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NRC Form 306

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED	OMB	NO.	3150-0104
EXPIRES	121 184		

FACILITY NAME (1)	DOCKST NUMBER 121	LER NUMBER (6)	PAGE (3)	
		YEAR SEQUENTIAL REVISION NUMBER NUMBER		
LASALLE COUNTY NUCLEAR STATION	0 15 0 0 0 3 7 3	8 8 4 - 0 0 2 - 0 0	012 05 0 13	

I. EVENT DESCRIPTION:

Unit One scrammed on an RPS signal of low reactor water level (+12,5") from 40% reactor power. The low reactor water level was a result of a total loss of feedwater. LaSalle's Feedwater System (SJ) has a Motor Driven Reactor Feed Pump (MDRFP) and a Feedwater Regulating Valve (FRV) that are used for plant startup and two Turbine Driven Reactor Feed Pumps (TDRFP) that are used for normal plant operations. The unit operator had just placed the 1A TDRFP in control of feedwater and had secured the MDRFP when 1A TDRFP tripped on high seal temperature. The MDRFP started as expected when there are two tripped TDRFP's (1A had just tripped and 1B was still shutdown), however, a signal to open the FRV could not be generated either automatically or manually from the FRV controller, 1C34-R602 _CO). Reactor Core Isolation Cooling, RCIC (BN), was manually initiated a restored reactor water level from -40" to normal level of +36". Peactor water level was controlled via RCIC until an operator established local control of the FRV. Review of the transient showed that neither ECCS or PCIS (JE/JM) actuations were required. that all rods were verified inserted and that pressure control was maintained using the main condenser and the main steam bypass valves (JI).

II. CAUSE:

LaSalle Unit One scram on low reactor water level occurred at 2205 on 1/6/84 from 40% reactor power. There was no testing or surveillances in progress nor was there any equipment out of service or special lineups that contributed to the initiating event or inhibited plant performance after the scram. The total loss of feedwater flow resulted from two occurrences: (1) TDRFP trip on high seal temperature (SK) and (2) failure of the Reactor Water Level Control System (JB) to generate an open signal to the FRV.

1A TDRFP tripped because the seal water temperature controller, 1TC-FW183. A. (TCV), for the inboard seal was not receiving the correct seal discharge temperature. The controller was set to maintain seal water outlet temperature at 140°F, and responds to a difference in temperature between the setpoint and seal discharge temperature. A change in discharge temperature is transmitted via a mechanical linkage and a resulting air signal is generated to position the flow control valve. The controller temperature indicator linkage had become disconnected and was indicating a low temperature, consequently a signal was transmitted not requiring cooling flow. When the high temperature alarm (170°F) was received in the control room, an operator was dispatched to check the seal temperatures. This is done by checking the indication on the controller and he reported that local temperatures were well below the alarm point. It was not obvious the indicator linkage was disconnected so it appeared to him one of the seal discharge temperature switches that generate the alarm and a trip from the corresponding seal was malfunctioning. These temperature switches have caused problems in the past which have resulted

NRC Form 3 (9-83)	LICENSEE EVENT REPORT (LER) TEXT CONTINUATION								
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	 from moisture accumulation. temperature. The instrumer temperature switches found The seal temperature contro and is Model 40 B. Troubleshooting the Feedwar circuitry for the FRV position 	Shortly thereafte at technician trouble the disconnected in oller is manufacture ter Reactor Water Le tion signal failure	r the eshoo dicat d by vel C did n	pump tr ting the or linka AMETEK C ontrol S ot revea	ipped on aforeme ge on th ontrols ystem, F 1 any pr	high s ntioned e contr Divisio RWLC (J oblems.	ieal olle n IB),		
	no further problems.	in operation and t	ne riv	v operac	eu probe	i iy wit			
111.	PROBABLE CONSEQUENCES OF THE OCCURRENCE:								
	Ability to control reactor water level and pressure was maintained at all times during the event. All ECCS systems were available and it was also possible to depressurize the reactor vessel enough to allow the condensate booster system to provide makeup from the condenser hotwell.								
	This event shouldn't result in a scram if it occurs with the second TDRFP on the line because each TDRFP is capable of approximately 2/3 feedwater flow necessar for 100% operation and because a seal flow controller failure only affects one pump. A power reduction to within the capacity of one TDRFP occurs through a Reactor Recirc Flow Control Valve runback to minimum valve position when Recirc Flow Control senses less than 2 feed pumps running and 31.5" or less reactor ve level. This evolution was successfully demonstrated during the Unit One Start Testing Program (STP-30). Also, the operator can downshift recirc pump speed fast to slow for power reduction.								
١٧.	CORRECTIVE ACTIONS:								
	 Seal temperature controller completed 1/7/84. 	r 1TC-FW183 was repl	aced	per Work	Request	L31543	3		
	 Work Request L31542 was per signal to the FRV, however further corrective action was 	rformed to troublesh , no failures were i was necessary.	oot f denti	or the l fied and	oss of c consequ	ontrol ently r	10		
۷.	PREVIOUS EVENTS:								
	None.								
VI.	NAME AND TELEPHONE NUMBER OF PR	EPARER:							
	Racon & Westobal extension 24	7							



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

February 2, 1984

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

Dear Sir:

Reportable Occurrence Report #84-002-00, Docket #050-373 is being submitted to your office in accordance with 10 CFR 50.73(d).

Duderist

G. J. Diederich Superintendent LaSalle County Station

GJD/GW/rg

Enclosure

cc: NRC, Regional Director INPO-Records Center File/NRC

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