

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 | 02

Title (4) FAILURE OF LEAK RATE SURVEILLANCE ON CONTAINMENT AIRLOCK

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 8	0 1	8 5	8 5	0 7 5	0 0	0 8	2 8	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)

2

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

POWER LEVEL (10)	0	0	2	20.402(b)	20.405(c)	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
				20.405(a)(1)(iii) X	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: Erich Wurz Ext. 2250 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	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
D	I	M	A	L	C	1	3	0	N

SUPPLEMENTAL REPORT EXPECTED (14)

Yes (If yes, complete EXPECTED SUBMISSION DATE)

X | NO

Expected Submission Date (15) Month | Day | Year

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

While performing a routine Local Leakage Rate Test on the Unit 1 Equipment Hatch Personnel Airlock, the leakage rate exceeded its Technical Specification limit. The airlock was declared inoperable, and a GSEP Unusual Event was declared. The plant was brought from Mode 2 to Mode 3 in accordance with the Tech. Spec. Action Statement while the door was being returned to an operable status.

The main cause of the failure was a procedural inadequacy leading to deficient testing conditions. The airlock is to be pressurized to approximately 45 psig with tie-downs installed on the airlock inner door to prevent the natural tendency of the door to open into containment. The procedure did not specify the number of tie-downs to install. Only three tie-downs were initially installed, but this was not sufficient as leakage was found around the upper portion of the door where no tie-downs were placed.

A minor factor of the failure was a crimped gasket which also could have represented a possible leakage path.

To prevent recurrence of this situation, the procedures for Local Leakage Rate Testing of both the Equipment Hatch Personnel Airlock and the Emergency Hatch Personnel Airlock are being revised to stress that five tie-downs must be installed to support the inner doors while testing. Also, the gasket interspaces are being leak tested within 72 hours of the airlock doors being opened to aid in checking against possible gasket deterioration.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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 7 5	— 0 0 0	0 2	OF	0 2

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

On August 1, 1985, at approximately 1430 hours with the Unit in Mode 2 at 2% power, the Equipment Hatch Personnel Airlock was declared inoperable. The semi-annual Type B Local Leakage Rate Surveillance Test of the Airlock was being performed and excessive leakage was observed during pressurization of the airlock. The test specified a pressure equal to or greater than 44.4 psig; however, the airlock could only be pressurized to 6.4 psig. Containment integrity could not be verified. Per Technical Specifications 3.6.1.1 and 3.6.1.3, the Unit was placed in Hot Standby condition at 2042 hours. The cause of the failure was determined and the airlock was successfully retested at 0245 hours, August 2, 1985 and declared operable.

Upon investigation, it was determined that the leakage was through the airlock inner door's interspace gasket into containment. There were two failure mechanisms identified. First, the interspace gasket was crimped in the upper right corner. Secondly, only three tie-downs were installed on the inner door for the test. The surveillance test procedure did not specify the quantity of tie-downs to be installed. The three tie-downs were installed on the lower portion of the door which forced the lower portion of the door to have a tighter fit than the upper portion. This looser fit, combined with the crimped interspace gasket, caused the test failure. The gasket was straightened out and additional tie-downs installed. Testing was performed and leakage rate was determined to meet the acceptance criteria limits.

From a safety standpoint, Containment Integrity could not be verified within the time frame prescribed in the Tech Specs. Plant shutdown was initiated and as a result a GSEP Unusual Event was declared. During testing, pressurization of the inner door gasket seal forces the door to open toward the containment, whereas, during an accident situation, pressurization of the containment would force the inner door to seal tighter. Therefore, there was no significant effect on the safety of the plant or the public.

Corrective action is in progress to revise surveillance test procedures for both the Equipment Hatch Personnel Airlock and the Emergency Hatch Personnel Airlock to require the installation of five tie-downs. In addition, the gasket interspaces will be leak tested within 72 hours of the airlock doors being opened. This will aid in trending possible gasket deterioration.

This was the first failure of the airlock pressurization test although mechanical failures have previously occurred with the door interlock mechanism.



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

August 28, 1985

LTR: BYRON 85-1203

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)(1)(a) which requires a 30 day written report.

This report is number 85-075-00; Docket No. 50-454.

Very truly yours,

R. E. Querio
Station Superintendent
Byron Nuclear Power Station

REQ/gt

Enclosure: Licensee Event Report No. 85-075-00

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

#3/017

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