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Distribution
Docket
ORB #3
Local PDR
NRC PDR
VStello
KGoller
GLear
CParrish
SNowicki
Attorney, OELD
OI&E (5)
BJones (4)
BScharf (10)
JMcGough
DEisenhut
ACRS (16)
OPA (CMiles)
DRoss
TBAbernathy
JRBuchanan

Docket No. 50-321

Georgia Power Company
Oglethorpe Electric Membership Corporation
Municipal Electric Association of Georgia
City of Dalton, Georgia
ATTN: Mr. Charles F. Whitmer
Vice President - Engineering
Georgia Power Company
Atlanta, Georgia 30302

Gentlemen:

The Commission has issued the enclosed Amendment No. 48 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 February 9, 1977, as supplemented by letters dated July 11, August 2, and October 11, 1977.

The amendment modifies the Technical Specifications to convert the primary source of power to the Low Pressure Coolant Injection (LPCI) system injection valve operators from diesel generators 1A, 1C, or 1B to independent sets of 250 volt DC/600 volt AC inverters which are powered by the station batteries.

Copies of the Safety Evaluation and the FEDERAL REGISTER Notice are also enclosed.

Sincerely,

Original signed by

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

Enclosures:
1. Amendment No. 48
2. Safety Evaluation
3. FEDERAL REGISTER Notice

cc w/enclosures: See page 2

Const. 1
GD

*SEE PREVIOUS YELLOW FOR CONCURRENCES

OFFICE	ORB #3	ORB #3	OELD	ORB #3		
SURNAME	*CParrish	*SNowicki:mjf	*	GLear GL		
DATE	12/8/77	12/8/77	12/16/77	1/3/78		

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Subject to Note

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NRC FORM 318 (9-76) NRCM 0240 ☆ U.S. GOVERNMENT PRINTING OFFICE: 1976—626-624

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

January 4, 1978

Docket No. 50-321

Georgia Power Company
Oglethorpe Electric Membership Corporation
Municipal Electric Association of Georgia
City of Dalton, Georgia
ATTN: Mr. Charles F. Whitmer
Vice President - Engineering
Georgia Power Company
Atlanta, Georgia 30302

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George Lear

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

Enclosures:
1. Amendment No. 48
2. Safety Evaluation
3. FEDERAL REGISTER Notice

cc w/enclosures: See page 2

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

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

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

DOCKET NO. 50-321

EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 48
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 February 9, 1977, as supplemented by letters dated July 11, August 2, and October 11, 1977 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. 48, 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: January 4, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 48

TO THE TECHNICAL SPECIFICATIONS

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 areas of change. The corresponding overleaf pages 3.9-5 and 3.9-11 are also provided to maintain document completeness.

Remove	Replace
3.9-3	3.9-3
3.9-4	3.9-4
3.9-5	3.9-5
3.9-6	3.9-6
3.9-9	3.9-9
3.9-10	3.9-10
3.9-11	3.9-11
3.9-12	3.9-12

3.9.A.3. 125/250 Volt DC Emergency Power System (Plant Batteries 1A and 1B)

Both 125/250 volt plant batteries (1A and 1B) shall be operable and shall have an operable battery charger and ventilation system available for each.

4.9.A.3. 125/250 Volt DC Emergency Power System (Plant Batteries 1A and 1B)

a. Weekly Surveillance
Every week the specific gravity and the voltage of the pilot cell and overall battery voltage shall be measured and recorded. Each 125 volt battery shall have a minimum of 105 volts at the battery terminals to be considered operable.

b. Monthly Surveillance
Every month measurements shall be made of voltage of each cell to the nearest 0.1 volt and the specific gravity of each cell. These measurements shall be recorded. Liquid level shall be checked visually.

c. Refueling Outage Surveillance
During each scheduled refueling outage, the batteries shall be subjected to a rated load discharge test. The specific gravity and voltage of each cell shall be determined after the discharge and recorded.

4. Emergency 4160 Volt Buses (1E, 1F, and 1G)

The emergency 4160 volt buses (1E, 1F, and 1G) shall be energized and operable.

4. Emergency 4160 Volt Buses (1E, 1F, and 1G)

The emergency 4160 volt buses (1E, 1F, and 1G) shall be monitored to the extent that they are shown to be ready and capable of transmitting the emergency load.

