**Dominion Nuclear Connecticut, Inc.**
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385

Dominion

APR 2 6 2010

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

| | |
|---|---|
| Serial No. | 10-237 |
| MPS Lic/GJC | R0 |
| Docket No. | 50-336 |
| License No. | DPR-65 |

**DOMINION NUCLEAR CONNECTICUT, INC.**
**MILLSTONE POWER STATION UNIT 2**
**LICENSEE EVENT REPORT 2010-001-00**
**MILLSTONE POWER STATION UNIT 2 REACTOR TRIP**

This letter forwards Licensee Event Report (LER) 2010-001-00 documenting an event that occurred at Millstone Power Station Unit 2, on February 26, 2010. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

If you have any questions or require additional information, please contact Mr. William D. Bartron at (860) 444-4301.

Sincerely,

A. J. Jordan
Site Vice President – Millstone

Attachments: 1

Commitments made in this letter: None

IE22
NRR

cc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Ms. C. J. Sanders
Project Manager
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NRC Senior Resident Inspector
Millstone Power Station

# ATTACHMENT

# LICENSEE EVENT REPORT 2010-001-00

## MILLSTONE POWER STATION UNIT 2
## DOMINION NUCLEAR CONNECTICUT, INC.

| NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (9-2007) | APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010 |
|---|---|
| **LICENSEE EVENT REPORT (LER)** (See reverse for required number of digits/characters for each block) | Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection. |

| 1. FACILITY NAME | 2. DOCKET NUMBER | 3. PAGE |
|---|---|---|
| Millstone Power Station - Unit 2 | 05000336 | 1 OF 2 |

**4. TITLE**
Millstone Power Station Unit 2 Reactor Trip

| 5. EVENT DATE | | | 6. LER NUMBER | | | 7. REPORT DATE | | | 8. OTHER FACILITIES INVOLVED | |
|---|---|---|---|---|---|---|---|---|---|---|
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REV NO. | MONTH | DAY | YEAR | FACILITY NAME | DOCKET NUMBER 05000 |
| 02 | 26 | 2010 | 2010 | 001 | 00 | 04 | 26 | 2010 | FACILITY NAME | DOCKET NUMBER 05000 |

**9. OPERATING MODE:** 1

**10. POWER LEVEL:** 100

**11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:** *(Check all that apply)*

| | | | |
|---|---|---|---|
| ☐ 20.2201(b) | ☐ 20.2203(a)(3)(i) | ☐ 50.73(a)(2)(i)(C) | ☐ 50.73(a)(2)(vii) |
| ☐ 20.2201(d) | ☐ 20.2203(a)(3)(ii) | ☐ 50.73(a)(2)(ii)(A) | ☐ 50.73(a)(2)(viii)(A) |
| ☐ 20.2203(a)(1) | ☐ 20.2203(a)(4) | ☐ 50.73(a)(2)(ii)(B) | ☐ 50.73(a)(2)(viii)(B) |
| ☐ 20.2203(a)(2)(i) | ☐ 50.36(c)(1)(i)(A) | ☐ 50.73(a)(2)(iii) | ☐ 50.73(a)(2)(ix)(A) |
| ☐ 20.2203(a)(2)(ii) | ☐ 50.36(c)(1)(ii)(A) | X 50.73(a)(2)(iv)(A) | ☐ 50.73(a)(2)(x) |
| ☐ 20.2203(a)(2)(iii) | ☐ 50.36(c)(2) | ☐ 50.73(a)(2)(v)(A) | ☐ 73.71(a)(4) |
| ☐ 20.2203(a)(2)(iv) | ☐ 50.46(a)(3)(ii) | ☐ 50.73(a)(2)(v)(B) | ☐ 73.71(a)(5) |
| ☐ 20.2203(a)(2)(v) | ☐ 50.73(a)(2)(i)(A) | ☐ 50.73(a)(2)(v)(C) | ☐ OTHER |
| ☐ 20.2203(a)(2)(vi) | ☐ 50.73(a)(2)(i)(B) | ☐ 50.73(a)(2)(v)(D) | Specify in Abstract below or in NRC Form 366A |

