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ACCESSION NBR:9007050095 DOC.DATE: 90/06/25 NOTARIZED: NO DOCKET #
 FACIL:50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-003-00:on 900214,Train B lower containment purge &
 exhaust isolation inoperable due to RMFIV not fully closed.
 W/9 ltr.

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	RES/DSIR/EIB	1 1	RGN3 FILE 01	1 1
EXTERNAL:	EG&G STUART,V.A	4 4	L ST LOBBY WARD	1 1
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June 25, 1990

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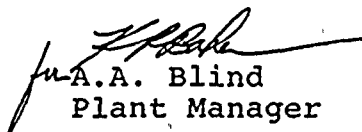
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Docket No. 50-316

Document Control Manager:

In accordance with the criteria established by 10 CFR 50.73
entitled Licensee Event Reporting System, the following
report is being submitted:

90-003-00

Sincerely,


A.A. Blind
Plant Manager

AAB:clw

Attachment

cc: D.H. Williams, Jr.
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EXPIRES: 4/30/92

LICENSEE EVENT REPORT (LER)

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) D. C. Cook Plant - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 1 6				PAGE (3) 1 OF 0 3		
TITLE (4) Train B Lower Containment Purge and Exhaust Isolation Inoperable Due To Radiation Monitor Flush Isolation Valve Not Fully Closed																
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	1	4	9	0	9	0	0	0	3	0	0	0	0	0	
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																
OPERATING MODE (9)		1														
POWER LEVEL (10)		1 0 0														
		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)		
		20.405(a)(1)(i)				50.36(e)(1)				50.73(a)(2)(v)				73.71(c)		
		20.405(a)(1)(ii)				50.36(e)(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)(ix)						
LICENSEE CONTACT FOR THIS LER (12)																
NAME J. T. Wojcik - Technical Physical Science Superintendent										TELEPHONE NUMBER						
										AREA CODE		6 1 6 4 6 5 - 5 9 0 1				
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						
B	I L	M O N	E 0 7 0	N												
SUPPLEMENTAL REPORT EXPECTED (14)																
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO		EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR

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

On February 14, 1990 it was identified that the valve which allows purging of the Lower Containment Train B special particulate, iodine, noble gas monitor (SPING) (MON) sample chamber with ambient (Auxiliary Building) air was open during operation of the monitor. It was determined on May 29, 1990 that this condition would have prevented the required channels (Channel 1 - beta particulate, Channel 5 - low range noble gas) from fulfilling the requirements of technical specification table 3.3-3, ESF Actuation System (ESF) Instrumentation for the Containment Purge System, Train B. The third required channel for Train B, VRS-2201 (area monitor) was operable and capable of providing the actuation. ERS 2301, 2305, which provide Train A Containment Purge System trip signals was operable at all times.

The cause of this event is attributed to a faulty logic circuit in the SPING startup process from a no power condition. When power is applied to the microprocessor, the purge valve begins to open before a logic relay interrupts the power to that particular circuit.

To prevent recurrence, the instrument operation procedure was revised to require a "Flush" command whenever returning a SPING to service. The "Flush" command cycles the purge valve fully closed.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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 Plant - Unit 2

DOCKET NUMBER (2)

0 5 0 0 0 3 1 6

LER NUMBER (8)

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SEQUENTIAL
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NUMBER

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PAGE (3)

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

Conditions Prior to Occurrence

Unit 1 at 100 percent power, prior to December 15, 1989, Unit 2 was at Mode 1, 100 percent power.

Description of Event

On February 14, 1990 during maintenance activities on ERS-2400, Unit 2 Lower Containment Train B special iodine and noble gas monitor (SPING) (EIIS-IL-MON), it was discovered that the flush isolation valve (V2) was not fully closed. This condition would allow the sample of air from containment to be diluted with Auxiliary Building air. Two channels of this SPING are required for Containment Purge (EIIS-ESF) operations during Modes 1-4. Their function is to provide Train B of Containment Purge isolation (EIIS-JM) trip signals upon a high radiation alarm signal. The flush valve had likely been open since December 15, 1989 when power to the microprocessor was removed for maintenance purposes. Technical Specification 3/4.3.2, Table 3.3-3, Item 3.c.3 requires that channels 1 and 5 be operable during Containment Purge system operation in Modes 1-4. Contrary to that requirement, the Unit 2 Containment Purge system was operated in Modes 1-4 without the required channels for Train B from January 6, 1990 to January 11, 1990.

Cause of Event

This event was caused by the flush valve (V-2) remaining open during a power up situation.

Analysis of Event

This event is being reported in accordance with 10CFR50.73(a)(2)(i)(B) due to the failure to comply with Technical Specification 3/4.3.2, Table 3.3-3. Action Statement number 17 requires that with less than the minimum channels operable, operation may continue provided the containment purge and exhaust valves are maintained closed. Through calculation, it has been determined that the actual sample concentration for ERS-2400 was approximately 60 percent of what it should have been.

The sample locations inside containment for Train A (ERS-2300) and Train B (ERS-2400) are relatively close and on the same elevation. Train A (ERS-2300) samples from elevation 616' at 180 degrees (between #2 and #3

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1) D. C. Cook Plant - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 1 6	LER NUMBER (6)			PAGE (3)		
		YEAR 9 0	SEQUENTIAL NUMBER 0 0 3	REVISION NUMBER 0 0	0 3	OF 0 3	

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

steam generators) while Train B (ERS-2400) samples from elevation 616' at 135 degrees (behind #2 reactor coolant pump). Review of daily radiation monitoring system readings, were inconclusive. Activity concentrations between the two monitors (ERS-2305 and ERS-2405) were essentially the same with no discernable increase after the flush valve was repaired. Review of gaseous projections for December 1989 and January 1990 confirmed that at no time during the inoperable period was the public or environment subjected to anything but routine radiological releases.

In addition, for Train B the area monitor (VRS-2201) was operable the capable of initiating purge and exhaust isolation. The Train A monitors were also operable as required by technical specification requirements and would have initiated purge and exhaust isolation. Since sufficient redundancy existed to ensure that isolation would occur, the incident did not significantly impact public health and safety.

Corrective Actions

The Operation of the Radiation Monitoring System procedure was revised to require a flush be performed on any SPING monitor being returned to service.

Failed Component Identification

Lower Containment Train B SPING
Plant Designation: ERS-2300
Manufacturer: Eberline
EIIS Code: IL-MON

Pervious Similar Events

None.