5. Emergency 600 Volt Buses (1C and 1D)

The emergency 600 volt buses (1C and 1D) shall be energized and operable.

5. Emergency 600 Volt Buses (1C and 1D)

The emergency 600 volt buses (1C and 1D) shall be monitored to the extent that they are shown to be ready and capable of transmitting the emergency load.

6. Emergency 250 Volt DC to 600 Volt AC Inverters

The emergency 250 volt DC to 600 volt AC inverters shall be energized and operable.

6. Emergency 250 Volt DC to 600 Volt AC Inverters

a. The emergency 250 volt DC/600 volt AC inverters shall be monitored to the extent that they are shown to be ready and capable of transmitting the emergency load.

4.9.A.6. Emergency 250 Volt DC to 600 Volt AC Inverters (Continued)

b. Once every scheduled refueling outage, the emergency 250 volt DC/600 volt AC inverters shall be subjected to a load test to demonstrate operational readiness.

3.9.A.7. Logic Systems

The following logic systems shall be operable.

7. Logic Systems

The logic systems shall be tested in the manner and frequency as follows:

a. The common accident signal logic system is operable.

a. Each division of the common accident signal logic system shall be tested every scheduled refueling outage to demonstrate that it will function on actuation of the core spray system to provide an automatic start signal to all 3 diesel generators.

b. The undervoltage relays and supporting system are operable.

b. Once every scheduled refueling outage, the conditions under which the undervoltage logic system is required shall be simulated with an undervoltage on each start bus to demonstrate that the diesel generators will start. The testing of the undervoltage logic shall demonstrate the operability of the 4160 volt load shedding circuits.

c. The 600 volt load shedding logic system is operable.

c. The undervoltage relays for the start buses shall be calibrated annually for trip and reset volt voltages and the measurements recorded.

d. Once every scheduled refueling outage, the condition under which the 600 volt load shedding logic system is required shall be simulated to demonstrate that the load shedding logic system will initiate load shedding on the diesel auxiliary boards, reactor MOV boards, and the 600 volt shutdown boards.

3.9.B.1. One Startup Auxiliary Transformer (1C or 1D) Inoperable or Only One Offsite Power Source Available (230 kV Transmission Line)

Reactor operation is permissible for seven days from the date that one startup auxiliary transformer (1C or 1D) is inoperable or incoming power is available from only one 230 kV offsite transmission line provided the increased Surveillance Requirements as stated in Specification 4.9.B.1 are implemented.

4.9.B.1. One Startup Auxiliary Transformer (1C or 1D) Inoperable or Only One Offsite Power Source Available (230 kV Transmission Line)

When it is established that one startup auxiliary transformer (1C or 1D) is inoperable or incoming power is available from only one 230 kV offsite transmission line, all Unit diesel generators and associated emergency buses shall be demonstrated to be operable immediately. On a rotating basis, the diesel generators shall be operated for at least one hour every 24 hours so that all three diesels are tested in three days. The diesels will be operated at greater than 50% of rated load during these tests.

2. One Diesel Generator (1A, 1B, or 1C) Inoperable

From and after the date that one of the diesel generators is made or found to be inoperable, continued reactor operation is permissible in accordance with Specification 3.5.G for a period not to exceed seven days provided that two 230 kV offsite transmission lines are available, both remaining diesel generators and associated emergency buses are operable, and the increased Surveillance Requirements as stated in Specification 4.9.B.2 are implemented.

2. One Diesel Generator (1A, 1B, or 1C) Inoperable

When it is established that one diesel generator (1A, 1B, or 1C) is inoperable, the two operable diesels shall be tested immediately for at least one hour at greater than 50% of rated load and continued on a rotating basis at least one hour every 24 hours so that both operable diesels are tested in two days.

3. One 125/250 Volt DC Power System (Plant Battery 1A or 1B) Inoperable

From and after the date that one of the two 125/250 volt plant batteries is made or found to be inoperable, continued reactor operation is permissible during the succeeding seven (7) days within electrical safety considerations, provided repair work is initiated immediately to return the failed component to an operable state, Specification 3.5.G is satisfied,

3. One 125/250 Volt DC Power System (Plant Battery 1A or 1B) Inoperable

When it is established that one of the 125/250 volt DC power systems (plant battery 1A or 1B) is made or found to be inoperable, the pilot cell voltage and specific gravity and the overall battery voltage of the operable plant battery shall be tested daily and determined to be satisfactory.

