

LICENSEE EVENT REPORT

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

01 C T M N S 2 0 0 - 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5
7 8 9 14 15 25 26 30 57 CAT 58

CON'T
01 REPORT SOURCE L 0 5 0 0 0 3 3 6 0 3 0 1 8 3 0 3 3 1 8 3 9
7 8 60 61 68 69 74 75 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 At 100 % power operation on 3/1/83, it was determined that Millstone 2 RCS unidentified
03 leak rate was in excess of 1.0 GPM. The unit proceeded to shutdown in accordance
04 with Technical Specification 3.4.6.2.b. The unit proceeded to Hot Standby within 6
05 hours. While in Hot Standby, searches for RCS leakage in Containment was carried out.
06 After completion of the Containment inspection, the unit proceeded to cold shutdown
07 to make repairs on known RCS leaks. Similiar LER's 82-32

09 SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE
C J 11 F 12 F 13 V A L V E X 14 E 15 D 16
7 8 9 10 11 12 13 18 19 20
17 LER/RO REPORT NUMBER EVENT YEAR SEQUENTIAL REPORT NO. OCCURRENCE CODE REPORT TYPE REVISION NO.
8 3 0 0 5 0 3 L 0
21 22 23 24 26 27 28 29 30 31 32
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPD-4 FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER
A 18 Z 19 A 20 A 21 0 4 2 6 Y 23 N 24 A 25 V 0 8 5 26
33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

0 Leakage was determined to be primarily from 3 sources: Valve 2-RC-405, a 2 1/2 inch
11 PORV block valve, valve 2-SI-247, a 12 inch Safety Injection System check valve and
12 a single tube found leaking in Steam Generator #1. Leaks from the 2 valves were
13 fixed and 2 Steam Generator tubes were plugged. The unit returned to the grid on
14 3/19/83 with minimal RCS leakage after these repairs.

15 FACILITY STATUS % POWER OTHER STATUS (30) METHOD OF DISCOVERY DISCOVERY DESCRIPTION (32)
E 28 1 0 0 29 NA B 31 Routine Surveillance
7 8 9 10 12 13 44 45 46 80
16 ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY (35) LOCATION OF RELEASE (36)
Z 33 Z 34 NA NA
7 8 9 10 11 44 45 80
17 PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION (39)
0 0 0 37 Z 38 NA
7 8 9 11 12 13 80
18 PERSONNEL INJURIES NUMBER DESCRIPTION (41)
0 0 0 40 NA
7 8 9 11 12 80
19 LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION (43)
Z 42 NA
7 8 9 10 80
20 PUBLICITY ISSUED DESCRIPTION (45) NA
N 44
7 8 9 10 80
8304110723 830331
PDR ADOCK 05000336
S PDR
NRC USE ONLY
78 69 80-91-7-925

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ATTACHMENT TO LER 83-05/03L-0
NORTHEAST NUCLEAR ENERGY COMPANY
MILLSTONE NUCLEAR POWER STATION - UNIT 2
FACILITY LICENSE NUMBER DPR-65
DOCKET NUMBER 50-336

On March 1, 1983, Millstone 2 was operating at 100% power. Surveillance requirement 4.4.6.2.c performed on 3/1/83 indicated that unidentified RCS leakage was in excess of the 1.0 GPM Technical Specification 3.4.6.2.b limit. The water inventory performed by plant computer calculations showed about 1.7 GPM total RCS leak rate. Known RCS leaks accounted for about .39 GPM, giving an unidentified RCS leak rate > 1.0 GPM. A Containment entry was made at power in an attempt to find and quantify any RCS leakage. The search identified little new information other than perhaps some additional leakage was coming from the top of the pressurizer. Tests were also performed while at full power to quantify any leakage from the Chemical Volume and Control System (CVCS). These tests indicated little leakage from the CVCS.

Based on the failure to reduce unidentified RCS leakage below 1 GPM, at 1730 hours on March 1, 1983, the unit began reducing power in accordance with Technical Specification Action Statement 3.4.6.2.b. An NRC approved one time only technical specification change allowed the unit 60 hours to reach cold shutdown. This allowed additional time at Hot Standby to search for leaks in the RCS while still at operating pressure. At 0908 hours on March 3, 1983 the unit was in cold shutdown, in compliance with Technical Specification Action Statement 3.4.6.2.b.

While in cold shutdown, repairs were made on 2-RC-405, A PORV blocking valve. The repairs consisted of disassembling the valve and replacing the seal ring. 2-RC-405 is a 2½ inch pressure seal gate valve with a motor operator, rated at 2500 psi, ASME III, class 1. Repairs were also made on 2-SI-247, a safety injection system 12 inch check valve. Repairs consisted primarily of replacing a metal gasket. Two Reactor Coolant Pump Seals were also replaced.

In addition to these repairs, Steam Generator #1 was opened up to look for leaks identified during power operation. Routine surveillance testing during the operating cycle had indicated a Steam Generator #1 Primary to Secondary leakage of about .28 GPM. Visual inspection identified a single leaking tube. The leaking tube and immediately adjacent tubes were Eddy Current Tested. The defect was identified to be on the hot leg side near the tube sheet. The leaking tube was plugged as was an adjacent tube which showed a significant defect via Eddy Current testing.

Prior to the plugging, attempts were made to quantify the leakage from the defective tube. By applying about 100 pounds secondary side pressure, the leakage rate from the defective tube was measured to be about .13 GPM. At about 200 pounds secondary side pressure, the leakage rate was measured to be about .21 GPM. These measurements were taken by direct collection of the water leaking from the tube over a specific time interval. Based on these measurements at cold conditions, it was calculationaly estimated that a leak rate of about .6 GPM could exist at operating conditions.

Because of the size of the Steam Generator leak, NNECO held discussions with the NRC to determine whether additional Eddy Current Testing was necessary. On the condition that allowable steam generator leakage would be reduced from .5 GPM to .35 GPM per steam generator for the remainder of the fuel cycle, no additional Eddy Current Testing was required by the NRC. It should be noted that Millstone 2 is scheduled to shutdown for refueling in the 2nd quarter of 1983 and extensive Steam Generator inspections are scheduled during this outage.

With all known RCS leaks fixed, the unit proceeded to heatup the RCS and on March 17, 1983, Millstone 2 reached normal operating temperature and pressure at zero power conditions. During the next several hours mass balances performed by the plant computer indicated RCS total leakage of about .1 GPM, well below the 1.0 GPM allowable limit. The plant then resumed normal startup activities.