

# PRIORITY

ACCELERATED RIDS PROCESSING

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 PEDRO,J.M.      Washington Public Power Supply System  
 PARRISH,J.V.      Washington Public Power Supply System  
 RECIP.NAME      RECIPIENT AFFILIATION

SUBJECT: LER 95-005-00:on 950222,inoperable IRM had been relied upon to meet TS requirements during reactor startup.Caused by lack of neutron source to test instrumentation. Sys knowledge gained will be incorporated.W/950503 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 7  
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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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May 3, 1995  
GO2-95-85

Docket No. 50-397

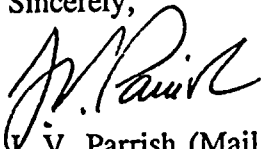
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Subject: NUCLEAR PLANT WNP-2, OPERATING LICENSE NPF-21,  
LICENSEE EVENT REPORT NO. 95-005, REVISION 0

Transmitted herewith is Licensee Event Report No. 95-005 for the WNP-2 Plant. This report is submitted in response to the reporting requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Should you have any questions or desire additional information, please call me or D.A. Swank at (509) 377-4563.

Sincerely,



V. V. Parrish (Mail Drop 1023)  
Vice-President, Nuclear Operations

JMP  
Enclosure

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# LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Washington Nuclear Plant - Unit 2</b>										DOCKET NUMBER (2) <b>0 5 0 0 0 3 9 7</b>					PAGE (3) <b>1 OF 5</b>					
TITLE (4) <b>Technical Specification Action Statement For Intermediate Range Monitoring Instrumentation Not Met</b>																				
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)					
02	22	95	95	-	0	0	5	-	0	0	05	03	95	N/A			0 5 0 0 0 0 0 0			
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (11)																	
POWER LEVEL (10)  0 0 0			2		20.402(b)				20.405c				50.73(a)(2)(iv)				73.71(b)			
			20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(c)					
			20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
			20.405(a)(1)(iii)				X 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)																				
James M. Pedro, Compliance Specialist												AREA CODE 509		TELEPHONE NUMBER 377-8418						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																				
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPPDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPPDS										
B	I   G	C   O   N	R   2   2   0	N																
SUPPLEMENTAL REPORT EXPECTED (14)																				
YES (if yes, complete EXPECTED SUBMISSION DATE)										X NO		EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR				
ABSTRACT (16)																				

On April 3, 1995, a reportability evaluation was completed concluding that an inoperable intermediate range monitor (IRM) had been relied upon to meet Technical Specification requirements during a reactor startup on February 22, 1995. An operability assessment completed on February 20, 1995 had inappropriately concluded the IRM was operable. Since another IRM in the trip system was inoperable during the startup, the plant failed to meet Technical Specification Action statement requirements. The reliance on the inoperable IRM resulted from a deficient operability assessment which was caused by a lack of understanding of critical operational characteristics of the IRM system and the lack of a questioning attitude directed at how the IRM could be operable with no repair performed. Contributing causes were the failure to ensure sufficient information was available to support the operability assessment and the failure to recognize that engineering judgement had been used in the assessment without independent review. No immediate corrective actions were required since the IRM had been repaired. Corrective actions include incorporation of additional system information into the appropriate system reference material for the IRM system engineer and a review of the lessons learned with appropriate personnel. The event had negligible impact on plant safety.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	95	-	0 0 5	-	0 0	2	OF	5
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TEXT (17)

## Event Description:

On April 3, 1995, with the plant at 100% power, a reportability evaluation was completed and concluded that an inoperable intermediate range monitor (IRM) [IG] channel had been relied upon to meet the Technical Specification Limiting Condition for Operation (LCO) requirements during a reactor startup on February 22, 1995. An operability assessment for the IRM had inappropriately concluded the IRM was operable on February 20, 1995. Since another IRM in the same trip system was declared inoperable during the reactor startup, the plant failed to comply with Technical Specification requirements for entry into Operational Condition (MODE) 2, Startup/Hot Standby. The Technical Specification requires three operable IRMs for MODE 2 operations or to place the inoperable channel(s) and/or trip system in the tripped condition within 12 hours. The failure to comply with Technical Specification requirements resulted from the reliance on a deficient operability assessment which had concluded IRM channel E was operable.