3.9.B.3. One 125/250 Volt DC Power System (Plant Battery 1A or 1B) Inoperable (Continued)

and the increased Surveillance Requirements as stated in Specification 4.9.B.3 are implemented.

4. Emergency 4160 Volt Buses (1E, 1F, or 1G) Inoperable

One of the emergency 4160 volt buses (1E, 1F, or 1G) may be inoperable for a period not to exceed seven (7) consecutive days providing the other two emergency 4160 volt buses and associated ECCS equipment are operable.

5. Emergency 600 Volt Buses (1C or 1D) Inoperable

One of the emergency 600 volt buses (1C or 1D) may be inoperable for a period not to exceed seven (7) days providing the other 600 volt bus is operable.

6. Emergency 250 Volt DC to 600 Volt AC Inverters

One of the emergency 250 volt DC to 600 volt AC inverters may be inoperable for a period not to exceed seven (7) consecutive days providing the other inverter is operable.

C. Diesel Generator Requirements (Reactor in the Shutdown or Refuel Mode)

Whenever the reactor is in either the Shutdown or Refuel Mode, a minimum of two diesel generators shall be operable whenever:

1. Work is being done which has the potential for draining the reactor pressure vessel, or

2. Secondary containment is required, or

3. A core or containment cooling system is required.

3.9.A.5. Emergency 600 Volt Buses (1C and 1D)

The emergency 600 volt buses (1C and 1D) shall be supplied from the emergency 4160 volt buses (1E, 1F, and 1G) and these 600 volt buses shall provide and distribute AC power to the engineered safety feature motors rated at and below 200 horsepower.

6. Emergency 250 Volt DC/600 Volt AC Inverters

The two (2) emergency 250 volt DC/600 volt AC inverters shall be supplied from plant batteries (1A and 1B) and these inverters shall supply 600 volts AC to Engineered Safety Feature valves of the LPCI and Recirculation Systems.

7. Logic Systems

The operability of logic systems provides assurance of proper diesel starting performance upon receipt of an accident signal. The operability shall be confirmed by periodic tests. Failure of a logic system requires that reactor operation be terminated within seven (7) days and the reactor be maintained in the Cold Shutdown Condition until the logic systems are proven operable.

B. Requirements for Continued Operation with Inoperable Components

1. One Startup Auxiliary Transformer (1C or 1D) Inoperable or Only One Offsite Power Source Available (230 kV Transmission Line)

One startup auxiliary transformer and one offsite transmission line can supply sufficient power to permit functioning of structures, systems, and components important to safety. The standby diesel generators will serve as a backup to the preferred offsite power sources.

2. One Diesel Generator (1A, 1B, or 1C) Inoperable

The failure of any component associated with the diesel generator units shall not jeopardize the capability of the remaining diesel generator units to start and supply the minimum required engineered safety feature loads. One diesel generator may be allowed out of service based on the availability of power from the startup auxiliary transformers and the fact that two diesel generators carry sufficient engineered safety feature equipment to cover any postulated design basis accident. A diesel generator shall be considered inoperable if it is incapable of automatically starting and running the required shutdown systems, emergency systems, and engineered safety feature loads.

3. One 125/250 Volt DC Power System (Plant Battery 1A or 1B) Inoperable

Although loss of one of the two DC sources is highly improbable, loss of one source would not prevent safe shutdown of the reactor. Loss of one of the 125/250 volt DC power systems does not affect plant safety since redundant loads continue to be supplied by the second system. However, since a single failure cannot be tolerated, continued operation will be permitted for only seven (7) days unless redundancy is restored.

3.9.B.4. Emergency 4160 Volt Buses (1E, 1F, or 1G) Inoperable

Each of the three emergency 4160 volt emergency buses (1E, 1F, and 1G) is preferably supplied from the auxiliary startup transformers with each bus normally having a single diesel generator as a standby power supply. The critical emergency safety feature loads are divided among the three emergency 4160 volt buses, and failure of one bus does not prevent a safe shutdown of the reactor. Therefore, operation would be permitted for only seven (7) days after which the reactor shall be placed in the Cold Shutdown Condition.

