January 11, 1996

Mr. John R. McGaha, Jr.
Vice President - Operations
Entergy Operations, Inc.
River Bend Station
P. O. Box 220
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 - AMENDMENT NO. 86 TO FACILITY OPERATING LICENSE NO. NPF-47 (TAC NO. M94083)

Dear Mr. McGaha:

The Commission has issued the enclosed Amendment No. 86 to Facility Operating License No. NPF-47 for the River Bend Station, Unit 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated November 20, 1995.

The amendment revises the TSs to eliminate selected response time testing requirements as discribed in the Boiling Water Reactor Owners Group topical report, NEDO-32291, "System Analyses for Elimination of Selected Response Time Testing Requirements." The affected TS is TS 3.3.1.1, "Reactor Protection System (RPS) Instrumentation."

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

Sincerely,

ORIGINAL SIGNED BY
David L. Wigginton, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosures: 1. Amendment No. 86 to NPF-47
2. Safety Evaluation
cc w/encls: See next page

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

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cc w/encls: See next page

cc:

Winston & Strawn
ATTN: Mark J. Wetterhahn, Esq.
1400 L Street, N.W.
Washington, DC 20005-3502

Mr. J. E. Venable
Manager - Nuclear Licensing
Entergy Operations, Inc.
River Bend Station
P. O. Box 220
St. Francisville, LA 70775

Mr. Layne McKinney, Director
Joint Operations Cajun
10719 Airline Highway
P. O. Box 15540
Baton Rouge, LA 70895

Senior Resident Inspector
P. O. Box 1051
St. Francisville, LA 70775

President of West Feliciana
Police Jury
P. O. Box 1921
St. Francisville, LA 70775

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

Ms. H. Anne Plettinger
3456 Villa Rose Drive
Baton Rouge, LA 70806

Administrator
Louisiana Radiation Protection Division
P. O. Box 82135
Baton Rouge, LA 70884-2135

Gary F. Hall
Vice President & Controller
Cajun Electric Power Cooperative
10719 Airline Highway
P.O. Box 15540
Baton Rouge, LA 70895

Mr. Harold W. Keiser
Executive Vice President and
Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286

Mr. Michael B. Sellman
General Manager - Plant Operations
Entergy Operations, Inc.
River Bend Station
Post Office Box 220
St. Francisville, LA 70775

Mr. James J. Fisicaro
Director - Nuclear Safety
Entergy Operations, Inc.
River Bend Station
Post Office Box 220
St. Francisville, LA 70775

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

The Honorable Richard P. Ieyoub
Attorney General
State of Louisiana
P. O. Box 94095
Baton Rouge, LA 70804-9095

Wise, Carter, Child & Caraway
Attn: Robert B. McGehee, Esq.
P. O. Box 651
Jackson, MS 39205

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

GULF STATES UTILITIES COMPANY**

CAJUN ELECTRIC POWER COOPERATIVE AND

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-458

RIVER BEND STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 86
License No. NPF-47

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

   A. The application for amendment by Gulf States Utilities* (the licensee) dated November 20, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

---

* EOI is authorized to act as agent for Gulf States Utilities Company, which has been authorized to act as agent for Cajun Electric Power Cooperative, and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

**Gulf States Utilities Company, which owns a 70 percent undivided interest in River Bend, has merged with a wholly owned subsidiary of Entergy Corporation. Gulf States Utilities Company was the surviving company in the merger.

E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment; and Paragraph 2.C.(2) of Facility Operating License No. NPF-47 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 86 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. EOI shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

David L. Wigginton, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the
Technical Specifications

Date of Issuance: January 11, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 86

FACILITY OPERATING LICENSE NO. NPF-47

DOCKET NO. 50-458

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.3-6	3.3-6

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.1.16	Verify Turbine Stop Valve Closure and Turbine Control Valve Fast Closure Trip Oil Pressure—Low Functions are not bypassed when THERMAL POWER is ≥ 40% RTP.	18 months
SR 3.3.1.1.17	Calibrate the flow reference transmitters.	18 months
SR 3.3.1.1.18	----------NOTES---------- 1. Neutron detectors are excluded. 2. For Functions 3, 4, and 5 in Table 3.3.1.1-1, the channel sensors are excluded. 3. For Function 6, "n" equals 4 channels for the purpose of determining the STAGGERED TEST BASIS Frequency. ---------- Verify the RPS RESPONSE TIME is within limits.	18 months on a STAGGERED TEST BASIS

