

Docket No.: 50-416

July 22, 1986

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Mr. Oliver D. Kingsley, Jr.
Vice President, Nuclear Operations
Mississippi Power & Light Company
Post Office Box 23054
Jackson, Mississippi 39205

Dear Mr. Kingsley:

SUBJECT: MODIFYING LICENSE CONDITION 2.C.(33)(d)(2)

RE: Grand Gulf Nuclear Station, Unit 1

The Commission has issued the enclosed Amendment No. 13 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1.

This amendment modifies license condition 2.C.(33)(d)(2) regarding the schedule for completion of the hydrogen control program to be consistent with scheduler requirements in 10 CFR 50.44, "Standard for combustible gas control system in light-water-cooled power reactors" in response to your application dated December 27, 1985.

By letter dated January 31, 1986, Mississippi Power & Light Company, proposed June 30, 1987 as the date for completion of the hydrogen control program and submittal of the final analysis required by 10 CFR 50.44. The staff concludes that this date is acceptable.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

LS

Lester L. Kintner, Project Manager
BWR Project Directorate No. 4
Division of BWR Licensing

Enclosures:

1. Amendment No. 13 to License No. NPF-29
2. Safety Evaluation

cc w/enclosures:
See next page

PD#4/PM
MO'Brien
7/18/86

ML
PD#4/PM
LKintner:lb
7/19/86

~~FOB/D
DVassallo
1/18/86~~

OELD *WJ*
Young
7/11/86

PD#4/D
WButler
7/19/86

*Approved revision to SE
check state & secy before
issuance*

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Mr. Oliver D. Kingsley, Jr.
Mississippi Power & Light Company

Grand Gulf Nuclear Station

cc:

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

MISSISSIPPI POWER & LIGHT COMPANY
MIDDLE SOUTH ENERGY, INC.
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION
DOCKET NO. 50-416
GRAND GULF NUCLEAR STATION, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 13
License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission) has found that
 - A. The application for amendment by Mississippi Power & Light Company, et al. (the licensee) dated December 27, 1985, as supplemented January 31, 1986, 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, paragraph 2.C.(33)(d)(2) of Facility Operating License No. NPF-29 is hereby amended to read as follows:
 - (2) (a) MP&L shall complete its research program on hydrogen control to show that the hydrogen control system will perform its intended function in a manner that provides adequate safety margins. This research program shall be completed on a schedule which reflects the requirements of 10 CFR 50.44.
 - (b) If it is determined that plant modifications are required to obtain NRC approval that an adequate hydrogen control system for Grand Gulf is installed, then these modifications shall be completed on a schedule which is approved by the NRC.

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

FOR THE NUCLEAR REGULATORY COMMISSION

/s/ L.L. Kintner
for Walter R. Butler, Director
BWR Project Directorate No. 4
Division of BWR Licensing

Date of Issuance: July 22, 1986

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MQ/Brien
7/8/86

PK
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LKintner:lb
7/8/86

W. H. Young
OELD *with reference to SE*
7/11/86
PD#4/D
WButler *W*
7/9/86



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 13 TO FACILITY OPERATING LICENSE NO. NPF-29

MISSISSIPPI POWER & LIGHT COMPANY, ET AL.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated December 27, 1985, the licensee requested an amendment to the operating license for Grand Gulf Nuclear Station, Unit 1. The amendment would modify license condition 2.C.(33)(d)(2) which requires confirmation of the adequacy of the hydrogen control system prior to startup following the first refueling outage. The proposed modified license condition is as follows:

- (2) (a) MP&L shall complete its research program on hydrogen control to show that the hydrogen control system will perform its intended function in a manner that provides adequate safety margins. This research program shall be completed on a schedule which reflects the requirements of the recently published final Hydrogen Control Rule.
- (b) If it is determined that plant modifications are required to obtain NRC approval that an adequate hydrogen control system for Grand Gulf is installed, then these modifications shall be completed on a schedule which is approved by the NRC.

In response to the Staff's letter dated January 17, 1986 requesting additional information, the licensee submitted by letter dated January 31, 1986, additional support for the proposed license condition modification.

