



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

November 1, 1984

Docket No. 50-416

Mr. J. B. Richard  
Senior Vice President, Nuclear  
Mississippi Power & Light Company  
P.O. Box 23054  
Jackson, Mississippi 39205

Dear Mr. Richard:

Subject: Issuance of Facility Operating License NPF-29 -  
Grand Gulf Nuclear Station, Unit 1

The U.S. Nuclear Regulatory Commission has issued the enclosed Facility Operating License NPF-29, together with Technical Specifications and Environmental Protection Plan for the Grand Gulf Nuclear Station, Unit 1. This action has been taken in accordance with the Commission's Order dated October 25, 1984. This license authorizes operation at 100% power (3833 megawatts thermal).

Also enclosed are copies of a related notice, the original of which has been forwarded to the Office of the Federal Register for publication, and of an evaluation of the effect of 40 years of license duration with respect to environmental matters.

Four signed copies of Amendment No. 2, Indemnity Agreement No. B-72 which covers the activities authorized under License No. NPF-29 are also enclosed. Please sign all copies and return one copy to this office.

Sincerely,

*for Frank J. Miraglia*  
Darrell G. Eisenhat, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosures:

1. Facility Operating License  
NPF-29
2. Federal Register Notice
3. 40-year Evaluation
4. Amendment No. 2 to Indemnity  
Agreement B-72

cc w/encl:  
See next page

DESIGNATED ORIGINAL  
Certified By *J. H. M. Ch.*

GRAND GULF

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The Honorable William J. Guste, Jr.  
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Department of Justice  
State of Louisiana  
Baton Rouge, Louisiana 70804



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

FACILITY OPERATING LICENSE

License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for license filed by Mississippi Power & Light Company, for itself and Middle South Energy, Inc., and South Mississippi Electric Power Association (hereinafter referred to as the licensees) complies 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, and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Grand Gulf Nuclear Station, Unit 1 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-118 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
  - D. There is reasonable assurance: (i) that the activities authorized by this operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
  - E. The Mississippi Power & Light Company (MP&L)\* is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

\*The MP&L is authorized to act as agent for the co-owners and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

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- F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. NPF-29, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession, and use of source, by-product and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings regarding this facility and pursuant to Commission Order CLI-84-19, dated October 25, 1984, License NPF-13, as amended, is superseded by this Facility Operating License NPF-29 which is hereby issued to the Mississippi Power & Light Company, Middle South Energy, Inc., and South Mississippi Electric Power Association to read as follows:
- A. This license applies to the Grand Gulf Nuclear Station (GGNS), Unit 1, a boiling water nuclear reactor and associated equipment (the facility), owned by Middle South Energy, Inc., and South Mississippi Electric Power Association and operated by Mississippi Power and Light Company. The facility is located in Claiborne County, Mississippi, and is described in the licensees' "Final Safety Analysis Report," as supplemented and amended, and in the licensees' Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) Mississippi Power & Light Company (MP&L), pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Claiborne County, Mississippi, in accordance with the procedures and limitations set forth in this license;
    - (2) Middle South Energy, Inc., and South Mississippi Electric Power Association to possess the facility at the designated location in Claiborne County, Mississippi, in accordance with the procedures and limitations set forth in this license;

- (3) MP&L, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
  - (4) MP&L, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - (5) MP&L, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (6) MP&L, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. The license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level  
MP&L is authorized to operate the facility at reactor core power levels not in excess of 3833 megawatts thermal (100% power) in accordance with the conditions specified herein.
  - (2) Technical Specifications  
The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B are hereby incorporated into this license. MP&L shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
  - (3) Antitrust Conditions  
MP&L shall comply with the antitrust conditions delineated in Appendix C.

(4) Independent Verification of Staff Performance and Other Plant Activities (Section 13.4, SER, SSER #2)

- (a) MP&L shall establish a subcommittee of the Corporate Safety Review Committee to review and evaluate the:
- (i) Status and readiness of the plant and systems needed to support intended modes of operation and/or testing;
  - (ii) Readiness of personnel to conduct intended operation and testing;
  - (iii) Morale and attitudes of plant personnel that have a bearing on safe plant operation;
  - (iv) Past performance in plant operations and adherence to procedures and administrative controls;
  - (v) Changes in current organization with regard to experience and qualifications of plant management and supervisory personnel since the last evaluation;
  - (vi) Results and effectiveness of the Plant Safety Review Committee (PSRC);
  - (vii) Status of plant as compared to other BWR startups based on the subcommittee's knowledge and experience.

Reviews shall be conducted prior to exceeding 50 percent of full power and within 30 days following completion of the 100 hour warranty run. The subcommittee shall be composed of a minimum of three professionals not employees of MP&L with experience which will be responsive to the concerns presented above. In conducting these evaluations, the subcommittee shall conduct interviews of representatives of all levels of plant staff management. The subcommittee shall report directly to the Chairman of the Corporate Safety Review Committee and, in turn, MP&L shall submit the report of these reviews to NRC.

- (b) The Plant Safety Review Committee shall review all Unit 1 Preoperational Testing and System Demonstration activities performed concurrently with the Unit 1 Startup Test Program to assure that the activity will not affect the safe performance of the portion of the Unit 1 Startup Program being performed. The review shall address, as a minimum,

system interaction; span of control, staffing, procedures, security and health physics, with respect to performance of the activities concurrent with the portion of the Unit 1 Startup Program being performed.

(5) Deferred Preoperational Deficiencies

MP&L shall satisfactorily resolve those deficiencies which were deferred from the preoperational testing program on a schedule that shall assure that the capability of a system required to be operable by Technical Specification is not degraded.

(6) Soil Structure Interaction (Section 3.7.1, SER, SSER #2)

Prior to startup following the first refueling outage, MP&L shall complete structural modifications, if required, as a result of the NRC staff's completion of its review of MP&L responses.

(7) Seismic Instrumentation (Section 3.7.4, SER, SSER #2)

Prior to startup following the first refueling outage, the installation of triaxial strong motion accelerometers on reactor supports shall be completed.

(8) Masonry Walls (Section 3.8.3, SER, SSER #2)

Prior to startup following the first refueling outage, MP&L shall complete structural modifications, if required, as a result of the NRC staff's completion of its review of the MP&L response to IE Bulletin 80-11.

(9) Dynamic Testing (Section 3.9.2, SER, SSER #2, SSER #4, SSER #5)

MP&L shall conduct vibrational measurement and inspection programs during preoperational and initial startup testing in accordance with the guidelines of R.G. 1.20, "Comprehensive Vibration Assessment Program for Reactor Internals During Pre-operational and Initial Startup Testing," for prototype reactors. An evaluation report demonstrating satisfactory results shall be provided to the NRC for review and approval no later than 6 months after completion of the startup test program.

