Mr. William A. Eaton
Vice President, Operations GNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

April 1999

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 - ISSUANCE OF AMENDMENT RE: EXTENSION OF EXPIRATION DATE OF OPERATING LICENSE (TAC NO. M92993)

Dear Mr. Eaton:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 137 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. This amendment is in response to the Entergy Operations, Inc. (EOI), application dated July 21, 1995. Although the EOI request was technically sound and not inconsistent with the regulations, there were policy issues and implications associated with granting the amendment. Consequently, in SECY-98-296 dated December 21, 1998, the staff informed the Commission of its intent and the policy issues. On March 30, 1999, the Commission approved the staff's recommendation to grant the amendment.

The amendment extends the expiration date of the operating license from June 16, 2022, to November 1, 2024. The extended date is 40 years from when the full power license was issued on November 1, 1984, in accordance with Section 103.c of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.51, 50.56, and 50.57.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice. The enclosed evaluation would not be sufficient for a request for license renewal under 10 CFR Part 54.

Sincerely,
original signed by:
S. Patrick Sekerak, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-416
Enclosures: 1. Amendment No. 137 to NPF-29
2. Safety Evaluation
cc w/encls: See next page

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JHannon	RGramm	JCalvo	LMarsh	

Document Name: GG92993.AMD *See previous concurrence

OFC	PDIV-1/PM	PDIV-1/LA	BC\EMEB*	BC\EMCB*	BC\HQMB*	BC\EELB*
NAME	PSekerak/vw	LBerry for E Conlee	RWessman	JStrosnider	SBlack	JCalvo
DATE	4/22/99	4/15/99	02/12/97	02/12/97	02/06/97	03/12/97
COPY	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO

OFC	BC/SPLB*	BC\ECGB*	OGC*	PDIV-1/SC
NAME	LMarsh	G Bagchi	RWeisman	RGramm
DATE	04/02/97	02/12/97	12/01/97	4/22/99
COPY	YES/NO	YES/NO	YES/NO	YES/NO

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CP-1

Mr. William A. Eaton
Vice President, Operatio. GGNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

SUBJECT: ISSUANCE OF AMENDMENT NO. TO FACILITY OPERATING LICENSE NO. NPF-29 - GRAND GULF NUCLEAR STATION, UNIT 1 (TAC NO. M92993)

Dear Mr. Hagan:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. This amendment is in response to the Entergy Operations, Inc. (EOI) application dated July 21, 1995. Although the EOI request was technically sound and not inconsistent with the regulations, there were policy issues and implication's associated with granting the amendment. Consequently, on December 21, 1998, the staff informed the Commission of its intent and the policy issues. On , the Commission approved the staff's recommendation to grant the amendment.

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A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly Federal Register notice. The enclosed evaluation would not be sufficient for a request for license renewal under 10 CFR Part 54.

Sincerely,

S. Patrick Sekerak, Project Manager
Project Directorate IV-1
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-416

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

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				LMarsh.
				G Bagchi

Document Name: GG92993.AMD *See previous concurrence PSekerak

OFC	PM\PD4-1	RM/PD4-1	LA\PD4-1	BC\EMEB*	BC\EMCB*	BC\HQMB*	BC\EELB*
NAME	PSekerak/vw	GDick N.A. SRB	CHawes	RWessman	JStrosnider	SBlack	JCalvo
DATE	/ /99	/ /99	/ /99	02/12/97	02/12/97	02/06/97	03/12/97
COPY	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO

OFC	BC/SPLB*	BC\ECGB*	OGC*	D/PD4-1
NAME	LMarsh	G Bagchi	RWeisman	JHannon
DATE	04/02/97	02/12/97	12/01/97	/ /99
COPY	YES/NO	YES/NO	YES/NO	YES/NO

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 26, 1999

Mr. William A. Eaton
Vice President, Operations GGNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 - ISSUANCE OF AMENDMENT RE: EXTENSION OF EXPIRATION DATE OF OPERATING LICENSE (TAC NO. M92993)

Dear Mr. Eaton:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 137 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. This amendment is in response to the Entergy Operations, Inc. (EOI), application dated July 21, 1995. Although the EOI request was technically sound and not inconsistent with the regulations, there were policy issues and implications associated with granting the amendment. Consequently, in SECY-98-296 dated December 21, 1998, the staff informed the Commission of its intent and the policy issues. On March 30, 1999, the Commission approved the staff's recommendation to grant the amendment.

