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Docket No. 50-321

Georgia Power Company
Oglethorpe Electric Membership Corporation
Municipal Electric Association of Georgia
City of Dalton, Georgia
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. 41 to Facility Operating License No. DPR-57 for the Edwin I. Hatch Nuclear Plant Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application dated November 30, 1976.

This amendment deletes monitoring programs in the Environmental Technical Specifications relating to (1) Impingement of Fish, (2) Entrainment, (3) Periphyton, (4) Benthos, and (5) Special Surveillance - Fish. We have reviewed the data collected for these specifications, as submitted in the Annual and Semi-Annual Operating Reports, and the reasons for the inclusion of these programs in the Environmental Technical Specifications as given in the Hatch Unit No. 1 Final Environmental Statement. We conclude that a negative declaration is appropriate for this action and we have prepared an Environmental Impact Appraisal.

You also proposed in your November 30, 1976 application to delete the requirements for aerial patrols along the rights-of-way of five transmission lines specified in Environmental Technical Specification 5.8.1. According to Specification 5.8.1, the surveys will continue semi-annually until stabilization of soil and vegetation is achieved. We feel that verification by the staff of stabilization should be obtained before the aerial patrols are terminated, particularly since this is the first instance of a proposed termination of such aerial overflights. Therefore, we believe that it would be useful for representatives from the NRC staff, including the NRC regional inspector, to be present on such an overflight conducted by you. This participation in an overflight would permit the establishing of a common understanding of when stabilization of erosion and revegetation has been reached. Without this or comparable supporting justification we are unable to

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SURNAME ➤						
DATE ➤						

approve the proposed deletion of the aerial patrols specified in Specification 5.8.1.

We have also concluded that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Copies of the Environmental Impact Appraisal and Notice of Issuance and Negative Declaration are enclosed.

Sincerely,

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

Enclosures:
1. Amendment No. 47 to License No. DPR-57
2. Safety Evaluation and Environmental Impact Appraisal
3. Notice of Issuance and Negative Declaration

cc: see next page

subject to change as in Insert B

OFFICE	ORB#3	ORB#3	OELD	ORB#3		
SURNAME	CParrish	SNowicki:acr	B. Smith	GLear		
DATE	9/21/77	9/22/77	9/26/77	10/17/77		

Georgia Power Company
Oglethorpe Electric Membership Corporation
Municipal Electric Association of Georgia
City of Dalton, Georgia

cc:
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Mr. H. B. Lee, Chairman
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U. S. Environmental Protection Agency
Region IV Office
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345 Courtland Street, N. E.
Atlanta, Georgia 30308

Appling County Public Library
Parker Street
Baxley, Georgia 31513

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. 47
License No. DPR-57

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

   A. The application for amendment by Georgia Power Company, Oglethorpe Electric Membership Corporation, Municipal Electric Association of Georgia and City of Dalton, Georgia (the licensees) dated November 30, 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 changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-57 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 47, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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 18, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 47

TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace the following pages of the Appendix "B" Technical Specifications with the enclosed pages. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove	Replace
3-1 thru 3-5	3-1 thru 3-5
4-1	4-1

3.0 ENVIRONMENTAL SURVEILLANCE

3.1 General

The purpose of this program is to determine the effects of thermal and chemical discharges from HNP on the aquatic community in the Altamaha River in the vicinity of HNP, and the effect of plant operation on the terrestrial environment. Given the present state of the art of biological sampling, it should be recognized that the approach of these studies is generally experimental in nature and that the methods may require modification. The program requires flexibility due to the unpredictable nature of environmental variables, such as weather, flooding, etc. Pre-operational data for HNP has not been fully analyzed, therefore, it is difficult to assign a report level to a majority of the biological sampling programs. Confidence limits will be based on data currently being gathered. If analyses of data collected during the first year of operation show no significant adverse effects within confidence limits of the pre-operational data, the programs will be discontinued or reduced.

3.1.1 Impingement of Fish - Program Completed

3.1.2 Entrainment - Program Completed

3.1.3 Periphyton - Program Completed

3.1.4 Benthos - Program Completed

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3.1.5. General Terrestrial Survey

Objective

To establish non-radiological effects of HNP operation on the immediate terrestrial environment.

Specification

A vegetation map of the area will be developed, using annual color and infrared aerial photography and field observations. Visual inspections of four permanent vegetation transects within the boundaries of HNP will be made in late spring and early fall.

If an abnormal trend or damage is observed in the field or by use of photography, additional study will be required to determine its cause and possible effect. The study will be discontinued if no effect is seen after 4 years.

