

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



Dominion

JAN 3 2005

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

Serial No. 04-780
MPS Lic/TGC R0
Docket No. 50-423
License No. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
LICENSEE EVENT REPORT 2004-003-00
OIL LEAK MAY HAVE CAUSED UNRECOGNIZED INOPERABILITY OF SAFETY
INJECTION PUMP

This letter forwards Licensee Event Report (LER) 2004-003-00, documenting two conditions at Millstone Power Station Unit 3, in which plant equipment, previously evaluated as operable, may have been inoperable. The investigation of this issue is ongoing and a supplement will be submitted upon completion. This preliminary report documents the potential for these conditions to be reportable under 10CFR50.73(a)(2)(i)(B), related to operation in a condition prohibited by Technical Specifications, as well as the provisions of 10CFR50.73(a)(2)(v)(B), related to loss of safety function.

If you have any questions or require additional information, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

J. Alan Price
Site Vice President - Millstone

IE22

Attachments: 1

Commitments made in this letter: None.

cc: U.S. Nuclear Regulatory Commission
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Mr. S. M. Schneider
NRC Senior Resident Inspector
Millstone Power Station

Attachment 1

Millstone Power Station Unit 3
LER 2004-003-00

Millstone Power Station Unit 3
Dominion Nuclear Connecticut, Inc. (DNC)

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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 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.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

| | | |
|--|--------------------------------------|---------------------------|
| FACILITY NAME (1) Millstone Power Station – Unit 3 | DOCKET NUMBER (2) 05000423 | PAGE (3) 1 OF 3 |
|--|--------------------------------------|---------------------------|

TITLE (4)
Oil Leak May Have Caused Unrecognized Inoperability of Safety Injection Pump

| EVENT DATE (5) | | | LER NUMBER (6) | | | REPORT DATE (7) | | | OTHER FACILITIES INVOLVED (8) | |
|----------------|-----|------|-----------------|-------------------|---------|-----------------|-----|------|-------------------------------|------------------------|
| MO | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REV NO. | MO | DAY | YEAR | FACILITY NAME | DOCKET NUMBER |
| 11 | 04 | 2004 | 2004 – 003 – 00 | | | 01 | 03 | 2005 | FACILITY NAME | DOCKET NUMBER 05000 |

| | | | | | | | | | | |
|--------------------------------|---|--------------------|---------------------|----------------------|---------------------|--|--|--|--|--|
| OPERATING MODE (9) 1 | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11) | | | | | | | | | |
| POWER LEVEL (10) 100 | 20.2201(b) | | 20.2203(a)(3)(ii) | | 50.73(a)(2)(ii)(B) | | 50.73(a)(2)(ix)(A) | | | |
| | 20.2201(d) | | 20.2203(a)(4) | | 50.73(a)(2)(iii) | | 50.73(a)(2)(x) | | | |
| | 20.2203(a)(1) | | 50.36(c)(1)(i)(A) | | 50.73(a)(2)(iv)(A) | | 73.71(a)(4) | | | |
| | 20.2203(a)(2)(i) | | 50.36(c)(1)(ii)(A) | | 50.73(a)(2)(v)(A) | | 73.71(a)(5) | | | |
| | 20.2203(a)(2)(ii) | | 50.36(c)(2) | | x 50.73(a)(2)(v)(B) | | OTHER | | | |
| | 20.2203(a)(2)(iii) | | 50.46(a)(3)(ii) | | 50.73(a)(2)(v)(C) | | Specify in Abstract below or In NRC Form 366A | | | |
| | 20.2203(a)(2)(iv) | | 50.73(a)(2)(i)(A) | | 50.73(a)(2)(v)(D) | | | | | |
| | 20.2203(a)(2)(v) | | x 50.73(a)(2)(i)(B) | | 50.73(a)(2)(vii) | | | | | |
| 20.2203(a)(2)(vi) | | 50.73(a)(2)(i)(C) | | 50.73(a)(2)(viii)(A) | | | | | | |
| 20.2203(a)(3)(i) | | 50.73(a)(2)(ii)(A) | | 50.73(a)(2)(viii)(B) | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)

| | |
|--|---|
| NAME David W. Dodson, Supervisor Nuclear Station Licensing | TELEPHONE NUMBER (Include Area Code) 860-447-1791 |
|--|---|

