



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

*BCD*

August 26, 1992

Ltr: BYRON 92-0563

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).

This report is number 92-006; Docket No. 50-454.

Sincerely,

R. Pleniewicz  
 Station Manager  
 Byron Nuclear Power Station

RP/CW/lw

Enclosure: Licensee Event Report No. 92-006

cc: A. Bert Davis, NRC Region III Administrator ✓  
 W. Kropp, NRC Senior Resident Inspector  
 INPO 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 5

Title (4) IST Program Surveillance 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)
0 7	2 8	9 2	9 2	0 0 6	0 0	0 8	2 6	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(r)	<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(l)(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 checked="" type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.7(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.3(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(vii)(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 J. Davis, Technical Staff Engineer, Ext. 2848 TELEPHONE NUMBER 8 1 5 12 3 4 - 5 4 4

J. VanLaere, Asst. Tech Staff Supervisor, Ext. 2244

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) Month | Day | Year

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

On 07/28/92 at 1615, Byron Technical Staff personnel discovered that several pump discharge check valves in the Component Cooling (CC) [CC] and Residual Heat Removal (RH) [BP] systems were not being tested as required by response to Generic Letter 89-04.

This event was caused by personnel error. A verification of that each procedure listed on Action Item Request (AIR) 90-150 was actually revised to include the required testing was not performed. Additionally, a review and comparison of the data to the acceptance criteria stated in surveillance BVP 200-2, ISI Requirements for ASME Class 1,2, and 3 valves was not performed.

The affected CC and RH check valves were backflow tested with no problems noted. Additionally, procedure revisions are in progress to ensure the testing requirements will continue to be met.

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

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT Energy Industry Identification System (EII5) codes are identified in the text as [XX]

A. PLANT CONDITIONS PRIOR TO EVENT:

Event Date/Time 07/28/92 / 1615

Unit 1 MODE 1 -- Power Operation Rx Power 100% RCS [AB] Temperature/Pressure Normal Operating

Unit 2 MODE 1 - Power Operation Rx Power 100% RCS [AB] Temperature/Pressure Normal Operating

B. DESCRIPTION OF EVENT:

On 07/28/92 at 16:15 following an In Service Testing (IST) data sheet review, Byron Technical Staff IST personnel discovered that several pump discharge check valves in the Component Cooling (CC) [CC] system (DCC9464, 1/2CC9463A,B) and Residual Heat Removal (RH) [BP] system (1/2RH8730A,B) were not being tested as indicated in revision 9 of the Byron IST Program for valves submitted in November of 1990 in response to Generic letter 89-04.

Immediately following this discovery, Nuclear Licensing was notified to address the potential operability concern. Subsequently, Nuclear Licensing contacted NRC/NRR and scheduled a conference call to be held on 07/29/92 at 1400.

During the conference call, the details of the testing oversight were reevaluated and it was determined that the event was the equivalent of a missed surveillance. Therefore, pursuant to the requirements of Byron Technical Specification 4.0.5 paragraph d, both units CC and RH pumps should be declared inoperable and this event is reportable under 10CFR50.73(a)(2)(i)(b), any operation or condition prohibited by the plant's Technical Specifications.

The CC and RH pumps on both units were declared inoperable at 1638 on 07/29/92 and Technical Specification 3.0.3 was entered for CC and RH on both units. Immediately following this declaration, testing preparation was initiated for the valves. CC check valve testing began at 1640 and Technical Specification 3.0.3 was exited for Unit 1 CC at 1657. All CC pump discharge check valves were tested and Technical Specification 3.0.3 was exited at 1659. RH check valve testing began at 1756. At approximately 1830 a Temporary Waiver of Compliance was requested for check valves 1/2RH8730A,B. The 1A RH discharge check valve was tested and declared operable, and at 1830 Technical Specification 3.0.3 was exited and Limiting Condition for Operation Action Requirement (LCOAR) 1BOS 5.2-1a was entered since one RH train for Unit 1 remained inoperable. At approximately 1845, the NRC was notified that the Temporary Waiver of Compliance was now only required for Unit 2. The 2A RH discharge check valve was then tested and declared operable, and at 1852 Technical Specification 3.0.3 was exited and LCOAR 2BOS 5.2-1a was entered since one RH train for Unit 2 remained inoperable. At approximately 1930, the request for a Temporary Waiver of Compliance was withdrawn since sufficient testing had been completed to allow exiting the LCOAR time clock of the RH specification. At 1947, a courtesy red phone call was made to summarize events. The 2B RH discharge check valve was tested and declared operable and LCOAR 2BOS 5.2-1a was exited at 2031. Finally, the 1B RH discharge check valve was tested and declared operable and LCOAR 1BOS 5.2-1a was exited at 2102.

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		9   2	-   0   0   6	-   0   0	0   3	OF	0   5

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

C. CAUSE OF EVENT:

Revision 9 of the IST Valve Program, submitted in November 1990 in response to Generic Letter (GL) 89-04 resulted in a major restructuring of the IST Program. Revision 9 required revisions to numerous IST implementing procedures.

Action Item Record (AIR) 90-150 was written to track the completion of the IST procedure revisions. This AIR tracked each procedure only by revision number. Furthermore, a Procedure Writers Guide revision program was occurring at the same time the GL 89-04 changes were being performed. It was not clear, in all cases, whether the procedure revision was incorporating the Procedure Writer Guide changes or the GL 89-04 changes or both. There was no formal tracking system within the ISI group to ensure that each procedure was revised to include all the required GL 89-04 changes. Therefore, the RH and CC procedures were revised to include some of the GL 89-04 testing requirements, but excluded backflow testing. Each procedure listed on AIR 90-150 was not verified to ensure the required testing was included. This is considered a personnel error by the ISI group leader and the IST Coordinator.

The missed requirement for backflow testing for the RH and CC check valves was discovered on 07/28/92. Prior to this, the procedure reviews conducted did not compare the data to the acceptance criteria requirements of the surveillance as required by BVP 200-2, ISI Requirements for ASME Class 1,2, and 3 Valves. This review is the responsibility of the IST Coordinator per BVP 200-2. IST required steps are not easily discernable in the implementing procedures for backflow testing. In addition, the IST Valve Record Data Sheets did not specify which step in each implementing procedure met the test requirements. The IST Coordinator reviewed the specified procedure for completeness without specifically verifying that the proper test requirement was included. If the procedure was completed satisfactorily, then the test requirements were assumed to be completed satisfactorily. This was an incorrect assumption and is considered a personnel error by the IST Coordinator.

D. SAFETY ANALYSIS:

Check Valves 0CC9464, 1/2CC9463A,B prevent backflow through their associated pumps during normal operations. These valves have no additional functional requirements during accident conditions. There are no safety consequences caused by this event because there was other testing being performed on these valves sufficient to verify their operability. The quarterly CC pump runs sufficiently challenge these valves to verify their closure capabilities. Additionally, the closure of the valves was always informally verified by the occurrence of a loud slam of the check valve disk and visual verification of no backflow through the pump.

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## D. SAFETY ANALYSIS: (continued)

The safety function of the 1/2RH8730A,B check valves in the closed position is to protect the RH pump from reverse flow during single train operation. The probability of an accident which challenges the RH check valves in this manner is very low. The accident scenario requires Post-LOCA cold recirculation condition concurrent with single RH train operation prior to isolating the non-operating train. No previous failure or maintenance problems existed with these valves; the system is clean and not conducive to erosion/corrosion related check valve failures. Therefore, the probability of these valves being in a degraded condition is very low. Also, the consequences of failure of the RH check valve would have been minimal. Accident analysis assumes one RH train for all accident conditions. Failure of the RH check valves would not impact the operating pump during the injection phase of a LOCA because there is another check valve (1/2S1895BA,B) available to prevent reverse flow. During the beginning of the recirculation phase of a LOCA, Emergency Procedures instruct operators to close the RH cross tie valve thus separating the two RH trains and preventing backflow through the pumps. In the final analysis all effected valves were declared operable.

## E. CORRECTIVE ACTIONS:

1. Immediate corrective actions included backflow testing of each of the subject RH and CC check valves under special procedures SPP 92-060 and 92-061 respectively.
2. Intermediate corrective actions include revising the RH and CC surveillances to include the backflow testing. (NTS #4542009204000-01)
3. A Human Performance Enhancement System (HPES) investigation (#92-09) was completed for this event.
4. The IST Coordinator has been counseled on management expectations in regards for review of tests to ensure compliance with IST requirements.
5. Implement a formal revision tracking system in the ISI group by developing a data sheet which will track and verify completion of revisions to implementing procedures. This dual verification will ensure that the system engineer is cognizant of the revision. (NTS #4542009204000-02)
6. The IST coordinator is currently reviewing IST implementing procedures for clarity and identification of IST requirements and acceptance criteria steps. The IST Valve Records Data Sheets will be updated to include the test section. (NTS #4542409209500-02)

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F. RECURRING EVENTS SEARCH AND ANALYSIS:

a) EVENT SEARCH (DIR. LER)

There have been no previous occurrences of IST Program test omissions resulting from revision to implementing procedures.

b) INDUSTRY SEARCH (OPEX's NPRDS)

Generic Letter B9-04.

c) NWR

N/A

d) ANALYSIS

This section is not applicable. This event does not involve an adverse trend, no previous corrective actions were involved, and this type of event is not trended through NPRDS or TJM.

G. COMPONENT FAILURE DATA:

MANUFACTURER	NOMENCLATURE	MODEL NUMBER	HFG PART NUMBER
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This section is not applicable. No failed component was involved.