

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Cooper Nuclear Station	DOCKET NUMBER (2) 0 5 0 0 0 2 9 8	PAGE (3) 1 OF 0 3
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TITLE (4) Unplanned Actuation of the Reactor Protection System and Engineered Safety Feature Group Isolations Due to a Procedural Deficiency During Design Change Activities

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	2 0	8 8	8 8	0 1 5	0 0	0 6	1 0	8 8				0 5 0 0 0
												0 5 0 0 0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 0	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	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)(vi)	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)(vii)(A)						
	20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)						
	20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(ix)						

LICENSEE CONTACT FOR THIS LER (12)

NAME Donald L. Reeves, Jr.	TELEPHONE NUMBER AREA CODE: 4 0 2 8 2 5 - 3 8 1 1
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On May 20, 1988, at 10:41 A.M. while shutdown for the 1988 Refueling Outage, an unplanned actuation of the Reactor Protection System (RPS) and Engineered Safety Feature (ESF) Group Isolations occurred while preparing for acceptance testing of a newly installed level transmitter. The sensing line for the level transmitter, which also serves as the variable leg for several other level instruments in the RPS trip logic and Primary Containment/Reactor Vessel isolation logic, had been backfilled and was being vented. Upon opening the instrument vent, the localized effect sensed by the attached level instruments was a decrease in variable leg pressure; in effect, an apparent level decrease. The decrease was sufficient to trip both level transmitters, resulting in a trip of both RPS channels and, additionally, actuation of Groups 2, 3, and 6 Isolations.

The response of the RPS and actuation of Groups 2, 3, and 6 Isolations occurred as designed. Since the plant was shutdown, there was no impact on plant operational activities.

The cause of the event was due to a procedural deficiency in that no specific guidance was provided reflecting the steps to be taken or the potential interactions that could occur during the process. The design change installation instructions were upgraded to provide specific guidance for backfilling of the instrument lines, including venting of the instruments.

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

A. Event Description

On May 20, 1988, at 10:41 A.M. while shutdown for the 1988 Refueling Outage, an unplanned actuation of the Reactor Protection System (RPS) and several Engineered Safety Feature (ESF) Group Isolations occurred while preparing for acceptance testing of a newly installed level transmitter. The variable leg sensing line for the new Reactor Vessel level transmitter (NBI-LT-92), added as part of a design change, had been backfilled with demineralized water through an instrument sensing line drain connection. Venting of the instrument was being accomplished by opening the transmitter vent. The variable leg sensing line connected to the new transmitter also serves as the variable leg for several other level instruments (NBI-LIS-101A and B which are two of the four level indicating switches in the RPS trip logic and Primary Containment/Reactor Vessel isolation logic). When the CNS Instrument and Control Technician vented the new level transmitter, the localized effect sensed by the other nearby level instruments (LIS-101A and B) was a decrease in variable leg pressure; in effect, an apparent level decrease. The decrease was sufficient to trip both level transmitters, resulting in a trip of both RPS channels and, additionally, actuation of Groups 2, 3, and 6 Isolations (Primary Containment, Reactor Water Cleanup [RWCU], and Secondary Containment, including initiation of the Standby Gas Treatment [SGT] System).

B. Plant Status

Shutdown for the 1988 Refueling Outage which commenced March 5, 1988.

C. Basis for Report

Unplanned actuations of the RPS and ESF Group Isolations, reportable in accordance with 10CFR50.73(a)(2)(iv).

D. Cause

Procedural deficiency. While the design change installation instructions specified that the instrument sensing line was to be backfilled, no specific guidance was provided reflecting the steps to be taken or the potential interactions that could occur during the process.

E. Safety Significance

None. The response of the RPS and actuation of Groups 2, 3, and 6 Isolations occurred as designed. Since the plant was shutdown, there was no impact on plant operational activities. While design change installation activities of this nature would only be accomplished during plant shutdown, replacement of level sensing instruments due to their failure could be required when at power. Such replacement efforts have been accomplished previously and completed with no impact on plant operation. However, if backfilling of the sensing line and venting of

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the instrument were not carefully controlled, the same sequence of events could occur. In that case, the resulting transient, while undesirable, would not be any more severe than any of the abnormal operational transients which have been analyzed.

F. Corrective Action

Venting of the newly installed transmitter was stopped, the RPS and Group Isolations were reset, and the affected systems were restored to their pre-tripped condition. The design change installation instructions were upgraded to provide specific guidance when backfilling the instrument lines and venting the newly installed instruments. Included in the guidance was the requirement to remove from service other instruments connected to the sensing line prior to any backfilling and venting activities. Work activities associated with the design change were then restarted.

In an effort to eliminate the potential for problems of this nature in the future, the circumstances associated with this event will be reviewed with offsite Engineering Group management. Their assistance in including detailed installation/acceptance testing instructions for specific activities, such as this, in design change documents will be solicited. Additionally, this LER will be routed to Engineering and I & C Supervisory personnel to promote dissemination of information regarding this event to all pertinent Nuclear Power Group individuals.

G. Past Similar Events

Backfilling of the High Pressure Coolant Injection (HPCI) System high flow sensing lines resulted in closure of the HPCI Steam Supply valve as reported in LER 86-017, dated September 17, 1986.



Nebraska Public Power District

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CNSS886159

June 10, 1988

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

Gentlemen:

Cooper Nuclear Station Licensee Event Report 88-015 is forwarded as an attachment to this letter.

Sincerely,

G. R. Horn
Division Manager of
Nuclear Operations

GRH:sg

Attachments

cc: R. D. Martin
L. G. Kunc1
R. E. Wilbur
V. L. Wolstenholm
G. A. Trevors
INPO Records Center
ANI Library
NRC Resident Inspector
R. J. Singer
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CNS Quality Assurance

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