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Docket No.: 50-416

Mr. J. P. McGaughy, Jr.
Vice President - Nuclear Production
Mississippi Power & Light Company
P. O. Box 1640
Jackson, Mississippi 39205

Dear Mr. McGaughy:

Subject: Amendment No. 11 to Facility Operating License No. NPF-13 -
Grand Gulf Nuclear Station, Unit 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 11 to Facility Operating License No. NPF-13 for the Grand Gulf Nuclear Station, Unit 1. This amendment is in response to MP&L letters dated June 16, 1983, August 18, 1983 and August 23, 1983. This Amendment grants changes to a license condition.

The changes to the license condition relate to the completion of the Control Room Envelope Leak Tightness Test. We find that you have satisfactorily completed this test for interim operation through February 1984. Additional information, as specified in the revised license condition, will be required by March 1, 1984.

A copy of the related staff evaluation supporting Amendment No. 11 to Facility Operating License NPF-13 is enclosed. The Notice of Issuance will be included in the Commission's next regular monthly Federal Register Notice.

Sincerely,

Original signed by

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosures:

1. Amendment No. 11 to NPF-13
2. Staff Evaluation

cc w/ enclosures: See next page

DL
DL:LB#2/PM
DHouston:pt
9/20/83

DL
DL:LB#4/LA
EGHouston
9/20/83

AS
DL:LB#2/BC
ASchwencer
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MEW
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TNovak
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Grand Gulf

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Vice President
Nuclear Production
Mississippi Power & Light Company
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Conner and Wetterhahn
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Mr. Larry Dale
Mississippi Power & Light Company
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Mr. R. Trickovic, Project Engineer
Grand Gulf Nuclear Station
Bechtel Power Corporation
Gaithersburg, Maryland 20760

Mr. Alan G. Wagner
Resident Inspector
Route 2, Box 150
Port Gibson, Mississippi 39150

Grand Gulf

cc: (continued)

President
Claiborne County Board of Supervisors
Port Gibson, Mississippi 39150

Office of the Governor
State of Mississippi
Jackson, Mississippi 39201

U. S. Environmental Protection Agency
Attn: EIS Coordinator
Region IV Office
345 Courtland Street, N. E.
Atlanta, Georgia 30309

Dr. Alton B. Cobb
State Board of Health
P. O. Box 1700
Jackson, Mississippi 39205



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

MISSISSIPPI POWER AND 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

License No. NPF-13
Amendment No. 11

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The applications for the amendment filed by the Mississippi Power and Light Company dated June 16, 1983, August 18, 1983, and August 23, 1983, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the applications, the provisions of the Act, and the 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 as follows:
 - A. Change Section 3 of Attachment 1 to License NPF-13 to read:
 - (3) Prior to March 1, 1984, the licensee shall submit additional information as specified in MP&L letter dated August 23, 1983, that is acceptable to the NRC in support of the calculations of control room operator doses due to control room inleakage under accident conditions. Specifically, such information shall include the results of plant specific wind tunnel tests to establish an appropriate value for the concentration coefficient (K) used in establishing X/Q values and the results of other analyses performed in support of a limit on control room leakage higher than 263 cfm but less than or equal to 590 cfm. In the interim, based on a measured containment leak rate of 0.072%/day, a control room envelope leak rate of up to 590 cfm is acceptable.

3. This amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed L,

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Date of Issuance: September 23 , 1983

*See previous concurrences

DL:LB#2/PM *	DL:LB#2/LA*	DL:LB#2/BC*	OELD*	DL:AD/L	DL:DIR
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9/20/83	9/20/83	9/20/83	9/22/83	9/23/83	9/23/83

3. This amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Date of Issuance: September , 1983

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MDHouston:pt
9/20/83

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ASchwencer
9/20/83

ME Wagner
OELB
ME Wagner
9/22/83



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

SAFETY EVALUATION
AMENDMENT NO. 11 TO NPF-13
GRAND GULF NUCLEAR STATION, UNIT 1
DOCKET NO. 50-416

Introduction

Section 3 of Attachment 1 to Grand Gulf Unit 1 License NPF-13 contains a condition that prior to exceeding 1 percent power, the licensee shall complete to the satisfaction of the NRC, a control room envelope leak tightness test.

