

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) OYSTER CREEK, UNIT 1										DOCKET NUMBER (2) 0 5 0 0 0 2 1 9 1 OF 0 4				PAGE (3) 1 OF 0 4	
TITLE (4) THREE OUT OF EIGHT ISOLATION CONDENSER PIPE BREAK SENSORS OUT OF SPECIFICATION															
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 2	1 0	8 6	8 6	0 0 3	0 0 3	1 4	8 6						0 5 0 0 0		
OPERATING MODE (9) N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)													
POWER LEVEL (10) 0 1 9 1 7		20.402(b)				20.406(a)				80.73(a)(2)(iv)				73.71(b)	
		20.406(a)(1)(i)				80.38(a)(1)				80.73(a)(2)(v)				73.71(a)	
		20.406(a)(1)(ii)				80.38(a)(2)				X 80.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.406(a)(1)(iii)				80.73(a)(2)(i)				80.73(a)(2)(viii)(A)					
		20.406(a)(1)(iv)				80.73(a)(2)(ii)				80.73(a)(2)(viii)(B)					
		20.406(a)(1)(v)				80.73(a)(2)(iii)				80.73(a)(2)(ix)					
LICENSEE CONTACT FOR THIS LER (12)															
NAME John R. Carscadden, Sr. Engineer										TELEPHONE NUMBER 6 1 0 1 9 9 1 7 1 1 - 1 4 9 1 0 1 4					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)															
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS						
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)

During routine surveillance testing of the pipe break sensors for the steam and condensate lines of both isolation condensers, three out of eight differential pressure switches tripped at values greater than specified in the plant Technical Specifications. The affected sensors IB11A1, IB11B1, and IB11B2 all had high flow trip setpoints which drifted in the non-conservative direction. These three sensors are located on the condensate lines, one on Isolation Condenser 'A' and two on Isolation Condenser 'B', respectively.

During this event the automatic pipe break isolation capability for Isolation Condenser 'A' remained fully operable. The automatic pipe break isolation capability for Isolation Condenser 'B', however, was not operable because both sensors on the condensate line were above the setpoint limit stated in the plant Technical Specifications.

All three sensors were satisfactorily readjusted to trip within the desired setpoint limits and returned to service. The event had no effect upon the health and safety of the public.

A review of the historical surveillance data for all eight sensors indicates these switches have experienced a tendency to drift out of trip setpoint calibration. It is GPU Nuclear's intent to evaluate this generic concern with snap-action switch setpoint drift and implement a solution to resolve this problem.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

DATE OF OCCURRENCE

The event occurred on February 10, 1986 at approximately 2330 hours.

IDENTIFICATION OF OCCURRENCE

During surveillance testing, isolation condenser pipe break sensors IB11A1, IB11B1 and IB11B2 tripped at values greater than specified in the plant Technical Specifications, Table 3.1.1, Item H.

The event is considered to be reportable as defined in 10 CFR 50.73 (a)(2)(vii)(C).

CONDITIONS PRIOR TO OCCURRENCE

The Mode Switch was in the RUN position with reactor operation at 1877 MWt and the reactor coolant was at normal temperature and pressure and all safety systems operable.

DESCRIPTION OF OCCURRENCE

While performing the scheduled surveillance test and calibration of the steam and condensate pipe break sensors in the isolation condenser system, the trip setpoints for three (3) out of the eight (8) sensors were found to be less conservative than permitted by plant Technical Specifications. Surveillance testing of sensors yielded the following data:

<u>Switch Designation</u>	<u>Sensor Location</u>	<u>Tech Spec. Limit</u>	<u>"As Found"</u>	<u>"As Left"</u>
IB05A1	Steam Pipe, Cond. A	\leq 20 psid	16.1 psid	16.1 psid
IB05A2	Steam Pipe, Cond. A	\leq 20 psid	16.9 psid	16.9 psid
IB05B1	Steam Pipe, Cond. B	\leq 20 psid	16.5 psid	16.5 psid
IB05B2	Steam Pipe, Cond. B	\leq 20 psid	16.0 psid	16.0 psid
*IB11A1	Cond. Pipe, Cond. A	\leq 27 in. H ₂ O	29.8 in. H ₂ O	25.0 in. H ₂ O
IB11A2	Cond. Pipe, Cond. A	\leq 27 in. H ₂ O	22.5 in. H ₂ O	22.5 in. H ₂ O
*IB11B1	Cond. Pipe, Cond. B	\leq 27 in. H ₂ O	29.0 in. H ₂ O	25.2 in. H ₂ O
*IB11B2	Cond. Pipe, Cond. B	\leq 27 in. H ₂ O	28.8 in. H ₂ O	24.0 in. H ₂ O

*Sensor 'As Found' setpoint above Technical Specifications limit.

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TEXT (If more space is required, use additional NRC Form 368A's) (17)

A review of the above surveillance data indicates that Isolation Condenser 'A' had one out of four of its pipe break sensors out of specification. Isolation Condenser 'B' had two out of four of its pipe break sensors out of specification. The three sensors are located on the condensate lines of both Isolation Condensers.

APPARENT CAUSE OF OCCURRENCE

The cause of occurrence is attributed to excessive switch setpoint drift in all three (3) sensors IB11A1, IB11B1, and IB11B2. The calibrated span of all eight (8) sensors remained within the specified calibration tolerance.

ANALYSIS OF OCCURRENCE

The isolation condenser pipe break sensors are designed to provide protection in the event of a steam or a condensate line break. Four pipe break sensors are installed in the piping of each emergency condenser; two sensors are for the detection of high flow in the steam line, and two are for the detection of high flow in the condensate line. Should one of these sensors detect a high flow condition lasting as long as 35 seconds, the isolation valves to that condenser are given a close signal.

SAFETY SIGNIFICANCE

Any one out of the four pipe break sensors (two in the condensate line, and two in the steam line) installed in each isolation condenser system, will, upon detecting a high flow condition, send a signal to isolate that Isolation Condenser System. A review of "As Found" sensor switch settings indicates that in the event of a pipe break Isolation Condenser 'A' was fully operable (three out of four sensors available) and would have been isolated by a pipe break on either the steam or condensate line. Isolation Condenser 'B', with two sensors available on the steam line, would have been isolated normally by a steam line pipe break. Both condensate line sensors were above the Technical Specification trip setpoint limit of 300% normal rated flow, however, based on the "as-found" setpoint values, the "B" Isolation Condenser would have been isolated at a value of condensate line break flow only 6.7 percent higher than the Technical Specification limit.

Based on the above, the safety significance of this occurrence is considered minimal.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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

CORRECTIVE ACTION

All three (3) sensors IB11A1, IB11B1, and IB11B2 were readjusted to trip within the limits required by Technical Specifications. (Note the "As Left" values in the description of occurrence.) Due to the frequency of setpoint drift problems with the snap-action type switch sensors in this and other applications, it is GPU Nuclear's intent to evaluate and implement a generic solution to the concern on snap-action switch setpoint drift.

EQUIPMENT DATA

Manufacturer - ITT Barton.

Model No. 288A indicating differential pressure switch (PDIS).

Range: Steam line break sensors (IB05's): 0-50 psid.

Condensate line break sensors (IB11's): 0-60 inches H₂O.

dam: (0154A)



GPU Nuclear Corporation

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Writer's Direct Dial Number:

March 14, 1986


U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Licensee Event Report

This letter forwards one (1) copy of Licensee Event Report (LER)
No. 86-003.

Very truly yours,


Peter B. Fiedler
Vice President and Director
Oyster Creek

PBF:JR:dam(0154A)
Enclosures

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