

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



**Dominion™**

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

APR -1 2005

|              |         |
|--------------|---------|
| Serial No.   | 04-390A |
| MPS Lic/BAK  | R0      |
| Docket Nos.  | 50-423  |
| License Nos. | NPF-49  |

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION, UNIT 3**  
**LICENSEE EVENT REPORT 2004-001-01**  
**TECHNICAL SPECIFICATION ACTION STATEMENT NOT MET**

This letter forwards a supplement to Licensee Event Report (LER) 2004-001-01, documenting an event that occurred at the Millstone Power Station, Unit 3, on April 30, 2004. This supplemental LER reflects information developed after the original submittal of the LER.

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

Very truly yours,

Stephen P. Sarver for  
J. Alan Price  
Site Vice President - Millstone

IE22

Attachments: 1

Commitments made in this letter: None.

cc: U.S. Nuclear Regulatory Commission (2 copies)  
Region I  
475 Allendale Road  
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Mr. G. F. Wunder  
Project Manager  
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Mr. M. Schneider  
NRC Senior Resident Inspector  
Millstone Power Station

**Attachment 1**

**Millstone Power Station, Unit 3**  
**LER 2004-001-01**

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

|   |   |
|---|---|
| <b>NRC FORM 366</b><br>(7-2001)   | <b>APPROVED BY OMB NO. 3150-0104</b><br>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. |
| <b>COMMISSION</b><br><br><b>LICENSEE EVENT REPORT (LER)</b><br><small>(See reverse for required number of digits/characters for each block)</small> |   |

|  |                                      |                           |
|--|--------------------------------------|---------------------------|
| <b>FACILITY NAME (1)</b><br>Millstone Power Station – Unit 3 | <b>DOCKET NUMBER (2)</b><br>05000423 | <b>PAGE (3)</b><br>1 OF 3 |
|--|--------------------------------------|---------------------------|

**TITLE (4)**  
 Technical Specification Action Statement Not Met

| 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 |
| 04             | 30  | 2004 | 2004           | 001               | 01      | 04              | 01  | 2005 | FACILITY NAME                 | DOCKET NUMBER |
|                |     |      |                |                   |         |                 |     |      |                               | 05000         |
|                |     |      |                |                   |         |                 |     |      |                               | 05000         |

|                           |     |   |                     |                      |   |
|---------------------------|-----|---|---------------------|----------------------|---|
| <b>OPERATING MODE (9)</b> | 5   | <b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)</b> |                     |                      |   |
|                           |     | 20.2201(b)  | 20.2203(a)(3)(ii)   | 50.73(a)(2)(ii)(B)   | 50.73(a)(2)(ix)(A)                            |
| <b>POWER LEVEL (10)</b>   | 000 | 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)         | 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)**

|  |   |
|--|---|
| <b>NAME</b><br>David W. Dodson, Supervisor Nuclear Station Licensing | <b>TELEPHONE NUMBER (Include Area Code)</b><br>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 |
|-------|--------|-----------|--------------|--------------------|-------|--------|-----------|--------------|--------------------|
|       |        |           |              |                    |       |        |           |              |                    |

|  |  |                                     |    |                                      |  |  |
|--|--|-------------------------------------|----|--------------------------------------|--|--|
| <b>SUPPLEMENTAL REPORT EXPECTED (14)</b> |  |                                     |    | <b>EXPECTED SUBMISSION DATE (15)</b> |  |  |
| <input type="checkbox"/>                 | YES (If yes, complete EXPECTED SUBMISSION DATE). | <input checked="" type="checkbox"/> | NO |                                      |  |  |

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)**

On April 30, 2004, while operating at 0% power in Mode 5, an oncoming Shift Manager performing a main control board walkdown (at approximately 1800) questioned if the equipment failure in the electrical distribution system that had occurred earlier required Limiting Condition for Operation (LCO) Action in accordance with plant Technical Specification (TS) 3.8.3.2 "Onsite Power Distribution – Shutdown." Plant Technical Specification 3.8.3.2 has one Action. It states, in part, "With any of the above required electrical busses not energized in the required manner, immediately suspend all operations involving...positive reactivity changes..." At the time of this discovery, the plant was in the process of heating up as part of the startup sequence following a refueling outage. The Shift Manager directed that the plant heatup be suspended. The time period from the equipment failure until the plant heatup was suspended was approximately three hours.

Upon further review, it was determined that the increase in temperature from 135 to 165°F over this (approximately) three hour time period did add positive reactivity. Also, upon subsequent review, two additional additions of positive reactivity were identified during the time period that TS 3.8.3.2 Action applied. At 1559 and 1659 on April 30, 2004, hydrazine and primary grade water additions were made to the reactor coolant system, constituting positive reactivity additions. Since TS 3.8.3.2 Action should have been entered at 1512 when Inverter #INV-4 failed and swapped to its alternate source, and the primary grade water additions and plant heatup constituted positive reactivity changes, this event is being reported pursuant to 10 CFR 50.73(a)(2)(i)(B) as any operation or condition prohibited by the plant's Technical Specifications.

The cause of the delayed entry into the Action for TS 3.8.3.2 is human error and the individuals involved have been coached. Additional corrective actions are being taken in accordance with the Millstone Corrective Action Program.

