Docket No. 50-321

April 27, 1990

Mr. W. G. Hairston, III
Senior Vice President-
Nuclear Operations
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Dear Mr. Hairston:

SUBJECT: ISSUANCE OF AMENDMENT NO.169TO FACILITY OPERATING LICENSE DPR-57, EDWIN I. HATCH NUCLEAR PLANT, UNIT 1 (TAC 75860)

The Commission has issued the enclosed Amendment No.169to Facility Operating License DPR-57 for the Edwin I. Hatch Nuclear Plant, Unit 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated January 15, 1990.

The amendment revises TS Tables 3.2-9 and 4.2-9.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register Notice.

Sincerely,

/s/

Lawrence P. Crocker, Project Manager
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 169to DPR-57
2. Safety Evaluation

cc w/enclosures:
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Mr. W. G. Hairston, III
Georgia Power Company

Edwin I. Hatch Nuclear Plant,
Units Nos. 1 and 2

cc:
Mr. Ernest L. Blake, Jr.
Shaw, Pittman, Potts and Trowbridge
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Executive Vice President -
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Project Branch #3
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DATED April 27, 1990

AMENDMENT NO. 169 TO FACILITY OPERATING LICENSE DPR-57, EDWIN I. HATCH, UNIT 1

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E. Jordan	MNBB-3302

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

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 169
License No. DPR-57

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

   A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-57 filed by Georgia Power Company, acting for itself, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia, (the licensee) dated January 15, 1990, 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 set forth in 10 CFR Chapter I;

   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.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-57 is hereby amended to read:

   Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 169, 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 its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 27, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 169

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove page	Insert Page
3.2-20	3.2-20
3.2-45	3.2-45

Table 3.2-9

INSTRUMENTATION WHICH INITIATES RECIRCULATION PUMP TRIP

Ref. No. (a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System	Trip Setting	Remarks
1.	Reactor Vessel Water Level (ATWS RPT)[c]	Low (Level 2)	2[b][g]	≥-47 inches H_2O	Power must be reduced and the mode switch placed in a mode other than the RUN Mode.
2.	Reactor Pressure (ATWS RPT)	High	2[b][g]	≤1095 psig	Power must be reduced and the mode switch placed in a mode other than the RUN Mode.
3.	EOC - RPT[d]	1. Turbine Stop Valve Closure 2. Turbine Control Valve Fast Closure	2[e][f]	1. Stop Valve ≤90% Open 2. Control Valve Hydraulic Press Trip Point	Trips recirculation pumps on turbine control valve fast closure or stop valve closure when reactor is > 30%.[e]

(a) The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in Table 3.2-9 and items in Table 4.2-9.

(b) Whenever the reactor is in the RUN Mode, there shall be two operable trip systems for each parameter for each operating recirculation pump. If the required number of operable channels cannot be met for one of the trip systems, place the inoperable channel in the tripped condition or take the indicated action within 14 days. If the required number of operable channels cannot be met for both trip systems, take the indicated action within 1 hour.

(c) Anticipated Transients Without Scram - Recirculation Pump Trip

(d) End of Cycle - Recirculation Pump Trip

(e) Either of these two EOC - RPT systems can trip both recirculation pumps. Each EOC - RPT system will trip if 2-out-of-2 fast closure signals or 2-out-of-2 stop valve signals are received.

(f) The requirement for these channels applies from EOC-2000 MWD/t to EOC. The RPT system may be placed in an inoperable status for up to 2 hours to provide the required monthly surveillance. If one EOC-RPT system is inoperable for longer than 72 hours or if both EOC-RPT systems are simultaneously inoperable, an orderly power reduction will be immediately initiated and reactor power will be <30% within the next 6 hours.

(g) Either of these two ATWS-RPT systems can trip both recirculation pumps. Each ATWS-RPT system will trip if 2-out-of-2 reactor low water level signals or 2-out-of-2 reactor high pressure signals are received.

Table 4.2-9

CHECK AND CALIBRATION MINIMUM FREQUENCY FOR INSTRUMENTATION WHICH INITIATES RECIRCULATION PUMP TRIP

Ref. No. (a)	Instrument	Instrument Check Minimum Frequency	Instrument Functional Test Minimum Frequency	Instrument Calibration Minimum Frequency
1	Reactor Vessel Water Level (ATWS RPT)[b]	Once/shift	Once/month	Once/operating cycle
2	Reactor Pressure (ATWS RPT)	Once/shift	Once/month	Once/operating cycle
3	EOC - RPT Trip			
	a) Initiating Logic	None	Once/month	None
	b) Breakers	None	Once/operating cycle	None
	c) Response Time RPT logics + Breakers[c]	None	None	Once/operating cycle

Notes for Table 4.2-9

(a) The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in Table 3.2-9 and items in Table 4.2-9

(b) An ATWS recirculation pump trip logic system functional test shall be performed once per operating cycle.

