

Georgia Department of Natural Resources

Environmental Protection Division, Watershed Protection Branch
4220 International Parkway, Suite 101, Atlanta, Georgia 30354
Wastewater Regulatory Program
404/362-2680
FAX: 404/362-2691

October 28, 2010

Mr. George L. Weaver, Chairman
Power4Georgians, LLC.
258 North Harris Street
Sandersville, Georgia 31082

RE: Plant Washington
Draft NPDES Permit No. GA0039055
Sandersville, Washington County

Dear Mr. Weaver:

The Environmental Protection Division (EPD) has made revisions/modifications to the above referenced permit and are considering the issuance of this revised National Pollutant Discharge Elimination System (NPDES) permit in accordance with the Georgia Water Quality Control Act and the Federal Clean Water Act.

Before issuing the permit, you must post a public notice for 30 days at the entrance of the Washington County Courthouse and publish this notice for one day in one or more newspapers of general circulation in the area affected by the discharge. When deciding whether to publish in one or more newspapers, please ensure that the notice will be published in all affected jurisdictions. The cost of publishing the public notice is the responsibility of Power4Georgians, LLC.

Within ten days of the publication date, please provide this office with a copy of the published notice and a letter stating where and what date the notice was posted. The letter should be signed by an authorized representative of the Power4Georgians, LLC. At the end of the 30-day public notice comment period, the EPD will make a determination on the issuance of this revised NPDES permit. Please be aware that failure to satisfy the public notice requirements may result in the need to revoke your permit.

Attached is a copy of the public notice and the draft revised NPDES permit, which contains the proposed conditions of your permit. If you have any comments or questions concerning the Permit or the Public Notice, please contact Mr. Joe Kane at, 404-362-2680 or send a facsimile to (404) 362-2691.

Sincerely,


Dominic Weatherill
Wastewater Regulatory Program

DJW/jrk

CC: Mr. Chris Thomas (w/attachments)
U. S. Environmental Protection Agency

PUBLIC ADVISORY
AND NOTICE OF PUBLIC HEARING

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
WATERSHED PROTECTION BRANCH

STATE OF GEORGIA
COUNTY OF WASHINGTON
NOTICE OF DRAFT SURFACE WATER WITHDRAWAL PERMIT
NOTICE OF DRAFT NPDES PERMIT

To all Interested Parties:

The Georgia Environmental Protection Division (EPD) announces its intent to issue to Power4Georgians (Plant Washington), a surface water withdrawal permit and a revised National Pollutant Discharge Elimination System (NPDES) permit to address issues raised in the earlier appeal and remand of these permits. EPD hereby announces a public hearing and the opportunity for formal public comment on the following permits:

Surface Water Withdrawal Permit No. 150-0391-04
NPDES Permit No. GA0039055

On April 8, 2010, these permits were issued to Power4Georgians and subsequently appealed.

On July 23, 2010, an administrative law judge ("ALJ") of the Office of State Administrative Hearings determined that the surface water withdrawal permit involved an "interbasin transfer" and thus required EPD to issue a press release and this public advisory and that the NPDES permit required further consideration by EPD and/or specific revisions. These two permits were remanded to EPD.

The surface water withdrawal permit allows surface water to be pumped from the Oconee River Basin to the Plant Washington power plant operation located in the Ogeechee River Basin. Plant Washington uses the surface water for both cooling and process purposes and any water not consumed by those purposes is returned to the Oconee River Basin for discharge via the NPDES permit. Due to the operations of the power plant, none of the water withdrawn from the Oconee River is discharged in the Ogeechee River Basin. EPD is not modifying the language of the surface water withdrawal permit issued on April 8, 2010.

The NPDES permit was remanded for revision to either impose certain effluent limitations at the point of discharge into the Oconee River (and not just at the point of discharge into the equalization basin that drains into the pipe that discharges into the Oconee River) or explain why it would be impractical or infeasible to do so. EPD is proposing to revise the permit to impose effluent limitations for free available chlorine and total residual chlorine at the point of discharge into the equalization basin for the reasons further detailed in EPD's Fact Sheet / Permit Rationale while also requiring

continuous monitoring of free available chlorine for at least one year at the point of final discharge to the Oconee River, and to impose effluent limitations for priority pollutants including chromium and zinc at both the discharge to the equalization basin and the final discharge to the Oconee River. EPD is also proposing to revise the permit effluent limitation for pH, and to formally define a designated mixing zone for temperature.

The draft permits, including a redlined version of the draft revised NPDES permit, are available for review at the office of the Watershed Protection Branch, International Parkway, Suite 101, Atlanta, Georgia 30354. Documents are available for review between the hours of 8:00 am and 4:30 pm, Monday thru Friday. If copies are desired, a copying machine for public use is provided by EPD at the Watershed Protection Branch office. There will be a copying charge of \$0.25 per page. For additional information regarding the NPDES permit contact: Jane Hendricks, Wastewater Regulatory Program, phone (404) 362 2680. For additional information regarding the surface water withdrawal permit contact: Clay Burdette, Water Withdrawal Permitting Program, phone (404) 675 1662.

You are hereby notified of the opportunity to submit written public comments concerning the draft surface water withdrawal permit and/or the draft revised NPDES permit. Persons wishing to comment on the draft permits are invited to submit their comments, in writing, to EPD at the address provided below, postmarked by December 10, 2010. All comments postmarked on or prior to that date will be considered by EPD in making its final decisions on the permits.

Written comments to:

Watershed Protection Branch
4220 International Parkway
Suite 101
Atlanta, Georgia 30354

PLANT WASHINGTON PUBLIC HEARING

You are also hereby notified that a public hearing will be held on December 7, 2010 at 7:00 pm located at the following address:

Ridge Road Elementary School Cafeteria
285 Ridge Road
Sandersville, Ga. 31082

The public hearing will be held to receive formal comments on the draft permits. At the public hearing, anyone may present data, make a statement, comment or offer a viewpoint or argument either orally or in writing.

PERMIT NO. GA0039055

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act;" the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act;" and the Rules and Regulations promulgated pursuant to each of these Acts,

Power4Georgians, LLC (SIC 4911)
258 N. Harris Street
Sandersville, Georgia 31082

is authorized to discharge from a facility located at

Plant Washington
Mayview Road
Sandersville, Washington County, Georgia

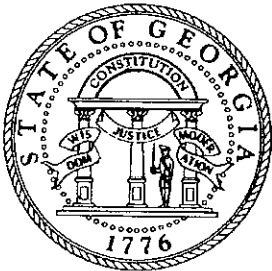
to receiving waters

Oconee River (Oconee River Basin)

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on xxxxx, 2010.