## Immediate Corrective Action:

No immediate corrective actions were required since the IRM had been repaired on February 28, 1995.

## Further Evaluation:

Technical Specification 3/4.3.1 requires that two of four instrument channels in each trip system be operable when the plant is in MODE 3 or 4. The Technical Specification requires three of the four instrument channels in each trip system be operable when the plant is in MODE 2 or 5. If these conditions can not be met, the Technical Specifications require the inoperable channel(s) and/or the trip system be placed in the tripped condition within 12 hours. Trip system "A" consists of IRM channels A, C, E, and G.

During startup from refueling outage 9 (R9) in July 1994, IRM channel E failed to respond to increasing neutron level and was declared inoperable. An investigation showed that the IRM had a potential open in the cable. The IRM was not repaired and the plant continued with the startup. The plant operated for approximately 204 days until a turbine trip during surveillance testing on February 18, 1995 resulted in a reactor trip.

Following the reactor trip the plant experienced spiking on IRM channel G which caused a half scram. IRM channel G was declared inoperable, but with the plant in MODE 4, Technical Specification requirements were met by operable IRM channels A and C.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (17)

An operability assessment for IRM channel E was performed on February 20 and the IRM was declared operable but degraded based on engineering judgement. No repairs were performed on the IRM after it had been declared inoperable during startup from R9. The operability assessment was based on the system engineer's judgement that IRM channel E responded as expected following the February 18, 1995 reactor trip.

During the ensuing plant startup activities, IRM channels C and G experienced noise related problems which induced half scrams. Troubleshooting efforts performed following the trip and during plant startup removed IRM channels C and G from service at various times. During these times of inoperability the plant relied on IRM channels A, E, and either C or G to meet Technical Specification requirements.

At 0634 hours on February 22, 1995 during the reactor startup, IRM channel E failed to properly respond to increasing neutron level. The IRM was declared inoperable and a 12 hour Technical Specification ACTION statement was entered due to having less than three operable IRM channels in the "A" trip system. IRM channel G had previously been declared inoperable due to spiking. Plant startup continued with the plant entering MODE 1 at 1819 hours and exiting the ACTION statement for Technical Specification 3.3.1 because IRMs are not required for MODE 1 operation.

The plant continued to operate until 1739 hours on February 26, 1995, when a failure in the main turbine digital electro-hydraulic (DEH) control system [JJ] resulted in a reactor trip. Prior to returning to power operations, IRM channel E was repaired and declared operable.

A review of the events associated with the IRMs following the February 18, 1995 reactor trip and startup from R9 determined that IRM channel E should not have been declared operable. With IRM channel E inoperable during the February 22, 1995 plant startup, the plant had less than the required three operable IRMs in trip system "A" from 1840 hours on February 21 until 1819 hours on February 22 when the plant entered MODE 1. Thus, because of the reliance on the deficient operability assessment for IRM channel E, trip system "A" was not placed in the tripped condition within the 12 hours allowed by Technical Specifications.

The failure that caused IRM channel E to be inoperable was the Reutor Stokes cable connector installed during R9 repairs.

This event is reported per 10 CFR 50.73(a)(2)(i) as a condition prohibited by the Technical Specifications.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (17)

## Root Cause:

During a plant shutdown IRM operability is based on system knowledge, operating history, surveillance results, diagnostic testing, and performance characteristics due to the lack of a neutron source to test the instrumentation and detector. The failure to comply with Technical Specifications resulted from the reliance on a deficient operability assessment which had inappropriately concluded IRM channel E was operable. The deficient operability assessment was the result of a lack of understanding by the system engineer of the critical system operating characteristics and the lack of a questioning attitude directed at how the IRM could be operable with no repair performed. Contributing causes included failure to ensure sufficient information was available to support the operability assessment and failure to recognize that engineering judgement was used in the assessment without the required independent technical review.