(c) The EOC-RPT System Response Time shall be that time interval from initial signal generation by the associated turbine stop valve limit switch or from when the turbine control valve hydraulic control oil pressure drops below the pressure switch setpoint to complete suppression of the electric arc between the fully-open contacts of the recirculation pump circuit breaker. The response time may be measured by any series of sequential, overlapping, or total steps such that the entire response time is measured. Each test shall include at least the logic of one type of channel input, turbine control valve fast closure or turbine stop valve closure, such that both types of channel inputs are tested at least once per 36 months. The EOC-RPT System Response Time acceptance criteria associated with turbine stop valve closure shall be ≤ 155 milliseconds; the EOC-RPT System Response Time acceptance criteria associated with the turbine control valve fast closure shall be ≤ 175 milliseconds.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 169 TO

FACILITY OPERATING LICENSE DPR-57

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

EDWIN I. HATCH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-321

1.0 INTRODUCTION

By letter dated January 15, 1990, Georgia Power Company, the licensee for the Edwin I. Hatch Nuclear Plant, Unit 1, requested changes to Tables 3.2-9 and 4.2-9 of the Technical Specifications (TSs). Specifically, proposed Change 1 would revise Table 3.2-9 to specify two operable channels per trip system, thus providing for a "two-out-of-two" logic scheme for each of the anticipated transients without scram - recirculation pump trip (ATWS-RPT) systems, and would add a provision allowing continued plant operation with one inoperable channel in either trip system, after placing the inoperable channel in its tripped position. Proposed Change 2 would revise the ATWS-RPT trip settings in Table 3.2-9 for the Reactor Vessel Low Water Level and the Reactor Pressure, would identify the Reactor Vessel Low Water Level trip as a "Level 2" trip, and would revise Table 4.2-9 to require that the reactor vessel water level and reactor pressure instruments receive an instrument check at a minimum frequency of "once per shift" and an instrument functional test at a minimum frequency of "once per month".

2.0 EVALUATION

2.1 Proposed Change 1

The present initiation logic scheme for the reactor vessel low water level and the reactor vessel high pressure trip signals use a "one-out-of-two" logic to trip the recirculation pumps. Either one of two low water level signals or one of two high pressure signals will trip the recirculation pumps. In its letter of December 14, 1988, to the licensee, the NRC staff noted that the "one-out-of-two" logic scheme is not in conformance with the ATWS Rule guideline in that inadvertent actuations of the trip systems are not minimized. However, by letter dated October 19, 1988, the licensee had committed to upgrade the recirculation pump trip actuation logic to a "two-out-of two" design by the end of the

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1990 refueling outage for Unit 1. The NRC staff found this commitment and this logic design acceptable. Proposed Change 1 merely follows through on the licensee's previous commitment.

Proposed Change 1 also would insert a note in Table 3.2-9 stating that if the required number of operable channels cannot be met for one of the trip systems, operation may be continued for a period of up to 14 days with the inoperable channel placed in its tripped condition. If the required number of operable channels cannot be met for both trip systems, action to shut down the reactor must be taken within one hour. This is consistent with the current BWR Standard Technical Specifications and with the proposed Improved Technical Specifications for BWRs.

In summary, proposed Change 1 would revise logic schemes for the ATWS recirculation pump trips to meet requirements requested by the NRC staff, and would incorporate provisions for continued operation with less than both channels of both trip systems functional. This is consistent with current BWR Technical Specifications and with the proposed Improved Technical Specifications for BWRs. The NRC staff has reviewed these proposed changes and finds that they are consistent with previous staff guidance and with the BWR Standard Technical Specifications. Accordingly, we find them acceptable.

2.2 Proposed Change 2

The values now shown as "Trip Settings" for ATWS-RPT in Table 3.2-9 actually are analytical limits rather than allowable values for the trip setpoints. Setpoint methodology prior to 1979 often did not differentiate between analytical limits and allowable values for trip setpoints, and in some cases the values specified in the TSs are analytical limits. However, the current practice in the BWR Standard Technical Specifications and in the proposed Improved Technical Specifications for BWRs is to specify allowable values rather than analytical limits, which is consistent with more modern setpoint methodology. The licensee proposes to change the ATWS-RPT vessel pressure and vessel water level trip settings in Table 3.2-9 to reflect the allowable values rather than the analytical limits.