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX |
|-------|--------|-----------|--------------|--------------------|-------|--------|-----------|--------------|--------------------|
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SUPPLEMENTAL REPORT EXPECTED (14)

| | | | | | |
|--|-----------------------------|--------------------------------------|------------|-----------|--------------|
| <input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE). | <input type="checkbox"/> NO | EXPECTED SUBMISSION DATE (15) | MONTH 3 | DAY 31 | YEAR 2005 |
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On November 4, 2004, while operating at 100% power in Mode 1, it was determined that an existing oil leak, previously assessed as not affecting the operability of safety injection pump 3SIH*P1A, may have rendered the pump inoperable. A similar, historical condition was identified for 3SIH*P1B. 3SIH*P1A had a 6 drop per minute (dpm) oil leak identified on October 14, 2004 and not corrected until November 4, 2004. The investigation of this condition identified that 3SIH*P1B was considered operable with a 4 dpm oil leak first identified on August 8, 2002 and corrected on April 16, 2003. Upon further evaluation, it was determined that oil leaks of 6 dpm and 4 dpm would have depleted the pumps' usable oil after a running period of approximately 11 and 17 days, respectively. Although 3SIH*P1A and 3SIH*P1B have a post-LOCA function, there is no established design basis run time requirement described in the FSAR for Millstone Unit 3. Actions to establish an appropriate design basis are in progress.

The root cause of these conditions is determined to be a latent organizational weakness in understanding the risks and consequences of oil leaks on safety related equipment.

This preliminary report documents the potential for these conditions to be reportable under 10CFR50.73(a)(2)(i)(B), related to operation in a condition prohibited by Technical Specifications, as well as the provisions of 10CFR50.73(a)(2)(v)(B) related to loss of safety function.

A supplement to this LER will be submitted upon completion of the ongoing evaluation.

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| Millstone Power Station - Unit 3 | 05000423 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 2 OF 3 |
| | | 2004 | - 003 - | 00 | |

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

1. Event Description

On November 4, 2004, while operating at 100% power in Mode 1, it was determined that an existing oil leak, previously assessed as not affecting the operability of safety injection pump 3SIH*P1A [P], may have rendered the pump inoperable. A leak of six drops per minute (dpm) had been identified on October 14, 2004 and remained uncorrected until November 4, 2004. Upon further evaluation, it was determined that a 6 dpm oil leak rate would have depleted the pump's usable oil after a running period of approximately 11 days.

As a result of the investigation associated with the oil leak on 3SIH*P1A, another similar, historical condition was identified for 3SIH*P1B, the redundant pump. It was determined that an historical 4 dpm oil leak, previously assessed as not affecting the operability of safety injection pump 3SIH*P1B, may have rendered the pump inoperable from August 8, 2002 until corrected on April 16, 2003. Upon further evaluation, it was determined that the 4 dpm oil leak rate would have depleted the pump's usable oil after a running period of approximately 17 days.

Although 3SIH*P1A&B have a post-Loss of Coolant Accident (LOCA) function, there is no established design basis run time requirement described in the Final Safety Analysis Report (FSAR) for Millstone Unit 3. Actions to establish an appropriate design basis are in progress. This effort involves review of design documents related to post accident decay heat removal and utilization of the alternate Reactor Coolant System (RCS) [AB] hot leg recirculation cooling capability included within the design of the Residual Heat Removal (RHR) [BP] system. Expected organizational response in the post accident period is also included in this evaluation.

This preliminary report documents the potential for these conditions to be reportable under 10CFR50.73(a)(2)(i)(B), related to operation in a condition prohibited by Technical Specifications, as well as the provisions of 10CFR50.73(a)(2)(v)(B), related to loss of safety function. A supplement to this LER will be submitted upon completion of the ongoing evaluation.

