September 15, 1989

Docket No. 50-416

DISTRIBUTION
See attached sheet

Mr. W. T. Cottle
Vice President, Nuclear Operations
System Energy Resources, Inc.
Post Office Box 469
Port Gibson, Mississippi 39150

Dear Mr. Cottle:

SUBJECT: ISSUANCE OF AMENDMENT NO. 63 TO FACILITY OPERATING LICENSE NO. NPF-29 - GRAND GULF NUCLEAR STATION, UNIT 1, REGARDING CONTROL ROD TESTING (TAC NO. 73294)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 63 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 May 8, 1989.

The amendment changes the Technical Specifications (TS) Table 1.2, "Operational Conditions," and TS 3/4.9.1, "Reactor Mode Switch," to allow movement of a single control rod with the reactor in hot shutdown or cold shutdown for purposes such as venting of the control rod drive, timing of the control rod scram and friction testing of the control rod. The TS had previously permitted movement of a control rod in these operational conditions to recouple a rod to its drive.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

Original signed by

Lester L. Kintner, Senior Project Manager
Project Directorate II-1
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 63 to NPF-29
2. Safety Evaluation

cc w/enclosures:
See next page

OFC	:LA:PD21:DRPR	:PM:PD21:DRPR	:D:PD21:DRPR	:	:	:	:
NAME	:PAnderson	:LKintner:sw	:EAdensam	:	:	:	:
DATE	:09/ /89	:09/ /89	:09/15/89	:	:	:	:

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Mr. W. T. Cottle
System Energy Resources, Inc.

Grand Gulf Nuclear Station (GGNS)

cc:
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President
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Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
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AMENDMENT NO. 63 TO FACILITY OPERATING LICENSE NO. NPF-29 - GRAND GULF

Docket File
NRC PDR
Local PDR
PDII-1 Reading
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G. Lainas
E. Adensam
P. Anderson
L. Kintner
OGC
D. Hagan (MNBB 3302)
E. Jordan (MNBB 3302)
B. Grimes (9A2)
T. Meeks (4) (P1-137)
W. Jones (P-130A)
J. Calvo (11D3)
H. Richings
ACRS (10)
GPA/PA
ARM/LFMB

cc: Licensee/Applicant Service List

OFC

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

SYSTEM ENERGY RESOURCES INC., et al.

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 63
License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission) has found that

   A. The application for amendment by System Energy Resources, Inc., (the licensee), dated May 8, 1989, 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. 63 , are hereby incorporated into this license. System Energy Resources, 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

Original signed by LKintner for

Elinor G. Adensam, Director
Project Directorate II-1
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 15, 1989

OFC	:LA:PD21:DRPR	:PM:PD21:DRPR	OGC	:D:PD21:DRPR	:	:	:
NAME	:RAnderson	:LKintner:sw		:EAdensam	:	:	:
DATE	:09/ /89	:09/ /89	:09/ /89	:09/ /89	:	:	:

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ATTACHMENT TO LICENSE AMENDMENT NO. 63

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	Insert
1-11	1-11
3/4 9-1	3/4 9-1

TABLE 1.2

OPERATIONAL CONDITIONS

CONDITION	MODE SWITCH POSITION	AVERAGE REACTOR COOLANT TEMPERATURE
1. POWER OPERATION	Run	Any temperature
2. STARTUP	Startup/Hot Standby	Any temperature
3. HOT SHUTDOWN	Shutdown#,***	> 200°F
4. COLD SHUTDOWN	Shutdown#,##,***	≤ 200°F
5. REFUELING*	Shutdown or Refuel**,#	≤ 140°F

#The reactor mode switch may be placed in the Run or Startup/Hot Standby position to test the switch interlock functions provided that the control rods are verified to remain fully inserted by a second licensed operator or other technically qualified member of the unit technical staff.

##The reactor mode switch may be placed in the Refuel position while a single control rod drive is being removed from the reactor pressure vessel per Specification 3.9.10.1.

*Fuel in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.

**See Special Test Exceptions 3.10.1 and 3.10.3.

***The reactor mode switch may be placed in the Refuel position while a single control rod is being moved provided that the one-rod-out interlock is OPERABLE.

3/4.9 REFUELING OPERATIONS

3/4.9.1 REACTOR MODE SWITCH

LIMITING CONDITION FOR OPERATION

3.9.1 The reactor mode switch shall be OPERABLE and locked in the Shutdown or Refuel position. When the reactor mode switch is locked in the Refuel position:

a. A control rod shall not be withdrawn unless the Refuel position one-rod-out interlock is OPERABLE.

b. CORE ALTERATIONS shall not be performed using equipment associated with a Refuel position interlock unless at least the following associated Refuel position interlocks are OPERABLE for such equipment.

1. One-rod-out.
2. Refuel platform position.
3. Refuel platform main hoist fuel-loaded.

APPLICABILITY: OPERATIONAL CONDITION 5* #, OPERATIONAL CONDITIONS 3 and 4 when the reactor mode switch is in the Refuel position.

