

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Power

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 POWERS, C. M. Washington Public Power Supply System
 RECIP. NAME: RECIPIENT AFFILIATION

SUBJECT: LER [REDACTED] 870916, discovered plant Tech Spec fire-rated floor penetration impaired since 860510. Caused by inadequate training on fire protection barrier identification. Training provided to staff. W/871016 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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	AEOD/DOA	1 1	AEOD/DSP/NAS	1 1
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	NRR/DEST/ADS	1 0	NRR/DEST/CEB	1 1
	NRR/DEST/ELB	1 1	NRR/DEST/ICSB	1 1
	NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1
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	NRR/DRIS/SIB	1 1	NRR/PMAS/ILRB	1 1
	REG FILE 02	1 1	RES DEPY GI	1 1
	RES TELFORD, J	1 1	RES/DE/EIB	1 1
	RGN5 FILE 01	1 1		
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC HARRIS, J	1 1	NSIC MAYS, G	1 1

~~87-10220153 7pp.~~

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Washington Nuclear Plant - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 1 9 7	PAGE (3) 1 OF 0 1 5
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TITLE (4) **Plant Technical Specification Fire-Rated Floor Penetration Impaired During Plant Design Modification - Inadequate Training**

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 9	1 6	8 7	8 7	0 2	9 0	0 9	1 6	8 7			0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (8) **7**

POWER LEVEL (10) **0 1 9 1 8**

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"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
J.D. Arbuckle, Compliance Engineer	5 0 9 3 7 7 - 2 1 1 5

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)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

During an inspection on September 16, 1987 it was discovered that a Plant Technical Specification fire-rated floor penetration had been impaired since May 10, 1986. The penetration was impaired in that two holes existed as a result of cables being pulled back through the seal during installation of the Alternate Remote Shutdown System in the first refueling outage (Spring, 1986). The penetration is located between Fire Areas RC-II (Zone A - Cable Spreading Room) and RC-IX (Remote Shutdown Room).

The penetration was immediately placed on the hourly fire tour and a Maintenance Work Request (MWR) was written to have the seal repaired.

The cause of this event has been determined to be inadequate training on fire protection barrier identification and impairment requirements provided to Plant Technical Engineers, Contractor Field Engineers, Contractor Craft and Plant Quality Control (QC) Inspectors.

Further corrective actions include 1) providing training on fire-rated penetration requirements to Plant Technical Engineers, Plant Maintenance Engineers, Plant QC Inspectors, Plant Craft and Contractor Field Engineers and 2) revising the Contractor Craft training program to better explain fire protection system impairment permit requirements.

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Washington Nuclear Plant - Unit 2	0500039787	029	00		02	OF 05	

TEXT (If more space is required, use additional NRC Form 365A's) (17)

Abstract. (Continued)

It was determined that this event posed no threat to the health and safety of either the Public or Plant personnel due to 1) the fire protection design of the fire areas involved, 2) the diameter of the cable holes and nature of the penetration seal material, and 3) the Cable Spreading Room was on an hourly fire tour for the majority of time the penetration was impaired.

Plant Conditions

- a) Power Level - 98%
- b) Plant Mode - 1 (Power Operation)

Event Description

During an inspection on September 16, 1987 it was discovered that a Plant Technical Specification fire-rated floor penetration (C304-5003.1) had been impaired since May 10, 1986. The penetration is located between Fire Areas RC-II (Zone A - Cable Spreading Room) and RC-IX (Remote Shutdown Room).

The inspection was performed as a result of a Corporate Quality Assurance fire protection audit concern of what appeared to be recent gouges in the top of the seal. Although the gouges were confirmed to exist, they were of minimal significance and did not affect the function of the penetration as a three-hour fire barrier. However, closer examination by Plant personnel revealed that the penetration was impaired in that two holes existed as a result of cables being pulled back through the seal.

It was determined by further investigation that the penetration was impaired during installation of the Alternate Remote Shutdown System in the first refueling outage (Spring, 1986). As part of the Design Change Package (DCP) for this work, two control cables (IADS-0035 and IADS-0036) were to be re-routed from the existing Remote Shutdown Panel to the new Alternate Remote Shutdown Panel. Included in the DCP were a Penetration Barrier Violation Form and a Fire Protection System Impairment Checklist permit for both cables.

The Maintenance Work Request (MWR) written to perform the work provided instructions to determ, pull back and re-pull both cables. However, the Plant Technical Engineer who prepared the MWR failed to include the Penetration Barrier Violation Form and Fire Protection System Impairment Checklist with the work instructions. As a result, the penetrations which were shown in the DCP were not transmitted to Contractor personnel who performed the work. The Engineer did, however, provide instructions on the MWR to re-route both cables in accordance with attached cable pulling instructions and Plant procedure 10.25.54, "Cable Pulling Instruction and Inspection." The procedure directs personnel to follow the requirements of Plant Procedure 1.3.10, "Fire Protection Program," in the event that fire barriers are impaired.



