NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Oyster Creek, Unit 1	0 5 0 0 0 2 1 9	1 OF 0 1 4

TITLE (4)
Two Inoperable Containment Isolation Valves in a Single Penetration

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 NAMES	DOCKET NUMBER(S)
											0 5 0 0 0
0 2	0 2	8 5	8 5	-	0 0 2	- 0 0	0 3	0 1	8 5		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 1 0 7		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Lynne Leitman, Engineer	6 0 9 — 9 7 1 1 - 1 4 3 8 9

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	
B	C E	I S V	A 3 9 1	Y							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On February 2, 1985, two (2) containment isolation valves in a single penetration were inoperable. During a planned shutdown, a reactor water cleanup system isolation valve (V-16-1) was required to be taken off its backseat. An electrician was dispatched to the motor control center supplying the valve to engage the closing contactor. To prevent full closure of the valve due to a seal-in closing signal, the electrician manually tripped the breaker. The breaker trip caused the cleanup recirculation pump to trip, which in turn caused a cleanup system isolation on low flow. A second isolation valve (V-16-14) failed to fully close on the system isolation signal, resulting in two (2) inoperable isolation valves in a single penetration. When the second isolation valve failed to close, the breaker for V-16-1 was re-closed and the valve travelled to the full closed position. Valve V-16-1 was left secured in the closed position and valve V-16-14 and the cleanup system outlet isolation valve (V-16-61) were secured closed within four (4) hours in accordance with Technical Specifications.

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

DATE OF OCCURRENCE

The event occurred on February 2, 1985 at approximately 0650 hours.

IDENTIFICATION OF OCCURRENCE

At least one (1) containment isolation valve in a containment penetration was not operable when reactor water temperature was above 212°F with fuel in the reactor vessel, as required by Technical Specification 3.5.A.3.a.1.

This event is considered to be a reportable event as defined in 10CFR50.73(a)(2)(i)(B).

CONDITIONS PRIOR TO OCCURRENCE

The reactor was being shutdown with reactor coolant temperature at 520°F, reactor power at 130 MWt and the reactor mode switch was STARTUP.

DESCRIPTION OF OCCURRENCE

During a planned shutdown on February 2, 1985, the reactor cleanup system inlet isolation valve inside the drywell (V-16-1) was required, by procedure, to be taken off its backseat. An electrician, stationed at the motor control center supplying power to the valve, was directed by Control Room personnel to depress the valve's closing contactor for two (2) seconds, using an option provided in a Station Standing Order to close, then open the valve rather than using the lengthy unbackseating procedure. However, this valve has a seal-in contact in the closing direction, causing the valve to go fully closed upon a closing signal. The instructions in the unbackseating procedure state that the leads for the opening and closing contactors are to be reversed, and the opening contactor is depressed for two (2) seconds to move the valve off its backseat. This is done because there is no seal-in contact in the opening logic. If the Control Room personnel and electrician had elected to use the unbackseating procedure rather than the Station Standing Order, a different series of steps would have been performed to move the valve off its backseat.

When the closing contactor was depressed the valve attempted to fully close, but the electrician tripped the breaker to prevent full valve closure. The breaker was tripped with the knowledge of Control Room personnel, not realizing that it would cause a system isolation. Control Room indication at this time went from double indication (valve in travel between full open and full closed) to no indication. When the breaker for the valve was tripped the cleanup system isolated on low flow. The cleanup system inlet isolation

valve outside the drywell (V-16-14), which was fully open prior to the isolation signal, partially closed as indicated by double position indication in the Control Room. When the breaker for V-16-1 was closed again, the system isolation signal was still present, and the valve travelled further toward the fully closed position. The valve breaker was again tripped, then subsequently reclosed after a few seconds (by the electrician under the direction of Control Room personnel) and the valve was left secured in the closed position.

With both cleanup system inlet isolation valves open momentarily and subsequent system stabilization, the cleanup system relief valve alternately lifted and reseated for approximately 15 minutes, passing approximately 1800 gallons of water to the torus.

APPARENT CAUSE OF OCCURRENCE

The apparent cause of the occurrence is attributed to the following:

a. V-16-1 did not close because its supply breaker was tripped. An action to trip the breaker is not included in the unbackseating procedure or the Station Standing Order. Allowing the breaker to be tripped represents a cognitive error in that the Control Room operators did not realize the consequences of their actions. The Standing Order permits a choice between using the unbackseating procedure or simply opening and closing the valve, however, the Standing Order provides no specific instructions for valve operation and must be revised.

b. V-16-14 failed to close on a system isolation signal because its lantern ring was damaged causing the stem to bind. Engineering analysis has determined the cause of the failure of V-16-14 to be steam cutting of the lantern ring.

ANALYSIS OF OCCURRENCE and SAFETY ASSESSMENT

The reactor water cleanup system inlet valves are designed to isolate on the following signals: low system flow; auxiliary pump cooling water outlet high temperature; non-regenerative heat exchanger outlet high temperature; high system pressure; standby liquid control system activation, reactor low-low level; and high drywell pressure. In this case, a system isolation signal was present, but both system inlet valves failed to close. (One because of valve failure and one because of procedural error.)

When it was found that the system received an isolation signal and the isolation valve (V-16-1) inside the drywell was still open, its supply breaker was immediately closed and valve closed.

The safety significance of this event is considered minimal due to the short time period during which V-16-1 was made inoperable.

CORRECTIVE ACTION

The immediate corrective action action taken was to close the breaker for V-16-1 and allow the valve to fully close. The valve was left secured in the closed position. In addition, valves V-16-14 and V-16-61 (inlet and outlet isolation valves, respectively), were also secured closed within 4 hours per the Technical Specifications. Later, once the reactor shutdown had been completed (212°F reactor coolant temperature) valves V-16-1 and V-16-61 were released for operation so the cleanup system could be returned to service.

During the subsequent outage, valve V-16-14 was found to have a damaged lantern ring. The lantern ring was repaired and the valve stem was also repaired. Valves V-16-1 and V-16-14 successfully passed operability tests which included MOVATS testing of the motor operator prior to startup. Also, as an additional reminder to operators and electricians, a sign will be placed at the breaker for valve V-16-1 that states that opening the breaker causes a cleanup recirculation pump trip. The Standing Order will be revised to caution that taking V-16-1 off its backseat must be done either by fully closing the valve and then reopening, or by using a procedure which reverses the leads and uses the opening contactor.

EQUIPMENT FAILURE DATA

Although V-16-14 is not identified as the cause of the event, failure data for the valve are provided below:

Cause:	B
System:	CE
Component:	ISV
Component Manufacturers:	A391
Reportable to NPRDS:	Yes

GPU Nuclear

GPU Nuclear Corporation
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Writer's Direct Dial Number:

March 1, 1985

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

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Licensee Event Report

This letter forwards one (1) copy of Licensee Event Report (LER) No. 85-002.

Very truly yours,

Peter B. Fiedler
Vice President and Director
Oyster Creek

PBF:KB:dam (#0603A)
Enclosures

cc: Dr. Thomas E. Murley, Administrator
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