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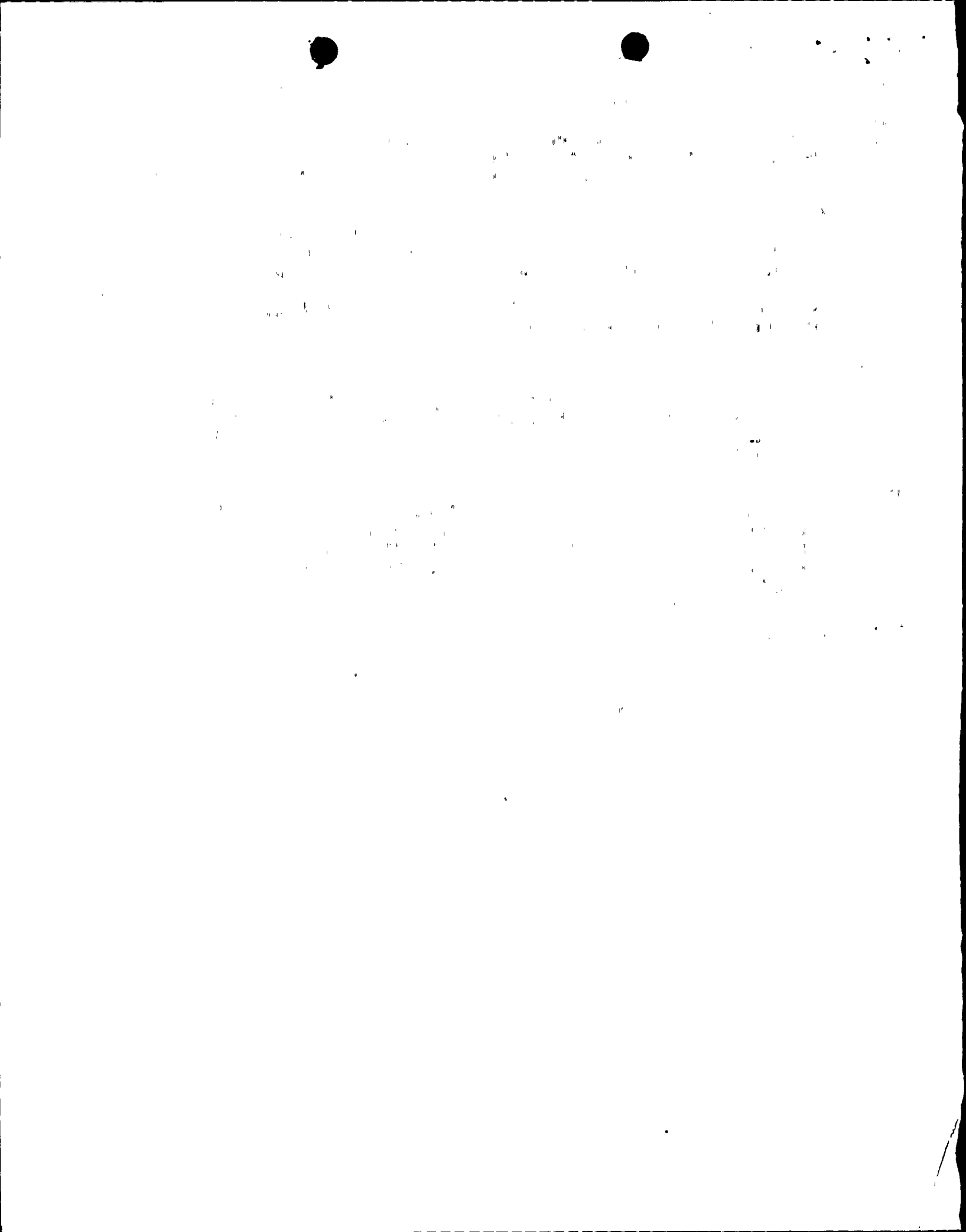
SUBJECT: Application for amend to License NPF-21, modifying snubber functional testing sampling plans, per guidelines of draft ANSI/ASME - OM-4 document, "Exam & Performance Testing of Nuclear Power Plant Dynamic Restraints." Fee paid.

