sludge, (b) sewage sludge management practices, or (c) concentrations of pollutants in sewage sludge, this permit may be reopened, and after notice and opportunity for public hearing, modified accordingly during its term.

#### 12. Sludge Disposal – Record Keeping

The permittee shall maintain monthly sludge inventory data. This data shall include at a minimum (a) quantity of sludge generated, (b) quantity of sludge stored on site, and (c) quantity of sludge transported off site. Transportation records shall include the date, quantity, carrier used, and the final destination for each shipment. The inventory data shall be maintained at the facility and be made available to the Department in accordance with Part I.D.8. "Records Retention", of this permit, except that records shall be retained for five (5) years.

#### 13. Sludge Disposal – Planned Changes

Prior to any planned change in the permittee's sludge use or disposal practice(s), the permittee shall notify the Department in accordance with the requirements of Part II.A.2.a, "Notification of Planned Changes" of this permit. A change in the permittee's sludge use or disposal practice(s) shall be considered cause for this permit to be modified, or revoked and reissued, under Part II.B.7, "Modification, Termination, or Revocation and Reissuance" of this permit.

#### 14. Industrial Pretreatment Program

- a. General Requirement – The permittee shall operate and implement a POTW pretreatment program in accordance with the federal Clean Water Act, applicable State laws, and the federal General Pretreatment Regulations at 40 CFR Part 403. The program shall also be implemented in accordance with the permittee's approved pretreatment program and any modifications thereto submitted by the permittee and approved by the Approval Authority.
- b. Annual Report and Other Requirements – The permittee shall submit a Pretreatment Annual Report by March 31 of each year to the Department and EPA that describes the permittee's pretreatment activities for the previous calendar year. The Pretreatment Annual Report shall include a description of pretreatment activities in all municipalities from which wastewater is received at the permittee's POTW. The Pretreatment Annual Report shall include the following information, at minimum:
  - 1) Industrial Listing – The Annual Report shall contain an updated industrial listing providing the names and addresses of all current Significant Industrial Users (SIUs) and Non-Significant Categorical Industrial Users (NSCIUs), as defined in 40 CFR 403.3, and the categorical standard, if any, applicable to each. The listing must: (1) identify any users that are subject to reduced reporting requirements under 40 CFR 403.12(e)(3); (2) identify which users are NSCIUs; (3) identify any users that have been granted a monitoring waiver in accordance with 40 CFR 403.12(e)(2) as well as the pollutants for which the waiver was granted and the date of the last POTW sampling event for each

pollutant; and (4) identify any categorical industrial users that have been given mass-based limits in place of concentration-based categorical limits in accordance with 40 CFR 403.6(c)(5) or concentration-based limits in place of mass-based categorical limits in accordance with 40 CFR 403.6(c)(6).

In addition, the Annual Report shall contain a summary of any hauled-in wastes accepted at the POTW including the source of the wastes (domestic, commercial or industrial) and the receiving location for acceptance of the wastes. For each industrial source (whether or not classified as an SIU), the report shall indicate (1) the name and address of the industrial source; (2) the average daily amount of wastewater received; (3) a brief description of the type of process operations conducted at the industrial facility; (4) whether the source facility is a categorical industrial user (including NSCIU), significant industrial users, or non-significant industrial user; and (5) any controls imposed on the user.

- 2) Control Mechanism Issuance – The Annual Report shall contain a summary of SIU control mechanism issuance, including a list of issuance, effective, and expiration dates for each SIU control mechanism. For each general control mechanism issued, provide the names of all SIUs covered by the general control mechanism and an explanation of how the users meet the criteria of 40 CFR 403.8(f)(1)(iii)(A) for issuance of a general control mechanism.
- 3) Sampling and Inspection – The Annual Report shall contain a summary of the number and types of inspections and sampling events of SIUs by the permittee, including a list of all SIUs either not sampled or not inspected, and the reason that the sampling and/or inspection was not conducted. For any user subject to reduced reporting under 40 CFR 403.12(e)(3), the list shall include the date of the last POTW sampling event and the date of the last POTW inspection of the user. In addition, the report shall include a summary of the number of self-monitoring events conducted by each SIU and the number required to be conducted, including a list of all SIUs that did not submit the required number of reports and the reason why the reports were not submitted. For NSCIUs, the report shall provide the date of the compliance certification required under 40 CFR 403.12(q).
- 4) Industrial User Compliance and POTW Enforcement – The Annual Report shall contain a summary of the number and type of violations of pretreatment standards and requirements, including local limits, and the actions taken by the permittee to obtain compliance, including compliance schedules, penalty assessments and actions for injunctive relief. The report shall state whether each SIU was in significant noncompliance, as that term is defined in 40 CFR Section 403.8(f)(2)(viii), and include the parameter(s) in violation, the period of violation, the actions taken by the POTW in response to the violations, and the compliance status at the end of the reporting period. A copy of the publication of users meeting the significant noncompliance criteria shall be included. In addition, the report shall provide a list of users previously designated as NSCIUs that have violated (to any extent) any pretreatment standard or requirement during the year and the date and description of the violation(s).
- 5) Summary of POTW Operations – The Annual Report shall contain a summary of any interference, pass-through, or permit violations by the POTW and indicate the following: (1) which, if any, permit violations may be attributed to industrial users; (2) which IU(s) are responsible for such violations; and (3) the actions taken to address these events. The report shall also include all sampling and analysis of POTW treatment plant influent, effluent, and sludge conducted during the year for local limit and priority pollutants identified pursuant to Section 303(d) of the Clean Water Act, 33 U.S.C. 1313(d).