This permit and the authorization to discharge shall expire at midnight,
March 31, 2015.



Signed this Xth day of xxxx 2010.

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Director
Environmental Protection Division

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through March 31, 2015, the permittee is authorized to discharge from outfall(s) serial number(s) 01 – Final Plant Discharge (Oconee River). (Lat. 32 deg, 55 min, 37 sec / Long. 83 deg, 03 min, 22 sec)

Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics (Specify Units)	Discharge Limitations				Monitoring Requirements		
	Mass Based (lbs/day)		Concentration Based		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	-	-	-	-	Continuous	Recorder	Final Effluent
Temperature (°F) ^{*1}	-	-	-	-	Continuous	Recorder	Final Effluent
Free Available Chlorine (FAC) ^{*2}	-	-	-	0.2 mg/l	Continuous	Recorder	Final Effluent

The pH shall not be less than 6.0 standard units nor greater than 8.5 standard units and shall be monitored daily by a grab sample or a continuous monitor of the final discharge to the Oconee River.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

See Part III.B, Special Requirement No.7 for compliance certification and discharge limitations for priority pollutants, including total chromium and total zinc.

*1. The minimum and maximum daily temperature of the final plant discharge shall be reported. Compliance with instream temperature water quality standards shall be demonstrated in accordance with Part III.B, Special Requirement No. 8.

*2. The maximum daily FAC value of the final plant discharge shall be reported. See Part III.B, Special Requirement No. 6 for additional details regarding FAC monitoring at Outfall 001.

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2. During the period beginning on the effective date and lasting through March 31, 2015, the permittee is authorized to discharge from outfall(s) serial number(s) 01A - Cooling Tower Blowdown.

Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics (Specify Units)	Discharge Limitations			Monitoring Requirements		
	Daily Max.	Concentration Based (mg/l)		Measurement Frequency	Sample Type	Sample Location
		Avg.	Instantaneous Max			
Flow (MGD)	-	-	-	*1	*1	*3
Free Available Chlorine (FAC)	-	0.2 ^{*2}	0.5 ^{*2}	1/Week	*2	*3
Total Residual Chlorine (TRC)	-	-	-	1/Week	*2	*3
FAC/TRC Time (Minutes/day/unit)	120	-	-	1/Week	*2	*3

Monitoring at any outfall is required only when a discharge is occurring.

See Part III.B, Special Requirement No.7 for compliance certification and discharge limitations for priority pollutants, including total chromium and total zinc.

*1. See Part III.B, Special Requirements for annual flow characterization study.

*2. Multiple grab samples are to be collected on 15 minute intervals during periods of FAC and TRC discharges attributable to cooling tower chlorination. Sampling is required over the entire period of FAC and TRC discharges. See Part III.B., Special Requirements for additional chlorine controls.

*3. Cooling tower system prior to discharge into the equalization basin.

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B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:
 - a. The permittee shall submit quarterly reports of construction progress and update estimates of when the discharge will begin. These reports shall be submitted to the Division, posted marked no later than the 21st day of the month following the end of each calendar quarter.
 - b. No later than two years after the permittee begins discharging from the proposed facility's final plant discharge Outfall 01, items V and VI of NPDES application Form 2C (EPA Form 3510-2C) must be completed and submitted to the Division. This includes analytical results for all applicable conventional pollutants, other pollutants, metals, cyanide, total phenols, and GC/MS organic pollutants as specified in the Form 2C instructions for steam electric power plants
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, any remedial actions taken, and the probability of meeting the next scheduled requirement.

Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. 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 three months shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the 21st day of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Georgia Environmental Protection Division
Industrial Wastewater Program
4220 International Parkway
Suite 101
Atlanta, Georgia 30354

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" mass means the total discharge by mass 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 by this permit, the daily average mass shall be determined by the summation of all the measured daily discharges by mass divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" mass means the total discharge by mass during any calendar day.

- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the highest value recorded concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as the 24-hour period between midnight of one day to midnight of the next day.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes 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.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

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

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

6. 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 Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silviculture dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 $\mu\text{g/l}$, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 $\mu\text{g/l}$ for acrolein and acrylonitrile, 500 $\mu\text{g/l}$ for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 $\mu\text{g/l}$, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and

- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, 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 only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:
 1. A description of the discharge and cause of noncompliance; and
 2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and

- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. 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 established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.

14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

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

b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
2. The discharge of metal cleaning waste through any permitted outfall is prohibited. Any chemical metal cleaning waste generated will be contained and disposed of off-site. This applies to any preoperational chemical cleaning of metal process equipment also. The treatment and disposal procedures shall be discussed in the flow monitoring and characterization submittal.
3. Neither free available chlorine (FAC) nor total residual chlorine (TRC) may be discharged from any unit for more than two hours in any one day and not more than one unit may discharge free available or total residual chlorine at any one time.
4. Neither free available chlorine (FAC) nor total residual chlorine (TRC) may be discharged except as stated above unless the permittee can demonstrate to the Director that the units in a particular location cannot operate at or below this level of chlorination.
5. In accordance with 40 CFR 423.11(k), the free available chlorine (FAC) average means the average over any individual chlorine release period of 2 hours per day per unit at Outfall 01A. The FAC maximum is the instantaneous maximum which may occur at any time at Outfall 01A. Further, the permittee will develop a system for monitoring and recording total time of FAC and TRC discharges at Outfall 01A. The results shall be reported in a suitably concise form.
6. The maximum daily FAC values shall be measured at Outfall 01 using a continuous monitor approved by EPD. If, after one full year of monitoring FAC, the FAC values all measure less than 0.2 mg/l, then EPD may allow the permittee to discontinue monitoring FAC at Outfall 01.

7. In accordance with 40 CFR 423.15(j)(3), the permittee shall certify annually that chemicals added for cooling tower maintenance, including such chemicals used for corrosion inhibition, do not result in the discharge, via cooling tower blowdown of any of the 126 priority pollutants, other than chromium or zinc, above detectable limits in Outfall 01A (Cooling Tower Blowdown) and Outfall 01 (Final Plant Discharge). These certifications may be based on manufacturer's certifications or engineering calculations.

The quantity of chromium and zinc discharged in Outfall 01A (Cooling Tower Blowdown) and in Outfall 01 (Final Plant Discharge) shall not exceed the quantity determined by multiplying the applicable flow times the concentrations listed below.

