Portland General Electric Company
Trojan Nuclear Plant
71760 Columbia River Hwy.
Rainier, Oregon 97048
(503) 556-3713

November 26, 1990
WRR-156-90

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

Gentlemen:

Licensee Event Report No. 90-44 is attached. This report discusses an event in which compensatory actions were not established as required by Trojan Technical Specification 3.7.9 when a fire barrier was non-functional.

Sincerely,

W. R. Robinson
General Manager
Trojan Nuclear Plant

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

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

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

LER Distribution

NRC FORM 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Trojan Nuclear Plant	0 5 0 0 0 3 4 4	1 OF 0 3

TITLE (4) Required Compensatory Action Not Established for a Non-Functional Fire Barrier Due to Personnel Error in Identifying that the Barrier was Governed by Technical Specification

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)
1 0	2 4	9 0	9 0	0 4 4	0 0	1 1	2 6	9 0	NA	0 5 0 0 0
										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)	0 9 8	20.402(b)	20.405(c)	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)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
John D. Guberski, Compliance Engineer	AREA CODE 5 0 3 — 5 5 6 - 5 5 2 3

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	

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)

On October 24, 1990 the Plant was in Mode 1 (Power Operation) at approximately 98 percent Rated Thermal Power, with a generator load of 1120 MW. While investigating the failure of a fire detection instrument alarm panel, it was identified that a personnel error had occurred, on past occasions, in designating three fire barriers as not being governed by Trojan Technical Specification 3/4.7.9, "Penetration Fire Barriers". As a result, the Technical Specification 3.7.9 required compensatory actions of a continuous fire watch, or verification of Operable fire detection instruments and an hourly fire patrol were not established when the fire barriers were non-functional. However, hourly fire patrols were established as a matter of good practice whenever these barriers were degraded. Fire Protection personnel made an error when applying the Technical Specification criteria on what constituted a fire barrier to the drawings identifying fire area boundaries and fire resistance rating. The criteria were not correctly applied. Contributing to the personnel error was the need to compare several drawings in order to determine if a fire barrier was governed by Technical Specification 3.7.9. Procedural guidance was not provided, to personnel making the determination, on how to accomplish this comparison. Corrective actions were to define those barriers governed by Technical Specification 3.7.9 on a prescribed set of drawings. Appropriate Plant procedures and documents will be updated, by June 30, 1991, to identify that a fire barrier is governed by Technical Specification 3.7.9, and to provide specific guidance on how to determine that a fire barrier is governed by Technical Specification 3.7.9.

DESCRIPTION OF OCCURRENCE

Trojan Technical Specification 3/4.7.9, "Penetration Fire Barriers" requires all 3-hour penetration fire barriers protecting safety related areas to be functional. If the barrier is non-functional and the area has a fire loading greater than 1 pound per square foot, equivalent wood, a continuous fire watch is required. Alternately, an hourly fire patrol can be used if fire detection instruments are verified operable on at least one side of the barrier.

On October 24, 1990, it was identified that compensatory measures taken in the past, for non-functional fire barriers in three safety related areas, did not meet the requirements of Technical Specification 3.7.9. Historically, an hourly fire patrol has been used as the compensatory measure when one of the barriers associated with these areas was non-functional. Two of the affected areas were not provided with fire detection instruments. The other area is equipped with fire detection instruments, but the instruments were not verified to be operable when the hourly patrol was established. Continuous fire watches should have been established for the first two areas. The other area should have had a continuous fire watch established, or the Operability of the fire detection instruments should have been verified in addition to establishing the hourly patrol. This problem was identified while investigating the failure of a fire detection system alarm panel, (see Licensee Event Report 90-43). At the time of discovery the Plant was in Mode 1 (Power Operation) at approximately 98 percent Rated Thermal Power, with a generator load of 1120 MW.

Failure to establish the required continuous fire watch or verify the Operability of the fire detection instruments, when fire barriers associated with these areas were degraded, is considered to be an operation or condition prohibited by the Technical Specifications. This is being reported per Title 10 Code of Federal Regulations, Part 50.73 (a) (2) (i) (B).

CAUSE OF OCCURRENCE

This event was the result of a personnel error. Fire Protection personnel who determined what compensatory measures would be established for non-functional fire barriers incorrectly interpreted that certain barriers associated with these three plant areas were not governed by Trojan Technical Specification 3.7.9. However, hourly fire patrols were established as a matter of good practice whenever these barriers were degraded.

The basis used for determining whether a fire barrier was required to be functional by Trojan Technical Specification 3.7.9 was the following:

1. The barrier was a 3-hour rated barrier protecting a safety-related area (area containing safety-related equipment).

2. The combustible loading of the safety-related area had to be greater than 1 pound per square foot equivalent wood.

3. The safety-related area had to be completely "enclosed" by 3-hour rated barriers.

The barriers associated with the three affected areas did not meet all the above criteria and, as such, were not considered to be governed by Technical Specification 3.7.9. These criteria have been determined not to be appropriate for determining Technical Specification applicability to fire barriers.

A contributing cause was the lack of specific guidance for determining the status of plant fire areas and required compensatory measures when fire barriers are degraded or non-functional. Several drawings must be consulted to determine which fire barriers are required to be Operable by Technical Specification 3.7.9 for a specific safety-related area. It was necessary to use one set of drawings to determine the location of fire area boundaries, and another set of drawings to identify the fire resistance rating of the fire area boundaries. Procedural guidance on how to accomplish this was not provided.

CORRECTIVE ACTIONS

The fire barriers governed by Technical Specification 3.7.9 were defined on the set of drawings identifying fire area boundaries.

The list of penetration fire barrier seals (FP-903) will be revised, by November 30, 1990, to reflect the Technical Specification status of the associated fire barriers.

Appropriate Plant procedures and documents will be updated to identify which fire barriers are governed by Technical Specification 3.7.9, and to provide specific guidance on how to determine that a fire barrier is governed by the Technical Specification. This will be completed by June 30, 1991.

SIGNIFICANCE OF OCCURRENCE

An hourly fire patrol was established for an area with a non-functional barrier. The areas were found to be satisfactory during routine inspections for transient combustibles. Thus, this event did not cause a significant degradation of operational safety nor have any effect on public health and safety.

PREVIOUS SIMILAR EVENTS

A review of previous Licensee Event Reports identified LER 87-35, "Fire Doors Made Inoperable Due to Personnel Error", as a similar event. LER 87-35 involved an event where an hourly fire patrol was not established for two fire doors. Due to a procedural inadequacy, the doors had not been labeled as fire doors. As these doors were recognized as Technical Specification fire barriers, the corrective action taken (ensure fire doors were properly labeled) would not have prevented this event.