

LICENSEE EVENT REPORT (LER)

| | | |
|---|--------------------------------------|----------------------|
| FACILITY NAME (1) Millstone Point Unit 2 | DOCKET NUMBER (2) 0 5 0 0 0 3 3 6 | PAGE (3) 1 OF 0 3 |
|---|--------------------------------------|----------------------|

TITLE (4)
Reactor Trip - MSIV Closure

| 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) |
| 1 | 1 | 5 | 8 | 4 | 0 | 1 | 2 | 1 | N/A | | 0 5 0 0 0 |
| 1 | 1 | 5 | 8 | 4 | 0 | 1 | 2 | 1 | N/A | | 0 5 0 0 0 |

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

| | | | | | |
|---------------------------|-------------------|------------------|-------------------------------------|----------------------|--|
| OPERATING MODE (9) 1 | 20.402(b) | 20.406(c) | <input checked="" type="checkbox"/> | 50.73(a)(2)(iv) | 73.71(b) |
| POWER LEVEL (10) 1 0 0 | 20.406(a)(1)(i) | 50.36(e)(1) | <input type="checkbox"/> | 50.73(a)(2)(v) | 73.71(e) |
| | 20.406(a)(1)(ii) | 50.36(e)(2) | <input type="checkbox"/> | 50.73(a)(2)(vii) | OTHER (Specify in Abstract below and in Text, NRC Form 365A) |
| | 20.406(a)(1)(iii) | 50.73(a)(2)(i) | <input type="checkbox"/> | 50.73(a)(2)(viii)(A) | |
| | 20.406(a)(1)(iv) | 50.73(a)(2)(ii) | <input type="checkbox"/> | 50.73(a)(2)(viii)(B) | |
| | 20.406(a)(1)(v) | 50.73(a)(2)(iii) | <input type="checkbox"/> | 50.73(a)(2)(ix) | |

LICENSEE CONTACT FOR THIS LER (12)

| | |
|---|------------------------------------|
| NAME Steve Stadnick, Plant Engineer, Ext. 4427 | TELEPHONE NUMBER |
| | AREA CODE: 2 0 3 4 4 7 1 - 1 7 9 1 |

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 | S | B I S V | M 3 2 2 | Y | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)

| | | |
|---|-----------------------------|-------------------------------|
| <input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) | <input type="checkbox"/> NO | EXPECTED SUBMISSION DATE (15) |
| | | MONTH: 0 6 DAY: 3 0 YEAR: 8 5 |

ABSTRACT (Limit to 140C spaces, i.e., approximately fifteen single-space typewritten lines) (16)

The plant was operating at 100% power. At approximately 0926 operators noticed number one steam generator main steam isolation valve had moved from its fully open position. This was indicated by dual lights (red-open and green-closed) on the control board. At 0931 the MSIV indicated fully shut followed by a reactor trip due to thermal margin/low pressure.

The MSIV is a 36" diameter, swing check valve manufactured by Attwood and Morrill. The air operator cylinder is a Miller model 74B. The plant responded normally to the trip, all systems and personnel performed as expected. Reactor Trip and Post Trip actions were performed in accordance with plant procedures.

Investigation has revealed seal degradation in the air operator cylinder of the check valve. This caused the disc to move down into the steam flow stopping flow. The air operator cylinder and test cylinder were replaced. The unaffected MSIV air operated cylinder and test cylinder were also replaced.

Currently the air operator cylinder seals are replaced every refuel outage. The cause of the seal degradation is not readily apparent. The seals appeared dry and brittle. A contributing factor to the degradation may have been the high area temperature near the cylinder. Further examinations of ambient conditions and possible corrective actions will be explored.

8412270024 841214
PDR ADCK 05000336
S PDR

IE 22
11

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| | | | | | | | |
|---|--|----------------|-------------------|-----------------|----------|--|------------|
| FACILITY NAME (1) Millstone Point Unit 2 | DOCKET NUMBER (2) 0 5 0 0 0 3 3 6 8 4 - 0 1 1 - 0 0 | LER NUMBER (5) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | | | | | | 0 2 OF 0 3 |

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

The plant was operating at 100% power. At approximately 0926 the control room operators noticed number one steam generator main steam isolation valve 2-MS-64A had moved from its fully open position. This was indicated by dual lights; (red-open and green-closed) on the control board. A plant equipment operator was dispatched to determine the cause of the dual indication. Just before the operator entered the room containing the MSIV the valve indicated fully shut, and the reactor tripped due to Thermal Margin/Low Pressure (TM/LP).