<u>Effluent Characteristic</u>	<u>Discharge Limitation (mg/l)</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>
Total Chromium	-	0.2
Total Zinc	-	1.0

Compliance with the discharge limitations for total chromium and total zinc shall be demonstrated through monthly sampling conducted at Outfall 01A and Outfall 01. Alternatively, the permittee may certify annually that discharges of total chromium and total zinc are below detectable limits in Outfall 01A and Outfall 01 using manufacturer's certifications or engineering calculations in accordance with 40 CFR 423.15(j)(3).

8. The effluent discharged at Outfall 01 shall be fully and homogeneously dispersed and mixed insofar as practical with the main flow of the Oconee River by use of a single-port jet momentum diffuser with a reducing orifice. Instream temperature water quality standards shall be met at the edge of a defined thermal mixing zone extending no greater than 25 feet in the cross-gradient direction from the outfall, no greater than 40 feet downstream from the outfall, and no greater than 4 feet upstream from the outfall. Compliance shall be demonstrated through instream temperature sampling conducted monthly at mid-depth. Temperature samples will be collected at the plant intake and at the downstream and cross-gradient limit of the defined mixing zone. Measurements will be made during daylight hours.
9. In the event that waste streams for various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled by this permit shall not exceed the specified limitations for that source.
10. The Director may modify any effluent limitation upon request of the permittee if such limitation is covered by an approved variance or by an amendment to the Federal Clean Water Act.
11. Any sewage treatment plants that are constructed on this site must be properly operated and maintained.

12. Annually, the permittee shall submit to the Director flow monitoring and characterization information regarding the various waste streams.

Summary of annual flow monitoring and characterization information:

- a. Chemical metal cleaning waste treatment and disposal procedures.
 - b. Cooling tower blowdown priority pollutant certification per 40 CFR 423.15(j)(3).
13. The provisions of 40 CFR 122.41(6)(iii) regarding waiver of the 5 day written report required by Part II.A.2. and Part II.A.5 of this permit shall be applicable and may be implemented on a case-by-case basis by EPD for noncompliances which are orally reported by the permittee within 24 hours of discovery of the noncompliance condition.
 14. The Division recognizes the inherent analytical variability in approved test methods and procedures and further agrees that such issues can be raised by the permittee as a defense in an enforcement action.
 15. Upon approval of the Director, the permittee shall, on a case-by-case basis, be able to utilize alternative analytical methods, conversion factors, methodology, procedures, or new technologies, to ensure that the biomonitoring and toxicity reduction requirements of Part III.C. and the testing/reporting requirements of the permit are adequately addressed.
 16. If the results for a given sample are such that a parameter is not detected at or above the method detection limit or reporting limit, a value of zero will be reported for that sample and the method detection limit or reporting limit will also be reported. Such sample shall be deemed to be in compliance with the permit limit.
 17. The permittee will perform additional source water body baseline biological monitoring in the vicinity of the proposed river intake structure. Monitoring will be conducted for one year following commencement of construction. The monitoring will be conducted on a seasonal basis with two sampling events to be conducted during the Spring spawning season (robust redhorse). A final biological monitoring plan and quality assurance plan will be submitted and approved by the EPD.
 18. The permittee shall submit to the Director, by July 1 of each year, an annual report that documents the volume of all stormwater storage basins to insure adequate storage capacity and maintenance of "no discharge" conditions

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

In order to determine whether the permittee is discharging wastes in concentrations or combinations which may have an adverse impact on the State's water quality, the Division can require the permittee to conduct a biomonitoring program.

If toxicity is believed to be present in the permittee's effluent, the Division may require the permittee to develop a biomonitoring screening program according to the following schedule:

1. Within 90 days of Division notification a screening program study plan detailing the test methodology and test organisms shall be submitted for conducting a forty-eight hour static acute test of the final effluent.

Note: If residual chlorine is present in the final effluent from a treatment and/or disinfection process, a prechlorinated or dechlorinated sample will be tested.

2. Within 90 days of Division approval of the study plan, the permittee shall conduct and submit the results of the forty-eight hour static acute test.

The Division will then review the results of the forty-eight hour static acute test. If the test criteria specified in the study plan are exceeded, then the permittee shall within 90 days of written notification by the Division repeat steps 1. and 2. above replacing the forty-eight hour static acute test with the ninety-six hour test.

The Division will then review the results of the ninety-six hour test. If the criteria* detailed in the ninety-six hour test indicates toxicity, then the permittee shall within 90 days of written notification by the Division submit to the Division a plan to reduce the toxicity of the effluent. Within 270 days of Division approval of this plan, the permittee shall implement the plan and initiate follow-up biomonitoring of the effluent in accordance with the approved toxicity reduction plan. The toxicity reduction plan shall not be complete until the permittee meets the criteria detailed in the ninety-six hour test plan.

If there are substantial composition changes in the permittee's effluent, the permittee may be required to repeat the forty-eight hour static acute test upon notification by the Division. Unless otherwise advised, the permittee shall perform biomonitoring of the effluent as provided in C. 1. and 2. above, at a minimum of once every three years upon notification by the Division. On a case specific basis, chronic toxicity testing procedures may be required. Upon approval by the Division, all of the plans will become part of the requirements of this permit.

*The 96 hour criteria shall define toxicity as a greater than 10% mortality of the exposed test organisms in 96 hours or less when the test solution contains volumes of effluent and dilution water proportional to the plant daily average flow and the 7Q10 flow of the receiving stream, as determined using test procedures and methods, and statistical methods for evaluating test results, developed by the permittee and approved by the Division pursuant to this section or revised pursuant to Part III. B.15. above.

D. COOLING WATER INTAKE STRUCTURE-Section 316 (b)

1. The intake structure shall be designed and constructed as specified in the NPDES application. The design of this structure is Best Technology Available. The cooling water intake shall be commensurate with that which can be attained by a closed-cycle recirculating cooling water system. The maximum daily intake flow at this intake structure shall be no more than 16 MGD. The withdrawal flow rate shall not exceed 5% of the mean annual flow rate of the Oconee River
2. The approach velocity (in the channel approaching the screens) and the through screen velocity (through bar racks and slot screens) of water withdrawals at the cooling water intake structure shall be no more than 0.2 feet per second.
3. The permittee shall design, construct, and install low velocity traveling screens with a 3/8-inch mesh to minimize impingement of fish. During the spawning season of the robust redhorse (March through June), the permittee shall install removable screens with 1/8-inch mesh on the intake structure.
4. There shall be no discharge of debris from intake screen washing operations, which will settle to form objectionable deposits, which is in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.
5. Biological monitoring. The permittee must monitor both impingement and entrainment of the commercial, recreational, and forage base fish and shellfish identified in the Source Water Baseline Biological Characterization (Characterization) required by 40 CFR 122.21(r)(3). The monitoring methods used must be consistent with those used in developing the Characterization. Monitoring frequencies may be reduced beginning two years after startup of the cooling water intake structure, if supporting data shows less variations in the species and numbers of individuals that are impinged/entrained and a written request is approved by the EPD.
 - (a) Impingement sampling. The permittee must collect samples over a 24-hour period once per month to monitor impingement rates for each species identified in the Characterization while the cooling water intake structure is in operation.

