



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL

OFFICE OF THE
SECRETARY

89 KINGS HIGHWAY
DOVER, DELAWARE 19901

PHONE: (302) 739-9000
FAX: (302) 739-6242

Secretary's Order No. 2011-W-0032

Re: National Pollutant Discharge Elimination System Permit for Indian River Power, LLC's Indian River Generating Station, Dagsboro, Sussex County
Date of Issuance: November 16, 2011
Effective Date: November 16, 2011

Background

This Order considers the draft permit for a National Pollutant Discharge Elimination System (NPDES) permit¹ for Indian River Power, LLC's (Applicant)² Indian River Generating Station (IRGS) located at 29416 Power Plant Road, Dagsboro, Sussex County.

On November 21, 2007, the Department's Division of Water, Surface Water Discharge Section (SWDS) issued notice of a draft permit, based upon accepting as complete Applicant's revised application on December 10, 2004³ following IRGS' purchase from Delmarva Power & Light. The Department received numerous comments and requests for a public hearing. The Department held a public hearing on February 21, 2008 at the Millsboro Senior Center, at which time the public comments opposed the draft permit because it allowed IRGS' continued use of once through cooling water.

¹ The Department issues federal and state permits in one permit document. The Department is authorized to issue a federal permit under federal delegation of NPDES permit administration in Delaware to the Department.

² Applicant is a subsidiary of NRG Energy, Inc., which acquired IRGS from the original applicant, Delmarva Power & Light Company.

³ The federal NPDES permit requires notice of a draft permit prepared by the Department.

Delaware's Good Nature depends on you!

The public hearing was held when the Department was in settlement negotiations to resolve litigation over IRGS' operation of the four coal fired generating units, Units 1-4. On October 26, 2008, the Department settled the litigation over IRGS' operations in a court approved Consent Order, which established the planned shutdown of Units 1 and 2. In July 2010, the Consent Order was amended to reflect an agreement to shutdown Unit 3 by December 31, 2013.

As a result of these operational changes and the preparation of best technology available determination for Unit 3, SWDS issued a revised draft permit for public comment on September 8, 2010, which reflected drastic reductions to IRGS' discharges and cooling water usage. The Department did not receive any public comments or any request for a public hearing on the revised draft permit.

The Department's presiding hearing officer prepared a Report, which recommends an Order be issued approving the permit prepared by SWDS for public comment in 2010. The Report recommends that the prior draft permit prepared in 2007 be deemed withdrawn. The Report recommends that a decision on the record be limited to the information relied upon by SWDS to support the revised draft permit and not include the information from the prior draft permit except for the public comments made at February 21, 2008 public hearing. I adopt the Report to the extent it is consistent with this Order.

Units 1, 2 and 3 are much smaller generating units than Unit 4,⁴ but they nevertheless require significantly more water than Unit 4 because they use 'once through,' or open loop cooling systems to provide cooling water directly from the water

⁴ The megawatt capacity of Units 1, 2, 3, and 4 are 90, 90, 165 and 424, respectively.

source. In contrast, Unit 4 requires only 26 mgd for cooling because it uses a cooling tower, or closed loop cooling system, that recirculates the cooling water.

Findings and Reasons

The Department's current NPDES permit authorizes IRGS to discharge up to 419.6 million gallons per day (mgd) of effluent into Island Creek, which is a tidal tributary of Indian River and within the Indian River Bay watershed. The discharge is from industrial use in the generation of electricity, with 410.4 mgd water withdrawn from the Indian River and used for non contact cooling water. IRGS' cooling water usage is considered thermal pollution under Section 316 of the federal Water Pollution Control Amendments of 1972 (Clean Water Act or CWA) and hence is subject to NPDES permit regulation. The Department administers the NPDES permit in Delaware under a delegation of authority from the United States Environmental Protection Agency (EPA).

EPA's NPDES regulations for cooling water usage have been the subject of several appeals and court decisions at the national and regional levels. The court decisions caused considerable uncertainty in the regulation of cooling water usage by large industrial users nationwide, including IRGS. The subject of most of the legal controversy was CWA Section 316(b), which requires that cooling water intake structures employ "best technology available" (BTA) for the "location, design, construction, and capacity" in order to minimize the adverse environmental impacts. IRGS' cooling water intake structure uses screens to minimize the environmental impact from the cooling water usage, but nevertheless the intake causes harm from the impingement of aquatic life against the screens and/or entrainment if the aquatic life passes through the screens and enters the cooling water system. The Department estimates that IRGS' cooling

water usage causes the annual loss of hundreds of thousands of blue crabs, millions of bay anchovy, and hundreds of thousands of Atlantic menhaden, Atlantic croaker, winter flounder, and weakfish. The harm is directly associated with the amount of water IRGS withdraws and most of the withdrawal is for cooling water usage.

The NPDES permit approved by this Order will reduce IRGS's cooling water usage and discharge from 410.4 mgd to 19.8 mgd by December 31 2013, which is when Unit 3 will shutdown. Units 1 and 2 already have shutdown and the NPDES permit reflects this decreased water discharge. As a result, the NPDES permit authorized by this Order will result in a vast improvement to the fish population and other aquatic life in the Inland Bays.

The road to the issuance of the NPDES permit has been was a long one, but the Department's delay has been attributable to certain factors outside its control, such as the litigation over the federal regulations. The EPA's initial regulations on cooling water intake were withdrawn in 1977 after being challenged in court. Thereafter EPA entered into a consent decree, which established a timetable for issuing revised regulations. Under the revised regulations, IRGS was subject to EPA's Phase II regulations issued in 2004, which established a cost benefit analysis for determining BTA. These regulations, however, were rejected in 2007 by the Second Circuit Court of Appeals, which concluded that there was not statutory authority for a cost benefit analysis. In 2009, the United States Supreme Court reversed the Second Circuit decision, and allowed EPA and the permitting state agencies such as the Department to use a cost benefit analysis in the exercise of best professional judgment to determine BTA. The Department also has prepared its best professional judgment on the BTA for Unit 3. Thus, the Order is the

culmination of a long NPDES regulation process that has been plagued with legal uncertainties with the various appeals and court decisions, but the end result is that IRGS will no longer be using the old once through cooling water process to generate electricity.

The Department also has been active in requiring changes in IRGS' operations in order to improve the environment. The most important change was the Department's success in negotiating the Consent Order and the amended Consent Order, which set forth the time table for shutting down of Units 1, 2, and 3. Together these units are older and represent most of IRGS' cooling water usage. The Department considers the cooling tower on Unit 4 to be consistent with BTA and consequently Unit 4 may use water to be reused after circulation through the closed loop cooling towers.

