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November 6, 1984

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Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: Waterford SES Unit 3  
Docket No. 50-382  
Exemption from 10CFR50, Appendix J

Dear Mr. Eisenhut:

Consistent with recent NRC policy on issuance of necessary exemptions from regulations, LP&L has reviewed the status of compliance with NRC regulations for Waterford 3.

We have identified an implicit exemption to the provisions of 10CFR50, Appendix J, Section III.D.2.b(ii) that is contained in a footnote to Section 4.6.1.3 of the Technical Specifications. Based on your staff's guidance and pursuant to 10CFR50.12(a), LP&L transmits its evaluation of the need for this exemption in the attachment. The attachment provides the information required by 10CFR50.12(a), including a description of the issue addressed in the exemption and the basis upon which LP&L concludes that the exemption may be issued if the NRC concludes such an exemption is appropriate.

Yours very truly,

K.W. Cook  
Nuclear Support & Licensing Manager

KWC/MJM/pcl

Attachment

cc: W.M. Stevenson, E.L. Blake, G.W. Knighton, J. Wilson, D. Hoffman,  
J.T. Collins, G.L. Constable

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## REQUEST FOR EXEMPTION TO 10CFR50 APPENDIX J

Applicant requests an exemption from the provisions of 10CFR Part 50 Appendix J Paragraph III.D.2(b)(ii).

The requested exemption is authorized by 10CFR50.12, and there are no laws or regulations which would prevent the granting of the exemption. The exemption will not present an undue risk to the public health and safety, is consistent with the common defense and security, and is in the public interest.

### PUBLIC HEALTH AND SAFETY JUSTIFICATION

Paragraph III.D.2(b) of Appendix J to 10CFR50 details three explicit air lock testing requirements which are further required to be included in the Technical Specifications. With one exception, Technical Specification 4.6.1.3 items a, b.1, and b.2 correspond to and comply with those Appendix J requirements.

Technical Specification 4.6.1.3.b.1 requires that containment air locks be demonstrated operable by conducting a leak test every 6 months, when containment integrity is required, by pressurizing the interior of the air lock to  $P_a$  (the calculated peak containment internal pressure under design basis accident conditions, 44 psig for Waterford 3) and verifying that the leakage rate is within its limit. This is in compliance with Appendix J requirement III.D.2(b)(i).

A further Appendix J requirement in paragraph III.D.2(b)(iii) to test air locks within 3 days after being opened (or at least once every 3 days for openings more frequent than every 3 days) specifies that air lock seal tests satisfy the 3 day test requirements. Technical Specification 4.6.1.3.a corresponds to and complies with this portion of Appendix J.

The portion of Appendix J to which the exception applies is paragraph III.D.2(b)(ii) which requires that "Air locks opened during periods when

containment integrity is not required by the plant's Technical Specifications shall be tested at not less than  $P_a$ ." In lieu of this requirement, Technical Specification 4.6.1.3.b.2 requires that an overall air lock leakage test be conducted at  $P_a$  when maintenance has been performed on the air lock that could affect the air lock sealing capability. This Technical Specification contains a footnote stating that this requirement is an exemption to Appendix J of 10CFR50.

The existing air lock doors are so designed that a full pressure test at  $P_a$  of an entire air lock can only be performed after strong backs (structural bracing) have been installed on the inner door. This is due to the fact that the pressure exerted on the inner door during the test is in a direction opposite to that of force experienced during a postulated accident and the locking mechanisms are not designed to withstand such reverse forces associated with pressures on the order of  $P_a$ . Installing strong backs, performing the test, and removing the strong backs, is a cumbersome process requiring approximately 12 hours per air lock (there are 2 air locks), during which access through the air lock is prohibited. The basic design of the Waterford 3 containment permits frequent access in order to perform required surveillance and maintenance activities.

The periodic 6-month test of paragraph III.D.2(b)(i) of Appendix J and the 3-day test requirement of paragraph III.D.2(b)(iii) of Appendix J provide assurance that the air lock will not leak excessively just because it has been opened when containment integrity is not required if no maintenance which could affect the ability of the air lock to seal has been performed on the air lock and the air lock is properly engaged and sealed.

Furthermore, this exemption is included as a part of the Standard Technical Specifications (NUREG-0212) and is consistent with current regulatory practice and policy.

An exemption from paragraph III.D.2(b)(ii) of Appendix J, 10CFR50 is requested since this present Technical Specification provides equivalent protection to the requirement itself and does not endanger life or property.



## PUBLIC INTEREST

If literal compliance with the applicable provisions of Appendix J discussed above were mandated, either a cumbersome and unwarranted test method must be used or a major design change would be required in order to permit the inner door to withstand full containment pressure in the test direction without strong backs. The remaining Appendix J test requirements for containment airlock testing in conjunction with the current Technical Specification post-maintenance test requirement achieve substantial compliance with the purpose of the Appendix J requirements, which is to provide reasonable assurance that leakage will be detected.

If design changes were undertaken, a corresponding delay in commercial operation of Waterford 3 would be occasioned at this stage. Any delay in the commercial operation of Waterford 3 would cause the cost of the unit to increase at the rate of more than \$20 million per month. Under standard ratemaking practices, these costs would eventually have to be borne by ratepayers of Louisiana Power & Light.

If full compliance with the Appendix J testing requirement is undertaken using the current design then, periodically over the remaining life of the plant, a cumbersome and lengthy test must be undertaken on one or both containment air locks. The duration of these tests taken over the life of the plant during which the plant must be shut down (since Appendix J required the test at the end of each period during which containment integrity is not required and during which the air lock has been opened) is substantial. These tests would extend the duration of the outages by half a day or more several times a year. This would have a significant financial impact on Louisiana Power & Light and ultimately on the ratepayers as described above.

Either implementation of a full compliance test requirement with lost time over the life of the plant or a delay in commercial operation to implement a major design change has a substantial financial impact on Louisiana Power & Light and its customers and is not warranted inasmuch as, as shown above, the public health and safety are adequately protected.

## POTENTIAL ENVIRONMENTAL IMPACT

The containment air locks are points of routine access with the containment and have no bearing on the plant radiological or non-radiological effluents. The exemption sought in this case, therefore, has no adverse impact on the normal operation effluents or, for that matter, any non-radiological areas.

Because of existing Technical Specification surveillance requirements, the requested exemption involves a de facto requirement for an air lock seal test in lieu of the Appendix J Paragraph II.D.2(b)(ii) test. Paragraph II.D.2(b)(iii) already allows an air lock seal test in lieu of a similar required air lock test at a pressure of not less than  $P_a$ , thus recognizing the implicit equivalence of these tests under similar circumstances.

As a result, it can be concluded that, under accident conditions, there is a reasonable assurance against undue air lock leakage provided under the exemption and that no material increase in the probability or extent of air lock leakage (i.e., in excess of the design value for post accident containment leakage) is to be expected. Therefore, there is no significant increase in the probability of higher post accident offsite (or for that matter onsite) doses related to the exemption and therefore no significant increase in environmental impact beyond that experienced with no exemption.