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A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice. The enclosed evaluation would not be sufficient for a request for license renewal under 10 CFR Part 54.

Sincerely,

S. Patrick Sekerak

S. Patrick Sekerak, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosures: 1. Amendment No. 137 to NPF-29
2. Safety Evaluation

cc w/encls: See next page

cc:

Executive Vice President
& Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Wise, Carter, Child & Caraway
P. O. Box 651
Jackson, MS 39205

Winston & Strawn
1400 L Street, N.W. - 12th Floor
Washington, DC 20005-3502

Director
Division of Solid Waste Management
Mississippi Department of Natural
Resources
P. O. Box 10385
Jackson, MS 39209

President,
Claiborne County Board of Supervisors
P. O. Box 339
Port Gibson, MS 39150

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Senior Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 399
Port Gibson, MS 39150

General Manager, GGNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

Attorney General
Department of Justice
State of Louisiana
P. O. Box 94005
Baton Rouge, LA 70804-9005

State Health Officer
State Board of Health
P. O. Box 1700
Jackson, MS 39205

Office of the Governor
State of Mississippi
Jackson, MS 39201

Attorney General
Asst. Attorney General
State of Mississippi
P. O. Box 22947
Jackson, MS 39225

Vice President, Operations Support
Entergy Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

Director, Nuclear Safety
and Regulatory Affairs
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, MS 39150

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENTERGY OPERATIONS, INC.

SYSTEM ENERGY RESOURCES, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

ENTERGY MISSISSIPPI, INC.

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 137
License No. NPF-29

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

   A. The application for amendment by Entergy Operations, Inc. (the licensee) dated July 21, 1995, 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, as indicated in the attachment to this license amendment, by amending paragraph 2. H. of Facility Operating License No. NPF-29 to read as follows:

   H. This license is effective as of the date of issuance and shall expire on November 1, 2024.

3. This license amendment is effective as of its date of issuance to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A. Gramm, Chief, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Change to Operating License

Date of Issuance: April 26, 1999

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 137 FACILITY OPERATING LICENSE NO. NPF-29

DOCKET NO. 50-416

Replace the following page of the Operating License with the attached issued page. The revised page is identified by amendment number and contains a marginal line indicating the areas of change.

Remove	Insert
Page 17 of License	Page 17 of License

F. EOI shall report any violations of the requirements contained in Section 2, Items C.(1), C.(4) through C.(38) of this license within twenty-four (24) hours. Initial notification shall be made in accordance with the provisions of 10 CFR 50.72 with written follow-up in accordance with the procedures described in 10 CFR 50.73(b), (c), and (e).

G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

H. This license is effective as of the date of issuance and shall expire at midnight on November 1, 2024.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY:

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachments:
1. Attachments 1 and 2
2. Appendix A - Technical Specifications (NUREG-0934)
3. Appendix B - Environmental Protection Plan
4. Appendix C - Antitrust Conditions

Date of Issuance: November 1, 1984

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. NPF-29

ENTERGY OPERATIONS, INC., ET AL.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated July 21, 1995, Entergy Operations, Inc. (the licensee), submitted a request for changes to the operating license for Grand Gulf Nuclear Station, Unit 1 (GGNS). The amendment would extend the expiration date of the operating license from June 16, 2022, to November 1, 2024. The extended date for termination of the operating license would be 40 years after issuance of the full-power license, NPF-29, issued on November 1, 1984. This proposed amendment is not a request for license renewal under Title 10 of the Code of Federal Regulations (10 CFR) Part 54.

2.0 BACKGROUND

Section 103.c of the Atomic Energy Act of 1954, as amended, provides that a license is to be issued for a specific period not to exceed 40 years. Section 50.51 of 10 CFR also specifies that each license will be issued for fixed period of time not to exceed 40 years from the date of issuance. Also, 10 CFR 50.56 and 50.57 allow the issuance of an operating license pursuant to 10 CFR 50.51 after the construction of the facility has been substantially completed, in conformity with the construction permit and when other provisions specified in 10 CFR 50.57 are met.

The current licensed term for GGNS ends on June 16, 2022. This is 40 years from the date of the low-power license, which was issued on June 16, 1982. In the low-power license, the licensee was only authorized to operate the plant up to 5 percent of rated power or 191 megawatts thermal.

