OYSTER CREEK NUCLEAR GENERATING STATION
Forked River, New Jersey 08731

Licensee Event Report Update
Reportable Occurrence No. 50-219/82-48/03X-1

Report Date

January 22, 1985

Previous Report Date

September 27, 1982

Occurrence Date

August 26, 1982

Identification of Occurrence

Violation of Technical Specification 3.1.A, when the reactor water level instrumentation for one channel in each Reactor Protection System and one channel in each of several safety systems were rendered inoperable as a result of the loss of reference column head.

This event is considered to be a reportable occurrence as defined in the Technical Specifications, paragraph 6.9.2.b(2).

Conditions Prior to Occurrence

The plant was shutdown with the reactor vessel vented. Reactor coolant temperature was being maintained at less than 212°F.

Description of Occurrence

On August 28, 1982 at 4:30 AM, a ten inch reactor water level error was entered into the shutdown logs. Approximately four hours later, the instrument error increased another ten inches which represented 100% of full scale or vessel high water level. All other level instrumentation indicated normal reactor water level. At 2:30 PM, the instrument reference leg was back-filled to correct the level error. A close observation of four sensors was maintained for a day and one half with no evidence of level error. Valve alignment was checked with attention given to the bypass valves; local piping was also observed for leakage, but none was evident.

A calculation was performed to determine the leak rate required to reduce the reference leg by approximately twenty-one and three quarter inches (21-3/4"). Assuming ten inches (10") or 27.7 cc of water was lost in four hours (taken from log readings) from the reference leg piping, the leak rate would be 0.12 cc/min. The volume of the constant head chamber is 168 cc. To evacuate this chamber at the constant rate of 0.12 cc/min. or 2.3 drops/min would take 24 hours and 15 minutes. It would take 8 hours to drain 20

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inches of reference leg piping and an additional 116 hours and 15 mintues to drain the constant head reserve chamber, for a total of 148 hours and 30 minutes to reach the as-found level. A review of various logs indicated that no maintenance or surveillance tests had been performed on the sensors or piping in question during this time. The last surveillance test was performed on August 6, 1982, nine days prior to plant shutdown, and nineteen days prior to the error event.

It should be noted that there are no piping connections with other systems and the affected water level reference leg. This was confirmed, at an earlier date, by a hand over hand walkdown of the instrument sensor piping.

Apparent Cause of Occurrence

The cause of the erroneous vessel water level reading was a decrease in reference leg head.

Analysis of Occurrence

The reactor water level instruments in question provide various reactor protection and safety system functions associated with the reactor scram, core spray initiation, isolation condenser initiation and ATWS recirculation pump trip. Redundant instrumentation, which was operable, also provides these functions; and, since the reactor was shutdown, vented and reactor coolant was less than 212°F, the safety significance of this event is considered minimal. During power operation, steam condensing in the constant head chamber provides continuous make-up to the reference leg thereby preventing erroneous high readings. Additionally, it should be noted that no change in actual reactor water level occurred as a result of this event.

Corrective Action

The immediate corrective action was to backfill the reference leg for the affected level instruments which restored it to an operable condition. The long term solution, which has been accomplished, was to develop a testing program to assure the condition of instrument rack RK02 level instruments, which included:

1. Pressure and leak testing of the instrument diaphragms and equalizing valves.
2. Visual inspection, at pressure, of all valves and fittings in the reference and variable legs, including the valve manifolds.

As a result of testing, per method 1, an equalizing valve of one valve manifold on RK02 was found leaking. The valve manifold was replaced. As a resul' of testing, per method 2, two instrument root valves were found leaking and repacked. After peforming the required maintenance on the entire system RK02 was tested satisfactorily, using both pressure and leak tests. As a result of testing RK02, the scope of work was expanded to include RK01. The tests which were performed on RK02 were performed on the RK01 instruments. The results of this testing indicated a diaphragm leak on one instrument. A new instrument was installed and subsequently passed both pressure and leak tests. Following the repair and testing, observation of the level indicators revealed consistent and accurate level indication.

UPDATE REPORT - PREVIOUS REPORT DATE September 27, 1982

NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01	LICENSEE CODE: N J O C P 1 (2)	LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3)	LICENSE TYPE: 4 1 1 1 1 (4)	CAT (5)

CON'T

01	REPORT SOURCE: L (6)	DOCKET NUMBER: 0 5 0 0 0 2 1 9 (7)	EVENT DATE: 0 8 2 6 8 2 (8)	REPORT DATE: 0 1 2 2 8 5 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 During shutdown, the reactor water level instrumentation for one channel
03 in each Reactor Protection System and one channel in each of several
04 safety systems were rendered inoperable as a result of a loss of
05 reference column head. This is a violation of Tech Spec 3.1.A and is
06 reportable per Tech Specs, para. 6.9.2.b.2. As the reactor was shutdown,
07 the safety significance is considered minimal.
08

09	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
	I A (11)	E (12)	B (13)	V A L V E X (14)	G (15)	H (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 4 8	/	0 3	X	—	1

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
C (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	N (25)	Y 0 1 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 The cause of erroneous vessel water level indication was a decrease in
11 reference leg head. The reference leg for the affected instruments was
12 filled and restored as operable. A test program was implemented and
13 resulted in replacement of a valve manifold and repacking of two (2) root
14 valves.

15	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
	G (28)	0 0 0 (29)	NA	A (31)	Operator Observation

16	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

17	NUMBER	TYPE	DESCRIPTION (39)
	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

18	NUMBER	DESCRIPTION (41)
	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

19	TYPE	DESCRIPTION
	Z (42)	NA

PUBLICITY

20	ISSUED	DESCRIPTION (45)	NRC USE ONLY
	N (44)	NA	

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January 22, 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 Update

This letter forwards Reportable Occurrence No. 50-219/82-48/03X-1, a Licensee Event Report revision, in compliance with paragraph 6.9.2.b(2) of the Technical Specifications.

Very truly yours,

Peter B. Fiedler
Vice President and Director
Oyster Creek

PBF:PC:dam
Enclosures

cc: Dr. Thomas E. Murley, Administrator
Region I
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NRC Resident Inspector
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