

February 9, 1998

Mr. Joseph J. Hagan
Vice President, Operations GGNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

SUBJECT: ISSUANCE OF AMENDMENT NO.134 TO FACILITY OPERATING LICENSE
NO. NPF-29 - GRAND GULF NUCLEAR STATION, UNIT 1 (TAC NO. M99380)

Dear Mr. Hagan:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 134 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. This amendment revises the Technical Specifications (TSs) in response to your application dated August 6, 1997.

The amendment implements the guidance and recommendations of Generic Letter (GL) 94-01, "Removal of Accelerated Testing and Reporting Requirements for Emergency Diesel Generators [EDG]," dated May 31, 1994. The EDG accelerated testing requirements are being removed from the TSs in that Table 3.8.1-1, "Diesel Generator Test Schedule," has been replaced by 31 days for the frequency stated in Surveillance Requirements (SRs) 3.8.1.2 and 3.8.1.3, and the table has been deleted from the TSs. The EDG reporting requirements were relocated to the Technical Requirements Manual in the Updated Final Safety Analysis Report (UFSAR) after the Improved TSs were approved for GGNS in Amendment 120, issued February 21, 1995. These reporting requirements will be revised in accordance with 10 CFR 50.59 to be consistent with GL 94-01.

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,

Handwritten signature: J. Donohew 2/5/98

Jack N. Donohew, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosures: 1. Amendment No. 134 to NPF-29
2. Safety Evaluation

cc w/encls: See next page

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DATE	1/20/98	1/20/98	1/24/98
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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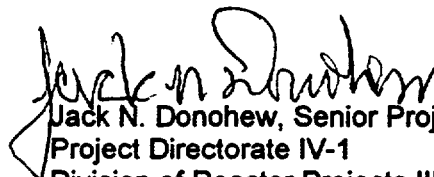
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Sincerely,


Jack N. Donohew, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosures: 1. Amendment No. 134 to NPF-29
2. Safety Evaluation

cc w/encs: See next page

Mr. Joseph J. Hagan
Entergy Operations, Inc.

Grand Gulf Nuclear Station

cc:

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& Chief Operating Officer**
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENTERGY OPERATIONS, INC.

SYSTEM ENERGY RESOURCES, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

ENTERGY MISSISSIPPI, INC.

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 134
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 August 6, 1997, 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. 134, 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



Jack N. Donohew, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 9, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 134

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

3.8-5
3.8-6
3.8-17
B 3.8-15
B 3.8-16
B 3.8-33
B 3.8-34

INSERT

3.8-5
3.8-6
3.8-17
B 3.8-15
B 3.8-16
B 3.8-33
B 3.8-34

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
H. Three or more required AC sources inoperable.	H.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each required offsite circuit.	7 days
SR 3.8.1.2	<p style="text-align: center;">—————NOTE—————</p> <p>All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading.</p> <hr/> <p>Verify each DG starts from standby conditions and achieves, in \leq, 10 seconds, voltage \geq 3744 V and \leq 4576 V and frequency \geq 58.8 Hz and \leq 61.2 Hz.</p>	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	<p style="text-align: center;"><u>NOTES</u></p> <ol style="list-style-type: none"> 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by, and immediately follow, without shutdown, a successful performance of SR 3.8.1.2. <hr/> <p>Verify each DG operates for ≥ 60 minutes at a load ≥ 5450 kW and ≤ 5740 kW for DG 11 and DG 12, and ≥ 3300 kW for DG 13.</p>	31 days
SR 3.8.1.4	Verify each DG day tank contains ≥ 220 gal of fuel oil.	31 days
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	31 days
SR 3.8.1.6	Verify the fuel oil transfer system operates to automatically transfer fuel oil from the storage tank to the day tank.	31 days
SR 3.8.1.7	Verify the load shedding and sequencing panels respond within design criteria.	31 days

(continued)

Table 3.8.1-1. DELETED

|

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.8.1.2

This SR helps to ensure the availability of the standby electrical power supply to mitigate DBAs and transients and maintain the unit in a safe shutdown condition.

To minimize the wear on moving parts that do not get lubricated when the engine is not running, this SR is modified by a Note to indicate that all DG starts for this Surveillance may be preceded by an engine prelube period and followed by a warmup period prior to loading.