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TEXT (If more space is required, use additional NRC Form 306A's) (17)

The work was monitored by a Contractor Field Engineer and Plant Quality Control personnel. Because the fire protection requirements were not specifically identified on the work instructions, all personnel involved overlooked the need to obtain a fire protection system impairment permit when the penetration was violated by pulling back the two cables through the seal. If the permit would have been obtained, Contractor Craft personnel would have received seal identification numbers from the Contractor Field Engineer, who would have contacted the Plant Technical Engineer for re-sealing instructions or verification that the seals were to be worked on another MWR.

The re-routing of the two cables was completed on May 10, 1986 and it has been determined that the fire-rated floor penetration has been impaired since that time.

The cause of this event has been determined to be inadequate training on fire protection barrier identification and impairment requirements provided to Plant Technical Engineers, Contractor Field Engineers, Contractor Craft and Plant Quality Control Inspectors.

Immediate Corrective Action

Fire-rated floor penetration C304-5003.1 was placed on an hourly fire tour and an MWR was written to have the seal repaired.

Further Corrective Action.

- Plant Procedure 7.4.7.7.1, "Fire Rated Assembly and Operation," was reviewed and determined to be adequate. The procedure provides instructions for performing surveillance inspection and operational verification of fire-rated assemblies as required by the Plant Technical Specifications. The procedure was reviewed because the fire-rated floor penetration discussed in this LER had been identified as being satisfactory during a 100% inspection of fire seals performed in June, 1986 (one month after the penetration was impaired). However, the nature of this particular breach was unique in that it was atypical of previous fire barrier violations, which made it difficult to detect. It should be noted that other experienced fire protection personnel had inspected the penetration on other occasions and did not recognize that the seal was impaired. As a result, this is considered to be an isolated case and not indicative of the overall fire-rated penetration inspection program currently in place. However, the nature of this violation will be discussed with fire seal inspection personnel during future qualification programs.
- Training will be provided on fire-rated penetration requirements to Plant Technical Engineers, Plant Maintenance Engineers, Plant QC Inspectors, Plant Craft and Contractor Field Engineers.
- The Contractor Craft training program will be revised to better explain fire protection system impairment permit requirements.



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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

- Engineering will provide additional re-sealing instructions on the work implementation summary sheet of those future Plant Modification Records (PMRs) where fire penetrations will be violated.
- Plant Technical personnel will review all currently open PMRs and identify those where fire barriers would be impaired. A list of such PMRs would be developed for independent tracking purposes.
- A review will be conducted of previous work performed by the Contractor personnel involved in this event.

Safety Significance

Fire-rated floor penetration C304.5003.1 is located in Fire Area RC-II (Cable Spreading Room - Zone A - Elevation 484'). The penetration separates Fire Area RC-II (Zone A) from Fire Area RC-IX (Remote Shutdown Room 467').

Fire Area RC-II (Zone A) is equipped with both fire detection and suppression systems. Fire Area RC-IX contains area detection and is designed such that it has a low fire loading.

The consequences of a Design Basis Fire occurring in Fire Area RC-IX and transferring up into Fire Area RC-II (Zone A), and thereby potentially affecting both Divisions I and II, has not been analyzed and is not considered necessary for the following reasons:

1. Fire Area RC-IX contains area detection and has a low fire loading.
2. Fire Area RC-II (Zone A) is equipped with both fire detection and suppression systems.
3. The diameter of the cable holes (5/16") in the impaired penetration, coupled with the design of the seal material (the Dow Corning 3-6548 foam expands when heated), would greatly reduce the passage of heat and smoke between the fire area.

As a result, the probability of a fire spreading from Fire Area RC-IX to Fire Area RC-II (Zone A) was considered to be very low.

In addition, Fire Area RC-II (the entire Cable Spreading Room) was on an hourly fire tour (due to thermolagging-related issues) during the time the penetration was impaired until August 28, 1987. As a result, the actual time frame that the Plant Technical Specification requirements were violated was from August 29, 1987 to September 16, 1987.

Accordingly, the assessment was made that this event posed no threat to the health and safety of either the public or plant personnel.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

Similar Events

None

EIIS Information

Text Reference

EIIS Reference

Fire-Rated Penetration (C304-5003.1)
Fire Protection System
ADS Cables (IADS-0035 and IADS-0036)
Remote Shutdown Panel
Alternate Remote Shutdown Panel

System	Component
KP	PEN
KP	---
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WASHINGTON PUBLIC POWER SUPPLY SYSTEM **85ERC-DS**

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352 **1987 OCT 22 A 10:06**

Docket No. 50-397

October 16, 1987

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 87-029

Dear Sir:

Transmitted herewith is Licensee Event Report No. 87-029 for the WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Very truly yours,

C.M. Powers (M/D 927M)
WNP-2 Plant Manager

CMP:db

Enclosure:
Licensee Event Report No. 87-029

cc: Mr. John B. Martin, NRC - Region V
Mr. C. J. Bosted, NRC Site (M/D 901A)
INPO Records Center - Atlanta, GA
Ms. Dottie Sherman, ANI
Mr. D. L. Williams, BPA (M/D 399)

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