

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): Washington Nuclear Plant - Unit 2
DOCKET NUMBER (2): 0 5 0 0 0 3 9 1 7
PAGE (3): 1 OF 0 1 2

TITLE (4): Grounds in MSRV Solenoids

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	3	2	2	8	4	8	4	4		0	5	0	0	0		
0	3	2	2	8	4	8	4	4		0	5	0	0	0		

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11):

OPERATING MODE (9): 4	20.402(b)	20.406(e)	50.73(a)(2)(vi)	73.71(b)
POWER LEVEL (10): 0 10 10	20.406(a)(1)(i)	50.38(a)(1)	50.73(a)(2)(vi) (d)	73.71(e)
	20.406(a)(1)(ii)	50.38(a)(2)	50.73(a)(2)(vii)	X OTHER (Specify in Abstract below and in Text, NRC Form 356A)
	20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	50.72(b)(2)(iii)
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	
	20.406(a)(1)(vi)	50.73(a)(2)(iv)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12):
NAME: R. L. Koenigs, Compliance Engineer
TELEPHONE NUMBER: 5 10 19 3 1 7 1 7 1 - 1 2 1 5 1 0 1 1
AREA CODE: 5 10 19

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13): Ext 2279

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
C	SLB - SP IV	C171110		N					

SUPPLEMENTAL REPORT EXPECTED (14):
YES (if you complete EXPECTED SUBMISSION DATE) NO
EXPECTED SUBMISSION DATE (15):

ABSTRACT (Limit to 400 spaces; 2 spaces after a period; use fifteen single-space typewritten lines) (16):

Revision '0' of LER 84-027 reported failures of Main Steam Relief Valve solenoids due to grounding in the solenoid coils. As reported, all installed MSRV solenoids (both the 18 MSRV and 14 ADS solenoids) had voltage spike suppression diodes installed across each solenoid circuit. In addition, each solenoid was megger tested for internal grounding and coil resistance was measured. Each ADS solenoid was then cycled ten times and a final ground check was performed.

Revision 1 reported on General Electric's review of these failures and similar events at LaSalle and Susquehanna. At that time GE had issued an interim report which justified continued plant operation. The 10CFR21 evaluation was not then complete.

GE has since issued an update on the failures which confirms the adequacy of these solenoids in existing circuit configurations.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 388A's) (17)

Plant Conditions

- a) Power Level - 0%
b) Plant Mode - 4

Event

On 3/10/84 and 3/14/84, grounds on the 125 VDC instrument bus were traced to Main Steam Relief Solenoid Valves MSRV-4B and MSRV-3C. Previously, during the Startup Test Program, five MSRV solenoids had been determined to have grounds and were replaced.

Corrective Action

After consultation with General Electric, all installed MSRV solenoids, active or not, were tested for grounding by megger. After megger testing the solenoid coil resistance was measured. Each active solenoid was then cycled ten times and a final ground check was performed. Voltage spike suppression diodes had been installed across each solenoid circuit prior to this testing. Eight more solenoid grounds were found due to this investigation. All defective solenoids in active positions were replaced and subjected to the same testing requirements. All replacement solenoids satisfactorily completed the testing.

GE issued an interim report (transmitted with Rev. 1 of this LER) which provided justification for continued plant operation.

Further Corrective Action

On August 21, 1984, GE provided the NRC with updated information on ground fault failures of actuation solenoids which initiate operation of Automatic Depressurization System (ADS) valves (GE to NRC letter MFN #125-84). This report confirms the adequacy of the solenoid coil insulation system and verified the coil will perform its safety function in existing circuit configurations. Therefore, continued plant operations is justified. GE has completed their evaluation and concluded that this equipment problem is not reportable per the requirements of 10CFR21.

Safety Significance

There were no safety consequences for WNP-2 associated with this event due to the following: 1) DC ground bus provides warning of solenoid to ground failures and faults can therefore be detected and replaced prior to operational failures occurring; 2) Test lamps on the ADS panel verify solenoid continuity and channel logic; 3) Every ADS valve has two redundant solenoids; and 4) GE has concluded that the insulation system does not present a potential for common mode failure with the suppression diode installed.

Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

Docket No. 50-397

September 17, 1984

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 84-027-02

Dear Sir:

Transmitted herewith is Licensee Event Report No. 84-027-02 for WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and provides supplemental information to LER 84-027, Rev. 1.

Very truly yours,

JM

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

JDM:mm

Enclosure:

Licensee Event Report No. 84-027-02
Attachment 1

cc: Mr. John B. Martin, NRC - Region V
Mr. A. D. Toth, NRC - Site (901A)
Ms. Dottie Sherman, ANI
INPO Records Center - Atlanta, GA

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