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November 26, 1996  
6730-96-2359

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

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station  
Docket No. 50-219  
Licensee Event Report 96-011: Primary Containment Leak Rate in Excess of  
Technical Specification Requirements Due to  
Incorrect Assembly of Valve Cover

Enclosed is Licensee Event Report 96-011. This event did not impact the health and safety of the public.

If any additional information or assistance is required, please contact Ms. Brenda DeMerchant, Regulatory Affairs Engineer, at 609-971-4642.

Very truly yours,

Michael B. Roche  
Vice President and Director  
Oyster Creek

MBR/BDe/gl

Attachment

cc: Administrator, Region I  
NRC Project Manager  
NRC Sr. Resident Inspector

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## LICENSEE EVENT REPORT (LER)

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.

FACILITY NAME (1)

OYSTER CREEK, UNIT 1

DOCKET NUMBER (2)

50-219

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TITLE (4)

Primary Containment Leak Rate in Excess of Tech Spec Requirements Due to Incorrect Assembly of Valve Cover

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
Month	Day	Year	Year	Sequential Number	Revision	Month	Day	Year	Facility Name	Docket Number	
10	26	96	96	-- 011	-- 0				FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)		0.0	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)			X	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)	Specify in Abstract below or in NRC Form 366A
20.2203(a)(2)(iv)			50.36(c)(2)				50.73(a)(2)(vii)				

## LICENSEE CONTACT FOR THIS LER (12)

NAME	James E. Frank, System Engineer	TELEPHONE NUMBER (Include Area Code)	609-971-4114
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## 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)

YES (If yes, complete EXPECTED SUBMISSION DATE).	NO	EXPECTED SUBMISSION	MONTH	DAY	YEAR
X					

## ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 26, 1996, a pressure drop test indicated primary containment leakage was above the Technical Specification limit. A Torus to Drywell vacuum breaker valve cover was found to be leaking. The valve cover was repaired and gross containment leakage was calculated to be below technical specification allowable leakage. Containment integrity was required for a five day period prior to discovery.

The cause of this event was determined to be less than adequate self-checking which resulted in failure to correctly reassemble V-26-005 valve cover during the 16R outage. Procedure changes will require emphasis on self-checking to ensure that the cover plate is level during and after the torquing sequence. An evaluation of the methodology used in performing Local Leak Rate Testing (LLRT) of the torus/drywell vacuum breakers will be done.

Additionally, this specific human performance error, as well as others, will be discussed at weekly craft/management interface meetings now in progress.

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

**DATE OF DISCOVERY**

Primary containment leak rate was calculated to be above Technical Specification limits on October 26, 1996, at approximately 2300 hours.

**IDENTIFICATION OF OCCURRENCE**

Containment (EIIIS JM) Torus to Drywell vacuum breaker cover V-26-5 (EIIC XX) was found to be leaking while containment was pressurized.

The leakage path was probably present during five days of reactor operation following the 16R outage.

This condition is considered reportable in accordance with 10 CFR 50.73(a)(2)(i) and 10 CFR 50.73(a)(2)(ii).

**CONDITIONS PRIOR TO DISCOVERY**

At the time of the discovery, the plant was shutdown, less than 212°F and vented to atmosphere. Primary containment was not required to be in effect.

The reactor had been operated in a startup mode with containment integrity in effect for approximately five days prior to the discovery. Primary Containment was inerted and pressurized with nitrogen for 40 hours prior to the manual plant shutdown on October 25, 1996.

**DESCRIPTION OF OCCURRENCE**

During the 16R outage all Torus to Drywell vacuum breaker valves were disassembled for mechanical surveillance and limit switch calibration. All passed local leak rate tests.

On October 20, 1996, the reactor was started and containment integrity was required. The plant was shutdown to repair a steam leak, and subsequently restarted on October 22, 1996. Containment was fully inerted and pressurized with nitrogen at 8:00 p.m. on October 23, 1996. (Containment pressurization was necessary to identify any leakage). On October 24, 1996, at 8:00 a.m., shift personnel performed a gross leakage calculation indicating containment leakage could be above Technical Specification and an evaluation began.

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## DESCRIPTION OF OCCURRENCE (Cont'd.)

The accuracy of the calculated leakage was low as containment conditions continued to change during the power ascension. Also, a significant contributor to the calculated leakage was identified at the nitrogen compressor outside of containment. This compressor leakage is not containment leakage. Further monitoring of the leakage continued during power ascension.

The reactor reached full power on October 25, 1996, and was subsequently shut down due to a generator cooling system problem. On October 26, 1996, the reactor was placed in cold shutdown and containment was no longer required. The time during which containment had been required was 133 hours.

While shutdown, the primary containment was pressurized to 2.0 psig under controlled conditions to perform a leakage test. During this test, a leak rate of approximately double the allowable Technical Specification limit was calculated.

While the containment was pressurized, a thorough walkdown was performed and the leak was identified. The vacuum breaker V-26-5 valve cover was found to be leaking. The cover was noted to be slightly out of alignment with the body.

The containment was depressurized and the valve was disassembled. The O rings were replaced, the valve was reassembled, and a local leak rate test was completed satisfactorily.

A subsequent containment pressure test was completed indicating total containment leakage was within allowable limits.

APPARENT CAUSE OF OCCURRENCE

The elevated containment leakage was caused by misalignment of the valve cover during valve assembly. During containment pressurization and heat up, the cover shifted slightly causing a leak path. The inner o-ring was believed to have been subsequently pinched during attempts to realign the cover. The root cause of this occurrence was personnel error in that improper valve maintenance was performed.

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**ANALYSIS OF OCCURRENCE AND SAFETY ASSESSMENT**

The safety significance of this occurrence has been determined to be minimal.

The function of the V-26-5 cover is to maintain primary containment integrity. If a design basis accident had occurred, automatic systems would have re-directed Reactor Building exhaust and V-26-5 cover leakage through the Standby Gas Treatment System (SGTS) for high efficiency filtering. The leak rate of the cover was calculated to be less than 875 scfh adjusted to a 35 psig pressure. This flow rate is well below the SGTS flow rate of 2600 scfm which would ensure that any release from this path would be filtered and monitored.

Additionally, during the entire time when containment integrity was required, reactor building radiation levels were normal.

**CORRECTIVE ACTIONS****IMMEDIATE ACTIONS**

A containment walkdown was performed and the leak was identified.

**SHORT TERM ACTIONS**

Valve, V-26-005 O rings were replaced and the valve was properly reassembled. A subsequent local leak rate test was performed with satisfactory results.

Primary containment leakage was calculated to be within Technical Specification limits upon subsequent containment pressurization utilizing the same procedure which identified the V-26-5 cover leakage.

**LONG TERM ACTIONS**

Procedure 604.1.005 "Torus to Drywell Vacuum Breaker, Mechanical Surveillance and Limit Switch Calibration" will be revised to emphasize self-checking in ensuring valve cover plate is level during and after torquing sequence.

An evaluation of the methodology for performing LLRT of the torus/drywell vacuum breakers will be done.

Additionally, this specific human performance error as well as selected others from 1996 will be discussed by upper management with craft personnel at the weekly craft/management interface meetings now in progress, as well as, monthly supervisor meetings.

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**SIMILAR EVENTS**

LER 94-022; December 19, 1994, Primary Containment Leak Rate in Excess of Technical Specification Requirements Due to Maintenance Procedure Non-compliance Sequence of Events.