

March 2, 2015

10 CFR 2.202
EA-12-051

Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Serial No.: 14-390B
NL&OS/MAE: R1
Docket No.: 50-336
License No.: DPR-65

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 2
SIX-MONTH STATUS REPORT IN RESPONSE TO MARCH 12, 2012 COMMISSION
ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL
INSTRUMENTATION (ORDER NUMBER EA-12-051)

References:

1. NRC Order Number EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012
2. Dominion Nuclear Connecticut, Inc. Letter, Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2013 (Serial No. 12-165B)
3. Dominion Nuclear Connecticut, Inc. Letter, Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2014 (Serial No. 12-165D)
4. Dominion Nuclear Connecticut, Inc. Letter, Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated August 28, 2014 (Serial No. 14-390)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued an order (Reference 1) to Dominion Nuclear Connecticut, Inc. (DNC). Reference 1 was immediately effective and directed DNC to install reliable Spent Fuel Pool level instrumentation (SFPLI).

Reference 1 required submission of an Overall Integrated Plan (OIP) (Reference 2) pursuant to Section IV, Condition C. Reference 1 also required submission of a status report at six-month intervals following submittal of the OIP.

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Attachment 1 to this letter provides the fourth Six-Month Status Report and an update of milestone accomplishments since the submittal of the previous six-month status report (Reference 4), including any changes to the compliance method, schedule, or need for relief and the basis. Attachment 2 to this letter provides the SFPLI request for additional information (RAI) responses.

If you have any questions, please contact Ms. Margaret Earle at (804) 273-2768.

Sincerely,



Mark D. Sartain
Vice President - Nuclear Engineering

- Attachments: 1. Six Month Status Report for the Implementation of Order EA-12-051
2. Response to Spent Fuel Pool Level Instrumentation (SFPLI) Requests for Additional Information (RAIs) and Safety Evaluation Review Item 6

Commitments made by this letter: No new regulatory commitments

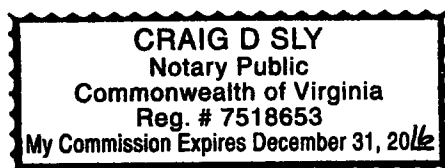
COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Mark D. Sartain who is Vice President Nuclear Engineering of Dominion Nuclear Connecticut, Inc. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of the Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 2ND day of March, 2015.

My Commission Expires: December 31, 2016.

(SEAL)



Notary Public

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NRC Senior Resident Inspector
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Attachment 1

**Six-Month Status Report for the Implementation of Order EA-12-051
Order Modifying Licenses with Regard to Requirements
for Reliable Spent Fuel Pool Instrumentation**

**Dominion Nuclear Connecticut, Inc. (DNC)
Millstone Power Station Unit 2**

Six-Month Status Report for the Implementation of Order EA-12-051

1 Introduction

Dominion Nuclear Connecticut, Inc. (DNC) developed an Overall Integrated Plan (OIP) (Reference 1) documenting the requirements to install reliable Spent Fuel Pool (SFP) Level Instrumentation (SFPLI) in response to Order EA-12-051 (the Order) (Reference 2). This attachment provides an update of milestone accomplishments since submittal of the last status report for Millstone Power Station Unit 2 (MPS2) (Reference 3), including changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

2 Milestone Accomplishments

The following milestones have been completed since the development of the MPS2 OIP for Order EA-12-051 and are current as of January 31, 2015.

1. Submit Overall Integrated Plan
2. Commence Engineering and Design
3. Complete Engineering and Design
4. Complete Procurement of SFP Instruments

3 Milestone Schedule Status

The following provides an update to the milestone schedule to support the MPS2 OIP. This section provides the activity status of each item, and the expected completion date, noting any change. The dates are planning dates subject to change as design and implementation details are developed.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit Overall Integrated Plan	February 2013	Complete	
Commence Engineering and Design	March 2013	Complete	

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Complete Engineering and Design	September 2014	Complete	
Complete Procurement of SFP Instruments	August 2014	Complete	
Commence Installation of SFP Instruments	September 2014	Not Started	February 2015*
Level Measurement System Functional	December 2014	Not started	May 2015*

* The revised milestone target completion dates for 'Commence Installation of SFP Instruments,' and 'Level Measurement System Functional' do not impact the Order implementation date for MPS2.