2.0 EVALUATION

In the staff's Grand Gulf Nuclear Station Safety Evaluation Report (SER) Supplement 3, July 1982, the staff presented its evaluation of the hydrogen control system at Grand Gulf and concluded that the hydrogen control system was acceptable for full-power licensing on an interim basis while the final confirmation of its adequacy was being completed. In SER Supplement 5,

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August 1984, the staff described its evaluation of additional research and recommended a license condition to identify the principal elements of the research effort required to demonstrate adequate performance of the hydrogen control system prior to startup following the first refueling. The resulting License Condition 2.C.(33)(d) was issued November 1, 1984 in the full power license. In compliance with 10 CFR 50.44 as amended January 25, 1985, the licensee submitted by letter dated June 24, 1985, a proposed date of December 31, 1986, for completion of the research program and submittal of the final analysis of the hydrogen control system analysis.

By letter dated October 22, 1985, the staff found the proposed schedule for meeting the rule on hydrogen control systems was unacceptable since the proposed date of December 31, 1986 was not consistent with the present license condition as required by Paragraph 50.44(c)(3)(vii)(C) of 10 CFR Part 50. At the time, startup following the first refueling outage was scheduled for August 1, 1986. Presently startup is scheduled for November 1986. By letter dated December 27, 1985 the licensee proposed the modified license condition which reflects the requirements of the hydrogen control rule and deletes a specific time for completion of the program.

The Hydrogen Control Rule requires justification that the hydrogen control system is acceptable by completing a suitable program of experiment and analysis on a schedule approved by the staff. Through its endorsement of the Hydrogen Control Owners Group (HCOG) research program, the licensee has committed to hydrogen control system testing and analysis. Due to delays in the HCOG program caused by the expansion of the analysis and test program in response to staff concerns, and to delays in the test facility construction and operation, the requirement to complete the program prior to startup following the first refueling outage cannot be met and license condition 2.C.(33)(d)(2) needs to be modified. By letter dated January 31, 1986 the licensee stated that the HCOG program would be completed and the final analysis for Grand Gulf Nuclear Station will be submitted June 30, 1987.

Part (a) of the proposed modified license condition stipulates completion of the research program to resolve the hydrogen control issue on a schedule which reflects the requirements of the hydrogen control rule. The licensee has complied with the schedular requirements of the rule by proposing a completion date of June 30, 1987. The proposed completion date of June 30, 1987 for resolving the hydrogen control issue is acceptable, because the licensee is an active participant in the HCOG and preliminary results of the HCOG research program to date indicate that the licensee's analyses which were evaluated in SER Supplement Nos. 3 and 5 are conservative. These preliminary HCOG results indicate that lower temperatures would exist at essential equipment locations, and that few equipment modifications will be needed to further assure equipment survivability during a degraded core accident. Part (b) of the proposed license condition requires plant modifications to provide an adequate hydrogen control system, if required, to be completed on a schedule approved by the staff.

The staff concludes that the preliminary analysis performed by the licensee provides a basis for continued support of interim operation at full power until the final analysis has been completed. There is reasonable assurance that the Grand Gulf hydrogen ignition system will function to control the

burning of hydrogen during a degraded core accident so that there is adequate protection against containment failure.

Accordingly, the staff concludes that it is acceptable to change License Condition 2.C.(33)(d)(2) regarding the test and analytical program for confirmation of adequate performance of the hydrogen control system from a fixed date to the scheduler requirements of the hydrogen control rule (10 CFR 50.44). The licensee's proposed date of June 30, 1987 for completion of the program and submittal of the final analysis required by the hydrogen control rule is also acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

The amendment involves a change of requirements of facility components located within the restricted area as defined in 10 CFR Part 20. The Commission made a proposed determination that the amendment involves no significant hazards consideration, and there have been no comments on that proposal. Based on its evaluation, the staff concludes that there is no significant change in types or significant increase in the amounts of any effluents that may be released offsite. There is no significant increase in individual or cumulative occupational radiation exposure because the changes do not affect personnel exposure. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (51 FR 10466) on March 26, 1986 and consulted with the state of Mississippi. No public comments were received, and the state of Mississippi did not have any comments.

We have 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 issuance of this amendment will not be inimical to the common defense and the security or to the health and safety of the public.

Principal Contributor: Frank Witt, Plant Systems Branch, DBL

Dated: July 22, 1986