AmerGen Energy Company
Oyster Creek
US Route 9 South, P.O. Box 388
Forked River, NJ 08731-0388

www.exeloncorp.com

AmerGen SM
An Exelon Company

10 CFR 50.73

January 4, 2005
2130-04-20328

U. S. 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 2004-006-00, Local Leak Rate Test Results in Excess of Technical Specifications*

Enclosed is Licensee Event Report 2004-006, Revision 0. This event did not affect the health and safety of the public or plant personnel. There was no safety system functional failure associated with this event.

If any further information or assistance is needed, please contact David Fawcett at 609-971-4284.

Sincerely,

C. N. Swenson
Vice President, Oyster Creek Generating Station

CNS/DIF
Attachment 1: List of Regulatory Commitments

cc: S. J. Collins, Administrator, USNRC Region I
P. S. Tam, USNRC Senior Project Manager, Oyster Creek
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek
File No. 04116

IE22

ATTACHMENT 1

SUMMARY OF AMERGEN ENERGY CO. LLC COMMITMENTS

The following table identifies commitments made in the document by AmerGen Energy Co. LLC (AmerGen). Any other actions discussed in this submittal represent intended or planned actions by AmerGen. They are described to the NRC for the NRC's information and are not regulatory commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
The MSIV Overhaul Procedure will be revised to include a documented management review prior to eliminating seat lapping even if a successful blue check has been obtained.	04/30/2005

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 06/30/2007

Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollects@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.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Oyster Creek, Unit 1	05000 219	1 OF 3

4. TITLE

Local Leak Rate Test Results in Excess of Technical Specifications

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	05	2004	2004	- 006 -	00	01	04	2005		05000
									FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE

N

10. POWER LEVEL

0

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER
☐ 20.2203(a)(2)(vi)	☑ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	☐ Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
David Fawcett, Licensing Engineer	(609) 971-4284

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
X	SB	ISV	A585	Y					

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete EXPECTED SUBMISSION DATE)* ☑ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On Friday, November 5, 2004, with the plant in Cold Shutdown for refueling outage 1R20, the as-found Local Leak Rate Test (LLRT) of Main Steam Isolation Valve (MSIV) NS04A failed to meet the acceptance criteria of Technical Specification 4.5.D.2. The acceptance criteria was revised just prior to 1R20 and is now less than or equal to 11.9 SCFH and the actual measured leakage was 24.3 SCFH at 20.6 psig. The valve was last refurbished during forced outage 1FO7 in September 2004 and found to be acceptable after maintenance that replaced the valve poppet. The valve was successfully repaired in 1R20 and subsequently passed the as-left LLRT.

The apparent cause of the as-found LLRT failure in 1R20 was irregularity of the mating surfaces between the poppet seating surface and the valve body seating surfaces.

Previous similar events of LLRT failures have occurred in each of the last two refueling outages:
LER 2000-010, Local Leak Rate Test Results in Excess of Technical Specifications, NS04B
LER 2002-002, Local Leak Rate Test Results in Excess of Technical Specifications, NS03A

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Oyster Creek, Unit 1	05000219	2004	- 006 -	00	2 OF 3

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

Description of Event

On Friday, November 5, 2004, with the plant in Cold Shutdown for refueling outage 1R20, the as-found Local Leak Rate Test (LLRT) of Main Steam Isolation Valve (MSIV) NS04A (EIIS SB-ISV) failed to meet the acceptance criteria of Technical Specification 4.5.D.2. The acceptance criteria is less than or equal to 11.9 SCFH at 20 (+3/-0) psig. The actual measured leakage was 24.3 SCFH at 20.6 psig.

The valve was last refurbished during forced outage 1FO7 in September 2004 and had an acceptable LLRT after maintenance that included replacing the valve poppet. The refurbishment of the valve was performed due to the valve failing to close during surveillance testing. The failure to close was due to guide rib wear. The valve was refurbished by weld repair of the guide rib. A new poppet was installed at that time. The poppet and seat were blue checked to assure 360° contact between the two components with the blue check indicating complete seat contact. The as-left LLRT was performed with an acceptable reading of 15.965 SCFH at 35 psig.

In the 1R20 refueling outage, dimensions of the valve internals were taken and no changes were noted from the as left conditions identified in 1FO7. In 1R20, the main seating surface was lapped eliminating any potential minor seating surface issues that existed. The valve was blue checked and a successful LLRT was performed.

This event is reportable per 10 CFR 50.73(a)(2)(i)(B), any operation or condition which was prohibited by Technical Specifications.

Analysis of Event

The MSIVs are containment isolation valves designed to minimize coolant loss from the vessel, and the resultant offsite dose, in the event of a main steam line break accident. The design basis loss of coolant accident was evaluated at the primary containment maximum allowable accident leak rate of 1.0% per day at an initial pressure of 35 psig that decays to 1.0 psig after 2.5 hours. The 1.0 psig is assumed to remain for the next 21.5 hours. The exceeding of 10CFR50 Appendix J leakage limits could result in unacceptable dose rates downstream of the MSIVs during an accident.

The safety significance of this event is considered minimal. The leakage past NS04A would have been limited by the leak rate of the inboard MSIV (NS03A) in the same header which met the LLRT acceptance criteria of Technical Specification 4.5.D.2 when tested in 1R19. NS04A leak rate would therefore have been limited to the leak rate past MSIV NS03A. This leakage provides adequate margin between projected potential offsite dose and 10 CFR 100 guidelines.

The acceptance criteria for MSIV LLRT had been changed between 1FO7 and 1R20 by Amendment 250 to the Facility Operating License for Oyster Creek. This change allowed LLRT to be done at 20 (+3/-0) psig versus previous testing which was performed at 35 psig. The new criteria of 11.9 SCFH @ 20 psig is more conservative than the previous criteria adjusted per ASME code calculation.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Oyster Creek, Unit 1	05000219	2004	- 006 -	00	3 OF 3

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

Analysis of Event (cont'd)

A review of industry Operating Experience (OE) for MSIV LLRT revealed numerous cases where there were leak rates significantly in excess of their limits that were unexplained and when the valve seat was lapped successful LLRTs were performed. One reported incident at another BWR plant during 1987 had an original LLRT failure on July 5th and then failed another LLRT on September 6th. The cause of the second failure was determined to be deformation of the lower seating surface that had not been removed by lapping during the prior maintenance outage in July.

Cause of Event

The apparent cause of the as-found LLRT failure was the irregularity of the mating surfaces between the poppet seating surface and the valve body seating surfaces. These minor irregularities may have caused the valve to seat differently when the valve was stroked entering the 1R20 refueling outage causing the LLRT failure. The decision to proceed with valve re-assembly in 1FO7 without lapping was made based on an acceptable blue check indicating a complete seat contact.

Corrective Actions:

- The valve was disassembled in 1R20 and the valve body seat was lapped. A satisfactory blue check was achieved and the valve was reassembled.
- The MSIV Overhaul Procedure will be revised to include a documented management review prior to eliminating seat lapping even if a successful blue check has been obtained.

Additional Information

A. Failed Components:

Main Steam Isolation Valve (MSIV) NS04A (V-1-009)

B. Previous similar events:
LER 2000-010, Local Leak Rate Test Results in Excess of Technical Specifications, NS04B
LER 2002-002, Local Leak Rate Test Results in Excess of Technical Specifications, NS03A

C. Identification of components referred to in this Licensee Event Report:

Components	IEEE 805 System ID	IEEE 803A Function
MSIV	SB	ISV