The NPDES permit approved by this Order reflects the elimination of 216 mgd of cooling water usage by Unit 1 and Unit 2. In addition, after December 31, 2013, the NPDES permit to be issued by this Order will reflect the reduction of 162 mgd of cooling water usage when Unit 3 shutdown for a total reduction of 378 mgd, which is a 93.6% reduction in water consumption.

The reduction in cooling water usage will benefit fish and other aquatic life in the Indian River and the Inland Bays, which the Department has designated as waters as Exceptional Recreational or Ecological Significance (ERES). The end to the open loop systems will reduce the number of fish and other aquatic life that are killed from impingement by screens at IRGS' intake or by entrainment if they pass through the screen and enter the cooling system.

The Department during the February 21, 2008 public hearing was criticized for its prior draft permit that would have allowed the open loop systems to continue to operate

for the five year term of the NPDES permit. This criticism may have been justified based upon what the public knew then, but it also was made without the understanding of the lengthy settlement negotiations that were ongoing at the time, which were successful with the resolution of the environmental issues with Units 1, 2 and 3's operations. The settlement with the Applicant avoided the delay and uncertainty with a legal challenge, which likely would have occurred if the Department had directed the operating changes unilaterally in a NPDES permit.

The Department's first draft permit was not popular based upon the opposition to its continued approval of Units 1, 2 and 3's once through cooling systems. The passage of time has shown that the Department was taking steps towards the issuance of an even better permit, as approved by this Order. The permit approved by this Order is consistent with the public comments, which wanted to end as soon as possible IRGS' once through cooling water usage by Units 1, 2 and 3. The NPDES permit to be issued reflects the end of IRGS' once through cooling water usage by Units 1, 2 and 3. The opportunity to rely on the Consent Order made the revision of the prior draft permit possible with the permit approved by this Order, even if the reliance delayed any action from the 2008 public hearing.

In terms of IRGS' NPDES permit renewal process, the time waiting for the 2010 Amended Consent Order did not cause any undue environmental harm because even if the Department had ordered the construction of cooling towers for Units 1, 2 and 3 in 2008 they would not have been operational by now even if NRG had not appealed such an Order. A more likely scenario would have been years of litigation and an uncertainty that such litigation entails. Thus, the Department's NPDES permit should avoid the legal

battles that embroiled the NPDES permits elsewhere when other open loop systems were ordered to be changed to closed loop systems. In addition, the electric utility ratepayers avoided the costs associated with retrofitting IRGS' open loop systems to closed loop systems through building cooling towers for Units 1, 2 and 3. Thus, this Order recognizes the hard work and effort over many years to obtain a result that will bring significant environmental benefits to the Inland Bays' fish population, other aquatic life and the overall water quality within the Inland Bays.

The permits also require a study of the impact of copper as recommended by the experts in SWDS. The permit also eliminates the discharge outfall for treated sanitary wastewater and consolidates outfall for stormwater. In addition, IRGS will be required to submit a stormwater plan that will minimize any stormwater discharges. The permit authorized by this Order will meet the water quality standards and the limits in the Department's Total Maximum Daily Loads (TMDLs). The NPDES permit reflects considerable progress towards attaining the water quality standards and limits for the Inland Bays' designated uses, consistent with their status under CWA Section 303(d).

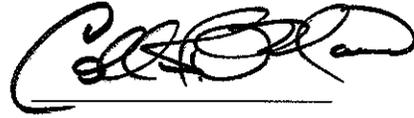
This Order concludes a lengthy permit review process, but the Report recommends that the record only include the information relied upon by SWDS for developing permit approved by this Order. The Report does not recommend including the information from the record developed for the prior draft permit, except for the public comments. The Report indicates that the Department has the authority to issue a permit based upon the 2010 draft permit without a public hearing or even an Order. The Report recommends that the public comments received at the February 21, 2008 hearing be included because they were instrumental in the Department's replacement of the prior

draft permit with the permit approved by this Order. I agree with the Report's reasoning on the Department's authority, and the recommendation to include the public comments from the February 21, 2008 public hearing. This Order is appropriate even without a public hearing because of the significant public interest, as expressed at the public hearing held on the prior draft NPDES permit. Moreover, the NPDES permit approved by this Order will substantially improve the environment, specifically, the Inland Bays' aquatic life and water quality.

In sum, I adopt and direct the following as an Order of the Department:

1. The Department has jurisdiction under its statutory authority in *7 Del C. Chap 60* to make a determination in this proceeding;
2. The Department provided adequate public notice of the draft permit, but did not receive any request for a public hearing and did not hold a public hearing on the draft permit;
3. The Department did not receive any public comments on the draft permit approved by this Order;
4. The Department determines that the record should include the information SWDS relied upon to develop the draft permit approved by this Order consistent with the reasoning in the Report, and shall include in the record the February 21, 2008 public hearing transcript even though it was held on the prior draft permit;
5. The duly authorized Department official shall timely prepare and issue the NPDES permit consistent with this Order; and

6. The Department shall provide notice of this Order to the persons affected by this Order, as determined by the Department.

A handwritten signature in black ink, appearing to read 'Collin P. O'Mara', written over a horizontal line.

Collin P. O'Mara
Secretary

HEARING OFFICER'S REPORT

TO: The Honorable Collin P. O'Mara
Secretary, Department of Natural Resources and Environmental Control

FROM: Robert P. Haynes, Esquire
Senior Hearing Officer, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Application of Indian River Power, LLC to Renew a National Pollutant Discharge Elimination System (NPDES) Permit for the Indian River Generating Station, Dagsboro, Sussex County

DATE: May 16, 2011

I. BACKGROUND AND PROCEDURAL HISTORY

This Report makes recommendations to the Secretary of the Department of Natural Resources and Environmental Control (DNREC or Department) on a National Pollutant Discharge Elimination System (NPDES) permit for Indian River Power, LLC's¹ (Applicant). The NPDES permit would renew industrial discharges from Applicant's Indian River Generating Station (IRGS) located at 29416 Power Plant Road, Dagsboro, Sussex County for discharges into Island Creek and Indian River Bay.

