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

AmerGen SM
An Exelon/British Energy Company

January 30, 2001
2130-01-20020

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

Dear Sir:

Subject: Oyster Creek Generating Station
Docket No. 50-219
Licensee Event Report 00-010, Rev. 1: Local Leak Rate Test Results in Excess of Technical Specification Limits Due to Component Wear

Enclosed is Licensee Event Report LER 00-010, Revision 1. The changed sections are indicated by a bar in the right margin. This event did not affect the health and safety of the public.

Revision 0 of this LER documented the first excessive leak rate of the Refueling Outage 18R Local Leak Rate Testing Program. This leak rate was not considered to be a functional failure as defined by the NRC's Performance Indicator criteria. This revision to the LER includes all reportable leaks identified during the 18R leak rate test program.

If any additional information or assistance is required, please contact Mr. John Rogers of my staff at 609.971.4893.

Very truly yours,

Ron J. DeGregorio
Vice President, Oyster Creek

RJD/JJR
cc: Administrator, Region I
NRC Project Manager
Senior Resident Inspector

IE22

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Oyster Creek Unit 1	05000 - 219	1 of 4

TITLE (4)

Local Leak Rate Test Results in Excess of Technical Specification Limits due to Component Wear

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 NAME	DOCKET NUMBER
										05000
10	14	2000	2000	-- 010 --	01	01	30	2001	FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	100	20.2201(b)	20.2203(a)(2)(v)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
John Rogers	609.971.4893

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

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION	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)

On October 14, 2000, Local Leak Rate Testing (LLRT) results indicated that Main Steam Isolation Valve V-1-0010 exceeded the Technical Specification leak rate limit of .05(.75)L_a at 35 psig (equivalent to 15.98 SCFH). The leak was quantified as 21.72 SCFH at 35 psig. The cause of this occurrence was component wear. The valve was repaired and the as-left leak rate was 4.24 SCFH.

Additionally, four containment isolation valves in two penetrations were removed from the plant with no as-found LLRT data collected. This was due to a change in the scheduled maintenance on the valves. The four removed valves had successfully passed their five previous as-found LLRTs with no maintenance.

The safety significance of these events is considered minimal. The total penetration leakage would have been limited by Main Steam Isolation Valve V-1-0008 in the same steam header. The leakage past V-1-0008 was quantified at 7.7 SCFH.

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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Oyster Creek Unit 1	05000 - 219	1 of 4

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10	14	2000	2000	-- 010 --	01					05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR ☐: (Check one or more) (11)

20.2201(b)	20.2203(a)(2)(v)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)
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20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	
20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

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SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION	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)

On October 14, 2000, Local Leak Rate Testing (LLRT) results indicated that Main Steam Isolation Valve V-1-0010 exceeded the Technical Specification leak rate limit of .05(.75)L_a at 35 psig (equivalent to 15.98 SCFH). The leak was quantified as 21.72 SCFH at 35 psig. The cause of this occurrence was component wear. The valve was repaired and the as-left leak rate was 4.24 SCFH.

Additionally, four containment isolation valves in two penetrations were removed from the plant with no as-found LLRT data collected. This was due to a change in the scheduled maintenance on the valves. The four removed valves had successfully passed their five previous as-found LLRTs with no maintenance.

The safety significance of these events is considered minimal. The total penetration leakage would have been limited by Main Steam Isolation Valve V-1-0008 in the same steam header. The leakage past V-1-0008 was quantified at 7.7 SCFH.

DATE OF DISCOVERY

The events being reported were discovered commencing October 14, 2000.

IDENTIFICATION OF OCCURRENCE

Main Steam Isolation Valve (MSIV) V-1-0010 (EIIS SB-ISV) exceeded the leak rate criteria specified in Technical Specification 4.5.D.2. Additionally, four containment isolation valves were removed from the plant prior to being local leak rate tested. These conditions are considered to be reportable in accordance with 10 CFR 50.73(a)(2)(i).

CONDITIONS PRIOR TO DISCOVERY

The plant was in a cold shutdown condition for a refueling outage when these conditions were discovered.

DESCRIPTION OF OCCURRENCE

On October 14, 2000, Local Leak Rate Testing (LLRT) results indicated that Main Steam Isolation Valve V-1-0010 exceeded the Technical Specification leak rate limit of .05(.75) L_a at 35 psig (equivalent to 15.98 SCFH). The leak was quantified as 21.72 SCFH at 35 psig. Additionally, four containment isolation valves in two penetrations were replaced (V-38-0016, 0017, 0022, 0023) without obtaining as-found local leak rate test data.

APPARENT CAUSE OF OCCURRENCE

The cause of the MSIV leakage was component wear. Poppet vibration in the open position resulted in excessive rib wear. This MSIV had previously exceeded Technical Specification limits during testing in the 15R refueling outage, but had successfully passed LLRT in both 16R and 17R.

Additionally, four isolation valve solenoids were scheduled for replacement in 18R. It was subsequently decided to replace the entire valve assembly. The older valves were removed and damaged during replacement without an as-found LLRT. The cause of the omission was a weakness in the work planning process. When the scope of the work was increased, the valves were not properly identified as needing an as-found LLRT.

ANALYSIS OF OCCURRENCE AND SAFETY SIGNIFICANCE

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 steamline 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 which decays to 1.0 psig after 2.5 hours. The 1.0 psig is assumed to remain for the next 21.5 hours. This leakage provides adequate margin between projected potential offsite dose and 10 CFR 100 guidelines. This projected dose was not exceeded.

The analysis for the contribution of MSIV leakage to control room habitability was reviewed. Although the total radiation which might have been released through this pathway was slightly above the existing calculated values, the potential dose received by the operators would have increased by approximately 3%, which would have been approximately 100 mrem TEDE. This remains well below the 5 rem TEDE requirement. Additionally, a new calculation has resulted in an approximate 4% decrease in the expected operator dose. Therefore, even with the increased leakage, the calculated dose to the operator has gone down.

The safety significance of this event is considered minimal. The leakage past the MSIV would have been limited by the leak rate of the other MSIV in the same header which met the leak rate acceptance criteria of Technical Specification 4.5.D.2.

The four valves which were removed without an as-found LLRT had successfully passed the previous five LLRTs without maintenance. There was no indication of any leakage during previous plant operations. NEI 94-01, "Industry Guideline for Implementing Performance Based Option of Appendix J", Section 9.2.1, allows valves on an extended surveillance interval which are not leak tested during an outage to be assigned the as-left values from the previous outage. The 17R as-left values were used in the 18R as-found Integrated Leak Rate calculation.

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REV	
Oyster Creek, Unit 1	05000 -219	00	-- 010 --	01	4 of 4

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

CORRECTIVE ACTIONS

The MSIV was inspected and repaired. The as-left leakage was 4.24 SCFH. The four valves removed without testing were replaced. The replacement valves all passed LLRT. The four newly installed valves have been assigned the shorter 30 month surveillance interval.

To ensure that all valves requiring leak rate testing will receive the proper tests, directions will be added to the Planners Desktop Guide. This will require a review of applicable work packages to determine if seat leakage could be affected by the work scope. Additionally, this concern with the omitted tests was discussed with the planners and emphasis was placed on the need to fully evaluate changes in planned maintenance. Finally, the computer software which did not provide the level of visibility to highlight the omitted testing is being replaced. The new software is presently scheduled for release during the second quarter of 2001, with training on the new software occurring during the first and second quarters of 2001.

SIMILAR EVENTS

LER 98-013: Local Leak Rate Test Results in Excess of Technical Specification Limits