For the purposes of this testing, the DGs are started from standby conditions. Standby conditions for a DG mean that the diesel engine coolant and oil are being continuously circulated and temperature is being maintained consistent with manufacturer recommendations for DG 11 and DG 12. For DG 13, standby conditions mean that the lube oil is heated by the jacket water and continuously circulated through a portion of the system as recommended by the vendor. Engine jacket water is heated by an immersion heater and circulates through the system by natural circulation.

SR 3.8.1.2 requires that the DG starts from standby conditions and achieves required voltage and frequency within 10 seconds. The DG's ability to maintain the required voltage and frequency is tested by those SRs which require DG loading. The 10 second start requirement supports the assumptions in the design basis LOCA analysis (Ref. 5).

The DGs are started for this test by using one of the following signals: manual, simulated loss of offsite power by itself, simulated loss of offsite power in conjunction with an ESF actuation test signal, or an ESF actuation test signal by itself.

The 31 day Frequency for SR 3.8.1.2 is consistent with the industry guidelines for assessment of diesel generator performance (Ref. 14). The Frequency provides adequate assurance of DG OPERABILITY, while minimizing degradation resulting from testing.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.8.1.3 (continued)

Although no power factor requirements are established by this SR, the DG is normally operated at a power factor between 0.9 lagging and 1.0. The 0.9 value is conservative with respect to the design rating of the machine, while 1.0 is an operational limitation to ensure circulating currents are minimized. The load band for DG 11 and 12 is provided to avoid routine overloading of the TDI DG. Routine overloading may result in more frequent teardown inspections in accordance with vendor recommendations in order to maintain DG OPERABILITY.

The 31 day Frequency for this Surveillance is consistent with the industry guidelines for assessment of diesel generator performance (Ref. 14).

Note 1 modifies this Surveillance to indicate that diesel engine runs for this Surveillance may include gradual loading, as recommended by the manufacturer, so that mechanical stress and wear on the diesel engine are minimized.

Note 2 modifies this Surveillance by stating that momentary transients because of changing bus loads do not invalidate this test.

Note 3 indicates that this Surveillance shall be conducted on only one DG at a time in order to avoid common cause failures that might result from offsite circuit or grid perturbations.

Note 4 stipulates a prerequisite requirement for performance of this SR. A successful DG start must precede this test to credit satisfactory performance.

SR 3.8.1.4

This SR provides verification that the level of fuel oil in the day tank is at or above the level at which fuel oil is automatically added. The level is expressed as an equivalent volume in gallons, and ensures adequate fuel oil for a minimum of 30 minutes of DG operation at the maximum expected post LOCA load.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.8.1.20 (continued)

This SR is modified by a Note. The reason for the Note is to minimize wear on the DG during testing. For the purpose of this testing, the DGs must be started from standby conditions, that is, with the engine coolant and oil continuously circulated and temperature maintained consistent with manufacturer recommendations for DG 11 and DG 12. For DG 13, standby conditions mean that the lube oil is heated by the jacket water and continuously circulated through a portion of the system as recommended by the vendor. Engine jacket water is heated by an immersion heater and circulates through the system by natural circulation.

(continued) |

BASES (continued)

- REFERENCES
1. 10 CFR 50, Appendix A, GDC 17.
 2. UFSAR, Chapter 8.
 3. Regulatory Guide 1.9.
 4. UFSAR, Chapter 6.
 5. UFSAR, Chapter 15.
 6. Regulatory Guide 1.93.
 7. Generic Letter 84-15, July 2, 1984.
 8. 10 CFR 50, Appendix A, GDC 18.
 9. Regulatory Guide 1.108.
 10. Regulatory Guide 1.137.
 11. ANSI C84.1, 1982.
 12. ASME, Boiler and Pressure Vessel Code, Section XI.
 13. IEEE Standard 308.
 14. NUMARC 87-00, Revision 1, August 1991.
 15. Letter from E.G. Adensam to L.F. Dale, dated July 1984.
 16. GNRI-96/00151, Amendment 124 to the Operating License.
 17. Generic Letter 94-01, May 31, 1994.
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 134 TO FACILITY OPERATING LICENSE NO. NPF-29

