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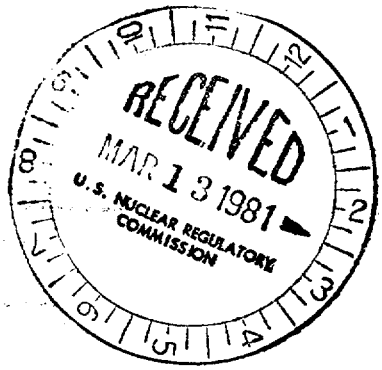
Docket No. 50-366

MARCH 06 1981



Mr. William Widner
Vice President - Engineering
Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302

Dear Mr. Widner:

The Commission has issued the enclosed Amendment No. 23 to Facility Operating License No. NPF-5 for the Edwin I. Hatch Nuclear Plant, Unit No. 2. The amendment consists of changes to the Technical Specifications (TSs) which add Limiting Conditions for Operation and Surveillance Requirements for the system to monitor the output of the power supply for the Reactor Protection System. By this action we have determined that you have satisfied the requirements of the condition set forth in paragraph 2.C.(3)(e) of the license. This action is a partial response to your application dated October 15, 1980, as supplemented by information provided in your letter dated November 11, 1980.

The TSs issued by this amendment impose identical requirements to those currently incorporated in the Hatch, Unit No. 1 TSs (Docket No. 50-321). Your amendment request included: (1) a proposal to change the Hatch Unit No. 1 TSs by revising the frequency of performing a functional test of this monitoring system from once per 6 months to once per cycle; and (2) the proposal for Unit No. 2 to have the identical surveillance frequency. During telephone discussions between members of our staffs, it was stated that we would consider such a relaxation if we were provided data on the performance of the power monitoring system to justify relaxation in surveillance frequency. Pending the receipt of such data and our evaluation thereof, we suggested to your staff that the Hatch, Unit No. 2 TSs should be amended at this time and should agree with those currently approved for Hatch, Unit No. 1; the relaxation on the frequency is considered as an open issue to your application. You will be advised of our determination upon our receipt and evaluation of the performance data. This position was discussed with representatives of your staff and they agreed.

The amendment also corrects an identified deficiency in the current specifications for the AC inverter associated with the Low Pressure Coolant Injection System (LPCI). This inverter (2R44-S003) need only be operable if the LPCI is required to be operable. We discussed this change with members of your staff and they agreed.

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Copies of Our Safety Evaluation and a related Notice of Issuance are also enclosed.

Sincerely,

Original signed by
Robert W. Reid

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:
1. Amendment No. 23 to NPF-5
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

OFFICE	ORB#4:DL	ORB#4:DL	C-ORB#4:DL	AD-OR:DL	OELD		
SURNAME	RIngram	DVerrelli	RReid	TNovak			
DATE	2/24/81	2/19/81:cb	2/27/81	2/26/81	3/2/81		

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

March 6, 1981

Docket No. 50-366

Mr. William Widner
Vice President - Engineering
Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302

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Copies of our Safety Evaluation and a related Notice of Issuance are also enclosed.

Sincerely,

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:
1. Amendment No. 23 to NPF-5
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

cc w/enclosure(s):

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Mr. H. B. Lee, Chairman
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Mr. Max Manry
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U. S. Environmental Protection Agency
Region II Office
ATTN: EIS COORDINATOR
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Atlanta, Georgia 30308

Appling County Public Library
Parker Street
Baxley, Georgia 31513

Mr. R. F. Rodgers
U.S. Nuclear Regulatory Commission
Route 1, P. O. Box 279
Baxley, Georgia 31513

Director, Criteria and Standards
Division
Office of Radiation Programs (ANR-460)
U. S. Environmental Protection Agency
Washington, D. C. 20460

cc w/enclosure(s) & incoming dtd.:

10/15/80, 11/11/80
Charles H. Badger
Office of Planning and Budget
Room 610
270 Washington Street, S.W.
Atlanta, Georgia 30334

