

August 26, 1991

Docket No. 50-416

Mr. William T. Cottle
Vice President, Operations GGNS
Entergy Operations, Inc.
Post Office Box 756
Port Gibson, Mississippi 39150

Dear Mr. Cottle:

SUBJECT: ISSUANCE OF AMENDMENT NO. 83 TO FACILITY OPERATING LICENSE
NO. NPF-29 - GRAND GULF NUCLEAR STATION, UNIT 1, REGARDING
DIESEL GENERATOR FUEL OIL STORAGE (TAC NO. 79848)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 83 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. This amendment consists of changes to the Technical Specifications (TS) in response to your application dated February 22, 1991, as supplemented May 24, 1991.

The amendment changes the TS by increasing the required minimum usable fuel oil in the diesel generator fuel oil storage tanks from 57,200 to 62,000 gallons for each of the Division I and the Division II tanks, and from 39,000 to 41,200 gallons for the Division III tank.

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

Sincerely,

Original signed by

Lester L. Kintner, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 83 to NPF-29
2. Safety Evaluation

cc w/enclosures:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

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Vice President, Operations GGNS
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A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script, appearing to read "L L Kintner".

Lester L. Kintner, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 83 to NPF-29
2. Safety Evaluation

cc w/enclosures:
See next page

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Grand Gulf Nuclear Station

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

ENERGY OPERATIONS, INC.

SYSTEM ENERGY RESOURCES, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

MISSISSIPPI POWER AND LIGHT COMPANY

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 83
License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated February 22, 1991, as supplemented May 24, 1991, 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.

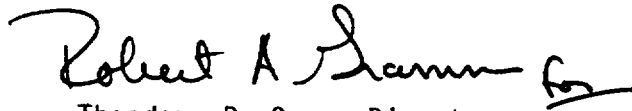
2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. NPF-29 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 83, are hereby incorporated into this license. Entergy Operations, Inc. shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Theodore R. Quay, Director
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 26, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 83

FACILITY OPERATING LICENSE NO. NPF-29

DOCKET NO. 50-416

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

REMOVE PAGES

3/4 8-1
3/4 8-9

INSERT PAGES

3/4 8-1
3/4 8-9

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) 62,000 gallons of fuel each for diesel generators 11 and 12, and
 - b) 41,200 gallons of fuel for diesel generator 13.
 3. A separate fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With one offsite circuit of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Demonstrate the OPERABILITY of the remaining OPERABLE diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4* for one diesel generator at a time within 24 hours. Restore the offsite circuit 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.
- b. With either diesel generator 11 or 12 of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the above required A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Demonstrate the OPERABILITY of the remaining OPERABLE diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4* within 24 hours. Restore the inoperable diesel generator 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

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) 62,000 gallons of fuel for each OPERABLE diesel generator 11 or 12.
 - b) 41,200 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.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 83 TO FACILITY OPERATING LICENSE NO. NPF-29

ENERGY OPERATIONS, INC., ET AL.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated February 22, 1991, as supplemented May 24, 1991, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Grand Gulf Nuclear Station Unit 1, Technical Specifications (TS). The requested changes would increase the required minimum usable fuel oil in the diesel generator fuel oil storage tanks from 57,200 to 62,000 gallons for each of the Division I and the Division II tanks, and from 39,000 to 41,200 gallons for the Division III tank.

2.0 EVALUATION

The TS for A.C. electrical power systems include a requirement that the fuel oil storage tanks for the emergency diesel generators (DG) shall contain a certain quantity of usable fuel oil during operation (TS 3.8.1.1) and during shutdown (TS 3.8.1.2). There are three tanks, one for each of the three DGs. The basis for this specification is that each of the three tanks will contain sufficient usable fuel oil to operate the associated DG for seven days following a loss of coolant accident at maximum continuous load conditions. The presently specified minimum usable fuel oil volume is 57,200 gallons for Division I and Division II diesel generators, and 39,000 gallons for Division III diesel generator. The unusable fuel oil volume is that below the centerline of the submersible fuel oil transfer pump suction (8 inches above the tank bottom) plus that available for the net positive suction head (NPSH) of the pump. For the present TS, the unusable volume was considered to be that in the bottom 2 feet of the tank which resulted in a minimum level of 1 foot - 4 inches above the pump suction centerline available for NPSH.

The minimum usable fuel oil volume was re-calculated by the licensee using current diesel generator loading requirements, revised horsepower data for components powered by the generators, and updated fuel consumption data for the diesel engines. The calculations were made in accordance with the American National Standards Institute (ANSI) Standard N195-1976 and Regulatory Guide 1.137, "Fuel Oil Systems for Standby Diesel Generators". The results showed that the minimum usable fuel oil volume should be 62,000 gallons for Division I and Division II diesel generators and 41,000 gallons for the

Division III diesel generator. Therefore, a request for TS changes was submitted and administrative controls were implemented to require the larger volumes until the proposed TS are issued.

The larger usable volumes will be obtained by reducing the minimum fluid level above the submerged fuel oil transfer pumps from 1 foot - 4 inches to 4 inches. A minimum fluid level of 4 inches above the horizontal pump suction pipe centerline was specified by the manufacturer to give adequate NPSH for continuous pump operation. The inlet diameter of the pump suction pipe and flange is 1 inch, resulting in a minimum of 3.5 inches of fluid above the suction inlet.

The submittals indicated that the storage tank fuel oil level instrumentation can have an error of 2.25 percent of total tank depth (3.14 inches) for Division I and Division II tanks, and 3.08 percent (4.44 inches) for the Division III tank. The minimum fuel oil storage tank levels specified for operability determinations in surveillance procedures include an allowance for these errors. Instrumentation is presently calibrated on an 18 month interval. If the as-found error exceeds these values, the instrumentation should be recalibrated on shorter intervals.

The staff concludes that the required usable volumes can be obtained in the manner proposed by the licensee while meeting applicable guidelines in Regulatory Guide 1.137 and ANSI Standard N195 and the pump vendor's recommended NPSH requirements. Accordingly, the proposed TS changes are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Mississippi State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC 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 (56 FR 33953). 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.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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: L.L. Kintner

Date: August 26, 1991