(10) Dynamic Qualification (3.10, SER, SSER #1, SSER #2, SSER #4, SSER #5)

(a) Prior to startup following the first refueling outage, MP&L shall complete any modifications or replacement of equipment found necessary as a result of the fatigue evaluation. In

the interim, MP&L shall document the occurrence of every safety relief valve actuation into the suppression pool; the associated cumulative damage factors shall be calculated for typical representative equipment and kept up-to-date; and MP&L shall report to NRC any malfunction of equipment that occurs due to any safety relief valve discharge.

- (b) MP&L shall perform an in-situ test of the High Pressure Core Spray (HPCS) service water pump and evaluate the effects of flow induced vibration on the HPCS service water pump. This evaluation shall be provided to the NRC for review and approval. Prior to startup following the first refueling outage, MP&L shall complete all modifications as a result of the NRC staff's review of the test results and evaluation.
  - (c) Prior to actual use in fuel handling operations, MP&L shall qualify the fuel-handling and auxiliary platform, in-vessel rack, and storage container for defective fuel.
- (11) Environmental Qualification (Section 3.11, SER; SSER #1; Appendix H, SSER #2; SSER #5)
- Prior to March 31, 1985, MP&L shall environmentally qualify all electrical equipment as required by 10 CFR 50.49.
- (12) Surveillance of Control Blade (Section 4.2.3.14, SER)
- Within 30 days after plant startup following the first refueling outage, MP&L shall comply with items 1, 2 and 3 of Bulletin No. 79-26 and submit a written response to NRC on item 3.
- (13) Core Stability Analysis and Prohibition of Natural Circulation (Section 4.4.1, SER)
- (a) Prior to startup following the first refueling outage, MP&L shall submit a new core stability analysis for operation beyond cycle 1.
  - (b) Natural circulation shall be prohibited as an operating mode.
- (14) Loose Parts Monitoring (Section 4.4.1, SER)
- Prior to startup following the first refueling outage, MP&L shall submit an evaluation of the Loose Parts Monitoring System to address conformance to R.G. 1.133, Rev. 1, dated May 1981.



(15) Scram Discharge Volume (Sections 4.6, SER)

Prior to startup following the first refueling outage, MP&L shall incorporate the following additional modifications into the scram discharge volume system:

- (i) Redundant vent and drain valves, and
- (ii) Diverse and redundant scram instrumentation for each instrumented volume, including both delta pressure sensors and float sensors.

(16) Containment Purge (Section 6.2.4, SSER #5)

Prior to startup following the first refueling outage, MP&L shall provide for NRC review a reevaluation of the need to use the containment purge mode of the containment cooling system. This study should include, but is not limited to, data gathered during the first fuel cycle related to airborne activity level (ALARA), overall containment air quality and personnel access to containment. Based on the above cited study, MP&L shall propose the purge criteria to be used for the remainder of the plant life.

(17) Containment Pressure Boundary (Section 6.2.8, SER)

Prior to startup following the first refueling outage, MP&L shall replace the feedwater check valve disc with a disc made from a suitable material.

(18) Pressure Interlocks on Valves Interfacing at Low and High Pressure (Section 6.3.4, SSER #2)

Prior to startup following the first refueling outage, the licensee shall implement isolation protection against overpressurization of the low pressure emergency core cooling systems (RHR/LPCI and LPCS) at the high and low pressure interface containing a check valve and a closed motor-operated valve.

(19) IE Information Notice 79-22, Qualification of Control System (Section 7.8.C, SER, SSER #2)

Prior to startup following the first refueling outage, MP&L shall complete any design changes found necessary as a result of this review.

(20) Standby Service Water System (Section 9.2.1 SER, SSER #2)

No irradiated fuel may be stored in the Unit 1 spent fuel pool prior to completion of modifications to the standby service water

(SSW) system and verification that the design flow can be achieved to all SSW system components. However, should a core offloading be necessary prior to completion of these modifications (scheduled for the first scheduled refueling outage), irradiated fuel may be placed in the spent fuel pool when the RHR system operating in the spent fuel pool cooling mode is available. Until the SSW system is modified, the spent fuel pool cooler shall be isolated from the SSW system by locked closed valves. The position of these valves shall be verified every 31 days until the design flowrate for SSW system is demonstrated.

(21) Spent Fuel Pool Ventilation System (Section 9.4.2, SER, SSER #2)

If spent irradiated fuel is placed in the spent fuel pool prior to installation and operability of the safety related backup fuel pool cooling pump room coolers, the plant shall be placed in shutdown condition and remain shutdown with the RHR system dedicated to the fuel pool cooling mode.

(22) Remote Shutdown Panel (Section 9.5.4.1, SER, SSER #2)

Prior to startup following the first refueling outage, MP&L shall install electrical isolation switches between the control room and the Division 1 remote shutdown panel.

(23) Fire Protection Program (Section 9.5.9, SER)

MP&L shall maintain in effect and fully implement all provisions of the approved Fire Protection Plan. In addition, MP&L shall maintain the fire protection program to meet the intent of Appendix R to 10 CFR Part 50, except that an oil collection system for the reactor coolant pump is not required.

(24) Interplant Communication Systems (Section 9.6.1.2, SER, SSER #2, SSER #4, SSER #5)

Tests of the communication systems used to mitigate the consequences of an event and attain a safe plant shutdown shall be completed during preoperational and startup tests. An evaluation of the test results shall be provided for NRC review within 90 days after test completion. Any system modifications found necessary as a result of NRC review shall be completed prior to startup following the first refueling outage.

(25) Reliability of Diesel-Generators (Sections 8.3.1, 9.6.3 through 9.6.7, SER, SSER #2, SSER #4, SSER #6)

(a) Prior to startup following the first refueling outage, a heavy duty turbocharger gear drive assembly shall be installed on all EMD diesel-generators.

- (b) Final evaluations and recommendations from the TDI Owners Group Program applicable to GGNS Unit 1, and MP&L's actions in response to this program for the standby diesel generators shall be submitted for NRC review and approval prior to startup following the first refueling outage.

(26) Turbine Disc Integrity (Section 10.2.1, SER, SSER #1)

During each refueling outage MP&L shall ultrasonically inspect the bores and keyways of the low pressure turbine discs for indications of cracking. All unacceptable indications and their dispositions shall be reported prior to startup for the next cycle of operation. These inspections shall continue until the potential for turbine disc cracking has been assessed and an acceptable alternate inspection schedule has been established.

