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January 4, 1990
CPY-008-90

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington DC 20555

Gentlemen:

Licensee Event Report No. 89-32 is attached. This report discusses an event in which the surveillance for the Pressurizer Power-Operated Relief Valves was not performed.

Sincerely,

C. P. Yundt
General Manager
Trojan Nuclear Plant

c: Mr. John B. Martin
Regional Administrator, Region V
US Nuclear Regulatory Commission

Mr. David Stewart-Smith
State of Oregon
Department of Energy

Mr. R. C. Barr
USNRC Resident Inspector
Trojan Nuclear Plant

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Trojan Nuclear Plant						DOCKET NUMBER (2) 0 5 0 0 0 3 4 4				PAGE (3) 1 OF 0 4	
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TITLE (4) Incomplete Surveillance of Power Operated Relief Valve Due to an Inadequate Procedure Review Upon Issuance of a License Amendment

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	2	0	5	8	9	8	9	0	N/A		
				0	3			0	DOCKET NUMBER(S)		
				2				0	0 5 0 0 0		
								1	0 5 0 0 0		
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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) 0 9 7		<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 60.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
		<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 60.36(c)(1)	<input type="checkbox"/> 60.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
		<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 60.36(c)(2)	<input type="checkbox"/> 60.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
		<input type="checkbox"/> 20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 60.73(a)(2)(i)	<input type="checkbox"/> 60.73(a)(2)(viii)(A)							
		<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 60.73(a)(2)(ii)	<input type="checkbox"/> 60.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 60.73(a)(2)(iii)	<input type="checkbox"/> 60.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)									
NAME John D. Guberski, Compliance Engineer							TELEPHONE NUMBER		
							AREA CODE		
							5 0 3 5 5 6 - 1 5 5 2 3		

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
N/A									

SUPPLEMENTAL REPORT EXPECTED (14)							EXPECTED SUBMISSION DATE (15)		
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO							MONTH	DAY	YEAR

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

On December 5, 1989, during a review of a design change, a design engineer discovered that the Pressurizer power operated relief valve (PORV) surveillance testing had not included relays in the automatic actuation circuitry for either of the two valves. The surveillance test is performed to satisfy the requirement of Technical Specification (TS) 4.4.3.2.1, "Relief Valves - Surveillance Requirements", and TS 4.4.9.3.1, "Overpressure Protection Systems - Surveillance Requirements". The control circuitry for the PORV uses an auxiliary relay as an interface between the Control and Protection System, (AC output), and the solenoid valve for the PORV, (a DC operated system). Drawings normally used in the preparation of instrumentation and control surveillance procedures [Process Control Block Diagrams and Interconnection Wiring Diagram] do not show the auxiliary relay. The schematic for the valve does show the relay, as does the wiring diagram for the auxiliary relay rack for the Control and Protection System. The cause of this event was an inadequate review of procedures to determine what changes were needed when a TS amendment was issued. The block valves were closed for both of the PORVs until the surveillance was performed on the portion of the circuit with the auxiliary relay on December 15, 1989. Permanent corrective action is to review all other circuits which use relays in the auxiliary relay rack to ensure that the surveillance procedures include the relay as necessary to satisfy surveillance requirements. Procedures will be revised as necessary based on results of this review. The surveillance test showed that the auxiliary relay functioned as required. Also, The Overpressure Mitigation System successfully relieved an actual overpressure event on June 30, 1989. The PORV automatic actuation circuit would have worked if called upon, and this event did not affect the health and safety of the public.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Trojan Nuclear Plant	DOCKET NUMBER (2) 0 5 0 0 0 3 4 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 9	— 0 3 2	— 0 0	0 2	OF	0 4

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DESCRIPTION OF OCCURRENCE

On December 5, 1989 during a review of a design change package by an engineer in the design engineering group, it was determined that a portion of the control circuit for automatic operation of the Pressurizer power operated relief valve (PORV) was not tested by existing procedures. Plant Event Report 89-252 was initiated to evaluate this event. Technical Specification (TS) 4.4.3.2.1, "Relief Valves - Surveillance Requirements", and TS 4.4.9.3.1, "Over Pressure Protection Systems - Surveillance Requirements", requires the performance of a CHANNEL CALIBRATION at least once every 18 months for PORVs. A review of plant records did not find any evidence that this surveillance has been performed on a portion of the control circuit containing an auxiliary relay. Neither of the relays circled in figure 1 were tested for either PORV (PCV-455A or PCV-456). These TS requirements became effective in May 1982, when TS amendment 73 was issued by the Nuclear Regulatory Commission. The plant has operated in various modes and at various power levels since that time.

