





UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 3, 1995

Mr. Ross P. Barkhurst  
Vice President Operations  
Entergy Operations, Inc.  
P. O. Box B  
Killona, LA 70066

SUBJECT: ISSUANCE OF SCHEDULAR EXEMPTION FROM THE REQUIREMENTS OF 10 CFR PART 50, APPENDIX J, FOR WATERFORD STEAM ELECTRIC STATION, UNIT NO. 3, REGARDING DELAY OF NEXT REQUIRED TYPE A LEAKAGE RATE TEST (TAC NO. M88327)

Dear Mr. Barkhurst:

By letters dated November 16, 1993, as supplemented by letters dated August 19, 1994, March 30, and June 19, 1995, Entergy Operations, Inc., requested a one-time schedular exemption to delay performance of a Type A test, as required by 10 CFR Part 50, Appendix J, for a period of approximately 18 months.

The NRC staff has reviewed the information provided in support of your schedular exemption request. On the basis of the submitted information and as discussed in the enclosed Exemption, the NRC staff has concluded that there is a high degree of confidence that the containment will not degrade to an unacceptable extent while this Exemption is in effect.

We find that granting the Exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.D.1.(a), is authorized by law, will not present an undue risk to public health and safety, is consistent with the common defense and security, and meets the special circumstances described in 10 CFR 50.12(a)(2)(ii). Accordingly, your request for a schedular exemption to delay performance of the Type A test, until April 1997 or completion of Refueling Outage 8 whichever comes first, is granted.

A copy of the Exemption is enclosed. The Exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

*Chandu P. Patel*

Chandu P. Patel, Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure: Exemption

cc w/encl: See next page

Mr. Ross P. Barkhurst  
Entergy Operations, Inc.

Waterford 3

cc:

Mr. William H. Spell, Administrator  
Louisiana Radiation Protection Division  
Post Office Box 82135  
Baton Rouge, LA 70884-2135

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

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

Resident Inspector/Waterford NPS  
Post Office Box 822  
Killona, LA 70066

Parish President Council  
St. Charles Parish  
P. O. Box 302  
Hahnville, LA 70057

Mr. R. F. Burski, Director  
Nuclear Safety  
Entergy Operations, Inc.  
P. O. Box B  
Killona, LA 70066

Mr. Harry W. Keiser, Executive Vice-  
President and Chief Operating Officer  
Entergy Operations, Inc.  
P. O. Box 31995  
Jackson, MS 39286-1995

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

Chairman  
Louisiana Public Service Commission  
One American Place, Suite 1630  
Baton Rouge, LA 70825-1697

Mr. Dan R. Keuter  
General Manager Plant Operations  
Entergy Operations, Inc.  
P. O. Box B  
Killona, LA 70066

Mr. Donald W. Vinci, Licensing Manager  
Entergy Operations, Inc.  
P. O. Box B  
Killona, LA 70066

Winston & Strawn  
Attn: N. S. Reynolds  
1400 L Street, N.W.  
Washington, DC 20005-3502

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
ENTERGY OPERATIONS, INC.	)	Docket No. 50-382
	)	
(Waterford Steam Electric Station,	)	
Unit No. 3)	)	

EXEMPTION

I.

Entergy Operations, Inc., (the licensee) is the holder of Facility Operating License No. NPF-38, which authorizes operation of Waterford Steam Electric Station Unit No. 3 (the facility, Waterford 3). The operating license provides among other things, that it is subject to all rules, regulations, and orders of the Commission now or hereafter in effect.

The facility is a pressurized water reactor located at the licensee's site in St. Charles Parish, Louisiana.

II.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 requires the performance of three Type A containment integrated leakage rate tests (ILRTs), at approximately equal intervals during each 10-year service period of the primary containment.

III.

By letter dated November 16, 1993, as supplemented by letters dated August 19, 1994, March 30, and June 19, 1995, the licensee requested temporary relief from the requirement to perform a set of three Type A tests at approximately equal intervals during each 10-year service period of the primary containment. The requested exemption would permit a one-time interval extension of the third Type A test by approximately 18 months (from the 1995 refueling outage, currently scheduled to begin in September 1995, to the 1997 refueling outage).