2. Cause

The root cause was found to be a latent organizational weakness in understanding the risks and consequences of oil leaks on safety related equipment.

3. Assessment of Safety Consequences

This event is of very low safety significance. The core damage and large early release risks associated with the SIH pump oil leaks were evaluated based on a qualitative assessment. SIH pump oil leaks are not assumed to result in a challenge to SIH pump operability until at least 11 days into a reactor accident based on engineering analysis. Therefore, the only accident sequence potentially impacted by the lube oil leakage is post-LOCA recirculation [BQ].

The PRA mission time for accident mitigation is 24 hours as long as a safe stable state is achieved (Ref. ASME PRA Std RA-Sa-2003 as endorsed by NRC RG 1.200). The mission time for SIH pumps to run in the Millstone Unit 3 PRA model is 24 hours, which is typical for PWR PRA models. Failures of the SIH pumps to operate longer than 24 hours is assumed mitigated by low decay heat after 24 hours, availability of staffed technical resources in the Technical Support Center and Emergency Operations Facility, and increased availability of offsite resources to support accident recovery.

The realistic dose rate at the SIH pump is not assumed to preclude normal SIH pump inspection and lube oil makeup unless a large LOCA initiating event occurs. In small LOCA and other events potentially requiring long term SIH pump operation, cladding failure is not predicted and dose rates at the SIH pumps would be based on

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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

normal Reactor Coolant System (RCS) [AB] activity, which would not preclude SIH pump inspection and makeup of the lube oil. In a realistic large LOCA initiating event, some minimal cladding failure is assumed and the dose rate at the SIH pumps will be larger than typical, but much less than the design basis source term dose rate. The frequency of the large LOCA initiating event in the Millstone Unit 3 PRA model is 5E-06/yr.

Only one of the two SIH pumps was affected by oil leaks at any time. The remaining redundant SIH pump was available to mitigate a reactor accident. The likelihood of the redundant SIH pump failure (e.g., failure to start, failure to run, and test/maintenance unavailability) from the Millstone Unit 3 PRA model is: 6.16E-03 (failure to start and run for 24 hrs) + 2.85E-03 (test/maintenance unavailability) = 9.01E-03 (or less than 1%). Therefore, the redundant SIH pump will be available to mitigate the accident greater than 99% of the time. The likelihood of a large LOCA and unavailability of the redundant SIH pump is 4.5E-08/yr (i.e., 9.01E-03 * 5E-06/yr), which is "very small" per NRC RG 1.174.

The SIH pumps do not provide a containment cooling function. Therefore, any degradation in the SIH pump performance does not impact the conditional large early release frequency.

4. Corrective Action

In both cases, the leaks had been repaired prior to the assessment that determined that the pumps may have been inoperable during the time period that the oil leaks existed. Therefore, no additional actions to restore OPERABILITY were necessary upon discovery. Pending completion of the Root Cause associated corrective actions, a compensatory measure in the form of a night order was issued. The night order requires that when any condition report concerning oil leaks on safety related equipment is received, engineering is to be contacted to discuss the effects of the oil leakage on equipment OPERABILITY.

Since the root cause was found to be a latent organizational weakness in understanding the risks and consequences of oil leaks on safety related equipment, the action to prevent recurrence is to proceduralize the requirement for an engineering evaluation to determine OPERABILITY for any condition report concerning oil leaks on safety related equipment. The night order remains in place pending completion of the procedure revision.

A review was conducted to assess the extent of condition of existing oil leaks on safety related equipment. No other oil leaks on safety related equipment potentially affecting OPERABILITY were identified. Additional corrective actions to address contributing causes are being addressed in accordance with the Millstone Corrective Action Program (CR-04-09890 and CR-04-10512).

5. Previous Occurrences

No previous similar events or conditions were identified.
Energy Industry Identification System (EIS) codes are identified in the text as [XX].