(27) Circulating Water System (Section 10.4.5, SER)

MP&L shall not fill the Unit 2 circulating water system (including the natural draft cooling tower basin) until Unit 1 flooding concerns related to this system are resolved to the satisfaction of the NRC staff.

(28) Advisor to Vice President (Section 13.1.1, SER, SSER #2, SSER #4, SSER #5)

MP&L shall provide one or more additional staff members, reporting directly to a Vice President principally in charge of nuclear operations, who have substantial commercial nuclear power plant operating management experience and who will act as advisors to the vice president on all decisions affecting safe operation of the plant. The additional staff members may be permanent employees or contracted consultants, but they shall be retained in this advisory position until the plant has operated for at least 6 months at power levels above 90% of full power.

(29) Operating Shift Advisor (Section 13.1.2, SER)

At least one individual on each operating shift shall have substantive previous BWR operating experience, including startup and shutdown of a BWR and under conditions that one might expect to encounter during the initial startup and power escalation at the Grand Gulf plant. This individual is not required to be licensed on Grand Gulf Unit 1 and need not be an MP&L employee, but as a minimum shall be retained on a contract basis to act as a consultant or advisor to the GGNS shift crew. Such an experienced person shall be assigned to each operating shift until the plant achieves and demonstrates full power operation.

(30) Training Instructors (Section 13.2, SER)

Permanent training center instructors and consultants assigned to training, who, after initial criticality will teach systems, integrated responses, transients, and simulator courses to license candidates or NRC-licensed personnel, shall either demonstrate or have previously demonstrated their competence to the NRC staff by successful completion of a senior operator examination prior to teaching licensed operators.

(31) Initial Test Program (Section 14, SER)

MP&L shall conduct the post-fuel-loading initial test program (set forth in Section 14 of MP&L's Final Safety Analysis Report, as amended) without making any major modifications of this program unless such modifications have been identified and have received prior NRC approval. Major modifications are defined as:

- (a) Elimination of any test identified in Section 14 of MP&L's Final Safety Analysis Report, as amended, as being essential;
- (b) Modification of test objectives, methods or acceptance criteria for any test identified in Section 14 of MP&L's Final Safety Analysis Report, as amended, as being essential;
- (c) Performance of any test at a power level different from that described in the program; and
- (d) Failure to complete any tests included in the described program (planned or scheduled for power levels up to the authorized power level).

(32) Partial Feedwater Heating (Section 15.1, SER, SSER #2)

Operation of the plant in the partial feedwater heating mode for the purpose of extending the normal fuel cycle shall be prohibited until analyses which justify that operation are provided to and approved by the NRC staff.

(33) NUREG-0737 Conditions (Section 22.2)

MP&L shall complete the following conditions to the satisfaction of the NRC. These conditions reference the appropriate items in Section 22.2, "TMI Action Plan Requirements for Applicants for Operating Licenses", in the Safety Evaluation Report and Supplements 1, 2, 3, 4, and 5 NUREG-0831.

- (a) Control Room Design Review (I.D.1, SER; Appendix E, SSER #2, SSER #4, SSER #5)

Prior to startup following the first refueling outage, MP&L shall demonstrate the ability to maintain an "effective temperature" condition of 85°F or less in the remote shut-down panel (RSP) room for at least 8 hours with an ambient outdoor temperature of at least 95°F.

- (b) Training During Low-Power Testing (I.G.1, SER)

MP&L shall conduct a special test, Simulated Loss of Onsite and Offsite Alternating-Current Power Test, as described in the MP&L letter dated August 18, 1981. At least 4 weeks prior to performing the Special Test, MP&L shall provide a safety analysis for this test and its procedures to NRC for review and approval.

- (c) Post Accident Sampling (II.B.3, SER, SSER #1, SSER #4, SSER #5)

Prior to startup following the first refueling outage, MP&L shall incorporate the additional requirements into the procedure for relating radionuclide gaseous and ionic species to estimate core damage as discussed in Section II.B.3.1 of SSER #4.

- (d) Hydrogen Control (Section II.B.7, SER, SSER #2, SSER #3, SSER #4, SSER #5)

(1) During the first cycle of operation, MP&L shall maintain a suitable program of analysis and testing of the installed hydrogen ignition system. MP&L shall submit to the NRC quarterly reports on the status of their research programs.

(a) MP&L shall amend its research program on hydrogen control measures to include, but not be limited to, the following items:

1) Perform containment sensitivity analysis to determine the adequacy of the hydrogen control system for a spectrum of degraded core accidents including the determination of accident sequences for which equipment survivability is assured;

- 2) Research to investigate the conditions leading to and consequences resulting from hydrogen combustion in the wetwell and containment. Testing shall be performed in a larger scale facility such as the one-quarter scale test facility proposed by MP&L;
- 3) Research to investigate the conditions leading to and consequences resulting from hydrogen combustion in the drywell;
- 4) Confirmatory tests on thermal response of selected equipment exposed to hydrogen burns.

(b) MP&L shall perform feasibility studies to examine the options for enhancing equipment survivability for essential equipment located in the vicinity of the suppression pool or other regions subjected to severe environments. The options to be studied in such feasibility studies shall include thermal shielding, additional cooling, and relocation of essential equipment.

(2) Prior to startup following the first refueling outage, MP&L must obtain NRC approval that an adequate hydrogen control system for the plant is installed and will perform its intended function in a manner that provides adequate safety margins.

(e) Instrumentation for Detection of Inadequate Core Cooling (II.F.2, SER, SSER #2)

MP&L shall submit a report addressing the analysis performed by the BWR Owners' Group regarding additional instrumentation relative to inadequate core cooling and shall implement the staff's requirements after the completion of the staff's review of this report. These modifications shall be completed on a schedule acceptable to the staff.

(f) Modification of Automatic Depressurization System Logic - Feasibility for Increased Diversity for Some Event Sequences (II.K.3.18, SER, SSER #2, SSER #4)

Prior to startup following the first refueling outage, MP&L shall provide, for NRC review, justification for the timer delay settings, revisions to the emergency procedures

covering the use of the manual inhibit switch, proposed Technical Specification surveillance procedures for the timer and switch, and shall implement alternative logic modification (Option 4) of the automatic depressurization system.

(g) Qualification of ADS Accumulators (II.K.3.28, SSER #5)

Prior to startup following the first refueling outage, MP&L shall perform an integrated leak test on the ADS air system, perform sampling to establish instrument air quality, provide instrumentation to monitor ADS air receiver pressure, establish suitable surveillance procedures for the ADS air system and provide proposed changes to the Technical Specifications associated with the surveillance procedures.

