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Docket
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Docket No. 50-321

Georgia Power Company
Oglethorpe Electric Membership Corporation
ATTN: Mr. I. S. Mitchell, III
Vice President and Secretary
Georgia Power Company
Atlanta, Georgia 30302

Gentlemen:

The Commission has issued the enclosed Amendment No. 35 to Facility Operating License No. DPR-57 for Edwin I. Hatch Nuclear Plant Unit No. 1. This amendment is in response to your request dated May 11, 1976.

This amendment revised the provisions in the Environmental Technical Specifications (ETS) relating to (1) the thermal discharge plume verification program, (2) fish collection procedures used to determine the migratory behavior of selected fish species, and (3) the administrative and management controls established to implement the ETS.

We have evaluated the potential for environmental impact of plant operation in accordance with the enclosed amendment as follows:

1. The changes associated with the thermal plume verification program are based on experience gained in implementing this program during the first year of plant operation. The changes assure that the data required to accomplish the objectives of the verification program will be collected.

2. The changes to the collection procedures for adult and juvenile shad serve to make the procedures more specific. The revised procedures provide assurance that the objectives of the fish collecting program will be accomplished.

3. The changes associated with administrative and management controls serve to (a) clarify the responsibilities of the Plant Superintendent and the Manager of Environmental Affairs for implementing the ETS, and (b) update the ETS reporting requirements to reflect current NRC guidance as expressed in Regulatory Guide 4.8, "Environmental

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DATE ➤						

Technical Specifications For Nuclear Power Plants." The changes assure (a) that the administrative and management controls for implementing the requirements of the ETS are adequate, and (b) that the ETS reporting requirements comply with current NRC regulations and guidance.

Consequently, we have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level, and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

This amendment does not involve new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a significant hazards consideration. The Commission has further concluded that there is reasonable assurance that the health and safety of the public will not be endangered by the proposed action.

A copy of the related Federal Register Notice is also enclosed.

Sincerely,

Original signed by
George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:
1. Amendment No. 35 to DPR-57
2. Federal Register Notice

cc: See next page

D. Eisenhut 9/29/76

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

GEORGIA POWER COMPANY
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION

DOCKET NO. 50-321

EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 35
License No. DPR-57

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Georgia Power Company and Oglethorpe Electric Membership Corporation (the licensees) dated May 11, 1976, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 4, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 35

TO THE ENVIRONMENTAL TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace pages 3-3, 4-1 thru 4-3, 5-1 thru 5-4 and Figure 5-1 with the attached revised pages. Add page 5-4a.

Reporting Requirement

An annual report will be submitted.

3.1.3 The objective of monitoring periphyton is to determine if there is a significant long term change in periphytic algae populations as a result of HNP operation.

Specification

A set of artificial substrates (8 glass slides each) will be held in floating diatometers at stations on each side of the Altamaha River above the intake and below the discharge, giving a total of 4 diatometers. The downstream stations will be located at the end of a state-approved mixing zone, and the upstream station will be in a location with physical characteristics similar to the downstream station. The artificial substrates will be placed in the river at quarterly intervals and exposed for a constant period of time necessary for measurable biomass to accumulate (approximately 3 weeks). Relative productivity at each station will be based on ashfree dry weight of the sample. The program will be conducted for one year prior to power operation and during the first year of power operation. Experience has shown that some substrates will be lost due to high water and vandalism. When this happens, a complete analysis cannot be made for the quarter in question.

Bases

Since periphyton is a sessile community which reflects extremes rather than means in environmental conditions, the community is very useful in assessing the stability of rivers.

The collection and analysis procedures which are described in the EPA manual Biological Field and Laboratory Methods for Measuring the Quality of Surface Waters and Effluents(1) will be used as a guide.

Report Requirement

An annual report will be submitted.

(1) Weber, C. I., 1973. Analytical Quality Control Laboratory, National Environmental Research Center, Cincinnati, Ohio.

SPECIAL SURVEILLANCE AND STUDY ACTIVITIES

4.1 General

The purpose of this program is to supplement the Environmental Surveillance program in the area of migratory behavior of important fish species.

