

## **Guzman, Richard**

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**From:** Guzman, Richard  
**Sent:** Wednesday, January 27, 2016 3:17 PM  
**To:** 'Semancik, Jeffrey'  
**Cc:** McNamara, Nancy; Tiff, Doug  
**Subject:** RE: Planned Issuance of NRC License Amendment for Millstone Unit 2 and 3 - Response to State Comments (CAC Nos. MF5715/MF5716)

Jeff,

The NRC staff's response to your questions/comments are shown below. Please contact me if you have any further questions. I've also copied our Region I State Liaison POCs for their awareness.

Thanks,  
Rich

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**Rich Guzman**  
**Sr. Project Manager**  
**NRR/DORL**  
**US NRC**  
**301-415-1030**

### CT State Comment #1

In their November 2 (ML15313A024) letter (DNC Response 9-1 section c on page 4 of the attachment), DNC discusses void volumes in LPSI identified following the 2R22 outage and concluded that the void volume was "...within the conservative acceptance criteria."

On October 4, 2015 Millstone declared an Unusual Event due to loss of RCS inventory when placing LPSI in service for shutdown cooling. In the Millstone 2 Special Inspection Report (05000336/2015012), the NRC identified an Green NCV because Dominion, "...did not verify that the SDC suction line to the LPSI pumps was filled and vented prior to placing the system in service.' This was related to activities conducted by Dominion during 2R22. The result of this void is that the SDC suction relief valves lifted due to the void collapsing when the LPSI pump was started.

I believe that RAI 9 requires additional information from Dominion that is material to gas accumulation that may not have been evaluated by the LAR reviewers. Moreover, because this void existed for 18 months, it is not clear to me how DNC did not detect or failed to properly evaluate this void; so, it seems pertinent to approving any change to their existing requirements.

### NRC Staff Response to Comment #1

In RAI-9, the NRC staff requested additional information from the licensee regarding the void surveillance history of MPS2, as the staff evaluated applicable history and noted a number of occurrences where voids were not adequately addressed when proceeding out of an outage. The licensee's response in the November 2, 2015 letter for RAI-9-1(e) addressed the staff's concerns.

RAI-9 specifically requested how DNC procedures have been corrected to address these void occurrences and instances of outgassing after shutdown cooling termination. The NRC staff also found the licensee's response to RAI-9c sufficient in addressing the staff's concern which was specific to small gas void volumes found at the four six-inch low pressure safety injection lines at their containment penetration ultrasonic testing locations 20, 21, 22, and 23.

The license amendment request proposes to revise or add new Technical Specification (TS) Surveillance Requirements (SRs) to verify that the shutdown cooling system is sufficiently full of water in operating MODES 4, 5, & 6. The NRC staff does not consider the October 4, 2015, event to have any adverse impact to the proposed TSs being changed. Additional justification/ information related to the October 4, 2015, event was not deemed necessary to serve as a basis for the NRC staff's review and safety findings for the proposed license amendment request. For additional description of the proposed SR wording, please see page 7 of TSTF-523, Revision 2 (ADAMS Accession No. ML13053A075) which in part indicates that the intent of the TS SRs, which state "full of water," may be met if the licensee can establish through an Operability Determination that there is a reasonable expectation that the system in question will perform its specified safety function. In the TS, "sufficiently filled with water" is understood to mean "sufficiently filled with water to support Operability." The regulation at 10 CFR 50.36(c)(3) states that one of the purposes of the SR is to verify that the LCO is met. Therefore, the TSTF-523 TS SR language will allow the licensee to make a conclusion as to whether or not a system is operable.

As indicated in the NRC inspection report dated January 5, 2016, the licensee's investigation determined that the most plausible cause of the event was a gas void in the shutdown cooling line which most likely resulted from improper fill and vent following maintenance during 2R22. By plant procedure, DNC relies on flushing to remove gas voids in the lines. Once flushed, only selected pump discharge side high points prone to collecting gas while the plant is in Mode 1 are subsequently inspected. The NRC assessed the licensee's failure to verify the SDC suction line to the LPSI pumps (was filled and vented prior to placing the system into service) was a performance deficiency that was within their ability to foresee and correct. The licensee acknowledges the performance deficiency related to improper fill and vent activities following the 2R22 outage. As indicated in the inspection report, the licensee entered the issue into their corrective action program. The appropriate regulatory path for assessing the adequacy of the licensee's corrective actions regarding fill and vent activities would be through the NRC's ROP inspection process which in part, would confirm that the scope of the licensee's plant procedures, administrative controls, etc. are adequate to control safety related operations within applicable regulatory requirements.

The NRC staff also notes that there is a difference between the NRC staff's review of design basis topics, such as LOCA analyses, and its review of operability topics, such as those addressed in TSTF-523. An NRC staff review of a design-basis topic requires an in-depth consideration of all applicable aspects, whereas the objective of an operability evaluation is to reasonably ensure that subject system operability is achieved (please also see NRC Inspection Manual Chapter 0326, dated January 31, 2014 (ADAMS Accession No. ML13274A578) regarding discovery of degraded or non-conforming conditions with respect to operability and 'reasonable expectation').