5. Emergency 600 Volt Buses (1C or 1D) Inoperable

The two emergency 600 volt buses (1C and 1D) are normally supplied from separate emergency 4160 volt buses (1E and 1G with 1F as a backup). Failure of one bus cannot affect its redundant counterpart and loss of either bus will not prevent operation of the minimum required emergency safety feature loads.

6. Emergency 250 Volt DC to 600 Volt AC Inverter Inoperable

The two emergency 250 volt DC to 600 volt AC inverters are normally supplied from separate emergency plant batteries (1A and 1B). Failure of one inverter cannot affect its redundant counterpart, and loss of either bus will not prevent operation of the minimum required emergency safety feature loads.

C. Diesel Generator Requirements (Reactor in the Shutdown or Refuel Mode)

This requirement provides added assurance that a standby power supply is available under certain circumstances even though the reactor may not be critical and the reactor coolant temperature is less than 212°F.

D. References

1. FSAR, Section 8.4, Standby AC Power Supply.

2. General Design Criterion 17 of Appendix A to 10 CFR 50.

3. "Proposed IEEE Criteria for Class 1E Electric Systems for Nuclear Power Generating Stations" (IEEE Standard No. 308), June, 1969.

4.9 AUXILIARY ELECTRICAL SYSTEMS

A. Auxiliary Electrical Systems Equipment

The auxiliary electrical power systems shall be functionally tested and inspected at a frequency to assure a high reliabiltiy of operation and a high degree of performance. This surveillance program is designed to meet the intent of "Proposed IEEE Criteria for Class IE Electric Systems for Nuclear Power Generating Stations" (Standard No. 308).

2. Standby AC Power Supply (Diesel Generators 1A, 1B, and 1C)

a. Operability

Upon demand, the standby diesel generators shall start automatically and reach rated frequency and voltage within 12 seconds (unloaded). Based on the operation of all diesel generator units and all emergency buses, the diesel generators are capable of accepting all AC loads within 40 seconds. Since the diesel generators are utilized as standby power sources, readiness is of prime importance. Readiness can best be demonstrated by testing, which insofar as practicable simulates actual emergency conditions. The testing program is designed to test both the ability to start and the ability to run the diesel generators under load for extended periods of operation.

Each diesel generator unit is furnished with two completely independent air starting systems, either of which is capable of starting the diesel engine five times without recharging.

The monthly test of the diesel generators is conducted to check for equipment failures and deterioration. Testing is conducted until the diesels reach equilibrium operating conditions to demonstrate proper operation at these conditions. Each diesel shall be manually started, synchronized to the bus, and load picked up. The diesels shall be loaded to at least one-half rated load to prevent fouling of the engines. The diesel generators will normally be run for at least one hour. In addition, during the test when the generator is synchronized to the bus, it is also synchronized to the offsite power source and thus is not completely independent of this source. Only one diesel shall be tested at a time to prevent parallel operation with another.

b. Diesel Battery (125 Volt)

The surveillance of the diesel generator starting batteries is designed to provide an early indication of potential failure.

c. Battery Charger

The battery chargers are monitored to assure adequate battery charger supply and are capable of recharging their assigned battery while carrying the normal loads.

d. Diesel Fuel

Quantity and quality checks assure sufficient acceptable fuel to maintain the minimum fuel supply requirements and to avoid damage to the diesel engine.

4.9.A.2.e. Fuel Oil Transfer Pumps

Following the monthly test of the diesels, the fuel oil transfer pumps shall be operated to refil the day tank and to check the operation of these pumps.

3. 125/250 Volt DC Emergency Power System (Plant Batteries 1A and 1B)

The plant batteries may deteriorate with time, but precipitous failure is unlikely. The type of surveillance described in this specification is that which has been demonstrated through experience to provide an indication of a cell becoming irregular or inoperable long before it fails.

4. Emergency 4160 Volt Buses (1E, 1F, and 1G)

The emergency 4160 volt buses (1E, 1F, and 1G) are monitored to assure readiness and capability of transmitting power to the emergency load.

