

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) La Crosse Boiling Water Reactor (LACBWR)										DOCKET NUMBER (2) 0 5 0 0 0 4 0 9				PAGE (3) 1 OF 0 4						
TITLE (4) Ground at Control Rod Drive Causing Reactor Scram and Blowing Fuse 55/2																				
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 None				DOCKET NUMBER(S) 0 5 0 0 0							
0	7	2	5	8	5	0	1	4	0	0	8	1	5	8	5	0	5	0	0	0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11)																				
OPERATING MODE (9)		1		20.402(b)				20.406(c)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)		73.71(b)						
POWER LEVEL (10)		0 9 16		20.406(a)(1)(i)				50.36(a)(1)				<input type="checkbox"/> 50.73(a)(2)(v)		73.71(c)						
				20.406(a)(1)(ii)				50.36(a)(2)				<input type="checkbox"/> 50.73(a)(2)(vi)		OTHER (Specify in Abstract below and in Text: NRC Form 308A)						
				20.406(a)(1)(iii)				<input checked="" type="checkbox"/> 50.73(a)(2)(i)				<input type="checkbox"/> 50.73(a)(2)(viii)(A)								
				20.406(a)(1)(iv)				50.73(a)(2)(ii)				<input type="checkbox"/> 50.73(a)(2)(viii)(B)								
				20.406(a)(1)(v)				50.73(a)(2)(iii)				<input type="checkbox"/> 50.73(a)(2)(ix)								
LICENSEE CONTACT FOR THIS LER (12)																				
NAME Lynne S. Goodman, LACBWR Operations Engineer										TELEPHONE NUMBER AREA CODE 6 1 0 1 8 6 1 8 9 - 1 2 1 3 1 1										
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																				
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS										
X	A	A	I	S	L	X	9	1	9	9	N									
SUPPLEMENTAL REPORT EXPECTED (14)																EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)																<input checked="" type="checkbox"/> NO				

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

A reactor partial scram occurred at 1115 on July 25, 1985 due to a ground in the gas pressure scram circuit on Control Rod Drive (CRD) Mechanism No. 8. At 1300, Fuse 55/2 blew, also due to the ground. The High Pressure Core Spray Pumps and Emergency Diesel Generators started and the Containment Building isolated. During the time period the fuse was blown and later when it was removed during troubleshooting, the High Pressure Core Spray Pumps would not have started automatically after being secured. The plant was in hot shutdown at the time, meeting the requirement of Technical Specification 3.0.3. At approximately 1840, the ground was located and the wire repaired.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB No. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1) La Crosse Boiling Water Reactor	DOCKET NUMBER (2) 0 5 0 0 0 4 0 9 8 5 - 0 1 4 - 0 0 0 2 OF 0 4	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

At 1115 on July 25, 1985, a reactor (RCT) partial scram occurred from 96% power. During a partial scram, the 13 center control rods (AA)(ROD) rapidly insert, rendering the reactor subcritical. The first-out scram alarm (ANN) was on low Control Rod Drive (CRD) gas pressure.

Troubleshooting commenced. The gas pressure on the control rods 14-29 was normal. The scram condition was reset and CRDs 1-13 were recharged at 1210. It was noted that the annunciator scram alarm remained annunciated even after the yellow low gas pressure warning lights (IL) cleared on all CRDs. The nominal operating pressure of the CRD accumulators (ACC) is 2950 psig, with the yellow alarm lights actuated at 2650 psig by a pressure switch (PS) and the scram signal actuated at 2150 psig by an adjacent pressure switch. A low gas pressure scram signal from any one CRD will cause a partial scram and the annunciator alarm. The charging pumps (P) was secured after the yellow lights cleared on low gas pressure.

At 1230, control rods 14-29 were manually inserted. The partial scram procedure requires insertion of the remaining rods if recovery within 2 hours is not possible. Technical Specification surveillance tests were required prior to startup, so recovery within 2 hours was not possible.

By checking voltages, it was determined that the scram switches were all closed. The low gas pressure relay (94) in the rod control circuit, however, was open, so it was postulated that the problem was somewhere in the circuitry.