Specification

Reproduction of American shad will be described within an area from two miles upstream to two miles downstream of HNP. This study will utilize the available literature and observation. Juvenile shad populations will be sampled monthly on sandbars for the period of April through September above and below the site using seines, when river levels are below 68'. One season (April through September) of operational data will be compared with pre-operational data. Collections of adult fish will be made seasonally (i. e. 4 times per year) when river conditions permit, although not on specific dates in a quarterly schedule. Species composition, total length, and wet weight will be determined for all fish collected. Collecting stations will be established upstream and downstream of the HNP site in areas where greatest densities of fish are expected. Comparisons will be made of fish data collected above and below HNP as well as during the pre-operational and operational stages. The principal methods of collection for adult fish will be electrofishing and gill nets which will be employed when river levels are below 73'. When river levels are greater than 73' (flood condition), the river is not safe for operating the type of equipment which is used. In addition, fish are scattered across the flood plain and cannot be collected.

Bases

Collection of adult and juvenile American shad above and below HNP will reveal whether or not fish populations present during the operational phase are similar to those present before operation began.

Report Requirement

Annual reports will be filed.

4.2 THERMAL PLUME VERIFICATION

The Motz-Benedict Model has been used to predict the thermal plume of the HNP discharge. The accuracy of this model will be verified for flows of less than 7500 cfs (elevation 68.5 feet) and occasionally tested at higher flows. Because of the conservatism built into the Motz-Benedict Model, it may become necessary to abandon this model and develop another model based on the field data which have been and will be collected. Temperatures will be taken at three depths from several transects. (Locations of these transects will depend upon river conditions and plume length.) In addition, temperatures will be taken from several rafts located below the discharge as it is deemed necessary. These rafts will be used to supplement information collected from the transects as needed. From this data the actual thermal plume can be plotted and compared to the theoretical model. Surveys will continue at flows of less than 7500 cfs until an NPDES permit has been issued, and at that time thermal monitoring will continue according to that permit. (This permit will contain a mixing zone as approved by the State of Georgia.).

4.2.1 Method of Data Collection

The transects across the river in the vicinity of the discharge will be run at three depths. They will be run from the same boat, and as close together in time as possible. Temperatures will be recorded at a one-foot depth during the first run, at a three-foot depth during the second run, and at a five-foot depth (or bottom) during the last run. If possible, temperatures at two or three depths may be collected on the same run. A temperature meter will be used to measure the temperatures from the boat and will be connected to a continuous recorder. All temperature meters and recorders will be calibrated prior to the survey for the temperature range expected during the survey.

As the location of transects and/or rafts will depend upon plume configuration, control will be established during each survey. Control may consist of stakes driven in the river bank, jugs or markers placed in trees, use of surveying equipment, aerial photos, maps, survey boat traveling at a constant speed, use of stop watches, or a combination of these or other means.

Temperature rafts will be used as field conditions permit and as deemed necessary. In addition, a continuous temperature recorder will be mounted on a piling in the river for the period of time each survey is being run. The piling is located approximately 500 feet downstream from the discharge and 200 feet from the south bank of the river which is within the mixing zone requested from the State of Georgia.

4.2.2 Method of Data Analysis

Through the use of various means of control, the length and location of each transect or temperature raft will be known so temperatures at specific points can be determined. These temperatures will be plotted in their proper position on a map of the river. The one-foot, three-foot, and five-foot data will be plotted on separate maps. Then the isotherms will be drawn and compared to the theoretical thermal plume.

4.3 RESIDUAL CHLORINE

4.3.1 General

The purpose of this study is to determine the minimum concentration of free residual chlorine required to maintain cooling tower cleanliness and to minimize the total chlorine residual discharge to the river.

4.3.2 Methods

Chlorine dosage at the condenser as well as frequency and duration will be varied (within the limits of specification 2.3) during a one-year study period to determine the minimum free residual chlorine concentration required to maintain cooling system cleanliness. Sufficient grab samples to be analyzed for free and total chlorine residuals will be collected at intervals during and after the various chlorination cycles at the condenser inlet (the point of blowdown from the circulating water system), the condenser outlet and at the dilution structure before entering the discharge pipe. This sampling and analysis program shall determine the relationship between:

1. Use of free chlorine;
2. Formation of combined chlorine in the cooling system;
3. Cooling tower cleanliness; and
4. Free and total residual chlorine discharge to the river.