The setpoint methodology used to make this conversion from analytical limits to allowable values was approved by the NRC staff in Amendment 103 to the Unit 1 license, which supported the analog transmitter trip system (ATTS) installation. The methodology, which is based on Regulatory Guide 1.105, uses analytical limits to calculate allowable values. The calculated allowable values are then inserted in the TSs. The actual setpoints used at the Hatch plant consider instrumentation drift and are developed from the allowable values.

The high reactor pressure "trip setting" (analytical limit) now shown as 1120 psig in Table 3.2-9 thus becomes 1095 psig when converted to the allowable value. The analytical limit remains 1120 psig. The actual setpoint in the plant would be equal to or lower than the 1095 psig to assure that the allowable value will not be exceeded during the intervals between instrument testing or calibration.

The ATWS-RPT on low water level is a Level 2 trip. Prior to implementation of Amendment 103, both the Emergency Core Cooling System (ECCS) "trip setting" and the ATWS-RPT "trip setting" (both analytical limits) on reactor vessel water Level 2 were at -38 inches. Amendment 103 provided for the installation of the new ATTS instrumentation, and the ECCS trip signal instrumentation was changed. Amendment 103 also approved a new analytical limit for the Level 2 ECCS setpoints of -58 inches, and based on the setpoint calculation methodology approved in that amendment, an allowable value of -47 inches water was calculated. This allowable value of -47 inches was inserted in the TSs as the new "trip setting". The ATWS-RPT Level 2 trip remained on the existing instrumentation and was unaffected by Amendment 103.

The licensee now proposes to incorporate the ATWS-RPT Level 2 trip into the ATTS instrumentation and to lower the analytical limit to -58 inches water. This change provides for consistent "trip settings" for all Level 2 instrumentation as specified in Tables 3.2-1, 3.2-2, 3.2-3 and 3.2-9 of the Unit 1 TSs.

While the change in trip setpoints from the -38 inches to -47 inches appears to be a non-conservative change, it has little impact on the safety analyses. For all ATWS events except the loss of feedwater flow, the Level 2 trip is a secondary signal to the trip on high reactor vessel pressure. For the loss of feedwater flow, the change to -47 inches for the trip setpoint would result in a delay of approximately 6 seconds in the trip of the recirculation pump. However, the reactor will not be isolated since main steam isolation valve (MSIV) isolation does not occur until Level 1 (-113 inches), and the fuel remains adequately covered such that it would not experience boiling transition.

Proposed Change 2 would also add the words "Level 2" to the trip condition nomenclature of Table 3.2-9. This change is purely editorial in nature and serves only to better describe the trip setting.

Finally, Table 4.2-9 would be changed to require instrument checks of the ATWS-RPT trips at a minimum frequency of once per shift and instrument functional tests at a minimum frequency of once per

month. These checks and functional tests are more frequent than those now specified and therefore would provide equal or better assurance of system availability.

In summary, proposed Change 2 would revise the presently specified trip setpoints to allowable values rather than analytical limits. At the same time, the change to the reactor vessel low water level setpoint would be based upon the analytical limit of -58 inches for Level 2, as previously approved by Amendment 103. Table 3.2-9 would also be amended to indicate that the low water level trip is a Level 2 trip. Finally, Table 4.2-9 would be changed to require more frequent instrument checks and instrument functional tests. The NRC staff has reviewed these proposed changes and finds that the change from the present "analytical limits" to "allowable values" for the trip settings is consistent with present practice in BWR Standard Technical Specifications, would help make the Unit 1 TSs more internally consistent, and was accomplished using the methods previously approved by the staff. The change in the analytical limit for the Level 2 trip also was previously approved by the staff. Insertion of the words "Level 2" in Table 3.2-9 is editorial in nature and serves to clarify the table. The changes in frequency for the instrument checks and instrument functional tests in Table 4.2-9 would result in equal or better assurance of system availability. Accordingly, we find proposed Change 2 acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register on March 7, 1990 (55 FR 8225), and consulted with the State of Georgia. No public comments were received, and the State of Georgia did not have any comments.

