

DEC 02 1987

Docket No.: 50-416

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Mr. Oliver D. Kingsley, Jr.
Vice President, Nuclear Operations
System Energy Resources, Inc.
Post Office Box 23054
Jackson, Mississippi 39205

Dear Mr. Kingsley:

SUBJECT: ISSUANCE OF AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE
NO. NPF-29 - GRAND GULF NUCLEAR STATION, UNIT 1, REGARDING
CHANGES TO ATTACHMENT 1 TO THE LICENSE (TAC NO. 65708)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 37 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1 (GGNS Unit 1). This amendment consists of changes to Attachment 1 to the license in response to your application dated July 1, 1987, as revised August 4, 1987.

The amendment changes Attachment 1 to the GGNS Unit 1 Operating License No. NPF-29, which requires completion of emergency response capabilities. Attachment 1 is changed by deleting the requirement for post-accident flow monitoring instrumentation in the standby liquid control system and deferring the installation date for post-accident neutron flux monitoring instrumentation from the second refueling outage to the third refueling outage.

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,

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

Enclosures:

1. Amendment No. 37 to NPF-29
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. Oliver D. Kingsley, Jr.
System Energy Resources, Inc.

Grand Gulf Nuclear Station (GGNS)

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

AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE NO. NPF-29 - GRAND GULF, UNIT 1

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UNITED STATES
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MISSISSIPPI POWER & LIGHT COMPANY

SYSTEM ENERGY RESOURCES, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 37
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 July 1, 1987, as revised August 4, 1987, 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.

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2. Accordingly, Attachment 1 to Facility Operating License NPF-29 is amended by changes, as indicated by lines in the margin to read as follows:

(c) Regulatory Guide 1.97 - Application to Emergency Response Facilities


- | | |
|---|---|
| (1) Submit a report to the NRC describing how the requirements of Supplement 1 to NUREG-0737 have been or will be met. | February 1985 |
| (2) Implement (installation or upgrade) requirements of R.G. 1.97 with the exception of flux monitoring and coolant level monitoring. | Prior to startup following first refueling outage. |
| (3) Implement (installation or upgrade) requirements of R.G. 1.97 for coolant level monitoring. | Prior to startup following second refueling outage. |
| (4) Implement (installation or upgrade) requirements of R.G. 1.97 for flux monitoring. | Prior to startup following third refueling outage. |


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


FOR THE NUCLEAR REGULATORY COMMISSION

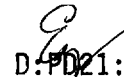
Elinor G. Adensam, Director
Project Directorate II-1
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Date of Issuance: December 2, 1987


LA:PD21:DRPR
PAnderson
11/24/87


PM:PD21:DRPR
LKintner
11/24/87


OGC
R. Bachmann
11/29/87


D:PD21:DRPR
EAdensam
11/30/87



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE NO. NPF-29

MISSISSIPPI POWER & LIGHT COMPANY

SYSTEM ENERGY RESOURCES, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

Regulatory Guide (R.G.) 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," recommends that Category 2 standby liquid control system (SLCS) flow monitoring instrumentation and Category 1 neutron flux monitoring instrumentation be installed for monitoring post-accident conditions. The present Attachment 1 for the Grand Gulf Nuclear Station, Unit 1, Operating License specifies that the R.G. 1.97 recommendations for SLCS flow monitoring and neutron flux monitoring systems be implemented prior to startup following the second refueling outage.

By letter dated July 1, 1987, as revised August 4, 1987, System Energy Resources, Inc. (the licensee) requested an amendment to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. The proposed amendment would change the requirements in License Condition 2.C.(36) (Attachment 1) by deleting the requirement for post-accident flow monitoring instrumentation in the SLCS and extending the implementation date for neutron flux monitoring instrumentation from the second refueling outage to the third refueling outage.

2.0 EVALUATION

The licensee's request that the requirement to install SCLS flow monitoring instrumentation by startup following the second refueling outage be deleted is based on its conclusion that the R.G. 1.97 recommendations for monitoring of SLCS flow are met by the use of alternative instrumentation. In the licensee's statements of conformance to R.G. 1.97, transmitted by letter dated February 28, 1985, the licensee stated that the reactor operator can verify SLCS pump operation by use of operating indicator lights and by a decrease in the SLCS storage

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tank level. Other parameters that can be monitored to verify SLCS operation include squib valve position, SLCS tank outlet valve position and neutron flux. In the staff's safety evaluation of the licensee's conformance to R.G. 1.97, issued January 12, 1987, the staff concluded that use of alternative instrumentation proposed by the licensee for SLCS flow monitoring was acceptable to verify SLCS operation following an accident. Accordingly, the staff concludes that deletion of the license condition requirement for post-accident flow monitoring in the SLCS is acceptable.

The licensee's request for a delay in the implementation of a Category 1 neutron flux monitoring system until startup following the third refueling outage is based on its inability to procure and install a qualified system during the second refueling outage. The licensee states that while some industry advances have been realized in the area of neutron flux monitoring system development, overall development has not progressed enough to allow the evaluation, procurement, and installation of a Category 1 system in the time frame allowed by the license condition. The licensee has committed to follow the industry development of Category 1 neutron flux monitoring instrumentation and to either implement a system that would comply with Category 1 requirements or upgrade the present system. The licensee is a participant in the BWR Owners Group (BWROG) R.G. 1.97 Neutron Flux Monitoring Subcommittee, which is presently evaluating these requirements. A licensing topical report is being prepared to recommend a post-accident BWR neutron flux monitoring system design. The licensee will use the results of the BWROG effort in the evaluation of a new system for GGNS Unit 1, or for the upgrading of the present system. The licensee states that an anticipated transient without scram (ATWS) is the only accident for which GGNS Emergency procedures require verification of reactor shutdown by a neutron flux monitor. Since an ATWS does not result in harsh environmental conditions in the dry well, the present neutron flux monitoring system is expected to be capable of verifying reactor shutdown for an ATWS. For accidents in which a scram of control rods occurs, shutdown status is available through the control rod position indication system, which meets R.G. 1.97 requirements.

The staff has been informed that industry has developed wide range neutron flux monitoring systems that satisfy the criteria of Regulatory Guide 1.97. However, the staff agrees with the licensee's conclusion that these newly developed systems cannot be evaluated, processed, and installed during the second refueling outage which started November 6, 1987. Therefore, the staff concludes that the licensee should evaluate these newly developed systems and install neutron flux monitoring instrumentation that fully conforms to the recommendations of R.G. 1.97 by the third refueling outage. The staff also concludes that the existing neutron flux instrumentation installed in GGNS Unit 1 is acceptable for operation during the third fuel cycle because the present neutron flux monitoring system can be used to verify shutdown status for an ATWS and control rod position indication can be used for other accidents. Accordingly, the change in the license condition to delay the implementation of a R.G. 1.97 Category, neutron flux monitoring system until startup following the third refueling outage is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to 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. 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 offsite 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 (52 FR32205) on August 26, 1987, 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 the security nor to the health and safety of the public.

Principal Contributor: B. Marcus

Dated: December 2, 1987