These buses distribute AC power to the required engineered safety feature equipment. The normal feeds and backup to the emergency buses (1E, 1F, and 1G) are taken from the startup auxiliary transformers. If neither startup auxiliary transformer is available, buses 1E, 1F, and 1G will be energized from the standby diesel generators.

5. Emergency 600 Volt Buses (1C and 1D)

The emergency 600 volt buses (1C and 1D) are monitored to assure readiness and capability of transmitting the emergency load.

6. Emergency 250 Volt DC to 600 Volt AC Inverters

The emergency 250 volt DC to 600 volt AC inverters are monitored to assure readiness and capability of transmitting power to the emergency loads.

7. Logic Systems

The periodic testing of the logic systems will verify the ability of the logic systems to bring the auxiliary electrical systems to running standby readiness with the presence of an accident signal or an undervoltage signal on the start buses.

The periodic simulation of accident signals will confirm the ability of the 600 volt load shedding logic system to sequentially shed and restart the 600 volt loads if an accident signal were present and diesel generator voltage were the only source of electrical power.

D. References

1. "Proposed IEEE Criteria for Class 1E Electric Systems for Nuclear Power Generating Stations" (IEEE Standard No. 308), June, 1969.

2. American Society for Testing and Materials, 1970 Annual Book of ASTM Standards, Part 17.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 48 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

Introduction

By letter dated February 9, 1977, as supplemented by letters dated July 11, 1977 and August 2, 1977, Georgia Power Company (GPC) requested an amendment to Facility Operating License No. DPR-57 for the E. I. Hatch Nuclear Plant Unit No. 1 (HNP-1). The amendment would modify the Technical Specifications to convert the primary source of power to the Low Pressure Coolant Injection (LPCI) system injection valve operators from diesel generators 1A, 1C or 1B to independent sets of 250 volt DC/600 volt AC inverters which are powered by the station batteries.

Discussion

By letter dated March 30, 1976 the NRC issued License Amendment No. 31 (Reference 2) which approved modifications to improve the functioning of the LPCI system (Reference 1). The NRC staff review of the swing bus arrangement associated with the backup power to the LPCI system injection valves had shown that the swing bus concept was not in conformance with Regulatory Guide 1.6, "Independence Between Standby Power Sources and Their Distribution Systems." GPC was allowed a reasonable period of time to institute a modified design using independent and redundant power sources for the LPCI injection valves.

By letter dated February 9, 1977, GPC proposed to convert the primary source of power to the LPCI injection valve operators from the diesel generators, to independent sets of AC inverters which are powered by station batteries in compliance with the NRC staff request. The proposed modification is designed to assure that the 600 volt AC power system that supplies power to the LPCI valve operators meet the NRC staff requirements. These modifications will also be in conformance with the provisions of Regulatory Guide 1.6.

In the existing LPCI system (Figure 1), power to the LPCI injection valve and reactor recirculation pump discharge valve motor operators is supplied from motor control centers (MCCs) S018A and S018B. Motor Control Center S018A supplies the Loop A valve operators and S018B supplies the Loop B valve operators. Normally, MCC-S018A is supplied by 4160 volt AC Bus 1E (Diesel Generator 1A bus) through 600 volt AC Bus 1C, and MCC-S018B is supplied by 4160 volt AC Bus 1G (Diesel Generator 1C bus) through 600 volt AC Bus 1D. The alternate supply for MCCs S018A and S018B is from 600 volt AC MCC S048 which in turn is supplied from 4160 volt AC Bus 1F (Swing Diesel Generator 1B Bus).

The LPCI valve operators in the modified LPCI system will be supplied by MCCs R24-S018A and R24-S018B (Figure 2). MCC R24-S018A will supply the Loop A motor operated valves (MOVs) which include the Reactor Recirculation Pump A Suction and Discharge MOVs, the LPCI Inboard MOV and the Reactor Heat Removal (RHR) Pump minimum Flow Bypass MOV and MCC R24-S018B will supply the Loop B MOVs.

Primary power for MCC R24-S018A is supplied from Station Battery 1A through the 250 volt DC/600 volt AC inverter R44-S002. The alternate supply for R24-S018A will be from the 600 volt AC Bus 1C (R23-S003). Similarly, the primary power for MCC R24-S018B is supplied from Station Battery 1B through inverter R44-S003, with the alternate supply being available from 600 volt AC Bus 1D (R23-S004).

