



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

October 12, 1985

Docket No. 50-416

Mr. J. B. Richard
Senior Vice President, Nuclear
Mississippi Power & Light Company
P.O. Box 23054
Jackson, Mississippi 39205

Dear Mr. Richard:

Subject: Issuance of Amendment No. 5 to Facility Operating License
NPF-29 Grand Gulf Nuclear Station, Unit No. 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 5 to Facility Operating License NPF-29 for the Grand Gulf Nuclear Station, Unit No. 1, located in Claiborne County, Mississippi. This amendment is in response to your letter dated August 23, 1985, and supplemented September 25 and October 5, 1985.

The amendment modifies the Technical Specifications to increase diesel fuel storage and to add a clarification statement to the bases for specification 3/4.8.1 "Electrical Power Systems - AC Sources." The amendment also modifies the license condition related to the standby service water system and adds a license condition to allow a temporary exception to the requirement for a 30-day water supply in the standby service water cooling tower basins. This license amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No.5 to Facility Operating License NPF-29 is enclosed.

Notice of issuance will be included in the Commission's next bimonthly Federal Register notice.

Sincerely,

Handwritten signature of Elinor G. Adensam in cursive.

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Enclosures:

1. Amendment No. 5
2. Safety Evaluation

cc w/enclosures:
See next page

Contracted By

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PDR ADDCK 05000416
P PDR

Mr. Jackson B. Richard
Mississippi Power & Light Company

Grand Gulf Nuclear Station

cc:

Robert B. McGehee, Esquire
Wise, Carter, Child, Steen and Caraway
P.O. Box 651
Jackson, Mississippi 39205

Nicholas S. Reynolds, Esquire
Bishop, Liberman, Cook, Purcell
and Reynolds
1200 17th Street, N.W.
Washington, D. C. 20036

Mr. Ralph T. Lally
Manager of Quality Assurance
Middle South Services, Inc.
P.O. Box 61000
New Orleans, Louisiana 70161

Mr. Larry F. Dale, Director
Nuclear Licensing and Safety
Mississippi Power & Light Company
P.O. Box 23054
Jackson, Mississippi 39205

Mr. R. W. Jackson, Project Engineer
Bechtel Power Corporation
15740 Shady Grove Road
Gaithersburg, Maryland 20760

Mr. Ross C. Butcher
Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Route 2, Box 399
Port Gibson, Mississippi 39150

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W., Suite 2900
Atlanta, Georgia 30323

Mr. J. E. Cross, General Manager
Grand Gulf Nuclear Station
Mississippi Power & Light Company
P.O. Box 756
Port Gibson, Mississippi 39150

The Honorable William J. Guste, Jr.
Attorney General
Department of Justice
State of Louisiana
Baton Rouge, Louisiana 70804

Mr. Oliver D. Kingsley, Jr.
Vice President, Nuclear Operations
Mississippi Power & Light Company
P.O. Box 23054
Jackson, Mississippi 39205

Office of the Governor
State of Mississippi
Jackson, Mississippi 39201

Attorney General
Gartin Building
Jackson, Mississippi 39205

Mr. Jack McMillan, Director
Solid Waste
Mississippi State Board of Health
880 Lakeland
Jackson, Mississippi 39206

Alton B. Cobb, M.D.
State Health Officer
State Board of Health
P.O. Box 1700
Jackson, Mississippi 39205

President
Claiborne County Board of Supervisors
Port Gibson, Mississippi 39150

DESIGNATED ORIGINAL

Certified By

October 12, 1985

AMENDMENT NO. 5 TO FACILITY OPERATING LICENSE NO. NPF-29 - Grand Gulf, Unit 1

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✓ Docket No. 50-416
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L. Kintner
M. Duncan
Attorney, OELD
R. Diggs, ADM
T. Barnhart (4)
E. L. Jordan, DEQA:I&E
L. Harmon, I&E
B. Grimes
M. Virgilio
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

MISSISSIPPI POWER & LIGHT COMPANY

MIDDLE SOUTH ENERGY, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Grand Gulf Nuclear Station, Unit 1 (the facility) Facility Operating License No. NPF-29 filed by the Mississippi Power and Light Company acting for itself, Middle South Energy, Inc., and South Mississippi Electric Power Association (the licensees), dated August 23, 1985, and supplemented September 25 and October 5, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the 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 license amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - E. The issuance of this license 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 NPF-29 is amended as follows:

A. Change paragraph 2.C.(20) to read as follows:

(20) Standby Service Water System (Section 9.2.1 SER, SSER #2)

No irradiated fuel may be stored in the Unit 1 spent fuel pool prior to completion of modifications to the standby service water (SSW) system and verification that the design flow can be achieved to all SSW system components. However, should a core offloading be necessary prior to completion of these modifications (scheduled for the first scheduled refueling outage), irradiated fuel may be placed in the spent fuel pool when the RHR system operating in the spent fuel pool cooling mode is available. Until the SSW system is modified, the spent fuel pool cooler shall be isolated from the SSW system by locked closed valves or the associated SSW subsystem shall be declared inoperable. The position of these valves shall be verified every 31 days until the design flowrate for SSW system is demonstrated. The surveillance to be performed is to verify the valves are locked closed and to verify that any SSW loop with valves which are not locked closed is declared inoperable.

B. Add paragraph 2.C.(40) to read as follows:

(40) Temporary Ultimate Heat Sink Change

With the plant in OPERATIONAL condition 4, SSW cooling tower basin A may be considered OPERABLE in accordance with Technical Specification 3.7.1.3 with less than a 30 day supply of water (without makeup) during the time that SSW basin B is drained to replace its associated service water pump provided:

- (a) SSW basin A water level is maintained greater than or equal to 87".
- (b) At least two sources of water (other than normal makeup with one source not dependent on offsite power) are available for makeup to SSW basin A.


This license condition may remain in effect until plant startup following the outage scheduled for fall 1985.

3. The license is further amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment. Paragraph 2.C.(2) of Facility Operating License NPF-29 is hereby amended to read as follows:

(2) The Technical Specifications contained in Appendix A, as revised through Amendment No.5 and the Environmental Protection Plan contained in Appendix B are hereby incorporated into this license. Mississippi Power & Light Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

4. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Hugh L. Thompson, Jr., Director
Division of Licensing
Office of Nuclear Reactor Regulation

Enclosure:
Technical Specification Changes

Date of Issuance: October 12, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 5

FACILITY OPERATING LICENSE NO. NPF-29

DOCKET NO. 50-416

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 are also provided to maintain document completeness.

<u>Amended</u> <u>Page</u>	<u>Overleaf</u> <u>Page</u>
3/4 7-4	3/4 7-3
3/4 8-1	3/4 8-2
3/4 8-9	3/4 8-10
B 3/4 8-1	B 3/4 8-2
B 3/4 8-1a	

PLANT SYSTEMS

HIGH PRESSURE CORE SPRAY SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 The high pressure core spray (HPCS) service water system shall be OPERABLE with:

- a. One OPERABLE HPCS service water pump, and
- b. An OPERABLE flow path capable of taking suction from the associated SSW cooling tower basin and transferring the water through the HPCS service water system heat exchangers.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4*, and 5*.

ACTION:

With the HPCS service water system inoperable, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.1 or 3.5.2, as applicable, and declare the associated diesel inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2.

SURVEILLANCE REQUIREMENTS

4.7.1.2 The HPCS service water system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve, manual, power operated or automatic, servicing safety related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.
- b. At least once per 18 months during shutdown by verifying that each automatic valve servicing safety-related equipment actuates to its correct position on a service water actuation test signal.

* When the HPCS system is required to be OPERABLE.

PLANT SYSTEMS

ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.1.3 At least the following independent SSW cooling tower basins, each with:

- a. A minimum basin water level at or above elevation 130'3" Mean Sea Level, USGS datum, equivalent to an indicated level of $\geq 87"$.
- b. Two OPERABLE cooling tower fans,[#]

shall be OPERABLE:

- a. In OPERATIONAL Condition 1, 2 and 3, two basins,^{##}
- b. In OPERATIONAL Condition 4, 5 and *, the basins^{##} associated with systems and components required OPERABLE by Specifications 3.7.1.1 and 3.7.1.2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5 and *.

ACTION:

- a. In OPERATIONAL CONDITION 1, 2, 3, 4, 5 and * with one SSW cooling tower basin inoperable, declare the associated SSW subsystem inoperable and, if applicable, declare the HPCS service water system inoperable, and take the ACTION required by Specifications 3.7.1.1 and 3.7.1.2, as applicable.
- b. In OPERATIONAL CONDITION 1, 2, 3, 4 or 5 with both SSW cooling tower basins inoperable, declare the SSW system and the HPCS service water system inoperable and take the ACTION required by Specifications 3.7.1.1 and 3.7.1.2.
- c. In Operational Condition * with both SSW cooling tower basins inoperable, declare the SSW system inoperable and take the ACTION required by Specification 3.7.1.1. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.3 At least the above required SSW cooling tower basins shall be determined OPERABLE at least once per:

- a. 24 hours by verifying basin water level to be greater than or equal to 87".
- b. 31 days by starting from the control room each SSW cooling tower fan not already in operation and operating each fan for at least 15 minutes.
- c. 18 months by verifying that each SSW cooling tower fan starts automatically when the associated SSW subsystem is started.