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

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA

DOCKET NO. 50-366

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 23
License No. NPF-5

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

   A. The application for amendment by Georgia Power Company, et al., (the licensee) dated October 15, 1980, as supplemented November 11, 1980, 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, Facility Operating License No. NPF-5 is hereby amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and as follows:

   A. Revise paragraph 2.C.(2) to read:

      (2) The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 23 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

   B. Delete paragraph 2.C.(3)(e).

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

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 6, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 23

FACILITY OPERATING LICENSE NO. NPF-5

DOCKET NO. 50-366

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

Pages

3/4 8-10

3/4 8-11

3/4 8-12

3/4 8-24 (new)

ELECTRICAL POWER SYSTEMS

A.C. SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and

b. One diesel generator with:

1. A day tank containing a minimum of 900 gallons of fuel,

2. A fuel storage tank containing a minimum of 32,000 gallons of fuel, and

3. A fuel transfer pump.

APPLICABILITY: CONDITIONS 4 and 5.

ACTION:

With less than the above required A.C. electrical power sources OPERABLE, suspend all operations involving CORE ALTERATIONS, irradiated fuel handling, positive reactivity changes or operations that have the potential of draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.1.2 At least the above required A.C. electrical power sources shall be demonstrated OPERABLE per Surveillance Requirements 4.8.1.1.1, 4.8.1.1.2, except for the requirement of 4.8.1.1.2.a.5, 4.8.1.1.3 and 4.8.1.1.4.

ELECTRICAL POWER SYSTEMS

3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

A.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A.C. distribution system buses, inverters and motor-generator (MG) sets shall be OPERABLE with breakers open between redundant buses:

a. 4160 volt Essential Buses 2E, 2F, and 2G,

b. 600 volt Essential Buses 2C and 2D,

c. 120/208 volt Essential Cabinets 2A and 2B,

d. 120/208 volt Instrument Buses 2A and 2B, and

e. A.C. inverters 2R44-S002 and 2R44-S003.

APPLICABILITY: CONDITIONS 1, 2 and 3

ACTION:

a. With one of the above required A.C. distribution system buses or inverters inoperable, restore the inoperable bus or inverter to OPERABLE status within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. With two or more of the above required A.C. distribution system buses or inverters inoperable, restore at least all except one of the inoperable buses and inverters to OPERABLE status within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.1 The above required A.C. distribution system buses and inverters shall be determined OPERABLE:

a. At least once per 7 days by verifying correct breaker alignment and indicated power availability, and

b. At least once per 31 days by determining that the 250 volt DC/600 volt AC inverters 2R44-S002 and 2R44-S003 are OPERABLE by verifying inverter output voltage of 600 volts $\pm$ 5% while supplying their respective buses.

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ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. distribution system buses, inverters and motor-generator (MG) sets shall be OPERABLE:

a. Two 4160 volt Essential Buses, 2E, 2F and/or 2G,

b. One 600 volt Essential Bus, 2C or 2D,

c. One 120/208 volt Essential Cabinet, 2A or 2B,

d. One 120/208 volt Instrument Bus, 2A or 2B, and

e. A.C. inverters 2R44-S002 and 2R44-S003*.

APPLICABILITY: CONDITIONS 4 and 5.

ACTION:

a. With less than the above required A.C. distribution system buses and inverters OPERABLE, suspend all operations involving CORE ALTERATIONS, irradiated fuel handling, positive reactivity changes or operations that have the potential of draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 At least the above required A.C. distribution system buses and inverters shall be determined OPERABLE per Specification 4.8.2.1.

* Required to be operable when LPCI is required to be operable.

TABLE 3.8.2.6-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER AND LOCATION*	TRIP SETPOINT (Amperes)	RESPONSE TIME (Milliseconds)	SYSTEM/COMPONENT POWERED
g. Type 7:			
1. 208 VAC, MCB, M.O. 2R24-S013, COMPT. 11D	110	NA	DRYWELL CHEMICAL SUMP PUMP 2G11-C101
2. 208 VAC, MCB, M.O. 2R24-S012, COMPT. 23C	35	NA	DRYWELL RETURN AIR FAN 2T47-C002B
3. 208 VAC, MCB, M.O. 2R24-S011, COMPT. 22C	20	NA	DRYWELL COOLING RETURN AIR FAN 2T47-C002A

*M.C.B. - molded case circuit breaker.
M.O. - magnetic only.
T.M. - thermal magnetic.