Sampling frequency shall be at least monthly during September through May and weekly during June through August. The analysis of the grab samples will be made using a Wallace and Tiernan Ampermetric Titrator or an equivalent alternative.

4.3.3 Report Requirement

A progress report of the results of the study will be provided to the NRC in the annual Operating Report, and a final report with recommendations 60 days after completion of the study.

5.0 ADMINISTRATIVE CONTROLS

Objective

This section describes the administrative and management controls established to implement the environmental technical specifications (ETS). Measures to be specified in this section include the assignment of responsibilities, review and audit functions, operating procedures, and reporting requirements.

5.1 Responsibility

5.1.1 The Plant Superintendent has responsibility for operating the plant within the Limiting Conditions for Operation (LCO) in Section 2.0 and as specified below:

1. Technical Specification 3.2

   Production Department is responsible for all sample collection, necessary calibrations and measurements, data recording, and procedures associated with 3.2.2, 3.2.3.A, and 3.2.4. except for the five mile survey mentioned in 3.2.2.C, which is the responsibility of the Environmental Affairs Division.

2. Technical Specification 4.3

5.1.2 The Manager of Environmental Affairs is responsible for the environmental surveillance and study programs in Section 3.0 and 4.0 except as specified in 5.1.1. He is also responsible for the following:

1. Technical Specification 3.2.

   All sections and aspects of 3.2 not mentioned in 5.1.1, such as data storage, analysis, and reports.

5.1.3 The Quality Assurance Department is responsible for conducting periodic audits of plant operations and the environmental surveillance activities to insure that these specifications are being met.

5.2 Organization

An organizational chart showing both plant and corporate levels relative to environmental matters is presented in Figure 5-1. The Production Department has a responsibility for planning and implementing the monitoring of the plant effluents, for observing the limiting conditions for operation, and for those items specified in Technical Specification 5.1.1. The Environmental Affairs Division of the General Engineering Department

has the responsibility for planning and implementing the environmental surveillance and study programs in Sections 3.0 and 4.0 for the plant and coordinating these programs with the Production Department, except as noted in Technical Specification 5.1.1. In these cases the Environmental Affairs Division has responsibility of reviewing the conduct of these environmental surveillance and study programs.

5.3 Review and Audit

5.3.1 The Plant Superintendent is responsible for routine review of plant operation to insure that plant operation is being conducted within the limiting conditions for operation defined in Section 2.0 of these specifications.

5.3.2 The Manager of Environmental Affairs is responsible for routine review of the conduct of the environmental surveillance and study programs to insure that Sections 3.0 and 4.0 of these specifications are being carried out.

5.3.3 The Quality Assurance Department shall conduct an audit at least once a year of the GPC Production Department and GPC Environmental Affairs Division activities related to compliance with these specifications.

5.3.4 Proposed changes to these specifications will be reviewed and approved by the Manager of Environmental Affairs, the Plant Review Board, and the Safety Review Board. Prior to this approval, an evaluation of the impact anticipated from the proposed change will be made. Proposed changes to the Section 2.0 of these specifications will be reviewed in the same manner as proposed changes to the safety technical specifications to avoid conflicts and maintain consistency between the safety and environmental aspects of plant operation.

5.3.5 Proposed changes or modifications to plant systems or equipment will be reviewed by the Plant Review Board (PRB) which will determine if proposed change would result in a potential adverse environmental impact, the proposed change will be referred to the Manager of Environmental Affairs who will evaluate the potential impact of the proposed change.

5.3.6 Procedures for the plant activities and proposed changes thereto, shall be reviewed and approved by the Plant Review Board (PRB). Temporary changes to the procedures which do not change the intent of the original procedure may be made with the concurrance of two individuals holding senior reactor operator licenses. Such changes shall be documented and subsequently reviewed by the PRB and approved by the Plant Superintendent on a timely basis.

Procedures for the environmental surveillance and special study activities and proposed changes thereto shall be reviewed and approved by the Manager of Environmental Affairs except as noted in 5.1.1.

5.3.7 The Safety Review Board (SRB) shall review the following:

a. Proposed changes to the Environmental Technical Specifications.

b. Results of the environmental monitoring program prior to their submittal in each annual Environmental Monitoring Report.

c. Violation of Environmental Technical Specifications to determine if adequate corrective action is being taken to prevent recurrence.

