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ADENSAM, E. G. BWR Project Directorate 3

SUBJECT: Appliction to amend License NPF-21, requesting exemption from App J Type B & C leak rate test schedules (NUREG/CR-4398) & revising Tech Spec Section 4.6.1.2.d.

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January 31, 1986
G02-86-119

Docket No. 50-397

Director of Nuclear Reactor Regulation
Attention: Ms. E. G. Adensam, Project Director
BWR Project Directorate No. 3
Division of BWR Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

Subject: NUCLEAR PLANT NO. 2
OPERATING LICENSE NPF-21, REQUEST FOR EXEMPTION TO APPENDIX J TYPE B & C LEAK RATE TEST SCHEDULES AND RELATED TECHNICAL SPECIFICATION AMENDMENT CHANGE SECTION 4.6.1.2.d

Reference: NUREG/CR-4398, "Cost Analysis of Revisions to 10 CFR Part 50, Appendix J, Leak Tests for Primary and Secondary Containments of Light-Water-Cooled Nuclear Power Plants", dated September 1985

Type B and C leak rate testing schedules as prescribed by Appendix J, Section III.D are:

> "Type B tests, except tests for airlocks, shall be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years."

And,

> "Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years."

The related technical specification states that, "type B and C tests shall be conducted at intervals no greater than 24 months . . .", which is clarified in paragraph 4.6.1.2.j such that "the provisions of specification 4.0.2 are not applicable to 24 month intervals". 4.0.2 allows a 25% extension to surveillance intervals which, as stated above, is not permitted.

A017
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ADD

EB (LIAW
PSB (L. HULMAN)
EICSB (SRINIVASAN)
RSB (ACTING)
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The Supply System, as discussed below, considers that strict compliance to these schedules misdirects resources and imposes an unnecessary burden on plant operations for WNP-2. Accordingly, per 10 CFR 50.90 and 2.101 the Supply System requests the technical specification surveillance requirement be amended as attached and exemptions per 10 CFR 50.12(a) to Appendix J be granted to allow Type C testing in accordance with the technical specification and to accommodate outage schedules which, due to weather conditions and the unique Pacific Northwest electric generation profile, can produce undue hardship in compliance to a strict two year test schedule.

The first exemption requested concerns the discrepancy between Type C testing per Appendix J "each refueling outage" and the technical specification "at intervals no greater than 24 months". As related in previous correspondence, WNP-2 provides power to the Bonneville Power Administration (BPA) grid which is heavily dependent on hydroelectric power generation, in turn impacted by seasonal variation in snow pack and spring runoff in the Pacific Northwest. The spring runoff and subsequent increase in hydroelectric capacity is the most opportune time for WNP-2 refueling. Hence, the BPA directs the Supply System to refuel on a yearly basis, ideally coinciding with the peak period of hydroelectric capacity. Strict compliance with Appendix J would then require Type C testing on a yearly basis which the Supply System considers to be beyond the original intent of Appendix J and which consumes far more resources than appropriate. Under the special circumstances dictated by the unique electrical generation profile discussed above, the Supply System must commit 100 percent more resources to meet the "each refueling outage" stipulation than the "two year" technical specification statement. The intent of Appendix J statement "in no case at intervals greater than two years", was based on limiting the exposure of components to service conditions between tests to less than two years. The "each refueling outage" also imposed by Appendix J, strictly applied to WNP-2 is beyond the original intent. A strict application is not necessary to achieve the purpose of the rule.

Granting the proposed exemption is in the best interest of the public. The committed resources beyond the intent of Appendix J could be better focused on other plant support tasks. The most recent Type B and C test leak rate program conducted at WNP-2 consumed in excess of 5,000 manhours which, using Industry labor rates developed in support of the referenced NUREG, exceeds $200,000. Type C testing, as stated in the reference, consumes the majority of the resources used for leak rate testing. This resource could be better focused in support of other plant activities rather than utilized on excessive over testing required by strict compliance to Appendix J.

Additionally, as documented in the reference NUREG, the average exposure for Type B and C testing at BWRs is approximately 7 man-rem with Type C testing again causing the majority of the exposure. Strict compliance with Appendix J and acceptance of this exposure is not in keeping with the WNP-2 as low as reasonably achievable (ALARA) program nor consistent with NRC policies on ALARA.

With this exemption the Supply System intends to yearly test approximately one half of the Type C valves. In a two year cycle all valves would be tested. Additionally, the Supply System has a program which will identify valves approaching excessive leak rates and, depending on leak rate, valve type, and service conditions will schedule these valves for yearly tests until the measured leak rate returns to an acceptable value. However, if this condition persists despite an improved maintenance program and increased testing, the valve shall be evaluated for modification. This program is similar to that recommended by the referenced NUREG for a Corrective Action Plan (CAP): "halving the test and servicing cycle length to one year, therefore, would seem to be a reasonable approach for a cap (sic)". This program provides additional assurance that Type C testing at WNP-2 will continue to meet the intent of Appendix J.

