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Writer's Direct Dial Number:

October 6, 1994
C321-94-2155

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

Dear Sir:

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

Enclosed is Licensee Event Report 94-017.

If there are any questions please contact Terry Sensue, Oyster Creek Licensing Engineer at 609-971-4680.

Very truly yours,

John J. Barton
Vice President and Director
Oyster Creek

JJB/TS:jc
Enclosure

100040
9410120281 941006
PDR ADDCK 05000219
S PDR

cc: Administrator, Region I
Senior Resident Inspector
Oyster Creek NRC Project Manager

LICENSEE EVENT REPORT (LER)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

FACILITY NAME (1)

Oyster Creek, Unit 1

DOCKET NUMBER (2)

05000219

PAGE (3)

1 OF 4

TITLE (4)

SPURIOUS ACTUATION OF REACTOR TRIPLE LOW WATER LEVEL SENSORS

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
09	15	94	94	017	0	10	06	94	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)			20.402(b)		20.405(c)		X		50.73(a)(2)(iv)	73.71(b)
			20.405(a)(1)(i)		50.36(c)(1)				50.73(a)(2)(v)	73.71(c)
			20.405(a)(1)(ii)		50.36(c)(2)				50.73(a)(2)(vii)	OTHER
			20.405(a)(1)(iii)		50.73(a)(2)(i)				50.73(a)(2)(viii)(A)	Specify in Abstract below and in Text, NRC Form 366A
			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 James Langenbach, Outage Director

TELEPHONE NUMBER (Include Area Code)

609-971-4090

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).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (16)

On September 15, 1994, the reactor was in a cold shutdown condition during a refueling outage. While water flushing a reactor water level instrument reference leg line tap inside the reactor vessel, two reactor triple low water level sensors spuriously actuated causing an automatic reactor building closed cooling water system valve to isolate flow returning from the drywell at approximately 1034 hours.

This event was caused by a work package inadequacy. Prerequisites to disable the function of the instruments connected to the reference leg line were not communicated to the contractor performing the work.

This event was not safety significant since the isolation function of this valve is not required to be operable during the present plant conditions.

The isolated valve was reopened and all instruments connected to the reference leg lines were isolated. Additional corrective actions will include communicating lessons learned from this event to appropriate personnel who have responsibility for work package preparation.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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DATE OF OCCURRENCE

This event occurred on September 15, 1994 at 1034 hours.

IDENTIFICATION OF OCCURRENCE

While performing work on a reactor water level instrument reference leg line, two reactor triple low water level sensors (CFI-LT) spuriously actuated causing an automatic Reactor Building Closed Cooling Water (RBCCW) system (EIIS-CC) valve (CFI-ISV) to isolate flow returning from the drywell. This event is reportable based on 10 CFR 50.73(a)(2)(iv).

CONDITIONS PRIOR TO OCCURRENCE

The reactor was in the cold shutdown condition, i.e. the mode switch was locked in shutdown and reactor water temperature was 110°F. The reactor head was removed and the reactor was flooded to 588 inches above the top of active fuel (TAF). RBCCW flow was only being supplied to the drywell coolers.

DESCRIPTION OF OCCURRENCE

While preparing to start work on a reactor water level system (EIIS-JC) modification, the refuel outage contractor was tasked with installing isolation plugs in the reactor water level reference leg lines inside the reactor vessel. These plugs would provide isolation so that the lines outside the reactor vessel could be cut and modified.

Before installing the isolation plugs, it was decided to first flush the tap with water where the reference leg line penetrated the reactor vessel. Cleaning out loose debris from the tap would allow for easier isolation plug installation. The contractor obtained permission from the Operations Outage Coordination Center to begin the water flushing.

When water flushing of one of the reference leg lines commenced, the two reactor triple low water level sensors RE18-A&C which are connected to the line spuriously actuated due to the differential pressure established across the sensors. This caused a RBCCW return flow from the drywell isolation valve to cycle closed.

The control room operating crew responded to the triple low isolation alarm received due to the spurious actuation. They reset the initiation logic and opened the RBCCW isolation valve to re-establish flow to the drywell coolers.

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APPARENT CAUSE OF OCCURRENCE

This event was caused by not having the prerequisites to disable the function of the instruments connected to the reference leg lines communicated to the contractor performing the work. The original planning job package contained prerequisites for removing these instruments from service to support the modification work. However, the work scope for isolating the reference leg lines was assigned to a contractor and separated from the original job package. Therefore, the prerequisites for disabling the instruments were not provided to the contractor for incorporation into their work package.

A contributing cause to this event was the responsible technical review (RTR) of the contractor work package did not identify the need for prerequisites to disable the function of the instruments connected to the reference leg lines. Since these instruments are not required to be operable during the present plant configuration and the modification work would render the instruments inoperable, it was not recognized that the instruments would provide signals to actuation logic trains unless they were physically isolated.

ANALYSIS OF OCCURRENCE AND SAFETY ASSESSMENT

The reactor triple low water level sensors provide input signals to the Automatic Depressurization System (ADS) (EIIS-JE) where the control logic is generated to close the RBCCW - Drywell isolation valves. This arrangement satisfies compliance with the requirements of NUREG-0578. The RBCCW system is not required for the safe shutdown of the reactor nor to mitigate the consequences of postulated accidents. Also the equipment serviced by the RBCCW system within the primary containment (drywell) is not required to mitigate the consequences of postulated accidents.

During a refueling outage when the reactor is not critical and reactor water temperature is below 212°F, primary containment integrity is not required to be maintained. Thus the ADS and RBCCW isolation functions are not required by technical specifications to be operable. Some drywell coolers remain in service during a refueling outage to provide worker comfort while bulk work activities are ongoing within the drywell. The momentary loss of RBCCW flow to the drywell coolers did not upset any work activities. Therefore, this event is not safety significant.

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CORRECTIVE ACTIONS

Immediate corrective actions included temporarily stopping the water flushing and isolation plug installation work, reopening the closed RBCCW isolation valve, and isolating all instrumentation connected to the reference leg lines that are being modified.

Lessons learned from this event will be communicated to the appropriate personnel within the Engineering staffs, Project Management teams, Planning groups and Responsible Technical Reviewers/Independent Safety Reviewers who have the responsibility for work planning and implementation.

This event will be used as an example of the importance of communicating the prerequisites for performing work to the work implementing organization, particularly when work is performed by more than one implementing organization.

SIMILAR EVENTS

LER 90-002 "Standby Gas Treatment System Automatically Starts While Removing Instrument Panel Power Supply from Service for Maintenance".