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ACCESSION NBR:8908140101DOC.DATE: 89/08/01NOTARIZED: NODOCKET #FACIL:50-397WPPSS Nuclear Project, Unit 2, Washington Public Powe05000397AUTH.NAMEAUTHOR AFFILIATIONFIES,C.L.Washington Public Power Supply SystemPOWERS,C.M.Washington Public Power Supply SystemRECIP.NAMERECIPIENT AFFILIATION

SUBJECT: LER 89-029-00:on 890703, RWCU & RCIC sys isolations caused by inadequate test/surveillance procedure.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

August 1, 1989

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

Subject: NUCLEAR PLANT NO. 2 LICENSEE EVENT REPORT NO. 89-029

Dear Sir:

Transmitted herewith is Licensee Event Report No. 89-029 for the WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Very truly yours,

CM Downes

C.M. Powers (M/D 927M) WNP-2 Plant Manager

CMP:1g

Enclosure: Licensee Event Report No. 89-029

cc: Mr. John B. Martin, NRC - Region V Mr. C.J. Bosted, NRC Site (M/D 901A) INPO Records Center - Atlanta, GA Ms. Dottie Sherman, ANI Mr. D.L. Williams, BPA (M/D 399)

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Plant Conditions

a) Power Level - 83%

b) Plant Mode - 1 (Power Operation)

Event Description

On July 3, 1989 at 1022 hours and again at 1026 hours primary containment isolation valves closed on an isolation signal. Both these events occurred during power ascension following the fourth refueling outage. The first event, a Reactor Water Cleanup (RWCU) System Isolation occurred when RWCU-V-1 (the inboard containment isolation valve between the reactor vessel and the RWCU System) closed on an NS⁴ RWCU area high temperature simulated signal causing the operating pump (RWCU-P-1A) to trip. Plant Operators immediately began an investigation into the cause of the isolation which can be the result of any of several events. During their investigation, at 1026 hours, a Reactor Core Isolation Cooling (RCIC) System Isolation occurred on an RCIC Pump Room High Temperature simulated signal causing At that time plant operators traced both isolations to RCIC-V-63 to close. Technical Specification Surveillance (TSS) Testing on the Leak Detection System which had been in progress since 0729 hours. The specific test being performed was TSS 7.4.3.2.1.6, Leak Detection Monitor Division II Channel Calibration (CC)/Channel Functional Test (CFT) for Leak Detection Monitors LD-MON-1B and LD-MON-2B. The Instrument and Control (I&C) Technicians had completed Section "A" of the procedure which calibrates LD-MON-1B, and were proceeding with Section "B" which tests the relay trip logic on LD-MON-1B. Steps 1 and 2 of Section "B" of the procedure required bypass key locks for LD-RMS-S3C, LD-RMS-S3D and LD-RMS-S4B, to be in the test position. The test position should have placed the downstream trip logic for LD-MON-1B in a configuration where relays "K1B" and "K2B" could be tested without an ESF actuation. The I&C Technicians, following procedures as written, proceeded through step 10 of the procedure which simulated a high temperature in the RWCU pump and heat exchanger areas, places the leak detection "Kl" relay in the "Trip" condition and tests for the proper functioning of the downstream "KIB" relay. With these steps complete they proceeded with steps 11 through 15 of the procedure which simulates a high RCIC Equipment Area or Differential Temperature, places the Leak detection "K2" relay in the "trip" condition and tests for proper functioning of the downstream "K2B" relay. The Control Room Operators stopped the surveillance testing at this time since it had obviously caused the isolations.

Immediate Corrective Action

Investigation by the Plant Operators and I&C Technicians revealed that the wrong switches had been called out in Steps 1 and 2 of Section "B" of the procedure. Consequently the testing of LD-MON-1B caused the RWCU and RCIC isolation. The switches identified were those needed for Section "E" of the procedure and were associated with LD-MON-2B. The procedure was deviated to call out the correct switches, LD-RMS-S1B and LD-RMS-S2B. Part B of the procedure was then completed successfully. The entire surveillance was successfully completed at 1627 hours. LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104 EXPIRES: 8/31/88

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | PAGE (3) |
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| Washington Nuclear Plant - Unit 2 | 0 5 0 0 0 3 97 | 8 9 - 0 2 9 - 0 0 | 0 3 OF 0 4 |
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The RCIC System was returned to Standby Status at 1039 hours. The RWCU system was brought back into service at 1515 hours after the required verification of pump bowl temperatures prior to pump restart. There was a delay in gaining access to the RWCU, pump room caused by an inadvertently removed step off pad.

