



A. P. Barkhurst

W3F1-93-0034
A4.05
PR

May 7, 1993

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Technical Specification Change Request NPF-38-135

Gentlemen:

The attached description and safety analysis support a change to the Waterford 3 Technical Specifications. This proposal requests a one-time exemption to Specification 4.6.1.2.a, which requires three Type A Containment Integrated Leakage Rate Tests to be performed at 40 ± 10 month intervals during each 10-year service period. This one-time exemption would allow the third test of the first 10-year service period to be performed during Refuel 7 at approximately a 54 month interval instead of the current maximum interval of 50 months. This amendment application supplements our request for exemption to 10 CFR Part 50 Appendix J Section III.D.1(a) submitted via W3F1-93-0041 dated May 7, 1993.

This proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1), using the criteria in 10 CFR 50.92(c) and it has been determined that this request involves no significant hazards consideration.

We respectfully request a timely review due to the potential impact on our refueling outage schedule. Refuel 6 is currently projected to begin on March 18, 1994. The attached proposed change is similar to a change recently approved by the NRC for the Callaway Plant, Unit 1, Facility Operating License No. NPF-30.

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Technical Specification Change Request NPF-38-135


W3F1-93-0034

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May 7, 1993

Should you have any questions or comments, please contact Paul Caropino at (504) 739-6692.

Very truly yours,



R.P. Barkhurst
Vice President, Operations
Waterford 3

RPB/PLC/dc

Attachment: Affidavit
NPF-38-135

cc: J.L. Milhoan (NRC Region IV), D.L. Wigginton (NRC-NRR),
R.B. McGehee, N.S. Reynolds, NRC Resident Inspectors Office,
Administrator Radiation Protection Division (State of
Louisiana), American Nuclear Insurers



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

August 12, 1993

Docket No. 50-382

RECEIVED

AUG 16 1993

ILN: 93-0165

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

Dear Mr. Barkhurst:

SUBJECT: EXEMPTION TO 10 CFR PART 50, APPENDIX J, SECTION III.D.1.(a)
WATERFORD STEAM ELECTRIC STATION, UNIT NO. 3 (TAC NO. M86485)

The Commission has issued the enclosed Exemption for the Waterford Steam Electric Station, Unit 3, from a certain requirement of Appendix J to 10 CFR Part 50, in response to your letter dated May 7, 1993.

The Exemption removes the requirement that the third Type A test (Containment Integrated Leak Rate Test, or CILRT) for the first 10-year service period be performed at the regular interval during the first 10-year service period. The one-time exemption would extend the third service period by approximately 4 months within the normal 10-year service period.

The Exemption is enclosed. A copy of the Exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

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

Enclosure:
Exemption

cc w/enclosure:
See next page

9308300275
2/1.

Mr. Ross P. Barkhurst
Entergy Operations, Inc.

Waterford 3

cc:

Mr. Hall Bohlinger, Administrator
Radiation Protection Division
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Mr. R. F. Burski, Director
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Entergy Operations, Inc.
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Winston & Strawn
Attn: N. S. Reynolds
1400 L Street, N.W.
Washington, DC 20005-3502



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

August 12, 1993

Docket No. 50-382

RECEIVED

AUG 16 1993

ILN: 93-0164

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. 85 TO FACILITY OPERATING LICENSE
NPF-38 - WATERFORD STEAM ELECTRIC STATION, UNIT 3 (TAC NO. M86484)

The Commission has issued the enclosed Amendment No. 85 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 May 7, 1993.

The amendment changes the Appendix A Technical Specifications by allowing the third Type A Containment Integrated Leakage Rate Test in the first 10-year service period to be conducted at Refuel 7. This exceeds the interval by approximately 4 months.

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,

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

Enclosures:

1. Amendment No. 85 to NPF-38
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. Ross P. Barkhurst
Entergy Operations, Inc.

Waterford 3

cc:

Mr. Hall Bohlinger, Administrator
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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. 85
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 May 7, 1993, 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.

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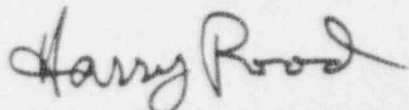
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-38 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 85, 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



Harry Rood, Acting Director
Project Directorate IV-1
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 12, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 85
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

3/4 6-2
3/4 6-3
3/4 6-4
B 3/4 6-1

INSERT PAGES

3/4 6-2
3/4 6-3
3/4 6-4
B 3/4 6-1

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that all penetrations^a not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.
- b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3.
- c. After each closing of each penetration subject to Type B testing, except containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at P_a , 44 psig, and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.2d for all other Type B and C penetrations, the combined leakage rate is less than or equal to $0.60 L_a$.

