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SUBJECT: Forwards request for amend to TS 3/4.3.2 & Table 4.3.2.1-1 isolation actuation instrumentation & surveillance requirements.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

March 11, 1991
G02-91-049

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 AMEND. TO TS 3/4.3.2 & TABLE 4.3.2.1-1 ISOLATION ACTUATION INSTRUMENTATION AND SURVEILLANCE REQUIREMENTS

Reference: See Attachment 1.

In accordance with the Code of Federal Regulations, Title 10 Parts 50.90 and 2.101, the Supply System hereby submits a request for amendment to the WNP-2 Technical Specifications (TS). Specifically, the Supply System is requesting that the subject sections be modified, see Attachment 2, to incorporate Isolation Actuation surveillance frequencies and outage times recommended in References 1) and 2) and approved by the Staff in References 3) and 4).

References 5), 6) and 7) requested changes to Reactor protection system (RPS), Emergency Core Cooling System (ECCS), and Reactor Core Isolation Cooling (RCIC) TS, to allow optimizing surveillance test intervals (STIs) and allowable outage times (AOTs). Because some isolation actuation instrumentation is common to either RPS or ECCS instrumentation, maximum benefit for the common instrumentation required similar analysis with respect to the isolation actuation function. Reference 1) provided the analysis to justify similar changes in the Isolation Actuation STIs and AOTs for the common instrumentation. Reference 2) provided the analysis to justify similar changes to the remainder of the actuation isolation instruments (i.e., those not common to either ECCS or RCIC).

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The technical basis for the isolation actuation instrumentation TS improvements is based on the reliability approach established in support of changes proposed by the Boiling Water Reactor Owners Group (BWROG) for RPS, ECCS, RCIC and Rod Block Instrumentation. In application of the BWROG methodology, the isolation actuation instrumentation fault trees were developed to model the isolation system of each BWR plant line. The affect of the proposed changes in STI and AOTs on the isolation signal could then be compared to the availability of the isolation signal without the proposed changes in the fault tree. The net change in the failure of the system isolation function was then used to determine the acceptability of the proposed changes. As shown in Table 2 of Reference 1) for BWR 5/6 relay plants (ECCS and RCIC instrumentation), the increase in probability of isolation failure due to an STI increase to 92 days is negligible. Further, Reference 1) section 3.5 provides a sensitivity analysis showing that an AOT increase to 24 hours has a less than 2% effect on the probability of failure of the isolation function given a demand. For Actuation Instrumentation not used for ECCS and RCIC, Reference 2) stated that STI and AOT changes were assessed to be acceptable if the calculated change in isolation failure frequency was less than 1E-07/year on an absolute basis or 10% on a relative basis. As stated in References 3) and 4), the staff found the analysis an acceptable basis for extending the STIs and AOTs of the subject instrumentation. Because of more restrictive AOT requirements on RPS instrumentation established in Reference 5), the test and repair AOTs for isolation instrumentation common to RPS is constrained to 6 and 12 hours respectively. AOTs established in Reference 6) for ECCS equipment are 6 and 24 hours (for test and repair AOTs) which are the values proposed by this submittal for the isolation actuation instrumentation. Where an isolation actuation instrument is common to both RPS and the isolation actuation instrumentation the more restrictive AOT is proposed.

In both References 3) and 4), the Staff found the corresponding BWROG submittals acceptable bases for extending STIs and AOTs for isolation actuation instrumentation and stated that applicants for the proposed TS changes must:

1. Confirm the applicability of the generic analyses to the plant

2. Confirm that any increase in instrument drift due to the extended STIs is properly accounted for in the setpoint calculation methodology. (For additional information on this issue, see letter from C.E. Rossi to R.F. Janecek, dated April 27, 1988.)

Accordingly, in response to condition 1, the Supply System confirms that the generic analyses provided in References 1) and 2) are applicable to WNP-2. See Attachment 3, a GE affidavit attesting the applicability of Reference 2) to WNP-2.)

For condition 2, additional clarification was provided in the noted letter (C.E. Rossi to R.F. Janecek, dated April 27, 1988) such that:

> "To address the setpoint drift issue in the amendment proposals to extend STIs, licensees need only confirm that the setpoint drift which could be expected under the extended STIs has been studied and either (1) has been shown to remain within the existing allowance in the RPS and ESFAS instrument setpoint calculation or (2) that the allowance and setpoint have been adjusted to account for the additional expected drift. No additional information need be provided for staff review. However, records showing the actual setpoint calculation and supporting data should be retained onsite for possible future staff audit."

In response, the Supply System has reviewed setpoint drift characteristics of the isolation actuation instrumentation affected by this change and confirmed that the setpoints will remain within existing allowances throughout the requested surveillance test interval extensions.

