



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. 101
License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Energy Operations, Inc. (the licensee) dated April 30, 1992, 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.

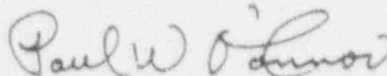
2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. NPF-29 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 101, 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



for John T. Larkins, Director
Project Directorate IV-1
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications

Date of Issuance: August 10, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 101

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

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3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the reactor protection system instrumentation channels shown in Table 3.3.1-1 shall be OPERABLE with the REACTOR PROTECTION SYSTEM RESPONSE TIME as shown in Table 3.3.1-2.

APPLICABILITY: As shown in Table 3.3.1-1.

ACTION:

- a. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place the inoperable channel and/or that trip system in the tripped condition* within twelve hours.
- b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, place at least one trip system** in the tripped condition within one hour and take the ACTION required by Table 3.3.1-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each reactor protection system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.1.1-1.

4.3.1.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months.

4.3.1.3 The REACTOR PROTECTION SYSTEM RESPONSE TIME of each reactor trip functional unit shown in Table 3.3.1-2 shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip system.

4.3.1.4 The provisions of Specification 4.0.4 are not applicable to the Channel Functional Test surveillance for the Intermediate Range Monitors for entry into the applicable OPERATIONAL CONDITIONS (as specified in Table 4.3.1.1-1) from OPERATIONAL CONDITION 1, provided the surveillances are performed within 12 hours after such entry.

*An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 6 hours or the ACTION required by Table 3.3.1-1 for that Trip Function shall be taken.

**The trip system need not be placed in the tripped condition if this would cause the Trip Function to occur. When a trip system can be placed in the tripped condition without causing the Trip Function to occur, place the trip system with the most inoperable channels in the tripped condition; if both systems have the same number of inoperable channels, place either trip system in the tripped condition.

GRAND GULF-UNIT 1

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TABLE 3.3.1-1
 REACTOR PROTECTION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	APPLICABLE OPERATIONAL CONDITIONS	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	ACTION
1. Intermediate Range Monitors:			
a. Neutron Flux - High	2 3, 4 5 ^(b)	3 3 3	1 2 3
b. Inoperative	2 3, 4 5	3 3 3	1 2 3
2. Average Power Range Monitor ^(c) :			
a. Neutron Flux - High, Setdown	2 3 5 ^(b)	3 3 3	1 2 3
b. Flow Biased Simulated Thermal Power - High	1	3	4
c. Neutron Flux - High	1	3	4
d. Inoperative	1, 2 3 5	3 3 3	1 2 3
3. Reactor Vessel Steam Dome Pressure - High	1, 2 ^(d)	2	1
4. Reactor Vessel Water Level - Low, Level 3	1, 2	2	1
5. Reactor Vessel Water Level-High, Level 8	1 ^(e)	2	4
6. Main Steam Line Isolation Valve - Closure	1 ^(e)	4	4
7. Main Steam Line Radiation - High	1, 2 ^(d)	2	5
8. Drywell Pressure - High	1, 2 ^(f)	2	1

TABLE 4.3.5.1-1

REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNITS</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>
a. Reactor Vessel Water Level - Low Low, Level 2	S	M	R ^(a)
b. Reactor Vessel Water Level - High, Level 8	S	M	R
c. Condensate Storage Tank Level - Low	S	M	R
d. Suppression Pool Water Level - High	S	M	R
e. Manual Initiation	NA	M ^(b)	NA

(a) Calibrate trip unit a: least once per 31 days.

(b) Manual initiation switches shall be tested at least once per 18 months during shutdown. All other circuitry associated with manual initiation shall receive a CHANNEL FUNCTIONAL TEST at least once per 31 days as a part of circuitry required to be tested for automatic system actuation.

INSTRUMENTATION

3/4.3.6 CONTROL ROD BLOCK INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.6. The control rod block instrumentation channels shown in Table 3.3.6-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.6-2.

APPLICABILITY: As shown in Table 3.3.6-1.

ACTION:

- a. With a control rod block instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.6-2, declare the channel inoperable until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, take the ACTION required by Table 3.3.6-1.

SURVEILLANCE REQUIREMENTS

4.3.6.1 Each of the above required control rod block trip systems and instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.6-1.