^a Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals** during shutdown at either P_a , 44 psig, or at P_t , 22 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.
- b. If any periodic Type A test fails to meet either $0.75 L_a$ or $0.75 L_t$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet either $0.75 L_a$ or $0.75 L_t$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either $0.75 L_a$ or $0.75 L_t$ at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
 1. Confirms the accuracy of the test by verifying that the supplemental test result, L_c , minus the sum of the Type A and the superimposed leak, L_o , are equal to or less than $0.25 L_a$.
 2. Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.
 3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be between $0.75 L_a$ and $1.25 L_a$.
- d. Type B and C tests shall be conducted with gas at P_a , 44 psig, at intervals no greater than 24 months* except for tests involving:
 1. Air locks,
 2. Purge supply and exhaust isolation valves with resilient material seals.

*Testing for the first cycle of operation shall be done during the first refueling outage.

**A one time extension of the test interval is allowed for the third Type A test of the first 10-year service period, provided that performance of the Type A test occurs prior to unit restart following Refuel 7.

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the SITE BOUNDARY radiation doses to within the limits of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the safety analyses at the peak accident pressure, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_i$ or less than or equal to $0.75 L_c$, as applicable during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance requirements for measuring leakage rates are consistent with the requirements of Appendix J of 10 CFR Part 50.*

Secondary containment bypass leakage paths previously, Table 3.6-1, have been incorporated into plant procedure UNT-005.026.

3/4.6.1.3 CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provides assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.

*A one time extension of the test interval is allowed for the third Type A test of the first 10-year service period, as required by Surveillance Requirement 4.6.1.2.a and by Section III.D.(a) of Appendix J to 10 CFR Part 50, provided the performance of the Type A test occurs prior to unit restart following Refuel 7.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 85 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated May 7, 1993, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Waterford Steam Electric Station, Unit 3, Technical Specifications (TS). The requested changes would allow a one time extension of the third Type A Containment Integrated Leakage Rate Test (CILRT), by approximately 4 months in the first 10-year service period.

2.0 EVALUATION

The existing TS 4.6.1.2.a. "Containment Leakage Surveillance Requirements," states that three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 -month intervals during shutdown at P₀ (44 psig) during each 10-year service period. The 50-month maximum interval for the third Type A test within the first 10-year service period would be extended to approximately 54 months. This extension will prevent performing four CILRTs, one more than required, within the first 10-year service period. The benefit of not performing the additional CILRT is a reduction in personnel radiation exposure. A dose savings will be realized from eliminating contamination, reducing exposure for venting and draining, and from setup and restoration of instrumentation required to perform the test.

Data from the first (May 1988) and second (May 1991) CILRT at Waterford 3 indicates that most of the measured leakage is from the containment penetrations and not from the containment barrier. The "as-left" leakage rate was well below the 10 CFR Part 50 Appendix J limit. Both Appendix J and TS requires that the leakage rate be less than 75% of L_0 to allow for deterioration in leakage paths between tests. The allowable leakage rate, L_0 , is 0.5 wt.%/day. Therefore, the established acceptable limit is < 0.375 wt.%/day. The "as-left" leakage rates for the first two CILRTs were 0.116 and 0.0731 wt.%/day, which is well below the acceptance limit. The Type B and C test (Local Leakage Rate Test or LLRT) program also provides assurance that containment integrity has been maintained. LLRTs demonstrate operability of components and penetrations by measuring penetration and valve leakage. Additionally, there have been no modifications made to the plant that could adversely affect the test results.

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Since the licensee has justified the leaktight integrity of the containment based on previous leakage test results, the staff concludes that a one-time extension of approximately 4 months beyond the maximum permitted test interval will not have a significant safety impact. The staff, therefore, concludes that the licensee's requested one-time schedular test interval extension for conducting the third CILRT of the first 10-year service period is acceptable.

3.0 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.

4.0 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 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 (58 FR 34079). 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.

5.0 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: August 12, 1993

PRINCIPAL CONTAINMENT DESIGN PARAMETERS

Parameter	Design	Margin ⁽¹⁾
Containment		
Internal design pressure, psig (LOCA)	44.0	2.2%
(MSLB)	44.0	0.91%
External design pressure, psid	0.65	34%
Net free volume, 10 ⁶ ft ³	2.677	Not applicable
Design leak rate, percent free volume Per day at 44.0 psig	0.5	Not applicable
Shield Building		
External design pressure, psig	3.0	4.85%
Subcompartments		
Reactor cavity design wall loading, psid	240.0	84%
Steam generator compartment design wall loading, psid	55.5	153%
Pressurizer compartment design wall loading, psid	10.0	56.25%

NOTES:

$$^{(1)}\text{Margin (\%)} = 100 \frac{\text{design value} - \text{peak calculated value}}{\text{peak calculated value}}$$

Actual margin, i.e., the margin between design values and peak calculated values when using realistic or median parameter values would be much larger.