On August 31, 1984, the Commission amended the low-power license to allow the licensee to operate up to 100 percent rated power or 3833 megawatts thermal. However, in response to a court challenge to the amendment, the Commission issued CLI-84-19 on October 25, 1984, directing the staff to issue a separate full-power license to Grand Gulf. On November 1, 1984, a full-power license was issued to Grand Gulf whose expiration date was 40 years from the date of issuance of the low-power license. In the full-power license, the licensee was authorized to operate up to 100 percent of rated power.

The licensee requested an extension to the full-power operating license so that the licensed term will expire on November 1, 2024, or 40 years from the date of issuance of the full-power operating license on November 1, 1984. In the full-power license, the licensee was authorized to operate the plant up to 100 percent rated power or 3833 megawatts thermal.

In its application, the licensee stated that GGNS is fairly unique among licensed commercial nuclear power facilities in having an extended period of low-power operation. The period from the date of issuance of the low-power license to the full-power license is approximately 2.5 years. The licensee proposed to recapture this period of low-power operation by having the 40-year operating license term extended from June 16, 2022, to November 1, 2024. The licensee stated that, for GGNS, the additional license period would allow for at least one additional cycle of operation and perhaps two cycles and, therefore, the economic value of the license extension would be substantial.

The licensee's request for an extension of the operating license is based on the fact that a 40-year service life was considered during the design and construction of the plant. Although this does not mean that some components will not wear out during the plant's lifetime, design features were incorporated, which provide for inspectability of structures, systems, and components during this lifetime. Surveillance, inspectability, and maintenance practices which were implemented in accordance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) for inservice inspection and testing of pumps and valves and the plant Technical Specifications (TSs) provide assurance that any degradation in plant safety equipment will be identified and corrected to provide safe operation of the plant for the proposed license extension period. The specific provisions and requirements for ASME Code testing are set forth in 10 CFR 50.55a.

3.0 EVALUATION

The staff has evaluated the environmental and safety issues associated with the proposed amendment which would allow approximately 2.5 years of additional plant operation. The major safety issue is the effects of aging and neutron fluence on plant structures and equipment. This is addressed in Section 3.2.

The staff reviewed the licensee's application, the licensee's Updated Final Safety Analysis Report (UFSAR) for GGNS, the GGNS TSs, and the Safety Evaluation Report (SER, NUREG-0831 and its seven supplements) and Final Environmental Statement (FES, NUREG-0777) related to the operation of Grand Gulf Nuclear Station, Units 1 and 2, which documented the staff's review prior to issuance of a license to GGNS. The two NUREGs were issued in September 1981. The supplements to NUREG-0831 were issued at later dates as identified in the evaluation below.

Unit 2 is not involved with this amendment because it was abandoned in September 1985 and never constructed. The construction permit for Unit 2 was revoked by the Nuclear Regulatory Commission (NRC) Order dated August 7, 1991.

3.1 Environmental Assessment

The environmental assessment for the proposed amendment was addressed by the staff in the Notice of Issuance of Environmental Assessment and Finding of No Significant Impact in the Federal Register (62 FR 19144) on April 18, 1997. The conclusion of the staff was that the proposed amendment would result in no significant differences from the environmental impacts that were reported in the FES dated September 1981 issued prior to the issuance of the licenses for GGNS on June 16, 1982 (low-power license), and November 1, 1984 (full-power license).

3.2 Safety Assessment

3.2.1 Neutron Damage of the Reactor Pressure Vessel

The reactor pressure vessel was designed and fabricated in accordance with the requirements of Section III, Class 1, of the ASME Code edition, addenda, and Code Cases applicable at the time of design and construction. Operating limitations of the ASME Code and of Appendix G, "Fracture Toughness Requirements," of 10 CFR Part 50 are also applicable. The reactor pressure vessel (RPV) and the reactor coolant system were designed to allow inspections in accordance with Section XI of the ASME Code. The staff's evaluation approving the programs and their implementation with respect to these structures is contained in NUREG-0831 and its seven supplements. Industry experience with steel structures confirms a service life in excess of 40 years may be anticipated.

Over the operating life of a reactor vessel, ferritic materials exposed to neutron irradiation will undergo changes in material properties and a decrease in fracture toughness. The decrease in fracture toughness is of particular importance because the ability to resist failure caused by the propagation of a crack decreases with increasing irradiation. The fracture toughness of the vessel is monitored by a surveillance program in accordance with the requirements of Appendix H, "Reactor Vessel Materials Surveillance Program Requirements," of 10 CFR Part 50. The purpose of the materials surveillance program is to help ensure vessel integrity by monitoring changes in the fracture toughness properties of the reactor vessel beltline materials. The ferritic materials must meet the fracture toughness properties of Section III of the ASME Code and Appendix G to 10 CFR Part 50. This surveillance program will aid in adjusting the operational conditions in order to maintain sufficient safety margin for the prevention of brittle failure of the reactor vessel.

