Exelon Generation. Oyster Creek Generating Station www.exeloncorp.com Route 9 South

PO Box 388 Forked River, NJ 08733

PA-13-117

10 CFR 50.73

December 5, 2013

U. S. Nuclear Regulatory Commission Attn: Document Control Desk Washington, DC 20555 - 0001

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

Subject: Licensee Event Report (LER) 2013-002-00, Manual Scram Oue to Lowering Vacuum

Enclosed is LER 2013-002-00, Manual Scram Due to Lowering Vacuum. This event did not affect the health and safety of the public or plant personnel. This event did not result in a safety system functional failure. There are no regulatory commitments made in this LER submittal.

Should you have any questions concerning this letter, please contact Mike McKenna, Regulatory Assurance Manager, at (609) 971-4389.

Respectfully,

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Russell R. Peak Plant Manager Oyster Creek Nuclear Generating Station

Enclosure: NRC Form 388, LER 2013-002-00

cc: Administrator, NRC Region 1

NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station NRC Project Manager - Oyster Creek Nuclear Generating Station

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NRC FO	RM 366			U.S. NU	CLEAR RI	EGULATO	RY COMM	ISSION	APPF	ROVED BY OMB: N	IO. 3150-010	4	E	XPIR	ES: 1	0/31/2013
(10-2010) LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)									Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@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 an 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.							
1. FACIL										2. DOCKET NUMBER 3. PAGE						
Oyst	ter Cre	ek, Unit	1							05000219			1	OF	3	
4. TITLE	iviar	iual Scra	am Due		ering va	cuum										
5. EVENT DATE		6.	LER NUM	BER	R 7. REPORT DATE				8. OTHER FACILITIES INVO			S INVOL				
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9. OPERATING MODE 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)																
N 10. POWER LEVEL 20		□ 20.2201(b) □ 20.2201(d) □ 20.2203(a)(1) □ 20.2203(a)(2)(i) □ 20.2203(a)(2)(ii) □ 20.2203(a)(2)(iii) □ 20.2203(a)(2)(iv) □ 20.2203(a)(2)(v) □ 20.2203(a)(2)(v)			 20.2203(a)(3)(i) 20.2203(a)(3)(ii) 20.2203(a)(4) 50.36(c)(1)(ii)(A) 50.36(c)(2) 50.46(a)(3)(ii) 50.73(a)(2)(i)(B) 				 □ 50.73(a)(2)(i)(C) □ 50.73(a)(2)(ii)(A) □ 50.73(a)(2)(ii)(B) □ 50.73(a)(2)(iii) ⊠ 50.73(a)(2)(v)(A) □ 50.73(a)(2)(v)(B) □ 50.73(a)(2)(v)(C) □ 50.73(a)(2)(v)(D) 			 50.73(a)(2)(vii) 50.73(a)(2)(viii)(A) 50.73(a)(2)(viii)(B) 50.73(a)(2)(ix)(A) 50.73(a)(2)(x) 73.71(a)(4) 73.71(a)(5) OTHER Specify in Abstract below or in NRC Form 366A 				
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LICENSEE EVENT REPORT (LER) U.S. NUCLEAR REGULATORY COMMISSION NRC FORM 366A (10-2010) **CONTINUATION SHEET** 2. DOCKET 3. PAGE 6. LER NUMBER **1. FACILITY NAME** SEQUENTIAL NUMBER REV YEAR NO. 2 Ovster Creek, Unit 1 05000219 OF 3 002 00 2013

NARRATIVE

Plant Conditions Prior To Event

Event Date: October 06, 2013 Unit 1 Mode: Startup Event Time: 1130 EDT Power Level: 20%

Description of Event

Reactor Startup from the 1M30 Maintenance Outage began at 0019 hours on 10/05/13. Criticality was achieved at 0520 hours. Reactor power was raised to approximately 25% power to perform turbine over speed testing with condenser vacuum at approximately 28.8" H2O. ABN 14 was entered at 1050 on 10/06/2013 due to degrading condenser vacuum. Reactor power was lowered to approximately 20% in an attempt to stabilize plant conditions. At 1130, a manual reactor SCRAM was inserted when condenser vacuum degraded below 23" H2O. All control rods were inserted, and condenser vacuum continued to degrade until stabilizing just above 20" H2O. Therefore, the main condenser remained available for decay heat removal.

Following the reactor SCRAM, operations and maintenance personnel identified an approximate 1" hole on Y-1-26, 'B' Condenser Steam Inlet Expansion Joint on the south side of 'B' Condenser. It was confirmed to be an active leak and subsequently the source of condenser vacuum degradation. A temporary leak repair was performed.

Cause of Event

An approximate 1" hole on Y-1-26, 'B' Condenser Steam Inlet Expansion Joint on the south side of 'B' Condenser was the cause of the degrading condenser vacuum. It was confirmed to be an active leak and subsequently the source of condenser vacuum degradation.

Analysis of Event

The basic function of the expansion joint, Y-1-26 (Sola Basic Industries, model 97-5516) is to provide a flexible pressure retaining connection to absorb motion in a system caused by thermal expansion and low levels of vibration. The need to be flexible requires the expansion joint to be fabricated from 1/32" (wall thickness) commercial grade stainless steel A240 type 304.

Inspection of the hole showed a circumferential fracture from end to end of one of the three expansion joint convolutions. The fracture was found to be thick-lipped with ratchet marks. There was also a tangential crack perpendicular to fracture as well as a 1/32" - 1/16" indentation that was suggestive of impact damage. The indentation was approximately 1 - 1.5" diameter quarter circle. The end of the indentation stopped at the upper half of the fracture. A review of photos of the failure done by Exelon Power Labs showed that the fracture was most likely caused by fatigue cracking. A contributory cause of the failure was also noted to be the impact damage at the fracture site.

During 1M30 V-3-20 valve rework was performed which necessitated entering the North water box approximately 20 feet North of Y-1-26 expansion bellows. However, due to the location of the valve it was unlikely that damage was caused from the work performed. Work history of expansion bellows Y-1-26 documents visual inspections of the bellows done on a 1R frequency. The last inspection was performed up to and including 1R23, November 2010, with no defects noted. The damage likely occurred after the 1R23 inspection. Since that time, work activities performed around Y-1-26 expansion bellows, such as the Condenser Waterbox Inspection PM complete

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Oveter Creek Unit 1	05000219	YEAR	SEQUENTIAL NUMBER	REV NO.	3	OF	3
		2013	- 002 -	00	J		<u> </u>
NARRATIVE							
Analysis of Event Continued							
on October 2012 during 1R24, likely res	ulted in an unseen ac	ccidental in	npact of tools or e	∍quipme	nt.		
Corrective Actions							
A temporary leak repair was performed on the south side of 'B' Condenser. A repla	on the 1" hole on Y-1 acement of the Y-1-2	-26, 'B' Co !6 Expansio	ndenser Steam I on Bellows is plar	nlet Exp nned for	ansion . a future	Joint or outag	า .e.
Previous Occurrences							
There have been no similar Licensee Ev the last two years.	ent Reports associat	ed with thi:	s component failu	ire subn	nitted at	OCNG	}S in
Component Data							
Component	IEEE 805 Syst	em ID:	IEEE 80	3A Com	ponent		
Expansion Joint	SM		EXJ				

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