3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

ELECTRIC POWER MONITORING FOR REACTOR PROTECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.8.2.7 The power monitoring system for a RPS MG set or the Alternate Source shall be OPERABLE if in service.

APPLICABILITY: At all times.

ACTION:

With the power monitoring system for a RPS MG set or the Alternate Source inoperable, restore the inoperable power monitoring system to OPERABLE status within 30 minutes or remove the RPS MG set or Alternate Source associated with the inoperable power monitoring system from service.

One channel of a power monitoring system may be inoperable, as necessary for test or maintenance, not to exceed 8 hours per month.

SURVEILLANCE REQUIREMENTS

4.8.2.7 The above specified RPS power monitoring system instrumentation shall be determined OPERABLE:

a. At least once per 6 months by performing a FUNCTIONAL TEST; and

b. At least once per operating cycle by demonstrating the OPERABILITY of over-voltage, under-voltage and under-frequency protective instrumentation by performance of a CHANNEL CALIBRATION including simulated automatic actuation of the protective relays, tripping logic and output circuit breakers and verifying the following setpoints.

   1. Over-voltage $\leq$ 132 VAC,

   2. Under-voltage $\geq$ 108 VAC, with time delay relay set to zero*, and

   3. Under-frequency $\geq$ 57 Hz.

*Pending NRC approval of different value.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 23 TO FACILITY OPERATING LICENSE NO. NPF-5

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

DOCKET NO. 50-366

1.0 INTRODUCTION

By letter dated October 15, 1980, as supplemented by letter dated November 11, 1980, Georgia Power Company (licensee) requested changes to the Technical Specifications (TSs) for Hatch Nuclear Plant, Unit No. 2. The requested changes would reflect the addition of a power monitoring system for the Reactor Protection System (RPS) power supply as required by the Hatch 2 license (para. 2.C.(3)(e)). The license requires the licensee to install, prior to startup following the first scheduled refueling outage, a Class IE system capable of de-energizing the RPS power supply when its output voltage exceeds or falls below limits within which the equipment being powered from the power supply has been designed and qualified to operate continuously and without degradation.

2.0 BACKGROUND

During the operating license review for Hatch 2, the NRC staff raised a concern about the capability of the Class IE RPS to operate after suffering sustained, abnormal voltage or frequency conditions from a non-Class IE power supply. Abnormal voltage or frequency conditions could be produced as a result of one of the following causes: combinations of undetected single failures, or multiple failures caused by external phenomena such as a seismic event.

The concern for the power supply integrity is generic to all Boiling Water Reactor (BWR) 3's, 4's, and 5's and all BWR 6's that have not elected to use the solid state RPS design. We have therefore pursued a generic resolution, one that could be applied to both operating plants and plants in the licensing review process. Accordingly, the General Electric Company (GE) proposed a design, in conceptual form, for resolution of this concern (Reference 4). The proposed modifications consist of the addition of two Class IE "protective packages" in series between each M-G Set and its respective RPS bus and the addition of two similar packages in series in the alternate power source circuit to the RPS buses. Each protective package would include a breaker and associated overvoltage, undervoltage and underfrequency relaying. Each protective package would meet the testability requirements for Class IE equipment.

With the protective packages installed, any abnormal output type failure (random undetectable or seismically caused) in either of the two M-G sets (or the alternate supply) would result in a trip of one or both of the two Class IE protec-

tive packages installed between each power supply and its respective RPS bus, thus producing a half scram on that channel and retaining full scram capability in the other channel. Thus, fully redundant Class IE protection is provided, bringing the overall RPS system design into full conformance with General Design Criteria 2 and 21 (including IEEE-279, IEEE-379, and the Standard Review Plan).