IRGS' current NPDES permit authorizes the surface water discharge of up to 419.4 million gallons per day (MGD). Most of the discharge is the water IRGS uses for non-contact cooling water in the generation of electricity by its four coal fired boiler generating units, Units 1-4. The current NPDES permit reflects IRGS Units 1, 2 and 3 use of 'once-through,' or open loop, cooling systems, in which water is withdrawn, used for cooling, and then discharged into the surface waters. In contrast, Unit 4 uses a closed cycle cooling system whereby the cooling

¹ The application timely was submitted in 1992 by Delmarva Power & Light Company and later revised in 2004 by IRGS's subsequent owner, NRG Energy, Inc., which is the parent corporation of the Applicant.

water is recirculated through a cooling tower system, which allows the cooling water to be reused.

The current NPDES permit authorized a discharge of up to 410.4 mgd for cooling water usage, but most of which from Units 1, 2 and 3's use of the once through cooling system. Unit 4 discharges 8.4 mgd because it uses a closed cycle cooling system with cooling tower technology.

On December 10, 2004, the Department's Division of Water, Surface Water Discharge Section (SWDS) determined that Applicant's revised NPDES permit renewal application was complete. On November 21, 2007, SWDS issued a public notice of a draft permit (2007 draft permit). The 2007 draft permit did not reduce the amount of discharge authorized or require any move away from the once through cooling water systems used by Units 1, 2 and 3. The public was provided the opportunity to submit comment until December 21, 2007, and the Department received public comments, including requests for a public hearing. Consequently, the Department published notice of such a public hearing. I was assigned to preside over the public hearing, which was held February 21, 2008 in the Millsboro Senior Center in Millsboro, Sussex County.

Department representatives, Peder Hansen and Tony Hummel from SWDS, were present at the public hearing. SWDS developed an administrative record based upon the following documents: 1) the July 29, 2004 updated application, 2) the fact sheet prepared by SWDS, 3) the 2007 draft permit prepared by SWDS, 4) the legal notice of the draft permit, 5) the written public comments received by the deadline for public comments, and 6) the legal notice of the public hearing, 7) additional public comments, and 8) the SWDS' powerpoint presentation. The public

comments at the hearing opposed the issuance of the 2007 draft permit because it allowed the continued use of the once through cooling systems by Units 1-3.

The Department did not issue a decision on the 2007 draft permit because of the public comments. Instead, SWDS prepared a revised draft permit, which was issued for public comment on November 21, 2010. (2010 draft permit). The 2010 draft permit did not receive any public comments or any request for a public hearing. The 2010 draft permit reflects that elimination of approval of any discharges from once through cooling systems for IRGS Units 1, 2 and 3.

SWDS 2010 draft permit reflects that IRGS' operations have changed based upon the Department's successful negotiation of a settlement of litigation involving IRGS' operations and compliance with environmental laws and regulations. The settlement was approved by New Castle County Superior Court in an October 27, 2007 Consent Order in Docket No. CA No.07C-02-283FSS (Consent Order). The Consent Order set forth the planned shutdown and mothballing of IRGS Units 1 and 2 by May 1, 2011.

The shutdown of Units 1 and 2 has occurred on schedule and the once through cooling water usage by these units is no longer required. In addition, the Department negotiated an amended Consent Order in July 2010, which the Superior Court also approved. This Amended Consent Order requires Unit 3 to be shut down by December 31, 2013.

II. RECOMMENDED RECORD OF DECISION

I recommend that the record in this permit renewal proceeding be limited to the record that supports the 2010 draft permit, which was not the subject of any public comments or public hearing. I recommend that the Department determine that the 2007 draft permit was withdrawn

by the publication of the notice of the 2010 draft permit. I recommend that the record of decision for the 2010 draft permit expressly include the February 21, 2008 public hearing, and the public comments provided during that public hearing in opposition to the 2007 draft permit because they were instrumental to the Department's decision to replace the 2007 draft permit with the 2010 draft permit. I recommend that the February 21, 2008 public hearing comments and record be included in the record for the 2010 draft permit, which was not the subject of any public hearing or public comments. In the alternative, the Department could issue the 2010 draft permit without an Order or designation of the recommended record in this Report. My recommendation is based upon the significant role the public comments in the replacement of the 2007 draft permit with the 2010 draft permit.

The Department's files contain an enormous amount of information on IRGS, including the entire NPDES permit renewal that began in 1992. Moreover, SWDS also relies on the Department's files on IRGS that date back to the construction of Units 1 and 2 in the late 1950s. This Report recognizes that certain information may no longer be necessary or relevant to the final decision, but the Department prepared a best technology available assessment for this permit and it should be included in the record as further support for the final decision if consistent with the recommendations in this Report. I recommend that this Report and SWDS' the attached draft permit and other documents relied upon by SWDS be included in the recommended record.

III. DISCUSSION AND REASONS

The Department's regulations *Governing the Control of Water Pollution* (Regulations), provide for regulatory foundation on Department's issuance of a NPDES permit. I find that the

draft permit is consistent with the Regulations and recommend issuance of the draft permit attached hereto as a final permit.

The 2010 draft permit reflects Unit 1 was shut down on May 1, 2011 and that Unit 2 was shut down by May 1, 2010, and that once through cooling water usage for these Units was to end shortly after their shutdown. The shutdown of these Units reduces IRGS' water intake requirements, which in turn will reduce the harm to fish and other aquatic life. Moreover, the 2010 draft permit also reflects that Unit 3 will be shutdown by December 31, 2013, which further will eliminate any once through cooling water usage by IRGS .

IRGS' cooling water intake structure is subject to regulation under Section 316(b) of the Clean Water Act, which requires that the location, design, construction and capacity reflect the "best technology available" (BTA) for minimizing adverse environmental impact." The Department experts have determined that the scheduled shutdown of Units 1, 2 and 3 will result in IRGS no longer using once through cooling systems, and that Unit 4 use of a cooling tower system satisfies BTA for this permit renewal. The 2010 draft permit also imposes a permit requirement to study copper discharges in Special Condition No. 9 once the once through cooling water usage ends. I find that this condition is warranted by the Department's concerns with copper discharges. Special Condition 10 also requires Applicant to implement and maintain a storm water plan to minimize the discharge of storm water and be submitted pursuant to Section 9 of the Department Regulations.

The draft permit also will consolidate the outfalls and require additional monitoring than currently performed for the permit that now is in effect. The Applicant also will reduce its water demand for pump seal water by 7.2 mgd by July 1, 2011 and another 5.4 mgd by March 1, 2014

and these limits will be in a combined discharge of 21.2 mgd for Outfall 014 with the consolidation of Outfalls 010, 012 and 013. I find that these permit conditions and changes are supported by the Department's experts.