As part of the LPCI system modification, dual initiation signals will be added to the Core Spray System such that Logic A or Logic B of the Core Spray System will start both Core Spray Pumps.

Evaluation

In the modified LPCI system, GPC has eliminated MCC S048 which was supplied power from 4160 volt AC Bus 1F (the Swing Diesel Generator 1B bus). This motor control center was the alternate source of power for MCCs S018A and S018B. MCCs S018A and S018B are modified to be supplied by Station Batteries 1A and 1B, respectively, through corresponding 250 volt DC/600 volt AC inverters R44-S002 and R44-S003. The capacity of the station batteries will be increased to accommodate the load requirements of the associated inverters. The alternate sources to MCCs R24-S018A and R24-S018B will be 600 volt AC Buses 1C and 1D, respectively. The alternate source will be used only during maintenance outages of the inverter, DC switchgear, or the station battery. No automatic transfer between normal and alternate supplies will be required or provided. Auxiliary contacts of both normal and alternate breakers at the MCCs will be interlocked to prevent the closing of the alternate supplies simultaneously.

All breaker control and indications associated with the modified power system will be located in the main control room. Alarms will be provided in the main control room to indicate normal feeder breaker tripped and alternate feeder breaker tripped for each MCC. Alarms will also be provided to indicate inverter trouble such as logic failure, power fuse blown, DC under/over voltage, AC under/over voltage, overload, abnormal frequency, fan failure, AC or DC filter fuse blown and power supply failure.

Georgia Power Company, by its letter dated August 2, 1977, submitted additional analyses (Reference 3) that were performed in accordance with the requirements of 10 CFR 50, Appendix K, to consider ECCS performance with operation of the modified power system. Based on its analyses, Georgia Power Company states that the design basis LOCA analyses for Cycle 2 are unaffected by the modification. However, for the small break analyses, it was seen that the worst case involved the single failure of a battery in combination with a small discharge line break, which lead to an inoperable High Pressure Coolant Injection (HPCI) pump and an inoperable LPCI injection valve. For this condition, it was found that the resulting peak clad temperature (PCT) was well below the allowable PCT limit.

By letter dated October 11, 1977, Georgia Power Company documented the final design information on the modifications, showing that the KVA rating of the inverters and increased capacity of the station batteries are adequate for handling the transient and steady state loads of the connected MCCs. Also, documentation to verify the seismic qualifications and conformance to the applicable standards and codes, and the outline of preoperational tests that will be performed to verify the adequacy of the batteries and inverters was provided. The staff has reviewed this documentation and has found it acceptable.

Based on our review, we find that:

(1) The proposed modifications to the LPCI system will assure that the relevant sections of the onsite power system are in conformance with requirements of the NRC and the recommendations of Regulatory Guide 1.6. This has been accomplished by the elimination of the provision for automatically transferring loads between redundant power sources and by providing separate and redundant power supplies and load groups. Further, the loss of a power supply or load group will not prevent the required safety functions from being performed. Therefore, these modifications are acceptable.

(2) Additional anlayses performed in accordance with the requirements of 10 CFR 50, Appendix K, to consider ECCS performance with the modified power systems have confirmed that: (a) the consequences of the design basis LOCA were not affected; and the small break LOCA analysis has shown that for the worst single failure, the peak fuel clad temperature was below the allowable limit. Therefore, the modifications are acceptable.

Based upon our evaluation above, we conclude that the proposed design modifications and the associated changes to the Technical Specifications are acceptable.

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.

Conclusion

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.

