

LICENSEE EVENT REPORT (LER)

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

TITLE (4): Manual Scram Due to Turbine Control Valve Cycling

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														
1	0	1	3	8	4	3	4	1	0	9	0	0	1	1	0	8	8	4	0	5	0	0	0

OPERATING MODE (9): 1
 POWER LEVEL (10): 0, 4, 0

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(e)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.38(e)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.38(e)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input checked="" type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	50.72(b)(2)(ii)
<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(a)	

LICENSEE CONTACT FOR THIS LER (12):
 NAME: R. L. Koenigs, Compliance Engineer
 TELEPHONE NUMBER: 510 931 7771 - 2501
 AREA CODE: 510
 COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13): Ext. 2279

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD
B	TG	-PIT	E210	N					

SUPPLEMENTAL REPORT EXPECTED (14):
 YES (If yes, complete EXPECTED SUBMISSION DATE)
 NO
 EXPECTED SUBMISSION DATE (15):

ABSTRACT (Limit to 1400 spaces - separate words by single space typewritten lines) (16)

While investigating high electro-hydraulic (EH) fluid temperatures on the main turbine, the turbine governor and bypass valves (TGV and BPV) were observed oscillating. A power reduction was commenced in an effort to reduce EH fluid temperatures. During this power reduction, the BPV's were observed oscillating between open and shut positions. TGV oscillation was also noted. As BPV cycling increased, the reactor was manually scrammed.

Subsequent investigation revealed that the TGV and BPV cycling was the result of radio frequency interference (RFI). Warning signs are being placed near each susceptible instrument and an engineering effort is underway to identify an appropriate RFI suppression/removal technique.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Washington Nuclear Plant - Unit 2	0500039784	84	109	00	02	OF 02

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

Plant Conditions

- a) Plant Mode - 1
- b) Power Level - 40%

Event

On 10/13/84 Plant Operators noted a high temperature condition involving the turbine Digital Electro-Hydraulic (DEH) system fluid. During investigation of the high temperature condition TGV and BPV oscillations were observed. As the investigation continued, the oscillations increased and BPV's cycled between the partially open and shut positions. An orderly shutdown was then commenced. As BPV cycling increased in severity, the Reactor was manually scrammed to preclude a loss of pressure control..

Immediate Corrective Actions

The Plant scram recovery procedure was followed and an investigation started to identify the cause for TGV/BPV cycling and high DEH fluid temperatures.

Further Corrective Action

The root cause of TGV/BPV instability was traced to RFI susceptibility of Electrosyn Model 7620 pressure transmitters used in the DEH pressure control scheme and warning signs were placed in the area of the DEH pressure transmitters. The pressure control system utilizes the pressure signal from selected transmitters of the affected type as a feedback and could not discern erroneous outputs induced by the RFI from actual process variable perturbation.

A review of Plant equipment identified 21 installations of Electrosyn Model 7620 devices. Further investigation revealed that of the 21 installed Electrosyn Model 7620 devices, only the 2 associated with the DEH system served any control function.

An engineering evaluation has been initiated to determine a feasible RFI suppression/removal technique for use on the Electrosyn Model 7620 pressure transmitters.

Partially fouled heat exchangers were found to be the cause of DEH fluid high temperatures. The DEH oil coolers were cleaned and returned to service.

Safety Significance

There were no safety consequences associated with this event and there was no threat to the health and safety of Plant personnel or to the public. The Plant systems functioned as designed.

Washington Public Power Supply System

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

Docket No. 50-397

November 8, 1984

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 84-109

Dear Sir:

Transmitted herewith is Licensee Event Report No. 84-109 for WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the item of reportability, corrective action taken, and action taken to preclude recurrence.

This is the follow-up report to the verbal notification given at 0721 hours on October 13, 1984.

Very truly yours,

J. D. Martin for

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

JDM:mm

Enclosure:
Licensee Event Report No. 84-109

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

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