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 AUTH. NAME AUTHOR AFFILIATION
 ARBUCKLE, J.D. Washington Public Power Supply System
 BAKER, J.W. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-018-00: on 920428, determined that six locations not provided w/emergency lighting capacity & operator actions required for fire outside main CR not in procedures. Caused by inadequate design. Lighting provided. W/920528 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

May 28, 1992
G02-92-131

Docket No. 50-397

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

**SUBJECT: NUCLEAR PLANT WNP-2, OPERATING LICENSE NPF-21
LICENSEE EVENT REPORT NO. 92-018**

Transmitted herewith is Licensee Event Report No. 92-018 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.

Sincerely,

J. W. Baker for

J. W. Baker
WNP-2 Plant Manager (Mail Drop 927M)

Enclosure

cc: Mr. John B. Martin, NRC - Region V
Mr. C. Sorensen, NRC Resident Inspector (Mail Drop 901A, 2 Copies)
INPO Records Center - Atlanta, GA
Mr. D. L. Williams, BPA (Mail Drop 399)

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Washington Nuclear Plant - Unit 2

DOCKET NUMBER (2)

0 5 0 0 0 3 9 7

PAGE (3)

1 OF 5

TITLE (4)

INADEQUATE EMERGENCY LIGHTING AND ALL REQUIRED OPERATOR ACTIONS FOLLOWING A FIRE OUTSIDE OF THE CONTROL ROOM NOT INCLUDED IN PROCEDURES - LESS THAN ADEQUATE DESIGN/COMMUNICATIONS

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 NUMBERS(S)										
0	4	2	8	9	2	9	2	0	1	8	0	0	0	0	0	0	0	0	0	0

OPERATING MODE (9) 5 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR §: (Check one or more of the following) (11)

POWER LEVEL (10)

0	0	0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	77.71(b)
			20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.73(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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

TELEPHONE NUMBER

J. D. Arbuckle, Licensing Engineer

AREA CODE

5 0 9 3 7 7 - 4 1 4 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)

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

YES (If yes, complete EXPECTED SUBMISSION DATE) X NO

ABSTRACT (16)

On April 28, 1992, following a review of concerns identified during a Quality Assurance audit of the fire protection program, it was determined that concerns pertaining to the adequacy of fixed lighting supplied for fire protection considerations and operator actions required for fires outside of the main control room were reportable in accordance with 10CFR50.73. Specifically, it was determined that six locations where components were located had not been provided with the emergency lighting capacity specified by 10CFR50, Appendix R. Plant Operator actions are required to reposition these components during the event of a fire. In addition, it was determined that not all operator actions required for fires outside of the main control room had been incorporated into procedures.

Immediate corrective action consisted of initiating action to provide portable emergency lighting in the areas affected and revising the procedure for fires outside of the control room to include required operator actions.

The causes of this event are 1) Less than Adequate Design in that emergency lighting was not provided in the locations required, and 2) Less than Adequate Communication in that all procedures were not revised following direction from Engineering. Further corrective actions consist of 1) staging portable lighting within the Plant for use in the event of a fire in the areas, 2) performing a 10CFR50.59 Safety Evaluation pertaining to the use of portable lighting in these areas, and 3) performing an additional review of procedures to ensure that operator actions pertaining to the WNP-2, Appendix R, Shutdown Evaluation have been addressed.

This event did not affect the health and safety of either the public or Plant personnel.

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TITLE (4) INADEQUATE EMERGENCY LIGHTING AND ALL REQUIRED OPERATOR ACTIONS FOLLOWING A FIRE OUTSIDE OF THE CONTROL ROOM NOT INCLUDED IN PROCEDURES - LESS THAN ADEQUATE DESIGN/COMMUNICATIONS											

Plant Conditions

Power Level - 0%
Plant Mode - 5 (Refueling)

Event Description

On April 28, 1992, following a review of concerns identified during the Quality Assurance triennial audit of the Fire Protection Program (Audit 92-595), it was determined that concerns pertaining to the adequacy of fixed emergency lighting supplied for fire protection considerations and operator actions for fires outside of the Main Control Room were reportable in accordance with the requirements of 10CFR50.73.

The concerns pertaining to emergency lighting were limited to four areas where breakers must be repositioned and two locations where motor-operated valves may need to be manually operated. The concerns pertained to the Supply System 10CFR50, Appendix R, Calculation NE-02-85-19 which provides analysis bases, methodology, results and individual calculations for supporting the WNP-2 Safe Shutdown Analysis for a Fire Incident.

Specifically, it was noted that the calculation required certain operator actions be taken in the event of a fire outside of the Main Control Room. These actions included 1) local operator operation of the High Pressure Core Spray (HPCS) System pump circuit breaker, 2) manual operation of Standby Service Water (SW) System Valves SW-V-224B, SW-V-225B, SW-V-227B, SW-V-822B, and SW-V-823B to provide cooling to the Control Room Chiller Units, and 3) isolation of SW to the Reactor Closed Cooling (RCC) System to mitigate potential spurious operation of valves SW-V-187A, SW-V-187B, SW-V-188A and SW-V-188B as required to prevent flooding in the area of the RCC Surge Tank. However, upon further review, it was determined that the areas in which these components were located had not been provided with the emergency lighting required by 10CFR50, Appendix R.

Furthermore, it was also determined that existing Plant procedures did not encompass all of the operator actions that would be required for a fire outside of the Main Control Room. In May 1990, following the expanded review of the WNP-2, Appendix R, Shutdown Analysis, Supply System Engineering issued an interoffice memorandum to Plant Operations which provided a summary of operator actions required to shutdown the reactor in the event of a fire. The summary included operator actions that had been required since Plant startup (1983 time-frame) and additional actions that were identified from followup reviews. Although these requirements were included in Plant procedures for fires within the Main Control Room, they had not been incorporated into procedures for fires outside of the Control Room.