* When handling irradiated fuel in the primary or secondary containment.

The basin cooling tower fans are not required to be OPERABLE for HPCS service water system OPERABILITY.

An OPERABLE basin shall have a 30 day supply of water either self-contained or by means of an OPERABLE siphon.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

A.C. SOURCES - OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Three separate and independent diesel generators, each with:
 1. Separate day fuel tanks containing a minimum of 220 gallons of fuel.
 2. A separate fuel storage system containing a minimum of:
 - a) 57,200 gallons of fuel each for diesel generators 11 and 12, and
 - b) 39,000 gallons of fuel for diesel generator 13.
 3. A separate fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With either one offsite circuit or diesel generator 11 or 12 of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and 4.8.1.1.2.a.4,* for one diesel generator at a time, within two hours and at least once per 8 hours thereafter; restore at least two offsite circuits and diesel generators 11 and 12 to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With one offsite circuit and diesel generator 11 or 12 of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and 4.8.1.1.2.a.4,* for one diesel generator at a time, within two hours and at least once per 8 hours thereafter; restore at least one of the inoperable A.C. sources to OPERABLE status within 12 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Restore at least two offsite circuits and diesel generators 11 and 12 to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

*Specification 4.8.1.1.2.a.4 must be performed for diesel generator 13 only when the HPCS system is OPERABLE.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

- c. With either diesel generator 11 or 12 of the above required A.C. electrical power sources inoperable, in addition to ACTION a or b above, as applicable, verify within 2 hours that all required systems, subsystems, trains, components and devices that depend on the remaining diesel generator 11 or 12 as a source of emergency power are also OPERABLE; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With two of the above required offsite circuits inoperable, demonstrate the OPERABILITY of three diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4*, for one diesel generator at a time, within two hours and at least once per 8 hours thereafter, unless the diesel generators are already operating; restore at least one of the inoperable offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours. With only one offsite circuit restored to OPERABLE status, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- e. With diesel generators 11 and 12 of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and 4.8.1.1.2.a.4*, within two hours and at least once per 8 hours thereafter; restore at least one of the inoperable diesel generators 11 and 12 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. Restore both diesel generators 11 and 12 to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- f. With diesel generator 13 of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and 4.8.1.1.2.a.4, for one diesel generator at a time, within two hours and at least once per 8 hours thereafter; restore the inoperable diesel generator 13 to OPERABLE status within 72 hours or declare the HPCS system inoperable and take the ACTION required by Specification 3.5.1.

*Specification 4.8.1.1.2.a.4 must be performed for diesel generator 13 only when the HPCS system is OPERABLE.

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. Diesel generator 11 or 12, and diesel generator 13 when the HPCS system is required to be OPERABLE, with each diesel generator having:
 1. A day tank containing a minimum of 220 gallons of fuel.
 2. A fuel storage system containing a minimum of:
 - a) 57,200 gallons of fuel for each OPERABLE diesel generator 11 or 12.
 - b) 39,000 gallons of fuel for diesel generator 13.
 3. A fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

ACTION:

- a. With all offsite circuits inoperable and/or with diesel generators 11 and 12 inoperable, suspend CORE ALTERATIONS, handling of irradiated fuel in the primary or secondary containment, operations with a potential for draining the reactor vessel and crane operations over the spent fuel storage pool and the upper containment pool when fuel assemblies are stored therein. In addition, when in OPERATIONAL CONDITION 5 with the water level less than 22 feet 8 inches above the reactor pressure vessel flange, immediately initiate corrective action to restore the required power sources to OPERABLE status as soon as practical.
- b. With diesel generator 13 inoperable, restore the inoperable diesel generator 13 to OPERABLE status within 72 hours or declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.
- c. 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 and 4.8.1.1.3, except for the requirement of 4.8.1.1.2.a.5.

*When handling irradiated fuel in the primary or secondary containment.