The licensee's request primarily cites the special circumstances of 10 CFR 50.12, paragraph (a)(2)(ii), as the basis for the exemption. They point out that the existing Type B and C testing programs are not being modified by this request and will continue to effectively detect containment leakage caused by the degradation of active containment isolation components as well as containment penetrations. The licensee also indicated that the testing history, structural capability of the containment, and the risk assessment has established that Waterford 3 has a low leakage containment, the structural integrity of the containment is assured, and that there is a negligible risk impact in changing the Type A test schedule. Therefore, application of the regulation in this particular circumstance would not serve, nor is it necessary to achieve, the underlying purpose of the rule.

IV.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 states that a set of three Type A leakage rate tests shall be performed at approximately equal intervals during each 10-year service period.

The licensee proposes an exemption to this section which would provide a one-time interval extension for the Type A test by approximately 18 months. The Commission has determined, for the reasons discussed below, that pursuant to 10 CFR 50.12(a)(1) this exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(ii), are present justifying the exemption; namely, that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

The underlying purpose of the requirement to perform Type A containment leak rate tests at intervals during the 10-year service period, is to ensure that any potential leakage pathways through the containment boundary are identified within a time span that prevents significant degradation from continuing or becoming unknown. The NRC staff has reviewed the basis and supporting information provided by the licensee in the exemption request. The NRC staff has noted that the licensee has a good record of ensuring a leak-tight containment. All Type A tests have passed with significant margin and the licensee will continue to perform the existing Type B and C testing to detect containment leakage caused by the degradation of active containment isolation components as well as containment penetrations. The licensee has stated to the NRC Project Manager that they will perform the general containment inspection although it is only required by Appendix J (Section V.A.) to be performed in conjunction with Type A tests. The NRC staff considers that these inspections, though limited in scope, provide an

important added level of confidence in the continued integrity of the containment boundary.

The NRC staff has also made use of the information in a draft staff report, NUREG-1493 "Performance-Based Containment Leak-Test Program," which provides the technical justification for the present Appendix J rulemaking effort which also includes a 10-year test interval for Type A tests. The integrated leakage rate test, or Type A test, measures overall containment leakage. However, operating experience with all types of containments used in this country demonstrates that essentially all containment leakage can be detected by local leakage rate tests (Type B and C). According to results given in NUREG-1493, out of 180 ILRT reports covering 110 individual reactors and approximately 770 years of operating history, only 5 ILRT failures were found which local leakage rate testing could not detect. This is 3% of all failures. This study agrees well with previous NRC staff studies which show that Type B and C testing can detect a very large percentage of containment leaks.

The Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), collected and provided the NRC staff with summaries of data to assist in the Appendix J rulemaking effort. NUMARC collected results of 144 ILRTs from 33 units; 23 ILRTs exceeded  $1.0L_a$ . Of these, only nine were not due to Type B or C leakage penalties. The NEI data also added another perspective. The NEI data show that in about one-third of the cases exceeding allowable leakage, the as-found leakage was less than  $2L_a$ ; in one case the leakage was found to be approximately  $2L_a$ ; in one case the as-found leakage was less than  $3L_a$ ; one case approached  $10L_a$ ; and in one case the leakage was

found to be approximately  $21L_a$ . For about half of the failed ILRTs the as-found leakage was not quantified. These data show that, for those ILRTs for which the leakage was quantified, the leakage values are small in comparison to the leakage value at which the risk to the public starts to increase over the value of risk corresponding to  $L_a$  (approximately  $200L_a$ , as discussed in NUREG-1493). Therefore, based on these considerations, it is unlikely that an extension of one cycle for the performance of the Appendix J, Type A test at Waterford 3 would result in significant degradation of the overall containment integrity. As a result, the application of the regulation in these particular circumstances is not necessary to achieve the underlying purpose of the rule.

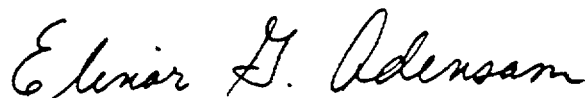
Based on generic and plant specific data, the NRC staff finds the basis for the licensee's proposed exemption to allow a one-time exemption to permit a schedular extension of one cycle for the performance of the Appendix J, Type A test to be acceptable provided the general containment inspection (10 CFR Part 50, Appendix J, Section V.A.) is performed.

Pursuant to 10 CFR 51.32, the Commission has determined that granting this Exemption will not have a significant impact on the environment (60 FR 39020).

This Exemption is effective upon issuance and shall expire after March 31, 1997, or at the completion of the 1997 refueling outage whichever comes first.

Dated at Rockville, Maryland, this 3rd day of August 1995.

FOR THE NUCLEAR REGULATORY COMMISSION



Elinor G. Adensam, Deputy Director  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation