

TOTAL MAXIMUM DAILY LOAD (TMDL)

For

Temperature

In

Lake Sinclair

Putnam, Baldwin,

and

Hancock Counties



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TOTAL MAXIMUM DAILY LOAD (TMDL)

Temperature

for

Lake Sinclair

Under the authority of Section 303(d) of the Clean Water Act, 33 U.S.C. 1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4, and the U.S. Environmental Protection Agency is hereby establishing a TMDL for temperature in:

Lake Sinclair

This TMDL shall become effective immediately, and is incorporated into the Continuing Planning Process for the State of Georgia under Sections 303(d)(2) and 303(e) of the Clean Water Act.

Signed this _____ day of _____, 2002.

Beverly H. Banister, Director
Water Management Division

1. Introduction

The U.S. Environmental Protection Agency (EPA) Region 4 is establishing this Total Maximum Daily Load (TMDL) for temperature in Lake Sinclair in Putnam, Baldwin, Hancock Counties, Georgia. Lake Sinclair is included on the State of Georgia's 2000 Section 303(d) list of impaired waters for temperature. Lake Sinclair was placed on the Georgia 303(d) list as a result of ambient measurements that demonstrate that lake water temperatures exceed the applicable water quality standard. The State of Georgia's Rules and Regulations for Water Quality Control provide that water temperature is not to exceed 90 degrees Fahrenheit, and at no time is the temperature of the receiving waters to be increased more than 5 degrees Fahrenheit above intake temperatures.

The Consent Decree in the case of *Sierra Club v. EPA*, 1:94-cv-2501-MHS (N.D. Ga.) requires the State or EPA to develop TMDLs for all waterbodies on the State of Georgia's current 303(d) list. EPA proposed this TMDL on August 30, 2001 because the State of Georgia did not do so.

The Georgia Power Company Plant Harlee Branch (Plant Branch) is a coal-fired electric power generating facility located on Lake Sinclair. Historically, this discharger has exceeded its National Pollutant Discharge Elimination System (NPDES) permit limits for thermal discharges to Lake Sinclair. On December 14, 2000, the Georgia Environmental Protection Division (EPD) issued an NPDES permit to the Georgia Power Company for Plant Branch. This permit includes an effluent limitation for temperature which provides a daily maximum temperature concentration of 90 degrees Fahrenheit or no greater than 5 degrees Fahrenheit above intake temperature.¹

The Plant Branch permit includes a compliance schedule that provides that by November 13, 2005 the facility must meet its permit limits. The permit also includes a special requirement to install and operate cooling towers during this time period. In addition, the permit contains a schedule for the Georgia Power Company to prepare and submit a study to support the company's request, pursuant to section 316(a) of the Clean Water Act (CWA), that alternative effluent limitations for temperature be established for the point source discharge from Plant Branch to Lake Sinclair (See Appendix A).

TMDLs are required for waters on a state's Section 303(d) list by Section 303(d) of the Clean Water Act (CWA) and the associated regulations at 40 CFR Part 130. A TMDL establishes the maximum amount of a pollutant a waterbody can assimilate without exceeding the applicable water quality standard. The TMDL allocates the total allowable pollutant load to wasteload allocations (WLAs) for point sources regulated by the NPDES program and to load allocations (LAs) for all other sources. The WLAs and LAs in the TMDL provide a basis for states to limit the amount of pollution from both point and nonpoint sources to restore or protect the waterbody from exceeding the applicable water quality standard. In this case, the entire temperature load, other than natural meteorological conditions, is contributed by one point source. This TMDL establishes a wasteload allocation load for Plant Branch that is consistent with Georgia's water quality standards regulations

¹ For purposes of the permit, the intake and discharge temperatures are defined as the temperatures measured one meter below the surface at specified instream monitoring locations.

and the State's water quality criteria for temperature.

2. Problem Definition

Lake Sinclair is on the State of Georgia's 2000 Section 303(d) list due to temperature. Plant Branch withdraws cooling water from the Little River arm of Lake Sinclair and discharges water to the Beaverdam Creek embayment of Lake Sinclair. The Lake is, in part, listed for temperature due to the thermal discharge from Plant Branch. Although long-term water temperature records for Lake Sinclair are not available, the Georgia Power Company has computed ambient water temperatures ("response temperatures") that provide a reasonable approximation of ambient water temperatures based on comparisons to actual field measurements. These calculated response temperatures show that the State's applicable water quality standards for temperature may also be exceeded due to meteorological conditions (Georgia Power 2001).

3. Applicable Water Quality Standard/TMDL Target

TMDLs are established at levels necessary to attain and maintain the applicable narrative and numerical water quality standards. (See 40 CFR Section 130.7(c)(1).) The State of Georgia's Rules and Regulations for Water Quality Control provide that water temperature is not to exceed 90 degrees Fahrenheit, and at no time is the temperature of the receiving waters to be increased more than 5 degrees Fahrenheit above intake temperatures.

The State's water quality standards regulations also recognize that natural water quality conditions may exist for temperature. Under DNR Rules 391-3-6-.03(7), "Natural Water Quality", these regulations state, "It is recognized that certain natural waters of the State may have a quality that will not be within the general or specific requirements continued herein. This is especially the case for the criteria for dissolved oxygen, temperature, pH and fecal coliform. NPDES permits and best management practices will be the primary mechanisms for ensuring that discharges will not create a harmful situation" (GAEPD 2000).

4. Background

Lake Sinclair is located in central Georgia (USGS Hydrologic Unit Code (HUC) 3070101). Lake Sinclair basin is presented in Figure 1.

