			LICENS	EE EVENT R	EPORT (LER)		
acility Name (1)						Docket Numb	per (2) Page (3)
aSalle County Nu	uclear Sta	tion Unit I				101 01 01 0	
fitle (4) Two Ind	operable I	ntermediate Rar	nge Moniters D	uring Refu	el Due to Pr	ersonnel Error	·
Event Date (5)		LER Number (6	6)	Report	Date (7)	Other Fa	icilities Involved (8)
Nonth Day Ye	ar Year	Number	Revision	Month	Day Year	Facility Na	imes Docket Number(s)
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OPERATING MODE (9) POWER LEVEL (10) 0	0 0	THIS REPORT 13    (Check one or    20.402(b)    20.405(a)    20.405(a)    20.405(a)    20.405(a)    20.405(a)    20.405(a)    20.405(a)	souther if the of the f    (1) (i)	CONTACT F	(i) 5 (ii) 5 (iii) 5 (	0.73(a) (2) (iv) 0.73(a) (2) (v) 0.73(a) (2) (v) 0.73(a) (2) (vii 0.73(a) (2) (vii 0.73(a) (2) (vii 0.73(a) (2) (x) (12)	i) i) i) x) 0 ther ispecify ii) (A) in Abstract ii) (B) below and in Text) Voluntary
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coward A. Mevey,	COMP	DIFTE ONE LINE	FOR FACH COMPO	NENT FAILU	JRE DESCRIBE	D IN THIS REPO	ORT (13)
CAUSE   SYSTEM	COMPONENT	MANUFAC-	REPORTABLE ///	//// CAUS	SE SYSTEM	COMPONENT	MANUFAC- REPORTABLE TURER TO NPROS
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<u>D    </u>	SUPPI	LEMENTAL REPORT	N 777 EXPECTED (14)				Expected Month   Day   Ye Submission Date (15)
Yes (If yes,	complete	EXPECTED SUBMI	ISSION DATE)	XIN	0		

At approximately 0005 hours on March 17, 1988, Unit 1 entered Operational Condition 5 (Refuel). At that time, Channel B of the Reactor Protection System (RPS) had only two of four Intermediate Range Monitors (IRM's) operable. Technical Specification 3.3.1 requires at least three of four IRM instrument channels per trip system be operable while in Refuel. This Technical Specification deviation was identified by the Shift Control Room Engineer (SCRE) at approximately 0100 hours on March 25, 1988 during core alterations. Core alterations were immediately suspended and the B Trip System was placed in the tripped condition resulting in a half scram on Channel B of the RPS.

The root cause of the event was personnel error, poor administrative controls and procedural inadequacy. The SCRE who authorized placing the unit in Refuel failed to recognize that Technical Specification 3.3.1 required three of four IRM's per trip system in Refuel. Also, no procedure existed which outlined the requirements for taking the reactor from Operational Condition 4 (Cold Shutdown) to Refuel.

An operating procedure will be implemented which will provide a checklist to ensure all requirements are met prior to entering into Refuel.

> TEZZ V.

This event is being submitted as a Voluntary Report due to interest expressed by the Nuclear Regulatory Commission.

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	LICENSEE EVENT REPORT	(LER) IL	LER N	UMBER	(6)		Page (3)
FACILITY NAME (1)	DUCKET NONDER (C)		Year	144	Sequential Number	111 Revision Number	
(aSalle County Station Unit 1	0151010101	3 7 3	8   8	-	0   0   3	- 0 0	0 2 0F 0

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

# PLANT AND SYSTEM IDENTIFICATION

General Electric - Poiling Water Reactor

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

A. CONDITION PRIOR TO EVENT

Unit(s): _1_		Event Date: _	3/25/88	- 1. C	Event	Time:	0100 Hours	-
Reactor Mode(s):	5	Mode (s	) Name:	Refuel		Power	Level(s):	0%

## B. DESCRIPTION OF EVENT

At approximately 0100 hours on March 25, 1988, during core alterations, the Shift Control Room Engineer (SCRE) determined that two (2) Intermediate Range Monitors (IRM's, NR) [IG] in Reactor Protection System (RPS) [JC] Trip Channel B were inoperable. The determination was made during a review of the Degraded Equipment Log (DEL) that both IRM D and F were inoperable. Technical Specification 3.3.1 requires at least three (3) of four (4) IRM instrument channels per trip system be operable while in Operational Condition 5 (Refuel). With less than 3 operable IRM channels in one trip system, the inoperable trip system must be placed in the tripped condition in accordance with Technical Specification 3.3.1, Action a. Core alterations were immediately suspended and the B Trip System was placed in the tripped condition resulting in a half scram on Channel B of the Reactor Protection System (RPS).