4.3.6.2 The provisions of Specification 4.0.4 are not applicable to the Channel Functional test surveillances for the Intermediate Range Monitors and Source Range monitors for entry into their applicable OPERATIONAL CONDITIONS (as specified in Table 4.3.6-1) from OPERATIONAL CONDITION 1, provided the surveillances are performed within 12 hours after such entry.

TABLE 3.3.6-1

CONTROL ROD BLOCK INSTRUMENTATION

<u>TRIP FUNCTION</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP FUNCTION</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>
1. <u>ROD PATTERN CONTROL SYSTEM</u>			
a. Low Power Setpoint	2	1, 2	60
b. High Power Setpoint	2	1#	60
2. <u>APRM</u>			
a. Flow Biased Neutron flux- Upscale	6	1	61
b. Inoperative	6	1, 2, 5	61
c. Downscale	6	1	61
d. Neutron Flux - Upscale, Startup	6	2, 5	61
3. <u>SOURCE RANGE MONITORS</u>			
a. Detector not full in ^(a)	4 2**	2## 5	61 62
b. Upscale ^(b)	4 2**	2## 5	61 62
c. Inoperative ^(b)	4 2**	2## 5	61 62
d. Downscale ^(c)	4 2**	2## 5	61 62
4. <u>INTERMEDIATE RANGE MONITORS</u>			
a. Detector not full in	6	2, 5	61
b. Upscale	6	2, 5	61
c. Inoperative ^(d)	6	2, 5	61
d. Downscale	6	2, 5	61
5. <u>SCRAM DISCHARGE VOLUME</u>			
a. Water Level-High	2	1, 2, 5*	62
6. <u>REACTOR COOLANT SYSTEM RECIRCULATION FLOW</u>			
a. Upscale	3	1	62
7. <u>REACTOR MODE SWITCH SHUTDOWN POSITION</u>	2	3, 4	63

INSTRUMENTATION

TABLE 3.3.6-1 (Continued)

CONTROL ROD BLOCK INSTRUMENTATION

ACTION

- ACTION 60 - Declare the RPCS inoperable and take the ACTION required by Specification 3.1.4.2.
- ACTION 61 - With the number of OPERABLE Channels:
- a. One less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 7 days or place the inoperable channel in the tripped condition within the next hour.
 - b. Two or more less than required by the Minimum OPERABLE Channels per Trip Function requirement, place at least one inoperable channel in the tripped condition within one hour.
- ACTION 62 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place the inoperable channel in the tripped condition within one hour.
- ACTION 63 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, initiate a rod block.

NOTES

- * With more than one control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.
 - ** OPERABLE channels must be associated with SRMs required OPERABLE per Specification 3.9.2.
 - # With THERMAL POWER greater than the Low Power Setpoint.
 - ## Whenever the related function is not bypassed as specified in notes (a) through (c).
- (a) This function shall be automatically bypassed if detector count rate is > 100 cps or the IRM channels are on range 3 or higher.
 - (b) This function shall be automatically bypassed when the associated IRM channels are on range 8 or higher.
 - (c) This function shall be automatically bypassed when the IRM channels are on range 3 or higher.
 - (d) This function shall be automatically bypassed when the IRM channels are on range 1.

TABLE 4.3.6-1

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>TRIP FUNCTION</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u> ^(a)	<u>OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED</u>
1. <u>ROD PATTERN CONTROL SYSTEM</u>				
a. Low Power Setpoint	NA	S/U ^(b) , Q	Q	1, 2
b. High Power Setpoint	NA	S/U ^(b) , Q	Q	1**
2. <u>APRM</u>				
a. Flow Biased Neutron Flux- Upscale	NA	Q	W ^{(f)(g)} , SA	1
b. Inoperative	NA	S/U, Q	NA	1, 2, 5
c. Downscale	NA	Q	W ^(h) , SA	1
d. Neutron Flux - Upscale, Startup	NA	S/U ^(b) , Q	Q	2, 5
3. <u>SOURCE RANGE MONITORS</u>				
a. Detector not full in	NA	S/U, W	NA	2, ## 5
b. Upscale	NA	S/U, W	Q	2, ## 5
c. Inoperative	NA	S/U, W	NA	2, ## 5
d. Downscale	NA	S/U, W	Q	2, ## 5
4. <u>INTERMEDIATE RANGE MONITORS</u>				
a. Detector not full in	NA	S/U, W	NA	2, 5
b. Upscale	NA	S/U, W	Q	2, 5
c. Inoperative	NA	S/U, W	NA	2, 5
d. Downscale	NA	S/U, W	Q	2, 5
5. <u>SCRAM DISCHARGE VOLUME</u>				
a. Water Level-High	NA	Q	R	1, 2, 5*
6. <u>REACTOR COOLANT SYSTEM RECIRCULATION FLOW</u>				
a. Upscale	NA	Q	Q	1
7. <u>REACTOR MODE SWITCH SHUTDOWN POSITION</u>	NA	R	NA	3, 4