Lake Sinclair

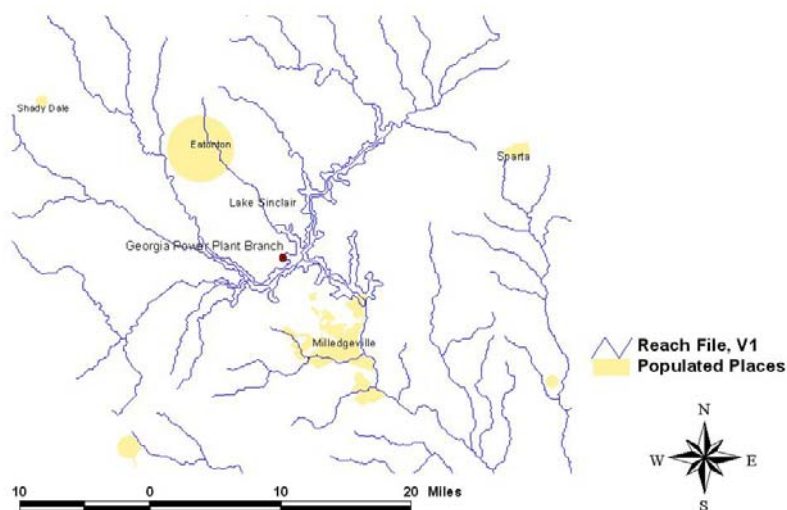


Figure 1 Map of Lake Sinclair

Lake Sinclair is a multi-purpose impoundment located on the Oconee River north of the City of Milledgeville. It was impounded in 1952 upon completion of Sinclair Dam. Sinclair Dam impounds approximately 15,330 acres at normal pool with a maximum depth of approximately 70 feet. The reservoir serves as a source for public drinking water supply, cooling water supply, hydroelectric power production, pumped storage operation, and water-based recreation (Georgia Power 2001).

4.1. Source Assessment

This TMDL evaluation examines the known potential sources of the thermal load in the watershed, including point sources, nonpoint sources, and background levels. The only sources of thermal load to Lake Sinclair are natural meteorological conditions and one NPDES permitted facility – the Georgia Power Company’s Plant Branch (NPDES Permit Number GA0026051).

Plant Branch is a four-unit, coal-fired steam electric generating station. Cooling water for the plant’s condensers and auxiliary equipment is taken from the Little River arm of Lake Sinclair via a short canal. After passing through the plant, the heated water is discharged into the Beaverdam Creek embayment. The path of the discharge generally follows an easterly direction to the confluence of the Little River and Oconee River arms of Lake Sinclair (Georgia Power 2001).

A review of the monitoring data and reporting for this facility indicates exceedences of the applicable instream water quality criteria for temperature.

5. Total Maximum Daily Load (TMDL)

The TMDL is the total amount of pollutant load that can enter a water body and still achieve the applicable water quality standard. Georgia has developed a numeric water quality standard for

temperature providing a maximum value not to exceed 90 degrees Fahrenheit or not to increase the temperature of the receiving waters more than 5 degrees Fahrenheit above intake temperature. Since temperature is not a mass load, this TMDL uses an other appropriate measure (40 CFR § 130.2(i)) rather than an actual mass-per-unit time measure. For this TMDL, as stated above, Georgia's numeric temperature criterion is the TMDL end point.

5.1. Critical Condition Determination

No critical condition will be used in the development of this TMDL because the end point for compliance with the TMDL is to attain the State's water quality standard at all times. EPA is using the State's water quality standards as the TMDL end point because Lake Sinclair was originally listed based on an exceedance of that standard. The temperature water quality standard end point will also assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife.

5.2. Seasonal Variation

Because compliance with the end point of the TMDL is dependent upon the actual ambient water temperature (as required by the State's water quality standard), implementation of the TMDL through the NPDES permit will take into account the seasonal changes in water column temperature.

5.3. Margin of Safety

A Margin of Safety (MOS) is a required component of a TMDL that accounts for the uncertainty about the relationship between the pollutant loads and the quality of the receiving waterbody (USEPA 1991). In this case, the margin of safety consists of a wasteload allocation under which the only point source discharger is expected to achieve water quality standards at specified instream monitoring stations. Therefore, there is little if any uncertainty about the relationship between the discharge and the desired quality of the receiving water. Moreover, consideration of an additional margin of safety is pending the collection of data and information and completion of studies described in the phased TMDL discussion below.

5.4. Phased TMDL

EPA recognizes that it may be appropriate to revise a TMDL based on information gathered and analyses performed in the future (USEPA 1991). With such possible revisions in mind, this TMDL is characterized as a phased TMDL. In a phased TMDL, EPA or the State uses the best information available at the time to develop a TMDL at levels necessary to meet the applicable water quality standards and to make the appropriate allocations to sources. However, the phased TMDL approach recognizes that additional data and information may become available that can validate the assumptions of the TMDL and can provide greater certainty that the TMDL will achieve the applicable water quality standard. Thus, Phase 1 of the TMDL identifies data and information to be collected after the first phase TMDL is developed that would then be assessed and form the basis for a Phase 2 TMDL. The Phase 2 TMDL may revise the needed load reductions or the allocations of the allowable load or both.

Phase 1 of this TMDL establishes a wasteload allocation for the Plant Branch discharge to Lake Sinclair consistent with the State's existing water quality criteria for temperature. The wasteload allocation is expressed as that discharge which will result in a daily maximum temperature of 90 degrees Fahrenheit, or no more than 5 degrees Fahrenheit above intake temperature, as measured at defined compliance points. EPA recognizes that the Georgia Power Company intends to request an alternative effluent limitation for temperature for the NPDES discharge at Plant Branch, pursuant to section 316(a) of the CWA. The TMDL established today is based on the temperature water quality standard without application of any alternative temperature limitation.

EPA understands that during Phase 1 of this TMDL, Georgia Power will gather data and information needed to support its variance request under §316(a) of CWA. EPA also understands that Georgia Power will gather data and information verifying its hydrothermal model predicting the effects of the cooling water discharge in Beaverdam Creek, which will better define the effluent temperature which can be discharged from Plant Branch in compliance with the NPDES permit. EPA will consider these additional data and information and the required studies that may better characterize the thermal load into Lake Sinclair. EPA intends to reconsider this TMDL prior to the time the Georgia Power Company NPDES permit is to be renewed and to revise the TMDL as necessary.

