

September 30, 1987

Docket No.: 50-416

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

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Dear Mr. Kingsley:

SUBJECT: CHANGE TO TECHNICAL SPECIFICATIONS REGARDING THE SETPOINT FOR THE SLCS PUMP RELIEF VALVE (TAC NO. 65724)

RE: GRAND GULF NUCLEAR STATION, UNIT 1

The Commission has issued the enclosed Amendment No. 36 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. This amendment consists of changes to the Technical Specifications (TSs) in partial response to your application dated July 6, 1987, as supplemented September 14, 1987.

The application dated July 6, 1987 requested three changes to the Technical Specifications: (1) an increase in the setpoint for the pump relief valve in a surveillance requirement for the standby liquid control system (SLCS); (2) revision of certain action statements to allow entry into operational conditions, provided the requirements in the action statements are met; and (3) deletion of the requirements for certain isolation valves and associated instrumentation to be operable in refueling shutdowns. This amendment provides the requested increase in the setpoint for the pump relief valve in the SLCS. The other two requested changes will be addressed separately.

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-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 36 to NPF-29
2. Safety Evaluation

cc w/enclosures:
See next page

PD22
DKintner
9/12/87

for
L. Kintner
9/22/87

for
PD22
HBerkow
9/12/87

EB
9/22
MEB
TMarsh
9/23/87

DF
RSB
WHodges
9/23/87

OGCBeth
MYoung
9/25/87

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

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. 36
License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Mississippi Power & Light Company, System Energy Resources, Inc. (formerly Middle South Energy, Inc.) and South Mississippi Electric Power Association, (the licensees) dated July 6, 1987, as supplemented September 14, 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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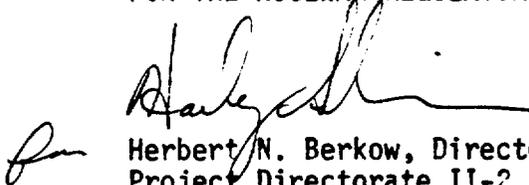
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-29 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 36 , 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



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 30, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 36

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. The corresponding overleaf page(s) have been provided to maintain document completeness.

Remove

3/4 1-19

Insert

3/4 1-19

REACTIVITY CONTROL SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 31 days by;
 - 1. Starting both pumps and recirculating demineralized water to the test tank.
 - 2. Verifying the continuity of the explosive charge.
 - 3. Determining that the available weight of sodium pentaborate is greater than or equal to 5500 lbs and the concentration of boron in solution is within the limits of Figure 3.1.5-1 by chemical analysis.*
 - 4. Verifying that each valve, manual, power operated or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- c. Demonstrating that, when tested pursuant to Specification 4.0.5, the minimum flow requirement of 41.2 gpm at a pressure of greater than or equal to 1220 psig is met, without actuation of the pump relief valve.
- d. At least once per 18 months during shutdown by;
 - 1. Initiating one of the standby liquid control system subsystems, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available by pumping demineralized water into the reactor vessel. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch which has been certified by having one of that batch successfully fired. Both system subsystems shall be tested in 36 months.
 - 2. Demonstrating that the pump relief valve opens within 3% of the nominal valve setpoint of 1400 psig and verifying that the relief valve does not actuate during recirculation to the test tank.
 - 3. **Demonstrating that all heat traced piping between the storage tank and the reactor vessel is unblocked by pumping from the storage tank to the test tank and then draining and flushing the piping with demineralized water.
 - 4. Demonstrating that the storage tank heater is OPERABLE by verifying the expected temperature rise for the sodium pentaborate solution in the storage tank after the heater is energized.

*This test shall also be performed anytime water or boron is added to the solution or when the solution temperature drops below the limit of Figure 3.1.5-1.

**This test shall also be performed whenever both heat tracing circuits have been found to be inoperable and may be performed by any series of sequential, overlapping or total flow path steps such that the entire flow path is included.