ENTERGY OPERATIONS, INC., ET AL.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated August 6, 1997, Entergy Operations, Inc. (the licensee) submitted a request for changes to Section 3.8.1, Alternating Current (AC) - Operating, of the Technical Specifications (TSs) for Grand Gulf Nuclear Station, Unit 1 (GGNS). The frequency of verifying emergency diesel generator (EDG) starts and operation in Surveillance Requirements (SRs) 3.8.1.2 and 3.8.1.3 in the current TSs is currently stated in Table 3.8.1-1, "Diesel Generator Test Schedule." The proposed changes would replace Table 3.8.1-1 with 31 days for the frequency stated in the SRs and delete the table from the TSs.

The proposed changes are in response to the resolution of Generic Safety Issue B-56, "Diesel Generator Reliability," the NRC issued Generic Letter (GL) 94-01, "Removal of Accelerated Testing and Reporting Requirements for Emergency Diesel Generators," dated May 31, 1994. In this GL, the staff stated that licensees may request the removal of the TSs for EDG accelerated testing and special reporting requirements; however, licensees must commit to the implementation of a maintenance program for monitoring and maintaining EDG performance.

2.0 EVALUATION

The licensee has requested that the provisions in TS 3.8.1 for accelerated testing of the EDGs at Grand Gulf be removed from the TSs. Specifically, the changes to the diesel generator TSs involve the removal of Table 3.8.1-1, "Diesel Generator Test Schedule," from the TSs and moving the 31 day test frequency contained in Table 3.8.1-1 to SR 3.8.1.2 and SR 3.8.1.3. The licensee has stated that these changes are consistent with the guidance and recommendations in GL 94-01.

NRC GL 94-01 states that licensees may request the removal of the TS provisions for accelerated testing and special reporting requirements. However, when requesting this license amendment, the licensees must commit to implement within 90 days of the issuance of the license amendment a maintenance program for monitoring and maintaining EDG performance consistent with the provisions of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and Regulatory Guide (RG) 1.160 Revision 1, dated January 1995, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."

The licensee stated in its letter of August 6, 1997, that it has complied at GGNS with the guidance and recommendations in GL 94-01 to implement a maintenance program for monitoring and maintaining EDG performance. The licensee stated that it is already in compliance with the provisions of 10 CFR 50.65 and the guidance of RG 1.160 by implementation of the Maintenance Rule (10 CFR 50.65) on July 10, 1996. In Inspection Report 97-01, issued April 8, 1997, conclusions were presented of the staff's inspection of the implementation of the Maintenance Rule at GGNS. The inspection concluded that the licensee had developed and implemented a maintenance program that met 10 CFR 50.65, with a few exceptions including a Level IV violation which did not involve the EDGs. The staff concludes that the implementation of the Maintenance Rule at GGNS is consistent with the guidance and recommendations in NRC GL 94-01 for implementing a maintenance program for the removal of the accelerated EDG testing and reporting requirements in the TSs.

The licensee stated that the EDG reporting requirements were relocated to the Technical Requirements Manual in the Updated Final Safety Analysis Report (UFSAR) when the Improved TSs were approved for GGNS in Amendment 120, issued February 21, 1995. The licensee stated that these reporting requirements will be revised in accordance with 10 CFR 50.59 to be consistent with GL 94-01 after the above proposed changes are approved. This is acceptable to the staff.

3.0 CONCLUSION

NRC GL 94-01 advised licensees that they may request a license amendment to remove accelerated testing and reporting requirements for EDGs from their plant TSs. The licensee has proposed to change the current TSs for GGNS so that the requirements for EDG accelerated testing requirements are removed. The reporting requirements are in the UFSAR and may be changed in accordance with 10 CFR 50.59 after the testing requirements are changed. The staff has reviewed the proposed changes to the TSs and the Bases, and has found them to be consistent with the guidance and recommendations of GL 94-01. Therefore, the staff concludes that the proposed changes are acceptable.

4.0 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.

5.0 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 and changes surveillance requirements. 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 (62 FR 50003). 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.

6.0 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: M. Pratt

Date: February 9, 1998