6. Allocation of Loads

In a TMDL assessment, the total allowable load is determined and allocated to the various point and nonpoint pollutant sources. Because temperature is not a mass-based standard, a conventional total maximum daily load cannot be calculated. Since there are only two sources (natural/meteorological and anthropogenic) and the natural source is not controllable, the anthropogenic source will be targeted to achieve the water quality standard. The anthropogenic source (the Georgia Power Company's Plant Branch) is given an allocation of thermal load that will not cause the receiving waterbody temperature to exceed 90 degrees Fahrenheit or raise the temperature of the receiving waters by more than 5 degrees Fahrenheit from the intake temperatures.

7. Implementation

The Plant Branch permit already implements this TMDL because it contains water quality-based effluent limitations equivalent to meeting the state's temperature water quality standards at specified instream monitoring stations. Those limitations are fully consistent with the wasteload allocation in this TMDL. This TMDL also assumes that the Georgia Power Company will meet the wasteload allocation by complying with the schedule prescribed in its NPDES permit (see Appendix B).

EPA recognizes that the State of Georgia's regulations authorize compliance schedules for water quality-based effluent limitations and conditions once those requirements are imposed in NPDES permits. See Rules and Regulations for Water Quality Control, Chapter 391-3-6-.06(10). Under these regulations, the Director of EPD is authorized to establish as a compliance deadline the date that he or she determines to be "the shortest reasonable period of time necessary to achieve such compliance, but in no case later than an applicable statutory deadline." Because there is no applicable statutory deadline relating to the achievement of this WLA-based deadline, the point source affected by this TMDL is eligible for, and has in fact received, a compliance schedule under this provision of Georgia's regulations. That schedule, included in Appendix A, provides that

Georgia Power's Plant Branch will discharge in compliance with the applicable water quality target on or before October 2005. This TMDL recognizes that the permitting authority is in the best position to determine the timing of development of a hydrothermal model for this discharge and the compliance schedule for developing and implementing control mechanisms to meet the temperature standard. Establishment of a compliance schedule in the Plant Branch permit is consistent with this TMDL if such compliance schedule is authorized under state law.

EPA also recognizes that the Georgia Power Company intends to request an alternative effluent limitation for temperature for the Plant Branch NPDES permit, pursuant to section 316(a) of the CWA, 40 C.F.R. § 125.70 et. seq. Establishment of such an alternative effluent limitation in the Plant Branch permit is consistent with this TMDL if such limitation complies with applicable law.

8. Appendix A: Memorandum of Agreement

MEMORANDUM OF AGREEMENT

The U.S. Environmental Protection Agency, Region 4, Office of Water Management (“EPA”), the Georgia Center for Law in the Public Interest on behalf of the Sierra Club (“Sierra Club”), the Georgia Power Company (“Georgia Power”), and the Georgia Environmental Protection Division (“EPD”), hereinafter collectively called “Participants”, for their mutual benefit in establishing a mechanism to review and address a study to be submitted by Georgia Power supporting its variance request under §316(a) of the federal Clean Water Act (“CWA”), 33 U.S.C. §§1251 *et seq.*, for the thermal component of the point source pollutant discharge from its Plant Branch into a portion of Lake Sinclair, do hereby enter into this Memorandum of Agreement (“MOA”) and agree as follows. The projected date at the end of each milestone is based on the Permit modification being effective in October 2000. The number of months (as stated in each milestone) from the effective date of said modification will govern, if said effective date is delayed past October.

I. §316(a) Study

A. A **Study Plan** shall be developed for the 316(a) Study to provide the necessary data to determine whether an alternative effluent limitation (“AEL”) for temperature can be applied in a permit that will assure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife (“balanced indigenous community” or “BIC”) within the primary area of study. A separate Plan for Hydrothermal Model Verification (“HMV Plan”) shall be developed also.

1. Georgia Power will submit the Study Plan and HMV Plan six months from the effective date of the Permit modification (which modification is expected to be effective in October, 2000) contemplated by Section VIII. of this Memorandum of Agreement (April, 2001);
2. All Participants will provide initial comments on the Study Plan and HMV Plan to EPD within two months after they are submitted (June, 2001);
3. All Participants will provide reply comments on the Study Plan and HMV Plan to EPD within one month of submission of initial comments (July, 2001);
4. All Participants will meet, as agreed upon, during the 30 days following submission of the reply comments, to seek to resolve any unresolved issues (August, 2001); and
5. EPD will make the final decision on the Study Plan and HMV Plan within one month (30 days) thereafter (September, 2001).

B. Progress Report

1. Georgia Power will submit its Progress Report using year-round data, including data from the portion of the first March-October period when the Plant Branch cooling tower array is operational, on or before the first day of the 28th month after the date the Permit is modified (March 1, 2003);
2. Participants will provide initial comments to EPD and the other Participants within 30 days of receipt of the Progress Report (by April 3, 2003);
3. Participants will provide reply comments to EPD and the other Participants within 15 days after receipt of initial comments (by April 18, 2003);
4. Participants will meet during the same month, as agreed upon, to seek to resolve any unresolved issues (late April and early May, 2003); and
5. EPD will make a decision on any changes in the Study Plan in light of the Progress Report results, on or before the fifteenth day of the 31st month after the Permit is modified (May 15, 2003).

C. Final Report of 316(a) Study

1. Georgia Power will submit the Final Report on the 316(a) Study using year-round data, including data for March-October of the second year in which the cooling tower array is operational, to EPD and the other Participants on or before the first day of the 45th month after the Permit is modified (August 1, 2004);
2. Participants will provide initial comments to EPD and the other Participants within 31 days of receipt of the Final Study (September 1, 2004);
3. Participants will provide reply comments to EPD and the other Participants within 31 days of receipt of initial comments (October 1, 2004);
4. All Participants will meet within the next 31 days, as agreed upon, to seek to resolve any unresolved issues (October, 2004); and
5. EPD will make the decision on any revisions needed in the Final Study, by the end of the 30-day period to resolve any unresolved differences (November 1, 2004).

