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 SORESEN, G.C. Washington Public Power Supply System
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SUBJECT: Application for amend to License NPF-21, revising Tech Spec
 Table 4.3.2.1-1.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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March 8, 1989
G02-89-038

Docket No. 50-397

Nuclear Regulatory Commission
Attn: Document Control Desk
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Gentlemen:

Subject: NUCLEAR PLANT NO. 2
OPERATING LICENSE NPF-21, REQUEST FOR AMENDMENT TO
TECHNICAL SPECIFICATION TABLE 4.3.2.1-1, ISOLATION ACTUATION
INSTRUMENTATION SURVEILLANCE REQUIREMENTS

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. Specifically, the Supply System is requesting that the subject table be modified, as attached, to reflect enhanced operating capabilities of the leak detection system due to replacement of the present equipment (based on Riley Model 86 temperature switches) with General Electric Nuclear Measurement Analysis and Control (NUMAC) micro-computer based instrumentation.

During the upcoming spring refueling outage the Supply System intends to replace the Riley temperature switches in the leak detection system with General Electric Nuclear Measurement and Control instrumentation. The NUMAC equipment will receive signals from the presently installed thermocouples and provide alarm and trip signals to existing circuitry. All functions of the leak detection system will remain, the change is being made to enhance overall system reliability. With enhanced capabilities the applicable technical specification requirements should be changed to recognize the improvements. Since installation will be completed during the spring refueling outage the proposed technical specification change will be the most beneficial if effective by June 1989.

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REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION TABLE 4.3.2.1-1,
ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

Presently the technical specification requires channel checks and channel functional tests on a 12-hour and monthly frequency respectively. Due to the enhanced capabilities of the NUMAC instrumentation, the Supply System proposes to amend the Technical Specifications to 1) eliminate the 12-hour channel check requirement based on diagnostic and self-test features provided in the NUMAC design and 2) change the channel functional test frequency from monthly to semi-annually based on the significantly better total channel drift characteristics of the NUMAC equipment and the diagnostic and self-test features of the design.

Presently the channel check of the instrumentation requires that an operator read the output of each channel and compare the reading to expected and similar channel readings on a 12-hour basis. Fifty-nine thermocouples are presently manually selected and assessed to complete the channel check. As a result, the process has potential for human error and consumes operator time that could be utilized elsewhere. Failure of the Riley instruments could remain unnoticed until the next channel check (12-hours later). The NUMAC replacement instrumentation, Quality Class 1 and seismically qualified, has the following diagnostic and self-test features:

- o Continually senses an open thermocouple (no input signal) and provides a trouble alarm.
- o Continually monitors two internal power supplies and provides a trouble alarm should one fail. The monitors remain functional with one power supply.
- o Continually monitors power input to the module and provides a trouble alarm on loss of power.
- o Self-checks each channel utilizing a micro-pulse signal through the channel to confirm functionality on a 30-minute frequency and provides a trouble alarm on failure of the self test.
- o Provides a trouble alarm if the module is left in an inoperable condition (card-out-of-file, instrument left in an instrument-out-of-operate mode).

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION TABLE 4.3.2.1-1,
ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

These design features provide a more comprehensive assessment of system operability every 30 minutes than that presently provided by the Riley instrument channel check on a 12-hour basis. Essentially, a 30-minute channel check feature is inherent in the design that far surpasses and precludes the necessity of the channel check presently performed. Utilization of the NUMAC instrumentation channel check feature provides greater and more frequent assessment of system operability, is more resistant to human error, and will avoid the use of an operator's time for an obsolescent function (channel checking manually). Continuation of a channel check requirement for the NUMAC equipment will consume man hours and not provide any greater assessment of system operability over that provided by the above design features. From the standpoint of efficient use of an operator's time in the assurance of plant safety, a manual channel check requirement for the new equipment detracts from the operator's mission.