ELECTRICAL POWER SYSTEMS

3/4.8.2 D.C. SOURCES

D.C. SOURCES - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 As a minimum, the following D.C. electrical power sources shall be OPERABLE:

- a. Division 1, consisting of:
 - 1. 125 volt battery 1A3.
 - 2. 125 volt full capacity charger 1A4 or 1A5.
- b. Division 2, consisting of:
 - 1. 125 volt battery 1B3.
 - 2. 125 volt full capacity charger 1B4 or 1B5.
- c. Division 3, consisting of:
 - 1. 125 volt battery 1C3.
 - 2. 125 volt full capacity charger 1C4.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With either Division 1 battery or Division 2 battery of the above required D.C. electrical power sources inoperable, restore the inoperable division battery 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.
- b. With Division 3 battery of the above required D.C. electrical power sources inoperable, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.1.
- c. With one of the above required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery bank by performing Surveillance Requirement 4.8.2.1.a.1 within one hour and at least once per 8 hours thereafter. If any Category A limit in Table 4.8.2.1-1 is not met, declare the battery inoperable.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

3/4.8.1, 3/4.8.2 and 3/4.8.3 A.C. SOURCES, D.C. SOURCES and ONSITE POWER DISTRIBUTION SYSTEMS

The OPERABILITY of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for (1) the safe shutdown of the facility and (2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criterion 17 of Appendix "A" to 10 CFR 50. The volume of fuel specified for each fuel storage system represents usable fuel.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least Division 1 or 2 of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source. Division 3 supplies the high pressure core spray (HPCS) system only.

The A.C. and D.C. source allowable out-of-service times are based on Regulatory Guide 1.93, "Availability of Electrical Power Sources," December 1974. When diesel generator 11 or 12 is inoperable, there is an additional ACTION requirement to verify that all required systems, subsystems, trains, components and devices, that depend on the remaining OPERABLE diesel generator 11 or 12 as a source of emergency power, are also OPERABLE. This requirement is intended to provide assurance that a loss of offsite power event will not result in a complete loss of safety function of critical systems during the period diesel generator 11 or 12 is inoperable. The term verify as used in this context means to administratively check by examining logs or other information to determine if certain components are out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the OPERABILITY of the component.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that (1) the facility can be maintained in the shutdown or refueling condition for extended time periods and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

The surveillance requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guide 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977; and Regulatory Guide 1.137 "Fuel-Oil Systems for Standby Diesel Generators," January 1978, as addressed in the FSAR, except that Division 1 and 2 diesel generator load testing requirements that were

ELECTRICAL POWER SYSTEMS

BASES

A.C. SOURCES, D.C. SOURCES and ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

restricted as noted in a letter from E. G. Adensam to L. F. Dale, dated 17 July 1984. The SSW pump load values are not used as the largest single load rejected from the diesel generators when testing to meet the requirements of Regulatory Guide 1.9. Since the SSW system supplies cooling water to its associated diesel generator, tripping the SSW pump to perform this test would result in loss of the diesel generator.

ELECTRICAL POWER SYSTEMS

BASES

A.C. SOURCES, D.C. SOURCES and ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

The surveillance requirements for demonstrating the OPERABILITY of the unit batteries are in accordance with the recommendations of Regulatory Guide 1.129 "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage onfloat charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 4.8.2.1-1 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than 0.020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than 0.010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

Operation with a battery cell's parameter outside the normal limit but within the allowable value specified in Table 4.8.2.1-1 is permitted for up to 7 days. During this 7 day period: (1) the allowable values for electrolyte level ensures no physical damage to the plates with an adequate electron transfer capability; (2) the allowable value for the average specific gravity of all the cells, not more than 0.020 below the manufacturer's recommended full charge specific gravity, ensures that the decrease in rating will be less than the safety margin provided in sizing; (3) the allowable value for an individual cell's specific gravity ensures that an individual cell's specific gravity will not be more than 0.040 below the manufacturer's full charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; and (4) the allowable value for an individual cell's float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 5 TO FACILITY OPERATING LICENSE NPF-29
GRAND GULF NUCLEAR STATION, UNIT 1
MISSISSIPPI POWER & LIGHT COMPANY
MIDDLE SOUTH ENERGY, INC.
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

