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ACCESSION NBR:9004040035 DOC.DATE: 90/03/22 NOTARIZED: NO DOCKET #
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-001-00:on 900225,pyralarm fire detection zone
 inoperable,roving FW on inoperable fire rated assemblies.
 W/9 ltr.

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 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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March 23, 1990

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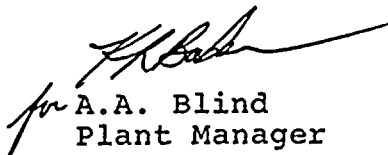
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In accordance with the criteria established by 10 CFR 50.73
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90-001-00

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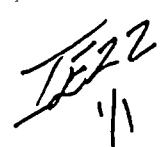

for A.A. Blind
Plant Manager

AAB:clw

Attachment

cc: D.H. Williams, Jr.
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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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.

FACILITY NAME (1) D. C. Cook Nuclear Plant, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 3 1 5										PAGE (3) 1 OF 0 5										
TITLE (4) Pyralarm Fire Detection Zone Inoperable, Roving FW on Inoperable Fire Rated Assemblies Not Upgraded to Continuous Fire Watch Due to Personnel Error.																														
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	2	2	5	9	0	9	0	0	0	1	0	0	0	3	2	2	9	0	D. C. Cook, Unit 2						0 5 0 0 0 3 1 6					
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																											
1			20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)															
POWER LEVEL (10)			20.405(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)															
1 0 0			20.405(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vi)				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)(ix)																			
LICENSEE CONTACT FOR THIS LER (12)																														
NAME										TELEPHONE NUMBER																				
J. R. Sampson, Operations Department Superintendent										6 1 1 6 4 1 6 5 1 - 1 5 9 1 0 1 1																				
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																														
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD																				
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 02-25-90 at 1015 the pyralarm fire detection zone 2 for the 587' elevation of the Auxiliary (Aux.) Building (Bldg.) (EFR ZN 2) was declared inoperable. The Unit Supervisor (US) notified the Fire Watch (FW) Dispatch and a roving FW was established to patrol the 587' elevation of the Aux. Bldg. to satisfy Technical Specification (TS). The US did not note that the TS action statement previously in affect for inoperable Coolant Charging Pump room wall fire rated assemblies located within the fire detection zone changed when EFR ZN 2 became inoperable and therefore, failed to upgrade a roving FW to a continuous FW. A continuous FW was not established for the inoperable assemblies until 02-26-90 at 1620. Also, while EFR ZN 2 was inoperable, Fire Door 368 was inoperable from 0635 to 1532 on 02-26-90, and Fire Door 364 was inoperable from 0740 to 1517 on 02-26-90. The US established a roving FW patrol on the inoperable fire doors. With EFR ZN 2 inoperable, a continuous FW should have been established to satisfy the TS action statement.

A reference to the fire rated assembly TS has been added to the surveillance procedure for a standing fire detection, alarm. In addition, this event was reviewed with Operations personnel by a training memo and discussed with the involved personnel.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
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D. C. Cook Nuclear Plant, Unit 1	0 5 0 0 0 3 1 5	9 0	— 0 0 1	— 0 0	0 2	OF	0 5

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

Conditions Prior to Occurrence

Unit 1 (U-1) in Mode 1 operating at 100%.

Unit 2 (U-2) in Mode 1 operating at 100%.

Description of Event

On 02-25-90 at 1015, the pyralarm fire detection (EIIS/ID-DEC) zone for the 587' elevation (elev.) of the Auxiliary (Aux.) Building (Bldg.) (EFR ZN 2) was declared inoperable. This fire detection zone encompasses areas in both U-1 and U-2. A roving fire watch (FW) patrol was established to patrol the 587' level elev. of the Aux. Bldg. as required by Technical Specifications (TS) 3.3.3.7 (U-1) and 3.3.3.8 (U-2) Fire Detection Instrumentation. Prior to the fire detection for the 587' elev. of the Aux. Bldg. becoming inoperable, a roving FW was established on the inoperable U-1 and U-2 Coolant Charging Pump (CCP) (EIIS/BQ-P) room removable walls per TS 3.7.10 (Fire Rated Assemblies). When the fire detection for the 587' elev. of the Aux. Bldg. became inoperable, the Unit Supervisor failed to recognize that the requirements to satisfy the TS 3.7.10 action statement changed. With the fire detection on the 587' elev. of the Aux. Bldg. inoperable, the US should have upgraded the roving FW on the U-1 and U-2 CCP Room removable walls to a continuous FW to satisfy the TS 3.7.10 action statement.

In addition, while the 587' elev. Aux. Bldg. fire detection was inoperable, two fire doors within the fire detection zone became inoperable. Fire Door 368 (Nuclear Sampling Room) was inoperable from 0635 to 1532 on 02-26-90, and Fire Door 364 (U-1 CCP Room) was inoperable from 0740 to 1517 on 02-26-90. When the fire doors became inoperable, the US notified the FW Dispatch to establish a roving FW on the inoperable doors. With the 587' elev. Aux. Bldg. fire detection inoperable, a continuous FW should have been established to satisfy the TS 3.7.10 action statement.

