

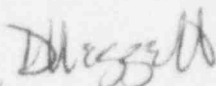


Commonwealth Edison
LaSalle County Nuclear Station
2601 N. 21st Road
Marseilles, Illinois 61341
Telephone 815/357-6761

September 13, 1994

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

Licensee Event Report #94-012-00, Docket #050-373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(i).

for 
D. J. Ray
Station Manager
LaSalle County Station

DJR/JU/lja

Enclosure

cc: NRC Region III Administrator
NRC Senior Resident Inspector
INPO - Records Center
IDNS Resident Inspector
IDNS Senior Reactor Analyst
Nuclear Licensing Administrator

9409220082 940913
PDR ADDCK 05000373
S PDR

JE221

LICENSEE EVENT REPORT (LER)																		Form Rev 3.0			
Facility Name (1) LaSalle County Station Units 1/2												Docket Number (2) 0 5 0 0 0 3 7 3 1 of 0 5									
Title (4) Untested Contacts in the NR and RP Systems Due to Procedure Deficiencies																					
Event Date (5)			LER Number (6)					Report Date (7)					Other Facilities Involved (8)								
Month	Day	Year	Year	///	Sequential	///	Revision	Month	Day	Year	Facility Names		Docket Number(s)								
0	8	1 5 9 4	9 4	---	0 1 2	---	0 0	0	9	1 3 9 4	LaSalle Unit 2		0 5 0 0 0 3 7 4								
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (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)					50.73(a)(2)(vii)					Other (Specify in Abstract below and in Text)			
			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 Edward Seckinger, Electrical Engineer, Extension 2005												TELEPHONE NUMBER AREA CODE 8 1 5 3 5 7 - 6 7 6 1									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS												
				N																	
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)																					

On August 15, 1994, at 1500 hours, the station was informed that NUS, as part of the Safety Related Contact Testing Adequacy review, had identified several relays in the Neutron Monitoring System which had not been tested for either Unit 1 or Unit 2. The relays which were identified are 1(2)C51B-K18/PS12, PS22, PS31, PS32, PS41, and PS51. These relays are interlocked with the Reactor Mode Switch in order to determine the setpoint of the Average Power Range Monitor (APRM) high neutron flux trip channels. At the time of this event, Units 1 and 2 were in Operating Condition 1 (Run).

The cause of this event is attributed to procedural deficiencies. The relays have never been included in any LaSalle surveillance.

An Operability Determination was performed and it was determined that the APRM channels are operable in the Run Mode, but are not operable in any other operational condition until this interlock is satisfactorily tested. Therefore, within one hour of either unit being taken out of Run, the respective Reactor Mode Switch shall be locked in the Shutdown position until the interlock is satisfactorily tested. This will be controlled administratively through the Degraded Equipment Log.

This event is being reported to the Nuclear Regulatory Commission as a Licensee Event Report in accordance with 10CFR50.73(a)(2)(i)(B) due to operation or condition prohibited by the plant's Technical Specifications because of the surveillance testing not having been performed.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION															Form Rev 3.0							
FACILITY NAME (1)	DOCKET NUMBER (2)									LER NUMBER (6)												
										Year	///	Sequential Number	///	Revision Number								
	LaSalle County Station Units 1/2	0	5	0	0	0	3	7	3	9	4	-	0	1	2	-	0	0	0	2	OF	0

TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

A. CONDITION PRIOR TO EVENT

Unit(s): 1/2

Event Date: 8/15/94

Event Time: 1500 Hours

Reactor Mode(s): 1/1

Modes(s) Name: Run/Run

Power Level(s): 100%/100%

B. DESCRIPTION OF EVENT

The Safety Related Contact Testing Adequacy (SRCTA) review for LaSalle Station is being conducted by NUS (an architect engineering firm). On August 15, 1994, at 1500 hours, the station received notification from NUS that they had identified several relays in the Neutron Monitoring System (NR)[IG] which were not being tested. The relays which were identified are the 1(2)C51B-K18/PS12, PS22, PS31, PS32, PS41, and PS51. These relays are interlocked with the Reactor Mode Switch in order to determine the setpoint of the Average Power Range Monitor (APRM) high neutron flux trip channels. The position of the Reactor Mode Switch determines whether the fixed or the setdown high neutron flux trip (i.e., $\leq 118\%$ or $\leq 15\%$ of rated thermal power) is in effect. When the Reactor Mode Switch is in the Run position, the fixed high neutron flux trip is in effect. If the mode switch is not in Run, the setdown high neutron flux trip is in effect.

The circuit that performs this function consists of a relay (K18) and a Reactor Mode Switch contact. Separate K18 relays and mode switch contacts are used for each APRM trip channel. The Reactor Mode Switch contacts are only closed in the Run position, and closure of these contacts will cause the relays to energize. The relay contacts are used in the APRM trip logic, and the position of these contacts (open or closed) determines which high neutron flux trip is in effect.