At 1300, reactor partial and full scram signals occurred. Both High Pressure Core Spray (HPCS)(BG) Pumps started and the Containment Building (NH)(JM) isolated. Both Emergency Diesel Generators (EDG)(EK)(DG) started, but did not close onto their respective buses. The HPCS Pumps were secured after water level was checked to be adequate. It was determined that Fuse (FU) 55/2 had blown, causing these actions. It was replaced. The EDGs were secured, the Containment Building was unisolated, and scrams reset at 1332. At 1336, recharging of the control rod drives was started.

At approximately 1350, it was noticed that Fuse 55/2 was heating up. At 1355, the diesel shorting plugs (CON) were removed to prevent the EDGs from starting if the fuse blew again. Removal of the plugs does not affect the ability of the diesels to start and load on an undervoltage condition, just the low water level start. With the diesel generators inoperable during hot shutdown, a breaker (BKR) alignment is required to be performed within 1 hour by Technical Specification Action Statement 4.2.3.1.1.d. The plugs were replaced at 1415.

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Approximately 22 amps were measured through Fuse 55/2 which is rated at 20 amps. With the control rods discharged and scrams reset, approximately 13 amps were measured. When rods were charged, the amperage jumped to approximately 22 amps, even before the yellow low gas pressure lights cleared. As discussed earlier, the low pressure scram switches are set at a lower pressure than the warning lights, so it was postulated that amperage increase occurred when scram switches were resetting. When the full scram or partial scram push buttons (HC) were pressed and then immediately reset, current stayed at approximately 20 amps. When the partial or full scram pushbutton was pressed and the rods allowed to discharge, current dropped to approximately 7 amps. Therefore, it was determined that the problem was probably a ground in the circuit involving Rods 1-13.

Fuse 55/2 was removed for further troubleshooting at 1525. The HPCS Pumps started and were secured. The Containment Building isolated. Prior to pulling the fuse, the diesel shorting plugs were removed to prevent the diesels from starting. At 1618, a breaker alignment was performed per Technical Specifications. Fuse 55/2 was reinstalled at 1632. During the time periods the fuse was blown or removed, the High Pressure Core Spray Pumps would not have started automatically after being secured. By the wording of current Technical Specifications, this placed the plant in Section 3.0.3 which requires hot shutdown within 12 hours and cold shutdown within an additional 30 hours. The plant was in hot shutdown at the time.

The rod circuitry containing the low gas pressure switches was checked with a clamp-on ammeter (II) to locate the ground. The ground was found to be on the CRD in position 8. A wire between the terminal block (BLK) and the electrical plug on CRD 8 was grounded against the frame of the terminal block support. Its insulation (ISL) was broken. From the pressure switch, wires go to the terminal block, from which they go to a connector plug, so that the wiring can be disconnected for removal and work on a mechanism (75).

The wire was repaired. The scram condition was reset and rods charged. The low gas pressure scram alarm cleared. Current through the fuse was measured to be 13.5 amps. As a precaution, the fuse which was in use during the troubleshooting was replaced. At 1848 the diesel shorting plugs were replaced.

The reason the current increased when the rods were charged was that when the low gas pressure scram switches closed on Rods 1-7 as pressure increased,

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there was a circuit to ground at Rod 8. With the switches open (rods discharged), there was no current flowing through the circuit. The cause of the wire grounding is not determinable. The grounded wire was cause of the scram and Fuse 55/2 blowing.

August 15, 1985

In reply, please
refer to LAC-11072

DOCKET NO. 50-409

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

SUBJECT: DAIRYLAND POWER COOPERATIVE
LA CROSSE BOILING WATER REACTOR (LACBWR)
PROVISIONAL OPERATING LICENSE NO. DPR-45
LICENSEE EVENT REPORT NO. 85-14

Reference : 10 CFR 50.73

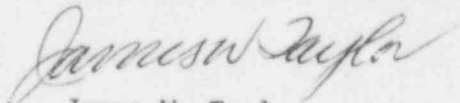
Gentlemen:

In accordance with 10 CFR 50.73, attached is Licensee Event Report
No. 85-14.

If there are any questions, please contact us.

Sincerely,

DAIRYLAND POWER COOPERATIVE



James W. Taylor
General Manager

JWT:LSG:sks

Attachment

cc: J. G. Keppler, NRC Reg. III
Walter Paulson, LACBWR Project Manager
NRC Resident Inspector
D. Sherman, ANI Library
INPO

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