On 02-26-90 at 1620, the US recognized that the TS 3.7.10 action statement was not met for the inoperable fire rated assemblies. The US notified the FW Dispatch to upgrade the roving FW on the U-1 and U-2 CCP Room removable walls to a continuous FW. Since Fire Door 368 and 364 were operable at the time the finding was identified, no FW was required to be posted on Fire Doors 368 and 364.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 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.

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
90	001	00

D. C. Cook Nuclear Plant, Unit 1

05000315

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

A similar event occurred in December 1989 when an operator did not recognize the TS 3.7.10 requirement to upgrade the roving FW on an inoperable fire rated assembly to a continuous FW when the fire detection on one side of the fire rated assembly became inoperable. Although this event was similar, the event was not reportable since a continuous FW had been established on a fortuitous basis. The preventive action for the December event included referencing TS 3.7.10 on the U-1 and U-2 Event Initiated Surveillance procedures for Standing Fire Detection Alarms. In addition, a commitment was made to train Operations personnel on the addition of the TS 3.7.10 reference to the procedure and the need to check for inoperable fire barriers when a fire zone becomes inoperable. The procedures were revised and placed into effect on 02-27-90. The training was also completed on 02-27-90. It is believed that these preventive actions would have prevented this event if they had been in place on 02-25-90.

Cause of Event

The cause of this event was personnel error. The involved operators failed to review TS Open Items when the fire detection for the 587' elev. of the Aux. Bldg. became inoperable. This review would have identified inoperable fire rated assemblies which required upgrading from a roving FW to a continuous FW.

In addition, when the fire doors became inoperable during the inoperability of the 587' elev. of the Aux. Bldg. fire detection, the involved personnel failed to adequately review TS 3.7.10 to determine that a continuous FW was required.

Analysis of Event

The TS 3.7.10 action statement for an inoperable fire rates assembly requires that "...within one hour either establish a continuous fire watch on at least one side of the affected assembly, or verify the OPERABILITY of the fire detectors per specification 4.3.3.7 on at least one side of the inoperable assembly and establish an hourly fire watch patrol...". Failure to establish the required FW patrol within one hour was a violation of TS 3.7.10 and is reportable under 10 CFR 50.73(a)(2)(i)(B).

The U-1 and U-2 CCP room removable walls were inoperable without a continuous FW for 29 hours 2 minutes. Fire door 364 was inoperable without a continuous FW for 7 hours 37 minutes, and Fire door 368 was inoperable without a continuous FW for 8 hours 57 minutes.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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.

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The analysis of this event concludes that in the unlikely event of a fire, personnel would have been promptly aware of its presence and would have extinguished the fire without significant spreading of the fire or equipment damage. This conclusion is based on the following:

1. The 587' elevation of the Aux. Bldg. is provided with a Preaction Dry Pilot Sprinkler System. This system has a compressed air pilot line with sealed sprinkler heads rated at 175°F, and water piping with sprinklers rated at 250°F or at 220°F for side wall sprinklers. Had a fire occurred on the 587' elev. of the Aux. Bldg., Control Room annunciators in U-1 and U-2 would have alarmed upon actuation of the sprinkler system to alert the Control Room. The operators would then investigate the cause of the alarm and take corrective action to extinguish the fire.
2. Although a continuous FW was not assigned to the inoperable fire rated assemblies, a roving FW was established to patrol the inoperable fire rated assemblies and the 587' elev. of the Aux. Bldg. each half hour. Had a fire occurred which affected the fire rated assembly, the fire would have been noted by the roving FW within 30 minutes and corrective actions would have been taken.

Although a continuous FW was not posted at the inoperable fire rated assemblies, it is concluded that the alarms associated with the 587' Fire Protection System and the roving FW, touring the 587' elev. of the Aux. Bldg. each 30 minutes, would have allowed timely identification of a fire. Therefore, this event is not considered to have created a significant safety concern, nor did it create a significant hazard to the health and safety of the general public.

Corrective Action

1. When the US recognized that a continuous FW was required for the U-1 and U-2 CCP Room removable walls with the fire detection for the 587' elev. of the Aux. Bldg. inoperable, the FW Dispatch was notified and a continuous FW was posted.
2. Since Fire Door 364 and 368 were operable when the FW posting error was noted, the TS 3.7.10 action statement had been exited and no corrective action was required.
3. This event was discussed with the involved personnel. The personnel are fully aware of the TS 3.7.10 requirements for an inoperable fire rated assembly.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 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.

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

4. A reference to TS 3.7.10 has been added to the Event Initiated Surveillance procedures. Training has been completed on the procedure change and the need to check for inoperable fire barriers when a fire zone becomes inoperable.

5. A training memo was sent to operations personnel to review this event.

Failed Component Identification

None

Previous Similar Events

- A review of previous similar Licensee Event Reports did not reveal a similar LER where an operator failed to upgrade a roving FW on an inoperable fire rated assembly to a continuous FW when the fire detection zone being used to satisfy the Technical Specification became inoperable.

Although a similar LER was not identified, the plant condition report system did identify a similar event where an operator failed to recognize the TS requirement to upgrade a roving FW on an inoperable fire rated assembly to a continuous FW. Since the TS requirement for a continuous FW was met by a continuous FW posted on one side of the inoperable fire rated assembly, this finding was not reportable.