At approximately 0130 hours on March 13, 1988, during unit shutdown with the reactor in Operational Condition 1 at approximately 25 percent power, the Unit 1 Nuclear Station Operator (NSO, Licensed RO) observed the D IRM reading downscale and the F IRM oscillating. The NSO's observations were based on data obtained from the IRM meters located on panels 1H13-P635 and 1H13-P636. The NSO informed the Shift Engineer and the SCRE of his observations. The SCRE subsequently examined the IRM meters and agreed that the <sup>n</sup> IRM was indicating lower than the other channels, but believed that the F IRM was operating properly. The SCRE declared IRM D inoperable at approximately 0200 hours, initiated Work Request L76686, and made an appropriate entry in the Degraded Equipment Log (DEL). At this time IRM D was the only inoperable IRM and Technical Specification 3.3.1 requirements for IRM operability were met.

The unit was scrammed at approximately 0215 hours on March 13, 1988. After the scram, the D IRM appeared to be reading the same as the other IRM's and the relieving SCRE believed the status of the D IRM was changed to be degraded. The initial DEL documentation was consolidated (by another SCRE) on March 14, 1988. The original DEL documentation was transmitted to Central File. The new DEL documentation did not indicate the status of the D IRM, only that it had "Failed downscale." Subsequent reviews of the DEL documentation from March 14 through March 25, 1988 would not have clearly identified the status of the D IRM.

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LaSalle County Station Unit ]	0151010101	3 7 3	8 8	-	0   0   3	-	0 1 0	0] 3	OF	01 9

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

## B. DESCRIPTION OF EVENT (Continued)

At approximately 2225 hours on March 15, 1988, with Unit 1 in Operational Condition 4 (Cold Shutdown), IRM F spiked high and initiated a half scram. Work Request L76819 was initiated to investigate the problem and an appropriate entry was made in the DEL. IRM F was bypassed and a Caution Card indicating that IRM F was inoperable was placed on the bypass stick. It was believed by the SCRE's and the Shift Engineers, during the 10 day period from March 14 to 25, that IRM F was inoperable and IRM D was decreded.

At approximately 0005 hours on March 17, 1988, Unit 1 entered Operational Condition 5 (Refuel). A review of the DEL was conducted by the SCRE prior to allowing the unit to enter into Refuel. The SCRE performing the mode change review had consolidated the DEL entry on March 14, 1988. He knew from the original documentation that the D IRM had been declared inoperable and recognized that D and F IRM's were in the same RPS bus. However, he thought that since two IRM's satisfied Operational Condition 4 (Cold Shutdown), two IRM's would be sufficient for Operational Condition 5 (Refuel). He did not verify this by reviewing the applicable Technical Specifications. He indicated to the oncoming SCRE that conditions were acceptable for entering Operational Condition 5. However, the SCRE who had previously consolidated the DEL and who was performing the mode change review failed to recognize that Technical Specification 3.3.1 required an additional IRM per trip system (3 of 4) in Refuel. Consequently, within one hour of the unit entering into Refuel, the B RPS Trip System should have been placed in a tripped condition, in accordance with Technical Specification 3.3.1, Action a.

On March 25, after the status of IRM D was questioned, immediate corrective actions were taken (core alterations suspended and the B RPS Trip System placed in the tripped condition), and Instrument Maintenance Department (IMD) personnel were called in to investigate IRM D and F operability. The IMD personnel checked cable connections and performed the IRM functionals in accordance with LaSalle Instrument Surveillance LIS-NR-302, "Unit 1 IRM Rod Block and Reactor Scram Functional Test." Both IRM D and F performed satisfactorily during the functional surveillance. At approximately 1000 hours on March 25, 1988, after consultation with IMD personnel, Operations personnel declared IRM F operable, took the B RPS channel out of the tripped condition and authorized the resumption of core alterations. At this time, IRM D was still considered inoperable pending further investigation. A review of the events leading to the declaration of IRM D inoperable, the IRM chart recorder traces on the shutdown, and the performance of IRM D, resulted in Operations personnel declaring IRM D operable but degraded on March 28, 1988 pending proper performance during the unit startup.

This event is being submitted as a Voluntary Report due to interest expressed by the Nuclear Regulatory Commission.

	LICENSEE EVENT REPORT	(LER) TEA	LER N	UMBER	(6)			F	ige (	3)
FACILITY NAME (1)	DUCKET NOTICE (C)		Year	144	Sequential Number	14/1	Revision Number			
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C. APPARENT CAUSE OF EVENT

The root cause of this event was personnel error, poor administrative controls and procedural inadequacy. The SCRE who authorized placing the unit in Refuel failed to recognize that Technical Specification 3.3.1 required an additional IRM per trip system in Refuel due to the lack of a procedure which outlined the requirements for taking the reactor from Cold Shutdown to Refuel. With most of the Technical Specifications, the requirements are less restrictive as the reactor is placed into conditions further from power operation. In this case, however, the requirement was actually more restrictive.

