

## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  
Donald C. Cook Nuclear Plant - Unit 1DOCKET NUMBER (2)  
50-315

Page 1 of 3

TITLE (4)  
Missed Procedure Step Results in Engineered Safety Features and Reactor Protection System Actuation

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 NAME	DOCKET NUMBER
01	07	98	98	-- 003 --	00	02	06	98	None	
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	0	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
		20.2201(b)	20.2203(a)(3)(i)	50.73(a)(2)(iii)	73.71(b)
POWER LEVEL (10)	5	20.2203(a)(1)	20.2203(a)(3)(ii)	50.73(a)(2)(iv)	73.71e
		20.2203(a)(2)(i)	20.2203(a)(4)	50.73(a)(2)(v)	OTHER
		20.2203(a)(2)(ii)	50.36(c)(1)	50.73(a)(2)(vii)	(Specify in Abstract below and in Text, NRC Form 366A)
		20.2203(a)(2)(iii)	50.36(c)(2)	50.73(a)(2)(viii)(A)	
		20.2203(a)(2)(iv)	50.73(a)(2)(i)	50.73(a)(2)(viii)(B)	
		20.2203(a)(2)(v)	X 50.73(a)(2)(ii)	50.73(a)(2)(x)	

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Mr. John Boesch, Maintenance Manager

TELEPHONE NUMBER (Include Area Code)

616/465-5901, x2634

## 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

## 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 15 single-spaced typewritten lines) (16)

On January 7, 1998, while performing 1 IHP 4030.STP.410, "Train 'A' RPS and ESF Reactor Trip Breaker and SSPS Automatic Trip/Actuation Logic Functional Test," a step to reposition a test switch within the Solid State Protection System (SSPS) was overlooked. Several steps later, when the SSPS was restored to normal, an unplanned Engineered Safety Features (ESF) actuation and Reactor Protection System (RPS) actuation occurred.

The root cause for this event is personnel error. The Instrumentation and Controls (I&C) procedure reader did not adequately follow an approved procedure. The I&C reader missed Step 6.5.50 during the performance of 1 IHP 4030.STP.410, "Train 'A' RPS and ESF Reactor Trip Breaker and SSPS Automatic Trip/Actuation Logic functional Test."

This event is being reported in accordance with 10 CFR 50.72(a)(2)(iv) as any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature, including the Reactor Protection System. The safety significance was negligible as the unit was in Mode 5 and the safety function of the actuated systems had already been established prior to the event.

A timeout was held with all I&C crews to discuss the event. The timeout focused on the reporting of unusual indications, self-checking, and I&C worker performance.



1

## LICENSEE EVENT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, 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)
Cook Nuclear Plant - Unit 1		50-315		YEAR	SEQUENTIAL	REVISION	2 OF 3
				98	-- 003 --	00	

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

**Conditions Prior to Event**

Unit 1 was in Mode 5, Cold Shutdown

**Description of Event**

On January 7, 1998, while performing 1 IHP 4030.STP.410, "Train 'A' RPS and ESF Reactor Trip Breaker and SSPS Automatic Trip/Actuation Logic Functional Test," a step to reposition a test switch within the Solid State Protection System (SSPS) was overlooked. Several steps later, when the SSPS was restored to normal, an unplanned Engineered Safety Features (ESF) and Reactor Protection System (RPS) actuation occurred.

In response to a Westinghouse bulletin which stated that portions of SSPS may not have been completely tested, change sheet 2 to 1 IHP 4030.STP.410 was generated. Change sheet 2 added Steps 6.5.39 through 6.5.39G to fully test SSPS. SSPS testing began on day shift January 7, 1998. The partially completed procedure was then turned over to the night shift for completion. However, the turnover of the procedure was not a factor in this event.