SPECIAL SURVEILLANCE AND STUDY ACTIVITIES

4.1 General - Program Completed

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

ENVIRONMENTAL IMPACT APPRAISAL BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 47 TO FACILITY OPERATING LICENSE NO. DPR-57

GEORGIA POWER COMPANY

OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION

MUNICIPAL ELECTRIC ASSOCIATION OF GEORGIA

CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1

DOCKET NO. 50-321

Description of Proposed Action

By letter dated November 30, 1976, Georgia Power Company (GPC) proposed an amendment to Facility Operating License DPR-57 for the Edwin I. Hatch Nuclear Plant Unit No. 1. The proposed amendment would delete Environmental Specifications 3.1.1 Impingement of Fish, 3.1.2 Entrainment, 3.1.3 Periphyton, 3.1.4 Benthos, and 4.1 Special Surveillance - Fish. The proposed amendment would also delete the aerial patrol requirements of Specification 5.8, "Transmission Line Herbicide, Erosion Control and Landscaping", from the Environmental Technical Specifications. Over two years of operational data have been collected and the licensee indicates that no significant adverse environmental impacts on the aquatic environment due to the operation of Hatch Unit No. 1 have been found.

Discussion

Specification 3.1.1 of the Hatch ETS requires weekly 24-hour impingement monitoring for the first year of operation and until cessation is approved by the NRC. Size, quantity and species of impinged fish are recorded. Particular emphasis is placed on the American shad, since it is the most important commercial fish in the Altamaha River, and a significant reduction in their abundance or growth would be undesirable. The technical specifications require that a report be filed if the total number of all fish impinged, other than flood plain forms, exceeds 20,000 per day. The technical specifications also provide that if quantities of impinged fish are determined not to have a significant detrimental impact on the propagation of commercially important species, this program may be discontinued upon NRC approval.

Specification 3.1.2 requires entrainment monitoring of the intake water during the major spawning period (February through May) for the first two years of operation to determine the number of fish eggs and larvae entrained. Collection of organisms by drift net at the mouth of the intake structure should assure an accurate estimate of the number and kinds of fish lost due to entrainment during normal plant operation.

Specification 3.1.3 requires periphyton monitoring using glass slides as artificial substrates. Quarterly comparisons of relative productivity are required between upstream and downstream areas for one year before and after power plant operation begins. Because periphyton is a sessile (permanently attached) community which reflects extremes rather than means in environmental conditions, it was felt that periphyton monitoring could be used to assess the stability of the river.

Specification 3.1.4 requires monitoring of benthic macroinvertebrates using the Peterson dredge and Hester-Dendy multiple plate samplers to determine if there is a significant long-term change in the benthic populations as a result of Hatch Nuclear Plant operation. Sampling was conducted quarterly for one year before and after plant operation began. A species diversity index was used to analyze data collected for this program.

Specification 4.1 requires a special study to assess plant impacts on fish populations near the Hatch Nuclear Plant. Migratory fish populations, particularly American shad, are examined to determine whether or not fish populations present during the operational phase are similar to those present before operation began.

Specification 5.8.1 requires that aerial patrols be made along the rights-of-way from the Hatch Nuclear Plant Unit No. 1 site to the first connection points (Vidalia, Offerman, Tifton, Bonaire, Eastman, Douglas) to determine if significant erosion damage to the rights-of-way has occurred. When significant errosion damage or areas subject to potential errosion damage are located maintenance crews will restore the damaged areas to a stable condition.

Environmental Impact

E. I. Hatch achieved initial criticality in September 1974, produced power in October 1974, and began producing electrical power on the grid December 22, 1974. The first year of operation included all of the year of 1975. We have reviewed the data connected for these specifications as submitted in the Annual and Semi-Annual Reports and the reasons for the inclusions of these programs as given in the Hatch Unit No. 1 Final Environmental Statement and have made the following appraisal.

Impingement samples (Specification 3.1.1) consisted of 52 samples of 24 hours duration and one sample of 48 hours duration during the year 1975. (Section 5.1, 1975 Annual Report) Sixty-three fish (less than 1.2 fish per 24 hour period) were collected, with the hogchoker (Trinectes maculatus), the most common species impinged, comprising 68% of the total. No other species contributed over 10% to the total. No fish were collected in 31 of 53 weekly samples. No American shad were impinged. The high relative impingement of the hogchoker is attributed to its bottom-oriented behavior and current preference, while the low total impingement of fish is attributed to a combination of low intake velocity and site selection. The NRC staff does not consider impingement losses of this magnitude to adversely affect the environment.