II. Permit Decision

- A. EPD will make its best efforts to propose a draft NPDES and 316(a) variance permit decision on or before the first day of the 49th month after the Permit is modified (December 1, 2004), and will provide for a public notice and comment period;
- B. Participants will provide comments to EPD and the other Participants during the public notice and comment period; and

- C. EPA will make its best efforts to communicate in writing whether there are any conditions of its concurrence on the 316(a) variance, and if so what they are, in a timely manner. EPD will make its best efforts to issue a final NPDES permit and 316(a) variance decision as soon as feasible after any EPA conditions of concurrence are known and before the Permit expires. Such decision shall address whether alternate effluent limits are appropriate, and if so what they should be, in accordance with §316(a) of the CWA (33 U.S.C. §1326(a)). Participants will make all good faith efforts to resolve (by settlement, ~~or~~ appeal decision or other available means) any outstanding issues on the terms of the renewal NPDES permit before the effective date of the final effluent limits in the present NPDES permit. This includes, but is not limited to, agreement by the Participants involved to a joint motion for expedited hearing filed by the Parties to the appeal.

III. Definitions

- A. “NPDES Permit” or “Permit” - for the purposes of this MOA, the referenced permit is NPDES Permit No. GA0026051 for the discharge(s) from the Georgia Power Company Plant Branch facility in Milledgeville, Putnam County, Georgia.
- B. “Parties to the appeal” – for purposes of any renewal permit appeal before a State Administrative Law Judge this means all Participants involved (except EPA, because EPA cannot be made a party in any appeal before a State Administrative Law Judge).
- C. The “primary area of study” will be as marked on **Attachment A** hereto (which shows the area of Lake Sinclair where the thermal discharge raises ambient temperature by at least 2° Centigrade one meter below the surface). This does not preclude EPD from setting appropriate conditions in the NPDES permit renewal or from conditioning a 316(a) alternate effluent limitation in such a permit, to address specific areas of impact that may be found within the primary area of study, in the NPDES permit renewal. The Study Plan and Study shall be in substantial conformance with the EPA “Draft Interagency 316(a) Technical Guidance Manual and Guide for Thermal Effects Sections of Nuclear Facilities Environmental Impact Statements” (May 1, 1977).

IV. Monitoring

Georgia Power will conduct monitoring for dissolved oxygen and temperature weekly between the hours of 9:00 a.m. and 3:00 p.m. during the months of May through October at the locations specified in the second paragraph of Condition III.B.2. of the Permit. Said monitoring shall be conducted when the cooling towers are in operation or when the intake water temperature is at least 89°F., or preferably when both conditions exist, to the extent feasible. EPD shall evaluate such monitoring data after the first year of cooling tower operation and determine whether further data would be duplicative, based on consistency of data results the first year.

V. Habitat Enhancement Project

Georgia Power shall fund a Habitat Enhancement Project (HEP) consisting of: (a) aquatic vegetative planting in the littoral zone, or similar projects, that are beneficial to fish in Lake Sinclair and wildlife on Lake Sinclair; and (b) creation of a "Habitat Enhancement Committee" ("HEC") to decide specifics of "(a)". The location selection process (including permission from landowners), plant selection, design approach, and before and after sampling will be determined by the HEC which will consist of a representative from each Participant, be chaired by Georgia DNR, and may include assistance from a representative of the COE Waterways Experiment Station. The HEC will first meet in June, 2002. The HEP will be funded at a level of \$250,000 by Georgia Power, when the HEC has decided what projects to include and is ready to proceed. HEP projects will not be conducted until all data collection for the 316(a) Final Study has been completed. All decisions by the Habitat Enhancement Committee shall be by consensus, if possible. If consensus cannot be reached, the decision shall be made by the Georgia DNR representative who will chair the Committee.

VI. Good Faith

All Participants will make all good faith efforts to submit comments and replies to comments in a timely manner, reach agreement on the substance of the Study Plan, the Progress Report, the Final Study, and on all other terms herein requiring agreement of the Participants.

VII. Facilitator

If the Participants all agree that a facilitator would be helpful to facilitate accomplishment of one or more tasks or subtasks under this MOA for the mutual benefit of all Participants, then they shall agree upon a person or entity to serve as a facilitator. Tasks for a facilitator may include such things as: providing a summary of all comments presented, providing further factual information or expertise not otherwise available, and/or providing mediation of one or more difficult issues that may arise. Any such facilitator will not supplant EPD as the decisionmaker in this process. Georgia Power shall pay any such facilitator up to \$25,000, \$10,000 of which may be paid from the amount allocated pursuant to Section V. of this MOA for HEPs. Any fees owed to one or more facilitator(s) that total more than \$25,000 may be paid by means of an increase in the MOA HEP amount, funded by the Georgia Power Company, if Georgia Power Company then determines in its sole discretion that further efforts by a facilitator(s) would be worthwhile.

VIII. Permit Modification

EPD will propose a modification of the NPDES permit to: (1) incorporate a schedule of compliance including an interim thermal effluent limitation extending to a date 59 months from the permit modification date, as well as appropriate milestones; (2) require that cooling tower(s) be designed, constructed, and operated to provide capacity to reduce by 50% the British Thermal Units ("BTUs") in the thermal discharge of Plant Branch; (3) add the

Attachment C force majeure language for Schedule Milestones in the modified NPDES Permit; and (4) otherwise conform the modified Permit to this MOA. EPD, the Sierra Club, and Georgia Power agree not to oppose or challenge said proposed or final modifications if finalized in substantial conformance with the proposal set forth in **Attachment B** hereto. EPA has reviewed the proposed modification in **Attachment B** hereto and at this time has no objection to the proposed Permit modification. Moreover, EPA anticipates that in the absence of new information it will have no objection to the Permit modification as proposed in **Attachment B**.

