

LICENSEE EVENT REPORT (LER)

Facility Name (1) Byron, Unit 1										Docket Number (2) 0 5 0 0 0 4 5 4				Page (3) 1 of 0 2								
Title (4) CONTROL ROOM VENTILATION ISOLATION																						
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				Docket Number(s)									
0	1	1	1	8	5	8	5	0	0	7	0	1	0	5	1	0	8	5	0 5 0 0 0			
OPERATING MODE (9)			3			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)																
POWER LEVEL (10) 0 0 0			20.402(b)			20.405(c)			X			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							
			20.405(a)(1)(iii)			50.73(a)(2)(i)						50.73(a)(2)(viii)(A)			Abstract below and							
			20.405(a)(1)(iv)			50.73(a)(2)(ii)						50.73(a)(2)(viii)(B)			in Text)							
20.405(a)(1)(v)			50.73(a)(2)(iii)						50.73(a)(2)(x)													
LICENSEE CONTACT FOR THIS LER (12)																						
Name Rick Hildebrand, System Test Engineer										Ext. 2415												
										TELEPHONE NUMBER												
										AREA CODE 8 1 5 2 3 4 - 5 4 4 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												
B	I	L	/	/	/	/	G	0	6	3	N											
SUPPLEMENTAL REPORT EXPECTED (14)																						
X Yes (If yes, complete EXPECTED SUBMISSION DATE)										NO												
										Expected Submission Date (15)				Month Day Year								
														0 1 1 5 8 6								
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																						

Radiation monitors OPR33J and OPR34J (Main Control Room Outside Air Intake "B"), 1RT-AR012 (Containment Fuel Handling Building Accident Monitor), and ORT-AR056 (Fuel Handling Building Accident Monitor) went into interlock condition due to a voltage transient caused by starting the 1B circulating water pump. This caused the B Train of Main Control Room HVAC to shift to it's ESF configuration. The Projects Engineering Department group is investigating solutions for preventing such voltage transients.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					Page (3)		
		Year	///	Sequential Number	///	Revision Number			
Byron, Unit 1	0 5 0 0 0 4 5 4	8 5	-	0 0 7	-	0 1	0 2	OF	0 2
TEXT									

On January 9, 1985, at 0952 with the plant in Mode 4 and on January 11, 1985 at 0819, with the plant operating in Mode 3, radiation monitors 1RT-AR012 (Containment Fuel Handling Accident Monitor), ORT-AR056 (Fuel Handling Building Accident monitor), OPR33J and OPR34J (Main Control Room Outside Air Intake "B") went into interlock condition due to the voltage transient caused by the startup of the 1B circulating water pump, 1CWO1PB, a 7000 hp, 4KV synchronous motor. This scenario has been verified by recreating the event. Using strip chart recorders, it was determined that a 20 volt drop, 115 volt to 95 volt, occurs. This caused the K-1 relay at the RM-80, the radiation monitoring system microprocessor, to dropout. When this relay drops out, the Control Room Ventilation shifts to the makeup mode. The reason there is a Power Fail function (line voltage less than 100 volts AC) for the RML-80 microprocessor is to allow the data base to be transferred to battery protected storage prior to the complete loss of AC voltage. Upon restoration of power, an interlock signal is generated. After the RM-80 reconfigures itself, it senses line voltage greater than 105 volts and clears the interlock condition.

Plant and public safety were not affected since the ESF function shifts the Control Room Ventilation to a safer lineup.

There has been a similar occurrence where starting a circulating water pump caused the Control Room Ventilation to shift to the makeup mode.

Project Engineering Department was requested to investigate this problem and has proposed the following solutions:

- Change the microprocessor under-voltage trip setpoint (90 VAC nominal),
- Modify the microprocessor power supply, thus ensuring adequate voltage regulation,
- Modify the system software by incorporating a low-power time delay, thus de-sensitizing the system to voltage fluctuations. The vendor has submitted a software change proposal to Engineering to determine acceptability.

Modifications for proposed solution a. are in progress. Proposed solutions b. and c. are still under review. Expected implementation is early 1986.



Commonwealth Edison
Byron Nuclear Station
4450 North German Church Road
Byron, Illinois 61010

May 10, 1985

LTR: BYRON 85-0720

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

Dear Sir:

The enclosed Licensee Event report from Byron Generating Station is being transmitted to you as a Supplemental Report to LER 85-007-00.

This report is number 85-007-01, Docket No. 50-454.

Very truly yours,

R.E. Querio
Station Superintendent
Byron Nuclear Power Station

REQ/gt

Enclosure: Licensee Event Report No. 85-007-01

cc: J.G. Keppler, NRC Region III Administrator
J. Hinds, NRC Resident Inspector
INPO Record Center
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11