The reactor vessel is discussed in Section 5.3 of the UFSAR. In that section, the following are discussed:

- The vessel is designed, fabricated, tested, inspected, and stamped in accordance with the ASME Code, Section III, Class 1 including the addenda in effect at the date of the order of the vessel, Winter 1972 and meets Seismic Category I.

- Shifts in transition temperature caused by irradiation during the vessel life can be accommodated by raising the minimum pressurization temperature, and the predicted value of adjusted reference temperature does not exceed 200 degrees F.

- Compliance with Appendices G and H of 10 CFR Part 50.

The reactor vessel was also designed to withstand a variety of transient and cyclic loads, which occur throughout the operational life of the plant. Table 3.9-35 of UFSAR provides the cyclic or transient limits for the vessel.

To date one material specimen capsule has been removed from the reactor vessel; however, by letters dated May 2 and 31, 1996, the licensee requested that it be placed back in the vessel because testing of the first capsule at 8 effective full-power years (EFPY) may not be useful. The low neutron fluence and good material chemistry for the vessel will result in a minimal shift in the material properties of the specimen in the capsule. A revision to the capsule withdrawal schedule and placing the first capsule back in the vessel was approved by the staff in its letter of August 27, 1996.

On May 19, 1995, the NRC issued Generic Letter (GL) 92-01, Revision 1, Supplement 1, "Reactor Vessel Structural Integrity." In this GL, the NRC requested that licensees perform a review of their reactor vessel structural integrity analyses in order to identify, collect, and report any new data pertinent to the analysis of the vessel structural integrity and to assess the impact of that data on the analysis relative to the requirements of 10 CFR 50.60 (Acceptance criteria for fracture prevention measures for normal operation) and 50.61 (Fracture toughness requirements for protection against pressurized thermal shock), and Appendices G and H. The licensee responded in its letters of August 14 and November 20, 1995, and indicated that it has performed additional reviews and the structural integrity analyses remain valid; however, the licensee also stated that there is an industry initiative to ensure all sources of information pertinent to the reactor vessel are considered in the structural integrity analyses. In its letter of August 22, 1996, the staff concluded that the licensee had completed all of the actions in GL 92-01 and requested that the licensee provide NRC with results of this industry initiative for GGNS within 120 days of receipt of the final generic assessment.

Based on the above, there is reasonable assurance that the RPV will, for the proposed license term extension requested by the licensee, be in conformity with the applicable provisions of the rules and regulations of the Commission, and the GGNS license.

3.2.2 Structures

The concrete and steel Category I structures at GGNS were designed and constructed in accordance with the General Design Criteria of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50. This is discussed in Sections 3.1 and 3.2 of the UFSAR. The licensee's design basis, fabrication, construction, and implementation of quality assurance criteria for the plant were reviewed by the staff when the plant was being licensed for low-power operation. The staff's evaluation approving the programs and their implementation with respect to these structures are contained in NUREG-0831 and its seven supplements. Industrial experience with concrete and steel structures confirms a service life in excess of 40 years may be anticipated.

The major codes and specifications used in the design and construction of the Category I concrete and steel structures were, respectively, American Concrete Institute (ACI) 349, "Criteria for Reinforced Concrete Nuclear Power Containment Structures," and ACI 318-71,

"Building Code Requirements for Reinforced Concrete," and the American Institute of Steel Construction (AISC) specification, "Specification for the Design, Fabrication, and Erection of Structural Steel for Building." The foundations of the seismic Category I structures are reinforced concrete designed to ACI 318-71. Section 3.8 of NUREG-0831 stated that the criteria that were used in the analysis, design, and construction of seismic Category I structures at GGNS account for anticipated loadings and postulated conditions that may be imposed on the structures during their service lifetime, which would include the requested 2.5 years of additional power operation. These criteria are in conformance with the established criteria, codes, standards, and specifications acceptable to the staff.

The licensee's use of the indicated codes, standards, and specifications in the plant's design, analyses, and construction and the licensee's quality assurance program required by Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, as approved by NUREG-0831 and its supplements, provide reasonable assurance that the concrete and steel structures will, for the proposed license term extension requested by the licensee, be in conformity with the applicable provisions of the rules and regulations of the Commission, and the GGNS license.