Appropriate detailed justification for the proposed changes is provided in References 1) and 2) which were in turn found acceptable by the Staff in References 3) and 4). Further, the proposed TS changes represent an optimization of testing resulting in negligible impact on the isolation function which when combined with the Reference 5), 6) and 7) changes to RPS, ECCS and RCIC provide a net improvement to plant safety and operation.

The Supply System has determined that these changes do not represent a significant hazard and provides the following in support of this conclusion:

1) The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated because the changes have been shown to have negligible impact to overall isolation actuation function failure rates. As shown by References 1) and 2), the changes do not significantly degrade the reliability of the isolation actuation instrumentation. Hence, the probability or consequences of previously evaluated accidents are not significantly increased due to this change. To the contrary, as stated in References 1) and 2), the changes combined with RPS, ECCS and RCIC changes requested in References 5), 6) and 7) represent a net improvement to plant safety.

2) The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated because isolation actuation function and reliability are not significantly degraded by these changes. No new modes of plant operation are introduced with these changes. No new or different kind of accident is therefore credible.

3) The proposed changes do not involve a significant reduction in a margin of safety because, as shown in References 1) and 2) and found acceptable by the Staff in References 3) and 4), the changes combined with previously requested changes [(References 5), 6) and 7)] represent an overall net improvement to plant safety and operations. Further, the changes were shown to have negligible impact on isolation function availability and reliability. As such, the margin of safety overall is enhanced by the proposed changes.

As discussed above, the Supply System considers that this change does not involve a significant hazards consideration, nor is there a potential for 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. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and therefore, per 10 CFR 51.22(b), an environmental assessment of the changes is not required.

This Technical Specification change has been reviewed and approved by the WNP-2 Plant Operations Committee (POC) and the Supply System Corporate Nuclear Safety Review Board (CNSRB). In accordance with 10 CFR 50.91, the State of Washington has been provided a copy of this letter.

Very truly yours,

GC Sorensen

G. C. Sorensen, Manager
Regulatory Programs

PLP/bk
Attachments

cc: RG Waldo - EFSEC
JB Martin - NRC RV
NS Reynolds - Winston & Strawn
PL Eng - NRC
DL Williams - BPA/399
NRC Site Inspector - 901A

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: REQUEST FOR T.S. AMENDMENT
3/4.3.2

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 the 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 11 MARCH, 1991

GC Sorensen
G. C. Sorensen, Manager
Regulatory Programs

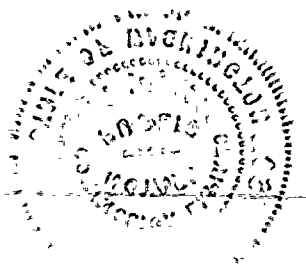
On this date personally appeared before me G. C. SORENSEN, to me known to be the individual who executed the foregoing instrument, and acknowledged that he signed the same as his free act and deed for the uses and purposes herein mention.ed

GIVEN under my hand and seal this 11th day of March 1991.

Teresa L Robertson
Notary Public in and for the
STATE OF WASHINGTON

Residing at Richland

My Commission Expires 7/14/91



References

1) GE Topic Report NEDC-30851P-A, Supplement 2, "Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation Common to RPS and ECCS Instrumentation", dated March 1989.

2) GE Topical Report NEDC-31677P-A, "Technical Specification Improvement Analyses for BWR Isolation Actuation Instrumentation", dated July 1990.

3) Letter, CE Rossi (NRR) to DN Grace (BWROG) "General Electric Company (GE) Topical Report NEDC-30851P, Supplement 2, 'Technical Specification Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation'", dated January 6, 1989

4) Letter, CE Rossi (NRR) to SD Floyd (BWROG) "General Electric Company (GE) Topical Report NEDC-31677P," Technical Specification Improvement Analysis for BWR Isolation Instrumentation, dated June, 1990.

5) Letter, GO2-89-161, GC Sorensen to NRC "Request for Amendment to Technical Specification 3/4.3.1 Reactor Protection System Instrumentation and Closeout of Item 4.5.3 of Generic Letter 83-28", dated September 14, 1989

6) Letter GO2-89-162, GC Sorensen (SS) to NRC, "Request for Amendment to Technical Specification 3/4.3.1 Reactor Protection System Instrumentation and Closeout of Item 4.5.3 of Generic Letter 83-28", dated September 14, 1989 (Proprietary information supporting Reference 5).

7) Letter, GO2-91-035, GC Sorensen to NRC "Request for Amendment to Technical Specification 3/4.3.3 and Tables 3.3.3-1, 4.3.3.1-1, 3.3.5-1 and 4.3.5.1-1 Emergency Core Cooling and Reactor Core Isolation Cooling System Acuation Instrumentation and Surveillance Requirements", dated February 21, 1991.