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 86 TO FACILITY OPERATING LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

1.0 INTRODUCTION

Current technical specifications (TSs) require nuclear power plants to periodically perform response time testing for instrument channels on the reactor protection system (RPS) instrumentation. The intent of these tests is to ensure that changes in response time of instrumentation beyond the limits assumed in safety analyses are detected, and combined with instrument calibration, to ensure that the instrument is operating correctly. The response time tests do not demonstrate that the instrument response time design value is met, but rather that the specified performance requirements of the TSs are satisfied.

By letter dated January 14, 1994, the Boiling Water Reactor Owners' Group (BWROG) submitted topical report NEDO-32291, "System Analyses for Elimination of Selected Response Time Testing Requirements," for staff review. The BWROG stated in NEDO-32291 that operational history has shown that significant degradation of instrumentation response times is being detected during the performance of calibrations and other surveillance tests. The BWROG further stated that the performance of conventional response time tests has proven to be of little value in assuring that instrumentation will perform as required or for determining the health of the instrument because the majority of allowable instrumentation response times are system response times rather than instrument times.

The primary argument provided in the topical report in support for the elimination of response time testing is that appropriate alternatives are currently in place per the criteria of Regulatory Guide 1.118, "Periodic Testing of Electric Power and Protection Systems," and IEEE 338-1977, "Criteria for the Periodic Testing of Nuclear Power Generating Station Safety Systems," which states:

> "Response time testing of all safety-related equipment, per se, is not required if, in lieu of response time testing, the response time of the safety equipment is verified by functional testing, calibration checks or other tests, or both. This is acceptable if it can be demonstrated that

changes in response time beyond acceptable limits are accompanied by changes in performance characteristics which are detectable during routine periodic tests."

By letter dated December 28, 1994, from B. Boger to R. Pinelli, the staff approved use of NEDO-32291 for the elimination of response time testing requirements. In the accompanying safety evaluation, the staff concluded that significant degradation of instrument response times, i.e., delays greater than about 5 seconds, can be detected during the performance of other surveillance tests, principally calibration, if properly performed. Accordingly, the staff concluded that response time testing can be eliminated from TSs for the selected instrumentation identified in the topical report and accepted NEDO-32291 for reference in license amendment applications for all boiling water reactors with the conditions discussed below:

When submitting plant-specific license amendment requests, licensees must confirm the applicability of the generic analysis of NEDO-32291 to their plant, and in addition to the request as shown in Appendix I of the topical report, the TS markup tables as shown in Appendix H, and a list of affected instrument loop components as shown in Appendix C.1, licensees must state that they are following the recommendations from EPRI NP-7243, "Investigation of Response Time Testing Requirements," and, therefore, are requiring the following actions:

(a) Prior to installation of a new transmitter/switch or following refurbishment of a transmitter/switch (e.g., sensor cell or variable damping components), a hydraulic response time test shall be performed to determine an initial sensor-specific response time value, and

(b) For transmitters and switches that use capillary tubes, capillary tube testing shall be performed after initial installation and after any maintenance or modification activity that could damage the lines.

Licensees must also state the following in their requests:

(a) That calibration is being done with equipment designed to provide a step function or fast ramp in the process variable,

(b) That provisions have been made to ensure that operators and technicians, through an appropriate training program, are aware of the consequences of instrument response time degradation, and that applicable procedures have been reviewed and revised as necessary to assure that technicians monitor for response time degradation during the performance of calibrations and functional tests,

(c) That surveillance testing procedures have been reviewed and revised if necessary to ensure calibrations and functional tests are being performed in a manner that allows simultaneous monitoring of both the input and output response of units under test,

(d) That for any request involving the elimination of response time testing for Rosemount pressure transmitters, the licensee is in compliance with the guidelines of Supplement 1 to Bulletin 90-01, "Loss of Fill-Oil in Transmitters Manufactured by Rosemount," and

(e) That for those instruments where the manufacturer recommends periodic response time testing as well as calibration to ensure correct functioning, the licensee has ensured that elimination of response time testing is nevertheless acceptable for the particular application involved.