Testing of the bistables which actuate the PORV is performed on an annual basis, in accordance with Maintenance Procedure 2-0, "Installed Plant Instrument Maintenance and Calibration". Instrument bistables (PB-455E, PB-458B, PB-456E, and PB-457E) are calibrated using the Instrumentation and Control Form 4 data sheet for the bistable. However, this calibration does not involve a functional test of the PORV, which would have verified operation of the auxiliary relay. The review of needed changes to existing procedures to implement the TS requirements apparently did not determine that an auxiliary relay was present in the control circuit.

CAUSE OF OCCURRENCE

The cause of this occurrence was an inadequate review of procedures to determine what changes were needed when a TS amendment was issued. Surveillance tests were developed using the Process Control Block Diagrams [MIT(13) series] and the Interconnecting Wiring Diagrams [MIT(6) Series, sheets 54, 55, 56, 57]. The auxiliary relays are not shown on these drawings but are shown on the schematic diagrams [E-546 & E-458A] and the wiring diagrams for the auxiliary relay racks [MIT(6)-142, -145] associated with the Control and Protection System.

CORRECTIVE ACTIONS

Immediate corrective action was to declare both PORVs inoperable, close the block valves, and remove power from the block valves, as required by TS 3.4.3.2.

The auxiliary relays were tested and found to function correctly on December 1, 1989 by performance of Temporary Plant Test - 327, "Pressurizer Power Operated Relief Valve Partial Channel Calibration and Automatic Control Circuit Functional Test". The PORVs were then declared operable, power was restored to the block valves and the block valves opened. The surveillance procedures for instrument loops which interface with the auxiliary relay racks will be reviewed to

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Trojan Nuclear System	DOCKET NUMBER (2) 0 5 0 0 0 3 4 4 8 9	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
			0 3 2	0 0 0	3	OF

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

ensure that relays were included, as required, in surveillance tests (CTL #31234). The auxiliary relay in the Overpressure Mitigation System will be tested prior to relying on this system during the 1990 refueling outage (CTL #31235). The relay is known to have functioned, as the Overpressure Mitigation System actuated to relieve an actual overpressure event on June 30, 1989.

The primary cause of an inadequate review of procedures to identify changes needed to implement a TS amendment was previously recognized as a problem. Changes were made to Nuclear Division Procedure 700-2, "Control of the Trojan Operating License and Licensing Documents to require that both the cognizant supervisor of an area (Operations, Maintenance, Inservice Testing, etc.) and the Plant Review Board procedures engineer identify needed changes to procedures. This change was made in August 1987, but was not applied retroactively.

SIGNIFICANCE OF OCCURRENCE

Since the auxiliary relays were determined to function correctly, the PORVs would have opened automatically if Reactor Coolant System Pressure exceeded the setpoint for the PORVs. Also, LER 88-20, "Overpressure Mitigation System Actuated Following Inadvertent Letdown Isolation", dated July 28, 1988, discusses an event in which the auxiliary relay associated with PORV 455A functioned when required (valve opened to relieve the pressure transient). Thus, this event did not cause a significant degradation of operational safety nor have any effect on public health and safety.

FACILITY NAME (1) Trojan Nuclear Plant	DOCKET NUMBER (2) 0 5 0 0 0 3 4 4	LER NUMBER (3)			PAGE (3)	
		YEAR 8 9	SEQUENTIAL NUMBER - 0 3 2	REVISION NUMBER - 0 0	OF	
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