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Immediate Corrective Action

Immediate corrective actions were to initiate steps to provide for temporary lighting in the critical areas and revise the procedure for a fire outside of the Main Control room to include required operator actions.

Further Evaluation and Corrective Action

A. Further Evaluation

1. This event is reportable in accordance with the requirements of 10CFR50.73(a)(2)(v) as any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition.
2. There were no systems, structures or components that were inoperable at the time of the event that contributed to the event.
3. Pertaining to the emergency lighting issue, the requirements of 10CFR50, Appendix R (Section III.J), are such that emergency lighting with an eight-hour battery power supply be provided in all areas where operator actions are specified to mitigate the potential effects of a fire. Although WNP-2 is a non-Appendix R Plant, the Supply System was required to review its Fire Protection Program against Appendix R and did not take exception to this section, except for certain areas where the existing normal emergency lighting has been demonstrated to remain available to support post-fire safe shutdown.

The current plan for the six areas to ensure the adequacy of lighting for fire protection considerations is to take credit for portable lighting in lieu of providing eight-hour, battery-backed lighting. These areas include four rooms where breakers must be repositioned only one time during an event, and the potential for valve operation in another room and also at the Service Water Pumphouse (which is outside of the Plant).

The use of portable lighting in lieu of fixed lighting will be addressed by means of the 10CFR50.59 Safety Analysis Process, which would require that a summary of the safety evaluation be included in the WNP-2 Annual Operating Report. It is not anticipated that the evaluation of the use of portable lighting will result in an unreviewed safety question.

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4. The causes of this event are 1) Less than Adequate Design in that emergency lighting was not provided in the locations required, and 2) Less than Adequate Communications in that all procedures were not revised following direction from Engineering.

Although emergency lighting requirements were stipulated in Calculation NE-02-85-19, the six areas as described in this LER were inadvertently omitted as being locations that required adequate lighting to allow for operator actions to be taken in the event of a fire. These areas should have been provided with the required emergency lighting.

Although Engineering provided direction pertaining to operator actions to be taken following a fire, the interoffice memorandum was not acted upon in a timely manner by Plant Operations because it was not fully understood. These actions should have been incorporated into the procedure for fires outside of the Main Control Room.

B. Further Corrective Action

1. With regard to the emergency lighting concern, a walkdown of the areas involved was performed which confirmed that the required Operator actions could be accomplished with portable lighting. In addition, the required portable lighting was obtained and has been staged at four separate locations within the Plant. Scheduled maintenance will be performed on the portable lighting to ensure that the batteries are fully charged. This activity has been entered into the computerized Scheduled Maintenance System (SMS) to track completion efforts.
2. The 10CFR50.59 Safety Evaluation pertaining to the use of portable lighting for the six locations identified in this LER will be completed prior to startup from the on-going Maintenance and Refueling Outage (currently scheduled for July 1, 1992).
3. Engineering and Plant Operations will perform an additional review of applicable procedures to ensure that operator actions required by the WNP-2, Appendix R, Shutdown Analysis have been addressed. This review will be completed prior to startup from the ongoing Maintenance and Refueling Outage.
4. An evaluation will be performed pertaining to the process of how design information is transmitted to the Plant for incorporation into Plant procedures to determine if any changes are necessary. The evaluation will be completed by August 31, 1992.

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FACILITY NAME (1) Washington Nuclear Plant - Unit 2	DOCKET NUMBER (2) <div style="display: flex; justify-content: space-around; font-family: monospace; font-size: 1.2em;"> 05000397 </div>	LER NUMBER (8) <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Year</th> <th style="width: 15%;">Number</th> <th style="width: 15%;">Rev. No.</th> <th colspan="3"></th> </tr> <tr> <td style="font-family: monospace;">92</td> <td style="font-family: monospace;">018</td> <td style="font-family: monospace;">00</td> <td colspan="3"></td> </tr> </table>				Year	Number	Rev. No.				92	018	00				PAGE (3) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; font-family: monospace;">5</td> <td style="width: 10%; font-family: monospace;">OF</td> <td style="width: 10%; font-family: monospace;">5</td> <td colspan="4"></td> </tr> </table>						5	OF	5				
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Safety Significance

During the event period no fires were experienced which would have affected the ability to safely shutdown the Plant. Furthermore, the fire detection, suppression and barrier systems either remained operable or required compensatory measures were implemented. The operability of the fire detection instrumentation ensures that adequate warning capability is available for prompt identification of fires. Operability of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires. The operability of fire barriers and barrier penetrations minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. Accordingly, this event did not affect the health and safety of either the public or Plant personnel.

Similar Events

There have been LERs associated with implementation of the Fire Protection Program; however, none pertaining to emergency lighting or operator actions required to mitigate the potential effects of a fire.

EIIS Information

Text Reference

EIIS Reference

	<u>System</u>	<u>Component</u>
High Pressure Core Spray (HPCS) System	BG	---
HPCS Pump Circuit Breaker	BG	6
Standby Service Water (SW) System	BI	---
SW-V-224B	BI	V
SW-V-225B	BI	V
SW-V-227B	BI	V
SW-V-822B	BI	V
SW-V-823B	BI	V
Control Room Chiller Units	KM	CHU
Reactor Closed Cooling (RCC) System	CC	---
SW-V-187A, SW-V-187B	BI	V
SW-V-188A, SW-V-188B	BI	V
RCC Surge Tank	CC	TK
Service Water Pump House	MK	BLDG