3.2.3 Mechanical Equipment

Surveillance, maintenance, and testing requirements for mechanical equipment are in place at the plant to verify operability or to detect degradation and ensure that the equipment that does degrade is replaced or other corrective actions are taken. In addition, subcomponents such as nonmetallics (e.g., gaskets and o-rings) are inspected and replaced as necessary, as part of routine maintenance in order to ensure the design life of equipment. Surveillance, inspection, and testing requirements at GGNS, which will apply during the operating life of the plant, include the following:

- ASME Code Section XI: Equipment that is safety-related is ASME Code Class 1, 2, or 3 and is subject to the inservice inspection and testing requirements of Section XI and 10 CFR 50.55a, except where relief has been granted in writing from these requirements. These requirements apply throughout the operating life of a plant and will provide reasonable assurance that mechanical components will be properly monitored throughout the plant lifetime.

- Technical Specifications (TSs): 10 CFR 50.36 requires the establishment of limiting conditions for operation (LCOs) for certain equipment. (LCOs are the lowest functional capability or performance levels of equipment required for safe operation of the facility). This equipment is subject to the surveillance and testing requirements in the TSs to assure systems are operable. These surveillance requirements include calibration and inspection of systems and components to ensure that operation of the plant will remain in accordance with the limiting conditions for operation.

- 10 CFR Part 50, Appendix J: Equipment and components associated with containment penetrations, including containment isolation valves, are subject to the leak testing requirements in Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." This is for Type B and C testing of valves and penetrations, and Type A testing of the overall containment structure.

The licensee has implemented procedures for maintaining the operability of the mechanical components and, thus, the mechanical equipment the components are a part of. Examples of the procedures are the following: 01-S-07-27 (Rev. 10, dated 8/26/92) Lubricating Oil Sample Program, 01-S-07-35 (Rev.100, 3/20/95) ASME Section XI System Pressure Test, 01-S-07-39 (Rev. 101, 2/4/97) Inservice Testing, 01-S-17-12 (Rev. 2, 3/11/96) Maintenance Monitoring Program for effectiveness of maintenance on equipment, 01-S-17-18 (Rev. 0, 4/5/90) Predictive Maintenance Program on early detection and diagnosis of equipment problems and degradation before failures, 01-S-17-20 (Rev. 3, 1/30/97) Reliability Centered Maintenance Program to enhance preventative maintenance to improve reliability, 01-S-17-21 (Rev. 1, 2/9/96) Oil/Lubricant Program, 01-S-17-43 (Rev. 0, 2/21/95) Air Operated Valves (AORs) Program for proper maintenance of AORs, 17-S-03-24 (Rev. 1, 8/6/93) Thermography Program to inspect electrical and mechanical equipment to determine if maintenance is required, 17-S-03-25 (Rev. 1, 10/13/94) and 17-S-03-27 (Rev. 0,6/17/94) Vibration Monitoring program to establish criteria and vibration limits to prevent equipment failures, 17-S-05-3 (Rev. 1, 11/14/95) Review of Pump Inservice Test Results, 17-S-05-12 (Rev. 100, 3/31/95) Snubber Service Life Program, GGNS-MS-41 (Rev. 3, 4/14/95) and GGNS-MS-46 (Rev. 1, 4/24/94) Monitoring Internal Erosion/Corrosion in High Energy and Moderate Energy Piping Components, and QAP.9.90 (Rev. 3, 2/26/97) Administration of Microbiological Induced Corrosion (MIC) Tracking in Standby Service Water Systems. The Station Information Management System (SIMS) and the repetitive task program (procedure 01-S-17-11, Rev. 2, 9/3/93) schedules the repetitive maintenance tasks, such as maintenance, inspections, testing, sampling, and surveillances to assure the tasks are completed as scheduled. This will assure that the preventative maintenance of the mechanical components is performed to ensure the operability and qualification of the mechanical equipment is maintained.

From this evaluation, the staff concludes that compliance with the codes, standards, and regulatory requirements to which mechanical equipment were analyzed, constructed, tested, and inspected provide adequate assurance that the structural integrity of equipment important to safety will be maintained during the operating lifetime of the plant and during the additional period authorized by this amendment. Any significant degradation by such equipment would be discovered and the equipment restored to an acceptable, and operable, condition.