INTRODUCTION

By letter dated August 23, 1985, Mississippi Power & Light Company (the licensee) proposed to amend the facility license and Technical Specifications to allow modifications and testing of one of two trains of the standby service water (SSW) system during a scheduled outage in October and November 1985. The changes proposed were: (1) change Technical Specifications 3.8.1.1 and 3.8.1.2 to require diesel fuel storage for each of diesel generators 11 and 12 to be increased from 48,000 to 57,200 gallons to be consistent with larger SSW pumps to be installed; (2) change License Condition 2.C.(20) to allow valves isolating the spent fuel pool coolers to be opened provided the associated SSW subsystem is declared inoperable in accordance with Technical Specifications; and (3) add a license condition to allow a temporary exception to Technical Specification 3/4.7.1.3 (which requires a 30 day water supply in the SSW cooling tower basins without makeup) provided a specified water level is maintained and two sources of makeup in addition to normal makeup are available.

By letter dated September 25, 1985, the licensee proposed further changes to License Condition 2.C(20) to make the surveillance requirement consistent with the technical specifications. Licensee's letter dated September 25, 1985, also proposed a change to the Bases for Technical Specification 3/4.8.1 to clarify diesel generator testing after larger SSW pumps are installed (change (4)). The description and justification for change (4) were provided in the initial application dated August 23, 1985. By letter dated October 5, 1985, licensee proposed a change (change (5)) to Technical Specification 3.7.1.3, "Ultimate Heat Sink," to clarify, as stated in the Federal Register notice (50 FR 37084) the technical specification requirement that a thirty day water supply is required in reactor shutdown conditions. The changes proposed in the September 25 and October 5, 1985, letters clarify the August 23, 1985, application for license amendment and do not make any substantive changes to the application. Therefore, the application was not renoticed.

EVALUATION

The proposed changes are needed to allow modifications to the standby service water (SSW) system during the outage scheduled in October and November 1985. License Condition 2.C.(20) requires modifications to the SSW system and verification that design flow can be achieved in all SSW system components

prior to storing irradiated fuel in the spent fuel pool (SFP); and requires the spent fuel pool coolers to be isolated from the SSW system by locked closed valves until the modifications and verification tests are completed. The licensee is planning to modify Train B of the SSW system in the fall 1985 outage and will modify Train A during the first refueling outage. The modifications proposed for the fall 1985 outage include installation of a larger capacity SSW pump in SSW cooling tower Train B which requires draining of the basin. Modifications also include relocation of the SSW loop B supply and return valves to the spent fuel pool cooler which requires taking the spent fuel pool cooler in the B loop out of isolation. Verification tests of design flow to the spent fuel pool cooler will also require taking the spent fuel pool cooler out of isolation. The modifications and tests will be made while the plant is in cold shutdown. Prior to startup following the 1985 outage, the SSW cooling tower basin will be refilled and the spent fuel pool coolers will be isolated until the other SSW loop modifications are completed.

Change (1) would increase the amount of fuel specified for seven day operation of each of the standby diesel generators 11 and 12 from 48,000 gallons to 57,200 gallons. The change is needed after the installation of larger SSW pumps. Although only one larger pump will be installed in the fall 1985 outage, the Technical Specification change is applicable to both large SSW pumps. The margin of safety of fuel capacity for operation with the larger pumps will be the same while the margin of safety for operation with one larger and one smaller pump will be increased. The NRC staff has reviewed proposed change (1). The staff concludes that the proposed amount of fuel to be included in the Technical Specifications is consistent with the guidelines in ANSI Standard N-195 and Regulatory Guide 1.137 "Fuel Oil Systems for Standby Diesel Generators." Therefore the staff finds change (1) acceptable.

The proposed revision to License Condition 2.C.(20) (change 2 as clarified by licensee's September 25, 1985, letter) will allow a necessary design change to prevent water hammer in SSW loop B piping, permit SSW loop B flow testing and permit testing involving alternate decay heat removal methods. Since the SSW subsystem associated with an open valve to the fuel pool cooler must be declared inoperable by the proposed change, assurance is provided by appropriate technical specification action statements that the plant will be maintained in a safe condition. The proposed revision to License Condition 2.C.(20) requires surveillance every 31 days to either verify that spent fuel pool coolers are isolated by locked closed valves or verify that the SSW subsystem associated with isolation valves which are not locked closed is declared inoperable. Since the change assures that the SFP coolers will be isolated, except during SSW loop B flow testing, and thus minimizes the time that less than design flow rate is available to safety related components, the change is acceptable.

