

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Oyster Creek, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 2 1 1 9				PAGE (3) 1 OF 0 3	
TITLE (4) Reactor Trip Due to High Neutron Flux															
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)		
1	2	15	85	85	024	00	01	16	86					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(e)				X 50.73(a)(2)(iv)				73.71(b)	
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(e)(1)				50.73(a)(2)(v)				73.71(e)	
0 9 9		20.405(a)(1)(ii)				50.36(e)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 386A)	
		20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(A)					
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)					
		20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)					
LICENSEE CONTACT FOR THIS LER (12)															
NAME Paul F. Cervenka, Plant Engineering										TELEPHONE NUMBER AREA CODE 610 9 917 11-1 4181914					
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					
A															
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)

On December 15, 1985 at 0743 hours, a reactor trip occurred due to a high neutron flux condition. At 0756 hours, all trip signals were reset and the plant was stabilized and maintained in a hot standby condition. The increase in neutron flux was due to the collapse of the voids in the core. A post trip review of reactor pressure recorder revealed a 12 PSI pressure increase. This increase is attributed to a failure of the Electric Pressure Regulator (EPR). The EPR failed due to a loose wire connection. The root cause of the loose connection was personnel error in that a flatwasher was missing at the wire terminal connection. The missing flatwasher combined with normal vibration caused the connection to loosen. The Licensee Event Report will be issued as required reading to appropriate maintenance personnel.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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

TEXT (If more space is required, use additional NRC Form 386A's) (17)

Date of Occurrence

The event occurred on December 15, 1985 at 0743 hours.

Identification of Occurrence

An automatic reactor shutdown occurred as a result of a high neutron flux condition.

This event is considered to be reportable as defined in 10CFR50.73(a)(2)(iv).

Conditions Prior to Occurrence

The reactor was in the RUN mode with a thermal power output of 1920 MWt and a generator load of 650 MWe.

Description of Occurrence

On December 15, 1985 at 0743 hours, the reactor automatically tripped due to a high neutron flux condition. A low reactor water level trip signal was also received due to the level shrink associated with the scram, and a scram discharge instrument volume high high level trip signal was received as expected. The low level trip signal cleared shortly after being received due to an increase in feedwater flow. Reactor pressure was controlled automatically. Level was manually controlled by the reactor operator. At 0756 hours, the scram signals were reset and the plant was stabilized and maintained in a hot standby condition.

Apparent Cause of Occurrence

The increase in neutron flux was the result of a void collapse in the core region. The pressure increase has been attributed to a loose wire connection which affected the turbine control valve position feedback signal to the electric pressure regulator. This condition caused the turbine control valves to move in the close direction thus causing an increase in reactor pressure. The root cause of the loose connection appeared to be an open end (spade) wire connector used on a small diameter terminal post without a flat washer, and normal vibration of the control valve hydraulic enclosure. This combination caused one wire connection to loosen and lose contact. Neither the DT-3 transducer which included the terminal post nor its wiring had been worked on in years.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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OYSTER CREEK, UNIT 1	0 5 0 0 0 2 1 9 8 5 —	0	2	4	—	0	1
						0	3
						OF	0 3

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

Analysis of Occurrence and Safety Assessment

A post trip review of this occurrence was performed with the following conclusions; safety limits were not exceeded, all automatic actions associated with limiting safety system setpoints occurred satisfactorily, plant response was as expected, and operator actions were proper and in accordance with existing procedures. The only deficiency noted was that following the reactor trip the reactor operator allowed reactor water level to increase beyond the maximum range of the narrow range water level indicators. A high water level is undesirable since it could introduce a water hammer condition in the main steam lines or the isolation condensers if they were to be initiated. There were no observed water hammer conditions during this event.

Corrective Action

Corrective action consisted of installing a flatwasher adjacent to the backing spacer of the terminal connection. As an additional precaution all connections in the same location were checked for tightness. Flat washers were installed on all connections. As a result of the inspection of the other connections in this location, two flat washers needed to be installed. This was found to be a unique arrangement as all terminations on transducers DT-1 and DT-2 had satisfactory terminal assemblies. This Licensee Event Report will be made required reading for appropriate electrical and instrument/control maintenance personnel.

As a result of previous high level conditions following reactor trips, the Safety Analysis and Plant Control Group, and Plant Engineering, have been assigned an action item. The result will be specific guidance to the operators for feedwater control system operation following a reactor trip. This guidance combined with training should result in a consistent and effective method for controlling water level following a reactor trip.

(0137A)



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Writer's Direct Dial Number:

January 16, 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. 85-024.

Very truly yours,

  
Peter B. Fiedler  
Vice President and Director  
Oyster Creek

PBF:JR:dam(0137A)  
Enclosures

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