NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

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

TITLE (4)
RPS Actuation on Turbine Overspeed Testing

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 5 0 0 0
0 5	2 9	8 4	8 4	— 0 5 4	— 0 0	0 6	2 5	8 4		0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	2 0	20.402(b)	20.405(c)	X 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)	X 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)	50.72(b)(2)(ii)
		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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
C.M. Powers, Reactor Engineering Supervisor	5 0 9 3 7 7 - 2 5 0 1 Ext. 2996

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
D	J J	D C C	W 1 2 0	N							

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)

With the Reactor operating at 20% power a Reactor Protection System (RPS) actuation on Turbine Governor Valve Fast Closure occurred as a result of overspeed testing of the Main Turbine Overspeed Protection Control (OPC) System. Governor valve fast closure was an expected outcome of OPC testing. However, the RPS actuation was not anticipated because Reactor steam flow as measured by turbine 1st stage inlet pressure was within the range in which the Reactor trip is bypassed. Incorrect OPC test techniques caused the turbine governor and intercept valves to trip closed, re-open and retrip approximately 6 times in 30 seconds. This rapid close-open-close sequence caused turbine first stage pressure to momentarily exceed the 30% thermal power equivalent bypass reset setpoint of the Reactor Protection System pressure switches MS-PS-3A,B,C,D. This produced a Turbine Governor Valve Fast Closure Reactor Protection Trip which was not auto-bypassed even though actual Reactor power was 20%.

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

Plant Conditions

a) Power Level - 20%
b) Plant Mode - 1
c) During Power Ascension Testing Program
d) Turbine/Generator Offline @ 1800 RPM

Event

On 5-29-84 as part of the Power Ascension Testing Program, main turbine overspeed testing was in progress. Per procedure the Overspeed Protection Control (OPC) System was in service with a speed reference demand of 1890 RPM and an acceleration rate of 50 RPM per minute selected at the Digital Electro-Hydraulic (DEH) turbine valve control system operator's console. As the OPC test was initiated, the turbine accelerated to the OPC setpoint speed of 1854 RPM (103.0%) and the Turbine Governor and Intercept valves tripped closed causing turbine speed to decrease. Because DEH remained in OPC service, as soon as turbine speed dropped below 103.0%, the DEH immediately re-opened the Governor and Intercept valves. Turbine speed again accelerated to the 1854 RPM (103.0%) OPC setpoint, causing the Governor and Intercept valves to reclose. This open/close cycling occurred about six times during a period of approximately 30 seconds. This tripping action caused turbine first stage pressure to increase above 108.5 psig, thus exceeding the design 30% power setpoint of pressure switches MS-PS-3A,B,C,D. This removed the bypass function and the turbine governor valve fast closure signal incorrectly initiated a Reactor Protection System actuation.

Immediate Corrective Action

Plant recovery actions were implemented per Plant General Operating Procedure PPM 3.3.1, Reactor Scram. In addition, a procedure deviation was issued to PPM 2.5.7, Main Turbine Generator Operating Procedure, to secure the OPC testing function of the DEH system after one complete cycle of the turbine governor valves to prevent reoccurrence of valve cycling.

Further Evaluation and Corrective Action

The associated Reactor Protection System pressure switches (MS-PS-3A,B,C,D) were reset to 131.5 psig as allowed by Plant setpoint change methodology to further preclude reoccurrence of this event. Subsequent OPC testing has been successfully performed.

Safety Significance

The rapid cycling of turbine governor valves resulting in increased turbine first stage pressure above 108.5 psig posed no threat to the health and safety of Plant personnel or to the public because no actual Reactor Protection System design parameters were exceeded and the Plant Protection Systems function 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
June 2[illegible], 1984

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 84-054

Dear Sir:

Transmitted herewith is Licensee Event Report No. 84-054 for WNP-2 Plant. This report is submitted in response to the report requirements of Technical Specification Section 6.9.1.7 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 1445 hours on May 29, 1984.

Very truly yours,

J. D. Martin

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

JDM:mm

Enclosure:
Licensee Event Report No. 84-054

cc: Mr. John B. Martin, Administrator
Region V, Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
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Walnut Creek, California 94596
Mr. A. D. Toth, NRC Resident Inspector (901A)
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The Exchange Suite 245
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