The overall impact of the draft permit will result in a significant improvement to the water quality of the receiving waters, which are within the Inland Bays watershed. The Department has classified the receiving waters as "impaired" for temperature, bacteria and nutrients based upon the Department's current CWA Section 302(d) listing. The 2010 draft permit complies with the Department's current Total Maximum Daily Loads (TMDLs). Of note is that the treated sanitary wastewater discharge will be eliminated as currently authorized for Outfall 028.

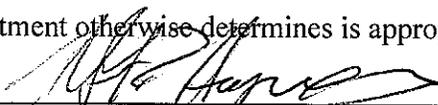
The 2010 draft permit also addresses the public concerns and comments on the 2007 draft permit's oil and grease limits and the current draft permit reflects reduced limits. The operation of IRGS will not result in oil and grease discharges that should be of any concern and the limits established in the draft permit are consistent with the Department's regulations and reflect an upper limit that will not be approached by IRGS' actual operation based upon the Department's considerable regulatory experience.

In sum, the revised draft permit had been duly subject of public notice and may be issued without a public hearing as none was requested and the Department determined that none should be held given that the current draft permit includes many of the changes requested by the public comments expressed during the February 2008 public hearing.

IV. RECOMMENDED CONCLUSIONS

Based on the record identified herein, I find and conclude that SWDS should issue Applicant the federal and state NPDES permit. I recommend the Secretary adopt the following conclusions:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department's publication of the 2010 draft permit reflected the withdrawal of the 2007 draft permit;
2. The Department provided adequate public notice of the 2010 draft permit and provided the public with the opportunity to comment on the 2010 draft permit in a manner required by the law and regulations;
3. The Department did not receive any public comment or request for a public hearing on the 2010 draft permit, and the law did not require the Department to hold a public hearing on the 2010 draft permit;
4. The Department's action is based upon the expertise of SWDS in its preparation of the 2010 draft permit, and the recommendations in the Report;
5. The Department shall issue Applicant a permit based upon the 2010 draft permit prepared by SWDS; and
6. The Department shall publish the Order on its web site and shall provide notice as required by the law and its Regulations and the Department otherwise determines is appropriate.


Robert P. Haynes, Esquire
Senior Hearing Officer

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

Indian River Power LLC
29416 Power Plant Road
Dagsboro, DE 19939

is authorized to discharge from the facility (Point Sources 001, 002, 005, 006, 010, 012, 013, 014, 022, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 042, 045, and 050) located at

29416 Power Plant Road
Dagsboro, Delaware 19939

to receiving waters named

Island Creek, a tributary to Indian River, and Indian River Bay

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

Rob Underwood, Manager
Surface Water Discharges Section
Division of Water Resources
Department of Natural Resources and Environmental Control

Date Signed

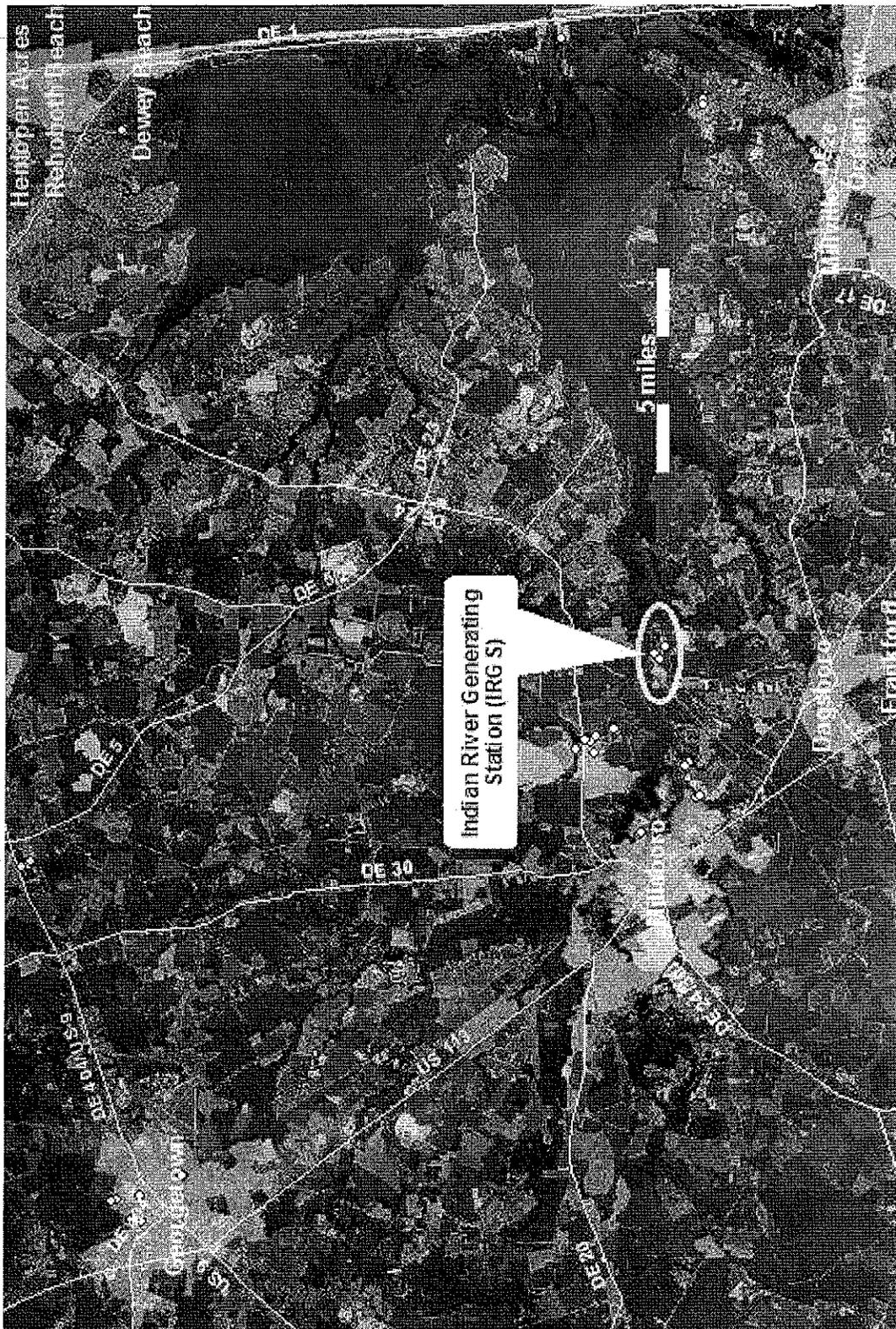
Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 2 of 35 Pages

