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SUBJECT: LER 89-012-00:on 890913,SSPS surveillance testing performed on Train B while Train A safety injection pump inoperable.
W/8 ltr.

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October 5, 1989

United States Nuclear Regulatory Commission
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Rockville, Maryland 20852

Operating License DPR-58
Docket No. 50-315

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:

89-012-00

Sincerely,

A. Alan Blind

A.A. Blind
Plant Manager

AAB:clw

Attachment

cc: D.H. Williams, Jr.
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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
D. C. Cook Nuclear Plant - Unit 1	0 5 0 0 0 3 1 5	1 OF 0 4

TITLE (4) Solid State Protection System Surveillance Testing Performed on The B Train While The A Train Safety Injection Pump Was Inoperable 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 5 0 0 0
0 9	1 3	8 9	8 9	- 0 1 2	- 0 0	1 0	0 5	8 9		0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
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(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	X 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
	AREA CODE
K. R. Baker, Operations Superintendent	6 1 6 — 4 6 5 - 1 5 9 0 1 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	

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)

At 0852 on September 13, 1989, the B Train of the Solid State Protection System (SSPS) was made inoperable for SSPS and reactor trip breaker surveillance testing after receiving permission from the Shift Supervisor and Unit Supervisor. Due to the design of the circuitry, the B Train of safety injection is also made inoperable during the testing. The A Train safety injection pump was also inoperable during the testing due to being isolated for leak repairs. Therefore, both safety injection pumps were inoperable from 0852 until the B Train of SSPS was returned to operability at 1000 on September 13, 1989. This violation of T.S. 3.5.2 was recognized by a second Unit Supervisor when reviewing plant status in preparation for the A Train SSPS and reactor trip breaker testing.

The primary cause of this event was failure of the Shift Supervisor and Unit Supervisor to recognize that the SSPS testing should not be done with the opposite train safety injection pump inoperable. Also contributing to the event was the job planning process which did not consider the surveillance schedule and the lack of guidance in the surveillance procedure to ensure that opposite train equipment was operable. Preventive actions taken to prevent recurrence include revision of the surveillance procedure and inclusion of the surveillance schedule in the job planning process.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
D. C. Cook Nuclear Plant - Unit 1	0 5 0 0 0 3 1 5	8 9	— 0 1 2	— 0 0	0 2 OF 0 4

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

Conditions Prior to Occurrence

Unit One in Mode 1 at 100 percent reactor thermal power.

Description of Event

At 0852 on September 13, 1989, the B Train of the Solid State Protection System (SSPS) (EIIS/JC) was made inoperable for SSPS and reactor trip breaker (EIIS/AA-BKR) surveillance testing after receiving permission from the Shift Supervisor (Senior Licensed Operator) and the Unit Supervisor (Senior Licensed Operator). Due to the design of the circuitry, the B Train of safety injection (EIIS/BQ) is also made inoperable during the testing. Concurent with the B Train testing, the A Train safety injection pump was also inoperable due to it being isolated for leak repairs at 0450 on September 13, 1989. Therefore, both safety injection pumps were inoperable for one hour and eight minutes. One safety injection pump was isolated and the other would not have auto started in the event of an SI signal, from 0852 when the B Train was placed in test, until the B Train of SSPS was returned to operability at 1000 on September 13, 1989. This violation of Technical Specification 3.5.2 was recognized by a second Unit Supervisor (Senior Licensed Operator) when reviewing plant status prior to granting approval for the A Train SSPS and reactor trip breaker testing.

Cause of Event

The primary cause of this event was that the Shift Supervisor and the Unit Supervisor failed to recognize that the B Train SSPS testing should not have been done while the A Train safety injection pump was inoperable. Both supervisors knew that the A Train safety injection pump was inoperable, but they did not make the connection when authorizing performance of the B Train SSPS testing.

Job planning inadequacy also contributed to this event. The Operations Department and Instrumentation & Control Department representatives, involved in planning of the work for the day, did not consider the surveillance test schedule when arranging for the A Train safety injection pump work.

Also contributing to this event was a procedural weakness. The Unit One SSPS and reactor trip breaker surveillance test procedure did not contain direction to ensure the opposite train equipment was operable prior to commencing the test.

Analysis of the Event

This event is considered reportable pursuant to 10 CFR 50.73(a)(2)(vii).

During this event, all of the A Train equipment was operable except for the North safety injection pump. If a safety injection signal had occurred during this event the B Train equipment would not have automatically started, but would have started upon manual action. The emergency operating procedure for a safety injection requires the operators to verify the safety injection pumps running and to manually start pumps as needed. It is conservatively estimated that the operators would have manually started the South safety injection pump within five minutes of the event initiation. The limiting accident when considering loss of high head safety injection is the small break loss of coolant accident. For the circumstances in question the A Train centrifugal charging pump would have began injection upon event initiation, but when a conservative approach of no high head safety injection is considered, significant increases in core fluid temperature are not expected until well after the five minute point.

Since operator training and procedural guidance existed to ensure that the B Train safety injection pump and charging pump would have been promptly started in the event of a safety injection, it is concluded that adequate safety injection flow would have been initiated far in advance of reaching an inadequate core cooling situation.

Based on the above it is concluded that this event did not involve an unreviewed safety question as defined in 10 CFR 50.59.

Corrective Actions

1. A memorandum was issued to Operations Department personnel to reinforce the necessity of maintaining opposite train equipment operable during SSPS testing on the other train.

2. This event was discussed with the job planners to stress the need to consider the surveillance test schedules during the daily job planning meetings. The surveillance schedules are now being used during the job planning process.

3. The Unit One SSPS and reactor trip breaker surveillance test procedures were revised with change sheets on September 21, 1989, to add a requirement for the Shift Supervisor to ensure that the opposite train equipment is operable. The Unit Two procedures did not require revision as they had been previously revised to include the requirement.

4. The procedure weakness was reviewed for generic implications. It was determined that the current practice for the writing of procedures is to provide the Shift Supervisor with sufficient information to allow determining the affect of performing the procedure on plant equipment and systems. This practice is also specified in the Plant Manager Instruction (PMI-2010) for procedures. Since adequate guidance in this area is provided by PMI-2010, no new initiatives are warranted at this time.

Failed Component Identification

None

Previous Similar Events

There were no previous similar events identified which involved SSPS surveillance testing on one train, while equipment was inoperable on the opposite train.