



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

April 30, 1992

Ltr: BYRON 92-0281

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 in accordance with the requirements of 10CFR50.73(a)(2)(i)(B).

This report is number 92-002; Docket No. 50-454.

Sincerely,

R. Pleniewicz
Station Manager
Byron Nuclear Power Station

RP/Ck/mw

Enclosure: Licensee Event Report No. 92-002

cc: A. Bert Davis, NRC Region III Administrator
W. Kropp, NRC Senior Resident Inspector
INPC Record Center
CECo Distribution List

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Byron, Unit 1 Docket Number (2) 0 5 0 0 0 4 5 4 Page (3) 1 of 0 4

Title (4) Loss of One of Two ESF Unit Cross ties

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 4	0 3	9 2	0 2	0 0 2	0 0	0 4	3 0	9 2	Byron, Unit 2	0 5 0 0 0 4 5 5

OPERATING MODE (9) 1

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> Other (Specify in Abstract below and in Text)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name R. Mancini, Technical Staff Engineer Ext. 2478 TELEPHONE NUMBER 8 1 5 2 3 4 - 5 4 4 1

R. Hegner, Asst. Tech Staff Supervisor Ext. 2274

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
				N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

Expected Submission Date (15) 1 1 3 0 9 2

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

On 04/03/92, during performance of Normal and Alternate Offsite AC Power Availability Weekly Surveillance (1BOS 8.1.1.1.a-1), the Nuclear Station Operator (NSO) observed there was no control power indication on Air Circuit Breaker (ACB) 2414. After further investigation, the NSO confirmed the breaker was racked out and partially disassembled. Limiting Condition for Operation Action Requirement (LCOAR) 1BOS 8.1.1-1a was entered. A spare breaker was racked into the cubicle and surveillance 1BOS 8.1.1.1.a-1 was successfully performed. LCOAR 1BOS 8.1.1-1a was exited upon completion of the surveillance.

The cause of this event was a cognitive personnel error by the Shift Engineer and Shift Control Room Engineer. They failed to recognize that the work on the Unit 2 cross tie breaker ACB 2414 had Technical Specification impact on Unit 1.

The following corrective actions were identified as a result of a Human Performance Enhancement System investigation and an Event Review Board:

- 1) A review of Electrical Non-Technical Specification surveillances will be performed.
- 2) A procedure revision was made to the operating procedure for cross-tie breakers.
- 3) A Senior Reactor Operator will approve performance of all Non-Technical Specification surveillances.
- 4) A review of the Out of Service program and associated procedures will be performed.
- 5) A review of all Non-Technical Specification surveillances will be performed.

This event is reportable per 10CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

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

A. PLANT CONDITIONS PRIOR TO EVENT:

Event Date/Time 04/03/92 / 1027

Unit 1 MODE 1 - Power Operation Rx Power 100% RC [AB] Temperature/Pressure NPT / NOP

Unit 2 MODE 6 - Refueling Rx Power 0% RCS [A3] Temperature/Pressure 90°F / 0 psig

B. DESCRIPTION OF EVENT:

On April 2, 1992, the Electrical Maintenance department was initiating breaker surveillances on Bus 241 prior to the scheduled bus outage on April 5, 1992. Electrical Maintenance signed into Non-Technical Specification surveillance 2BHS AP-2 (Preventative Maintenance Inspection of 6.9 KV and 4 KV Circuit Breakers Westinghouse Type DHP) and obtained permission to test "241 to 141 Crosstie" (ACB 2414) from the Shift Engineer (SE) and Shift Control Room Engineer (SCRE) on April 2, 1992 at 0045. An Out-of-Service (OOS) had been prepared for this activity if the job was to be performed during the bus outage. However this activity was moved up in the schedule and the OOS was deemed not necessary. The surveillance was started at 0100 on April 2, 1992, and completed at 2000 on April 5, 1992. The 2414 breaker was racked out by an Equipment Operator (EO) on April 2, 1992 for Electrical Maintenance to perform surveillance 2BHS AP-2 per the direction of the SE and SCRE. The Unit 2 Nuclear Station Operator (NSO) was not briefed on this evolution as the control switch for ACB 2414 was already in the pull-to-lock position.

