

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

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

---

\* 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 *[Signature]*