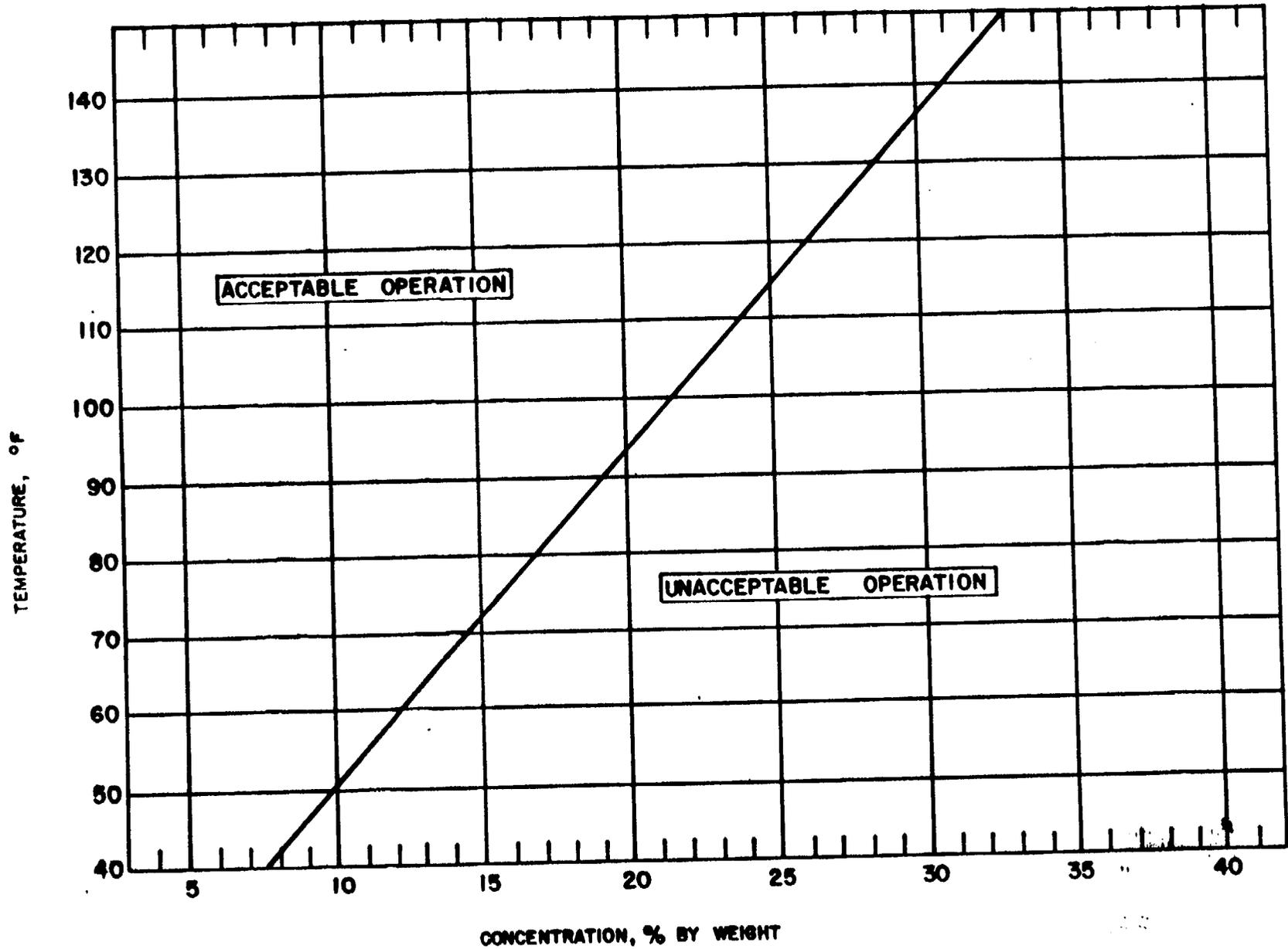


FIGURE 3.1.5-1 SODIUM PENTABORATE SOLUTION TEMPERATURE/CONCENTRATION REQUIREMENTS



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 36 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

INTRODUCTION

By letter dated July 6, 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 licensee requested three changes to the Technical Specifications: (1) an increase in the setpoint for the pump relief valve in a surveillance requirement for the standby liquid control system (SLCS); (2) revision of certain action statements to allow entry into operational conditions, provided the requirements in the action statements are met; and (3) deletion of the requirements for certain isolation valves and associated instrumentation to be operable in refueling shutdowns. This evaluation addresses the requested increase in the setpoint for the pump relief valve in the SLCS. The other two requested changes will be addressed separately.

By letter dated September 14, 1987, the licensee proposed further changes to the surveillance requirements of the SLCS. These proposed changes clarified the requirements for running the surveillance tests, but did not change the requested increase in the setpoint for the SLCS pump relief valve. Because no substantive changes were requested in the September 14, 1987 letter, the application was not renoticed.

EVALUATION

The Technical Specifications (TSs) for the SLCS require that the SLCS pumps be tested quarterly to demonstrate the capability of developing a minimum flow of 41.2 gpm at a pressure of greater than or equal to 1220 psig. This surveillance requirement has been difficult to meet because the SLCS pump relief valve lifts occasionally during the running of the test. The SLCS pumps are piston-type, positive displacement pumps. Each time the piston strokes, the discharge pressure oscillates. At the specified minimum flow discharge pressure of 1220 psig, each piston stroke causes the discharge pressure to rise approximately 100 psi, bringing the total discharge pressure to about 1320 psig. Surveillance Requirement 4.1.5.d.2 currently requires the pump relief valve setpoint to be less than or equal to 1386 psig. The relief valves are ASME Class 2 valves and, as such, have a 3% tolerance in the set pressure, in accordance with the ASME Code. Since there is a 3% tolerance on the relief valve opening, a very

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small margin exists between the peak system pressure and the relief valve minimum opening pressure during the pump surveillance tests. Because the system test pressure is difficult to control in the test configuration, the relief valve sometimes opens.

The SLCS piping design pressure is 1400 psig at the pump discharge. This piping is ASME Class 2 piping. The ASME Code, Section III, permits the over-protection relief valve to be set at the design pressure and requires the relief valve to open within 3% of the setpoint. In order to minimize the potential for opening the relief valve during the running of the test, it is proposed that the relief valve setpoint be increased to 1400 psig and that Surveillance Requirement 4.1.5.d.2 be changed to verify that the relief valve opens within 3% of the setpoint pressure.

The NRC staff has reviewed the proposed increase in the SLCS pump relief valve setpoint. The proposed setpoint of 1400 psig is in accordance with the ASME Code requirements and therefore the relief valve would continue to protect the SLCS discharge piping.

The staff concludes that the proposed increase in the setpoint would improve the capability to perform surveillance tests of the SLCS without impairing system integrity. The increased setpoint meets the ASME Code requirements for system integrity and is therefore acceptable.

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 and changes to 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 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.

CONCLUSION

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.

Dated: September 30, 1987

Principal Contributors:

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L. L. Kintner, Project Directorate II-2, DPR-I/II