INSTRUMENTATION

TABLE 4.3.6-1 (Continued)

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

NOTES:

- a. Neutron detectors may be excluded from CHANNEL CALIBRATION.
- b. Within 7 days prior to startup.
- c. [Deleted]
- d. [Deleted]
- e. [Deleted]
- f. This calibration shall consist of the adjustment of the APRM channel to conform to the power values calculated by a heat balance during OPERATIONAL CONDITION 1 when THERMAL POWER is greater than or equal to 25% of RATED THERMAL POWER. Adjust the APRM channel if the absolute difference is greater than 2% of RATED THERMAL POWER.
- g. This calibration shall consist of the adjustment of the APRM flow biased channel to conform to a calibrated flow signal.
- h. This calibration shall consist of verifying the trip setpoint only.
- * With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.
- ** With THERMAL POWER greater than the Low Power Setpoint.
- ## Whenever the related function is not bypassed as specified in Table 3.4.6-1 notes (a) through (c).

INSTRUMENTATION

SOURCE RANGE MONITORS

LIMITING CONDITION FOR OPERATION

- 3.3.7.6 At least the following source range monitor channels shall be OPERABLE.
- In OPERATIONAL CONDITION 2*, four.
 - In OPERATIONAL CONDITION 3 or 4, two.

APPLICABILITY: OPERATIONAL CONDITIONS 2*, 3 and 4.

ACTION:

- In OPERATIONAL CONDITION 2* with one of the above required source range monitor channels inoperable, restore at least 4 source range monitor channels to OPERABLE status within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- In OPERATIONAL CONDITION 3 or 4 with one or more of the above required source range monitor channels inoperable, verify all insertable control rods to be fully inserted in the core and lock the reactor mode switch in the Shutdown position within one hour.

SURVEILLANCE REQUIREMENTS

- 4.3.7.6 Each of the above required source range monitor channels shall be demonstrated OPERABLE by:
- Performance of a:
 - CHANNEL CHECK at least once per:
 - 12 hours in OPERATIONAL CONDITION 2*, and
 - 24 hours in OPERATIONAL CONDITION 3 or 4.
 - CHANNEL CALIBRATION** at least once per 18 months.
 - Performance of a CHANNEL FUNCTIONAL TEST:
 - Within 7 days prior to moving the reactor mode switch from the Shutdown position, and
 - At least once per 31 days#.
 - Verifying, prior to withdrawal of control rods, that the SRM count rate is at least 0.7 cps with the detector fully inserted.

*With IRM's on range 2 or below.

**Neutron detectors may be excluded from CHANNEL CALIBRATION.

#The provisions of Specification 4.0.4 are not applicable to the Source Range Monitor Channel Functional test surveillances for entry into OPERATIONAL CONDITIONS 2*, 3 or 4 from OPERATIONAL CONDITION 1, provided the surveillances are performed within 12 hours after such entry.

INSTRUMENTATION

TRAVERSING IN-CORE PROBE SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.3.7.7. The traversing in-core probe system shall be OPERABLE with:
- a. Five movable detectors, drives and readout equipment to map the core, and
 - b. Indexing equipment to allow all five detectors to be calibrated in a common location.

APPLICABILITY: When the traversing in-core probe is used for:

- a. Recalibration of the LPRM detectors, and
- b.* Monitoring the APLHGR, LHCR, MCPR, or MFLPD.

ACTION:

With the traversing in-core probe system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.7 The traversing in-core probe system shall be demonstrated OPERABLE by normalizing each of the above required detector outputs within 72 hours prior to use when required for the LPRM calibration function.

*Only the detector(s) in the location(s) of interest are required to be OPERABLE.