**LICENSEE EVENT REPORT (LER)**

| FACILITY NAME (1)                | DOCKET (2) | LER NUMBER (6)  |                        |                      | PAGE (3) |
|----------------------------------|------------|-----------------|------------------------|----------------------|----------|
| Millstone Power Station - Unit 3 | 05000423   | YEAR            | SEQUENTIAL<br>NI IMRFR | REVISION<br>NI IMRFR | 2 OF 3   |
|                                  |            | 2004 - 001 - 01 |                        |                      |          |

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

1. Event Description

On April 30, 2004, while operating at 0% power in Mode 5, an oncoming Shift Manager performing a main control board [MCBD] walkdown (at approximately 1800) questioned if the equipment failure in the electrical distribution system [EK] that had occurred earlier required Limiting Condition for Operation (LCO) Action in accordance with plant Technical Specification (TS) 3.8.3.2 "Onsite Power Distribution – Shutdown". Plant Technical Specification 3.8.3.2 has one Action. It states, in part, "With any of the above required electrical busses not energized in the required manner, immediately suspend all operations involving...positive reactivity changes..." At the time of this discovery, the plant was in the process of heating up as part of the startup sequence following a refueling outage, with "B" train protected and the "A" train emergency diesel generator (EDG) inoperable. The Shift Manager directed that the plant heatup be suspended. The time period from the equipment failure until the plant heatup was suspended was approximately three hours.

Upon further review, engineering determined that, based on the core design, boron concentration and reactor coolant system [AB] temperatures, the increase in temperature from 135 to 165°F over this (approximately) three hour time period did add positive reactivity. Also, upon subsequent review, two additional additions of positive reactivity were identified during the time period that TS 3.8.3.2 Action applied. At 1559 and 1659 on April 30, 2004, hydrazine additions were made to the reactor coolant system. Each of these hydrazine additions requires the addition of primary grade water for a period of fifteen minutes and constituted positive reactivity additions. Since TS 3.8.3.2 Action should have been entered at 1512 when Inverter #INV-4 [INVT] failed and swapped to its alternate source, and the primary grade water additions and plant heatup constituted positive reactivity changes, this event is being reported pursuant to 10 CFR 50.73(a)(2)(i)(B) as any operation or condition prohibited by the plant's Technical Specifications.

TS 3.8.3.2 requires, as a minimum, one train (A or B) of electrical busses [BU] shall be Operable. The "B" train was the credited train, requiring in part, Bus #VIAC-4 energized from Inverter #INV-4 connected to DC Bus #301B-2 (TS 3.8.3.2.b.3.b). At 1512, an "Inverter Trouble" alarm was received. Operators entered the alarm response procedure (ARP). In accordance with the Alarm Response Procedure (ARP), an operator was dispatched to the inverter panel to determine the cause of the alarm. The operator informed the control room that the "Fuse Blown" indicator for Inverter #INV-4 was lit. Per the ARP, operators notified the maintenance department to check the fuses. At this point, the Unit Supervisor turned the issue over to the Outage Control Center, without completing the ARP. The last step of the ARP requires review of the applicable Technical Specifications, specifically noting TS 3.8.3.2. This step was not completed and operators did not enter the Action Statement of TS 3.8.3.2. Although Inverter #INV-4 was still energized, the alternate source is not credited for Operability. The operators initially failed to recognize that with Inverter #INV-4 energized from its alternate source and the EDG inoperable on the "A" train, the LCO of TS 3.8.3.2 was not met and the TS 3.8.3.2 Action should have been entered. Neither the Unit Supervisor nor the Shift Manager took into consideration that the inoperable "A" EDG resulted in the "A" train Onsite Power Distribution being inoperable. The "A" EDG was not Operable because a necessary support system (service water) was out of service for maintenance.

2. Cause

The cause of the Inverter #INV-4 failure is attributed to a blown fuse. Troubleshooting did not reveal any other failures that would have caused the fuse to blow

The cause of not performing the required Limiting Condition of Operation (LCO) actions associated with the Inverter #INV-4 failure is human error. The operating crew did not recognize that TS 3.8.3.2 applied when one facility has an inoperable diesel generator and the other facility has its inverter powered from the non-vital source.

**LICENSEE EVENT REPORT (LER)**

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| Millstone Power Station - Unit 3 | 05000423   | YEAR            | SEQUENTIAL<br>NUMBER | REVISION<br>NUMBER | - -<br>3 of 3 |
|                                  |            | 2004 - 001 - 01 |                      |                    |               |

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

When Inverter #INV-4 failed, the crew believed that the Technical Specification requirements were being met by two means: the fact that the Inverter was still energized and the belief that the "A" train electrical distribution could be credited. The ARP that would have prompted further consideration of the Technical Specification implications was not completed.

**3. Assessment of Safety Consequences**

This event is of very low safety significance. The Operability of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that: (1) the facility can be maintained in the shutdown or refueling condition for extended time periods, and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status. Inverter #INV-4 was still energized, although the alternate source is not credited for Operability. Even with Bus #VIAC-4 not supplied from the Technical Specification required source, the "B" train remained capable of providing power to the structures, systems and components credited with detecting and mitigating the following events: loss of residual heat removal, loss of offsite power, loss of reactor inventory and loss of refueling cavity level control.

At the time of this event, the "A" train onsite power distribution system was available (although not Operable since the "A" emergency diesel generator was out of service). The plant experienced a minor increase in positive reactivity, less than 15 PCM (percent millirho), for a period of about three hours.

**4. Corrective Action**

The individuals involved have been coached and counseled on the human performance issues associated with this event. The Operations Manager provided lessons learned on this event to all operations personnel emphasizing the need to enter Technical Specification Action Statements when warranted by plant conditions. The Operations Manager reinforced the expectation that Alarm Response Procedures be reviewed completely when used. Nuclear Training will provide a new Technical Specification worksheet to be used during training related to this event. Additional corrective actions are being addressed within the Millstone Corrective Action Program, (CR-04-08469, CR-04-08935, CR-04-10628).

**5. Previous Occurrences**

No previous similar events or conditions were identified.

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