4 Changes to Compliance Method

There are no changes to DNC's compliance method with NEI 12-02 (Reference 4).

5 Need for Relief/Relaxation and Basis for the Relief/Relaxation

DNC expects to comply with the Order implementation date and no relief/relaxation is required at this time.

6 Open Items from Overall Integrated Plan and Interim Staff Evaluation

No open items were identified in the MPS2 OIP. However, Requests for Additional Information (RAIs) were identified in the Interim Staff Evaluation (ISE) (Reference 5).

Responses to RAIs 2, 7, 8, 9, 10, 11, 13, and 14 contained in the ISE were provided to the Nuclear Regulatory Commission (NRC) in Attachment 3 to the second Six-Month Status Report dated February 28, 2014 (Reference 6). Responses to the remaining RAIs are provided in Attachment 2 to this letter.

One additional item, identified as Safety Evaluation (SE) Review Item 6, was identified during the July 2014 Onsite NRC Audit. SE Review Item 6 was a question regarding the potential effect that Electromagnetic Interference (EMI) may have on the SFPLI. The response to this item is also addressed in Attachment 2 of this letter.

The Millstone Power Station, Units 2 and 3 – “Report for the Onsite Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Instrumentation Related to Orders EA-12-049 and EA-12-051,” dated November 17, 2014, (Reference 7) concluded that the SFPLI RAIs and SE Review Item 6 had been evaluated and indicated that further review of these items was not anticipated as Dominion proceeds towards compliance for Order EA-12-051.

The only requirement is to submit the SFPLI RAI and SE Review Item 6 RAI responses no later than submittal of the letter documenting full compliance.

7 Potential Interim Staff Evaluation (ISE) Impacts

No potential impacts to the ISE or the pending SE have been identified since the last Six-Month Status Report (Reference 3).

8 References

The following references support the update to the MPS2 SFPLI system OIP described in this attachment:

1. Dominion Nuclear Connecticut, Inc. letter, Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2013.
2. NRC Order Number EA-12-051, “Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,” dated March 12, 2012.
3. Dominion Nuclear Connecticut, Inc. letter, Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated August 28, 2014 (Serial No. 14-390).
4. NEI 12-02 (Revision 1), Industry Guidance for Compliance with NRC Order EA-12-051, “To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,” dated August 2012.

5. Millstone Power Station, Units 2 and 3 letter, Interim Staff Evaluation and Request for Additional Information Regarding to Overall Integrated Plan for Implementation of Order EA-12-051, Reliable Spent Fuel Pool Instrumentation, dated October 29, 2013.
6. Dominion Nuclear Connecticut, Inc. letter, "Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)," dated February 28, 2014 (Serial No. 12-165D).
7. Millstone Power Station, Units 2 and 3 – "Report for the Onsite Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Instrumentation Related to Orders EA-12-049 and EA-12-051," dated November 17, 2014 (ML14275A017).

Attachment 2

**Response to Spent Fuel Pool Level Instrumentation (SFPLI) Requests for
Additional Information (RAIs) and Safety Evaluation Review Item 6**

**Dominion Nuclear Connecticut, Inc. (DNC)
Millstone Power Station Unit 2**

**Response to Spent Fuel Pool Level Instrumentation (SFPLI) Requests for
Additional Information (RAIs) and Safety Evaluation Review Item 6**

SFPLI RAIs 2, 7, 8, 9, 10, 11, 13, and 14

DNC Response:

On October 29, 2013, Dominion Nuclear Connecticut, Inc. (DNC) received an Interim Staff Evaluation (ISE) regarding the Millstone Power Station (MPS) Unit 2 (MPS2) and MPS Unit 3 (MPS3) SFPLI system Overall Integrated Plan (OIP) in a letter from Mr. James Kim to Mr. David Heacock (Reference 1). Responses to requests for additional information (RAIs) 2, 7, 8, 9, 10, 11, 13, and 14 contained in the ISE were provided to the Nuclear Regulatory Commission (NRC) in Attachment 3 to the second Six-Month Status Report dated February 28, 2014 (Reference 2).