Dated: January 4, 1978

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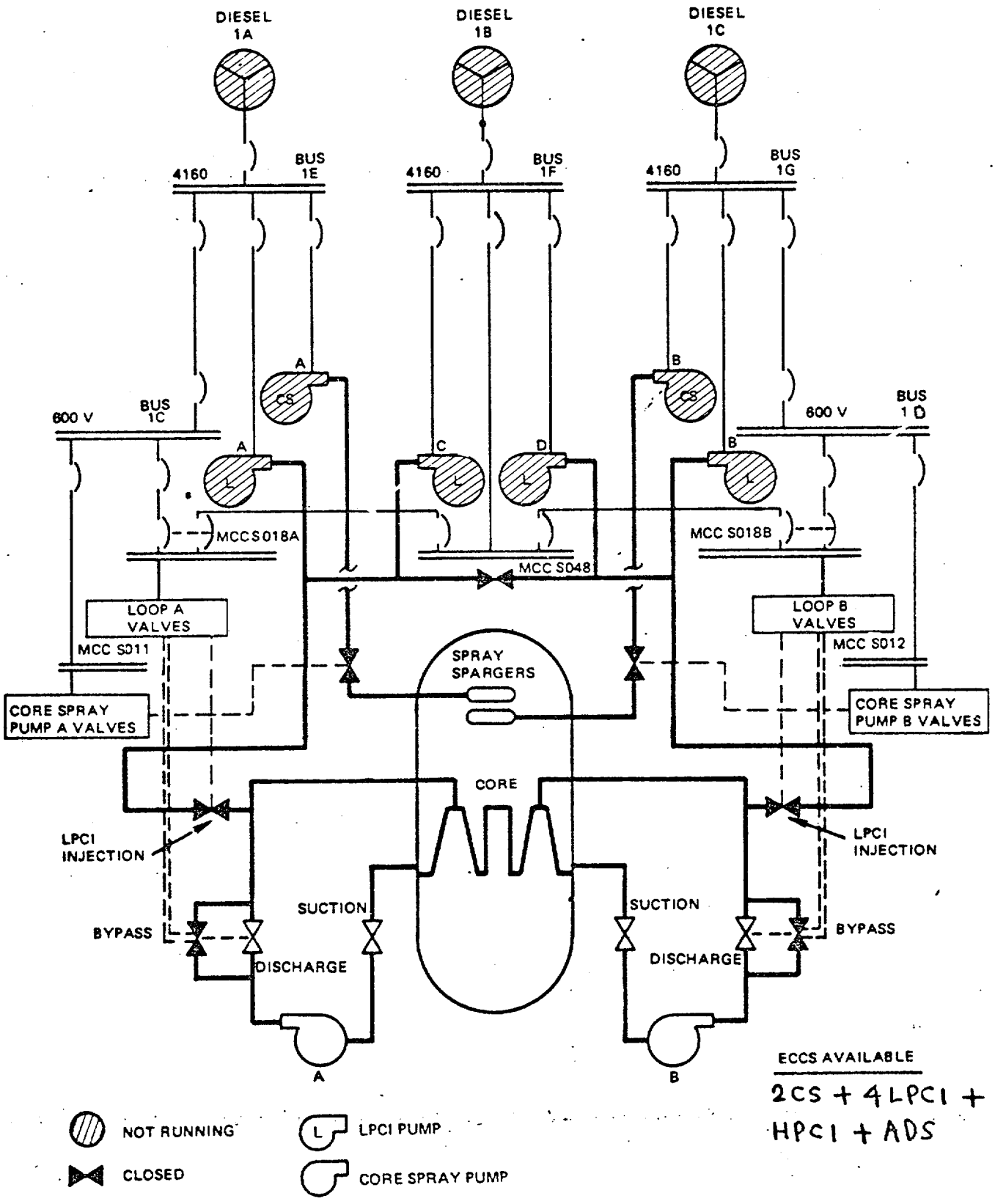

