

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8712140095      DOC. DATE: 87/12/07      NOTARIZED: NO      DOCKET #  
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe      05000397  
 AUTH. NAME      AUTHOR AFFILIATION  
 ARBUCKLE, J.D.      Washington Public Power Supply System  
 POWERS, C.M.      Washington Public Power Supply System  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 87-030-00: on 871106, upgraded plant Tech Spec fire wall  
 not const to qualify as 3 h fire barrier.

W/8      ltr.

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

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ARM/DCTS/DAB	1 1	DEDRO	1 1
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NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1
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NRR/DREP/RAB	1 1	NRR/DREP/RPB	2 2
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	FORD BLDG HOY, A	1 1
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**LICENSEE EVENT REPORT (LER)**

FACILITY NAME (1) <b>Washington Nuclear Plant - Unit 2</b>															DOCKET NUMBER (2) <b>0 5 0 0 0 3 9 7</b>					PAGE (3) <b>1 OF 0 5</b>				
TITLE (4) <b>Upgraded Plant Technical Specification Fire Wall Not Constructed To Qualify As a Three-Hour Fire Barrier and Wall Penetration Not Sealed - Cause Unknown</b>																								
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)								
																<b>0 5 0 0 0</b>								
<b>1</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1 2 0 7 8 7</b>							<b>0 5 0 0 0</b>								
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																					
POWER LEVEL (10) <b>0 9 8</b>			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)					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)(ix)											
LICENSEE CONTACT FOR THIS LER (12)																								
NAME															TELEPHONE NUMBER									
<b>J.D. Arbuckle, Compliance Engineer</b>															AREA CODE <b>5 0 9 3 7 7 - 2 1 1 5</b>									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																								
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs
SUPPLEMENTAL REPORT EXPECTED (14)															EXPECTED SUBMISSION DATE (15)					MONTH	DAY	YEAR		
YES (If yes, complete EXPECTED SUBMISSION DATE)										NO														

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

On November 6, 1987 during verification activities associated with an Engineering review of fire-rated assemblies and walls (reference LER 87-004), it was discovered that 1) a Plant Technical Specification designated fire wall was not constructed to qualify as a three-hour barrier and 2) a penetration in the wall, consisting of a 12" hole with an 8" remote air supply pipe, was not sealed as required by the Plant Technical Specifications.

The wall provides a barrier between Fire Areas TG-1 (Turbine Generator Building - Elevation 471') and RC-1 (Radwaste Building - Elevation 487'). The penetration is a remote air intake line for the Control Room Emergency Ventilation System.

As required by the Plant Technical Specifications, the wall and penetration were placed on an hourly fire tour. Further corrective actions include the performance of a 100% review of documentation, and physical walkdowns of all accessible Technical Specification walls and penetrations, to determine the adequacy of the Plant Seal Tracking System (PSTS). In addition, Engineering will continue efforts to verify the accuracy of PSTS using seal control, penetration schedule and outstanding change document information.

Although the cause of this event cannot be positively identified, a probable cause was a lack of complete communication between Architect/Engineer disciplines (i.e., civil/structural mechanical and mechanical services) and Sealing Contractors responsible for design implementation of fire protection requirements.

The assessment was made that this event posed no threat to the health and safety of either the public or Plant personnel. F820

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Plant Conditions

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

Event Description

On November 6, 1987 during ongoing verification activities associated with an Engineering review of fire-rated assemblies and walls, it was discovered that 1) a Plant Technical Specification designated fire wall was not constructed to qualify as a three-hour fire barrier and 2) a penetration in the wall, consisting of a 12" hole with an 8" remote air supply pipe, was not sealed as required by the Plant Technical Specifications.

The wall, which is formed by the South wall of the Turbine Generator Building (Elevation 471') on the west end and the Radwaste Building Health Physics area (Elevation 487'), provides a barrier between Fire Areas TG-I and RC-I. Fire Area TG-I (Turbine Generator Building) consists of the entire Turbine Generator Building general equipment areas, transformer rooms, and all corridors between buildings except for Fire Areas/Zones TG-II through TG-IX. Fire Area RC-I (General Equipment Area) consists of all floors in the Radwaste Building, used to treat radioactive waste, which are not included in Fire Areas RC-II through RC-XIX.

The penetration is a remote air intake line for the Control Room Emergency Ventilation System.