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Lawrence P. Crocker, PDII-3, DRP I/II, NRR

Dated: April 27, 1990

April 27, 1990

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R. Ingram
L. Crocker

Docket No. 50-321

MEMORANDUM FOR: Sholly Coordinator

FROM: Lawrence P. Crocker, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II

SUBJECT: REQUEST FOR PUBLICATION IN BIWEEKLY FR NOTICE - NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE (TAC 75860)

Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, City of Dalton, Georgia, Docket No. 50-321, Edwin I. Hatch Nuclear Plant, Unit 1, Appling County, Georgia.

Date of application for amendment: January 15, 1990

Brief description of amendment: The amendment revises Technical Specification Tables 3.2-9 and 4.2-9.

Date of issuance: April 27, 1990

Effective date: April 27, 1990

Amendment No: 169

Facility Operating License No. DPR-57. Amendment revised the Technical Specifications.

Date of initial notice in FEDERAL REGISTER: March 7, 1990 (55 FR 8225)

The Commission's related evaluation of the amendment is contained in a Safety Evaluation dated April 27, 1990.

No significant hazards consideration comments received: No.

Local Public Document Room location: Appling County Public Library, 301 City Hall Drive, Baxley, Georgia 31513.

Original Signed By:

Lawrence P. Crocker, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

* See previous concurrence

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Docket No. 50-321 April 27, 1990

Mr. W. G. Hairston, III
Senior Vice President-
Nuclear Operations
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Dear Mr. Hairston:

SUBJECT: ISSUANCE OF AMENDMENT NO. TO FACILITY OPERATING LICENSE DPR-57, EDWIN I. HATCH NUCLEAR PLANT, UNIT 1 (TAC 75860)

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The amendment revises TS Tables 3.2-9 and 4.2-9.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register Notice.

Sincerely,

/S/

Lawrence P. Crocker, Project Manager
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. to DPR-57
2. Safety Evaluation

cc w/enclosures:
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1/1

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Mr. W. G. Hairston, III
Georgia Power Company

Edwin I. Hatch Nuclear Plant,
Units Nos. 1 and 2

cc:
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101 Marietta Street, NW, Suite 2900
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DATED April 27, 1990

AMENDMENT NO. TO FACILITY OPERATING LICENSE DPR-57, EDWIN I. HATCH, UNIT 1

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GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.
License No. DPR-57

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

   A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-57 filed by Georgia Power Company, acting for itself, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia, (the licensee) dated January 15, 1990, 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 set forth in 10 CFR Chapter I;

   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.

9005100177 SDP.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-57 is hereby amended to read:

   Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , 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 its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance:

ATTACHMENT TO LICENSE AMENDMENT NO. ____

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

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(a) The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in Table 3.2-9 and items in Table 4.2-9.

(b) Whenever the reactor is in the RUN Mode, there shall be two operable trip systems for each parameter for each operating recirculation pump. If the required number of operable channels cannot be met for one of the trip systems, place the inoperable channel in the tripped condition or take the indicated action within 14 days. If the required number of operable channels cannot be met for both trip systems, take the indicated action within 1 hour.

(c) Anticipated Transients Without Scram - Recirculation Pump Trip

(d) End of Cycle - Recirculation Pump Trip

(e) Either of these two EOC - RPT systems can trip both recirculation pumps. Each EOC - RPT system will trip if 2-out-of-2 fast closure signals or 2-out-of-2 stop valve signals are received.

(f) The requirement for these channels applies from EOC-2000 MWD/t to EOC. The RPT system may be placed in an inoperable status for up to 2 hours to provide the required monthly surveillance. If one EOC-RPT system is inoperable for longer than 72 hours or if both EOC-RPT systems are simultaneously inoperable, an orderly power reduction will be immediately initiated and reactor power will be <30% within the next 6 hours.

(g) Either of these two ATWS-RPT systems can trip both recirculation pumps. Each ATWS-RPT system will trip if 2-out-of-2 reactor low water level signals or 2-out-of-2 reactor high pressure signals are received.

Table 4.2-9

CHECK AND CALIBRATION MINIMUM FREQUENCY FOR INSTRUMENTATION WHICH INITIATES RECIRCULATION PUMP TRIP

Ref. No. (a)	Instrument	Instrument Check Minimum Frequency	Instrument Functional Test Minimum Frequency	Instrument Calibration Minimum Frequency
1	Reactor Vessel Water Level (ATWS RPT)[b]	Once/shift	Once/month	Once/operating cycle
2	Reactor Pressure (ATWS RPT)	Once/shift	Once/month	Once/operating cycle
3	EOC - RPT Trip			
	a) Initiating Logic	None	Once/month	None
	b) Breakers	None	Once/operating cycle	None
	c) Response Time RPT logics + Breakers[c]	None	None	Once/operating cycle

Notes for Table 4.2-9

(a) The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in Table 3.2-9 and items in Table 4.2-9

(b) An ATWS recirculation pump trip logic system functional test shall be performed once per operating cycle.