A contributing factor, which resulted in the extended period of time the unit was in Refuel prior to identification of the discrepancy, was a lack of awareness of the status of IRM D. Although the shift personnel were cognizant of the Technical Specification requirement of 3 of 4 IRM's in Refuel, it was their belief that IRM D was operable but degraded due to satisfactory performing during IRM functional testing (LIS-NR-302) on March 18, 1988.

The DEL was consolidated on March 14, 1988 without specific indication whether IRM D was inoperative (INOP) or degraded, and the original documentation was removed and forwarded to Central File. This effectively prevented all subsequent reviewers of the DEL from seeing the original declaration of INOP for IRM D.

## D. SAFETY ANALYSIS OF EVENT

Subsequent investigation revealed that both IRM's D and F appeared to be functioning properly. IRM F, however, was in bypass throughout the period of time in question so it would not have been available to perform its design function. IRM D, on the other hand, was not in bypass and would have been available to perform its design function. From the time the unit was placed in Refuel until the time the core was fully unloaded, all rods remained in the fully inserted position and the mode switch remained locked in Refuel so the possibility of a criticality incident was very remote. Also, since fuel was being removed from the reactor throughout the core unload, and no fuel was being placed into the reactor, the possibility of a criticality incident was again very remote.

In addition, during the period of time in question, no unplanned half scrams were received on either RPS channel. So even though RPS Channel B should have been in a tripped condition, the unit would not have received an unplanned full scram signal.

#### E. CORRECTIVE ACTIONS

Immediate corrective actions were taken. A functional surveillance was performed on all Source Range Monitors (SRM's) [IG], IRM's and Average Power Range Monitors (APRM's) [IG]. All instrumentation was demonstrated operable except for APRM B which had a failed power supply. All outstanding DEL entries and Work Requests for nuclear instrumentation were reviewed and determined acceptable for refueling operations. Surveillances required for core alterations were reperformed. All surveillances required by the Technical Specifications in Refuel were verified to be current. A review was conducted to ensure that Technical Specifications applicable in Refuel, for Core Alterations, and "At All Times" were satisfactorily met. Also, a special log was started which required Operations personnel to verify the operability of all required nuclear instrumentation once per shift.

	LICENSEE	VEN	RE	(2)	(12)	() []		18	RN	UMBER	(6)			Pa	ige (	3)
FACILITY NAME (1)	DOCKET	NUC	DER	(2)			-	Yea	ar	11/1	Sequential Number	14	Revision Number			
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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [xx]

E. CORRECTIVE ACTIONS (Continued)

A number of corrective actions will be taken to ensure that a similar event does not occur again. An operating procedure will be implemented which will provide a checklist to ensure all requirements are met prior to entering into Refuel. Action Item Record (AIR) 373-200-88-02301 will track completion of this item. All licensed person el will be trained on this procedure. AIR 373-200-88-02302 will track completion of this item.

LaSalle Administrative Procedure LAP-220-4, "Degraded Equipment Log," will be revised to provide a clearer indication of the status of the equipment. It will also include a requirement to hang a small red tag on Inoperable Technical Specification/Safety Related indication or control switches located in the Control Room. The revision will also expand the responsibility of the off shift supervisors to review the DEL weekly. The intent of the Operating Engineer Review of the DEL is to ensure that continuity of the information placed in the DEL is maintained from week to week by a non-shift operating management supervisor. The unit Operating Engineer will continue to provide this continuity but can at times delegate the responsibility. These changes should provide all shift personnel clear Control Room indication of the status of the nuclear instrumentation and all Technical Specification/Safety Related equipment. AIR 373-200-88-02303 will track completion of this item. All licensed personnel will be trained on this item prior to its implementation. AIR 373-200-88-02304 will track completion of this item.

Training on this event will be included in the Annual Regualification Training Program for all licensed personnel AIR 373-200-88-02305 will track completion of this item.

The SCRE who reviewed the DEL prior to entering Refuel and prior to commencing core alterations has been counseled on this event.

F. PREVIOUS EVENTS

None.

G. COMPONENT FAILURE DATA

None.



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Commonwealth Edison LaSalle County Nuclear Station Rural Route #1, Box 220 Marseilles, Illinois 61341 Telephone 815/357-6761

April 25, 1988

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

Dear Sir:

Licensee Event Report #88-003-00, Docket #050-373 is being submitted to your office as a Voluntary Report due to interest expressed by Nuclear Regulatory Commission on the event.

G. J. Diederich Station Manager LaSalle County Station

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Enclosure

xc: Nuclear Licensing Administrator NRC Resident Inspector NRC Region III Administrator INPO - Records Center