IX. Reservation of Rights

- A. Nothing in the terms of this MOA shall be construed to limit or modify the discretion of EPD or EPA in deciding or concurring on terms of the renewal or any other NPDES permit for this facility, nor does it act to limit the terms of the June 28, 1974, MOA, as amended, between EPD and EPA concerning authorization of Georgia EPD to implement the NPDES program in Georgia.
- B. Nothing herein shall be construed to preclude EPD or EPA from taking an appropriate enforcement action if there are any fish kills or other circumstances viewed by EPD or EPA as violations of State or Federal law. Nothing herein shall be construed as a substantive finding or admission that can be used against any Participant in any other judicial or administrative proceeding. This does not preclude reference by any Participant to any element of the MOA in a proceeding relating to the present or renewal NPDES permit.

X. Participant Representatives

Written materials to be sent to the Participants under this Agreement, shall be sent to:

Ogden Doremus
Legal Chair,
Sierra Club, Georgia Chapter
1447 Peachtree St., N.E.
Atlanta, GA 30309

Mike Wilder
Environmental Manager
Land & Water Programs
Georgia Power Co., BIN 10221
241 Ralph McGill Boulevard
Atlanta, Georgia 30308-3374

Beverly H. Banister
Acting Director
Water Management Division
EPA Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-3104

Jeff Larson
Chief, Permitting Compliance and
Enforcement Program
Water Protection Branch
Georgia EPD
4220 International Parkway, Ste. 101
Atlanta, Georgia 30354

XI. Schedule Milestones and Effective Date

Schedule Milestones contemplated by this MOA are contained in **Attachment D** hereto, for the convenience of the Participants. Attachment D does not contain any new requirements. If anything in Attachment D conflicts with language of this MOA or other attachments

hereto, language in the MOA or other attachments shall govern.
This MOA is effective when executed by all parties.
Effective Date: _____

Signed:

ENVIRONMENTAL PROTECTION DIV.

ENVIRONMENTAL PROTECTION AGY.

SIERRA CLUB

GEORGIA POWER COMPANY

Attachment B

Permit Modification Language

Based on new information that shows that legal challenges that are presently staying the effective date of the Permit can be resolved by agreement of the parties, which agreement is dependent in part on Permit modification, the following Permit modifications are proposed.

- A. On the Cover Page change the effective date of the Permit to the date in 2000, that this modification is finalized.
- B. In footnote 5 of Condition I.A.2. on page 3, change “54 months” to the date specified in the schedule of compliance.
- C. Modify condition I.B.1. on page 10 as follows:

Event	Months after Permit Modification (Eff.Date)
1 Begin Awarding Contracts	0
2 Start Construction	2
3 First Progress Report	6
4 Submit 316(a) Study Plan to assess “Balanced Indigenous Community” (BIC) & separate Plan for Hydrothermal Model Verification	6
5 Complete Contract Awards	8
6 Second Progress Report	13
7 Complete Construction	18
8 Submit Progress Report on 316(a) Study Report as specified in Study Plan approved by EPD	28
9 Submit Final Hydrothermal Model Verification Report and Cooling Tower Operation Plan	45
10 Submit Final 316(a) Study Report per EPD-approved Study Plan	45
11 Temperature limitations in Part I.A.2 or Alternate Thermal Limitations Will be Applicable	59

- D. Add the following after the 12 listed events in Section I.B.1., before the “Note” in that Section:

Cooling towers constructed shall have the capacity to remove 50% of the BTUs (British Thermal Units) added to the cooling water between the cooling water intake and the cooling water discharge point(s), and shall be utilized to the extent appropriate to meet applicable Permit terms (applicable portions of Conditions I.A.2. and 3., I.B.1., I.C., II.A., and II.B., and Special Conditions III.B. 2., 11., and 18.). This does not limit the discretion of EPD or EPA in setting limits of a renewal Permit for this facility.

- E. Replace the first paragraph of the “Note” on page 10 of the permit with the following:

a. “Force majeure” for the purposes of the NPDES permit modification, is defined as any event arising from circumstances beyond the control of the Georgia Power Company (“Georgia Power”) that delay or prevent the timely completion of any of the Schedule Milestones, despite Georgia Power’s best efforts to meet the Milestone. Force majeure does not include any delay caused by operational error, improperly designed or inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation on the part of Georgia Power.

b. The basis and sufficiency of any claimed force majeure event shall be determined by the Georgia Environmental Protection Division (“EPD”) in its sole discretion. If any event occurs which may delay or prevent it from attaining one or more Schedule Milestones, that Georgia Power believes constitutes a force majeure event, Georgia Power may petition EPD for an extension of such Milestone(s). Such Milestone(s) shall remain in effect until and unless an extension is granted by EPD. Georgia Power shall make all reasonable efforts to meet all Milestones, particularly for event 10, submission of the Final Study. Georgia Power shall notify EPD verbally within 48 hours (or at the beginning of the next business day if expiration of the 48-hour period is on a weekend or holiday) of any circumstances that may reasonably be expected to cause a Milestone delay. Georgia Power shall also notify EPD in writing within two (2) days thereafter of any such circumstances that are expected to cause a Milestone delay of more than five (5) days. Such written notification shall include a description of the asserted force majeure event(s), efforts made to prevent it(them), efforts that will be made to minimize its(their) effect, and the expected length of delay. Under no circumstances shall the last Milestone consisting of application of State thermal water quality standards or a 316(a) alternative effluent limitation, be extended beyond 59 months.

c. If EPD determines that the delay constitutes a force majeure event, the time for performance of the affected Schedule Milestone(s) may be extended by EPD for such time as is reasonably necessary to complete the Milestone(s). EPD shall provide written notification of its determination to the Participants within a reasonable time after Georgia Power has provided the required force majeure information. Such determination shall include a statement of which if any Milestone(s) is (are) extended and the new deadline(s) for any extended Milestone.