- (b) Entrainment sampling. The permittee must collect samples over a 24-hour period at a frequency of biweekly (once every two weeks) to monitor entrainment rates for each species during the primary period of reproduction, larval recruitment, and peak abundance identified in the Characterization. Sampling must take place while the cooling water intake structure is in operation.
 - (c) During the peak of the robust redhorse spawning season (Month of May), the frequency of impingement and entrainment sampling shall be increased to once per week.
- 6. Velocity monitoring. The permittee shall monitor head loss across the screens and correlate the measured value with the design intake velocity. The head loss across the intake screen must be measured at the minimum ambient surface water elevation (best professional judgment based upon available hydrological data) of the Oconee River. If the facility uses devices other than surface water intake screens, velocity must be measured at the point of entry through the device. Head loss or velocity must be measured at initial facility startup and once per quarter, thereafter.
- 7. Visual or remote inspections. The permittee shall conduct visual inspections or employ remote monitoring devices to ensure that any design and construction technologies employed to minimize impingement and/or entrainment are properly maintained and operated, and are functioning as designed. Inspections must take place at a frequency of no less than once per week.
- 8. The permittee shall submit to the Director, by July 1 of each year, an annual status report, which contains the results of biological monitoring, velocity and head loss monitoring, and visual or remote inspections for the cooling water intake structure.

Summary of NPDES Permit Rationale

Name: Power4 Georgians, LLC (Plant Washington)

NPDES Permit No. GA0039055

Location: Mayview Road, Sandersville, Washington County, Georgia 31082

Major Discharge: Minor Discharge:

Prepared by: J Kane

Date: October 5, 2010(rev2)

Draft permit is:

- first issuance
- reissuance with no modifications from previous permit
- reissuance with limit adjustments to previous permit
- incorporates facility modifications

Discharge is:

- industrial
- municipal
- privately owned (domestic wastewater only)

For industrial discharges, the point source category is: This is a new coal fired, steam electric generating facility. This facility is regulated under 40 CFR 423.15 Steam Electric Power Generating, New Sources Performance Standards (EGL). The production level is 850 megawatts and the SIC Code is 4911.

Facility is located on stream segment that is (and the basis for derivation of limitation is):

- Stream water quality limited (Lowest daily flow = 243 cfs – 157 MGD)(Average annual flow = 1958 cfs)
- Based on water quality model (wasteload allocation, aka WLA)
- Based on instream calculation at 7 day, 10 year low flow (7Q10)
- Stream effluent limited
 - Based on promulgated guidelines (also known as effluent guidelines, or EGLs)
 - Based on plant's demonstrated performance
 - Based on demonstrated technology (best professional judgment (BPJ) from 40 CFR 423.15 - Steam Electric Power Generating Point Source Category - New Source Performance Standards (EGL)

Discussion:

See attached Fact sheet/Permit Rational

Check Appropriate Line(s) After Permit Issuance:

- Public comments were received during public notice period.
- Final permit was unchanged from draft permit.
- Final permit included changes from draft permit. See attached Summary of Changes to Draft Permit and Summary of Comments for details.

Fact Sheet / Permit Rationale

Draft National Pollutant Discharge Elimination System (NPDES) Permit

PERMIT NUMBER: GA0039055

PUBLIC COMMENT PERIOD: NOVEMBER 4, 2010 TO DECEMBER 10, 2010

NAME AND ADDRESS OF APPLICANT:

Power4Georgians, LLC (SIC4911)
258 N. Harris Street
Sandersville, GA 31082

NAME AND ADDRESS OF FACILITY:

Plant Washington
Mayview Road
Sandersville, Washington County, Georgia

RECEIVING WATER:

Oconee River (Oconee River Basin)

DISCUSSION

1. Proposed action, type of facility, and discharge location:

Plant Washington is a new 850 megawatt, coal-fired, steam electric power plant located in Sandersville, Washington County, Georgia. EPD is proposing to issue a Clean Water Act permit to authorize non-contact cooling water used at this facility to be discharged into the Oconee River approximately 30 miles upstream of Dublin, Georgia (Lat. 32 deg., 55 min., 37 sec. / Long. 83 deg., 03 min., 22 sec.).

2. Description of discharge:

The discharge consists of water used in the cooling towers, referred to as cooling tower blowdown, at Plant Washington. Cooling tower blowdown is subject to technology based standards applicable to all facilities of this type nationwide. These standards have been adopted by EPD from regulations issued by the U.S. Environmental Protection Agency under the federal Clean Water Act.

The cooling tower blowdown will be discharged into an on-site equalization basin at Outfall 01A before being piped to the Oconee River approximately 30 miles away and discharged at Outfall 01. The equalization basin has been designed to hold two to three days of cooling tower blowdown discharge. The equalization basin will allow continuous pumping of blowdown through the pipeline to the Oconee River and provide time for further reduction of chlorine concentrations. No other waste streams will be sent to the equalization basin other than cooling tower blowdown.

The average discharge flow at the Oconee River (Outfall 01) is estimated to be 1.55 mgd, with a maximum discharge flow of 3.8 mgd. Because of the large dilution factor¹ in the receiving stream, approximately 42 to 1 at the maximum plant flow (3.8 mgd), there is no reasonable potential to expect water quality violations (see section 4 below). The dilution factor using the anticipated average daily flow from the plant (1.55 mgd) is 102 to 1.

3. Effluent limitations based on New Source Performance Standards:

The cooling tower blowdown discharge from Plant Washington is subject to new source performance standards ("NSPS") codified at 40 C.F.R. § 423.15. Applicable restrictions address the following parameters: pH, PCBs, pollutants discharged in chemical metal cleaning wastes (total suspended solids, oil and grease, copper and iron), and pollutants discharged in cooling tower blowdown (free available chlorine ("FAC"), total residual chlorine ("TRC"), total chromium, and total zinc).