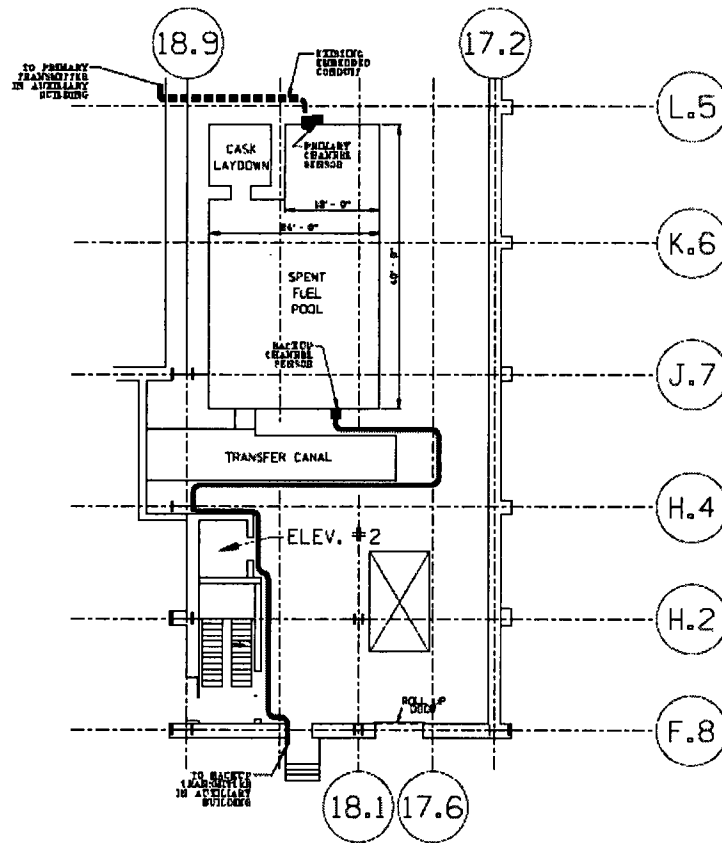
SFPLI RAIs 1, 3, 4, 5, 6, 12, 15, 16, and 17

SFPLI RAI No. 1

Please provide a clearly labeled sketch or marked-up plant drawing of the plan view of the SFP area, depicting the SFP inside dimensions, the planned locations/placement of the primary and back-up SFP level sensor, and the proposed routing of the cables that will extend from these sensors toward the location of the read-out/display device.

DNC Response:

A plan view sketch of the MPS2 SFP area is provided in the figure below. The sketch depicts the MPS2 SFP inside dimensions, the planned locations/placement of the primary and back-up channel sensors, and the proposed cable routing that extend the sensors toward the location of the electronics.



AUXILIARY BUILDING
PLAN - EL 38'-6"

Millstone Power Station Unit 2 SFP Level Instrumentation Plan View

SFPLI RAI No. 3

For each of the mounting attachments required to attach SFP Level equipment to plant structures, please describe the design inputs, and the methodology that was used to qualify the structural integrity of the affected structures/equipment.

DNC Response:

The level sensing probe is attached to the mounting bracket, which is anchored to the SFP structure at the concrete curb using concrete expansion anchors. The anchorage to the Seismic Category I SFP structure concrete curb is designed to meet the requirements of the MPS design basis for Seismic Category I components including seismic loads, static weight loads and hydrodynamic loads.

Each of the additional SFPLI system components required to be mounted / anchored will be attached to plant structures consistent with the MPS design basis for Seismic Category I components, and include consideration of design basis maximum seismic loads and static weight loads.

SFPLI RAI No. 4

Please provide analysis of the maximum expected radiological conditions (dose rate and total integrated dose) to which the equipment (including transmitters, control boxes, and display panels) will be exposed. Also, please provide documentation indicating how it was determined that the electronics for the SFP level instrumentation is capable of withstanding a total integrated dose of 1E4 Rads. Please discuss the time period over which the analyzed total integrated dose was applied.