ACTION:

a. With the reactor mode switch not locked in the Shutdown or Refuel position as specified, suspend CORE ALTERATIONS and lock the reactor mode switch in the Shutdown or Refuel position.

b. With the one-rod-out interlock inoperable, lock the reactor mode switch in the Shutdown position.

c. With any of the above required Refuel position equipment interlocks inoperable, suspend CORE ALTERATIONS with equipment associated with the inoperable Refuel position equipment interlock.

---

* See Special Test Exceptions 3.10.1 and 3.10.3.##

The reactor shall be maintained in OPERATIONAL CONDITION 5 whenever fuel is in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.

##The reactor mode switch may be placed in the Run or Startup/Hot Standby position to test the switch interlock functions provided that all control rods are verified to remain fully inserted by a second licensed operator or other technically qualified member of the unit technical staff.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 63 TO FACILITY OPERATING LICENSE NO. NPF-29

SYSTEM ENERGY RESOURCES, INC.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated May 8, 1989, System Energy Resources, Inc. (SERI or the licensee), requested an amendment to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1 (GGNS-1). The proposed amendment would change the Technical Specifications (TS) by changing a TS footnote in Table 1.2, Operational Conditions, and the Applicability statement of TS 3/4.9.1, Reactor Mode Switch. Both changes were requested to permit single control rod withdrawal in the Hot Shutdown or Cold Shutdown Operational Condition (Conditions 3 or 4, respectively) with the Mode Switch in the Refuel position, rather than the normal Shutdown position.

Currently a single control rod full withdrawal is permitted, while the rod is being recoupled, in the Hot or Cold Shutdown Condition. This is done by placing the mode switch in the Refuel position, provided the one-rod-out interlock (which limits withdrawal to one rod) is operable. Permission for this withdrawal for recoupling is provided in a footnote to the Conditions 3 and 4 mode switch position requirement statements in TS Table 1.2. SERI proposes to change this by replacing the word "recoupled" with "moved" in the footnote. This would provide permission to move a single rod in those operational conditions for purposes other than recoupling, e.g., for post scram venting, friction testing or scram testing.

Currently there is no TS required surveillance related to the rod withdrawal for recoupling permitted for Conditions 3 and 4 in Table 1.2. SERI proposes to augment the Applicability statement of TS 3/4.9.1 to include "Operational Conditions 3 and 4 when the reactor mode switch is in the Refuel position." This would provide, via (unchanged) surveillance specifications 4.9.1.2 and 4.9.1.3, requirements for testing and operability demonstration of the one-rod-out interlock.

2.0 EVALUATION

The NRC staff has reviewed the licensee's submittal. The following factors are of primary importance in considering the acceptability of the proposed changes.

The proposed change to TS Table 1.2 is similar to existing approved TS Table 1.2 specifications in other BWR6 reactors (e.g., Clinton, Perry and River Bend). These were either in the initial TS or a result of an approved change similar to that proposed for GGNS-1.

Since the mode switch in the Shutdown position blocks rod movement, the movement of the switch to Refuel (or to Startup or Run) is necessary to move a rod for recoupling (e.g., after repairs on the drive) or any other purpose.

Rod movement in the Refuel position is limited to one rod by the redundant logic of the one-rod-out interlock.

Because of the required shutdown margin (verified before or during startup) with one rod out, and the interlock, it is reasonably assured that the reactor will remain subcritical with the mode switch in the Refuel position.

The proposed change to TS Table 1.2 does not change the current permission to withdraw a single rod in Operational Conditions 3 and 4, but it does expand the permitted testing and maintenance activities for withdrawal (e.g., scram time testing). While this might increase the frequency of withdrawals in Operational Conditions 3 and 4, it does not increase the probability of withdrawal events since the withdrawals would occur in Operational Conditions 1, 2, or 5 if not 3 or 4.

Maintenance and Testing are currently allowed (in all BWRs) in Operational Conditions 1 and 2 (Startup and Power Operation, respectively), where they are not under the control of the one-rod-out interlock, as well as in Condition 5 (Refueling).

The change to TS 3/4.9.1 provides appropriate surveillance for the one-rod-out interlock for the Refuel mode switch position in Operational Conditions 3 and 4, as it does currently for Operational Condition 5.

The above factors indicate that the change to TS Table 1.2 to permit single rod withdrawal in Operational Conditions 3 and 4 for purposes in addition to recoupling is in accord with previous staff approvals and existing TS in other BWR6 reactors, provides for needed operations of maintenance and testing of rods, is not significantly different from currently permitted operations of rod withdrawal and does not increase the probability of a rod withdrawal event. The change to TS 3.4.9.1 provides additional and appropriate surveillance requirements for rod withdrawal in Operational Conditions 3 and 4 not currently required for permitted withdrawals. Therefore, the staff concludes these proposed changes to the GGNS-1 TS are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes the surveillance requirements. The 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 off site; and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

4.0 CONCLUSION

The Commission made a proposed determination that this amendment involves no significant hazards consideration, which was published in the Federal Register (54 FR 29412) on July 12, 1989, and consulted with the State of Mississippi. No public comments or requests for hearing were received, and the State of Mississippi did not have any comments.

The staff 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, and (2) 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.

Principal Contributor: Howard Richings

Dated: September 15, 1989