5.4 Action to be Taken if a Limiting Condition for Operation is Exceeded

5.4.1 Remedial action as permitted by the technical specifications shall be taken until the condition can be met.

5.4.2 Violation of a limiting condition for operation will be reported immediately to the Plant Superintendent.

5.4.3 A separate report of each violation shall be prepared by the Plant Superintendent. Copies of such reports will be submitted to the Manager of Production and the Chairman of the SRB for review and approval of corrective actions as specified in Paragraph 5.3.7c of these specifications.

5.4.4 The Plant Superintendent will report such violations to the NRC as specified in Paragraph 5.6.2.

5.5 Procedures

5.5.1 Detailed written procedures, including applicable check lists and instructions, shall be prepared and followed for all activities involved in carrying out the environmental technical specifications. Procedures shall include sampling, data recording and storage, instrument calibration, measurement and analysis, and actions to be taken when limits are approached or exceeded. Testing frequency of any alarm shall be included. These frequencies shall be determined from experience with similar instruments in similar environments and from manufacturers' technical manuals. Plant standard operating procedures may be referenced in the above procedures in areas pertaining to maintenance and calibration of instrumentation and other such areas of interface with the above procedures in order to prevent duplication of effort and to insure that there are no conflicts between Appendix A procedures and Appendix B procedures.

5.5.2 Plant standard operating procedures shall include pro-

visions in addition to the procedures specificied in Section 5.5.1, to insure that all plant systems and components are operated in compliance with the limiting conditions for operations established as part of the environmental technical specifications.

5.6 Plant Reporting Requirements

5.6.1 Routine Reports

A report on environmental surveillance programs for the previous 12 months of operation shall be submitted within 90 days after January 1 of each year. The period of the first report shall begin with the date of initial criticality. The report shall be a summary and interpretation of the results of the environmental activities for the 12 month period, including a comparison with preoperational studies, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of irreversible damage are detected by the monitoring, the licensee shall provide an analysis of the problem and a proposed course of action to alleviate the problem.

A summary report on radioactive effluents released from the plant, with data summarized on a quarterly basis as outlined in NRC Regulatory Guide 1.21 shall be submitted semiannually within 60 days after January 1 and July 1 of each year. If statistically significant variations of offsite environmental radionuclide concentrations with time are observed, a comparison of these results with effluent releases shall be provided in the environmental surveillance reports. Individual samples which show higher than normal levels (25% above control station value for external dose, or twice control station value for radionuclide content) shall be noted in the reports.

Results of all radiological samples taken shall be summarized on an annual basis for inclusion in the annual report. In the event that some results are not available within the 90 day period, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report. (This is particularly applicable to the biological sampling due to the time required to process biological samples.)