The proposal to perform channel functional testing on a semi-annual frequency instead of monthly is based on 1), the manufacturer's total channel drift as compared to that experienced by the presently installed Riley instruments and 2), an analysis of the minimum changes in temperature between trip setpoint and allowable value allowed by the technical specifications compared to the manufacturer's specified total channel drift. Observed drift values on the Riley instrumentation have been as high as 7°F per month. The NUMAC equipment drift specification is less than 0.7°F per month, which is one-tenth of that observed in the Riley equipment. Additionally, the minimum margin between Trip setpoint and Allowable Value for the temperature monitoring system variables as noted in Technical Specification Table 3.3.2-2, Isolation Actuation Instrumentation Setpoints, is 10°F . Using this value and the manufacturer's specified drift (less than 0.7°F), the changing of channel functional testing from monthly to semi-annually for the new system will leave a margin to the allowable value of greater than 5.8°F . Using this same drift value, the new instrumentation could be channel functional tested each 10 months and provide approximately the same margin observed, at times, with the present instrumentation. As discussed above, failure mode diagnostic features are continuous and preclude the necessity of confirmation during channel functional testing. Hence, the diagnostic and drift characteristics of the NUMAC equipment assure greater confidence in system operability when functionally tested on a semi-annual basis than the Riley equipment tested monthly.

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION TABLE 4.3.2.1-1,
ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

The Supply System has evaluated this amendment request per 10CFR50.59 and 50.92 and determined that it does not represent an unreviewed safety question or a significant hazard because it does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated because, as discussed above, the NUMAC design features and diagnostic, self-test, and low drift value preclude the necessity to perform channel checks and allow the change in channel functional testing to semi-annual while actually enhancing the ability to assess operability and functionality of the leak detection system. Deletion of the obsolescent channel check increases operator availability and can be considered a contribution towards decreasing the probability or consequences of accidents. Semi-annual channel functional testing of the NUMAC equipment provides more margin to Allowable Values than testing the present equipment on a monthly basis. Hence, the probability or consequences of previously evaluated accidents are not increased by this change.
- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated because operability and functionality of the system is enhanced with the diagnostic self-test and drift features of the NUMAC equipment. The assessment of channel behavior is made on a 30-minute interval with the NUMAC equipment. This assessment will identify system failures and malfunction much sooner than the present 12 hour manual channel check. As such, the possibility of a new or different kind of accident due to deletion of the manual check is not credible. The semi-annual channel functional test assures, with a large measure of conservatism, that margins realized on monthly functional testing of the present equipment are preserved. Again a new or different kind of accident due to functional testing on a semi-annual versus monthly frequency is not credible.
- 3) Involve a significant reduction in a margin of safety because as discussed above both changes, channel check deletion and semi-annual functional testing, have no impact on the margin of safety. Due to the diagnostic, self-test, and channel drift features, system operability is assessed more frequently and accurately, failure is identified more readily, operator efficiency is increased and presently recognized margins are conservatively preserved. The margin of safety is increased through the use of the NUMAC equipment. The diagnostic and self-test functions in lieu of a manual channel check, and semi-annual functional testing ensure the NUMAC equipment functions as intended. Hence, there is no impact to safety due to this proposal.

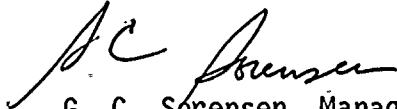
REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION TABLE 4.3.2.1-1,
ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

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 10CFR51.22(c)(9) and therefore, per 10CFR51.22(b), an environmental assessment of the change, is not required.

This amendment request 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 10CFR 50.91, the State of Washington has been provided a copy of this letter.

Very truly yours,



G. C. Sorensen, Manager
Regulatory Programs

Enclosure

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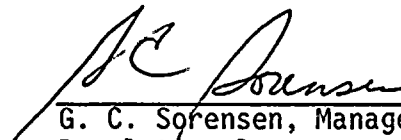
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Subject: Am. Request
T.S. 4.3.2.1-1

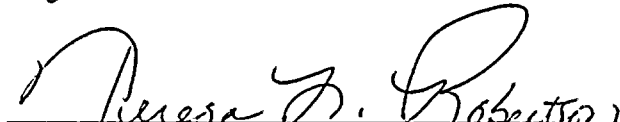
I, G. C. Sorensen, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information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

DATE 8 March, 1989


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 8th day of March 1989.


Notary Public in and for the STATE
OF WASHINGTON

Residing at Richland, WA
My commission expires 7/14/91





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