## Further Corrective Actions:

The system knowledge gained from this event will be incorporated into the appropriate system reference material for the IRM system engineer by June 1, 1995.

The lessons learned associated with the deficient operability assessment were discussed with the individuals involved in the event.

Refresher training will be provided to appropriate personnel who perform operability assessments by June 1, 1995.

The Supply System is evaluating enhanced IRM system training programs for individuals involved with the IRM system. This evaluation will be completed by July 1, 1995; an appropriate training program will be developed and implemented following completion of this evaluation.

## Safety Significance:

During this event the "A" trip system had two of the four IRM channels capable of inserting a rod block or trip signal to the protection system. The "B" trip system had four of four channels available. Each trip system requires a one out of four logic to insert a rod block or half-scam. Channel independence and redundancy coupled with conservative trip set points ensure protection from excessive power generation.

The event was determined to have negligible safety significance since WNP-2's Final Safety Analysis Report accident analyses does not credit the IRM rod block or trip functions for accident mitigation.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Washington Nuclear Plant - Unit 2	05000397	YEAR				SEQUENTIAL NUMBER				REVISION NUMBER				5	OF	5
		95	-	0	0	5	-	0	0	5	-	0	0			

TEXT (17)

## Previous Similar Events:

A review of LERs since January 1993 for similar root cause, failure, or sequence of events identified one LER where control room personnel relied on a deficient operability assessment. LER 94-04 reported an unclear operability assessment for nine motor operated valves. The operability assessment concluded that the nine valves were operable but failed to document that Main Steam drain valves MS-V-16 and MS-V-19 [SB,ISV] were inoperable until the torque switches [SB] were reset.



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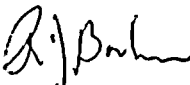
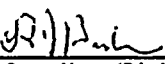

**REGULATORY COMMITMENT IDENTIFICATION FORM**  
(FOR INTERNAL DISTRIBUTION ONLY)

Regulatory Agency NRC	Licensing Engineer JM Pedro	Source Document/Date G02-95-	
Outgoing Document Author DL Overman/JM Pedro	Incoming Document Reviewer N/A	Mail Drop PE20	Ext 8418

Summary of Document

LER regarding deficient operability assessment for IRM-E. The reliance on the operability assessment resulted in violating TS 3.3.1 action statement.

**CONCURRENCE FOR COMMITMENTS LISTED BELOW**

Commitment: The system knowledge gained from this event will be incorporated into the appropriate system reference material for the IRM system engineer.	Action Tracking No.	Assigned To	Supv. Name (Print) RJ Barbee
		Scheduled Complete Date June 1, 1995	Supv. Signature 
		Hard Date <input type="checkbox"/> YES <input type="checkbox"/> NO	
Commitment: The lessons learned associated with the deficient operability assessment will be reviewed with those personnel that would be expected to perform operability assessments.	Action Tracking No.	Assigned To	Supv. Name (Print) RJ Barbee
		Scheduled Complete Date June 1, 1995	Supv. Signature 
		Hard Date <input type="checkbox"/> YES <input type="checkbox"/> NO	
Commitment: The Supply System is evaluating enhanced IRM system training programs for individuals involved with the IRM system. This evaluation will be completed by July 1, 1995; an appropriate training program will be developed and implemented following completion of this evaluation.	Action Tracking No.	Assigned To	Supv. Name (Print) RJ Barbee
		Scheduled Complete Date July 1, 1995	Supv. Signature 
		Hard Date <input type="checkbox"/> YES <input type="checkbox"/> NO	
Commitment:	Action Tracking No.	Assigned To	Supv. Name (Print)
		Scheduled Complete Date	Supv. Signature
		Hard Date <input type="checkbox"/> YES <input type="checkbox"/> NO	
Commitment:	Action Tracking No.	Assigned To	Supv. Name (Print)
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