The night shift performed a pre-job brief for this activity. It was mentioned in the pre-job briefing that the usual 2 hour technical specification limiting condition for operation time limit did not apply, but the need to avoid an ESF actuation in any mode was emphasized. 1 IHP 4030.STP.410 is written to be performed in Modes 1, 2, 3, 4, and 5. Routinely this procedure is performed in Mode 1, thus the I&C crew was familiar with the SSPS response in Mode 1. No consideration was given to differences that might exist in Mode 5, nor were potential differences between Mode 1 and Mode 5 discussed during the pre-job briefing.

Approximately 10 steps in the procedure had been completed by using three (3) Instrumentation and Control (I&C) technicians as is the standard for this procedure. One was designated as a procedure reader. A second was a worker (turned switches and took meter reading) and a third was a helper, to allow the first two to remain focused on the incremental steps. Due to a lack of self-checking, a poor procedure use practice, and poor supervisory oversight, the I&C procedure reader missed Step 6.5.50 which directed "Place MEMORIES in OFF" and preceded to the next step.

Steps 6.5.51 through 6.8.4 were performed with the MEMORIES switch in the wrong position. Unusual SSPS panel indications were noted by both the I&C reader and the I&C worker. They did not stop what they were doing or contact their supervisor. Instead, they rationalized away the unusual indications to be associated with the performance of the test in Mode 5.

Step 6.8.5 was performed which placed the SSPS back to normal. This action restored the SSPS system and allowed the test generated trip signals to affect the plant. Shortly thereafter, the I&C crew reported to the Operations Unit Supervisor that their testing was completed. The Unit Supervisor performed a check of the control room panels and questioned why a safety injection status light was on. A check of the procedure and SSPS revealed the error. With the unit in Mode 5, the only physical equipment response was the opening of the main steam dump valves.

**Cause of Event**

The root cause for this event is personnel error. The I&C procedure reader did not adequately follow an approved procedure. The I&C reader missed Step 6.5.50 during the performance of 1 IHP 4030.STP.410, "Train 'A' RPS and ESF Reactor Trip Breaker and SSPS Automatic Trip/Actuation Logic Functional Test." The bases for the error was attributed to a lack of self-checking, a poor procedure use practice, and poor supervisory oversight.

## LICENSEE EVENT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, 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)
Cook Nuclear Plant - Unit 1		50-315		YEAR	SEQUENTIAL	REVISION	3 OF 3
				98	-- 003 --	00	

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

**Analysis of Event**

This event is being reported in accordance with 10 CFR 50.72(a)(2)(iv) as any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature, including the Reactor Protection System.

This event occurred in Mode 5, Cold Shutdown, with all control rods already inserted into the core, the reactor protection system removed from service, and the main steam isolation valves closed. As a consequence, there was negligible impact on safety-related components and systems. The main steamline isolation valve dump valves opened; but, as noted above, the associated main steamline isolation valves were already in a closed condition. In summary, the safety function of the actuated systems had already been established prior to the event.

**Corrective Actions**

Immediate corrective actions consisted of the following:

- Work on SSPS was stopped, a high priority job order was initiated to restore SSPS to normal, restoration plans were developed, and SSPS was successfully restored to normal.
- Appropriate administrative actions were taken with the responsible I&C crew members.
- The I&C supervisor was reminded of his responsibility to include special plant conditions and expected test indications as part of the pre-job briefings.

Immediate preventive actions consisted of the following: A timeout was held with all I&C crews to discuss the event. The timeout focused on the following items:

- The job performance expectations for I&C workers. Key topics included in this discussion were: Strict Procedure Use and Adherence, Self Checking, Comprehensive Job Briefs, Supervisory Oversight and Teamwork.
- The need to stop and resolve unusual indications during task performance.
- The need to self-check one's work, especially before high-risk steps.

After determining that the crew clearly understood the expectations for them to successfully complete the procedure, the procedure was completed without incident.

**Failed Component Identification**

None

**Previous Similar Events**

315/96-005-00  
316/96-005-00  
315/95-010-00  
316/95-006-00  
316/94-001-00  
316/94-010-00