Part I

A. General Description of Discharges and Facilities

1. Site Location Map



Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 3 of 35 Pages

A. General Description of Discharges and Facilities (continued)

2. Description of Outfalls

001, 002 – Once through cooling water from Unit #1 (These Outfalls will be eliminated by April 30, 2011)

005, 006 – Once through cooling water from Unit #3 (These Outfalls will be eliminated by December 31, 2013)

010 – Service water

012 – Service water

013 – Service water

014 – Service Water (as of March 1, 2014, monitoring and limits for 010, 012, & 013 will be consolidated into 014, except that copper limits and flow monitoring will be retained at 010)

022 – Screen backwash

027 – Cooling tower blowdown (Unit #4)

028 – Sewage treatment plant effluent

029 – Screen backwash (Unit #4)

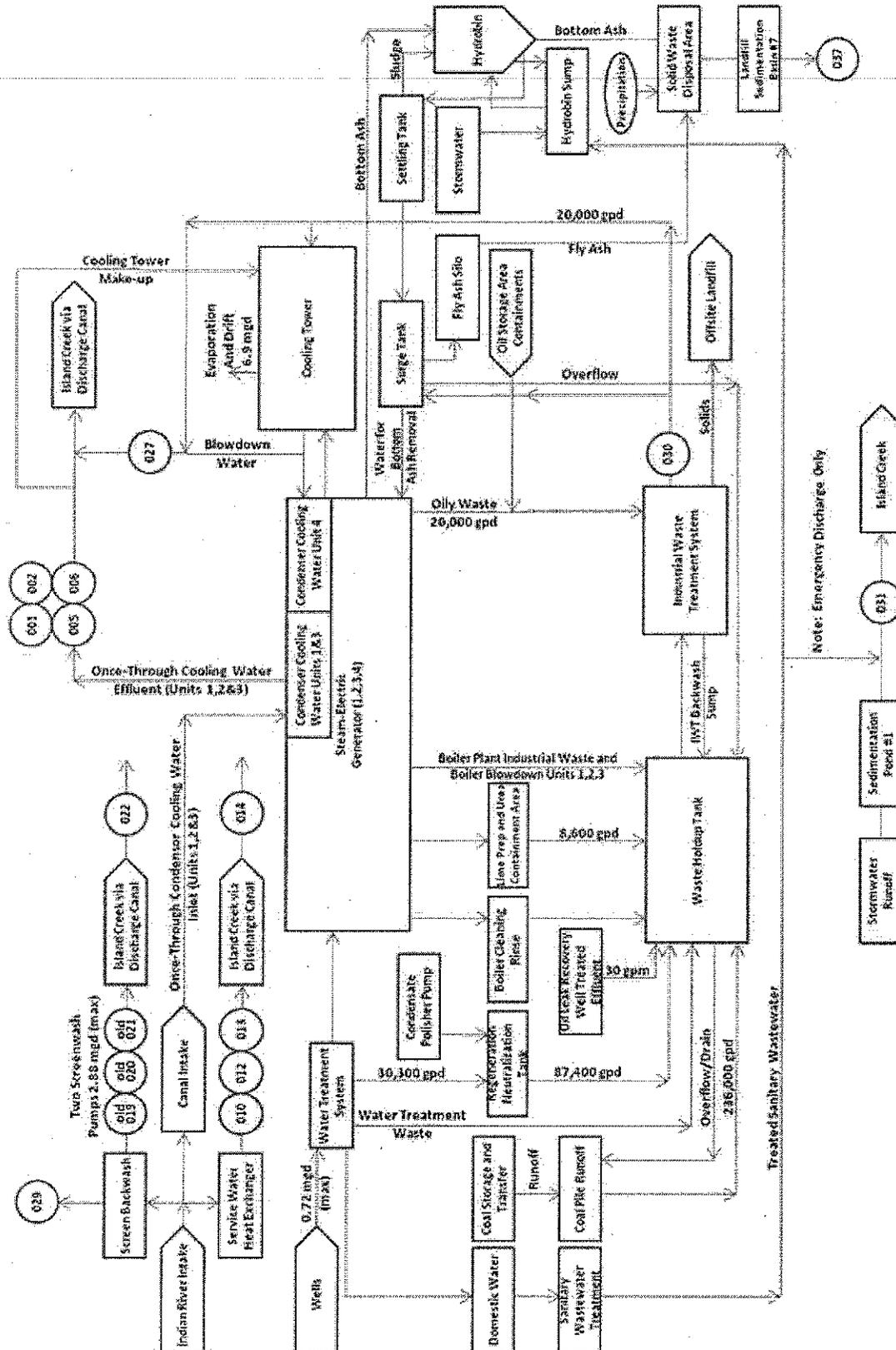
030 – Industrial wastewater treatment plant effluent

050 – Strainer backwash for make-up to chlorination unit

031, 032, 033, 034, 035, 036, 037, 042, and 045 – Stormwater runoff

A. General Description of Discharges and Facilities (continued)

3. Flow Diagram



Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 5 of 35 Pages

B. Effluent Limitations and Monitoring Requirements

1. Outfall 001 – Effluent Limitations and Monitoring Requirements – Once Through Cooling Water

During the period beginning **effective date** and lasting to July 1, 2011, the permittee is authorized to discharge from point source 001⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽³⁾		54	Mgd	--	--	--	Monthly	Calculate
Turbine Heat Rejected	202X10 ⁶	223X10 ⁶	BTU/hr	--	--	--	Monthly	Calculate
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge			Hours/day	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
Temperature	--	--	--		107	°F	Hourly	Immersion/stabilization
This Outfall will be eliminated as soon as possible after the shutdown of Unit 1, but no later than by July 1, 2011.								
<ul style="list-style-type: none"> • The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. • There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. • Total residual chlorine shall not be discharged from any unit for more than two hours in any one day. Not more than one unit in the plant shall discharge total residual chlorine at any one time. 								

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At prepared sampling stations located within the discharge canal.

- 1 See discharge description on page 3 of 35 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 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

2. **Outfall 002 — Interim Effluent Limitations and Monitoring Requirements – Once Through Cooling Water**

During the period beginning **effective date** and lasting to July 1, 2011, the permittee is authorized to discharge from point source 002⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽³⁾	--	54	mgd	--	--	--	Monthly	Calculate
Turbine Heat Rejected	202X10 ⁶	223X10 ⁶	BTU/hr	--	--	--	Monthly	Calculate
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge			hours/day	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
Temperature	--	--	--		107	°F	Hourly	Immersion/Stabilization
This Outfall will be eliminated as soon as possible after the shutdown of Unit 1, but no later than July 1, 2011.								
<ul style="list-style-type: none"> • The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. • There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. • Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. 								