On March 8, 1983, in test CZ51PT01, Revision 1, MP&L performed a control room leak test in which the leakage at 1/8" water gauge pressure was measured to be 435 cfm. This leakage was substantially higher than the 263 cfm assumed for the FSAR analysis.

By letter dated June 16, 1983, MP&L presented control room doses for an assumed 590 cfm leak rate calculated using doses assessment methodology as described therein. The NRC staff by letter dated August 1, 1983, found the analytical bases for these doses unacceptable and met with MP&L on August 4, 1983, to discuss NRC staff concerns. At that meeting, MP&L contended that several conservatisms in the NRC staff's computation of control room accident doses should be reduced, and that these reductions would permit the Grand Gulf control room to meet General Design Criterion (GDC) 19 with the higher proposed control room leak rate. The largest factor by which the NRC staff and licensee differ is the atmospheric dispersion to be expected of releases from the containment prior to arrival at the control room intake. The NRC staff requested that MP&L have scale model tests performed to establish a reliable basis for estimating this atmospheric dilution, and it was estimated that such tests could be performed and the results reviewed within six months. Following that meeting, MP&L submitted additional analytical data on August 18, 1983.

Evaluation

The August 18, 1983 submittal reported the results of this recalculation of the control room operator doses, which used the same meteorological parameters as in both the FSAR and SER, but which assumed control room and tested containment leak rates of 590 cfm and 0.072%/day, respectively. The NRC staff has reviewed this submittal and confirms that the control room doses obtained by this calculation meet the SRP Section 6.4 criteria.

MP&L has also committed to supply additional information within six months. Specifically, in an August 23, 1983 letter, MP&L stated that it will conduct plant-specific wind tunnel tests to establish an appropriate value for the concentration coefficient (K) used in obtaining X/Q values in the meteorological model for calculating doses. Also, as discussed in its August 23, 1983 letter, MP&L will perform other analyses in support of a control room leakage on the order of that measured in the March 8, 1983 test.

It is the NRC staff's position that in the absence of a demonstrated basis for lesser consequences, a conservative estimate must show compliance to the GDC. The containment leak rate of 0.35%/day was used in the SER computation of Grand Gulf accident consequences in order to assure that degradation of the containment over its life-time will not lead to excessive accident consequences. The MP&L data indicates that containment leakage does not increase rapidly, and has generally remained at its original value during the early years of a plant's operation. While it would be inappropriate to assume that the Grand Gulf containment leak rate would remain at its present tested level of 0.072%/day for the life of the plant, it can be expected to remain at a low value for the next six months. This period of time would permit MP&L to demonstrate a firm basis for greater atmospheric dilution of containment leakage specifically applicable to the Grand Gulf building configuration.

On the basis of the results of the recalculation of the control room operator doses, MP&L proposed that interim operation of Grand Gulf Unit 1 be permitted at the higher control room leakage rate of 590 cfm for six months pending final resolution of other factors used in judging compliance with General Design Criterion 19.

The NRC staff concludes that an appropriate basis has been established, as indicated above, for operation during the six month period.

Accordingly, pending submittal and approval of the additional information identified in MP&L August 18 and 23, 1983 letters, the NRC staff finds that MP&L has satisfied the conditions of Section 3 of Attachment 1 to NPF-13 through February 1984. We consider this to be an extension of our review necessary for full power operation, resulting from the fact that the values initially assumed prior to plant completion required validation and/or reconsideration based on as-built plant conditions as actually measured.

In addition to the tests and analysis described above, the NRC staff believes that efforts be continued by MP&L to identify and seal leakage paths to the control room. Such action would provide margin to offset potential long term degradation of the containment and control room pressure boundaries and minimize reliance on the results of the above planned tests and analyses.

Environmental Consideration

The Commission has determined that the issuance of this amendment will not result in any environmental impacts other than those evaluated in the Final Environmental Statement since the activity authorized by the amendment is encompassed by the overall action evaluated in the Final Environmental Statement dated September 1981.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) this amendment results as part of the review for the full power operating license (43 FR 32903), (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Dated: September 23, 1983