3.2.4 Electrical Equipment

The licensee has a program in place for the environmental qualification (EQ) of electrical equipment. As noted in Appendix H of Supplement 2 (dated June 1982), and Section 3.11 of Supplements 4 (dated May 1983) and 5 (dated August 1984), to NUREG-0831, the staff approved the program and deleted the low-power license conditions related to the program.

The full-power license condition 2.C.(11) required the licensee to qualify the electrical equipment to the EQ requirements in 10 CFR 50.49 by March 31, 1985. By letter dated March 7, 1985, the licensee requested an extension to no later than November 30, 1985 (as was allowed by 50.49) to have all electrical equipment important to safety qualified and in compliance with 10 CFR 50.49, and the staff granted the extension in its letter of March 27, 1985. The NRC Inspection Report 50-416/87-32, of March 25, 1988, documented that the licensee had met 10 CFR 50.49. Although there were four deficiencies in the EQ program, the staff concluded that within the scope of the inspection, the program met the requirements of 10 CFR 50.49.

The EQ program at GGNS includes qualification of the electrical equipment through accelerated aging tests. In accordance with 10 CFR 50.49, the program is required during the entire period of the operating license, which will include the term of the proposed license extension requested by the licensee, with approval of this amendment. The program will continue to ensure electrical equipment important to safety will not be used beyond its qualified life. To determine whether the program can and will perform this function, the following GGNS procedures, which govern the environmental equipment qualification program, were reviewed: (1) Standard ES-19 (Revision 9, September 9, 1996) Engineering Standard for Environmental Equipment Qualification Maintenance," (2) 07-S-01-227 (Revision 6, dated February 19, 1997) "Maintenance Procedure Equipment Qualification Program Safety Related," and (3) Standard ES-21 (Revision 1, May 5, 1988) "Engineering Standard Environmental Qualification Program Safety-Related." The safety information management system (SIMS) provides a computerized method of ensuring that the requirements of maintaining qualification of safety-related equipment are tracked and met. The maintenance activities for each component, which are required to maintain qualification of that component, are shown in and scheduled through the SIMS database.

Although the plant's original life was considered to be 40 years, the EQ program will account for operation during the term of the proposed extension requested by the licensee. If a component has a qualified life of less than 40 years, its replacement is scheduled through the maintenance program and the SIMS database. Similarly, if the component has a 40-year qualified life, the replacement of the component is also scheduled through the maintenance program and the SIMS database. Therefore, the EQ program will support the proposed amendment.

3.2.5 Quality Assurance and Maintenance Programs

In licensing GGNS, the staff reviewed the quality assurance (QA) program and the conduct of operations, including the maintenance procedures, at GGNS. The QA program for the plant operations will assess how the plant organization is following procedures and meeting requirements for plant operation. This would include the maintenance program at the plant which assures the equipment is operable. In NUREG-0813, the staff concluded that the QA program and maintenance procedures were acceptable.

Inspections by the staff of the QA and maintenance programs at GGNS show that these programs remain acceptable, although corrections in the programs have been identified. The QA program meets the requirements of Appendix B to 10 CFR Part 50.

Therefore, the licensee's implementation and use of these programs at GGNS provides reasonable assurance that equipment important to safety will, for the proposed license term extension requested by the licensee, be in conformity with the applicable provisions of the rules and regulations of the Commission, and the GGNS license.

3.2.6 Status of Outstanding Issues, Confirmatory Issues, and License Conditions

At the time the plant was licensed, there were outstanding issues, confirmatory issues, and license conditions discussed in Sections 1.09, 1.10, and 1.11, respectively, of NUREG-0831 and its seven supplements. These issues and license conditions were either resolved prior to

issuance of the full-power license or made license conditions. The proposed amendment has no effect on the license conditions in the full-power license.

3.3 Conclusion

Based on the discussion above, on the safety and environmental issues involved with granting an extension to the operating license, there are no safety issues that would preclude an additional 2.5-year period of operation, from June 16, 2022, to November 1, 2024, extending the term of the license. Based on this, the staff concludes that the proposed amendment is acceptable; however, it should be noted that the above evaluation would not be sufficient for license renewal under 10 CFR Part 54.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Mississippi State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact has been prepared for the proposed amendment and published in the Federal Register on April 18, 1997 (62 FR 19144). Accordingly, based upon the environmental assessment, the staff has determined that the issuance of the amendment will not have a significant effect on the quality of the human environment.

6.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Jack Donohew

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