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Washington Public Power Supply System

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December 1, 1987
G02-87-278

Docket No. 50-397

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Subject: NUCLEAR PLANT NO. 2
OPERATING LICENSE NPF-21
REQUEST FOR AMENDMENT TO TECHNICAL
SPECIFICATION 3/4.7.4 (SNUBBERS)

In accordance with the Code of Federal Regulations Title 10, Parts 50.90 and 2.101, the Supply System hereby requests an amendment to the WNP-2 Technical Specification. Specifically, the Supply System is seeking to modify snubber functional testing sampling plans as detailed in Technical Specification 4.7.4.e per the guidelines of the draft ANSI/ASME - OM-4 document (Examination and Performance Testing of Nuclear Power Plant Dynamic Restraints), see Attachment 2.

The first of three approved sampling plans, the "10 percent plan", described in Specification 4.7.4.e(1) requires 10% of the snubbers to be tested periodically. It requires testing of an additional 10% of the snubbers for each snubber not meeting the acceptance criteria of Specification 4.7.4.f. The proposed change modifies this plan to require only a 5% additional testing for each snubber that fails functional testing as opposed to 10% additional testing presently required. Reducing the percentage of snubbers to be retested does not undermine the effectiveness of this surveillance. The initial test sample remains the same and is sufficient to provide an adequate sampling of the snubbers. This change will reduce the amount of additional testing required and thus reduce man-rem exposure and safety concerns associated with unnecessary functional testing. This change is consistent with the ASME OM-4 document.

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The second sampling plan, the "37 plan", described in Specification 4.7.4.e(2) requires that a representative sample of snubbers be tested periodically in accordance with Figure 4.7-1. Figure 4.7-1 provides the acceptance criteria method for the functional test results and denotes a "reject" region and a "continue testing" region. If at any time the plotted test results fall within this "reject" region, then all snubbers are to be functionally tested. The proposed change revises surveillance requirement 4.7.4.e(2) and Figure 4.7-1 to delete the "reject" region and substitute an expanded "continue testing" region. With the deletion of the "reject" line plotting of results by lot or individual basis becomes a moot point because snubbers must continue to be tested until the point falls into the "accept" region or until all snubbers have been tested.

The proposed change also deletes references to the "reject" region in the text of Specification 4.7.4.e(2) and bases 3/4.7.4. Bases 3/4.7.4 is also being supplemented by a footnote such that if testing continues to be between 100 - 200 snubbers and the accept region has not been attained, then the actual percent of population quality (C/N)* would be used to indicate the probability of extended or 100 percent testing. A population quality of greater than or equal to 5% failed snubbers will probably result in extended testing.

Figure 4.7-1 as it appears in the Technical Specification was developed using "Wald's Sequential Probability Ratio Plan". Statistical studies using Wald's sequential sampling plan indicate that a major change in the reject line caused an insignificant change in the accept line or in other words acceptance is independent of rejection. These studies also demonstrate that while the probability of false acceptance of a bad snubber population under the proposed amendment still exists it is negligible. As long as the "reject" line remains in the sample plan there is some possibility of rejecting a good snubber population and consequently requiring an unnecessary 100% functional testing of snubbers with attendant ALARA and safety concerns, manpower utilization and outage extension. The proposed technical specification change will alleviate these problems and still ensure continued or additional testing if snubber quality of failed snubbers is equal to or greater than 5%. These changes have been previously evaluated by the NRC through ANSI/ASME OM-4 participation and by granting similar technical specification changes. References: Duke Power Company McGuire Nuclear Stations.

*Number of snubbers not meeting the acceptance criteria "C"/number of snubbers tested "N".

The third sampling plan, the "55 plan", described in Specification 4.7.4.e(3) also requires that a representative sample of snubbers be periodically tested. Deleting the "reject" line from the "37 plan" makes the "55 plan" unnecessary. Moreover the "55 plan" is not a Wald sequential plan and as such has been deleted from the ASNI/ASME OM-4 draft document.

The proposed change clarifies additional functional testing requirements due to failure of snubbers. Technical Specification 4.7.4.e states that if during the functional testing, additional sampling is required due to failure of only one type of snubber, the functional test results shall be reviewed at that time to determine if additional samples should be limited to the type of snubber which has failed the functional testing. The proposed change allows categorization of unacceptable snubbers into failure mode groups. A test failure mode group shall include all unacceptable snubbers that have a given failure mode and all other snubbers subject to the same failure mode. It allows independent testing of failure mode groups based on the number of unacceptable snubbers and requires one additional test sample from the general population for each failure mode group to provide assurance that failure mode groups have been properly established. This change is consistent with the ASME OM-4 document. A flow chart (Attachment 1) shows how Snubber Functional Testing shall be carried out at WNP-2. This flow chart shall be included in the implementing procedures.

