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## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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SUBJECT: LER 90-016-00: on 900806, TS noncompliance due to RCIC steam supply line isolation valve closing time too long.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

September 20, 1990


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

Subject: NUCLEAR PLANT NO. 2  
LICENSEE EVENT REPORT NO. 90-016

Dear Sir:

Transmitted herewith is Licensee Event Report No. 90-016 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,

  
J. W. Baker (M/D 927M)  
WNP-2 Plant Manager

JWB:lr

Enclosure:  
Licensee Event Report No. 90-016

cc: Mr. John B. Martin, NRC - Region V  
Mr. C. Sorensen, NRC Resident Inspector (M/D 901A)  
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Mr. D. L. Williams, BPA (M/D 399)  
NRC Resident Inspector - walk over copy

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## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Washington Nuclear Plant - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 9 7 1				PAGE (3) 1 OF 0 5	
TITLE (4) Technical Specification Noncompliance Due to RCIC Steam Supply Line Isolation Valve Closing Time Too Long As a Result of Personnel Error															
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)					
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)		
0 8	0 6	9 0	9 0	0 1 6	0 0	0 9	2 0	9 0					0 5 0 0 0		
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)													
1		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)	
POWER LEVEL (10)		20.405(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)	
0 8 2		20.405(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)					
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)					
		20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)					
LICENSEE CONTACT FOR THIS LER (12)															
NAME W. S. Davison, Compliance Engineer										TELEPHONE NUMBER 5 0 9 6 2 7 - 2 5 0 1					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)															
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS					
A	B N	V	V	0 8 5	Yes										
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR	
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO					

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On August 18, 1990, during a routine review of completed surveillance procedures, a Plant Technical Department system engineer discovered a condition which violated the WNP-2 Plant Technical Specifications. His review showed that on August 6, 1990, a four inch steam supply line isolation valve for the Reactor Core Isolation Cooling (RCIC) System turbine, RCIC-V-8, had an unacceptable closing time of 10.8 seconds. This should have resulted in the valve being declared inoperable as a result of not meeting ASME Pump and Valve Inservice Test Program criteria. After further evaluation, RCIC-V-8 was declared inoperable on August 21, 1990, and the requirements of the Technical Specification LCO Action statements were implemented.

The cause of this condition was evaluated as personnel error in that the personnel reviewing and approving the surveillance procedure did not recognize the out of specification valve closing time for RCIC-V-8. The corrective actions consist of: required reading of the LER by licensed operators, counselling of involved personnel, discussion of the event during Compliance Group and Shift Technical Advisor staff meetings, and training of affected Operations Department personnel on the ASME Test program and NRC Generic Letter 89-04. This event did not pose a threat to the safety of Plant Personnel or the Public.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATE OF BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Plant Conditions

- a) Plant Mode - 1 (Power Operation)
- b) Power Level - 82%

Event Description

On August 18, 1990, during a routine review of completed surveillance procedures, a Plant Technical Department system engineer discovered a condition which violated the WNP-2 Plant Technical Specifications. His review showed that on August 6, 1990, a four inch steam supply line isolation valve for the Reactor Core Isolation Cooling (RCIC) System turbine, RCIC-V-8, had an unacceptable closing time of 10.8 seconds. This placed the valve in an inoperable status because the closing stroke time was slow enough to be in the Action Required Range (ASME Pump and Valve Inservice Test Program criteria) called out in the Technical Specification surveillance procedure. Placing RCIC-V-8 inoperable also meant that the RCIC System was inoperable and, in fact, had been inoperable since August 6, 1990, when the surveillance test was performed.

RCIC-V-8 was one of a group of valves in which Chesterton live load packing was installed during the recent refueling outage. The operational retest specified for the Maintenance Work Request (MWR) was to perform the RCIC Operability Technical Specification Surveillance Test for the valve. This test had all ready been performed once during the process of recovering from the outage, with the closing time for RCIC-V-8 being 9.15 seconds, well under the maximum allowed 10 seconds. The RCIC-V-8 section of the surveillance was reperformed on August 6, 1990, resulting in a 10.8 second closing time. This new data was not recorded on the same line of the valve data sheet as the original closing time. Instead, it was written in at the bottom of the original data sheet as retest data referencing the MWR. During review and approval of the surveillance, no one caught the significance of the fact that the 10.8 second closing time exceeded the value listed on the data sheet as the ACTION range (10 Seconds). This should have resulted in declaring the valve and the RCIC System inoperable and entering Technical Specification LCO Action statements 3.7.3 (RCIC System - 14 day LCO) and LCO Action statement 3.6.3.a.2 (Primary Containment Isolation Valves - 4 hour LCO).