We reviewed the proposed design and concluded that the proposed modification was conceptually sound and acceptable, and should be implemented in conformance with the applicable criteria for Class IE systems (Ref. 5).

3.0 REQUIREMENTS

The NRC requires that the components of the RPS not be exposed to unacceptable electric power conditions, i.e., sustained abnormal voltage or frequency conditions which could damage the RPS. This involves providing means to detect any overvoltage, undervoltage, or underfrequency condition that is outside the design limits of the RPS equipment and to disconnect the RPS from such abnormal electric power conditions before damage to the RPS could occur. The equipment which performs this function must satisfy the single failure criterion and be seismically qualified.

4.0 DESIGN DESCRIPTION

The licensee has proposed to install an electric power monitoring system on each of the three sources of power for the RPS. The monitoring system logic is identical to the one approved by the NRC staff for Hatch Unit No. 1.

5.0 EVALUATION

The proposed changes to the TSs include the same relays setpoints as applied to the relays on Unit 1. The values are found to adequately protect the RPS from harmful electric power conditions. The RPS monitoring logic is similar to that for Unit 1 and established to provide automatic protection to the RPS considering a single component failure.

Since the Unit 1 and Unit 2 RPS monitoring systems are based on the same design, the Unit 2 system is also seismically qualified as Category 1 in conformance with IEEE 344-1975 and each of its channels is physically and electrically independent of any other channel.

The licensee proposed TSs that would require functional testing and calibration at a frequency of once-per-cycle. This is a relaxation from that previously approved by the NRC staff. We discussed this aspect of the licensee's request and stated that we would consider such a frequency if the licensee would provide data on the performance of the power monitoring system installed on Hatch 1 to justify a relaxation. Pending the receipt of such data, we suggested, and the licensee agreed, that the amendment should conform the Hatch 2 TSs to those currently approved for Hatch 1.

In view of the above, we find the TSs, as amended by the NRC staff, to be acceptable.

During our review of the licensee's request, we identified an omission in the TSs as originally issued on June 13, 1978. The omission relates to the Limiting Conditions for Operation for the AC inverter 2R44-S003 which is associated with the Low Pressure Coolant Injection System (LPCI). This inverter need only be operable if the LPCI is operable. We suggested to the licensee that this specification should be clarified to reflect this requirement. He agreed.

6.0 ENVIRONMENTAL CONSIDERATIONS

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 impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

7.0 CONCLUSIONS

We have concluded, based on the considerations discussed above, 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.

8.0 REFERENCES

1. Amendment No. 70 to Hatch Nuclear Plant Unit 1, Docket No. 50-321, dated August 14, 1979.

2. Georgia Power (W. A. Widner) letter to NRC, dated October 15, 1980.

3. Georgia Power (W. A. Widner) letter to NRC, dated November 11, 1980.

4. GE letter (G. G. Sherwood) to NRC, dated October 31, 1978.

5. Memo from F. Rosa to J. Stolz, T. Ippolito and G. Lainas, dated February 12, 1979.

Dated: March 6, 1981

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-366

GEORGIA POWER COMPANY, ET AL.

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 23 to Facility Operating License No. NPF-5, issued to Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia, which revised the license and Technical Specifications for operation of the Edwin I. Hatch Nuclear Plant Unit No. 2 (the facility) located in Appling County, Georgia. The amendment is effective as of its date of issuance.

This amendment deletes a satisfied license condition and revises the Technical Specifications to add Limiting Conditions for Operation and Surveillance Requirements for the system to monitor the output of the power supply for the Reactor Protection System. This amendment also corrects an identified deficiency in the specifications for the AC inverter associated with the Low Pressure Injection System.

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 impact statement or negative declaration and 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 October 15, 1980, as supplemented November 11, 1980, (2) Amendment No. 23 to License No. NPF-5, and (3) the Commission's related Safety Evaluation. 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 Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 6th day of March 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing