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JUL 13 2016

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

Serial No. 16-233  
MPS Lic/GJC R0  
Docket No. 50-423  
License No. NPF-49

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 3**  
**LICENSEE EVENT REPORT 2016-004-00**  
**MANUAL REACTOR TRIP DUE TO LOW HYDROGEN**  
**GAS PRESSURE IN MAIN GENERATOR**

This letter forwards Licensee Event Report (LER) 2016-004-00 documenting a condition discovered at Millstone Power Station Unit 3, on May 15, 2016. 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. Jeffry A. Langan at (860) 444-5544.

Sincerely,

Craig T. Olsen  
Plant Manager – Millstone

Attachments: 1

Commitments made in this letter: None

IE22  
NRR

cc: U.S. Nuclear Regulatory Commission  
Region I  
2100 Renaissance Blvd.  
Suite 100  
King of Prussia, PA 19406-2713

R.V. Guzman  
NRC Senior Project Manager Millstone Units 2 and 3  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Mail Stop 08 C-2  
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NRC Senior Resident Inspector  
Millstone Power Station

**ATTACHMENT**

**LICENSEE EVENT REPORT 2016-004-00**  
**MANUAL REACTOR TRIP DUE TO LOW HYDROGEN**  
**GAS PRESSURE IN MAIN GENERATOR**

**MILLSTONE POWER STATION UNIT 3  
DOMINION NUCLEAR CONNECTICUT, INC.**



**LICENSEE EVENT REPORT (LER)**  
(See Page 2 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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@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.

<b>1. FACILITY NAME</b> Millstone Power Station Unit 3	<b>2. DOCKET NUMBER</b> 05000 423	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
Manual Reactor Trip Due to Low Hydrogen Gas Pressure In Main Generator

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
05	15	2016	2016	004	00	07	13	2016		05000
									FACILITY NAME	DOCKET NUMBER
										05000

<b>9. OPERATING MODE</b>	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>			
1	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
10. POWER LEVEL  074	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A	

**12. LICENSEE CONTACT FOR THIS LER**

LICENSEE CONTACT Jeffrey A Langan, Manager Nuclear Station Licensing	TELEPHONE NUMBER (Include Area Code) (860) 444-5544
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	<b>15. EXPECTED SUBMISSION DATE</b> MONTH: _____ DAY: _____ YEAR: _____
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**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)**

On May 15, 2016, with Millstone Power Station Unit 3 (MPS3) operating in MODE 1 at 74% power, the operators observed decreasing hydrogen pressure in the main turbine generator. Upon field investigation it was determined there was an active hydrogen leak from the main generator. The operators manually tripped the reactor and vented the hydrogen from the main generator. The reactor trip was uncomplicated. The auxiliary feedwater (AFW) pumps started as designed on low steam generator level and operators maintained steam generator level.

The active hydrogen leak was the direct cause of the manual reactor trip. The hydrogen leak was caused by a dislodged plug on a port on the main generator. MPS maintenance procedures did not contain adequate procedural guidance in that there was no specific direction for installation, i.e., torque value and verifications. The procedures will be revised to include specific direction to tighten the plugs and applicable verifications (i.e., torque value, peer checking). Additional corrective actions are being taken in accordance with the station's corrective action program.

The actuation of the RPS and the automatic start of the AFW pumps 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).



**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@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	6. LER NUMBER			3. PAGE
Millstone Power Station Unit 3	05000423	YEAR	SEQUENTIAL NUMBER	REV NO.	2 of 3
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**1. EVENT DESCRIPTION**

On May 15, 2016, with Millstone Power Station Unit 3 (MPS3) operating in MODE 1 at 74% power, the operators observed decreasing hydrogen pressure in the main generator. The operators added hydrogen but it continued to decrease. Operators in the field identified a hydrogen leak from the main generator. Due to the active hydrogen leak, at 0645 hours eastern daylight time (EDT), the operators manually tripped the reactor and vented the hydrogen from the main generator to the atmosphere. The auxiliary feedwater (AFW) pumps started as designed on low steam generator level and operators maintained steam generator level. The reactor trip was uncomplicated.

The actuation of the reactor protection system was reported in accordance with 10 CFR 50.72(b)(2)(iv)(B), as an event or condition that results in actuation of the reactor protection system (RPS) when the reactor is critical except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation. The automatic start of the AFW pumps was reported in accordance with 10 CFR 50.72(b)(3)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.72(b)(3)(iv)(B). (Event Number: 51929)

The actuation of the RPS and the automatic start of the AFW pumps 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 active hydrogen leak was the direct cause of the manual reactor trip. The hydrogen leak was caused by a dislodged plug from a port on the main generator. MPS procedures did not contain adequate procedural guidance in that there was no specific direction for installation of the plug, i.e., torque value and verifications.

**3. ASSESSMENT OF SAFETY CONSEQUENCES**

The operating crew responded to decreasing hydrogen pressure in the main generator as directed by approved procedures. The reactor was at 74% power. All control rods fully inserted into the reactor and all emergency systems functioned as designed. There were no radiological challenges as a result of the event. There were no detrimental effects to station equipment. No safety limits were exceeded. 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 as the result of the reactor trip.

**4. CORRECTIVE ACTION**

The plug was properly re-installed. Maintenance procedures will be revised to include specific direction to install the outer end shield pipe plugs and sealant and include direction to tighten the plugs and applicable verifications (i.e., torque value, peer checking). Additional corrective actions are being taken in accordance with the station's corrective action program.



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CONTINUATION SHEET**

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**5. PREVIOUS OCCURRENCES**

NONE

**6. Energy Industry Identification System (EIIIS) codes**

- Reactor Coolant System – AB
- Auxiliary/Emergency Feedwater System – BA
- Main Generator System – TB
- Main Generator Hydrogen Cooling System – TK
- Turbine – TRB
- Pump – P
- Valve – V