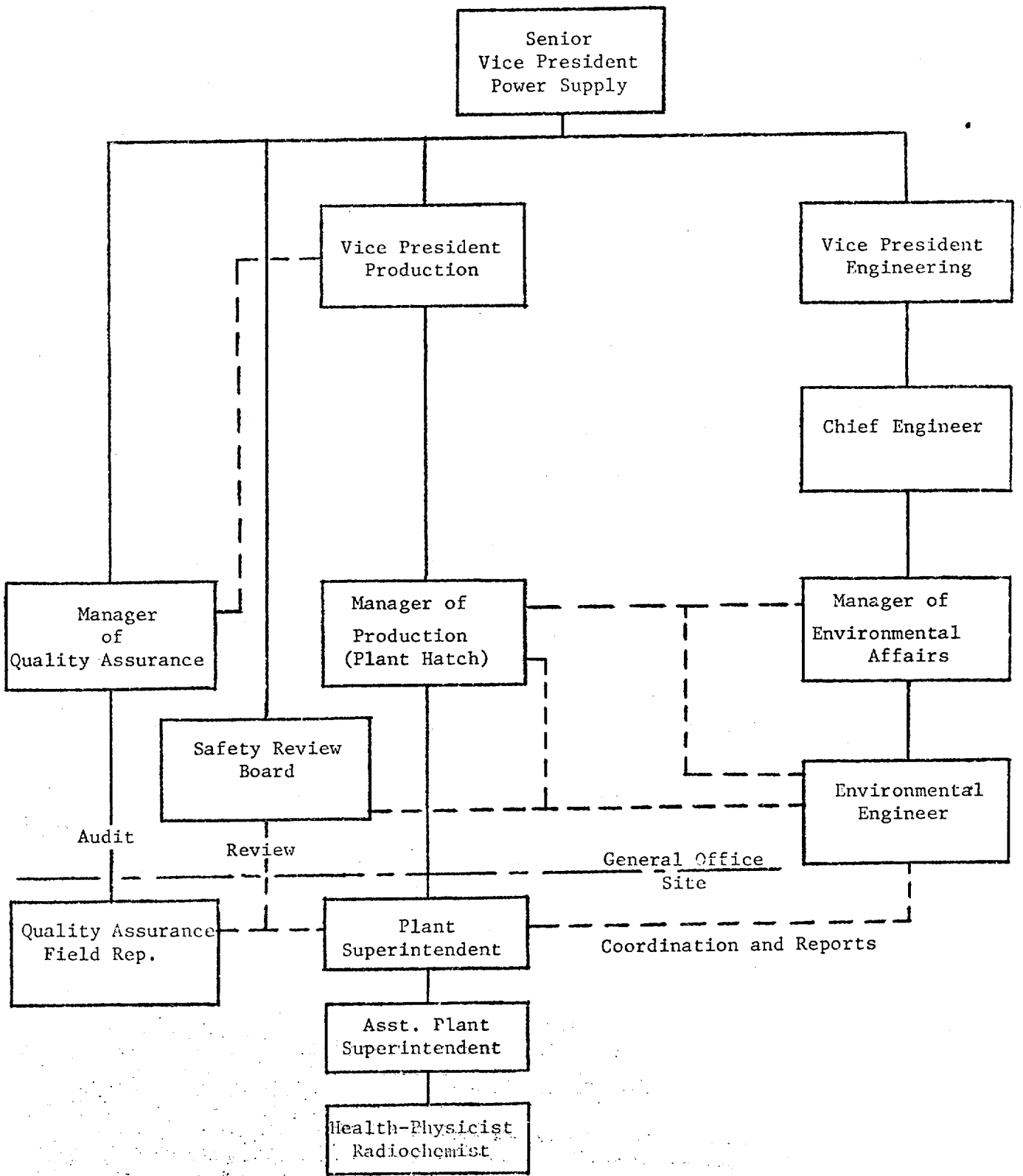
5.6.2 Non-Routine Reports

In the event a limiting condition for operation is exceeded or a report level, specified in Section 3, is reached or

a reportable occurrence involving a significant environmental impact occurs, a report will be made within 24 hours by telephone and telegraph to the Director of the Regional Office of Inspection and Enforcement, followed by a written report within 10 days to the Director of the Regional Office of Inspection and Enforcement (with a copy to the Director, Division of Operating Reactors, USNRC).

The written report and to the extent possible, the preliminary telephone and telegraph report, will: (a) describe, analyze, and evaluate the occurrence, including extent and magnitude of the impact, (b) describe the cause of the occurrence and (c) indicate the corrective action (including any significant changes made in procedures) taken to preclude repetition of the occurrence and to prevent similar occurrences involving similar components or systems.

HNP ETS
FIG. 5-1
ORGANIZATION RELATIVE TO
ENVIRONMENTAL MATTERS



Amendment No. 35

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-321

GEORGIA POWER COMPANY
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 35 to Facility Operating License No. DPR-57 issued to Georgia Power Company and Oglethorpe Electric Membership Corporation, which revised Technical Specifications for operation of the Edwin I. Hatch Nuclear Plant, Unit No. 1, located in Appling County, Georgia. The amendment is effective as of its date of issuance.

The amendment consists of changes to the Technical Specifications relating to (1) the thermal discharge plume verification program, (2) fish collection procedures used to determine the migratory behavior of selected fish species, and (3) the administrative and management controls established to implement the Environmental Technical Specifications.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated May 11, 1976, (2) Amendment No. 35 to License No. DPR-57 and (3) the Commission's reference letter. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street N. W., Washington, D. C. and at the Appling County Public Library, Parker Street, Baxley, Georgia 31513.

A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commisison, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 4th day of October, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors