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February 27, 1986

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QA

George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
Supplement to NPF-38-13 Local Leak Rate Testing
Exemption Request to 10CFR50 Appendix J

Reference: W3P86-0033 dated February 19, 1986

Dear Mr. Knighton:

By the referenced letter LP&L requested a one time only change to Surveillance Requirements 4.6.1.2.d/f to allow local leak rate testing (LLRT) to be performed at the first refueling outage for Waterford 3 rather than during the two year period ending in April, 1986. This letter provides supplemental information to the referenced request. It also constitutes a request for exemption to certain requirements of 10CFR50 Appendix J.

Appendix J requires, for Type B and C leak rate testing, that such be performed "during each reactor shutdown for refueling...but in no case at intervals greater than 2 years." The proposed Technical Specification changes will defer Type B and C testing to the first refueling outage, an extension of approximately 8 months beyond the 2 year period required by Appendix J. Technical justification for the extension period has previously been provided to the NRC in the referenced letter. For the purpose of the present exemption request the previous information is considered as incorporated by reference.

In discussions with the NRC Staff LP&L has been requested to provide additional commitments to assist the staff in resolving both the Technical Specification changes and the exemption request. The remainder of this letter provides the supplemental information requested.

Although the proposed changes will allow Waterford 3 to significantly reduce a planned outage, LP&L still intends to conduct a two week or less outage for purposes other than Technical Specification surveillances. At the request of the NRC Staff we have reviewed Technical Specification Table 3.6-1 to determine those components that: 1) are testable at power, and

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2) if not testable at power, should be tested during the proposed two week outage to give added assurance of containment integrity.

Our evaluation has determined that all electrical penetrations may be tested during power operation. The electrical penetrations are designed to be tested from outside of containment and present no undue risk to personnel involved in the testing.

The remainder of the components in Table 3.6-1 require containment entry to perform leak rate testing. Of 73 valves in the Table, approximately 47 are in systems potentially isolable for testing and that do not have other Technical Specification restrictions. LP&L has performed an evaluation of the consequences to personnel should the 47 valves be tested at power. Our evaluation considered the following information:

1. Average containment temperature is 112°; containment conditions are such that respirators must be worn continuously, limiting personnel entries to 2 hours at a time and 4 hours per shift.
2. A minimum of 3 personnel are required per penetration - two technicians to perform the testing, and an HP technician to monitor radiation conditions.
3. An average testing time of 3 hours per penetration was assumed - 1 hour for testing and 2 hours for lineup/restoration. This allows no time for malfunctions, troubleshooting, etc.
4. Over one testing period an average dose was assumed of 170 mrem/person, 120 mrem of which is neutron dose. These estimates are based on radiation surveys taken at 50% power and thus may understate the actual dose at 100% power operation.

For testing 28 penetrations (which encompass the 47 valves) we estimate a minimum dose of 14.3 man-rem during a total time in containment of 250 man-hours. These estimates assume that all testing proceeds smoothly. Should problems arise with the testing of several penetrations the estimates could be considerably higher.

LP&L has concluded that undue personnel risk (both radiation and occupational safety) is associated with leak testing valves in containment at power conditions. As noted in the referenced letter there are no indications of containment leakage sufficient to require Type B and C testing prior to first refueling. With no compelling technical reason to perform leakage testing, to do so at power with the associated risks to personnel cannot be justified.

To evaluate those valves that should be tested during the two week outage in order to provide added assurance of containment integrity, LP&L has developed conservative screening criteria. Table 3.6-1 was reviewed to determine those valves which are either permanently closed (or normally closed and seldom cycled), or have other Technical Specification leakage

testing requirements (e.g. containment purge valves). Such valves were not further considered for testing during the outage. The remaining valves in Table 3.6-1 were reviewed against four criteria:

1. Has the valve had relatively frequent cycling?
2. Is there a history of leakage for this valve at Waterford 3?
3. Does NPRDS data indicate potential generic problems with leakage for this valve?
4. Was rework and retesting of this valve necessary on the previous LLRT?

None of these criteria are, in and of themselves, a cause for concern with respect to valve leakage. For instance, NPRDS data indicates that valve wearout is the primary failure mechanism in most cases and Waterford 3's valves are relatively new; retesting of valves assures adequate leak performance for criteria 2 and 3.

Nonetheless, LP&L made the conservative decision to leak test valves that met more than one of the above criteria. Our review determined that the following valves should be leak tested during the upcoming outage to provide additional assurance of containment integrity:

<u>Valve Tag No.</u>	<u>System</u>	<u>Criteria</u>
NG 157/158	Nitrogen Systems Supply to Reactor Bldg	1, 2, 3, 4
IA 909/910	Instrument Air	3, 4
HRA 129 A/B	Hydrogen Analyzer Supply and Return	3, 4
SA 908/909	Station Air	1, 3

Based on the above review, and in response to the NRC staff request for addition information, LP&L agrees to the following:

- o All electrical penetrations (except welded spares) will be leak tested prior to April 22, 1986.
- o The individual valves identified above will be leak tested during the upcoming March outage.
- o Leak testing required by Technical Specifications other than 4.6.1.2.d/f will be performed in accordance with the applicable Technical Specifications.

George W. Knighton

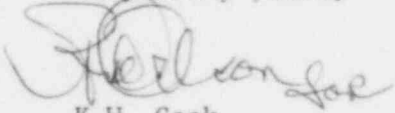
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- o Should adverse indications of valve leakage occur prior to the first refueling outage such valves will be reworked as necessary and retested.

LP&L is confident that the referenced letter, in conjunction with the added assurance provided above, forms a sufficient basis to reach a conclusion of acceptable containment integrity for Technical Specification change NPF-38-13 and an exemption to the schedular requirements of Appendix J to 10CFR50. Should you require further information to expedite your review please contact Mike Meisner at (504) 595-2832.

Very truly yours,



K.W. Cook

Nuclear Support & Licensing Manager

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