In summary, this proposed exemption is within the intent of Appendix J, does not pose an undue risk to public health and safety, allows more efficient allocation of resources and minimizes exposure in keeping with ALARA programs. The Supply System has determined that this exemption is authorized by law per 10 CFR 50.12.

The remaining technical specification change and Appendix J exemption requests concern the two year interval imposed for both Type B and C tests: "in no case at intervals greater than 2 years". As discussed earlier, the timing for WNP-2 refueling outages is dependent on annual snow melt and spring runoff. For planning purposes the date nominally scheduled for the refueling outage is April 15 of each year. Obviously, depending on the vagaries of weather in the Pacific Northwest, the snow melt, runoff and subsequent hydroelectric capacity can either be delayed or early. It is not anticipated that any outage, if deferred due to weather, would be delayed beyond May 15 of any year. As a result, WNP-2 can not adhere to the stipulation "in no case at intervals greater than 2 years" and yet provide reliable service to the BPA grid. Given an early snow melt followed by a late spring on a two year cycle it is conceivable that compliance would cause a shutdown during a period of low hydroelectric capacity and urgent need for WNP-2 power. Forcasting, by BPA, of the precise date for any given refueling outage is not exact and usually can not be fixed with more than a month advance notice. For this reason a yearly-one-time-only request is not practical. For these reasons the Supply System requests that an exemption allowing a 3 month allowance on the Type B and C test interval be granted.

Obviously the scenario provided: an early spring followed by a late spring on a two year cycle, can be reversed and over the forty year life of the plant will be offset resulting in an average two year cycle. From this standpoint the intent of Appendix J to limit the exposure of components to service conditions between tests to less than two years is met over the life of the plant. Additionally, each outage (nominally two months) will be a period in which the components are not exposed to service conditions and as such will provide additional assurance for any specific

test interval that actual exposure to service conditions is indeed less than two years. Thus, the proposed exemption is in keeping with this intent of Appendix J. Additionally, since the two year interval is maintained, this exemption does not represent an increase in risk to public health and safety.

In reality, strict compliance with Appendix J and subsequent shutdown at a period of high demand for power under the special circumstances described above is contrary to the public interest. Additionally, the intent of Appendix J as described in the exemption request for TVA (Federal Register posting Volume 49, No. 160, dated August 16, 1984) was that valves be tested at refueling outages and not to require a shutdown solely for local leak rate testing. This exemption request is in keeping with this intent of Appendix J in that it allows operation to continue to the most opportune time for refueling without forcing an outage and stays within the 2 year exposure limit imposed by Appendix J.

In summary, the Supply System considers this exemption request for a 3 month allowance to the 24 month Type B & C testing to be authorized by law, within the intent of Appendix J, does not represent an undue risk, avoids unnecessary plant shutdowns at periods of greatest need and is otherwise in the public interest.

With regard to the proposed technical specification change (attached), the Supply System has reviewed this request per 10 CFR 50.59 and 50.92 and has determined that it does not represent an unreviewed safety question or significant hazard and does not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated because, as discussed above, the proposed change maintains operation within the bounds intended by Appendix J. No increase in probability or consequences of an accident previously evaluated is represented by this proposal.

2) Create the possibility of a new or different kind of accident than previously evaluated because no new designs or plant operating modes are introduced by this amendment.

3) Involve a significant reduction in a margin of safety because, as discussed above, operation is maintained with the original intent of Appendix J. No threat to a safety margin is represented in this change.

This technical specification change has been reviewed and approved by the WNP-2 Plant Operations Committee and the Supply System Corporate Nuclear Safety Review Board.

In accordance with 10 CFR 170.21, an application fee of One hundred fifty dollars ($150.00) accompanies this request. In accordance with 10 CFR 50.91, the State of Washington has been provided a copy of this letter.

With a refueling outage scheduled for April 15, 1986, the Supply System desires to obtain this requested change and exemptions prior to commencing the outage. The potentially large expenditure of manpower, resources, and exposure represented by complete Type B and C testing requires a considerable amount of planning, scheduling and resource allocation. Contingency plans are being developed; however, any expedited processing of this request will be beneficial to the resource allocation and scheduling presently underway in support of the April refueling outage. Should you require any further information or assistance to aid in evaluating this request, please contact Mr. P. L. Powell, Manager, WNP-2 Licensing.

Very truly yours,

G. C. Sorensen, Manager
Regulatory Programs

PLP/tmh
Attachments

cc: JO Bradfute - NRC
C Eschels - EFSEC
JB Martin - NRC RV
E Revell - BPA
NS Reynolds - BLCP&R
NRC Site Inspector

EXEMPTION REQUEST - APPENDIX J
TYPE B & C LEAK RATE TEST SCHEDULES

STATE OF WASHINGTON)
)
County of Benton)

Subject: _____

I, G. C. SORENSEN, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information and belief the statements made in it are true.

DATE 31 JANUARY, 1986

G. C. Sorensen, Manager
Regulatory Programs

On this day personally appeared before me G. C. Sorensen to me known to be the individual who executed the foregoing instrument and acknowledge that he signed the same as his free act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and seal this 31st day of January, 1986.

Notary Public in and for the
State of Washington

Residing at Richland

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