The proposed change also addresses the functional test failure analysis of locked up snubbers. Technical Specification 4.7.4.g states that if the cause of the locked up snubbers is due to manufacturer or design deficiency, all snubbers of the same type subject to the same defect shall be functionally tested. The proposed change includes unexpected transient events as a cause of locked up snubbers in addition to manufacturer or design deficiency and changes the requirement of mandatory functional testing of this type of failure mode group snubbers to evaluation in a manner (stroking, testing, replacement etc.) to ensure their operability. For mechanical snubbers, this evaluation of operability can easily be demonstrated by determining the freedom of motion by stroking the snubbers rather than functional testing. This will provide better manpower utilization, reduce man-rem exposure and safety concerns associated with unnecessary functional testing. All locked snubbers shall be replaced or repaired to original qualified condition. This change to evaluation in a manner to ensure operability rather than mandatory functional testing has previously been reviewed and approved on the McGuire Nuclear Stations.

The Supply System has reviewed this request per 10CFR 50.59 and 50.92 and has determined that no unreviewed safety questions or significant hazards will result relative to the proposed change based on the following considerations:

- 1) Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?

No, reducing the percentage of additional snubbers to be tested from 10% to 5% for "10 percent plan" does not undermine the effectiveness of this surveillance. The initial test remains the same and is sufficient to provide an adequate sampling of the snubbers. This change reduces the amount of additional testing without affecting the previously established confidence level.

Deleting the "reject" line from the "37 plan" does not affect acceptance of the snubber population because snubbers must continue to be tested until the acceptance criteria are met or until all snubbers have been tested. Deletion of the "reject" line from the "37 plan" also makes the "55 plan" unnecessary. Statistical studies indicate that these changes do not reduce the previously established confidence level and thus have no affect on the structural integrity of the reactor coolant system and other safety related systems under dynamic loading. Hence the probability or consequences of previously evaluated accidents are not significantly increased.

- 2) Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

No, because the proposed changes involve no changes to system design bases or system function and do not introduce any new variables beyond those previously considered.

- 3) Do the proposed changes involve a significant reduction in the margin of safety?

Although the proposed amendments do not involve changes in surveillance frequency or operating conditions, they do involve changes in surveillance methods and sample size but not individual acceptance criteria. However, statistical evidence indicates that while the probability of acceptance of a bad snubber population under the proposed amendments still exists, it does not represent a significant reduction to the margin of safety.

As discussed above the Supply System considers that this change does not involve a significant hazards consideration nor does it involve a significant change in the types or significant increase in the amount of any effluents that may be released offsite, nor does it involve a significant increase in individual or cumulative occupational radiation exposure. In actuality it will allow reduction or avoidance of increased radiation exposure. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10CFR 51.22(c)(9) and therefore per 10CFR 51.22(b) an environmental assessment of the change is not required.


The Supply System requests that this technical specification amendment be approved prior to our next scheduled refueling outage, presently scheduled to begin no earlier than March 15, 1988. For this reason, we have submitted it in advance of the outage in order to allow the staff and the Supply System sufficient time for processing.

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

Should you have any questions, please contact Mr. P. L. Powell, Manager, WNP-2 Licensing.

Very truly yours,


G. C. Sorensen, Manager
Regulatory Programs

PLP/bk
Attachments

cc: C Eschels - EFSEC
JB Martin - NRC RV
NS Reynolds - BCP&R
RB Samworth - NRC
DL Williams - BPA
NRC Site Inspector - 901A

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: Snubbers

I, G. C. SORENSEN, being dully 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 30 Nov, 1987.

GC Sorensen
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 acknowledged that he signed the same as his free act and deed for the uses and purposes herein mentioned.

GIVEN under my hand and seal this 30th day of November, 1987.

S. B. Michael
Notary Public in and for the
State of Washington

Residing at Richland, WA.
Dec 89 99352



ATTACHMENT 1
SNUBBER FUNCTIONAL TESTING
FLOW CHART SAMPLE PLAN 2

