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Tel 609-971-4000

April 10, 1997  
6730-97-2108

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 97-003:

Enclosed is Licensee Event Report 97-003. This event did not impact the health and safety of the public.

If any additional information or assistance is required, please contact Mr. Paul Czaya, Regulatory Affairs Engineer, at 609-971-4139.

Very truly yours,

*Michael B Roche*  
Michael B. Roche  
Vice President and Director  
Oyster Creek

MBR/PFC/gl

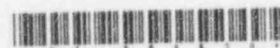
Attachment

150132

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

IE221

9704150235 970410  
PDR ADOCK 05000219  
S PDR



## 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

PAGE (3)

1 of 3

TITLE (4)

Suppression Pool Bypass Flow Path Created During Preventive Maintenance Due to Inadequate Safety Review

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
03	11	97	97	-- 003 --	00	4	10	97	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		Run	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
		20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)					
POWER LEVEL (10)		100%	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(1)	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A					
			20.2203(a)(2)(iv)	50.36(2)		50.73(a)(2)(vii)				

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Robert Henriksen, Operations Engineer

TELEPHONE NUMBER (Include Area Code)

609-971-4872

## 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 March 11, 1997, while post maintenance testing was in progress on torus spray valve V-21-18, operations personnel identified that the pressure suppression function of primary containment had been inadvertently degraded. By opening valve V-21-18, a flow path was created from the drywell to the torus airspace which would have bypassed the suppression pool in the event a loss of coolant accident (LOCA) occurred. This could result in inadequate steam suppression from the drywell and over-pressurization of the torus. The condition existed for a total of about ten minutes, therefore, exposure to the risk was minimal. The cause of this event has been determined to be an inadequate safety review of the change of PM 9441M from an outage task to an on-line task. This resulted in inadequate precautions in the job order and maintenance procedures that controlled the evolution. Upon discovery, shift supervisors notified affected operations personnel that when a torus spray valve is cycled, the associated test valve must be closed. A process will be developed and implemented to allow review of work activities and preparation of switching orders by operations personnel other than the on-shift control room staff. The process for revising PMs will be reviewed and revised to address potential impacts on performing a PM when the plant is in a different mode than specified.

**LICENSEE EVENT REPORT (LER)**  
Text Continuation

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

**DATE OF DISCOVERY**

The event occurred on March 11, 1997.

**IDENTIFICATION OF OCCURRENCE**

While post maintenance testing was in progress on torus spray valve (EIIC-INV) V-21-18, operations personnel identified that the pressure suppression function of primary containment had been inadvertently degraded. By opening valve V-21-18, a flow path was created from the drywell to the torus airspace which would have bypassed the suppression pool in the event a loss of coolant accident (LOCA) occurred. Valve V-21-18 was opened and closed three times. This is a condition which is outside the design basis of the plant.

This condition is considered reportable pursuant to 10 CFR 50.73(a)(2)(ii).

**CONDITIONS PRIOR TO DISCOVERY**

The plant was at approximately 100% power at the time of discovery. System pressures and temperatures were normal for full power operation. Containment spray system 1 was inoperable to perform preventive maintenance.

**DESCRIPTION OF OCCURRENCE**

Normally, the containment spray system is aligned in the torus cooling mode. In this mode, containment spray test valve (EIIC-TV) V-21-17 is open to allow cooling water flow into the downcomer that connects the drywell to the torus. The downcomer is submerged in the suppression pool so that during a LOCA steam is quenched. In the torus cooling mode, sprays to the drywell and torus are isolated.

Preventive maintenance (FM) was performed on torus spray valve V-21-18 while the system was aligned in the torus cooling mode. The PM and post maintenance testing (PMT) required that V-21-18 be cycled. Valve V-21-18 was cycled open and closed three times. When V-21-18 was opened with V-21-17 open, pressure suppression capability was degraded.

**APPARENT CAUSE OF OCCURRENCE**

The cause of this event has been determined to be an inadequate safety review of the change of PM 9441M from an outage task to an on-line task. This resulted in inadequate precautions in the job order and maintenance procedures that controlled the evolution. The individuals involved in the safety review did not have sufficient operating knowledge to identify the potential concern.

In addition, the control room staff did not identify the potential suppression pool bypass flow path during development, review and approval of switching orders to implement the PM.

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

**ANALYSIS OF OCCURRENCE AND SAFETY ASSESSMENT**

When a flow path is created from the drywell to the torus airspace, in the unlikely event of a LOCA, the quenching effect of the suppression pool is bypassed and the torus air space becomes pressurized. This could result in inadequate steam suppression from the drywell and over-pressurization of the torus. The condition existed for a total of about ten minutes, therefore, exposure to the risk was minimal.

**CORRECTIVE ACTIONS**

Upon discovery, shift supervisors notified affected operations personnel that when a torus spray valve is cycled, the associated test valve must be closed.

A pre-shift briefing form will be issued to alert licensed and non-licensed operators to potential suppression pool bypass paths.

This event will be reviewed with personnel that revise PM tasks as follows:

1. Highlight the potential effect on the plant of changing from an outage task to an on-line task.
2. Ensure that appropriate operations personnel are included in the review process.
3. Review other PMs that were changed to on-line PMs to ensure that operational considerations are appropriately addressed.

A process will be developed and implemented to allow review of work activities and preparation of switching orders by operations personnel other than the on-shift control room staff.

The process for revising PMs will be reviewed and revised to address potential impacts on performing a PM when the plant is in a different mode than specified.

Job orders and maintenance procedures that include PM tasks on the containment spray system will be revised to include appropriate precautions related to preventing suppression pool bypass.

Caution labels will be posted as needed at containment spray valves to help ensure that suppression pool bypass paths are not created.

The functions of primary containment will be reviewed in operator requalification training. The impact of suppression pool bypass paths will be emphasized.

**SIMILAR EVENTS**

None