#### CT State Comment #2

Millstone Unit 2 operators periodically use a vacuum pump in the common shutdown cooling suction line to remove entrained air from suction of the LPSI pumps. Is this material to the LAR?

#### NRC Staff Response to Comment #2

The NRC staff did not evaluate all of the licensee's methods of removing voids such as using vacuum pumps. As explained in the response above, this is consistent with an operability topic review instead of an in-depth design-basis topic review (i.e., the staff did not perform an in-depth review of determining void volumes by UT or other means when making an operability determination). While the information related to the appropriate use of the vacuum pump for removing entrained air is not irrelevant to the overall scope of the proposed license amendment request, the staff did not find it necessary for the licensee to provide further information on the use of the pump in order to make a safety decision on the proposed amendment or to further support the basis for the staff's safety evaluation and conclusion.

Additionally, the licensee's operation of the vacuum pump is procedurally controlled in their plant procedures and is not a Technical Specification requirement. As stated above, the appropriate regulatory review/assessment of the licensee's operation of the vacuum pump would be through the NRC's ROP

inspection process which in part, would confirm that the scope of the licensee's plant procedures, administrative controls, etc. are adequate to control safety related operations within applicable regulatory requirements.

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**From:** Semancik, Jeffrey [<mailto:Jeffrey.Semancik@ct.gov>]  
**Sent:** Monday, January 11, 2016 4:28 PM  
**To:** Guzman, Richard  
**Subject:** [External\_Sender] RE: Planned Issuance of NRC License Amendment for Millstone Unit 2 and 3

Richard,

I do have two comments/questions based upon this amendment request.

1. In their November 2 (ML15313A024) letter (DNC Response 9-1 section c on page 4 of the attachment), DNC discusses void volumes in LPSI identified following the 2R22 outage and concluded that the void volume was "...within the conservative acceptance criteria."

On October 4, 2015 Millstone declared an Unusual Event due to loss of RCS inventory when placing LPSI in service for shutdown cooling. In the Millstone 2 Special Inspection Report (05000336/2015012), the NRC identified an Green NCV because Dominion, "...did not verify that the SDC suction line to the LPSI pumps was filled and vented prior to placing the system in service." This was related to activities conducted by Dominion during 2R22. The result of this void is that the SDC suction relief valves lifted due to the void collapsing when the LPSI pump was started.

I believe that RAI 9 requires additional information from Dominion that is material to gas accumulation that may not have been evaluated by the LAR reviewers. Moreover, because this void existed for 18 months, it is not clear to me how DNC did not detect or failed to properly evaluate this void; so, it seems pertinent to approving any change to their existing requirements.

2. Millstone Unit 2 operators periodically use a vacuum pump in the common shutdown cooling suction line to remove entrained air from suction of the LPSI pumps. Is this material to the LAR?

Thanks,

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*Conserving, improving and protecting our natural resources and environment;  
Ensuring a clean, affordable, reliable, and sustainable energy supply.*

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**From:** Guzman, Richard [<mailto:Richard.Guzman@nrc.gov>]  
**Sent:** Monday, January 11, 2016 2:14 PM  
**To:** Semancik, Jeffrey  
**Subject:** Planned Issuance of NRC License Amendment for Millstone Unit 2 and 3

Jeff,

The NRC staff is preparing to issue the following license amendment regarding Millstone Power Station, Unit 2 and 3. A brief description of the license amendment request (LAR) is provided below. Additional information can be found in the licensee's submittal which is also referenced below by ADAMS Accession No.

Please let me know if you have any comments or questions regarding this licensing action by January 18, 2015, if possible. My current projection for issuance of the amendment is January 25, 2016.

[Millstone Power Station, Unit 2 and 3 \(MPS2 and MPS3\), License Amendment Request To Adopt TSTF-523, Revision 2, Generic Letter 2008-01, Managing Gas Accumulation](#)

Application date: January 15, 2015 (ML15021A128), as supplemented by letters dated April 15 (ML15111A449), July 16 (ML15202A125), July 30 (ML15216A365), November 2 (ML15313A024), and December 1, 2015 (ML15342A028).

Brief Description: The amendment would revise the MPS2 and MPS3 Technical Specifications (TSs) to adopt NRC-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation." The proposed change would revise surveillance requirements related to gas accumulation for the emergency core cooling system (ECCS). The proposed change would also add new SRs related to gas accumulation for the shutdown cooling and containment spray systems (MPS2) and the residual heat removal (RHR) system (MPS3).

The LAR was published in the Federal Register (FR) on July 21, 2015 (80 FR 43126): <https://www.gpo.gov/fdsys/pkg/FR-2015-07-21/pdf/2015-17651.pdf> with no comments or requests for hearing received.

Thanks,  
Rich

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Rich Guzman  
Sr. Project Manager  
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