UPDATE REPORT - Previous Report February 2, 1983 update on failure of SG pressure transmitters B&W

NRC FORM 366 (7-77)

LICENSEE EVENT REPORT

U. S. NUCLEAR REGULATORY COMMISSION
Attachment 1
4410-83-L-0243

DEC 16 1983

CONTROL BLOCK: 1 6 7 2 7 5 (1)

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | P A T M I 2 (2) | 0 0 - 0 0 0 0 0 - 0 0 (3) | 4 1 1 1 1 (4) | (5)

LICENSEE CODE (7-14) | LICENSE NUMBER (15-25) | LICENSE TYPE (26-30) | CAT (57-58)

CON'T

0 1 | REPORT SOURCE: L (6) | DOCKET NUMBER: 0 5 0 0 0 3 2 0 (7-68) | EVENT DATE: 0 1 0 4 8 3 (8-74) | REPORT DATE: 1 0 3 1 8 3 (75-80) (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | On Jan. 4, 1983, after filling the secondary side of Once Through Steam Generator (OTSG)

0 3 | "A" to facilitate cleaning, the OTSG pressure instrument was expected, but did not,

0 4 | register a small change. Investigation showed both "A" OTSG pressure indicators were

0 5 | inoperable. Further investigation on Jan. 7 showed 1 indicator on the "B" was

0 6 | inoperable on Jan. 25; the 2nd "B" OTSG pressure instrument was inoperable. These

0 7 | events are reportable via Tech Spec 3.3.3.5 and 3.3.3.6 pursuant to 6.9.1.8(b).

0 8 | These events had no effect on the health and safety of the public.

0 9 | SYSTEM CODE: H B (11) | CAUSE CODE: E (12) | CAUSE SUBCODE: X (13) | COMPONENT CODE: I N S T R U (14) | COMP. SUBCODE: T (15) | VALVE SUBCODE: Z (16)

(17) LER/RO REPORT NUMBER: EVENT YEAR 8 3 | SEQUENTIAL REPORT NO. 0 0 1 | OCCURRENCE CODE 0 1 | REPORT TYPE X | REVISION NO. 1 (Rev. 0 on file)

ACTION TAKEN F (18) | FUTURE ACTION G (19) | EFFECT ON PLANT Z (20) | SHUTDOWN METHOD Z (21) | HOURS (22) 0 0 0 0 | ATTACHMENT SUBMITTED Y (23) | NPRD-4 FORM SUB. N (24) | PRIME COMP. SUPPLIER A (25) | COMPONENT MANUFACTURER F 1 8 0 (26)

1-30-84 RR

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Investigation on the "A" OTSG pressure indicators indicate that the probable cause was

1 1 | failure of the pressure transmitters located on the 282' elevation of the reactor bldg.

1 2 | Alternate pressure indication was provided for both OTSG's to fulfill requirements

1 3 | of Tech Spec 3.3.3.6. A Tech Spec Change Request has been submitted to delete the

1 4 | OTSG pressure instrument requirements of Tech Spec 3.3.3.5.

1 5 | FACILITY STATUS: X (28) | % POWER: 0 0 0 (29) | OTHER STATUS (30): Recovery Mode | METHOD OF DISCOVERY: A (31) | DISCOVERY DESCRIPTION (32): Operator observation

1 6 | ACTIVITY RELEASED: Z (33) | CONTENT OF RELEASE: Z (34) | AMOUNT OF ACTIVITY (35): N/A | LOCATION OF RELEASE (36): N/A

1 7 | PERSONNEL EXPOSURES NUMBER: 0 0 0 (37) | TYPE: Z (38) | DESCRIPTION (39): N/A

1 8 | PERSONNEL INJURIES NUMBER: 0 0 0 (40) | DESCRIPTION (41): N/A

8311210414 831031
PDR ADOCK 05000320
S PDR

1 9 | LOSS OF OR DAMAGE TO FACILITY TYPE: Z (42) | DESCRIPTION (43): N/A

2 0 | PUBLICITY ISSUED: N (44) | DESCRIPTION (45): N/A | NRC USE ONLY

NAME OF PREPARER: Russ Wells | PHONE: (717) 948-8461

LER 83-01/01X-1
EVENT DATES - January 4 and 25, 1983

I. EXPLANATION OF THE OCCURRENCE

During the "A" Once Through Steam Generator cleanup operations on January 4, 1983, at 1145 hours, the Unit 2 Control Room personnel observed that the "A" Once Through Steam Generator (OTSG) pressure indication read less than zero. A rough calculation showed that the indication should have shown approximately 8 psig due to static head. (The "A" OTSG water level was verified to be at 715 inches on January 4, 1983.) Due to this discrepancy, the "A" OTSG pressure indication was declared inoperable. An investigation was initiated to determine the reason for the low indication.

For an extended period of time, the OTSG secondary side was maintained in a partially drained condition and at ambient pressure. As a result, the OTSG pressure instrument was reading at zero pressure, as expected. When the "A" OTSG was filled for OTSG cleanup operations using the OTSG Layup Recirculation System, some pressure indication was expected but not seen on the pressure instrument.

This condition placed the unit in the Action Statement of Technical Specifications 3.3.3.5 and 3.3.3.6, Tables 3.3-9 and 3.3-10, respectively. At 1945 hours, the Action Statement timeclock (8 hours) for Tech Spec 3.3.3.5 was exceeded. This event is, therefore, reportable pursuant to Section 6.9.1.8(b) of the Recovery Technical Specifications.