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At prepared sampling stations located within the discharge canal.

1 See discharge description on page 3 of 35 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 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

3. Outfall 005 –Effluent Limitations and Monitoring Requirements – Once Through Cooling Water

During the period beginning **effective date** and lasting to March 1, 2014, the permittee is authorized to discharge from point source 005⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽³⁾		81	mgd	--	--	--	Monthly	Calculate
Turbine Heat Rejected	412X10 ⁶	412X10 ⁶	BTU/hr	--	--	--	Monthly	Calculate
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge			hours/day	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
Temperature	--	--	--	--	107	°F	Hourly	Immersion/Stabilization
This Outfall will be eliminated as soon as possible after the shutdown of Unit 43, but no later than by March 1, 2014.								
<ul style="list-style-type: none"> • The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. • There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. • Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. 								

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At prepared sampling stations located approximately 120 feet from the outfall to the discharge canal.

1 See discharge description on page 3 of 35 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 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 8 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

4. **Outfall 006 – Effluent Limitations and Monitoring Requirements – Once Through Non-Contact Cooling Water**

During the period beginning **effective date** and lasting to March 1, 2014, the permittee is authorized to discharge from point source 006⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽³⁾		81	mgd	--	--	--	Monthly	Calculate
Turbine Heat Rejected	412X10 ⁶	412X10 ⁶	BTU/hr	--	--	--	Monthly	Calculate
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U. at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge			hours/day	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
Temperature	--	--	--		107	°F	Hourly	Immersion/Stabilization
This Outfall will be eliminated as soon as possible after the shutdown of Unit 43, but no later than by March 1, 2014.								
<ul style="list-style-type: none"> The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. 								

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At prepared sampling stations located approximately 120 feet from the outfall to the discharge canal.

- 1 See discharge description on page 3 of 35 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 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 9 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

5. Outfall 010 – Interim Effluent Limitations and Monitoring Requirements – Service Water

During the period beginning **effective date** and lasting to **March 1, 2014**, the permittee is authorized to discharge from point source 010⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
June 1 through September 30								
Flow ⁽³⁾		21.6	mgd	--	--	--	Monthly	Calculate
Copper, Total ⁽⁴⁾	90	90	lbs/day	0.5	0.5	mg/L	Monthly	Composite
October 1 through May 31								
Flow ⁽⁴⁾		14.4	mgd	--	--	--	Monthly	Calculate
Copper, Total ⁽⁵⁾	60	60	lbs/day	0.5	0.5	mg/L	Monthly	Composite
January 1 through December 31								
Total Monthly Flow			Millions of gallons	--	--	--	Monthly	Calculate
Oil and Grease	--	--	--	10	15	mg/L	Monthly	Grab
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U. at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge			hours/day	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
<ul style="list-style-type: none"> The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. 								

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

At prepared sampling stations located approximately 120 feet from the outfall to the discharge canal.

- 1 See discharge description on page 3 of 35 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. 4 on page 33 of this permit. Report both average daily and maximum daily flows on the discharge monitoring report (DMR).
- 4 Mass limitations based on long-term average flow of 21.6 mgd.
- 5 Mass limitations based on long-term average flow of 14.4 mgd.

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

6. Outfall 010 – Final Effluent Limitations and Monitoring Requirements – Service Water

During the period beginning **March 1, 2014**⁽¹⁾, and lasting **through the expiration date**, the permittee is authorized to discharge from point source 010⁽²⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽³⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
January 1 through December 31								
Flow ⁽⁴⁾			mgd	--	--	--	Monthly	Calculate
June 1 through September 30								
Copper, Total ⁽⁵⁾	90	90	lbs/day	0.5	0.5	mg/L	Monthly	Composite
October 1 through May 31								
Copper, Total ⁽⁶⁾	60	60	lbs/day	0.5	0.5	mg/L	Monthly	Composite
<ul style="list-style-type: none"> The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. 								

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

At prepared sampling stations located approximately 120 feet from the outfall to the discharge canal.

- As of March 1, 2014, except for copper, monitoring and limits for this discharge will be at Outfall 014. Flow will continue to be monitored at Outfall 010, since it is needed to calculate copper loads.
- See discharge description on page 3 of 35 of this permit.
- 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.
- See Part III.A., Special Condition No. 4 on page 33 of this permit. Report both average daily and maximum daily flows on the discharge monitoring report (DMR).
- Mass limitations based on long-term average flow of 21.6 mgd.
- Mass limitations based on long-term average flow of 14.4 mgd.

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

7. Outfall 012 – Interim⁽¹⁾ Effluent Limitations and Monitoring Requirements – Service Water

During the period beginning **effective date** and lasting to **March 1, 2014**, the permittee is authorized to discharge from point source 012⁽²⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽³⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽⁴⁾		5.4	mgd	--	--	--	Monthly	Calculate
Total Monthly Flow			Millions of gallons	--	--	--	Monthly	Calculate
Oil and Grease	--	--	--	10	15	mg/L	Monthly	Grab
Copper, Total			lbs/day			mg/L	Monthly	Composite
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U. at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge	--	--	--	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
<ul style="list-style-type: none"> The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. Mass limitations based on long-term average flow of 5.4 mgd. 								

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

At prepared sampling stations located approximately 120 feet from the outfall to the discharge canal.

- As of March 1, 2014, monitoring and limits for Outfall 012 will be consolidated into Outfall 014.
- See discharge description on page 3 of 35 of this permit.
- 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.
- See Part III.A., Special Condition No. 4 on page 33 of this permit. Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

8. Outfall 013 – Interim1 Effluent Limitations and Monitoring Requirements – Service Water

During the period beginning **effective date** and lasting to **March 1, 2014**, the permittee is authorized to discharge from point source 013⁽²⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽³⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽⁴⁾		5.4	mgd	--	--	--	Monthly	Calculate
Total Monthly Flow			Millions of gallons	--	--	--	Monthly	Calculate
Oil and Grease	--	--	--	10	15	mg/L	Monthly	Grab
Copper, Total			lbs/day			mg/L	Monthly	Composite
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U. at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge	--	--	hours/day	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
<ul style="list-style-type: none"> The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. Mass limitations based on long-term average flow of 5.4 mgd. 								

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

At prepared sampling stations located approximately 120 feet from the outfall to the discharge canal.