(34) SRV Test Program (Section A-39, Appendix C, SER, SSER #1, SSER #2)

During Cycle 1, an inplant SRV test program shall be carried out to confirm that the containment building response to SRV loads is acceptable. Results of these tests shall be provided to NRC no later than four months after test completion.

(35) Post-LOCA Vacuum Breaker Position Indicators

Prior to startup following the first refueling outage, MP&L shall install position indicators with redundant indication and alarm in the control room for the check valves associated with the dry-well post-LOCA vacuum breakers.

(36) Emergency Response Facilities (Generic Letter 82-33, NUREG-0737 Supplement 1, SSER #5)

MP&L shall complete the emergency response capabilities as required by Attachment 1 to this license.

(37) Evaluation of Licensee's Technical Specification Problem Sheets (Section 16.3, SSER #6)

Prior to startup following the first refueling outage, MP&L shall implement the following modifications:

- (a) Include an emergency override of the test mode of the Division 3 HPCS diesel generator to permit response to emergency signals and to return the control of the diesel generator to the emergency standby mode. (Item No. 333, T.S. 4.8.1.1.2.d.12.b).

- (b) Provide the second level undervoltage protection for Division 3 power supply (Item No. 373, T.S. Table 3.3.3-2).
- (c) Incorporate a bypass or coincident logic in all Division 1 and 2 diesel generator protective trips, except for trips on diesel engine overspeed and generator differential current (Item No. 808, T.S. 4.8.1.1.2.d.16.d).

(38) Control Room Leak Rate (Section 6.2.6, SSER #6)

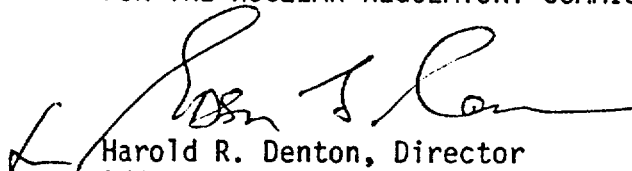
MP&L shall operate Grand Gulf Unit 1 with an allowable control room leak rate not to exceed 590 cfm. Upon restart of construction of Unit 2 control room, MP&L will be permitted to operate at a leak rate of 760 cfm as evaluated in SSER No. 6.

- D. The facility requires exemptions from certain requirements of Appendices A and J to 10 CFR Part 50. These include: (a) exemption from General Design Criterion 17 of Appendix A until startup following the first refueling outage, for (1) the emergency override of the test mode for the Division 3 diesel engine, (2) the second level undervoltage protection for the Division 3 diesel engine, and (3) the generator ground over current trip function for the Division 1 and 2 diesel generators (Section 8.3.1 of SSER #7) and (b) exemption from the requirements of Paragraph III.D.2(b)(ii) of Appendix J for the containment airlock testing following normal door opening when containment integrity is not required (Section 6.2.6 of SSER #7). These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, these exemptions are hereby granted pursuant to 10 CFR 50.12. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act and the rules and regulations of the Commission.
- E. MP&L shall maintain in effect and fully implement all the provisions of the Commission-approved physical security plan, guard training and qualification plan and safeguards contingency plan, including amendments made pursuant to the authority of 10 CFR Section 50.54(p). The approved plans, which are safeguards information protected under 10 CFR 73.21, are collectively entitled Grand Gulf Nuclear Station "Physical Security Plan," Revision 1, 2 and 3; the Grand Gulf Nuclear Station "Security Training and Qualification Plan," and the Grand Gulf Nuclear Station "Safeguards Contingency Plan." The identification of vital areas and measures used to control access to these areas, as described in the physical security plan, may be subject to amendments in the future based upon a confirmatory evaluation of the plant to determine those areas where acts of sabotage might cause a release of radionuclides in sufficient quantities to result in dose rates equal to or exceeding 10 CFR Part 100 guidelines.



- F. MP&L 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 June 16, 2022.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Attachments:

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

Date of Issuance: November 1, 1984

## Attachment 1

MP&L shall complete the following requirements on the schedule noted below:

Emergency Response Facilities (Generic Letter 82-33, NUREG-0737  
Supplement 1, SSER #5)

MP&L shall implement the specific items below, in the manner described in MP&L letter (AECM-83/0232) dated April 15, 1983, as modified in MP&L letter (AECM-83/0486) dated August 22, 1983, no later than the following specified dates:

(a) Safety Parameter Display System (SPDS)

- (1) Submit a safety analysis and an implementation plan to the NRC July 1985
- (2) SPDS fully operational and operators trained Prior to startup following first refueling outage

(b) Detailed Control Room Design Review (DCRDR)

- (1) Submit a program plan to the NRC December 1984
- (2) Submit a summary report to the NRC including a proposed schedule for implementation July 1986

(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, coolant level monitoring, and SLCS flow monitoring. Prior to startup following first refueling outage
- (3) Implement (installation or upgrade) requirements of R.G. 1.97 for flux monitoring, coolant level monitoring, and SLCS flow monitoring. Prior to startup following second refueling outage

(d) Upgrade Emergency Operating Procedures (EOP's)

- (1) Submit a Procedures Generation Package to the NRC April 1985

(2) Implement the upgraded EOP's

Prior to startup  
following the  
first refueling  
outage

(e) Emergency Response Facilities

(1) Technical Support Center fully functional  
with exception of Regulatory Guide 1.97  
implementation

Prior to startup  
following the  
first refueling  
outage

(2) Operational Support Center fully functional  
with exception of Regulatory Guide 1.97  
implementation

Prior to startup  
following the  
first refueling  
outage

(3) Emergency Operations Facility fully  
functional with exception of Regulatory  
Guide 1.97 implementation

Prior to startup  
following the  
first refueling  
outage

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-416GRAND GULF NUCLEAR STATION, UNIT 1NOTICE OF ISSUANCE OF FACILITY OPERATING LICENSE

On June 16, 1982, the U.S. Nuclear Regulatory Commission (the Commission) issued Facility Operating License No. NPF-13 to the Mississippi Power & Light Company, Middle South Energy, Inc., and South Mississippi Electric Power Association (the licensees) authorizing operation of the Grand Gulf Nuclear Station, Unit 1, (the facility) at reactor core power levels not in excess of 191 megawatts thermal (five percent of full power) in accordance with the provisions of the license, the Technical Specifications and the Environmental Protection Plan.

The Commission has now issued Facility Operating License No. NPF-29 which authorizes operation of the Grand Gulf Nuclear Station, Unit 1, at reactor core power levels not in excess of 3833 megawatts thermal in accordance with the provisions of the license, the Technical Specifications, and the Environmental Protection Plan. License No. NPF-29 supersedes NPF-13, as amended, pursuant to Commission Order CLI-84-19, dated October 25, 1984.