NSPS regulations require that effluent limitations be imposed at the final point of discharge into the Oconee River (Outfall 01) whenever it is practical and feasible to do so as stated in 40 C.F.R. § 122.45(h). With the exception of FAC and TRC, the NSPS effluent limitations are imposed at Outfall 01. Because EPD has determined that it is impractical to monitor compliance with the FAC and TRC effluent limitations at Outfall 01, these limits are applied at the point of discharge to the equalization basin (Outfall 01A). Specific effluent limitations are discussed below.

¹ The dilution factor is calculated according to the following equation:

$$\frac{\text{lowest daily stream flow} + \text{discharger design flow}}{\text{discharger design flow}}$$

This equation is consistent with the dilution factor calculations provided under Georgia's rules for Waste Treatment and Permit Requirements, 391-3-6-.06(2)(f). The lowest daily stream flow recorded at the Avant Mine gage (USGS gage 02223056) is 236 cfs. This value is adjusted to the discharge location using the drainage area ratio of 1.03 (3,186 mi² drainage area at the discharge location / 3,100 mi² drainage area at the Avant Mine gage). The resulting value, 243 cfs (157 mgd), is used as the lowest daily stream flow in the above equation to calculate the dilution factor.

3.1. **pH**

40 C.F.R. § 423.15(a) requires that the pH of the cooling tower blowdown discharge be within the range of 6.0 to 9.0. In response to public comments and with the concurrence of the applicant, EPD is proposing to impose tighter pH limits. The draft permit requires that the pH of the cooling tower blowdown discharge from Plant Washington be within the range of 6.0 to 8.5. (See Part I.A.1. of the draft NPDES permit.)

3.2. **Polychlorinated Biphenyl Compounds.**

40 C.F.R. § 423.15(b) prohibits the discharge of polychlorinated biphenyl compounds (PCBs). This limitation is included in the permit. (See Special Requirements, Part III.B.1., of the draft NPDES permit.)

3.3. **Chemical Metal Cleaning Wastes**

40 C.F.R. § 423.15(d) prohibits the discharge of certain pollutants associated with chemical metal cleaning wastes (total suspended solids, oil and grease, copper, and iron) in excess of certain quantities. The draft permit is more stringent, as it prohibits the discharge of such wastes in any quantity. (See Special Requirements, Part II.B.2., of the draft NPDES permit.) Any chemical metal cleaning wastes generated at Plant Washington must be contained and disposed off-site.

3.4. **Free Available Chlorine and Total Residual Chlorine**

40 C.F.R. § 423.15(j)(1) requires that the quantity of free available chlorine discharged in the cooling tower blowdown be limited to an instantaneous maximum concentration of 0.5 mg/l and an average concentration of 0.2 mg/l. This requirement is included in the draft permit. (See Part I.A.2.)

40 C.F.R. § 423.15(j)(2) further requires that, "neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the [Director] that the units in a particular location cannot operate at or below this level of chlorination." This requirement is included in the permit. (See Special Requirements, Part III.B., No. 2 & 3.)

EPD has determined that it is impractical to require compliance with these limitations at Outfall 01 for several reasons.

First, no other waste streams will be added to the cooling tower blowdown after it is discharged into the equalization basin. Only rain water that falls during storm events may be intermixed with the cooling tower blowdown in the equalization basin. Therefore effluent limitations imposed at Outfall 01A will also ensure compliance at Outfall 01.

Second, FAC and TRC levels will degrade once discharged from the cooling tower system. This is due to the inherently unstable nature of chlorine in aqueous solution, the ability of chlorine to naturally react with dissolved organic and inorganic compounds in the cooling tower water, and the sun exposure and physical agitation the cooling tower blowdown will be exposed to in the equalization basin and in the pipeline to the Oconee River. Concentrations of FAC and TRC are also expected to be diluted as rainwater falls into the equalization basin. For these reasons, it is highly unlikely that FAC and TRC will even be present at detectable levels at Outfall 01. It follows that compliance with an effluent limitation at Outfall 01 will *not* ensure compliance at Outfall 01A. Stated differently, imposing the monitoring and effluent limitations for FAC and TRC at Outfall 01A will be even more stringent than requiring compliance at Outfall 01.

Third, the distance between the facility and the final point of discharge make it impractical and infeasible to monitor compliance with FAC effluent limitations at Outfall 01 using the methodology specified by the NSPS regulations. These regulations call for the use of amperometric titration to monitor FAC, an analytical methodology that can only properly be performed in a laboratory. The facility's on-site laboratory, however, will be located approximately 30 miles away from Outfall 01. Further, the maximum holding time for chlorine sample analysis is 15 minutes.

Fourth, the regulations state that FAC and TRC may be discharged for no more than two hours in any one day. (40 C.F.R. § 423.15(j)(3)). EPD will require monitoring of FAC and TRC at Outfall 01A at 15-minute intervals during periods of chlorination. This same level of monitoring is impractical and infeasible at Outfall 01 due to the two to three days of retention time in the equalization basin and the approximately 30-mile pipeline distance between Outfall 01A and the discharge at the Oconee River at Outfall 01. Moreover, the two hours per day NSPS limitation on the discharge of FAC and TRC necessarily means that cooling tower blowdown discharged to the equalization basin during the remaining 22 hours of each day will contain no chlorine. Because the majority of the cooling tower blowdown discharged to the equalization basin does not contain chlorine, the chlorine concentrations will be substantially reduced prior to the discharge at Outfall 01.

Because it is impractical and infeasible to impose the NSPS limits for FAC and TRC at Outfall 01, and because compliance at Outfall 01A will ensure compliance at Outfall 01, these limits will be imposed at Outfall 01A. As an added safeguard, however, EPD is also proposing to require the applicant to monitor FAC at Outfall 01 using continuous monitoring equipment that does not require access to an onsite laboratory. EPD may reevaluate the need for this additional monitoring at a later date based on the sampling results.

3.5. Chromium and Zinc

40 C.F.R. § 423.15(j)(1) states that the cooling tower blowdown shall contain no detectable amount of any "priority pollutants" (40 C.F.R. § 423 App. A) contained in chemicals added for cooling tower maintenance, with the exception of chromium and zinc. For chromium, the maximum daily and 30-day average limits for total chromium are both 0.2 mg/l . For zinc, the maximum daily and 30-day average limits for total zinc are both 1.0 mg/l . These limits are included in the permit as daily maximum effluent limitations. (See Special Requirements, Part II.B.6.)