The two problems were identified during the performance of followup activities associated with further corrective actions committed to in a previous LER (87-004-00 and -01, "Missed Fire Door Surveillance and Improper Identification of Fire Seal Penetrations"). As stated in LER 87-004, an Engineering review of the Fire Protection Plan that applied a new definition of fire-rated assemblies and walls was performed to ensure that all fire doors, barriers and penetrations were properly identified on Plant drawings and in Plant procedures. The new definition was applied because, during the review process, it was determined that the original interpretation of Technical Specification fire-rated assemblies and seals made by the Architect/Engineer (Burns and Roe, Inc.) was incorrect. This was confirmed in previous discussions with the Nuclear Reactor Regulation (NRR) branch of the NRC and resulted in a new clarification of the definition which was subsequently incorporated into the ongoing Engineering review. At the completion of the review, followup corrective action in LER 87-004 was to update all associated drawings and documentation as required.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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

During the update and verification process (Spring, 1987), the wall was upgraded from normal three-hour rated barrier to a Technical Specification designated three-hour barrier. (The wall is classified as a three-hour barrier in the Fire Protection Plan.) However, during a physical walkdown associated with the update process, Engineering personnel noted that a penetration existed in the wall. The penetration was not identified on either Architect/Engineer or contractor seal control documentation, or the Plant Seal Tracking System (PSTS). Further investigation confirmed that the existing penetration was not sealed and, in addition, that the wall was not constructed to qualify as a three-hour fire barrier. (The wall is of a cinder block construction instead of reinforced concrete as described in the Fire Protection Plan.)

Accordingly, a review of Plant drawings was performed and it was confirmed that both the wall and penetration were constructed as designed. Design drawings do not identify the wall as being a three-hour fire barrier. As a result, the Fire Protection Plan prepared by the Architect/Engineer was incorrect in that the wall was identified as a fire barrier, but was not designed as such.

Because several years have passed since the problems originally occurred and that Burns and Roe, Inc., is no longer acting in the capacity of the WNP-2 Architect/Engineer, it is neither possible nor constructive to positively identify the cause of this event. However, a probable cause was a lack of complete communication between Architect/Engineer disciplines (i.e., civil/structural, mechanical and mechanical services) and Sealing Contractors responsible for design implementation of fire protection requirements.

Immediate Corrective Action

As required by the Plant Technical Specifications, the wall and penetration were placed on an hourly fire tour.

Further Evaluation and Corrective Action

## a) Further Evaluation

- During the first refueling outage (Spring, 1986), a 100% verification walkdown of fire-rated assemblies and walls was performed using PSTS and seal contractor (Brand, Inc.) wall maps. The wall identified in this LER was upgraded to a Technical Specification designated barrier during Spring, 1987 and was included in the wall surveillance walkdown at that time. However, the intent of the inspections was to examine walls from a degradation standpoint only and not for design adequacy. The penetration was not inspected because it was not identified as a fire-rated assembly in PSTS.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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

- o At the time of the 100% walkdown in 1986, PSTS had been verified to be accurate but concerns were raised, after the inspection, that not all information had been included because PSTS was developed using only two contractor (Brand, Inc. and Bechtel, Inc.) seal control logs. Accordingly, Engineering continued the evaluation and verification process to consolidate information contained in other contractor seal control and penetration documents into the PSTS. This process of verifying the accuracy of PSTS is currently ongoing. At the completion of the review, PSTS will be the controlling document for identification of fire-rated assemblies.
- b) Further Corrective Action
  - o An Engineering evaluation of the wall and penetration will be performed to determine a method for satisfying the Appendix R requirements for the protection of redundant safe-shutdown circuits. At the completion of the evaluation, the wall and penetration will be modified accordingly.
  - o A 100% review of documentation, and physical walkdowns of all accessible Technical Specification walls and penetrations, will be performed to determine adequacy of PSTS.
  - o Engineering will continue to verify the accuracy of PSTS using other seal control, penetration schedule and outstanding change document information for inaccessible penetrations. All penetrations/assemblies which are added to PSTS will be field inspected for proper configuration.

Safety Significance

Fire Area TG-I contains components and cabling required for operation of the Appendix R, Divisions 1 and 2, Safe Shutdown System. However, the Appendix R, Division 2, Safe Shutdown components and cabling are protected by thermolag and a wet sprinkler system.

Fire Area RC-I contains Appendix R, Division 2, Safe Shutdown components and cabling which are located on the 467' Elevation. An Appendix R, Division 2, designated cable is located on the 487' Elevation; however, the cable has been analyzed as not being required for safe shutdown.

A review of the areas was performed and it was determined that the risk of a loss of redundant safe shutdown capability is remote due to multiple non-rated physical barriers; the distance separating the Appendix R, Divisions 1 and 2, components and cabling; and low intervening combustibles.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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

In addition, if a Design Basis Fire had occurred in either Fire Area, pre-alarm/ionization detectors would have activated and alarmed in the Control Room. The fire brigade would have then been dispatched and taken appropriate action in accordance with the pre-fire plans and emergency response procedures. A manual hose is available in both areas.

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

Similar Events

LERs 85-028, 87-004-00 and 87-004-01

EIIS InformationText ReferenceEIIS Reference

Fire-Rated Wall  
Fire Seal Penetration  
Control Room Emergency Ventilation System

System	Component
ME	Wall
KP	Penetration
VH	-----

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

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Docket No. 50-397

December 7, 1987

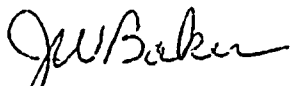
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U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: NUCLEAR PLANT NO. 2  
LICENSEE EVENT REPORT NO. 87-030

Dear Sir:

Transmitted herewith is Licensee Event Report No. 87-030 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. 87-030

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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