The Grand Gulf Nuclear Station, Unit 1, is a boiling water reactor located at the licensees' site in Claiborne County, Mississippi. The license is effective as of its date of issuance and shall expire at midnight on June 16, 2022.

The application for the license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter 1, which are set forth

in the license. Prior public notice of the overall action involving the proposed issuance of an operating license was published in the Federal Register on July 28, 1978 (43 FR 32903).

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

For further details with respect to this action, see (1) Facility Operating License No. NPF-29 complete with Technical Specifications and the Environmental Protection Plan; (2) the Commission's Safety Evaluation Report, dated September 1981 (NUREG-0831), and Supplements 1 through 7; (3) the Final Safety Analysis Report and Amendments thereto; (4) the Final Environmental Statement, dated September 1981 (NUREG-0777); (5) the Evaluation of the Effect of License Duration on Matters Discussed in the Final Environmental Statement for the Grand Gulf Nuclear Station Units 1 and 2 (dated September 1981); (6) the Commission's Memorandum dated August 1, 1984; and (7) Commission Order CLI-84-19, dated October 25, 1984.

These items are available at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C. 20555, and at the George McLendon Library, Hinds Junior College, Raymond, Mississippi 39154. A copy of Facility Operating License NPF-29 may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing. Copies of the Safety Evaluation Report and its Supplements (NUREG-0831) and the Final Environmental Statement (NUREG-0777) may be purchased at current rates from the National Technical Information Service, Department of

Commerce, 5285 Port Royal Road, Springfield, Virginia 22161, and through the NRC GPO sales program by writing to the U.S. Nuclear Regulatory Commission, Attention: Sales Manager, Washington, D. C. 20555. GPO deposit account holders may call (301) 492-9530.

Dated at Bethesda, Maryland, this 1<sup>st</sup> day of November 1984.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas M. Novak, Assistant Director  
for Licensing  
Division of Licensing

EVALUATION OF THE EFFECT OF LICENSE DURATION ON MATTERS DISCUSSED  
IN THE FINAL ENVIRONMENTAL STATEMENT FOR THE GRAND GULF NUCLEAR STATION  
UNITS 1 AND 2 (Dated September 1981)

INTRODUCTION

The Final Environmental Statement (FES) for the operation of the Grand Gulf Nuclear Station Unit Nos. 1 and 2 was published in September 1981. At that time it was staff practice to issue operating licenses for a period of 40 years from the date of the construction permit. For Grand Gulf the CPs were issued in September 1974, thus, approximately 30 years of operating life would be available.

By letter dated June 10, 1982, Mississippi Power & Light Company requested that the operating license for Grand Gulf Nuclear Station, Unit 1 then under consideration by the staff, have a duration of 40 years from the date of issuance. On June 16, 1982, a license, conditioned to not exceed 5% power, effective for a 40-year period from issuance of the CP, was issued to MP&L for the operation of Grand Gulf Nuclear Station, Unit 1.

DISCUSSION

The staff has reviewed the Grand Gulf FES to determine which aspects considered in the FES are affected by the duration of the operating license. In general, the FES assesses various impacts associated with operation of the facility in terms of annual impacts and balances these against the anticipated annual energy production benefits. Thus, the overall assessment and conclusions would not be dependent on specific operating life. There are, however, three areas in which a specific operating life was assumed:

1. Project costs are based on a 30-year levelized cost.
2. Radiological assessments are based on a 15-year plant midlife.
3. Uranium fuel cycle impacts are based on one initial core load and annual refuelings.

These were assessed to determine whether the use of a 40-year operating period rather than a 30-year operating period would significantly affect our assessment concerning these areas.

EVALUATION:

The staff's appraisal of the significance of the use of 40 years of operation rather than 30 as it affects these three areas is presented in the following discussions:

1. Projected Costs - The projected costs of the facility which includes the cost of decommissioning are based on a 30-year operating life and are levelized over that period of time. The use of a 40-year operating period rather than a 30-year period would not significantly affect the operating and maintenance cost. If the facility's capital cost were spread over a 40-year period the overall resulting cost of facility operation would be lowered. Therefore, any extension in the operating life of the facility would result in savings in system production costs. The production of energy at reduced cost results in an incremental net benefit for the use of a 40-year operating life of the facility.
2. Radiological Assessments - The NRC staff calculates dose commitments to the human population residing around nuclear power reactors to assess the impact on people from radioactive material released from these reactors. The annual dose commitment is calculated to be the dose that would be received over a 50-year period following the intake of radioactivity for 1 year under the conditions that would exist 15 years after the plant began operation.

The 15 year period is chosen as representing the midpoint of plant operation and factors into the dose models by allowing for buildup of long life radionuclides in the soil. It affects the estimated doses only for radionuclides ingested by humans that have half-lives greater than a few years. For a plant licensed for 40 years, increasing the buildup period from 15 to 20 years would increase the dose from long life radionuclides via the ingestion pathways by 33% at most. It would have much less effect on dose from shorter life radionuclides. Tables D-4 and D-5 of Appendix D to the FES indicate that the estimated doses via the ingestion pathways are only a fraction of the regulatory design objectives. For example, the ingestion dose to the thyroid is 7.0 mrem/yr compared to an Appendix I design objective of 15 mrem/yr. Thus, for 7 mrem/yr, an increase of even as much as 33% in these pathways results in a dose within the Appendix I guidelines and would still not be significant.



3. Uranium Fuel Cycle Impacts - The impacts of the uranium fuel cycle are based on 30 years of operation of a model LWR. The fuel requirements for the model LWR were assumed to be one initial core load and 29 annual refuelings (approximately 1/3 core). The annual fuel requirement for the model LWR averaged out over a 40-year operating life (1 initial core and 39 refuelings of approximately 1/3 core) would be reduced slightly as compared to the annual fuel requirement averaged for a 30-year operating life.

The net result would be an approximately 1.5% reduction in the annual fuel requirement for the model LWR. This small reduction in fuel requirements would not lead to significant changes in the impacts of the uranium fuel cycle. The staff does not believe that there would be any changes to Grand Gulf FES Table 5.10 (S-3) that would be necessary in order to consider 40 years of operation. If anything, the values in Table 5.10 become more conservative when a 40-year period of operation is considered.