Attachment C

Force majeure

- a. “Force majeure” for the purposes of the Memorandum of Agreement (“MOA”) and NPDES permit, is defined as any event arising from circumstances beyond the control of the Georgia Power Company (“Georgia Power”) that delay or prevent the timely completion of any of the Schedule Milestones, despite Georgia Power’s best efforts to meet the Milestone. Force majeure does not include any delay caused by operational error, improperly designed or inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation on the part of Georgia Power.

- b. The basis and sufficiency of any claimed force majeure event shall be determined by the Georgia Environmental Protection Division (“EPD”) in its sole discretion. If any event occurs which may delay or prevent it from attaining one or more Schedule Milestones, that Georgia Power believes constitutes a force majeure event, Georgia Power may petition EPD for an extension of such Milestone(s). Such Milestone(s) shall remain in effect until and unless an extension is granted by EPD. Georgia Power shall make all reasonable efforts to meet all Milestones, particularly for event 12, submission of the Final Study. Georgia Power shall notify EPD verbally within 48 hours (or at the beginning of the next business day if expiration of the 48-hour period is on a weekend or holiday) of any circumstances that may reasonably be expected to cause a Milestone delay. Georgia Power shall also notify EPD in writing within two (2) days thereafter of any such circumstances that are expected to cause a Milestone delay of more than five (5) days. Such written notification shall include a description of the asserted force majeure event(s), efforts made to prevent it(them), efforts that will be made to minimize its(their) effect, and the expected length of delay. Under no circumstances shall the last Milestone consisting of application of State thermal water quality standards or a 316(a) alternative effluent limitation, be extended beyond 59 months.

- c. If EPD determines that the delay constitutes a force majeure event, the time for performance of the affected Schedule Milestone(s) may be extended by EPD for such time as is reasonably necessary to complete the Milestone(s). EPD shall provide written notification of its determination to the Participants within a reasonable time after Georgia Power has provided the required force majeure information. Such determination shall include a statement of which if any Milestone(s) is (are) extended and the new deadline(s) for any extended Milestone.

Attachment D

Schedule Milestones

Permit

Begin Awarding Contracts	0 months =	10/00
Start Construction	2 months =	12/00
First Progress Report	6 months =	4/01
Submit 316(a) Study Plan	6 months =	4/01
Submit HMV Plan	6 months =	4/01
Complete Contract Awards	8 months =	6/01
Second Progress Report	13 months =	11/01
Complete Construction	18 months =	4/02
Submit Progress Report on 316(a) Study	28 months =	3/1/03
Submit HMV Report +		
Cooling Tower Oper. Plan	45 months =	8/01/04
Submit 316(a) Study Report	45 months =	8/01/04
Final Thermal Limits effective or		
Alternate Effluent Limitations applicable	59 months =	9/05

MOA

Submit 316(a) Study Plan	6 months =	4/01
Submit HMV Plan	6 months =	4/01
Initial Comments on both	8 months =	6/01
Reply Comments on both	9 months =	7/01
Reconcile Comments	10 months =	8/01
EPD decides remaining issues	11 months =	9/01
First Meeting of HEC to decide on HEPs	20 months =	6/02
Submit Progress Report	27 months =	3/1/03
Initial Comments	28 months =	4/1/03
Reply Comments	28 months =	4/16/03
Reconcile Comments	30 months =	5/03
EPD decides remaining issues	30 months =	5/15/03
HEP Projects may begin after		
316(a) Study data collection complete		
Submit Final Study	45 months =	8/01/04
Initial Comments	46 months =	9/01/04
Reply Comments	47 months =	10/01/04
Reconcile Comments + issue		
Draft Renewal NPDES Permit	49 months =	12/1/04
Issue Final Renewal Permit	in a timely manner, in time to resolve any appeal before 59 months	

9. Appendix B: NPDES Permit

PERMIT NO. GA0026051

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,

GEORGIA POWER COMPANY
241 Ralph McGill Blvd. N.E.
Atlanta, Georgia 30308

is authorized to discharge from a facility located at

Plant Branch
Milledgeville, Putnam County, Georgia

to receiving waters

Lake Sinclair

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 December 14, 2000.

This permit and the authorization to discharge shall expire at midnight, December 13, 2005.

Signed this 14th day of December, 2000.

Director, Environmental Protection Division



B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

	<u>Permit Event</u>	<u>Months After Final Permit Issuance</u>
1	Begin Awarding Contracts	0
2	Start Construction	2
3	First Progress Report	6
4	Submit 316(a) Study Plan to assess “Balanced Indigenous Community” (BIC) & separate Plan for Hydrothermal Model Verification	6
5	Complete Contract Awards	8
6	Second Progress Report	13
7	Complete Construction	18
8	Submit Progress Report on 316(a) Study Report as specified in Study Plan approved by EPD	28
9	Submit Final Hydrothermal Model Verification Report and Cooling Tower Operating Plan	45
10	Submit Final 316(a) Study Report per EPD-approved Study Plan	45
11	Temperature limitations in Part I.A.2 or Alternate Thermal Limitations Will be Applicable	59

Cooling towers constructed shall have the capacity to remove 50% of the BTUs (British Thermal Units) added to the cooling water between the cooling water intake and the cooling water discharge point(s), and shall be utilized to the extent appropriate to meet applicable Permit terms (applicable portions of Conditions I.A.2. and 3., I.B.1., I.C., II.A., and II.B., and Special Conditions III.B.2., 11., and 18.). This does not limit the discretion of EPD or EPA in setting limits of a renewal Permit for this facility.