On April 3, 1992, at 1027 with Unit 1 in power operation (Mode 1) at 100% reactor power, and Unit 2 in refueling (Mode 6) at 90 Degrees Fahrenheit, a Nuclear Station Operator (NSO) performing 1BOS 8.1.1.1.a-1 (Normal and Alternate Offsite Power Availability Weekly Surveillance) observed there was no control power indication on ACB 2414. On April 1, 1992, the control switch for ACB 2414 was placed in the pull-to-lock position per procedure (2BOS 8.2.1.3-1, 125V DC Bus 211 Load Shed When Cross-tied to DC Bus 111). Therefore, it was not possible to note the breaker availability since control power indication was not available upon main control board walkdowns. Upon further investigation, the NSO confirmed the breaker was racked out and partially disassembled. Since ACB 2414 was unavailable, Limiting Condition for Operation Action Requirement (LCOAR) 1BOS 8.1.1-1a was entered at 1115 on April 3, 1992. A spare breaker was then placed into the 2414 cubicle. At 1207, surveillance 1BOS 8.1.1.1.a-1 was initiated. At 1258, surveillance 1BOS 8.1.1.1.a-1 was successfully performed and LCOAR 1BOS 8.1.1-1a was exited.

No plant systems or components were previously inoperable that contributed to this event. Both units were maintained in a stable condition during this event. This event is reportable per 10CFR 50.73(a)(2)(i)(B), (any operation or condition prohibited by the plant's Technical Specifications) in that LCOAR 1BOS 8.1.1-1a was not entered and the action requirement was not satisfied.

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C. CAUSE OF EVENT:

The cause of this event was cognitive personnel error by the Shift Engineer (SE) and Shift Control Room Engineer (SCRE). The SE and SCRE failed to recognize that the work on the Unit 2 cross-tie breaker, ACB 2414, had Technical Specification impact on Unit 1. However, there are contributing factors that led to the occurrence of this event. The SE was not aware of the cross-tie breaker status at the time Electrical Maintenance requested to perform surveillance 2BHS AP-2. Additionally, with the control switch for ACB 2414 in the pull-to-lock position, the loss of control power to the breaker could not be readily detected. Finally, the procedure 2BHS AP-2 does not address LCOAR evaluation or the use of a spare breaker because it is generic to all 6.9KV and 4KV breakers.

D. SAFETY ANALYSIS:

At all times while the breaker was removed from the cubicle, the 1A Diesel Generator and Unit 1 System Auxiliary Transformer (SAT) were capable of powering Bus 141. If the Unit 2 SAT would have been required, a manual crosstie would have been performed by the operators. A spare breaker was readily available at the cubicle and could have been racked in to provide an alternate source of offsite power for Unit 1. Plant and public safety was not affected by this event. The safety consequences would have been the same under a worst case scenario.

E. CORRECTIVE ACTIONS:

A Human Performance Enhancement System (HPES 92-05) investigation was performed and an Event Review Board was held. The following corrective actions were identified:

- 1) Electrical Maintenance Department will perform a review of Electrical Non-Technical Specification surveillances to determine impact on Technical Specification equipment. (NTS #4542009202000-01)
- 2) Procedures 1(2)BOS 8.2.1.3-1, "125V DC Bus _11 Load Shed When Cross-tied to DC Bus _11" and 1(2)BOS 8.2.1.3-2, "125V DC Bus _12 Load Shed When Cross-tied to DC Bus _12", will be revised to place the control switch for Unit 1 to Unit 2 4KV ESF cross-tie breakers in the after trip position and caution card them to allow for Main Control Board control power indication.
- 3) A Senior Reactor Operator (SKO) is currently approving all Non-Technical Specification surveillances until the completion of items 4 and 5 below. This action will be re-evaluated at that time for applicability.
- 4) A review of the Out-of-Service program and associated procedures will be performed to provide guidance on when Out-of-Services are required. (NTS #4542009202000-02)
- 5) A review will be performed for Non-Technical Specification surveillances to determine the impact on Technical Specification related equipment. (NTS #4542009202000-03)

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F. RECURRING EVENTS SEARCH AND ANALYSIS:

a) EVENT SEARCH (DIR, LER)

No events found.

b) INDUSTRY SEARCH (OPEX's NPRDS)

None found.

c) NWR

None found.

d) ANALYSIS

No trends were identified.

G. COMPONENT FAILURE DATA:

<u>MANUFACTURER</u>	<u>NOMENCLATURE</u>	<u>MODEL NUMBER</u>	<u>MFG PART NUMBER</u>
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None.