1 As of March 1, 2014, monitoring and limits for Outfall 013 will be consolidated into Outfall 014.
2 See discharge description on page 3 of 35 of this permit.
3 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.
4 See Part III.A., Special Condition No. 4 on page 33 of this permit. Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 13 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

9. Outfall 014 – Effluent Limitations and Monitoring Requirements – Service Water

During the period beginning **March 1, 2014** and lasting through the expiration date, the permittee is authorized to discharge from point source 014⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽³⁾	21.2		Mgd	--	--	--	Monthly	Calculate
Total Monthly Flow			Millions of gal/ month	--	--	--	Monthly	Calculate
Oil and Grease	--	--	--	10	15	mg/L	Monthly	Grab
Copper, Total			lbs/day			mg/L	Monthly	Composite
Zinc, Total			lbs/day			mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U at all times					S.U.	Weekly	Grab
Time of Chlorine Discharge			hours/ day	--	--	--	Weekly	Logs
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Once/15 minutes during chlorination	Multiple Grabs
<ul style="list-style-type: none"> • Foam control flow of 1.4 mgd is included in overall flow calculations. Flow required for screen wash and foam reduction supply water. • The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. • There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. • Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time. 								

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: in the discharge canal, prior to the confluence of the Unit 4 cooling tower blowdown.

- 1 See discharge description on page 3 of 35 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. 4 on page 33 of this permit. Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 14 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

10. Outfall 014 – Influent Monitoring Requirements

During the period beginning **effective date** and lasting through **expiration**, the permittee shall monitor the influent¹ for the parameters specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽³⁾			mgd	--	--	--	Monthly	Calculate
Chromium, Total			lbs/day			mg/L	Monthly	Composite
Copper, Total			lbs/day			mg/L	Monthly	Composite
Zinc, Total			lbs/day			mg/L	Monthly	Composite
Temperature	--	--	--			°F	Continuous	Record

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At the mouth of the intake canal, at Indian River.

- 1 Monitoring is for the intake water from Indian River. For reporting purposes, this monitoring is designated as the "influent of Outfall 014" since that Outfall will continue to exist through the permit expiration date.
- 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 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 15 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

11. Outfall 022 – Effluent Limitations and Monitoring Requirements – Screen Backwash

During the period beginning **effective date** and lasting through expiration, the permittee is authorized to discharge from point source 022⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽²⁾			mgd	--	--	--	Monthly	Calculated
Total Monthly Flow			Millions of gallons	--	--	--	Monthly	Record/Totalize
Debris removed from the trash racks shall not be returned to the surface water.								

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: the sum of flows for the screen backwashes.

1 See discharge description on page 3 of 35 of this permit.
2 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 16 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

12. Outfall 027 – Effluent Limitations and Monitoring Requirements – Unit #4 Cooling Tower Blowdown

During the period beginning **effective date** and lasting through **expiration**, the permittee is authorized to discharge from point source 027⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow ⁽³⁾	--	8.5	mgd	--	--	--	Monthly	Record/ Totalize
Priority Pollutants added for cooling tower maintenance	--	--	--	non-detect	non-detect		Monthly	(a)
Phosphorus	(b)	(b)	--	--	--	--	--	(b)
Chromium, Total	14.2	14.2	lbs/day	0.2	0.2	mg/L	Monthly	Composite
Zinc, Total	70.9	70.9	lbs/day	1.0	1.0	mg/L	Monthly	Composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U at all times					S.U.	Daily	Grab
Total Residual Chlorine	--	--	--	--	0.2	mg/L	Weekly	Multiple Grabs
Time of Chlorine Discharge			hours/day	--	--	--	Weekly	Logs
Temperature				--	96	°F	Hourly	Immersion/ Stabilization
Copper, Total	--	--	--	--	--	--	See Special Condition 9	

- The discharge shall be free from floating solids, sludge deposits, debris, oil and scum.
- There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
- Neither free available chlorine nor total residual chlorine shall be discharged from any unit for more than 30 minutes four times per day in any one day. Not more than one unit in the plant shall discharge free available chlorine or total residual chlorine at any one time.
- Mass limitations based on design flow of 8.5 mgd.
- (a) As allowed by 40 CFR §423.13(d)(3), compliance with the limitations for the 126 priority pollutants may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.
- (b) There shall be no net increase in mass loadings of phosphorus due to operations or practices at the facility. Compliance shall be demonstrated through signed statements submitted with discharge monitoring reports stating that the facility has not added phosphorus or phosphorus compounds to water being discharged from this outfall.

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

At prepared sampling stations located approximately 120 feet from the outfall to the discharge canal.

- 1 See discharge description on page 3 of 35 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 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 17 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

13. Outfall 029 – Effluent Limitations and Monitoring Requirements – Unit 4 Screen Backwash

During the period beginning **effective date** and lasting through **expiration**, the permittee is authorized to discharge from point source 029⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
None	--	--	--	--	--	--	--	

Debris removed from the trash racks shall not be returned to the surface water.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Not applicable.

1 See discharge description on page 3 of 35 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.

Effective Date:
 Expiration Date:

Part I
 State Permit Number WPCC 3013C/76
 NPDES Permit Number DE 0050580
 Page 18 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

14. Outfall 030 – Effluent Limitations and Monitoring Requirements – Industrial Wastewater Treatment Plant

During the period beginning **effective date** and lasting through **expiration**, the permittee is authorized to discharge from point source 030⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
Flow	--	0.72	mgd	--	--	--	Continuous	Recording
Oil and Grease	--	--	--	10	15	mg/L	Monthly	Grab
Total Suspended Solids	180	600	lbs/day	30	100	mg/L	Monthly	composite
Iron	6.0	6.0	lbs/day	1	1	mg/L	Weekly	composite
Copper, Total	3.0	3.0	lbs/day	0.5	0.5	mg/L	Weekly	composite
pH	The pH shall be between 6.5 S.U. and 8.5 S.U at all times					S.U.	Daily	Grab
<ul style="list-style-type: none"> • The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. • There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. • Mass limitations based on design flow of 0.72 mgd. 								

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At discharge from treatment plant prior to entering sedimentation basin #1 or prior to cooling tower basin.

1 See discharge description on page 3 of 35 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. Monitoring is only required when discharge to surface waters occurs.

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 19 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

15. Outfalls 031, 032, 033, 034, 035, 036, 037, 042, 045, – Storm water outfalls

During the period beginning **effective date** and lasting through **expiration**, the permittee is authorized to discharge from point sources 031, 032, 033, 034, 035, 036, 037, 042, and 045⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations ⁽²⁾						Monitoring Requirements ^(3,4)	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
The discharge shall be free from floating solids, sludge deposits, debris, oil and scum. Dry weather discharge is prohibited.								