Note: a. “Force majeure” for the purposes of the NPDES permit modification, is defined as any event arising from circumstances beyond the control of the Georgia Power Company (“Georgia Power”) that delay or prevent the timely completion of any of the Schedule Milestones, despite Georgia Power’s best efforts to meet the Milestone. Force majeure does not include any delay caused by operational error, improperly designed or inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation on the part

of Georgia Power.

- b. The basis and sufficiency of any claimed force majeure event shall be determined by the Georgia Environmental Protection Division (“EPD”) in its sole discretion. If any event occurs which may delay or prevent it from attaining one or more Schedule Milestones, that Georgia Power believes constitutes a force majeure event, Georgia Power may petition EPD for an extension of such Milestone(s). Such Milestone(s) shall remain in effect until and unless an extension is granted by EPD. Georgia Power shall make all reasonable efforts to meet all Milestones, particularly for event 10, submission of the Final Study. Georgia Power shall notify EPD verbally within 48 hours (or at the beginning of the next business day if expiration of the 48-hour period is on a weekend or holiday) of any circumstances that may reasonably be expected to cause a Milestone delay. Georgia Power shall also notify EPD in writing within two (2) days thereafter of any such circumstances that are expected to cause a Milestone delay of more than five (5) days. Such written notification shall include a description of the asserted force majeure event(s), efforts made to prevent it (them), efforts that will be made to minimize its (their) effect, and the expected length of delay. Under no circumstances shall the last Milestone consisting of application of State thermal water quality standards or a 316(a) alternative effluent limitation, be extended beyond 59 months.
- c. If EPD determines that the delay constitutes a force majeure event, the time for performance of the affected Schedule Milestone(s) may be extended by EPD for such time as is reasonably necessary to complete the Milestone(s). EPD shall provide written notification of its determination to the Participants within a reasonable time after Georgia Power has provided the required force majeure information. Such determination shall include a statement of which if any Milestone(s) is (are) extended and the new deadline(s) for any extended Milestone.

In accordance with the provisions of Part II.B.4., the Director of EPD may modify the permit to include a variance as provided in Section 316(a) of the Clean Water Act if a “balanced indigenous community,” in the primary area of study (see Attachment A) of Lake Sinclair is demonstrated after completion of the plan.

2. No later than 14 calendar days following an event 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 event.

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
4244 International Parkway
Suite 110
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" discharge 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 by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight 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 daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- 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 or the 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 µg/l, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/l for acrolein and acrylonitrile, 500 µg/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 µg/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 acknowledgment 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.
- e. Demonstration of a “balanced indigenous community” in the Primary area of study (see Attachment A) of Lake Sinclair which would allow a variance as provided in Section 316(a) of the Clean Water Act.

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. The Company has submitted information in support of a request for a 316(a) thermal variance to show that operation of Plant Branch in such a manner that thermal loading in the Plant Branch discharge produces temperatures in Lake Sinclair above 90 degrees Fahrenheit provides for the protection and propagation of a balanced indigenous aquatic community. This information was submitted to satisfy the requirements of Georgia Water Quality Control Regulations 391-3-6-.06(12) which adopt by reference the provisions of Federal Regulation 40 C.F.R. 122.62 including the provision for modification of a permit to allow for a thermal variance under Section 316(a) of the CWA. As part of this request, the Company has submitted extensive studies of the aquatic community, temperature modeling information and additional information to address questions posed by the Georgia Department of Natural Resources. Based upon a review of this information by the Division, with the assistance of the U.S. Environmental Protection Agency, the Division determined that the information submitted in the permit renewal application was insufficient to approve the CWA Section 316(a) variance at this time. Whenever the Company can demonstrate that any effluent limitation proposed for the control of the thermal component of any discharge from such source will require effluent limitations more stringent than necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the primary area of study (see Attachment A) of Lake Sinclair, the State may impose an effluent limitation under such sections for such plant, with respect to the thermal component of such discharge (taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the primary area of study (see Attachment A) of Lake Sinclair. Should the permittee wish to pursue a demonstration pursuant to Section 316(a) of the Act, as previously requested, no later than 6 months after the final permit effective date the permittee shall design and submit specific details for review, modification and approval by the Division to document the extent of the thermal effects of the discharge on the indigenous

population of shellfish, fish, and wildlife in and on the primary area of study (see Attachment A) of Lake Sinclair. Such study shall be in substantial conformance with “Draft Interagency 316(a) Technical Guidance Manual and Guide for Thermal Effects Sections of Nuclear Facilities Environmental Impact Statements, “U.S. Environmental Protection Agency, May 1, 1977. The approved studies and schedule shall take into consideration the proposed cooling tower and allow sufficient time to document the effect of the cooling tower on the balanced indigenous community in the primary area of study (see Attachment A) of Lake Sinclair. If the supplemental studies support a 316(a) variance, the permittee may be granted alternative thermal limitations provided that the statutory test set forth in Section 316(a) of the Clean Water Act [as elaborated in U.S. EPA’s regulations pursuant to 40 CFR 125.73(c)(1)(i) and (ii)] has been satisfied.

2. In accordance with the dates listed in the “Schedule of Compliance”, the permittee shall install and operate the cooling tower sufficiently to insure that non-lethal thermal conditions for fish are available somewhere in the vertical water column throughout the portions of the reservoir that are thermally affected by Plant Branch. Non-lethal thermal conditions are defined by the Division as measuring a temperature of not greater than 93°F at the seven MS locations shown on the map attached to this permit monitored at a depth in the water column that contains dissolved oxygen of not less than 3.0 mg/l. The permittee will measure vertical profiles at a minimum of 1 meter depths throughout the vertical water column. Monitoring for dissolved oxygen and temperature will be conducted weekly during the months May through October and during the hours of 9:00 A.M. to 3:00 P.M. It shall be conducted when the cooling towers are in operation or when the intake water temperature is at least 89°F, or preferably when both conditions exist, to the extent feasible.

