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Wilfred Connell
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WC-112-97
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Docket No. 50-461

10CFR50.73

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

Subject: Clinton Power Station - Unit 1
Licensee Event Report No. 97-003-00

Dear Madam or Sir:

Enclosed is Licensee Event Report (LER) No 97-003-00: Disconnecting Division 1 Intermediate Range Monitor (IRM) Cable While Division 2 IRM Cable was Disconnected Satisfies 2-out-of-4 Reactor Protection System Actuation Logic. This report is being submitted in accordance with the requirements of 10CFR50.73.

Sincerely yours,

Wilfred Connell
Vice President

RSF/krk

Enclosure

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety
INPO Records Center

IE22 1/1

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), 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.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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TITLE (4)
Disconnecting Division 1 Intermediate Range Monitor (IRM) Cable While Division 2 IRM Cable was Disconnected Satisfies 2-out-of-4 Reactor Protection System Actuation Logic

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	28	97	97	003	00	02	25	97	None	05000
									FACILITY NAME: None	DOCKET NUMBER: 05000

OPERATING MODE (9)	5
POWER LEVEL (10)	000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)	X	50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
R. B. Bedford, Assistant Director-Plant Operations	(217) 935-8881, Extension 3650

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
X	YES (If yes, complete EXPECTED SUBMISSION DATE).		NO		04	17	97

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

The plant was in REFUELING during the sixth refueling outage, the reactor mode switch was locked in the shut down position and all reactor control rods were fully inserted. A safety tagout was in place for reworking a cable connector assembly on the Neutron Monitoring system Division 2 intermediate range monitor (IRM) channel F. The channel F cable was disconnected from its detector causing an IRM trip signal to the reactor protection system (RPS) as expected. Additional safety tags were hung for the Division 1 IRM channel E to allow the channel E cable to be used in trouble shooting the channel F monitor. Disconnecting the channel E cable caused a second IRM trip signal to the RPS and satisfied the 2-out-of-4 RPS actuation logic. No control rods moved as a result of the RPS actuation. The cause of this event appears to be personnel error, but is still under investigation. A supplemental report will be provided to identify the cause, corrective action and a discussion of similar events.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

DESCRIPTION OF EVENT

On January 26, 1997, a safety tagout was issued for maintenance in accordance with maintenance work request (MWR) D73357 to rework a cable [CBL] connector [CON] assembly on Neutron Monitoring System [IG] Division 2 intermediate range monitor (IRM) [MON] channel F. Several other Neutron Monitoring System components were included in the same tagout. Per the MWR, the channel F cable was disconnected from its detector [DET] resulting in an expected Division 2 IRM trip signal input into the Reactor Protection System [JC] (RPS).

On January 27, 1997, at about 0700 hours, the team performing work on the IRMs discussed the need for work on IRM E with the day-shift Operations Shift Supervisor and the Line Assistant Shift Supervisor (LASS) and requested an addendum to the safety tagout for MWR D73357. MWR D73357 was revised to add the IRM E work which involved rerouting the IRM E cable to allow its use in troubleshooting IRM channel F. The discussion included the impact of performing the IRM E work and the need to use the sensor bypass switch [HS] while performing the work on both IRMs to prevent an actuation of the RPS.

At about 1700 hours, the IRM work team discussed the IRM E work, the impact matrix for the work, and the need to use the sensor bypass switch to prevent an RPS actuation with the day-shift Shift Resource Manager (SRM). The SRM authorized the work at this time, but did not sign the impact matrix for the work on IRM E.

At about 1900 hours, during shift turnover, the day-shift SRM discussed the need for adding safety tags for the IRM E work with the mid-shift SRM, but did not discuss the impact that adding the IRM E work would have on the RPS. At about 1930 hours, the mid-shift SRM swapped positions with the LASS. The new mid-shift SRM prepared the additional safety tags for the IRM E work.

On January 28, 1997, the plant was in Mode 5 (REFUELING), reactor [RCT] coolant temperature was about 80 degrees Fahrenheit and pressure was atmospheric, and the sixth refueling outage (RF-6) was in progress. The reactor mode switch was locked in the shutdown position and all reactor control rods were fully inserted.

At about 0630 hours, the oncoming day-shift SRM questioned the mid-shift SRM about whether the safety tags for the IRM E work were added to the tagout for the IRM work. In response to the question, the mid-shift SRM added the safety tags for IRM E work to the tagout documentation at that time. The impact assessment on the tagout documentation for the additional safety tags identified that IRM E would be out of service but did not address the impact on the RPS.

At about 0800 hours, the day-shift SRM reviewed and verified the additional safety tags and took the safety tags to the Main Control Room (MCR) for hanging. MCR personnel identified that the caution statement on the tagout documentation did not account for IRM E and returned the tagout documentation to the SRM for correction.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

At about 0900 hours, the corrected tagout documentation for IRM channel E to allow the use of the channel E cable in trouble shooting the channel F monitor was returned to the MCR. The impact of the added IRM E work on the RPS was not discussed.

The Line Assistant Shift Supervisor (LASS) directed the B reactor operator to hang additional safety tags. The impact of the IRM E work on the RPS was not discussed.

At 1108 hours, the B reactor operator hung the tags for IRM channel E and disconnected the channel E cable connector. Disconnecting the cable caused a Division 1 IRM trip signal input into the RPS. The combination of the Division 1 IRM trip signal and the Division 2 IRM trip signal satisfied the 2-out-of-4 actuation logic resulting in an automatic actuation of the RPS.

In response to the RPS actuation, operators entered and completed appropriate portions of off-normal procedure CPS No. 4100.01, "Reactor Scram," at about 1126 hours. No control rods moved as a result of the RPS actuation.

Condition Report 1-97-01-254 was initiated to track a cause and corrective action determination for the event.

No automatic or manually initiated safety system responses were necessary to place the plant in a safe and stable condition. No equipment or components were inoperable at the start of this event to the extent that their inoperable condition contributed to this event.

CAUSE OF EVENT/CORRECTIVE ACTION

The cause of this event appears to be personnel error, but is still under investigation. Corrective action for this event will be determined after the cause has been identified. Illinois Power expects to issue a supplement to this report identifying the cause of the event, corrective action, and similar event discussion by April 17, 1997.

ANALYSIS OF EVENT

This event is reportable under the provisions of 10CFR50.73(a)(2)(iv) due to the automatic actuation of the Reactor Protection System (RPS).

An assessment of the safety consequences and implications of this event identified that this event was not nuclear safety significant for existing plant conditions or other applicable plant modes or power levels. At the time the event occurred, all control rods were fully inserted into the reactor core and the plant was in a safe and stable condition. The RPS actuation ensured the plant remained in a safe and stable condition.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

The input of the IRM trip signals into the two-out-of-four RPS actuation logic is a designed response to inoperable IRMs. Disconnecting the IRM cables caused the two divisions of IRMs to become inoperable, resulting in the trip signals that satisfied the 2-out-of-4 RPS actuation logic. The Neutron Monitoring and the Reactor Protection Systems responded as designed to the inoperable IRMs. The capability of the plant to perform its intended safety functions and achieve and maintain a safe shutdown condition was not affected by this event.

ADDITIONAL INFORMATION

No equipment or components failed as a result of this event.

A discussion of similar events will be provided in a supplemental report as discussed in the cause of event/corrective action section of this report.

For further information regarding this event, contact R. B. Bedford, Assistant Director-Plant Operations, at (217) 935-8881, extension 3650.