On January 7, 1983, OTSG Pressure Transmitter SP-6B-PT2 for the "B" OTSG was declared out-of-service. On January 25, 1983, at 1100 hours, Pressure Transmitter SP-6B-PT-1 was declared out-of-service. With both the "B" OTSG pressure transmitters inoperable, the unit again entered the Action Statement of Technical Specifications 3.3.3.5, Table 3.3-9. Note: Only the Action Statement for Section 3.3.3.5 was entered due to the installation of a local pressure gauge for monitoring the "B" OTSG pressure. For further information, see the Immediate Corrective Action Section of the LER.

II. CAUSE OF THE OCCURRENCE

These events were the result of the apparent inoperability of Pressure Transmitters SP-6A-PT1/2 (OTSG "A") and SP-6B-PT1/2 (OTSG "B") all of which are located on the 282'-6" elevation of the containment building. Due to the location of these transmitters, the root cause for the transmitter failures could not be determined.

III. CIRCUMSTANCES SURROUNDING THE OCCURRENCE

At the time of the occurrence, the Unit 2 facility was in a long-term cold shutdown state. The reactor decay heat was being removed via loss to ambient. Throughout the event there was no effect on the Reactor Coolant System or the core.

IV. CORRECTIVE ACTIONS TAKEN OR TO BE TAKEN

Immediate

After the declaration of inoperability of the "A" OTSG pressure instruments, all evolutions with the "A" OTSG were placed in a temporary shutdown mode. An investigation was initiated to identify and repair the problem. It was verified during the investigation that the signals emerging from the containment building indicated that the pressure transmitters were failed.

As a result of the "A" OTSG pressure transmitter failures, the need for monitoring the OTSG pressures during the OTSG cleanup evolutions and the inability to repair the installed instrumentation due to ALARA considerations alternate pressure indication was installed on both OTSG's. The alternate pressure indication (0-60 psi) on the main steam line of the "A" OTSG and the emergency feedwater line of the "B" OTSG were installed on January 7 and 6, 1983, respectively. Also as a result of the "A" OTSG pressure transmitter failures, the "B" OTSG transmitters were checked on January 7, 1983. At that time, SP-6B-PT2 was discovered inoperable.

The alternate pressure instruments are considered adequate to satsify the requirements of Tech Spec 3.3.3.6. Therefore, with respect to Section 3.3.3.6, the OTSG alternate pressure instruments are considered operable. However, the alternate pressure instruments are not sufficient to satisfy 3.3.3.5 since both pressure range (0-1200 psig) and instrument readout location are not met. Therefore, the "A" and "B" OTSG pressure indication remain inoperable insofar as Technical Specification 3.3.3.5 is concerned. Note: The interrupted OTSG cleanup operations were resumed after installation of the alternate pressure gauges. This was in compliance with Technical Specification 3.0.3.

Long-Term

Technical Specification Change Request No. 41 and Recovery Operations Plan Change Request No. 20 requested deletion of the Technical Specification and Recovery Operations Plan requirements for the "A" and "B" OTSG pressure indication in Tech Spec 3.3.3.5, "Remote Shutdown Monitoring Instrumentation", and modify the surveillance requirements of Section 4.3.3.6 to reflect appropriate operability requirements for the alternate pressure instruments. These documents were submitted to the NRC on September 12, 1983.

V. COMPONENT FAILURE DATA

Foxboro Pressure Transmitters, Model No. E-11GM
Manufactured by Foxboro Instrument Company

GPU Nuclear

GPU Nuclear Corporation
Post Office Box 480
Route 441 South
Middletown, Pennsylvania 17057-0191
717 944-7621
TELEX 84-2386
Writer's Direct Dial Number:

October 31, 1983
4410-83-L-0243

Office of Inspection and Enforcement
Attn: Dr. Thomas E. Murley
Regional Administrator
US Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Updated Licensee Event Reports

The Licensee Event Reports listed in Attachment 1 have been updated and are enclosed as Attachment 2 to this letter.

If you have any questions, please contact Mr. J. J. Byrne of my staff.

Sincerely,

B. K. Kanga
Director, TMI-2

BKK/JJB/RDW/jep

Attachments

CC: Mr. L. H. Barrett, Deputy Program Director - TMI Program Office
Dr. B. J. Snyder, Program Director - TMI Program Office

Attachment 1
4410-83-L-0243

LIST OF UPDATED LICENSEE EVENT REPORTS

80-27	Closing of Deluge Isolation Valves FS-V-4-22B, 4-23B, and 4-24B.
80-39	Halon bottles below weight.
81-11	Inoperability of Nuclear Service River Water Pump "A".
81-24	Excessive Reactor Coolant System leakage.
81-30	Improper administrative controls for containment penetration isolation valves.
81-37	Nuclear Service River Water Pump NR-P-1B inoperability.
82-01	Inoperability of the Auxiliary Building Ventilation System.
82-23	Actuation of the AIT Halon System.
82-41	Inoperability of the Auxiliary Building Ventilation System.
83-01	Inoperability of "A" OTSG pressure indicators.
83-04	Failure of the AIT Deluge System.
83-06	Leak Testing of the Reactor Building Personnel Airlock No. 2.
83-14	Actuation of the Air Intake Tunnel Halon System.