(c) The EOC-RPT System Response Time shall be that time interval from initial signal generation by the associated turbine stop valve limit switch or from when the turbine control valve hydraulic control oil pressure drops below the pressure switch setpoint to complete suppression of the electric arc between the fully-open contacts of the recirculation pump circuit breaker. The response time may be measured by any series of sequential, overlapping, or total steps such that the entire response time is measured. Each test shall include at least the logic of one type of channel input, turbine control valve fast closure or turbine stop valve closure, such that both types of channel inputs are tested at least once per 36 months. The EOC-RPT System Response Time acceptance criteria associated with turbine stop valve closure shall be ≤ 155 milliseconds; the EOC-RPT System Response Time acceptance criteria associated with the turbine control valve fast closure shall be ≤ 175 milliseconds.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. TO

FACILITY OPERATING LICENSE DPR-57

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

EDWIN I. HATCH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-321

1.0 INTRODUCTION

By letter dated January 15, 1990, Georgia Power Company, the licensee for the Edwin I. Hatch Nuclear Plant, Unit 1, requested changes to Tables 3.2-9 and 4.2-9 of the Technical Specifications (TSs). Specifically, proposed Change 1 would revise Table 3.2-9 to specify two operable channels per trip system, thus providing for a "two-out-of-two" logic scheme for each of the anticipated transients without scram - recirculation pump trip (ATWS-RPT) systems, and would add a provision allowing continued plant operation with one inoperable channel in either trip system, after placing the inoperable channel in its tripped position. Proposed Change 2 would revise the ATWS-RPT trip settings in Table 3.2-9 for the Reactor Vessel Low Water Level and the Reactor Pressure, would identify the Reactor Vessel Low Water Level trip as a "Level 2" trip, and would revise Table 4.2-9 to require that the reactor vessel water level and reactor pressure instruments receive an instrument check at a minimum frequency of "once per shift" and an instrument functional test at a minimum frequency of "once per month".

2.0 EVALUATION

2.1 Proposed Change 1

The present initiation logic scheme for the reactor vessel low water level and the reactor vessel high pressure trip signals use a "one-out-of-two" logic to trip the recirculation pumps. Either one of two low water level signals or one of two high pressure signals will trip the recirculation pumps. In its letter of December 14, 1988, to the licensee, the NRC staff noted that the "one-out-of-two" logic scheme is not in conformance with the ATWS Rule guideline in that inadvertent actuations of the trip systems are not minimized. However, by letter dated October 19, 1988, the licensee had committed to upgrade the recirculation pump trip actuation logic to a "two-out-of two" design by the end of the

9005100179 SPP.

1990 refueling outage for Unit 1. The NRC staff found this commitment and this logic design acceptable. Proposed Change 1 merely follows through on the licensee's previous commitment.

Proposed Change 1 also would insert a note in Table 3.2-9 stating that if the required number of operable channels cannot be met for one of the trip systems, operation may be continued for a period of up to 14 days with the inoperable channel placed in its tripped condition. If the required number of operable channels cannot be met for both trip systems, action to shut down the reactor must be taken within one hour. This is consistent with the current BWR Standard Technical Specifications and with the proposed Improved Technical Specifications for BWRs.

In summary, proposed Change 1 would revise logic schemes for the ATWS recirculation pump trips to meet requirements requested by the NRC staff, and would incorporate provisions for continued operation with less than both channels of both trip systems functional. This is consistent with current BWR Technical Specifications and with the proposed Improved Technical Specifications for BWRs. The NRC staff has reviewed these proposed changes and finds that they are consistent with previous staff guidance and with the BWR Standard Technical Specifications. Accordingly, we find them acceptable.