- 6) Pretreatment Program Changes – The Annual Report shall contain a summary of any changes made or proposed to the approved program during the period covered by the report and the date of submission to the Approval Authority.
- c. Routine Monitoring – The permittee shall conduct monitoring at its treatment plant that, at a minimum, includes quarterly influent, effluent, and sludge analysis for all pollutants for which local limits have been established, and an annual priority pollutant scan for influent and sludge.
- d. Notification of Pass Through or Interference – The permittee shall notify EPA and the Department, in writing, of any instance of pass through or interference, as defined at 40 CFR 403.3(p) and (k), respectively, known or suspected to be related to a discharge from an IU into the POTW. The notification shall be attached to the DMR submitted to EPA and the Department and shall describe the incident, including the date, time, length, cause (including responsible user if known), and the steps taken by the permittee and IU (if identified) to address the incident. A copy of the notification shall also be sent to the EPA at the address provided below.
- e. Headworks Analysis – The permittee shall submit to EPA and the Department a reevaluation of its local limits based on a headworks analysis of its treatment plant within one (1) year of permit issuance, and provide a revised submission within three (3) months of receipt of comments from EPA or the Department unless a longer period of time is granted in writing by EPA or the Department. In order to ensure that the permittee's discharge complies with water quality standards, the reevaluation of local limits shall consider, at a minimum, all water quality standards applicable to the pollutants included in the reevaluation, unless the POTW is subject to an effluent limitation for the pollutant in Part I of this permit. The list of pollutants to be evaluated, as well as a sampling plan for collection of necessary data, shall be submitted to EPA and the Department within three (3) months of permit issuance. Unless otherwise approved in writing, the list of pollutants shall include arsenic, cadmium, chromium, copper, cyanide, lead, mercury, molybdenum, nickel, selenium, silver, zinc, BOD5, TSS, ammonia, any pollutants for which a local limit currently exists, any pollutant limited in this permit, as well as any other pollutants that have been identified in the POTW in significant quantities through monitoring or the receipt of indirect discharges and hauled-in wastes. Within four (4) months of acceptance of the headworks analysis by the Approval Authority, the permittee shall adopt the revised local limits and, if necessary to ensure that the limits are enforceable throughout the service area, notify all contributing municipalities of the need to adopt the revised local limits.
- f. Changes to Pretreatment Program – EPA and the Department may require the permittee to submit for approval changes to its pretreatment program if any one or more of the following conditions is present:
  - 1) The program is not implemented in accordance with 40 CFR Part 403;
  - 2) Problems such as interference, pass through or sludge contamination develop or continue;
  - 3) The POTW proposes to introduce new pollutants or an increased loading of approved pollutants;
  - 4) Federal, State, or local requirements change;
  - 5) Changes are needed to assure protection of waters of the State.

Effective Date: November 1, 2015  
Expiration Date: October 31, 2020  
Minor Modification Effective Date: February 10, 2016  
Major Modification Effective Date: March 30, 2019

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Program modification is necessary whenever there is a significant change in the operation of the pretreatment program that differs from the information contained in the permittee's submission, as approved under 40 CFR 403.11.

- g. Procedure for Pretreatment Program Changes – Upon submittal by the permittee, and written notice of approval by the Approval Authority to the permittee of any changes to the permittee's approved pretreatment program, such changes are effective and binding upon the permittee unless the permittee objects within 30 days of receipt of the written notice of approval. Any objection must be submitted in writing to EPA and the Department.
- h. Correspondence – The Approval Authority shall be EPA at the following address:

Pretreatment Coordinator (3WP41)  
U.S. Environmental Protection Agency  
1650 Arch Street  
Philadelphia, PA 19103-2029

Copies of all correspondence and reports dealing with this program shall be sent to:

Delaware Dept. of Natural Resources and Environmental Control  
Division of Water, Surface Water Discharges Section  
89 Kings Highway  
Dover, Delaware 19901

#### 15. Waste Load Allocation Transfer from Bridgeville to Seaford

Upon start-up and commissioning of the Western Sussex Regional System, the annual and daily wasteload allocation for Total Nitrogen and Total Phosphorous currently assigned to the Town of Bridgeville (NPDES Permit DE0020249) shall be transferred to the City of Seaford.