#### CONCLUSION

The staff has reviewed the Grand Gulf FES and determined that only three of the areas related to its NEPA analysis discussed in the statement were tied directly to a 30-year operating period. The staff has concluded, based on the reasons discussed in the sections above, that the impacts associated with a 40-year operating license duration are not significantly different from those associated with a 30-year operating license duration assessed in the Grand Gulf FES. Therefore, the staff considers that the Grand Gulf FES sufficiently addresses the environmental impacts associated with a 40-year operating period.



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

Docket No. 50-416

Amendment to Indemnity Agreement No. B-72  
Amendment No. 2

Effective November 1, 1984, Indemnity Agreement No. B-72 between Mississippi Power and Light Company, Middle South Energy, Inc., and South Mississippi Electric Power Association and the Nuclear Regulatory Commission dated July 15, 1981, as amended, is hereby further amended as follows:

Item 3 of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:


Item 3 - License number or numbers

SNM-1882 (From 12:01 a.m., July 15, 1981 to 12 midnight, June 15, 1982, inclusive)

NPF-13 (From 12:01 a.m., June 16, 1982 to 12 midnight October 31, 1984 inclusive)

NPF-29 (From 12:01 a.m., November 1, 1984 )

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

  
Jerome Saltzman, Assistant Director  
State and Licensee Relations  
Office of State Programs

Accepted \_\_\_\_\_, 1984

Accepted \_\_\_\_\_, 1984

By \_\_\_\_\_  
MISSISSIPPI POWER AND LIGHT CO.

By \_\_\_\_\_  
MIDDLE SOUTH ENERGY, INC.

Accepted \_\_\_\_\_, 1984

By \_\_\_\_\_  
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

APPENDIX B

TO FACILITY LICENSE NO. NPF-29

GRAND GULF NUCLEAR STATION

UNIT 1

MISSISSIPPI POWER AND LIGHT COMPANY

DOCKET NO. 50-416

ENVIRONMENTAL PROTECTION PLAN

OCTOBER 1984

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GRAND GULF NUCLEAR STATION

UNIT 1

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

TABLE OF CONTENTS

Section	Page
1.0 Objectives of the Environmental Protection Plan. . . . .	1-1
2.0 Environmental Protection Issues. . . . .	2-1
2.1 Aquatic Issues . . . . .	2-1
2.2 Terrestrial Issues . . . . .	2-1
3.0 Consistency Requirements . . . . .	3-1
3.1 Plant Design and Operation . . . . .	3-1
3.2 Reporting Related to the NPDES Permits and State Certification. . . . .	3-2
3.3 Changes Required for Compliance with Other Environmental Regulation . . . . .	3-3
4.0 Environmental Conditions . . . . .	4-1
4.1 Unusual or Important Environmental Events. . . . .	4-1
4.2 Environmental Monitoring . . . . .	4-1
5.0 Administrative Procedures. . . . .	5-1
5.1 Review and Audit . . . . .	5-1
5.2 Records Retention. . . . .	5-1
5.3 Changes in Environmental Protection Plan . . . . .	5-1
5.4 Plant Reporting Requirements . . . . .	5-2

1.0 OBJECTIVES OF THE ENVIRONMENTAL PROTECTION PLAN

The Environmental Protection Plan (EPP) is to provide for protection of environmental values during construction and operation of the nuclear facility. The principal objectives of the EPP are as follows:

- (1) Verify that the Plant is operated in an environmentally acceptable manner, as established by the FES and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility construction and operation and of action taken to control those effects.

Environmental concerns identified in the FES which relate to water quality matters are regulated by way of MP&L's (the licensee's) NPDES permit.

## 2.0 ENVIRONMENTAL PROTECTION ISSUES

In the FES-OL dated September 1981, the staff considered the environmental impacts associated with the operation of the Grand Gulf Nuclear Station. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

### 2.1 Aquatic Issues

No aquatic issues were identified in the FES-OL. Effluent limitations and monitoring requirements are contained in the effective NPDES permit issued by the Mississippi Department of Natural Resources. The NRC will rely on this agency for regulation of these matters as they involve water quality and aquatic biota.

### 2.2 Terrestrial Issues

- (1) Potential erosion along transmission line corridors during and immediately following their construction.
- (2) Potential impact of cooling tower drift on vegetation surrounding the site. In the FES the staff recommended an aerial remote sensing program. The applicant has opted to do a more detailed surveillance program as described in Section 4.2.2 of this EPP.

NRC requirements with regard to the terrestrial issues are specified in Subsection 4.2 of this EPP.

### • 3.0 CONSISTENCY REQUIREMENTS

#### 3.1 Plant Design and Operation

The licensee may make changes in plant design or operation or perform tests or experiments affecting the environment provided such changes, tests or experiments do not involve an unreviewed environmental question, and do not involve a change in the Environmental Protection Plan.\* Changes in plant design or operation and performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this section.

Before engaging in additional construction or operational activities which may affect the environment, the licensee shall prepare and record an environmental evaluation of such activity.\*\* When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activities and obtain prior approval from the Director, Office of Nuclear Reactor Regulation. When such activity involves a change in the Environmental Protection Plan, such activity and change to the Environmental Protection Plan may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the final environmental statement (FES) as modified by staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing

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\* This provision does not relieve the licensee of the requirements of 10 CFR 50.59.

\*\*Activities are excluded from this requirement if all measurable environmental effects are confined to on-site areas previously disturbed during site preparation and plant construction.

Board; or (2) a significant change in effluents or power level; or (3) a matter not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in plant design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include a written evaluation which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question nor constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of the Annual Environmental Operating Report (per Subsection 5.4.1) brief descriptions, analyses, interpretations, and evaluations of such changes, tests and experiments.

### 3.2 Reporting Related to the NPDES Permits and State Certification

Violations of the NPDES permit or the State certification (pursuant to Section 401 of the Clean Water Act, respectively) shall be reported to the NRC by submittal of copies of the reports required by the NPDES permit or certification.

Changes and additions to the NPDES permit or the State certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The NRC shall be notified of changes proposed by the licensee to the effective NPDES permit by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The notification of a licensee-initiated change shall include a copy of the requested revision submitted to the permitting agency. The licensee shall provide the NRC with a copy of its application for renewal of the NPDES permit at the same time the application is submitted to the permitting agency.



### 3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments required to achieve compliance with other Federal, State, or local environmental regulations are not subject to requirements of Section 3.1.

#### 4.0 ENVIRONMENTAL CONDITIONS

##### 4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to station operation shall be recorded and promptly reported to the NRC within 24 hours by telephone, telegraph or facsimile transmissions followed by a written report per Sub-section 5.4.2. The following are examples: excessive bird impaction events, onsite plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, fish kills, increase in nuisance organisms or conditions and unanticipated or emergency discharge of waste water or chemical substances.