Within 6 months following final permit issuance, the permittee will submit a plan to verify the hydrothermal model predicting the effects of the cooling water discharge and the size of the zone of passage in Beaverdam Creek. The confirmation will consist of cross sectional profiles tested for zone of passage points at no fewer than (7) locations along Beaverdam Creek. These locations will include monitoring stations at the following: (1) halfway between the plant discharge and the Route 441 bridge, (2) halfway between the proposed cooling tower discharge point and the plant discharge, (3) at the plant discharge, (4) 100 yards above the cooling tower discharge, (5) 100 yards below the Route 441 bridge, (6) halfway between the Route 441 bridge and the mouth of Beaverdam Creek, and (7) at the mouth of Beaverdam Creek. The testing will be done when the cooling towers are in operation during the summer months.

After conducting the Cooling Tower Operation Plan for Test Purposes referenced in the Plant Branch NPDES permit renewal application package,

the permittee will submit a revised Cooling Tower Operation Plan to the Division. The Plan will include provisions for the operation of the cooling tower, or alternate methods, to compensate for the decrease in dissolved oxygen caused by a reduction in the surface reaeration attributable to the Plant Branch thermal discharge so that the discharge does not cause or contribute to an excursion of the water quality standards. The plan revisions regarding dissolved oxygen compensation will only be in effect when the dissolved oxygen monitoring referenced at Part I.A.1. indicates dissolved oxygen concentrations less than 5.0 mg/l. Dissolved oxygen levels will be monitored at a depth of one meter at location MS-04 as shown on the attached map. Subsequent modifications of the plan will also be submitted to the Division.

3. Flows for outfalls 01 and 02 shall be calculated from circulating water pump operating hours and nameplate flow and include estimated auxiliary equipment cooling water and ash pond discharges. The daily maximum temperature will be calculated by summing the flow weighted hourly temperatures for outfalls 01 and 02 and dividing by the sum of the flows. The temperature rise across the plant will be calculated as the difference between the referenced daily maximum temperature for outfalls 01 and 02 and the daily maximum plant intake temperature measured at a location representative of condenser inlet temperatures.
4. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
5. Any chemical cleaning wastes generated will be contained for further treatment or disposal in a manner to permit compliance at time of discharge with requirements listed below or disposed of in a manner approved by the Division. This applies to any pre-operational chemical cleaning of metal process equipment also. The treatment and disposal procedures shall be discussed in the flow monitoring and characterization submittal.
6. The quantity of pollutants discharged in chemical cleaning waste shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times the concentrations listed below. All effluent characteristics shall be monitored 1/week by grab sampling when a discharge is occurring.

<u>Effluent Characteristic</u>	<u>Discharge Limitation (mg/l)</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>
Total suspended solids	30.0	100.0
Oil and Grease	15.0	20.0
Copper	1.0	1.0
Iron	1.0	1.0

7. Total residual chlorine may not be discharged from any single generating unit

- for more than two hours per day. Simultaneous multi-unit chlorination is permitted.
8. The TRC maximum is the instantaneous maximum which may occur at any time. Further, the permittee will develop a system for monitoring and recording total time of TRC discharges. Such system shall be submitted to and approved by the Division. The results shall be reported in a suitably concise form beginning with the first scheduled Operation Monitoring Report (OMR) and continuing on each OMR thereafter.
 9. In the event that waste streams for various sources are combined for treatment of 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. Annually the permittee shall submit to the Director flow monitoring and characterization information regarding the various waste streams.
 12. All sewage treatment plants (STP) must be properly operated and maintained. This applies to the main, coal handling, and contractor STPs.
 13. The provisions of 40 CFR 122.41(l)(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. 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.
 15. The sludge from the iron coprecipitation system will be disposed of in accordance with the approved sludge management plan.
 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 best management practices plan for "Biofouling Control for Plant Service Water Systems" dated May 11, 1994 is incorporated in this permit. The plan may be modified during the permit term upon written approval by the Division and may include biofouling control provisions for the proposed cooling tower.
18. The permittee is authorized to discharge stormwater from the outfalls identified in Part I, Section A. of this permit provided that these discharges do not cause violations of State water quality standards in the receiving streams.

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.16. above.

**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,

**GEORGIA POWER COMPANY
241 Ralph McGill Blvd. N.E.
Atlanta, Georgia 30308**

is authorized to discharge from a facility located at

**Plant Branch
Milledgeville, Putnam County, Georgia**

to receiving waters

Lake Sinclair

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

This permit is a modification of one originally issued on December 14, 2000.

This permit and the authorization to discharge shall expire at midnight, December 13, 2005.

Signed this 31st day of August 2001.

**Director,
Environmental Protection Division**



- A. 7. During the period beginning effective date and lasting through December 13, 2005, the permittee is authorized to discharge from outfall(s) serial number(s) 09 - Employee Car Wash, 010 - Water Treatment Plant Sump, 011 - Fire Training Area Water and Stormwater, and 012 - Cooling Tower Intake Screen Backwash.

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

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

These discharges shall remain as described above. If the Director determines that water quality standards are not being met as the result of these discharges and so notifies the permittee in writing, the permittee shall take all reasonable steps to prevent the discharge from causing water quality standards to be exceeded in the receiving water.

10. References

Georgia Power Company, Study Plan for the Plant Branch 316(a) Demonstration, June 2001.

GAEPD, *Rules and Regulations For Water Quality Control, Chapter 391-3-6*, April 2000, Georgia Department of Natural Resources, Environmental Protection Division.

GAEPD, NPDES Permit No. GA0026051, Georgia Power Company, Plant Branch, Milledgeville, GA, December 2001.

USEPA. 1991. *Guidance for Water Quality –based Decisions: The TMDL Process*. U.S. Environmental Protection Agency, Office of Water, Washington, DC. EPA-440/4-91-001, April 1991.

USEPA 1993. 40 Code of Federal Regulations (CFR) Part 130.7, July 1993.

Memorandum of Agreement among EPA, EPD, Sierra Club and the Georgia Power Company, September 2000.