The permittee does not plan to add maintenance chemicals to the cooling tower system that contain chromium and zinc. Therefore, EPD proposes to allow the permittee to demonstrate compliance with the chromium and zinc limitations in one of two ways: (1) through monthly sampling conducted at Outfall 01 and Outfall 01A by the analytical methods specified in 40 C.F.R. Part 136; or (2) through use of manufacturer's certifications or engineering calculations demonstrating that total chromium and total zinc are not detectable in the final discharge as specified in 40 C.F.R. § 423.15(j)(3).

4. Compliance with Georgia's Instream Water Quality Standards

EPD has concluded that there is no reasonable potential for the discharge to have a significant impact on the water quality of the Oconee River or to cause or contribute to a violation of any applicable instream water quality standard.

This determination is based on a "reasonable potential" analysis of the expected level of pollutants as indicated in the NPDES application Form 2D. The reasonable potential analysis was performed at average discharge conditions (1.55 mgd) and maximum discharge conditions (3.8 mgd). The river flow used in the analysis was the lowest recorded daily flow of the Oconee River at the USGS Avant Mine gage (236 cfs), translated to the discharge location, 243 cfs (157 mgd). No reasonable potential for violating water quality standards was noted.

The cooling tower blowdown will be discharged into a segment of the Oconee River classified for warm water fishing. There are no impaired stream segments within one linear mile of the proposed discharge site. There are no TMDLs applicable to the proposed discharge location that affect this discharge. Applicable standards and corresponding permit conditions are discussed individually below.

4.1. General criteria applicable to all waters

4.1.1. *“All waters shall be free from materials associated with municipal or domestic sewage, industrial waste or any other waste which will settle to form sludge deposits that become putrescent, unsightly or otherwise objectionable.” DNR Rule 391-3-6-.03(5)(a)*

Given the nature of the discharge, there is no reasonable potential for the discharge to cause or contribute to a violation of this standard.

4.1.2. *“All waters shall be free from oil, scum and floating debris associated with municipal or domestic sewage, industrial waste or other discharges in amounts sufficient to be unsightly or to interfere with legitimate water uses.” DNR Rule 391-3-6-.03(5)(b)*

Given the nature of the discharge, there is no reasonable potential for the discharge to cause or contribute to a violation of this standard. Nonetheless, the permit requires that “there shall be no discharge of floating solids or visible foam in other than trace amounts.” Draft Permit, Part I.A.1.

4.1.3. *“All waters shall be free from material related to municipal, industrial or other discharges which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses.” DNR Rule 391-3-6-.03(5)(c)*

Given the nature of the discharge, there is no reasonable potential for the discharge to cause or contribute to a violation of this standard. Further, as explained below, the diffuser port has been designed specifically to avoid causing increased turbidity or other objectionable conditions. Nonetheless, the permit does state that “there shall be no discharge of floating solids or visible foam in other than trace amounts.” Draft Permit, Part I.A.1.

4.1.4. *“All waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity. The upstream appearance of a body of water shall be as observed at a point immediately upstream of a turbidity-causing man-made activity. That upstream appearance shall be compared to a point which is located sufficiently downstream from the activity so as to provide an appropriate mixing zone. For land disturbing activities, proper design, installation, and maintenance of best management practices and compliance with issued permits shall constitute compliance with DNR Rule 391-3-6-.03(5)(d).”*

EPD has determined that there is no reasonable potential for the discharge to cause or contribute to a violation of this standard.

The cooling tower blowdown will be discharged to the Oconee River at Outfall 01 through a submerged jet-momentum diffuser port that will provide rapid mixing and dispersion of the blowdown effluent into the main flow of the Oconee River. The diffuser port has been specifically designed to avoid causing scouring of the

riverbed, increased turbidity, aerial spray, strong currents, or other objectionable conditions. The diffuser port will be located approximately 0.5 feet above the channel bottom to maximize the depth of submergence at low-water conditions while limiting the potential for scouring or plume attachment along the river bottom. The headwall design includes a reinforced concrete foundation system underlying the submerged diffuser port, extending five feet outward along the river bottom. Beyond the edge of the submerged concrete foundation is an additional three-foot margin of rip rap protection to guard against bottom scouring in the vicinity of the discharge.

This type of diffuser is being used instead of a multiport diffuser pipe based on the specific facts and circumstances of this discharge. A multiport diffuser pipe, for example, would extend into the river and thus accumulate woody debris. Also, the Oconee River channel is too shallow to maintain sufficient clearance above the river bottom to control scouring while still maintaining a sufficient depth of diffuser submergence to accommodate low-water navigability.

- 4.1.5. ***“All waters shall be free from toxic, corrosive, acidic and caustic substances discharged from municipalities, industries or other sources, such as nonpoint sources, in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.”***
DNR Rule 391-3-6-.03(5)(e)

Effluent limitations applicable to free available chlorine, total residual chlorine, total chromium, total zinc, and other 40 C.F.R. § 423 App. A priority pollutants ensure that the discharge will not cause or contribute to a violation of this standard.

- 4.1.6. ***“Applicable State and Federal requirements and regulations for the discharge of radioactive substances shall be met at all times.”*** ***DNR Rule 391-3-6-.03(5)(f)***

Given the nature of the discharge, there is no reasonable potential for the discharge to cause or contribute to a violation of this standard.

4.2. Specific criteria applicable to receiving waters

- 4.2.1. ***Dissolved Oxygen: “A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.”***
DNR Rule 391-3-6-.03(6)(c)(i).

Due to the turbulent mixing and air flow in the cooling tower, blowdown water is expected to be substantially saturated with dissolved oxygen upon discharge to the equalization basin. Therefore, given the nature of the discharge, there is no reasonable potential for the discharge to cause or contribute to a violation of this standard.

4.2.2. pH: Within the range of 6.0 - 8.5. DNR Rule 391-3-6-.03(6)(c)(ii).

As noted above, EPD has responded to public comments and, with the concurrence of the applicant, is proposing to impose pH limits within the range of 6.0 to 8.5. (See Part I.A.1. of the draft NPDES permit.) Therefore, there is no reasonable potential for the discharge to cause or contribute to a violation of this standard.

4.2.3. Bacteria. DNR Rule 391-3-6-.03(6)(c)(iii).

Given the nature of the discharge, there is no reasonable potential for the discharge to cause or contribute to a violation of this standard.

4.2.4. "Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature." DNR Rule 391-3-6-.03(6)(c)(iv).