No routine monitoring programs are required to implement this condition.

##### 4.2 Environmental Monitoring

Deviations from required monitoring programs will not be a violation of license requirements if samples are accidentally spilled or contaminated, or if samples are unattainable due to hazardous conditions, seasonal unavailability, or malfunction of equipment.

###### 4.2.1 Erosion Control Inspection

Maintenance and monitoring of the transmission line corridor rights-of-way will be conducted as a part of the normal transmission line inspections from the GGNS to the Franklin in EHV Switching Station, to the Baxter Wilson Steam Electric Station Switchyard, and to the Port Gibson Substation. These inspections, conducted by aerial surveys and walking patrols at periodic intervals, include monitoring for erosion or vehicular damage caused by right-of-way encroachment by hunters and loggers. Problem areas will be identified

by the aerial surveys, and walking patrols will be directed to the problem areas to evaluate the extent of the problem to be corrected.

- The Erosion Control Inspection Program shall begin upon commencement of normal transmission line inspection procedures. Semi-annual surveys shall continue until stabilization of soil and vegetation (i.e., ground cover establishment) is achieved.

A summary of the field inspection program and any procedures implemented to control abnormal erosion conditions associated with transmission line maintenance activities shall be reported in the Annual Environmental Operation Report in accordance with Subsection 5.4.1. Field logs indicating locations of erosion damage and measures taken to rectify erosion problem areas and estimation of the time to achieve effective stabilization will be maintained and available for inspection for a period of two years. Results reported shall contain information encompassing but not limited to inspection date, estimated size of erosion problem area, probable cause of erosion, type of stabilization program, and date of effective stabilization, as appropriate.

#### 4.2.2 Cooling Tower Drift Program

Seven sampling sites will be utilized to measure cooling tower drift-deposition. At least two of the sampling sites will have duplicate sampling devices. Six of the seven sampling sites will be located in areas where maximum salt deposition is predicted. These areas were extrapolated from the Bechtel Salt Deposition Model developed for the MP&L Final Environmental Report. The seventh sampling site will be a control site located south of Raymond, Mississippi.

Fallout samples will be collected using buckets with a known volume of deionized water in each. The buckets will be located four to six feet above the ground, fitted with bird rings, and covered with fine mesh screens to exclude leaves and insects. The samples will be collected on a quarterly basis and analyzed for calcium, magnesium, sodium, iron, phosphates, nitrates, chloride, fluorides, sulfates, and total dissolved solids. These parameters were selected because past analyses have shown them to be prevalent in the cooling tower source water. The results of these analyses will be correlated with local rainfall data and

the results expressed as mg/m<sup>2</sup>. Details of the sampling procedure and chemical analysis are to be submitted to the NRC's Environmental Engineering Branch for review and approval prior to plant operation above 5% power.

If statistically significant amounts of the analyzed components, at the 95% confidence level as determined by a repeated-measure analysis of variance, are obtained between the preoperational and operational samples, then a supplemental program will be implemented to determine if the increase in drift is of biological significance.

The results will be incorporated into the Annual Environmental Operating Report as described in Section 5.4.1 of the EPP.

This program is to be implemented at least 3 months prior to the operation of Unit 1 above 5% power and will be continued for three years of operation. If no statistically significant amounts of the analyzed components are detected during this time period, then a proposal can be made to NRC to terminate the program.

• 5.0 ADMINISTRATIVE PROCEDURES

5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the Environmental Protection Plan. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

5.2 Records Retention

Records and logs relative to the environmental aspects of plant operation shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to NRC on request.

Records of modifications to plant structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the plant. All other records, data and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

5.3 Changes in Environmental Protection Plan

Requests for changes in the Environmental Protection Plan shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a licensee amendment incorporating the appropriate revision to the Environmental Protection Plan.

## 5.4 Station Reporting Requirements

### 5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following issuance of the operating license. The period of the first report shall begin with the date of issuance of the operating license for the first operational unit.

The report shall include summaries and analyses of the results of the environmental protection activities required by Subsection 4.2 of this Environmental Protection Plan for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous non-radiological environmental monitoring reports, and an assessment of the observed impacts of the station operation on the environment. If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem.

The Annual Environmental Operating Report shall also include:

- (a) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (b) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental issue.
- (c) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.

In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

#### 5.4.2 Nonroutine Reports

- A written report shall be submitted to the NRC within 30 days of occurrence of a nonroutine event. The report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of these impact and plant operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also require reports to other Federal, State, or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided with a copy of each report at the same time it is submitted to the other agency.

APPENDIX C

ANTITRUST CONDITIONS  
OPERATING LICENSE NO. NPF-29

The Mississippi Power & Light Company shall comply with the following antitrust conditions:

I. DEFINITIONS

- (a) "Western Mississippi Area" means the counties of: Walthall, Lawrence, Jefferson Davis, Covington, Simpson, Smith, Scott, Leake, Attala, Choctaw, Montgomery, Grenada, Yalobusha, Panola, Tate, DeSoto, Pike, Amite, Wilkinson, Adams, Franklin, Lincoln, Copiah, Jefferson, Claiborne, Hinds, Rankin, Madison, Yazoo, Warren, Issaquena, Sharkey, Humphreys, Holmes, Carroll, Leflore, Sunflower, Washington, Bolivar, Tallahatchie, Quitman, Coahoma, and Tunica. An entity shall be deemed to be in the "Western Mississippi Area" if it has electric power generation, transmission, or distribution facilities located in whole or in part in the above described area.
- (b) "Bulk Power" means the electric power, and any attendant energy, supplied or made available at transmission or subtransmission voltage by one entity to another.
- (c) "Entity" means a person, a private or public corporation, a municipality, a cooperative, an association, a joint stock association or business trust owning, operating or proposing to own or operate equipment or facilities for the generation, transmission or distribution of electricity, provided that, except for municipalities or rural electric cooperatives, "entity" is restricted to those which are or will be public utilities under the laws of the state in which the entity transacts or will transact business or under the Federal Power Act, and are or will be providing electric service under a contract or rate schedule on file with and subject to the regulation of a state regulatory commission or the Federal Power Commission.
- (d) "Cost" means any operating and maintenance expenses involved together with any ownership costs which are reasonably allocable to the transaction consistent with power pooling practices (where applicable). No value shall be included for loss of revenues from sale of power at wholesale or retail by one party to a customer which another party might otherwise serve. Cost shall include a reasonable return on Licensees' investment. The sale of a portion of the capacity of a generating unit shall be upon the basis of a rate that will recover to the seller the pro rata part of the fixed costs and operating and maintenance



expenses of the unit, provided that, in circumstances in which licensees and one or more entities in the Western Mississippi Area take an undivided interest in a unit in fee, construction costs and operation and maintenance expenses shall be paid pro rata.