LICENSEE EVENT REPORT (LER)  
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Immediate Corrective Action

When the error was discovered on August 18, 1990, after evaluation by the Compliance and Operations staff, the valve and the RCIC System were not declared inoperable. Since the maximum closing time listed in the primary containment Technical Specification was 13 seconds, it was thought that a closing time of 10.8 seconds was sufficient to meet that criteria. A subsequent retest of the valve closing stroke time, performed later that day, with the associated 125 VDC battery on equalize charge, appeared to confirm that the valve was operable when the time came in at less than ten seconds. After more evaluation, however, the retest at elevated DC voltage was invalidated. RCIC-V-8 was declared inoperable on August 21, 1990, due to not meeting the time requirements mandated by the ASME Section XI Pump and Valve Test Program (10 seconds) which override the times specified in the Technical Specifications (13 seconds). A troubleshooting effort was immediately started to correct the problem with RCIC-V-8. These efforts resulted in lubrication of the valve stem and in return to operability of the valve and the RCIC System on August 22, 1990, at 0045 hours.

Further Evaluation and Corrective ActionA. Further Evaluation

1. This LER is written to document this event as reportable per the requirements of 10CFR50.73(a)(2)(i)(B) as a condition "prohibited by the Plant's Technical Specifications;". LCO action statement 3.6.3.a.2 requires isolation of the affected containment penetration with at least one deactivated automatic valve secured in the isolated position within four hours. As soon as it was realized that this LCO Action statement was applicable, action was taken to close and deenergize two series isolation valves (RCIC-V-63 and RCIC-V-76) which resulted in compliance within thirty-eight minutes. This was, however, three days after the initial discovery and fifteen days after occurrence of the event itself. LCO action statement 3.7.3 allows 14 days in which the RCIC System can be inoperable. The system was not returned to operable status until the sixteenth day counting from the occurrence of the event. This was well within the time allowed from initial discovery, however.
2. NRC Generic Letter No. 89-04 "GUIDANCE ON DEVELOPING ACCEPTABLE INSERVICE TESTING PROGRAMS" states that "as soon as the data is recognized as being within the Required Action Range for pumps or exceeding the limiting value of full stroke time for valves, the associated component must be declared inoperable and the TS ACTION time must be started." Based on this direction, even though the Technical Specification required closing time is 13 seconds, the valve was declared inoperable due to noncompliance with the ASME SECTION XI performance criteria found in the Technical Specification Surveillance Procedure data sheet.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

3. There were no structures, components or systems that were inoperable at the start of this event that contributed to the event.
4. The immediate cause for this event was personnel error. Personnel assigned to perform and review the RCIC System Operability Test failed to recognize the fact that the valve closing time exceeded the ACTION value specified on the surveillance data sheet. A contributing factor was a poor work practice of recording the data on the sheet in an area well away from the original data and not crossing out or circling the original closing time of 9.15 seconds. Also, evaluation by the Compliance Group staff and the Shift Technical Advisor failed to result in declaration of inoperability on August 18, 1990. The root cause effort for this event is still in progress. Any substantive changes in root cause or corrective actions will be reported at a later date.

B. Further Corrective Action

1. This LER will be required reading for all Licensed operators at WNP-2.
2. The staff personnel involved in the performance, review and approval of the RCIC System Operability Surveillance Test performed on August 6, 1990, were counselled on the requirement for complete and thorough review of all surveillance test criteria for out of specification data.
3. The Compliance Group staff and the Shift Technical Advisors will discuss this event in detail in staff meetings to ensure an understanding of the requirements of the ASME XI Pump and Valve Inservice Test Program in relation to Technical Specification compliance and equipment operability.
4. Training will be provided to affected Operations Department personnel on the ASME Pump and Valve Inservice Test program, specifically addressing acceptance criteria and NRC Generic Letter 89-04 specifically regarding its applicability to Technical Specifications.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Safety Significance

This event posed minimal safety significance. RCIC-V-8 close stroke time was found to be too slow by 0.8 seconds. Although the condition went unrecognized for fifteen days, no safety system demands occurred during that time. In the event a safety system initiation had been required, this condition by itself was not enough to result in failure of the RCIC system to perform its safety function or failure of the valve to perform its isolation function. In order for the slow valve closing time to have had any impact during accident conditions, it must occur in conjunction with a Reactor Building RCIC line break. This event did not question the integrity of the RCIC steam supply line and in no way affected the probability of occurrence of a steam supply line break to the RCIC System. This event, therefore, did not present a condition which had significant impact on safety functions. The effect of the 0.8 second slower valve closing time is believed to be within the conservative criteria of the code requirements. It would, however, consume significant engineering resource to verify this conservatism. The Supply System has decided not to expend this effort. This event posed no threat to the safety of Plant Personnel or the Public.

Similar Events

LER 87-031 documents a similar event involving the 250 Volt Battery float voltage being below the allowed Technical Specification limit in excess of the time allowed by the LCO. The corrective actions involved counselling of individuals involved in the event and increased training of Operations and Maintenance Department personnel.

LER 87-033 also documents a similar event involving failure to perform the ASME/ Technical Specification surveillances for the Post Accident Sampling System containment isolation valves within the required time limits. The corrective actions involved increased training for personnel involved in the completion of these surveillances and revision of the Technical Specification Surveillance procedure to provide additional guidance on completion requirements.

EIIS InformationText ReferenceEIIS Reference

RCIC System  
RCIC-V-8  
125 VDC Battery  
RCIC-V-63  
RCIC-V-76  
250 Volt Battery  
Post Accident Sampling System

System	Component
BN	---
BN	V
EJ	BTRY
BN	V
BN	V
EJ	BTRY
KN	---