The Director has determined that there is no reasonable potential for the discharge to cause a violation of the water quality criteria for temperature in the receiving stream. This conclusion is based on the characteristics of the discharge, the large dilution factor in the receiving stream, and the use of a diffuser port specifically designed to ensure that cooling tower blowdown effluent will be "fully and homogenously dispersed and mixed insofar as practical with the main flow [of the Oconee River] by appropriate methods," in accordance with DNR Rule 391-3-6-.03(10). Further, the draft permit requires the applicant to report the minimum and maximum daily temperatures monitored at Outfall 01. Draft Permit, Part I.A.1.

Notwithstanding the Director's conclusion that the discharge will not cause a violation of instream water quality standards for temperature, the applicant has suggested that it would be prudent to establish a mixing zone approximately equal to the maximum area within which the cooling tower blowdown will mix with the receiving stream — an area 4' upstream from, 25' cross-gradient to, and 40' downstream from the discharge at Outfall 01. The applicant has demonstrated to EPD through computer simulations and engineering calculations that effluent temperatures within this zone will not create objectionable or damaging pollution conditions. Furthermore, because the mixing zone extends only 25' into a stream that is over 140' wide even during critical conditions, there will still be a substantial zone of passage for any aquatic organisms potentially affected by thermal exceedances. The permittee will be required to monitor compliance with the temperature water quality criteria at the downstream and cross-gradient limit of the designated thermal mixing zone on a monthly basis.

4.3. Monitoring and reporting requirements

Within two years of commencing discharge, the facility will be required to submit analytical results for all applicable pollutants. At that time, a review of the reasonable potential analysis will be performed and any water quality based

effluent limitations and/or biomonitoring requirements will be imposed, if appropriate.

5. Antidegradation Review

EPD has determined that the discharge is not expected to have a significant impact on the water quality of the Oconee River. To the extent that there may be any negative impact to water quality, however, the discharge is not expected to degrade or lower water quality below levels necessary to protect existing uses fully. Further, to the extent that the discharge may lower or degrade water quality at all, EPD has determined that such lowering of water quality is necessary to accommodate important economic and social development in the area in which the waters are located.

As part of the antidegradation analysis, EPD has evaluated several different discharge alternatives and determined that discharge to the Oconee River as proposed by the applicant is the most feasible and protective of the environment. The plant's intake structure will be designed to exceed the requirements of the USEPA's Phase 1 § 316(b) Rule to minimize impingement and entrainment of fish and other aquatic organisms. In addition, local employment, tax-base growth and regional economic development are expected to be positively enhanced as a result of the construction and operation of the plant. Construction spending alone will result in approximately \$2.8 billion in additional economic output for Washington County and the State of Georgia. Over 57% of that additional output (approximately \$1.6 billion) would benefit Washington County directly. Other socioeconomic benefits resulting from the project are also likely to be substantial.

Importantly, these benefits would not come at the expense of water quality. Plant Washington's design incorporates significant levels of recycling and reuse of the various wastewater and stormwater streams within the plant, minimizing discharges from the site. The plant, for example, collects stormwater runoff in storage basins and then uses this stormwater at the plant site. The only process-generated discharge water from the plant is cooling tower blowdown from the non-contact cooling tower system. All other process-generated wastewater streams are reused at the plant site. To the extent there may be any minimal impact to water quality as a result of the discharge, those minimal impacts are more than outweighed by the significant socioeconomic benefits to Washington County and the State of Georgia that will result from the construction and operation of Plant Washington.

These determinations are supported by the applicant's Antidegradation Report (Appendix F to the Plant Washington Water Management Plan (Jan. 19, 2009)) and Antidegradation Report Supplement (Mar. 25, 2010). EPD has conducted an independent review of these and other submissions by the applicant and concurs in their conclusions.

6. Availability of documents.

The draft NPDES permit and supporting information are available for review at the office of the Watershed Protection Branch, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354. Documents are available for review between the hours of 8:00 am and 4:30 pm, Monday through Friday. If copies are desired, a copying machine for public use is provided by EPD at the Watershed Protection Branch office. There will be a copying charge of \$0.25 per page.

7. Public involvement.

Persons wishing to comment on the draft modified NPDES permit are invited to submit their comments, in writing, to EPD at the Watershed Protection Branch address above. All comments postmarked on or prior to December 10, 2010 will be considered by EPD in making its final decisions on the permits.

A public hearing will be held at 7:00 pm on December 7, 2010, at the following address:

Ridge Road Elementary School Cafeteria
285 Ridge Road
Sandersville, Georgia 31082

During the public hearing, representatives from EPD will be available to discuss Plant Washington's draft modified NPDES permit and to receive formal comments on Plant Washington's NPDES permit application. At the public hearing, anyone may present data, make a statement, comment or offer a viewpoint or argument either orally or in writing.

8. For additional information regarding the draft NPDES permit, contact:

Jane Hendricks, Wastewater Regulatory Program, (404) 362-2680.

