

Mike Sellman  
Vice President, Operations  
Waterford 3W3F1-96-0214  
A4.05  
PR

December 2, 1996

U.S. Nuclear Regulatory Commission  
Attn.: Document Control Desk  
Washington, D.C. 20555Subject: Waterford 3 SES  
Docket No. 50-382  
License No. NPF-38  
Technical Specification Change Request NPF-38-188

Gentlemen:

The purpose of this letter is to withdraw Technical Specification Change Request NPF-38-182, originally submitted under Waterford 3 letter number W3F1-96-0168, dated October 16, 1996, and resubmit the Technical Specification Change Request.

Based on conversations with the NRC Staff, Waterford 3 recognizes that our original submittal was not in accordance with industry guidance published on this Technical Specification change. Accordingly, Waterford hereby withdraws the previously submitted Technical Specification Change Request in its entirety.

The attached description and safety analysis support a change to the Waterford 3 Technical Specifications. The purpose of this Technical Specification Change Request is to permit the use of 10CFR50 Appendix J, Option B, Performance-Based Containment Leakage Testing for Type A, B and C leak rate testing. Technical Specifications 3/4.6.1.1, 3/4.6.1.2, 3/4.6.1.3, 4.6.1.6 and 4.6.1.7 are revised and section 6.15 is added establishing the Containment Leakage Rate Testing Program. The Bases are revised to reflect this change. Minor editorial changes are included in this submittal. Waterford commits to have a Containment Leakage Rate Testing Program in place prior to the next scheduled refueling outage. This program will be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September, 1995.

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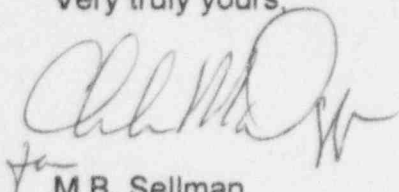
This proposed change has been evaluated in accordance with 10CFR50.91(a)(1), using the criteria in 10CFR50.92(c), and it has been determined that this request involves no significant hazards consideration.

The circumstances surrounding this change do not meet the NRC's criteria for exigent or emergency review. However, due to the significant impact on our upcoming refueling outage, we request an expeditious review. The Waterford 3 refueling outage is currently scheduled to begin April 11, 1997. Entergy Operations requests the effective date for this change be within 60 days of approval.

Waterford 3 currently has an exemption to delay performance of the Type A test until April 1997 or completion of Refueling Outage 8, whichever comes first. This exemption was granted by the NRC Staff by letter dated August 3, 1995.

Should you have any questions or comments concerning this request, please contact Mr. James Fisicaro at (504) 739-6242.

Very truly yours,



M.B. Sellman  
Vice President, Operations  
Waterford 3

MBS/CWT/ssf

Attachment: Affidavit  
NPF-38-188

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

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

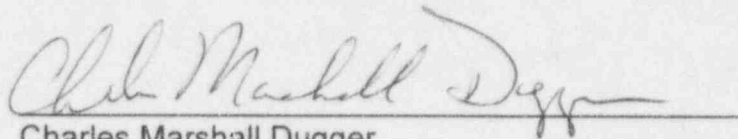
In the matter of )

Entergy Operations, Incorporated )  
Waterford 3 Steam Electric Station )

Docket No. 50-382

AFFIDAVIT

Charles Marshall Dugger, being duly sworn, hereby deposes and says that he is General Manager, Plant Operations - Waterford 3 of Entergy Operations, Incorporated; that he is duly authorized to sign and file with the Nuclear Regulatory Commission the attached Technical Specification Change Request NPF-38-188; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.



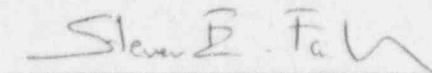
Charles Marshall Dugger  
General Manager, Plant Operations - Waterford 3

STATE OF LOUISIANA )

) ss

PARISH OF ST. CHARLES )

Subscribed and sworn to before me, a Notary Public in and for the Parish and State above named this 2<sup>ND</sup> day of DECEMBER, 1996.



Notary Public

My Commission expires WITH LIFE.

## DESCRIPTION AND SAFETY ANALYSIS OF PROPOSED CHANGE NPF-38-188

The proposed change requests a change to the Technical Specifications for containment leakage to permit the use of 10CFR50 Appendix J, Option B, Performance-Based Containment Leakage Testing. This incorporates Option B into Type A, B, and C leak rate testing. Changes to the Bases are submitted to support this change and provide an editorial change. Specifically these changes include the following:

1. Addition of Section 6.15, "Containment Leakage Rate Testing Program" to the index.
2. Modified Surveillance 4.6.1.1.c to require Type B penetrations (except containment air locks) to be tested in accordance with the Containment Leakage Rate Testing Program if opened following a Type A or Type B test.
3. Modified Specification 3.6.1.2, it's ACTION and Surveillance 4.6.1.2 to require containment leakage rates be in accordance with the Containment Leakage Rate Testing Program.
4. Modified Specification 3.6.1.3.b and Surveillance 4.6.1.3.b.2 to require containment air locks be demonstrated OPERABLE in accordance with the Containment Leakage Rate Testing Program.
5. Modified Surveillance 4.6.1.6 to add the Containment Leakage Rate Testing Program and delete special report no longer required under program.
6. Modified Surveillance 4.6.1.7.2 to require containment purge valves with resilient material seals to be tested in accordance with the Containment Leakage Rate Testing Program. Delete annotation referencing special requirements in effect prior to first refueling cycle.
7. Basis 3/4.6.1.2 is revised to reflect the Containment Leakage Rate Testing Program and change a specific procedure number to the Technical Requirements Manual.
8. Add Section 6.15 "Containment Leakage Rate Testing Program" describing the program to be instituted.

### Existing Specification

See Attachment A

### Proposed Specification

See Attachment B

## Background

Appendix J to 10CFR50 requires that a Type A, integrated leakage rate, test of containment be performed periodically. These tests are required to be scheduled as a set of three tests to be performed at approximately equal intervals during each ten year service period with the third test to coincide with the shutdown for the ten year plant inservice inspection. The Technical Specification essentially duplicates the requirements of Appendix J. The proposed change would allow the use of Appendix J, Option B, which is the conducting of the containment leakage tests at an interval based on performance.

Likewise, Type B Tests, local tests of penetrations, and Type C Tests, containment isolation valve tests, are performed at specified intervals. This proposed change allows conducting of these tests based on performance.

The recent NRC conclusions on containment leak rate testing, as documented in NUREG-1493, "Performance-Based Containment Leakage-Test Program," are based on two fundamental components. First is the insight gained through probabilistic risk assessment techniques. This insight allows the NRC to better assess and apply the relative significance of systems important to safety. The second is the significant data base of practical experience regarding containment leakage rate testing gained since 1973, when Appendix J became effective. This operating and testing experience provides convincing evidence of the need for and activities necessary to conduct Appendix J testing and the cost of those activities both in resources and occupational radiation exposure.

The new risk-based regulation is based on the performance history of the containment as a means to justify an increase in the interval for Type A tests. The new regulation requires tests to be conducted on an interval based on the performance of the containment structure without specifying the interval in the regulation.

As discussed in Waterford 3's Letter W3F1-93-0098, dated November 16, 1993, Waterford 3 has a low leakage containment and that leakage has never exceeded 24.6% of  $L_a$ . There are no mechanisms which would adversely affect the structural capability of the containment and that would be a factor in extending the Type A test schedule. A risk impact assessment was performed, and a determination was made that there is no risk impact as a result of changing the Type A test schedule.

Reducing the Type A test frequency from the current three tests every ten years to performance based frequency as documented in NUREG 1493 leads to no significant increase in risk.



Furthermore, industry operating experience shows that leaks found by Type A tests have performed in accordance with existing requirements. Given the insensitivity of risk to containment leakage rate and the small fraction of leakage paths detected solely by Type A testing, increasing the interval between Type A tests is possible with no significant impact on public risk.

In regard to Type B and C testing, NUREG 1493 has used a statistical approach to determine that the increased risk due to extending the interval was acceptable.

#### Implementation of Technical Specification Changes

The Containment Leakage Rate Testing Program, as required by Option B of 10 CFR 50 Appendix J, and as identified by Section 6.15 of the proposed Technical Specifications, will be effective prior to implementation of these amendments. The performance based leakage rate testing program will be developed consistent with Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

#### Description

The proposed changes would revise the Technical Specifications for Waterford 3. Specifically, the change would permit the use of 10CFR50 Appendix J, Option B, Performance-Based Containment Leakage Rate Testing.

The Nuclear Regulatory Commission has amended its regulations to provide a performance based option for leakage rate testing of containments. This testing option is available in lieu of compliance with the prescriptive requirements contained in Appendix J. Therefore, Waterford 3 is proposing a change to the Technical Specifications to reference Option B to 10CFR50, Appendix J. This change will permit use of the performance-based surveillance testing, Option B, of 10CFR50 Appendix J.

Surveillance 4.6.1.1.c has had the prescriptive requirements and frequency relocated to Section 6.15 and now requires Type B penetrations (except containment air locks) to be tested in accordance with the Containment Leakage Rate Testing Program if opened following a Type A or Type B test.

Specification 3.6.1.2, it's ACTION and Surveillance 4.6.1.2 have had the prescriptive requirements and frequency relocated to Section 6.15 and now requires containment leakage rate testing to be in accordance with the Containment Leakage Rate Testing Program. Note that, although this ACTION is not as written in the model Technical Specifications, it is adequately restrictive as L.C.O. 3.0.3 would apply. L.C.O. 3.0.3 requires initiating action within 1 hour to place the unit in hot standby in 6 hours, in hot shutdown in the next 6 hours, and in cold shutdown within the next 24 hours.

Specification 3.6.1.3.b and Surveillance 4.6.1.3.b.2 have had the prescriptive requirements relocated to Section 6.15 and now require containment air locks be demonstrated OPERABLE in accordance with the Containment Leakage Rate Testing Program.

Surveillance 4.6.1.6 has been modified to add the Containment Leakage Rate Testing Program, as this inspection is performed in conjunction with the Type A test and deletes special reports which have been replaced with record keeping requirements per 10CFR50 Appendix J. Reference to Specification 4.6.1.2 has been removed since it is referenced the Containment Leakage Rate Testing Program.

Surveillance 4.6.1.7.2 has been modified to require containment purge valves with resilient material seals to be tested in accordance with the Containment Leakage Rate Testing Program rather than prescriptive requirements. Frequency has been changed to that in the model Technical Specifications. Delete the annotation referencing special requirements in effect prior to first refueling cycle.

Basis 3/4.6.1.2 is revised to reflect Reg Guide 1.163 rather than the ANSI Standard, and is revised to include the Containment Leakage Rate Testing Program. Where the Basis now specifies a specific procedure number, a change is being submitted to reference the "Technical Requirements Manual".

Section 6.15 "Containment Leakage Rate Testing Program" has been added describing the program to be instituted and has been added to the index.

#### Safety Analysis

The proposed change described above shall be deemed to involve a significant hazards consideration if there is a positive finding in any of the following areas:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change will not affect the assumptions, design parameters, or results of any accident previously evaluated. The proposed change does not add or modify any existing equipment. The proposed changes will result in increased intervals between containment leakage tests determined through a performance based approach. The intervals between such tests are not related to conditions which cause accidents. The proposed changes do not involve a change to the plant design or operation. Therefore, this change does not involve a significant increase in the probability of any accident previously evaluated.

NUREG-1493, "Performance-Based Containment Leak-Test Program," contributed to the technical bases for Option B of 10 CFR 50 Appendix J. NUREG-1493 contains a detailed evaluation of the expected leakage from containment and the associated consequences. The increased risk due to lengthening of the intervals between containment leakage tests was also evaluated and found acceptable. Using a statistical approach, NUREG-1493 determined the increase in the expected dose to the public from extending the testing frequency is extremely small. It also concluded that a small increase is justifiable due to the benefits which accrue from the interval extension. The primary benefit is in the reduction in occupational exposure. The reduction in the occupational exposure is a real reduction, while the small increase to the public is statistically derived using conservative assumptions. Therefore, this change does not involve a significant increase in the consequences of any accident previously evaluated.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different type of accident from any accident previously evaluated?

Response: No.

The proposed change does not involve modifications to any existing equipment. The proposed change will not affect the operation of the plant or the manner in which the plant is operated. The reduced testing frequency will not affect the testing methodology. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change does not change the performance methodology of the containment leakage rate testing program. However, the proposed change does affect the frequency of containment leakage rate testing. With an increased frequency between tests, the proposed change does increase the probability that a increase in leakage could go undetected for a longer period of time. Operational experience has demonstrated the leak tightness of the containment buildings has been significantly below the allowable leakage limit.

The margin of safety that has the potential of being impacted by the proposed change involves the offsite dose consequences of postulated accidents which are directly related to containment leakage rates. The limitation on containment



leakage rate is designed to ensure the total leakage volume will not exceed the value assumed in our accident analysis. The margin of safety for the offsite dose consequences of postulated accidents directly related to containment leakage is maintained by meeting the 1.0 L<sub>a</sub> acceptance criteria. The proposed change maintains the 1.0 L<sub>a</sub> acceptance criteria. Therefore, the proposed change will not involve a significant reduction in a margin of safety.

#### Safety and Significant Hazards Determination

Based on the above safety analysis, it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10CFR50.92; and (2) there is a reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC final environmental statement.

NPF-38-188

ATTACHMENT A