NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
OYSTER CREEK, UNIT 1	0 5 0 0 0 2 1 9	1 OF 0 4

TITLE (4)
SIX OUT OF EIGHT ISOLATION CONDENSER PIPE BREAK SENSORS OUT OF SPEC.

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 5	8 5	—	0 0 5	— 0 0	0 3	0 8	8 5		0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 0 0		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Michael G. Kapil, Senior Engineer	AREA CODE 6 0 9 — 9 7 1 4 8 9 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	
B	B L	P D I S	I 2 0 4	Y							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	NO				

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

During routine surveillance testing, pipe break sensors IB05A1, IB05B1, IB11A1, IB11A2, IB11B1 and IB11B2 for both isolation condensers steam and condensate lines, tripped at values greater than specified in the technical specifications, Table 3.1.1.

Sensors IB05A1, IB05B1, IB11A2, IB11B1 and IB11B2 were reset to trip within desired set point limits. Sensor IB11A1 had a defective switch actuating cam; the defective cam was replaced and the sensor was set to trip within limits.

The event had no effect upon public health or safety.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
OYSTER CREEK, UNIT 1	0 5 0 0 0 2 1 9	8 5	— 0 0 5	— 0 0	0 2 OF 0 4

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

DATE OF OCCURRENCE

The event occurred on February 10, 1985 at approximately 0330 hours.

IDENTIFICATION OF OCCURRENCE

During surveillance testing, isolation condenser pipe break sensors IB05A1, IB05B1, IB11A1, IB11A2, IB11B1 and IB11B2 tripped at values greater than specified in the Technical Specification Table 3.1.1, Item H.

The event is considered to be reportable as defined in 10CFR50.73(a)(2)(i)(B).

CONDITIONS PRIOR TO OCCURRENCE

The Mode switch was in the shutdown position with reactor coolant temperature $< 212^{o}F$.

DESCRIPTION OF OCCURRENCE

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

Switch Designation	Sensor Location	Tech Spec. Limit	"As Found"	"As Left"
IB05A1	Steam Pipe, Cond. A	$\leq$ 20 psid	21 psid	15.5 psid
IB05A2	Steam Pipe, Cond. A	$\leq$ 20 psid	20 psid	15.25 psid
IB05B1	Steam Pipe, Cond. B	$\leq$ 20 psid	21.5 psid	14.5 psid
IB05B2	Steam Pipe, Cond. B	$\leq$ 20 psid	18.4 psid	14.0 psid
IB11A1	Cond. Pipe, Cond. A	$\leq$ 27 in. H_2O	*60 in. H_2O	**
IB11A2	Cond. Pipe, Cond. A	$\leq$ 27 in. H_2O	30 in H_2O	25 in. H_2O
IB11B2	Cond. Pipe, Cond. B	$\leq$ 27 in. H_2O	32.2 in. H_2O	24.5 in. H_2O
IB11B2	Cond. Pipe, Cond. B	$\leq$ 27 in. H_2O	31.8 in. H_2O	24.6 in. H_2O

*Test input pressure limited to sixty inches. With 60 inches applied, switch had still not tripped.

** Due to malfunction of the sensor, technicians were not able to reset the switch within the required "As Left" tolerances. The switch actuating cam for this sensor was subsequently replaced.

APPARENT CAUSE OF OCCURRENCE

The cause of occurrence is attributed to instrument drift for sensors IB05A1, IB05B1, IB11A2, IB11B1, and IB11B2. Sensor IB11A1 was found with a defective switch actuating cam.

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, 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, the steam line break sensor IB05A2 (in Isolation Condenser System A), and steam line break sensor IB05B2 (in Isolation Condenser System B), which were operating within the technical specification limits, would have actuated to isolate the affected Isolation Condenser System in the required manner.

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

CORRECTIVE ACTION

Sensors IB05A1, IB05B1, IB11A2, IB11B1, and IB11B2 were reset to trip within the limits required by Technical Specifications. (Note the "As Left" values in the description of occurrence.) The switch actuating cam for sensor IB11A1 was replaced and the sensor was set to trip within the limits required by Technical Specifications. An inspection was performed on a sample of other sensors for any degradation. The Switch Actuating cams and mechanisms were found in satisfactory condition in these sensors.

Due to the frequency of setpoint drift problems with these snap-action type switch sensors, it is GPU Nuclear's intent to replace these sensors with ones having better accuracy and repeatability specifications, as part of the Reactor Protection System instrument upgrade, scheduled for the next (Cycle 11) refueling outage.

EQUIPMENT DATA

Manufacturer - ITT Barton.

Model No. 288A indicating pressure switch.

Range: Steam line break sensors (IB05's): 0-50 psid.
Condensate line break sensors (IB11's): 0-60 inches H_2O.

GPU Nuclear

GPU Nuclear Corporation
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609 971-4000
Writer's Direct Dial Number:

March 8, 1985

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. 85-005.

Very truly yours,

Peter B. Fiedler
Vice President and Director
Oyster Creek

PBF:BH
Enclosures

cc: Dr. Thomas E. Murley, Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, NJ 08731

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