Water Quality Standard and Discharge Limit Calculator for Streams

Modified 3/14/03 Dissolved Formulas

	Arsenic	Cadmium	Chromium III	Chromium VI	Copper	Lead	Nickel	Zinc	Reference
Hardness (mg/l)	25	25	25	25	25	25	25	25	Minimum 25 mg/l
TSS (mg/l)	10	10	10	10	10	10	10	10	Use 0 for standard translator
Dissolved standard (ug/l): Acute	50	50	50	50	50	50	50	50	GA Rule 391-3-6-.03(5)(e)(ii)
Dissolved standard (ug/l): Chronic	50	50	50	50	50	50	50	50	GA Rule 391-3-6-.03(5)(e)(ii)
K _{sp} (1/kg)	4.80E+05	4.80E+06	3.36E+06	3.36E+06	1.04E+06	2.30E+06	4.90E+05	1.23E+06	EPA Document 440/4-84-022, June 84
a	0.7236	1.150	0.9307	0.9304	0.7436	0.8	0.5719	0.67038	EPA Document 440/4-84-022, June 84
K _p (1/kg)	8.97E+04	2.96E+05	3.94E+05	3.94E+05	1.88E+05	4.74E+05	1.31E+05	2.30E+05	= K _{sp} x TSS ³
Cd/Ct: Acute	0.527	0.352	0.202	0.202	0.348	0.184	0.432	0.288	= 1/(1+Kp(TSS)(10 ⁻⁶ kg/mg)
Cd/Ct: Chronic	0.527	0.352	0.202	0.202	0.348	0.184	0.432	0.288	= 1/(1+Kp(TSS)(10 ⁻⁶ kg/mg)
Total Recoverable standard (ug/l): Acute	94.83	3.75	905.08	79.10	10.47	75.49	335.21	125.71	= (Cd) / (Cd/Ct)
Total Recoverable standard (ug/l): Chronic	94.83	3.17	117.73	54.38	7.89	2.94	37.23	126.73	= (Cd) / (Cd/Ct)
Receiving stream flow rate (cfs) - 7Q10	243	243	243	243	243	243	243	243	4B3 or 7Q10 for dry weather discharges
Receiving stream flow rate (cfs) - 1Q10	243	243	243	243	243	243	243	243	1Q10 for dry weather flow
Discharge flow rate (mgd)	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	Maximum design/permitted flow rate
Dilution factor -7Q10	42.355	42.355	42.355	42.355	42.355	42.355	42.355	42.355	= (rev stream flow + disch. flow) / disch. flow
Dilution factor -1Q10	42.355	42.355	42.355	42.355	42.355	42.355	42.355	42.355	#VALUE!
Max. allowable discharge conc. (ug/l): Acute	4016.71	158.96	38334.76	3350.47	443.54	3197.26	14197.77	5324.25	= Ct x dilution factor
Max. allowable discharge conc. (ug/l): Chronic	4016.71	134.47	4986.56	2303.45	334.39	124.59	1576.93	5367.80	= Ct x dilution factor
Max. allowable load (lb/d): Acute	127.30	5.04	1214.91	106.18	14.06	101.33	449.96	168.74	= conc (ug/l) x flow (mgd) x 0.00834
Max. allowable load (lb/d): Chronic	127.30	4.26	158.03	73.00	10.60	3.95	49.98	170.12	= conc (ug/l) x flow (mgd) x 0.00834

Note: The red font is the data that is input into this spreadsheet; the yellow area is calculated; and the green area is constant information.

PLANT WASHINGTON
 7Q10 - 243 cfs
 Run: 10/05/2010

Water Quality Standard and Discharge Limit Calculator for Streams
 Modified 3/14/03 Dissolved Formulas

	Arsenic		Cadmium		Chromium III		Chromium VI		Copper		Lead		Nickel		Zinc		Reference
	25	10	25	10	25	10	25	10	25	10	25	10	25	10	25	10	
Hardness (mg/l)	25	10															Minimum 25 mg/l
TSS (mg/l)																	Use 0 for standard translator
Dissolved standard (ug/l): Acute	50	50	0.95E+06	0.95E+06	0.95E+06	0.95E+06	0.95E+06	0.95E+06	3.64	3.64	15.88	15.88	15.88	15.88	15.88	15.88	GA Rule 391-3-6-.03(5)(e)(ii)
Dissolved standard (ug/l): Chronic	50	50	0.95E+06	0.95E+06	0.95E+06	0.95E+06	0.95E+06	0.95E+06	2.74	2.74	0.84	0.84	0.84	0.84	0.84	0.84	GA Rule 391-3-6-.03(5)(e)(ii)
K_{sp} (U/kg)	4.80E+05	4.80E+05	1.00E+06	1.00E+06	3.36E+06	3.36E+06	3.36E+06	3.36E+06	1.04E+06	1.04E+06	2.80E+06	2.80E+06	2.80E+06	2.80E+06	2.80E+06	2.80E+06	EPA Document 440/4-84-022, June 84
K_p (U/kg)	8.97E+04	8.97E+04	1.15E+05	1.15E+05	1.09E+04	1.09E+04	1.09E+04	1.09E+04	0.7436	0.7436	0.18	0.18	0.18	0.18	0.18	0.18	EPA Document 440/4-84-022, June 84
Cd/Ct: Acute	0.527	0.527	0.252	0.252	0.202	0.202	0.202	0.202	0.348	0.348	0.184	0.184	0.184	0.184	0.184	0.184	$= K_{sp} \times TSS^a$
Cd/Ct: Chronic	0.527	0.527	0.252	0.252	0.202	0.202	0.202	0.202	0.348	0.348	0.184	0.184	0.184	0.184	0.184	0.184	$= 1/(1+Kp(TSS)(10^{-6} \text{ kg/mg}))$
Total Recoverable standard (ug/l): Acute	94.83	94.83	3.75	3.75	905.08	905.08	905.08	905.08	10.47	10.47	75.49	75.49	75.49	75.49	75.49	75.49	$= 1/(1+Kp(TSS)(10^{-6} \text{ kg/mg}))$
Total Recoverable standard (ug/l): Chronic	94.83	94.83	3.17	3.17	117.73	117.73	58.38	58.38	7.89	7.89	2.94	2.94	2.94	2.94	2.94	2.94	$= (Cd) / (Cd/Ct)$
Receiving stream flow rate (cfs) - 7Q10	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	$= (Cd) / (Cd/Ct)$
Receiving stream flow rate (cfs) - 1Q10	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	4B3 or 7Q10 for dry weather discharges
Discharge flow rate (mgd)	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1Q10 for dry weather flow
Dilution factor -7Q10	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	Maximum design/permitted flow rate
Dilution factor -1Q10	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	102.386	$= (\text{rcv stream flow} + \text{disch. flow}) / \text{disch. flow}$
Max. allowable discharge conc. (ug/l): Acute	9709.76	9709.76	384.26	384.26	92668.15	92668.15	8099.22	8099.22	1072.19	1072.19	7728.86	7728.86	7728.86	7728.86	7728.86	7728.86	$= \text{Ct} \times \text{dilution factor}$
Max. allowable discharge conc. (ug/l): Chronic	9709.76	9709.76	325.06	325.06	12054.22	12054.22	5568.21	5568.21	808.32	808.32	301.18	301.18	301.18	301.18	301.18	301.18	$= \text{Ct} \times \text{dilution factor}$
Max. allowable load (lb/d): Acute	125.52	125.52	4.97	4.97	1197.92	1197.92	104.70	104.70	13.86	13.86	99.91	99.91	99.91	99.91	99.91	99.91	$= \text{conc} (\text{ug/l}) \times \text{flow} (\text{mgd}) \times 0.000834$
Max. allowable load (lb/d): Chronic	125.52	125.52	4.20	4.20	155.82	155.82	71.98	71.98	10.45	10.45	3.89	3.89	3.89	3.89	3.89	3.89	$= \text{conc} (\text{ug/l}) \times \text{flow} (\text{mgd}) \times 0.000834$

Note: The red font is the data that is input into this spreadsheet, the yellow area is calculated, and the green area is constant information.