

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 | 3

Title (4) STATION BLOWDOWN RADIATION MONITOR INOPERABLE AND TECHNICAL SPECIFICATION ACTION NOT TAKEN DUE TO PERSONNEL ERROR

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	3	0	8	6	8	6	---	0	0	5	---	0	0	0	0	2	2	4	8	6	NONE	0	5	0	0	0	0	0	0	0	0

OPERATING MODE (9) 1

POWER LEVEL (10) 0 4 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 Lee Sues, Assistant Superintendent Operating Ext. 2221 TELEPHONE NUMBER 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	P	G	0	6	3	N	
A				N					

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X YES NO

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

On January 29, 1986 at 1508 a Loss of Sample Flow alarm occurred for the Station Blowdown Radiation Monitor (OPR010). Control room personnel were unable to clear the alarming condition. The Technical Specification Limiting Condition for Operation Action Requirement (LCOAR) was not implemented. At 0621 on January 30, 1986 a radioactive liquid release was started. At 0703 a control room licensed operator noted the Loss of Sample Flow alarm and stopped the release. The appropriate LCOAR was entered. Since the LCOAR was not in effect within the twelve hours required by Technical Specifications, this event is being reported per 10CFR50.73.a.2.i.B.

The Loss of Sample Flow alarm was due to sample pump seal failure which occurred as a result of high suspended solids in the process stream. The Technical Specification violation was a result of a personnel procedural error in that the licensed operators did not implement the LCOAR upon initial identification of OPR010 inoperability. Procedural deficiencies also existed which contributed to the Technical Specification violation.

The OPR010 sample pump seals were repaired and the monitor returned to service. The applicable LCOAR was satisfied commencing at 0715 on January 30, 1986. Revisions to deficient procedures will be made to prevent recurrence.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

A. PLANT CONDITIONS PRIOR TO EVENT:

MODE 1 - Power Operations Rx Power 41% RCS [AB] Temperature/Pressure Normal Operating

B. DESCRIPTION OF EVENT:

On January 29, 1986 at 1508 a Loss of Sample Flow alarm was received at the RM-11 console in the Main Control Room for the Station Blowdown Radiation Monitor (OPR010) [IL]. The OPR010 monitor measures the activity level of Circulating Water (CW) [KE] Blowdown flow which is discharged to the Rock River. Control room personnel acknowledged the alarm at the RM-11 console. The Loss of Sample Flow alarm indicates that the OPR010 will not provide an accurate indication of actual blowdown activity levels. The loss of sample flow resulted due to sample pump seal leakage. A review of the radiation monitor data base indicated that several attempts were made to start the sample pump from the RM-11 console on January 29, 1986 (times: 1748, 1752, 1822 and 1842). These attempts were not successful in clearing the Loss of Sample Flow alarm.

At 0216 on January 30, 1986 CW Blowdown flow was stopped in order to raise flume level. At 0254 on January 30, 1986 a channel check was performed on the OPR010 in accordance with the Mode 1, 2 and 3 Shiftly and Daily Operating Surveillance (BOS.1-1,2,3). This surveillance procedure permits OPR010 operability even with a Loss of Sample Flow alarm present provided CW Blowdown flow is stopped, which was the case. Therefore the surveillance was satisfactorily completed. At 0441 on January 30, 1986 CW Blowdown flow was established, since satisfactory flume level had been achieved.

At 0621 on January 30, 1986 Radioactive Liquid Release number 60060 was initiated in accordance with Liquid Radwaste Release Form (BCP 400-T50). At 0703 a control room operator requested the status of OPR010 sample flow from the RM-11 and discovered the loss of sample flow condition. AT 0705 the radioactive liquid release was manually terminated due to assumed inoperability of the OPR010. The appropriate Technical Specification Limiting Condition for Operation Action Requirement (LCOAR) 3.3.3.9 for OPR010 inoperability was implemented immediately, which requires grab samples be collected and analyzed every twelve hours while effluent releases continue. A grab sample collected at 0715 on January 30, 1986 indicated a less than detectable activity level in the CW Blowdown flow path. The failures experienced during this event did not affect the power escalation that was in progress at the time and caused no safety system actuations.

This event is being reported in accordance with 10CFR50.73(a)(2)(i)(B) since the Technical Specification LCOAR was not implemented within the required twelve hour time period.

C. CAUSE OF EVENT:

The intermediate cause of this event was the failure of the OPR010 sample pump seals. Excessive leakage through the seals precluded adequate sample flow to the OPR010 monitor. The root cause of the seal failure is excessive seal surface pitting due to a suspended solids content in the sample stream. The sample pump is designed for use in relatively pure sample streams of less than 10 parts per million (ppm) suspended solids. Circulating Water is unpurified, unfiltered cooling water drawn from the Rock River and can contain suspended solids concentrations of up to 240ppm.

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

The root cause of the Technical Specification violation was a procedural personnel error in that licensed operators failed to implement the appropriate Technical Specification LCOAR within the allotted time when the OPR010 became inoperable. A contributing cause of this event was a procedural deficiency in 1BOS.1-1, 2, 3 which permitted satisfactory completion of the OPR010 channel check with no OPR010 sample flow while CW Blowdown flow is stopped. Additionally the procedure for the liquid release, BCP 400-T50, only required that the daily channel check for the OPR010 be completed for that day prior to liquid release.

D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or public. The OPR010 serves only to provide an alarm on high activity in the CW Blowdown flow path. At the time of the liquid release the Liquid Radwaste Effluent Radiation Monitor (OPR001) [IL], which monitors Release Tank [WB] activity, was operable, and would have automatically stopped the liquid release prior to exceeding 10CFR20 liquid release limits. At no time during the liquid release were 10CFR20 limits exceeded.

E. CORRECTIVE ACTIONS:

The OPR010 sample pump was rebuilt to repair the seal failure and was returned to service on February 4, 1986. While the OPR010 was inoperable, grab samples were drawn and analyzed in accordance with Technical Specification 3.3.3.9 Action Statement number 32. Similar seal failures have occurred but have not resulted in the submission of Licensee Event Reports. Technical Staff engineers are testing a new type of sample pump that should be able to withstand the high suspended solids content of the CW process stream. The final engineering decision for system modification to utilize a new pump is tracked by Action Item Record (AIR) 6-85-420.

The Liquid Release Form (BCP 400-T50) will be revised to require performance of the daily channel check of OPR010 prior to initiating a liquid release and with CW Blowdown flow established. The Mode 1, 2 and 3 Shiftly and Daily Operating Surveillance (1BOS.1-1,2,3) will be revised to provide the operators more guidance for action required on a failure of OPR010.

This LER will be included in licensed operator required reading to increase awareness of liquid release requirements.

F. PREVIOUS OCCURRENCES:

LER NUMBER	TITLE
NONE	

G. COMPONENT FAILURE DATA:

MANUFACTURER	NOMENCLATURE	MODEL NUMBER	MFG PART NUMBER
Oberdorfer	Positive Displacement Pump	2146	--



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

February 24, 1986

LTR: BYRON 86-0168

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) which requires a 30 day written report.

This report is number 86-005-00; Docket No. 50-454.

Very truly yours,

R. E. Querio
Station Manager
Byron Nuclear Power Station

REQ/RP/bf

Enclosure: Licensee Event Report No. 86-005-00

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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