2.2 Proposed Change 2

The values now shown as "Trip Settings" for ATWS-RPT in Table 3.2-9 actually are analytical limits rather than allowable values for the trip setpoints. Setpoint methodology prior to 1979 often did not differentiate between analytical limits and allowable values for trip setpoints, and in some cases the values specified in the TSs are analytical limits. However, the current practice in the BWR Standard Technical Specifications and in the proposed Improved Technical Specifications for BWRs is to specify allowable values rather than analytical limits, which is consistent with more modern setpoint methodology. The licensee proposes to change the ATWS-RPT vessel pressure and vessel water level trip settings in Table 3.2-9 to reflect the allowable values rather than the analytical limits.

The setpoint methodology used to make this conversion from analytical limits to allowable values was approved by the NRC staff in Amendment 103 to the Unit 1 license, which supported the analog transmitter trip system (ATTS) installation. The methodology, which is based on Regulatory Guide 1.105, uses analytical limits to calculate allowable values. The calculated allowable values are then inserted in the TSs. The actual setpoints used at the Hatch plant consider instrumentation drift and are developed from the allowable values.

The high reactor pressure "trip setting" (analytical limit) now shown as 1120 psig in Table 3.2-9 thus becomes 1095 psig when converted to the allowable value. The analytical limit remains 1120 psig. The actual setpoint in the plant would be equal to or lower than the 1095 psig to assure that the allowable value will not be exceeded during the intervals between instrument testing or calibration.

The ATWS-RPT on low water level is a Level 2 trip. Prior to implementation of Amendment 103, both the Emergency Core Cooling System (ECCS) "trip setting" and the ATWS-RPT "trip setting" (both analytical limits) on reactor vessel water Level 2 were at -38 inches. Amendment 103 provided for the installation of the new ATTS instrumentation, and the ECCS trip signal instrumentation was changed. Amendment 103 also approved a new analytical limit for the Level 2 ECCS setpoints of -58 inches, and based on the setpoint calculation methodology approved in that amendment, an allowable value of -47 inches water was calculated. This allowable value of -47 inches was inserted in the TSs as the new "trip setting". The ATWS-RPT Level 2 trip remained on the existing instrumentation and was unaffected by Amendment 103.

The licensee now proposes to incorporate the ATWS-RPT Level 2 trip into the ATTS instrumentation and to lower the analytical limit to -58 inches water. This change provides for consistent "trip settings" for all Level 2 instrumentation as specified in Tables 3.2-1, 3.2-2, 3.2-3 and 3.2-9 of the Unit 1 TSs.

While the change in trip setpoints from the -38 inches to -47 inches appears to be a non-conservative change, it has little impact on the safety analyses. For all ATWS events except the loss of feedwater flow, the Level 2 trip is a secondary signal to the trip on high reactor vessel pressure. For the loss of feedwater flow, the change to -47 inches for the trip setpoint would result in a delay of approximately 6 seconds in the trip of the recirculation pump. However, the reactor will not be isolated since main steam isolation valve (MSIV) isolation does not occur until Level 1 (-113 inches), and the fuel remains adequately covered such that it would not experience boiling transition.

Proposed Change 2 would also add the words "Level 2" to the trip condition nomenclature of Table 3.2-9. This change is purely editorial in nature and serves only to better describe the trip setting.

Finally, Table 4.2-9 would be changed to require instrument checks of the ATWS-RPT trips at a minimum frequency of once per shift and instrument functional tests at a minimum frequency of once per

month. These checks and functional tests are more frequent than those now specified and therefore would provide equal or better assurance of system availability.

In summary, proposed Change 2 would revise the presently specified trip setpoints to allowable values rather than analytical limits. At the same time, the change to the reactor vessel low water level setpoint would be based upon the analytical limit of -58 inches for Level 2, as previously approved by Amendment 103. Table 3.2-9 would also be amended to indicate that the low water level trip is a Level 2 trip. Finally, Table 4.2-9 would be changed to require more frequent instrument checks and instrument functional tests. The NRC staff has reviewed these proposed changes and finds that the change from the present "analytical limits" to "allowable values" for the trip settings is consistent with present practice in BWR Standard Technical Specifications, would help make the Unit 1 TSs more internally consistent, and was accomplished using the methods previously approved by the staff. The change in the analytical limit for the Level 2 trip also was previously approved by the staff. Insertion of the words "Level 2" in Table 3.2-9 is editorial in nature and serves to clarify the table. The changes in frequency for the instrument checks and instrument functional tests in Table 4.2-9 would result in equal or better assurance of system availability. Accordingly, we find proposed Change 2 acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register on March 7, 1990 (55 FR 8225), and consulted with the State of Georgia. No public comments were received, and the State of Georgia did not have any comments.

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: April 27, 1990