March 15, 1991

Docket No. 50-382

Mr. Ross P. Barkhurst
Vice President Operations
Entergy Operations, Inc.
Post Office Box B
Killona, Louisiana 70066

Dear Mr. Barkhurst:

SUBJECT: ISSUANCE OF AMENDMENT NO. 67 TO FACILITY OPERATING LICENSE NPF-38 - WATERFORD STEAM ELECTRIC STATION, UNIT 3 (TAC NO. 77261)

The Commission has issued the enclosed Amendment No. 67 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated July 25, 1990.

The amendment changes the Appendix A Technical Specifications by the addition of a note concerning relay testing in Table 4.3-2, "Engineering Safety Features Actuation System Instrumentation Surveillance Requirements."

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

Sincerely,

Original Signed By:

L. Raynard Wharton, Acting Project Manager
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 67 to NPF-38
2. Safety Evaluation

cc w/enclosures:
See next page

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

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L. Raynard Wharton

L. Raynard Wharton, Acting Project Manager
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

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cc w/enclosures:
See next page

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

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 67
License No. NPF-38

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

   A. The application for amendment by Entergy Operations, Inc. (the licensee) dated July 25, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

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

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

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

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

2. Accordingly, the license is amended 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-38 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. 67 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Theodore R. Quay

Theodore R. Quay, Director
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 15, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 67

TO FACILITY OPERATING LICENSE NO. NPF-38

DOCKET NO. 50-382

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE PAGES	INSERT PAGES
3/4 3-25	3/4 3-25
3/4 3-27	3/4 3-27

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTAION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	1, 2, 3, 4
b. Containment Pressure - High	S	R	M	1, 2, 3
c. Pressurizer Pressure - Low	S	R	M	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	M(2) (3) (6)	1, 2, 3
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	1, 2, 3, 4
b. Containment Pressure -- High - High	S	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1) (2) (3)	1, 2, 3
3. CONTAINMENT ISOLATION (CIAS)				
a. Manual CIAS (Trip Buttons)	N.A.	N.A.	R	1, 2, 3, 4
b. Containment Pressure - High	S	R	M	1, 2, 3
c. Pressurizer Pressure - Low	S	R	M	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	M(1) (2) (3)	1, 2, 3
4. MAIN STEAM LINE ISOLATION				
a. Manual (Trip Buttons)	N.A.	N.A.	R	1, 2, 3
b. Steam Generator Pressure - Low	S	R	M	1, 2, 3
c. Containment Pressure - High	S	R	M	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	M(1) (2) (3)	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
5. SAFETY INJECTION SYSTEM RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	N.A.	N.A.	R	1, 2, 3, 4
b. Refueling Water Storage Pool - Low	S	R	M	1, 2, 3, 4
c. Automatic Actuation Logic	N.A.	N.A.	M(1) (2) (3)	1, 2, 3, 4
6. LOSS OF POWER (LOV)				
a. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)	N.A.	R	D(4)	1, 2, 3
b. 480 V Emergency Bus Undervoltage (Loss of Voltage)	N.A.	R	D(4)	1, 2, 3
c. 4.16 kV Emergency Bus Undervoltage (Degraded Voltage)	N.A.	R	D(4)	1, 2, 3

TABLE 4.3.-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
7. EMERGENCY FEEDWATER (EFAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	1, 2, 3
b. SG Level (1/2)-Low and ΔP (1/2) - High	S	R	M	1, 2, 3
c. SG Level (1/2) - Low and No Pressure - Low Trip (1/2)	S	R	M	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	M(1) (2) (3)	1, 2, 3
e. Control Valve Logic (Wide Range SG Level - Low)	S	R	SA(5)	1, 2, 3

TABLE NOTATION

(1) Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(2) Testing of Automatic Actuation Logic shall include energization/deenergization of each initiation relay and verification of the OPERABILITY of each initiation relay.

(3) A subgroup relay test shall be performed which shall include the energization/deenergization of each subgroup relay and verification of the OPERABILITY of each subgroup relay. Relays K109, K114, K202, K301, K305, K308 and K313 are exempt from testing during power operation but shall be tested at least once per 18 months and during each COLD SHUTDOWN condition unless tested within the previous 62 days.