Specification 3.1.2 requires entrainment monitoring of the intake water during the major spawning period (February-March). During the 1975 spawning season, the maximum daily fraction of river flow entrained was less than one half of one percent (Section 5.2, 1975 Annual Report). Assuming 100% mortality for entrained fish eggs and larvae, and constant maximum daily fraction of river flow entrainment, this less would be less than 0.5% of the eggs and larvae fish in the river. We conclude that entrainment will not significantly reduce the fish population near the Hatch Nuclear Plant. The combined conditions of low intake capacity as a result of closed cycle operation and most intense spawning during periods of increased river flow are major factors contributing to low numbers of ichthyoplankton entrained relative to total populations in the river near the Hatch Nuclear Plant.

Periphyton data (Specification 3.1.3) collected during 1975 from plant-affected areas showed no significant adverse impacts that could be attributed to plant operation when compared to either 1974 per-operational data or 1975 controls (Section 5.3, 1975 Annual Report). Results indicate that the stability of the Altamaha River has not been significantly reduced due to operation of the Hatch Nuclear Plant, Unit No. 1. Relative productivity; chlorophyll a, and biomass apparently were affected more by differences in current velocity between stations than they were by plant operation while chlorophyll a/ phenophytin a ratios indicated healthy periphytic algal populations in all areas.

Results of sampling in 1975 using dredges and artificial substrates (Specification 3.1.4) indicate no significant adverse effects on the benthos of the Altamaha River due to operation of Hatch Nuclear Plant, Unit No. 1 (Section 5.4, 1975 Annual Report). The decrease in species diversity at one of the downstream stations can probably be attributed to poor substrate due to sandbar formation at that station.

Results of fish sampling (Specification 4.1) in the vicinity of the Hatch Nuclear Plant showed no adverse effects on resident fish populations (Section 5.6, 1975 Annual Report). In 1975, American shad eggs, larvae, and juveniles were collected upstream of the plant indicating that no blockage to migration exists. Seasonal comparisons to previous fish survey data showed little variation in composition after one year of plant operation.

In the Introduction to the section 3.1 containing the programs on Impingement, Entrainment, Periphytic, and Benthos it is stated that the data collected during the first year of operation will be analyzed to determine if it falls within confidence limits of the pre-operational data. No pre-operational confidence limits can be established for impingement and entrainment data as no data exists for these programs prior to plant operation. For periphyton and benthos samples some statistical differences were noted when comparing pre-operational to operational samples. But comparisons to control stations did not reveal differences indicating that changes were not due to plant operation and that changes from year to year were due to natural variation.

The actual number of organisms and areas affected by plant operation were much smaller than predicted in the FES.

Georgia Power reports that results of aerial patrols (Specification 5.8.1) along the rights-of-way of five of the transmission lines indicate that stabilization of soil and vegetation has been reached. We feel that verification of stabilization should be obtained before the aerial patrols are terminated. We have proposed to have NRC representatives present on an overflight conducted by the licensee to permit a common understanding of when stabilization of erosion and revegetation has been reached. Without some form of supporting justification, we do not approve the proposed change to Specification 5.8.1.

Conclusion

We have evaluated the licensee's monitoring program and conclude on the basis of the above evaluation that except for Specification 5.8.1, the purpose of the program has been fulfilled, that no significant impacts have been observed or are projected based on the results of the program, that Specifications 3.1.1, 3.1.2, 3.1.3, 3.1.4 and 4.1 therefore may be deleted, and that a Negative Declaration to this effect is appropriate.

Dated: October 18, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-321

GEORGIA POWER COMPANY
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION
MUNICIPAL ELECTRIC ASSOCIATION OF GEORGIA
CITY OF DALTON, GEORGIA

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

AND NEGATIVE DECLARATION

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 47 to Facility Operating License No. DPR-57, issued to Georgia Power Company, Oglethorpe Electric Membership Corporation, Municipal Electric Association of Georgia and City of Dalton, Georgia, which revised Technical Specifications for operation of the Edwin I. Hatch Nuclear Plant, Unit No. 1 (the facility) located in Appling County, Georgia. The amendment is effective as of its date of issuance.

The amendment consists of changes to the Environmental Technical Specifications to delete monitoring programs relating to (1) Impingement of Fish, (2) Entrainment, (3) Periphyton, (4) Benthos, and (5) Special Surveillance - Fish.

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 prepared an environmental impact appraisal for the revised Technical Specifications and has concluded that an environmental impact statement for this particular action is not warranted because there will be no environmental impact attributable to the action other than that which has already been predicted and described in the Commission's Final Environmental Statement for the facility dated October 1972.

For further details with respect to this action, see (1) the application for amendment dated November 30, 1977, (2) Amendment No. 47 to License No. DPR-57, (3) the Commission's letter dated October 18, 1977. and (4) the Commission's Environmental Impact Appraisal. 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), (3) and (4) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland this 18 day of October 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear

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