Further Evaluation and Corrective Action

A. Further Evaluation

NRC Form 366A

9-83)

- This event is being reported per the requirements of 10CFR50.73(a)(2)(iv) as an "event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF)...."
- 2. There were no structures, components or systems that were inoperable at the start of this event that contributed to the event.
- 3. The root cause of this event was less than adequate attention to detail in the preparation and review of the surveillance procedure. A contributing factor was the fact that the surveillance procedure was drafted and reviewed during the outage when schedule and time constraints are very intense.
 - a) The initial draft of the procedures by the Project Engineer had the correct by-pass switches called out for LD-MON-1B. A subsequent revision to the draft by the I&C Engineer caused the incorrect switches to be placed in Section "B" of the procedure.
 - b) Reviews of this revision by the Project Engineer and the I&C Engineers did not discover the deficiency in Section "B". A contributing factor to this less than adequate review was the ongoing outage which started in mid April when the I&C Engineers had a large number of competing outage tasks to perform.
 - Temporary Test Procedure 8.3.139, WNP-2 Leak Detection Monitor c) Preoperational Test was written in May 1989 to check out operation of the NUMAC Leak Detection Monitors being installed during the The test included the performance of TSS Test refueling outage. 7.4.3.2.1.6 as part of its procedure. The test was completed on June 10, 1989 without discovering the error associated with the bypass switches associated with LD-MON-1B. A review of the test showed that the procedure calls for the bypassing of all ten isolation functions associated with the Leak Detection System. These bypasses were in place prior to and during the performance of the surveillance test part of the procedure. Thus, individual operation of the bypass switches in the manner they were intended to be used in the subsequent surveillance were not verified during the performance of the test.
 - d) The review of the surveillance contained in the test procedure should have identified and corrected the error with the bypass switches.

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| NRC Form 366A (9-83) 1 | LICENSEE EVENT REPORT (LER) | TEXT CONTINU | JATION | S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO, 3150-0104 EXPIRES: 8/31/88 |
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| B. <u>Furt</u> h | er Corrective Action | | | |
| 1. | Maintenance Engineers will rec "Maintenance Department Procedu | eive additior are Writers Gu | al training (ide." | on the use of the |
| 2. | Plant Procedure PPM 1.5.7, Po modified. Where practical, results in a change to an O performed as a Section of the p | st Maintenanc in situations perations or preoperational | e/Nodification s where a p Surveillance test. | n Testing will be lant modification Test it will be |
| 3. | Project management procedures more advance planning for plan revisions to test and surve completed prior to the start of improved management visibility workload allowing appropriate f | (1.16 Series t modification illance proce of the refuel cy of the p time for prepa |) will be mo n work. Where edures will ing outage. rocedure/soft ration and re | dified to require e practical, draft be scheduled and This will provide ware modification view. |
| <u>Safety Sig</u> | nificance | | | |
| There is were perfo the equipm | no safety significance associa prmed associated with the insta lent and the downstream logic pe | ted with the llation of th erformed its s | event. Durin le new leak do afety functio | ng all tests that etection equipment n as designed. |
| This event | posed no threat to the health | and safety of | the public o | r Plant personnel. |
| <u>Similar Ev</u> | ents | • | • | |
| A review c actuation a plant mo | of previous LERs identified 87- caused by an oversight associat dification. Corrective action | 009 as a simi ted with a pro was very spec | lar event. I Decedure revisi ific to the e | t involved an ESF on as a result of vent. |
| EIIS Infor | mation | | , | |
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| | | | System | Component |

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|-------------------------------------|-----------|--------------|
| Reactor Water Cleanup | CE | |
| Reactor Core Isolation Cooling | BN | |
| Nuclear Steam Supply Shutoff System | BD | |
| RWCU-V-1 | CE | V |
| RWCU-P-1A | · CE | Р |
| Leak Detection | IJ | |
| RCIC-V-63 | BN | V |
| LD-MON-1B | . IJ | MON |
| LD-MON-2B | IJ | MON |
| LD-RMS-53C | IJ | HS |
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