## II. INTERCONNECTIONS

- (a) Licensees shall interconnect with and coordinate reserves by means of the sale and purchase of emergency and/or scheduled maintenance bulk power with any entity(ies) in the Western Mississippi Area engaging in or proposing to engage in electric bulk power supply on terms that will provide for Licensees' costs in connection therewith and allow the other party(ies) full access to the benefits of reserve coordination.
- (b) Emergency service and/or scheduled maintenance service to be provided by each party shall be furnished to the fullest extent available from the supplying party and desired by the party in need. Licensees and each party(ies) shall provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and from generation of others to the extent it can do so without impairing service to its customers including other electric systems to whom it has firm commitments.
- (c) Licensees and the other party(ies) to a reserve sharing arrangement shall from time to time jointly establish the minimum reserves to be installed and/or provided under contractual arrangements as necessary to maintain in total a reserve margin sufficient to provide adequate reliability of power supply to the interconnected systems of the parties. If Licensees plan their reserve margin on a pooled basis with other Middle South System companies, the reserves jointly established hereunder shall be on the same basis. Unless otherwise agreed upon, minimum reserves shall be calculated as a percentage of estimated peak load responsibility. No party to the arrangement shall be required to maintain greater reserves than the percentage of its estimated peak load responsibility which results from the aforesaid calculation, provided that, if the reserve requirements of Licensees are increased over the amount Licensees would be required to maintain without such interconnection, then the other party(ies) shall be required to carry or provide for as its (their) reserves the full amount in kilowatts or such increase.
- (d) The parties to such a reserve sharing arrangement shall provide such amounts of ready reserve capacity as may be adequate to avoid the imposition of unreasonable

demands on the other in meeting the normal contingencies of operating its system. However, in no circumstances shall the ready reserve requirement exceed the installed reserve requirement.

- (e) Interconnections will not be limited to low voltages when higher voltages are available from licensees' installed facilities in the area where interconnection is desired, when the proposed arrangement is found to be technically and economically feasible. Control and telemetering facilities shall be provided as required for safety and prudent operation of the interconnected systems.
- (f) Interconnection and coordination agreements shall not embody any restrictive provisions pertaining to intersystem coordination. Good industry practice as developed in the area from time to time (if non-restrictive) will satisfy this provision.

### III. POWER TRANSACTIONS

Licensees will sell bulk power at their costs to or purchase bulk power from any other entity(ies) in the Western Mississippi Area engaging in or proposing to engage in generation of electric power when such transactions would serve to reduce the overall costs of new bulk power supply for themselves or for the other party(ies) to the transaction. This refers specifically to the opportunity to coordinate in the planning of new generation, transmission and related facilities. This provision shall not be construed to require Licensees to purchase or sell bulk power if they find such purchase or sale infeasible or their costs in connection with such purchase or sale would exceed their benefit therefrom.

### IV. PARTICIPATION IN OWNERSHIP

- (a) Licensees and any successor in title shall offer an opportunity to participate in the Grand Gulf Nuclear Units and any other nuclear generating unit(s) which they or either of them, may construct, own and operate in the State of Mississippi, severally or jointly, during the term of the instant license, or any extension or renewal thereof, to any entity(ies) in the Western Mississippi Area by either a reasonable ownership interest in such unit(s), or by a contractual right to purchase a reasonable portion of the output of such unit(s) at the cost thereof if the entity(ies) so elects. In connection with such access, licensees will also offer transmission service as may be required for delivery of such power to such entity(ies) on a basis that will fully compensate licensees for their cost.

- (b) In the event that during the term of the instant license, or any extension or renewal thereof, licensees obtain participation in the ownership of or rights to a portion of the output of one or more nuclear generating units constructed, owned and operated by any affiliate or subsidiary of the Middle South Utilities System other than licensees, or by any successor in title to the Grand Gulf Nuclear Units, licensees shall exert their best efforts to obtain participation in such nuclear unit(s) by any entity(ies) in the Western Mississippi Area requesting such participation on terms no less favorable than the terms of licensees' participation therein.

V. TRANSMISSION SERVICES

- (a) Licensees shall facilitate the exchange of bulk power by transmission over its transmission facilities between or among two or more entities in the Western Mississippi Area with which it is interconnected; and between any such entity(ies) and any such entity(ies) engaging in bulk power supply outside the Western Mississippi Area between whose facilities Licensees' transmission lines and other transmission lines would form a continuous electrical path, provided that (1) permission to utilize such other transmission lines has been obtained, and (2) the arrangements reasonably can be accommodated from a functional and technical standpoint. Such transmission shall be on terms that fully compensate Licensees for their cost. Any entity(ies) requesting such transmission arrangements shall give reasonable advance notice of its (their) schedule and requirements. (The foregoing applies to any entity(ies) to which Licensees may be interconnected in the future as well as those to which they are now interconnected.)
- (b) Licensees shall include in their planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that any entity(ies) in the Western Mississippi Area give Licensees sufficient advance notice as may be necessary to accommodate its (their) requirements from a functional and technical standpoint and that such entity(ies) fully compensates Licensees for their cost. Licensees shall not be required to construct transmission facilities which will be of no demonstrable present or future benefit to Licensees.

VI. POWER FOR RESALE

Licensees will sell power for resale to any entity(ies) in the Western Mississippi Area now engaging in or proposing to engage in retail distribution of electric power.

VII. REGULATORY PROVISIONS

The foregoing conditions shall be implemented in a manner consistent with the provisions of the Federal Power Act and the Mississippi Public Utilities Act of 1956 and all rates, charges or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

November 1, 1984

DISTRIBUTION FOR GRAND GULF FACILITY OPERATING LICENSE NPF-29

✓ Docket No. 50-416  
NRC PDR  
Local PDR  
PRC System  
NSIC  
LB #4 r/f  
M. Duncan  
D. Houston  
T. Novak  
E. Adensam  
J. Saltzman, SP  
Attorney, OELD  
C. Miles, OPA  
H. Denton  
J. Rutberg, OELD  
A. Toalston, SAB  
W. Miller, LFMB  
J. N. Grace  
E. Jordan  
L. Harmon  
D. Brinkman  
T. Barnhart (4)

DESIGNATED ORIGINAL

Certified By

A handwritten signature in dark ink, appearing to be "J. H. M. C.", is written over the "Certified By" text and extends into the "DESIGNATED ORIGINAL" stamp area.