See Special Condition Part III.A.10 below, on page 35 of 35 of this permit.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At the discharge points of the respective outfalls.

- 1 See discharge description on page 3 of 35 of this permit.
- 2 See Special Condition No. 10 on page 35 regarding implementation and maintenance of a Storm Water Plan.
- 3 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. Monitoring is only required when discharge to surface waters occurs.
- 4 Report both average daily and maximum daily flows on the discharge monitoring report (DMR).

Effective Date:
Expiration Date:

Part I
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 20 of 35 Pages

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

16. Outfall 050 – Effluent Limitations and Monitoring Requirements – Strainer Backwash

During the period beginning **effective date** and lasting through **expiration**, the permittee is authorized to discharge from point source 050⁽¹⁾ the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements ⁽²⁾	
	Load			Concentration			Measurement Frequency	Sample Type
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units		
None	--	--	--	--	--	--	--	

Debris removed from the trash racks shall not be returned to the surface water.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Not applicable.

- 1 See discharge description on page 3 of 35 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.

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:

None

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.
3. All submittals under this Schedule of Compliance are subject to the review of the Department. The Department may provide written comments regarding the submittals referenced above. No later than fourteen (14) calendar days after receipt of the Department's written comments, the permittee shall provide written response to address those comments

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), 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 RESOURCES, SURFACE WATER DISCHARGES SECTION, R & R BUILDING,
89 KINGS HIGHWAY, DOVER, DELAWARE 19901
TELEPHONE: (302) 739-9946
FACSIMILE: (302) 739-8369

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 groundwater 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 groundwater 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. Duplicate¹ and spiked² 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 December 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.

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

2 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 5, and total suspended solids. Procedures for spiking samples are available through the Regional Quality Assurance Coordinator.

- 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:
 - 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 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 CFR 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 Section 2 of the Department's Regulations Governing the Control of Water Pollution, as amended May 14, 2003; 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

Effective Date:
Expiration Date:

Part II
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 27 of 35 Pages

- 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.

Effective Date:
Expiration Date:

Part II
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 28 of 35 Pages

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. §6028

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. §6028.

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 groundwaters.

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. §6024;

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., §6013.

5. Signatory Requirements

All applications, reports, or information submitted to the Department shall be signed and certified as outlined in Section 6.11 of the Department's Regulations Governing the Control of Water Pollution, as amended May 14, 2003.

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 the permittee:
 - 1) Notifies the Department, in writing, of the proposed transfer, in advance; and
 - 2) 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 Section 6, Part V of the Department's Regulations Governing the Control of Water Pollution, as amended May 14, 2003. 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.

Effective Date:
Expiration Date:

Part II
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 32 of 35 Pages

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.

Effective Date:
Expiration Date:

Part III
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 33 of 35 Pages

Part III

A. Special Conditions

1. Supersedes previous permit

This permit supersedes State Permit No. WPCC 3013B/76 and NPDES Permit No. DE 0050580, issued with an effective date of September 25, 1988 and amended April 25, 1990.

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. 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 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. Wastewater Treatment Facility Operator Licensing

The process 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, as revised."

4. Service Water Flow Reductions

As of the permit effective date, "Service Water Flows" are those associated with Outfalls 010, 012, and 013.

The permittee shall reduce total service water flows according to the following schedule:

Service Water Flow Reductions	
Schedule	Maximum Allowable Flow* (mgd)
Initial Flows	33.8
July 1, 2011 – Reduce by 7.2 MGD	26.6
March 1, 2014 – Reduce by an additional 5.4 MGD	21.2**

Note
*Calculated as Total of Service Water flows for Outfalls 010, 012, and 013.
**21.2 mgd becomes the flow limit for Outfall 014, when Outfalls 010, 012, and 013 are combined into the one Outfall 014, which will be by no later than March 1, 2014.

5. Application for Stormwater Outfalls

Within one year after the permit effective date, and again for submittal with the permit renewal application (due 180 days before the permit expiration date), the permittee shall complete the EPA's NPDES Application Form 2F, "Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity," for each outfall which includes stormwater discharges.

However, if approved by the Department in writing, the permittee may sample one or more of the Outfalls as substantially identical to and representative of the Outfalls, and report those sampling results for the outfalls.

Monitoring results shall also be submitted in electronic format (eg., spreadsheet); format is subject to the approval of the Department.

6. 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 40 CFR Part 258, Section 28 "Liquids Restrictions" and the Department's Guidance and Regulations Governing the Land Treatment of Wastes, August 1988, as amended 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.

7. 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.

8. 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, excepting that records shall be retained for five (5) years.

9. Copper Study

The permittee shall conduct a study of copper discharges from the facility, to begin after the shut downs of Units 1, 2, and 3 are completed. The permittee shall prepare a monitoring plan for submission to the Department. The monitoring plan is subject to the written approval of the Department.

The permittee shall comply with the following schedule in implementing the work required:

	Task	Compliance Date
a.	Submit monitoring plan	July 1, 2013
b.	Implement monitoring plan	January 1, 2014
c.	Conduct monitoring as specified in the monitoring plan for a period of 12 months	Monthly, beginning January 1, 2014
d.	Submit technical report on sampling results as described in the monitoring plan	September 1, 2015

Effective Date:
Expiration Date:

Part III
State Permit Number WPCC 3013C/76
NPDES Permit Number DE 0050580
Page 35 of 35 Pages

The Department will evaluate the appropriateness of establishing effluent limitations for copper following the conclusion of the monitoring. Following the completion of the study, future monitoring shall cease until the Department reviews the data and decides future action. If appropriate, this permit may be reopened and modified, for the purpose of establishing effluent limits, after notice and opportunity for public hearing.

~~10. Storm Water Plan~~

The permittee shall implement and maintain a Storm Water Plan (SWP) to minimize the discharge of contaminated storm water from its facility. The SWP shall be implemented and maintained to be in accordance with the requirements of the Delaware Regulations Governing the Control of Water Pollution (RGCWP), Section 9, "The General Permit Program", Subsection 1, "Regulations Governing Storm Water Discharges Associated with Industrial Activities", Part 1, "Baseline General Permit". In particular, the SWP shall address practices including good housekeeping, inspections under wet and dry weather, sediment and erosion control, facility security and managing runoff. A copy of the SWP shall be submitted to the Department for approval within 60 days of the effective date of this permit.