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SORENSEN, G. C. Washington Public Power Supply System
RECIP. NAME RECIPIENT AFFILIATION
ADENSAM, E. G. BWR Project Directorate 3

SUBJECT: Responds to IE Bulletin 86-002 re static "O" ring (SOR) differential pressure switches. Four SOR switches utilized at plant. Addl response will be submitted within 30 to 60 days of receipt of test assembly.

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Washington Public Power Supply System
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July 29, 1986
G02-86-698

Docket No. 50-397

Director of Nuclear Reactor Regulation
Attn: 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
IE BULLETIN 86-02, STATIC "O" RING DIFFERENTIAL PRESSURE SWITCHES SPECIAL OPERABILITY TESTING SCHEDULE

References:
1) IEB 86-02, "Static "O" Ring Differential Pressure Switches", dated July 18, 1986
2) Letter, G02-86-696, G. C. Sorensen (SS) to J. B. Martin (NRC RV), "IEB 86-02, Static 'O' Ring Differential Pressure Switches, Seven (7) Day Response", dated July 29, 1986

Reference 1) requested that licensees determine whether or not Series 102 or 103 Static "O" Ring (SOR) differential pressure switches are utilized in electrical equipment important to safety and, if so, to complete certain actions to assure that system operation is reliable.

Reference 2) confirmed that four Series 103 SOR differential pressure switches are utilized at WNP-2 and provided information describing the reliability observed to date (no significant setpoint inconsistency), additional vendor test results reflecting component reliability (each of the four devices showed insignificant setpoint shift when tested at 10, 300, and 1500 psig by SOR), and the testing schedule implemented at WNP-2 to provide greater assurance of total system operation (monthly tests for each device on a weekly rotation).

Reference 1) required that a special test simulating operating conditions be conducted within 30 days to verify proper operation of the device and system function. The Supply System has reviewed the implications of conducting the test within 30 days and has the following concerns:

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- Testing at system operating pressure presents the possibility of degrading the equipment. The test could inadvertently apply a differential pressure equivalent to system operating pressure to the device. To avoid such an event, the Supply System considers it prudent to approach the test deliberately with appropriately designed and fabricated testing equipment and procedures. The required 30 day interval precludes the use of this approach to the test and imposes an accelerated schedule to devise test equipment, procedures, and actually conduct the test. The imposed schedule appears over reactive in light of the differences in application of the devices at WNP-2 as compared to that described in the Bulletin.

  The four WNP-2 SOR switches are utilized for level 2 containment isolation actuation and not RPS or ECCS actuation purposes as described in the Bulletin. As stated in Reference 2), the licensed operators have been advised of what control room indications would indicate switch failure and the necessary actions to accomplish. It should be noted that RPS and ECCS actuations would have already occurred due to trips on other instruments; hence, the threat of a similar event as that described by the Bulletin is non-existent.

- The test assembly for conducting this test should be traceable to National Bureau Standards (NBS). Reliance on trip setpoints resulting from a test device not having traceability to NBS is contrary to sound engineering and operating principles and does not conform to guidance provided in IEEE Standard 498, "Requirements for the Calibration and Control of Measuring and Test Equipment used in the Construction and Maintenance of Nuclear Power Generating Stations". The Supply System has investigated the availability of an NBS traceable test assembly and been informed that delivery can be made within 45 days of order placement. The Supply System is in the process of placing such an order at present. Obviously, the 30 day test requirement can not be supported with NBS traceable equipment.

As a result of the above two concerns, the Supply System proposes to meet the 30 and 60 day reporting requirements of the Bulletin within 30 and 60 days of receipt of the test assembly, traceable to NBS, which is presently being procured.

In the interim, the Supply System is taking compensatory measures. For one thing, the plant licensed operators have been informed via a Special Operations Bulletin (SOB) of 1) the potential malfunction of the four SOR switches, 2) the desired methods of verifying proper containment isolations during a level transient and 3) the potential need to initiate operator actions to ensure the proper isolations. Further, this Bulletin (SOB) will be included in a near-term Maintenance and Operations Bulletin (MOB) with an explanation of the future augmented testing of the SOR differential pressure switches at system operating conditions. This Bulletin should become part of the formal requalification training program cycle beginning about August 11, 1986.

Additionally, the Surveillance Procedures on SOR differential pressure switches have been rewritten so that one channel is covered in each procedure. This will allow one channel to be tested each week, on a monthly staggered basis. While this does not constitute an increase in the actual number of surveillance tests being performed, it does increase the likelihood of any potential problem being discovered and responded to earlier than under the old surveillance schedule. Greater diversity with respect to test equipment/personnel will also be accomplished by this change.

Your immediate attention to this response is requested. Should you have any questions or require further information, please contact Mr. P. L. Powell, Manager, WNP-2 Licensing.

Very truly yours,

G. C. Sorensen, Manager
Regulatory Programs

PLP/tmh

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