The plant responded normally to the trip with all personnel and systems performing as expected. Operations personnel performed standard post trip actions in accordance with emergency operating procedure (EOP) 2525. The plant stabilized as expected and operations personnel performed normal reactor trip recovery in accordance with EOP 2526.

Just after closure of the MSIV, Steam Generator #1 steam pressure went high to 950 PSIA. Normal Steam Generator pressure is 880 PSIA. The pressure was reduced by manual control of the atmospheric steam dump valve.

As steam flow from the #1 Steam Generator decreased to zero, reactor coolant system heat removal from loop #1 decreased and as a result loop #1 temperature-cold (Tc) values increased. In addition Reactor Coolant System RCS average temperature increased causing increased neutron leakage which was detected by excore nuclear instrumentation. This was evidenced by the Nuclear Instrumentation Sensor (NIS) to ΔT alarm on Reactor Protection System (RPS) channel "C" and a High NIS power level channel "B" trip. Since the Tc and reactor power signals are positive inputs to the TM/LP setpoint it increased and resulted in trips on Channel B & C for TM/LP.

Reactor coolant system pressure remained constant because the Pressurizer spray valves were in the "forced" spray mode. This operation is performed periodically to equalize boron concentration between the pressurizer and reactor coolant system.

The Main Steam Isolation valve that closed is a reverse direction, air operator, air to open, swing check valve, manufactured by Attwood and Morrill. The air operator cylinder is manufactured by the Miller Co. Model number is 74B. A test air operated cylinder is also installed to check valve operation during plant operations.

As the air in the cylinder leaked by the seals the leading edge of the disc fell into the steam flow. The steam flow caused the disc to swing shut against its seat.

The air operated cylinder and test cylinder for the MSIV 2-MS-64A were removed and replaced with operators that had been previously rebuilt and stored in the warehouse. The cylinders that were removed from 2-MS-64A were rebuilt at the plant and installed on MSIV 2-MS-64B. This valve did not show evidence of air operator leakage but the cylinders were replaced with rebuilt units to insure reliable operation.

Inspection of the cylinder seals at disassembly shows the seals in 2-MS-64A were cracked, dry, and brittle. The seals in 2-MS-64B were dry and brittle but showed no evidence of cracking.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| | | | | | | | |
|---|--|----------------|-------------------|-----------------|----------|----|-------|
| FACILITY NAME (1) Millstone Point Unit 2 | DOCKET NUMBER (2) 0 5 0 0 0 3 3 6 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 8 4 | - 0 1 1 | - 0 0 | 0 3 | OF | 0 3 |

TEXT (If more space is required, use additional NRC Form 386A's) (17)

The air operator seals are currently on the preventative maintenance program and are scheduled for replacement every refuel outage. There are no safety implications as a result of this problem, since the valve functioned as designed. Further examinations of the ambient temperature conditions surrounding the valves and operators will be made, and any possible future corrective actions will be explored, with an update report submitted.

There are no similar events.

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 666-6911

December 14, 1984
MP-6495

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

Reference: Facility Operating License No. DPR-65
Docket No. 50-336
Reportable Occurrence RO 50-336/84-011

Gentlemen:

This letter forwards the Licensee Event Report 84-011/3L-0 required to be submitted within thirty (30) days pursuant to paragraph 50.73 (a) (2) (IV). "Reactor Trip."

Yours truly,

NORTHEAST NUCLEAR ENERGY COMPANY

A handwritten signature in cursive script, appearing to read 'E. J. Mroczka'.

E. J. Mroczka
Station Superintendent
Millstone Nuclear Power Station

EJM/SS:mo

Attachment: LER RO 50-336/84-011

cc: Dr. T. E. Murley, Region I

IE22
1/1