By letter dated November 20, 1995, Entergy Operations, Inc. submitted a license amendment application to eliminate instrument response time testing in accordance with NEDO-32291.

2.0 EVALUATION

The licensee's letter of November 20, 1995, referenced NEDO-32291 and proposed elimination of response time testing for selected parameters of the Reactor Protection System (RPS) instrumentation. The licensee stated that the response time tests proposed for elimination are of little safety significance and result in unnecessary personnel radiation exposure, reduced availability of systems during plant shutdown, increased potential for inadvertent actuations of safety systems, and a significant burden to utility resources. The proposed changes to the River Bend Station (RBS) TSs are different than that provided in Appendix H of NEDO-32291 since RBS has recently adopted TS written in the Improved TS format. However, the proposed changes meet the intent of Appendix H of NEDO-32291.

In accordance with the conditions identified in the staff's safety evaluation, the licensee provided the following information:

- Entergy Operations, Inc. (EOI) confirmed the applicability of NEDO-32291 to RBS. As identified in Appendix A of the topical report, RBS was a lead plant in the evaluation. In addition, EOI has confirmed that the components within the scope of the license amendment application have been evaluated in NEDO-32291. The components are identified in Table 1 of the staff's safety evaluation of NEDO-32291 as those instruments/components for which response time testing can be eliminated.

- EOI confirmed that RBS is in conformance with the following recommendations from EPRI NP-7243, "Investigation of Response Time Testing Requirements:"

  (a) Prior to installation of a new transmitter/switch or following refurbishment of a transmitter/switch (e.g., sensor cell or variable damping components), a hydraulic response time test will be performed to determine an initial sensor-specific response time value. EOI committed to revise applicable RBS procedures prior to the upcoming refueling outage (RF-6) to fulfill this recommendation.

(b) For transmitters and switches that use capillary tubes, capillary tube testing shall be performed after initial installation and after any maintenance or modification activity that could damage the lines. EOI stated that RBS does not utilize any transmitters or switches that use capillary tubes in any application that requires response time testing. Therefore, this recommendation is not applicable to RBS.

- EOI committed to revise applicable calibration procedures to include steps to input a fast ramp or step change to system components during calibrations.

- EOI has conducted training for operators and technicians in response to Requested Action 4.a of NRC Bulletin 90-01, "Loss of Fill-Oil in Transmitters Manufactured by Rosemount." Applicable calibration procedures will be reviewed to assure technicans monitor for response time degradation during the performance of calibrations. These procedures will be revised prior to the next performance of the procedure.

- EOI committed to revise surveillance testing procedures to ensure calibrations and functional tests are being performed in a manner that allows simultaneous monitoring of both the input and output response of units under test. The applicable calibration procedures will be revised to require the technicians at different locations to be in direct communication to verify that the response of the transmitter to a step input change is prompt, and in all cases less than five seconds.

- EOI has complied with the guidelines of Supplement 1 to NRC Bulletin 90-01. NRC's evaluation was documented in the staff's letter to EOI dated March 8, 1995.

- The components affected by this amendment request are limited to Rosemount transmitters model 1152, 1153, 1154. EOI has reviewed the vendor recommendations for these devices and confirmed that they do not contain recommendations for periodic response time testing.

The staff has previously concluded that licensees may reference NEDO-32291 in license amendment applications provided that certain conditions are met. In their application dated November 20, 1995, the licensee addressed each of these conditions and the staff finds the responses acceptable. Therefore, the staff finds the licensee's proposed changes to the RBS TSs acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (60 FR 62492). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: D. Wigginton

Date: January 11, 1996