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Oyster Creek
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An Exelon/British Energy Company

10 CFR 50.73

September 29, 2003
2130-03-20247

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Oyster Creek Generating Station
Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Licensee Event Report 2003-004-00:
Actuation of Reactor Protection System due to Instrument Malfunction

Enclosed is Licensee Event Report 2003-004, Revision 0. This event did not affect the health and safety of the public or plant personnel.

If any further information or assistance is needed, please contact Mr. William Stewart, of my staff, at 609.971.4775.

Very truly yours,



Ernest J Harkness P.E., Vice President
Oyster Creek Generating Station

EJH/RAM
Enclosure

cc: Regional Administrator, USNRC Region I
USNRC Senior Project Manager, Oyster Creek
USNRC Senior Resident Inspector, Oyster Creek
File No. 03082

IE22

NRC FORM 366 (1-2001)			U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2001 <small>Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>					
LICENSEE EVENT REPORT (LER) <small>(See reverse for required number of digits/characters for each block)</small>											
FACILITY NAME (1) Oyster Creek, Unit 1					DOCKET NUMBER (2) 05000 219			PAGE (3) 1 OF 3			
TITLE (4) Actuation of Reactor Protection System Due to Instrument Malfunction											
EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
08	22	2003	2003 - 004 - 00			09	29	2003	FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9) N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)									
POWER LEVEL (10) 100		20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)			
20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)					
20.2203(a)(1)		50.36(c)(1)(i)(A)		X 50.73(a)(2)(iv)(A)		73.71(a)(4)					
20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)					
20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER					
20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A					
20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)							
20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)							
20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)							
20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)							
LICENSEE CONTACT FOR THIS LER (12)											
NAME William Stewart						TELEPHONE NUMBER (include Area Code) 609.971.4775					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		
B	SN	LS	M040	Y							
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 15 single-spaced typewritten lines) (16)											
<p>On August 22, 2003, a Turbine Trip was caused by a spurious actuation of Moisture Separator Hi-Hi Level switch, LS-4-691. This resulted in a Reactor Scram from 100% power. The reactor shut down as designed. Plant cooldown to cold shutdown was required due to the trip of all five recirculation pumps.</p> <p>The safety significance of this event is considered minimal. The plant responded as designed for this type of event. Technical Specification limits were maintained. There was no radioactive release. All safety systems were fully operable. Off-site power was available. Operator performance was satisfactory.</p> <p>All four level switches were replaced and a root cause is in progress.</p>											

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)	
Oyster Creek, Unit 1	05000 0219	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3	
		2003	004	00		

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

DATE OF DISCOVERY

This event occurred on August 22, 2003.

IDENTIFICATION OF OCCURRENCE

Note: System Identification codes from IEEE 805-1984 are indicated with SI. Component Function Identifiers from ANSI/IEEE 803A-1983 are indicated by CFI.

A spurious actuation of a Moisture Separator (SI - SN), HI-HI Level switch (CFI - LS) tripped the main turbine (CFI - TRB) and scrammed the reactor (CFI - RCT). Actuation of the Reactor Protection System is reportable under 10 CFR 50.73(a)(2)(iv)(A).

CONDITIONS PRIOR TO DISCOVERY

The plant was operating at approximately 100% power at normal reactor pressure, level, and temperature. All safety-related equipment was operable. Plant conditions prior to the Turbine Trip / Scram were stable.

DESCRIPTION OF OCCURRENCE

On August 22, 2003, at 0259 hours, annunciators (CFI - ANN) in the Main Control Room indicated a Moisture Separator HI-HI Level alarm. About ten seconds later the main turbine tripped as designed. The reactor then scrammed as designed, due to the anticipatory scram on the turbine stop valve closure.

The turbine trip caused a pressure increase which caused two of five Electromatic Relief Valves (CFI - RV) to open momentarily, three of five Reactor Recirculation Pumps (SI - AD, CFI - P) to trip, and both Isolation Condensers (SI - BL) to actuate. The reactor scram shut down the reactor as designed. Operators manually tripped the two operating Reactor Recirculation pumps, as required by procedure, and stabilized plant conditions.

Although no Technical Specification required the plant to be placed in the Cold Shutdown condition, the trip of all reactor recirculation pumps required cooldown to cold shutdown to recover the plant. Plant cooldown was begun at 0349 hours. Shutdown Cooling (SI - BO) was placed in service at 1050 hours and the cold shutdown condition was reached at 1205 hours.

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Oyster Creek, Unit 1	05000 219	2003	- 004	- 00	3 OF 3

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

APPARENT CAUSE

Actuation of the Reactor Protection System was caused by closure of the turbine stop valves when the turbine tripped. The turbine trip was caused by spurious actuation of Moisture Separator Hi-Hi Level switch, LS-4-691.

ANALYSIS OF OCCURRENCE AND SAFETY ASSESSMENT

The safety significance of this event is considered minimal. The plant is designed for this type of transient and responded as designed. Technical specification limits were maintained. There was no radioactive release, nor any effect on the health and safety of the public. Operator performance was satisfactory.

CORRECTIVE ACTIONS

Replaced all four moisture separator Hi-Hi Level Switches.

A root cause of the switch actuation is in progress to determine if additional corrective actions are warranted.

SIMILAR EVENTS

LER 1994-003, Turbine Trip / Reactor Scram on High RPV Water Level