When NUS reviewed the Reactor Protection (RP)[JC] and NR Systems for SRCTA, they found that these Reactor Mode Switch and relay contacts were not being tested in any station procedures. The Instrument Maintenance Department (IMD) surveillance procedures which calibrate the APRMs replace the K18 relay with a "dummy" relay which is then used to simulate the Run and Startup/Hot Standby positions of the mode switch.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION															Form Rev 3.0							
FACILITY NAME (1)	DOCKET NUMBER (2)								LER NUMBER (6)													
									Year	///	Sequential Number			///	Revision Number							
LaSalle County Station Units 1/2	0	5	0	0	0	3	7	3	9	4	-	0	1	2	-	0	0	0	3	OF	0	5
TEXT Energy Industry Identification System (EIS) codes are identified in the text as [XX]																						

B. DESCRIPTION OF EVENT (Continued)

A further review of all previous revisions of the IMD surveillance procedures for calibration and functional testing of the APRMs determined that they also had replaced the K18 relay with a "dummy" relay. The functionality of this relay has not been verified since initial startup on either unit. Therefore, changes in the Operating Mode of the Units have been made contrary to Technical Specification sections 3.0.4 and 4.0.2.

C. APPARENT CAUSE OF EVENT

The cause of this event is attributed to procedural deficiencies. Neither the LaSalle Electrical Surveillances, which test the Reactor Protection System logic, nor the LaSalle Instrument Surveillances, which calibrate and perform functional tests of the Neutron Monitoring System, verified that the K18 relays operated properly when the Reactor Mode Switch was moved.

D. SAFETY ANALYSIS OF EVENT

The APRM high neutron flux trip channels are operable in Operating Condition 1 (Run). A review of the circuitry shows that a failure of the Reactor Mode Switch contacts or the K18 relays can only cause the relay contacts to open or close. If the K18 relay contacts fail in the open position or a failure in the circuit prevents the contacts from closing, the setdown trip setpoint of 15% is placed in service. If the K18 relay contacts fail in the closed state or are shorted, the 118% scram setpoint is in effect. Since the APRM channel will always initiate a trip before the 118% setpoint is exceeded, regardless of the type of failure in the K18 relay or Reactor Mode Switch, the APRM channels are operable in Run.

However, since the interlock between the APRMs and the Reactor Mode Switch has not been verified by testing, the APRM channels are not considered to be operable in STARTUP, HOT SHUTDOWN, or REFUEL. It is possible that a undetected circuit failure which causes the K18 relay contacts to remain closed regardless of the Reactor Mode Switch position could exist. Thus, the 15% scram setpoint may not be placed in effect under these operational conditions. The probability of this type of failure occurring in the circuit is very small because other contacts on the Reactor Mode Switch have been verified to operate correctly, and the K18 relay contacts open when the relay is deenergized which is the fail safe direction.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION															Form Rev 3.0							
FACILITY NAME (1)	DOCKET NUMBER (2)									LER NUMBER (6)												
										Year	/// /// ///	Sequential Number	/// /// ///	Revision Number								
	LaSalle County Station Units 1/2	0	5	0	0	0	3	7	3	9	4	-	0	1	2	-	0	0	0	4	OF	0

TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]

D. SAFETY ANALYSIS OF EVENT (Continued)

If the relays did fail in the energized state, the safety consequences would have been minimal. A review of the accidents and transient analysis described in the UFSAR revealed the 15% APRM setdown neutron flux setpoint is not taken credit for in mitigation or preventing an accident or transient. The only applicable accident, the Control Rod Drop Accident (CRDA), results in a scram on 120% APRM neutron flux.

E. CORRECTIVE ACTIONS

Short term action to verify that the K18 relay and Reactor Mode Switch interlock is functional:

A special test procedure for testing the interlock between each APRM channel and the Reactor Mode Switch was prepared and performed on Unit 2. This test verified that the APRM 15% setdown trip is in effect with the Reactor Mode Switch not in the Run position. This test was performed satisfactorily on Unit 2 per LaSalle Special Test (LST 94-074) on August 26, 1994 following the unit scram on August 25, 1994.

Prior to startup following the next outage on Unit 1, a special test procedure, similar to LST 94-074, will be prepared and performed.

Long term action to verify that the K18 relay and Reactor Mode Switch interlock is verified in accordance with logic testing requirements of Technical Specifications include:

1. Prior to startup of Unit 1 following the upcoming L1R07 refuel outage, procedure revisions will be made to the Electrical Maintenance logic testing surveillance for the Unit 1 Reactor Mode switch interlocks to verify the proper operation of the applicable mode switch contacts for the APRM neutron flux scram setdown interlock. The Instrument Maintenance functional test procedures will also be revised to include functional testing with the K18 relays installed. These procedure changes will ensure that the mode switch logic is tested on an 18 month frequency as required by Technical Specifications for the APRM neutron flux setdown function.
2. Prior to startup of Unit 2 following the upcoming L2R06 refuel outage, procedure revisions will be made to the Electrical Maintenance logic testing surveillance for the Unit 2 Reactor Mode switch interlocks to verify the proper operation of the applicable mode switch contacts for the APRM neutron flux scram setdown interlock. The Instrument Maintenance functional test procedure will also be revised to include functional testing with the K18 relays installed. These procedure changes will ensure that the mode switch logic is tested on an 18 month frequency as required by Technical Specifications for the APRM neutron flux setdown function.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION															Form Rev 3.0							
FACILITY NAME (1)	DOCKET NUMBER (2)									LER NUMBER (6)												
										Year	/// ///	Sequential Number	/// ///	Revision Number								
LaSalle County Station Units 1/2	0	5	0	0	0	3	7	3	9	4	-	0	1	2	-	0	0	0	5	OF	0	5
TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]																						

E. CORRECTIVE ACTIONS (Continued)

The Safety Related Contact Testing Adequacy (SRCTA) review for LaSalle Station is a long term project that is currently approximately 50% completed. Any additional Safety Related devices which are found to be not tested will be reported as necessary.

F. PREVIOUS EVENTS

None.