Figure 1 - Existing LPCI System

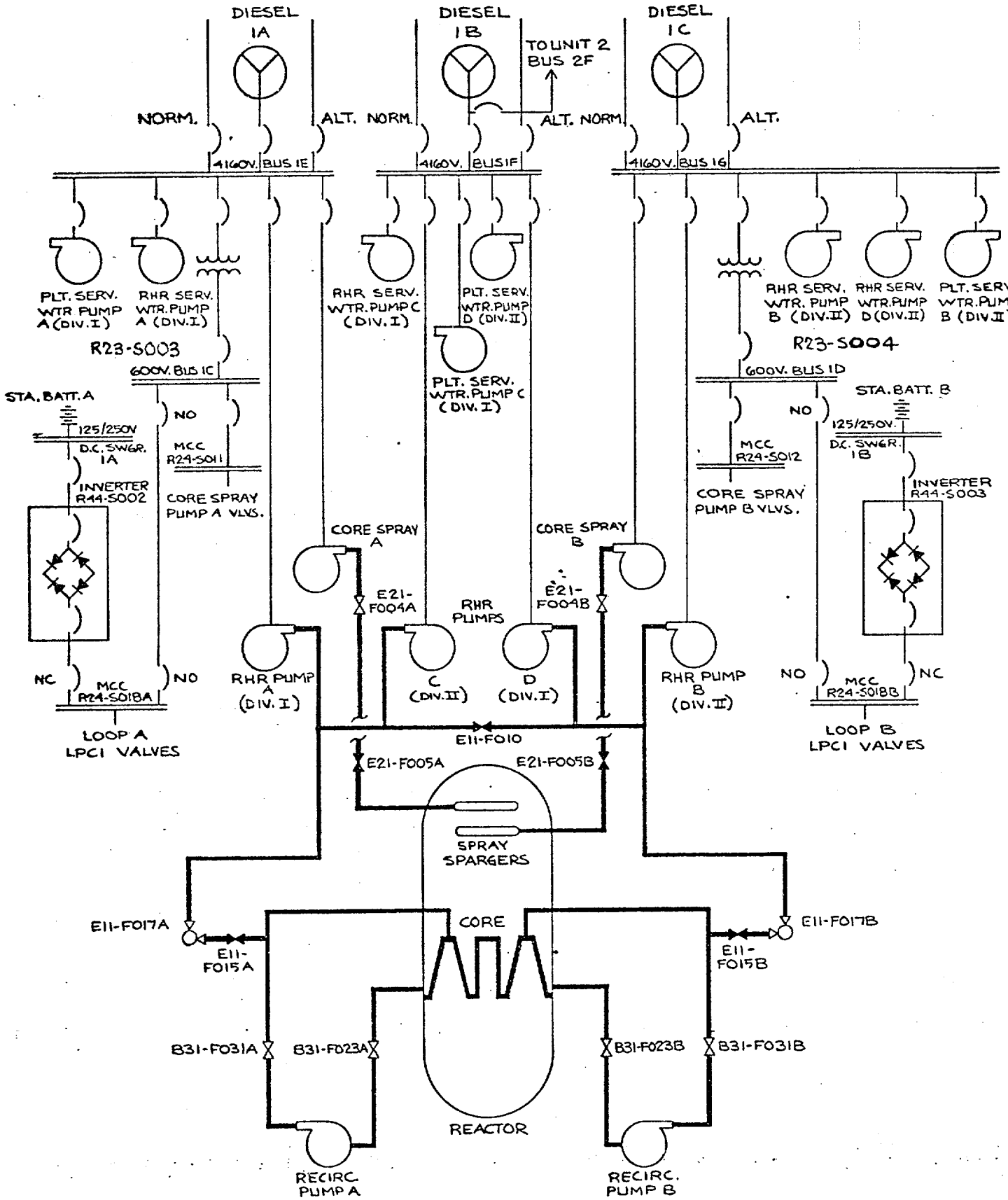

FIGURE 2

MODIFIED LPCI SYSTEM

REFERENCES

1. NEDO-21187, Emergency Core Cooling System Low Pressure Coolant Injection Modification for Performance Improvement.

2. Letter dated March 30, 1976, from the Nuclear Regulatory Commission to Georgia Power Company (Docket No. 50-321) with its enclosed Amendment No. 31, Safety Evaluation and FEDERAL REGISTER Notice.

3. NEDO-24030, Edwin I. Hatch Nuclear Plant Unit No. 1, Cycle 2, Appendix K Analysis for Modified LPCI Power Supply.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-321

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

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 48 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, located in Appling County, Georgia. The amendment is effective as of its date of issuance.

The amendment modifies the Technical Specifications to convert the primary source of power to the Low Pressure Coolant Injection (LPCI) system injection valve operators from diesel generators 1A, 1C or 1B to independent sets of 250 volt DC/600 volt AC inverters which are powered by the station batteries.

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 February 9, 1977, as supplemented by letters dated July 11, August 2, and October 11, 1977, (2) Amendment No. 48 to License No. DPR-57 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 Operating Reactors.

Dated at Bethesda, Maryland, this 4th day of January 1978.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear

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