**12. LICENSEE CONTACT FOR THIS LER**

| FACILITY NAME | TELEPHONE NUMBER (Include Area Code) |
|---|---|
| William D. Bartron, Nuclear Station Licensing | 860-444-4301 |

**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

| CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| 14. SUPPLEMENTAL REPORT EXPECTED | 15. EXPECTED SUBMISSION DATE | MONTH | DAY | YEAR |
|---|---|---|---|---|
| ☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO | | | | |


**ABSTRACT** *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On February 26, 2010, with the unit in Mode 1, at 100 % power, the Millstone Power Station Unit 2 (MPS2) reactor was manually tripped as required by procedure due to a loss of circulating water (CW) flow to one of the two sections of the main condenser. All control rods fully inserted into the reactor and all emergency systems functioned as designed. At the time of the trip, the 'D' CW pump was out of service for planned maintenance. The loss of CW flow to a main condenser section occurred when the 'C' CW pump automatically tripped due to a larger than expected influx of debris causing a high differential level across the traveling screens. Following the trip, the operators closed the main steam isolation valves to protect the condenser from overpressure. There were no radiological challenges as a result of the event.

The cause was determined to be the failure of the organization's individual departments to work together as a team to clearly identify the risks associated with the work evolution. The risk assessment and mitigation control process has been reviewed and the appropriate actions are being taken in accordance with the corrective action program.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

NARRATIVE

1. **EVENT DESCRIPTION:**

On February 26, 2010, with the unit in Mode 1, at 100 % power, the Millstone Power Station Unit 2 (MPS2) reactor was manually tripped as required by procedure due to a loss of circulating water (CW) [SG] flow to one of the two sections of a main condenser [COND]. All control rods fully inserted into the reactor and all emergency systems functioned as designed. At the time of the trip, the 'D' CW pump [P] was out of service for planned maintenance and divers were working in the 'D' CW pump bay to remove thermal barriers [NN] and install stop logs in support of the planned work. The work required close coordination with the control room staff as the 'C' CW pump bay screen wash system had also been removed from service in support of the planned work. A contingency plan was in place to support restoration of 'C' CW pump bay screen wash if needed. The contingency plan was not effective since during the removal of the thermal barriers a larger than expected influx of debris from the 'D' bay resulted in differential level across the 'C' CW screen reaching the automatic trip point of the 'C' CW pump. Due to the loss of the two CW pumps in one CW bay the condenser was unavailable. Following the trip, the operators closed the main steam isolation valves to protect the condenser from overpressure. The auxiliary feedwater system started in response to low steam generator water levels and restored the steam generator levels to their normal operating band.

There were no radiological challenges as a result of the event.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

2. **CAUSE:**

The cause was determined to be the failure of the organization's individual departments to work together as a team to clearly identify the risks associated with the work evolution. This led to failure to mitigate risk during the 'D' CW pump work activity.

3. **ASSESSMENT OF SAFETY CONSEQUENCES:**

The operating crew responded to the reactor trip by completing EOP 2525, Standard Post Trip Actions, and entering EOP 2526 Reactor Trip Recovery. The auxiliary feedwater system started in response to low steam generator water levels and restored the steam generator levels to their normal operating band. The reactor coolant system (RCS) heat removal safety function was maintained. In addition all other safety functions, including reactivity control, RCS inventory and pressure control, and containment safety functions continued to be satisfied.

With the loss of the 'C' CW pump and the 'D' CW pump out of service for maintenance the operators closed the main steam isolation valves and broke condenser vacuum in accordance with EOP 2525. With the condenser unavailable, the main feedwater system and the steam dump to condenser valves were not available. RCS heat removal was satisfied utilizing auxiliary feedwater and the main steam atmospheric dump valves.

The operator actions and plant mitigating equipment responded as expected with no safety system failures. There were no challenges to any fission product barrier. Therefore, there were no safety consequences to the reactor trip.

4. **CORRECTIVE ACTION:**

The risk assessment and mitigation control process has been reviewed and the appropriate actions are being taken in accordance with the station's corrective action program.

5. **PREVIOUS OCCURRENCES:**

No previous similar events/conditions were identified.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].