Change (3) is a license condition to allow a temporary exception to the requirement for a 30 day water supply in the ultimate heat sink, the standby service water cooling tower basins A and B. Licensee estimated that the standby service water cooling tower basin B will have to be drained for a period of 36 days to complete modifications to the SSW system. The licensee calculated that, for the worst case of starting to drain basin B immediately

upon plant shutdown, 12 days of water supply without makeup will be available from basin A. Licensee calculated that, sixteen days of water supply will be available from basin A if basin B is drained starting at day eight of the outages. The calculation to determine the number of days of water supply without makeup is based on the plant experiencing a loss of offsite power coincident with the design basis loss of coolant accident. Even though SSW basin A contains approximately seven million gallons of water, only 3.37 million gallons are assured in accident analyses since full design flows for some equipment cannot be assured if the basin level falls below 107 feet mean sea level elevation. During the operating license review the staff was concerned that Mississippi River make-up water might be lost for several months and, therefore, required MP&L to identify additional water sources that could be used past 30 days. The NRC staff's Safety Evaluation Report for the Grand Gulf Nuclear Station Supplement No. 2 (NUREG-0831) identifies these sources as; (1) the construction well water system, (2) the circulating water basins, and (3) water brought in by truck. In addition to these water sources, the station also has a dedicated fire truck and 2000 feet of hose available and capable of transferring water from the identified sources to the ultimate heat sink. The maximum makeup capacity needed in order to account for cooling tower losses is approximately 200 gallons per minute which can be supplied from any of the identified sources. In consideration of the additional water sources and conveyance capabilities the staff concludes that the less than 30-day water supply for the ultimate heat sink during the scheduled fall 1985 outage is acceptable. Accordingly, the license condition proposed in change (3) is acceptable.

Change (4) adds a statement in the Bases for Technical Specification 3/4.8.1 "Electrical Power Systems - A.C. Sources" to clarify why SSW pump load is not specified as the load to be rejected in testing Diesel Generator 12 in Technical Specification 4.8.1.1.2.d.2. Regulatory Guide 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," recommends that tests should include disconnection of the largest single load on a diesel generator to demonstrate the diesel generator will not overspeed on this transient. For Diesel Generator 12 after the the larger SSW pump is installed, the largest single load on this diesel generator would be the SSW pump (997 kilowatts). However, for this diesel generator, the test cannot be performed by tripping the SSW pump, since the SSW pump supplies cooling water to the diesel generator associated with that subsystem. Tripping the SSW pump would result in tripping the diesel generator. Therefore, the licensee is using the next largest load for these tests, the residual heat removal pump (550 kw). NRC staff has reviewed this basis for tests of diesel generator 12 to meet the requirements of Regulatory Guide 1.9 and concludes that it is acceptable.

Change (5), adds a footnote to Technical Specification 3.7.1.3. The footnote defines an operable basin as one having a 30 day supply of water either self contained or by means of an operable siphon between the two basins. With the presently-installed smaller SSW pumps, both basins are needed to have a 30 day supply of water for reactor operating conditions and for reactor shutdown conditions. The current technical specifications expressly require the operability of both basins for reactor power operating conditions only. The change makes clear that both basins must be operable for both reactor operating and

shutdown conditions in order to assure there is a thirty day water supply without the availability of makeup water. As stated in the Federal Register Notice, 50 FR 37084, the technical specifications require a 30 day water supply in the SSW cooling tower basins without makeup. (Change (3) discussed above--license condition 2.C(40)--allows a temporary exception to this technical specification during the SSW system modifications because basin B must be drained and the required thirty day water supply will not be available.) Since the footnote clarifies the intent of the Technical Specifications to require the operability of both basins for all reactor conditions, change (5) is acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves changes of requirements of facility components located within the restricted area as defined in 10 CFR 20. The Commission made a proposed determination that the amendment involves no significant hazards consideration and there have been no comments on that proposal. Based on its evaluation, the staff concludes that there is no significant change in types or significant increase in the amounts of any effluents that may be released offsite. There is no significant increase in individual or cumulative occupational radiation exposure because the standby service water system to be modified is not significantly radioactive. 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.

CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (50 FR 37084) on September 11, 1985, and consulted with the state of Mississippi. No public comments were received, and the state of Mississippi 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 issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: S. C. Rhow, Power Systems Branch, DSI
Lester L. Kintner, Licensing Branch No. 4, DL
J. Ridgely, Auxiliary Systems Branch, DSI
G. Staley, Environmental and Hydrologic Engineering
Branch, DE
R. Giardina, Power Systems Branch, DSI

Dated: October 12, 1985