(4) Using installed test switches.

(5) To be performed during each COLD SHUTDOWN if not performed in the previous 6 months.

(6) Each train shall be tested, with the exemption of relays, K110, K410 and K412, at least every 62 days on a STAGGERED TEST BASIS. Relays K110, K410 and K412 shall be tested at least every 62 days but will be exempt from the STAGGERED TEST BASIS.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-3.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 67 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By letter dated July 25, 1990, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Waterford Steam Electric Station, Unit 3 Technical Specifications (TS). The proposed changes would add a note to Table 4.3-2," Engineered Safety Features Actuation System Instrumentation Surveillance Requirements," concerning the testing requirements for certain specific relays. The purpose of the change, and the associated plant modifications, is to reduce the number of emergency diesel generator (EDG) starts performed to meet surveillance testing requirements. As described in Generic Letter 84-15, the staff has concluded that excessive cold fast starts of the EDG's may reduce EDG availability to perform their safety function. A reduction in the number of surveillance testing cold starts is, therefore, considered by the staff to be an improvement in overall plant safety. The surveillance of the ESFAS circuitry and an appropriate number of EDG tests are still performed. The staff and the licensee held a meeting on December 20, 1990, to resolve staff concerns about the design changes proposed.

2.0 DISCUSSION

In TS Table 4.3-2, the channel functional test for the automatic actuation logic of the Safety Injection System contains a note (#1) which requires that each train or logic channel be tested at least every 62 days on a staggered test basis. Staggered test basis currently requires equal intervals between the tests such that each channel is tested every 62 days with approximately 31 days between the Channel A and Channel B tests. ESFAS relay surveillance testing requires that the final contact in the circuit is verified to have functioned. For specific relays designated as K110, K410, and K412 the ESFAS relay testing results in an EDG start with the normal diesel generator protective circuits bypassed. The existing start circuitry is designed so that when the EDG is started in the emergency mode, as it is during the ESFAS relay test, it cannot be manually paralleled to the electrical bus to perform other required surveillances.

The EDG's are started for surveillance testing on a monthly basis that is also on a staggered basis, such that every EDG is tested every 31 days with approximately 15 days between the Channel A EDG test and the Channel B EDG test. Because of the differences in the EDG and ESFAS surveillance test schedule, the EDGs are subjected to additional starts to meet the ESFAS surveillance requirements.

3.0 EVALUATION

The proposed changes by the licensee fall into two basic parts. The first part is the actual TS change which will change the note in TS Table 4.3-2 so that those specific relays listed above will still be tested every 62 days but the requirement for the equal time interval between channel tests will be eliminated. The licensee would then be able to perform the ESFAS relay tests at the same time that the required EDG tests are performed and, therefore, reduce the total number of required EDG starts. The effect on the ESFAS relay testing would be that, for the relays listed, one half of the tests would have two weeks between Channel A and Channel B tests while for the other half there would be six weeks between testing. Each relay would still be tested every 62 days. The additional two weeks between tests for half the tests increases the time that a relay failure could be undetected. For the other half of the tests, a failure would be detected sooner. The change in test interval involves only a few relays and these relays have been reliable. The staff considers the change in ESFAS relay test intervals to have an insignificant impact on EDG starting reliability and concludes that the TS change is acceptable.

The second part of the proposed changes involves a design change which is not specifically described in the TS. This modification would modify the EDG control circuitry to allow the operators to parallel the EDG to the bus, manually remove it from the emergency mode, and perform the other required testing. This change would allow the diesel generator protection circuits to be in place as the diesel is tested. The EDG would remain available to respond to a valid emergency start signal during the test. The staff concludes that the improvement in overall reliability of the EDGs achieved by reducing the number of cold starts warrants the changes and the staff finds the changes acceptable.

4.0 CONTACT WITH STATE OFFICIAL

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 and changes in surveillance requirements. 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 exposures. 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 (55 FR 36343). 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 Contributors: N. Trehan, SELB/DST
J. Stewart, SICB/DST

Date: March 15, 1991