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

December 4, 1990

Ltr: BYRON 90-1143

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)(iv).

This report is number 90-009; Docket No. 50-455.

Sincerely,

R. Pleniewicz
Station Manager
Byron Nuclear Power Station

RP/DK/mlm

Enclosure: Licensee Event Report No. 90-009

cc: A. Bert Davis, NRC Region III Administrator
W. Kropp, NRC Senior Resident Inspector
INPO Record Center
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(0681R/0081R-5)

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

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

Title (4)

ESF Actuation caused by Low-2 Steam Generator Level due to Procedural Deficiency

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)
									Byron Unit 1	0 5 0 0 0 4 5 4
1 1	0 7	9 0	9 0	0 0 9	0 0	1 2	0 3	9 0		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)					
6	___	20.402(b)	___	20.405(c)	X	50.73(a)(2)(iv)	___ 73.71(b)
POWER LEVEL (10) 0	___	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
	___	20.405(a)(1)(iii)	___	50.73(a)(2)(i)	___	50.73(a)(2)(viii)(A)	in Abstract
	___	20.405(a)(1)(iv)	___	50.73(a)(2)(ii)	___	50.73(a)(2)(viii)(B)	below and in
	___	20.405(a)(1)(v)	___	50.73(a)(2)(iii)	___	50.73(a)(2)(x)	Text)

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
R. Hildebrand, Technical Staff, Ext 2472	AREA CODE
T. Gierich, Unit 2 Operating Engineer, Ext 2218	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	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)		Expected Submission Date (15)	Month	Day	Year
___ Yes (If yes, complete EXPECTED SUBMISSION DATE)	___ X NO				

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

At 1547 on November 7, 1990, the 2A Steam Generator was being drained per chemistry control via Steam Generator Blowdown. At the low-2 Steam Generator level setpoint the Blowdown Valves (2SD002A and 2SD002B) isolated as required by a newly installed interlock. The procedure in use, BOP FW-4B "Draining the Main Feedwater System-Unit 2" made no mention of the new interlock installed by modification M6-2-89-035 during the current outage.

The root cause of this event was a procedural inadequacy in the Modification Program's "Station Checklist", BAP 1610-8T3 Attachment C. In accordance with this procedure, there was no review of modification related procedure changes by Operating or Maintenance Departments; therefore, the effected procedure BOP FW-4B was not revised.

Because no level is required in the steam generators and no action initiated by Low-2 level setpoint is required in Mode 6, plant and public safety was not affected by this event.

Corrective actions included: revising BOP FW-4B; revising the Modification Procedure to include review of procedure revisions by Operations and Maintenance; and reviewing other modifications installed during this outage for procedures needing revision.

This event is reportable per 10CFR50.73(a)(2)(iv) due to the automatic actuation of an Engineered Safety Feature.

A. PLANT CONDITIONS PRIOR TO EVENT:

Event Date/Time 11-7-90 / 1547

Unit 2 MODE 6 - Refueling Rx Power 0% RCS [AB] Temperature/Pressure Ambient/Atmospheric

B. DESCRIPTION OF EVENT:

At 1547 on November 7, 1990, the 2A Steam Generator (MS)[SB] was being drained per chemistry control via Steam Generator Blowdown (SD) [WI]. At the Low-2 Steam Generator level setpoint the Blowdown valves (2SD002A and 2SD002B) isolated as required by a newly installed interlock. The procedure in use, BOP FW-4B "Draining the Main Feedwater System - Unit 2" made no mention of the new interlock installed by modification M6-2-89-035 during the current outage, B2R02. The draining was halted as no other flowpath was available. Two Nuclear Work Requests were written to lift the lead on terminal 6 of slave relays K620 and K633 in 2PA09J and 2PA10J which de-energized the slave relays thus defeating the interlock. This allowed opening of the 2SD002A and 2SD002B valves to continue draining the 2A Steam Generator.

No personnel error was involved in this event. No systems or components were inoperable at the beginning of this event which contributed to this event. Plant conditions remained stable throughout. A red phone call was made in accordance with 10CFR50.72(b)(2)(ii). This event is reportable per 10CFR50.73(a)(2)(iv) due to the automatic actuation of an Engineered Safety Feature.

C. CAUSE OF EVENT:

The root cause of this event was a procedural inadequacy in the Modification Program's "Station Checklist", BAP 1610-8T3 Attachment C. In accordance with this procedure only Technical Staff Engineers reviewed modifications for procedure changes. There was no review of modification related procedure changes by Operating or Maintenance Departments. Therefore, the effected BOP FW-4B was not revised.

A secondary cause of the event was a lack of operator training on the modification. This item had been included in Operators required Reading/Listening but was not scheduled for completion prior to use of the modification. Training was in progress but had not yet been given to the Operators (NSO, licensed) involved.

D. SAFETY ANALYSIS:

Because no level is required in the steam generators and no action initiated by Low-2 level setpoint is required in Mode 6, plant and public safety was not affected by this event.

E. CORRECTIVE ACTIONS:

Corrective actions include:

1) Revising BOP FW-4B (Unit Two) to lift the lead on terminal 6 of K620 and K633 in 2PA09J and 2PA10J, during the draining of steam generators (completed).

2) Technical Staff to conduct tailgate session to discuss this event and remind System Engineers of the importance of performing a complete and accurate review of the procedure changes required for each modification. AIR 454-225-90-28300 will track this action.

3) Technical Staff to revise the Modification Program's "Station Checklist" (BAP 1620-8T1) to provide an Operating and Maintenance review of the list of procedures to be changed for each modification. AIR 454-225-90-28400 will track this action.

4) Operating Department to determine when training is required for a modification prior to declaring the modification operable. This will require revision to the Modification Program Training Requirement Checklist (BAP 1610 8T3). AIR 454-225-90-28500 will track this action.

5) Technical Staff review of the Emergency Operating Procedures which were changed prior to the installation of the modification to ensure that the procedures remained accurate with the installation of the modification on Unit two (completed).

6) A review of other modifications completed during the outage was performed by Operating, Training, and Technical Staff during the Mode 4 on-site review to look for any other instances of procedures not revised.

F. PREVIOUS OCCURRANCES:

DVR 6-1-90-108 (LER 90-010) "1A Auxiliary Feedwater Pump Automatic Start due to Module Failures in the Anticipated Transient Without Scram System".

An ESF actuation due to equipment failure in the ATWS system cabinet 1PS54J was partly attributed to inadequacy of information provided to Operations personnel for changes to the plant design.

G. COMPONENT FAILURE DATA:

No components failed or were caused to fail during this event.