DNC Response:

A radiation dose analysis was performed to support the radiological requirements defined by NEI 12-02 (Reference 3) for the MPS2 SFP and Auxiliary Building areas and the results are documented in Calculation CALC-RA-0045, Rev. 1 "Radiological Evaluation following a Beyond Design Basis (BDB) MPS2 SFP Draindown for NEI 12-02" (Reference 4). The results of the analysis provided integrated doses for 7-days post-event conservatively assuming the SFP water level at one foot above the fuel rack, except as noted below. The analysis also provided dose rates and integrated doses for 40-year normal operation. The 7-day integrated doses and dose rates were based on core inventories with 100 hours of decay post-shutdown (spent fuel sources) as defined in NEI 12-02. In the SFP area where the coupler and coaxial cable are located, the dose analysis resulted in a 7-day integrated dose of 2.7E6 Rads and a 40-year integrated dose of 880 Rads. In the Auxiliary Building where the SFPLI system sensor transmitters are located, the dose analysis resulted in a 7-day integrated dose of

81 Rads and 40-year integrated dose of 700 Rads. In this instance, the 7-day integrated dose assumed a variable SFP water level consistent with MPS2 FLEX Strategy Document ETE-CPR-2008-0009 "Beyond Design Basis – FLEX Strategy Overall Integrated Plan Basis Document." Alternatively, a SFP water level of only 2 feet above the fuel would result in a 7-day integrated dose of less than 250 Rads. In the Auxiliary Building where the display cabinets are located, the dose analysis resulted in a 7-day integrated dose of 4.4 Rads and a 40-year integrated dose of 700 Rads. These values were compared to the design criteria of $1E7$ Rads for the SFP area and $1E3$ Rads for the Auxiliary Building area and formed the basis for demonstrating reliability of the permanently installed SFPLI system. ETE-CPR-2008-0009 and calculation CALC-RA-0045, Rev. 0, have previously been provided to the NRC staff (Reference 11).

Radiation test results supplied from Westinghouse in qualification summary test report EQ-QR-269, "Design Verification Testing Summary Report for the Spent Fuel Pool Instrumentation System," (Reference 5) have qualified the coupler and coaxial connecting cable to greater than $1E7$ Rads demonstrating reliability of this permanently installed equipment located in the MPS2 SFP. Westinghouse document EQ-QR-269 has previously been provided to the NRC staff (Reference 11).

The SFPLI electronics use Commercial-off-the-Shelf (COTS) components containing Complementary Metal Oxide Semiconductor (CMOS) devices which have been found to be capable of withstanding ionizing dose radiation levels of up to $1E3$ Rads as described in EPRI 1021067, "Nuclear Power Plant Equipment Qualification Reference Manual" Rev 1, and discussed in RG 1.209, "Guidelines for Environmental Qualification of Safety-Related Computer Based Instrumentation and Control Systems in Nuclear Power Plants." Comparing the calculated integrated dose for both the short-term post BDB event and the long-term normal operating conditions to the industry accepted limit form the basis to demonstrate reliability of the permanently installed sensor transmitters and display cabinet's equipment located within the MPS2 Auxiliary Buildings under post-BDB event radiological conditions.

SFPLI RAI No. 5

Please provide information indicating (a) what are the temperature ratings and whether the temperature ratings for the system electronics (including transmitters, control boxes, and display panels) are continuous duty ratings; and, (b) what will be the maximum expected ambient temperature in the rooms in which the system electronics will be located under BDB conditions in which there are no AC power available to run Heating Ventilation and Air Conditioning (HVAC) systems?

DNC Response:

a) The temperature rating for the electronic equipment located in the MPS2 Auxiliary Building (transmitter, control box, uninterruptible power supply (UPS), display) is 120°F based on a continuous duty rating and 140°F under abnormal conditions. The basis for the temperature ratings is provided in Section 4.6 of Westinghouse design specification WNA-DS-02957-GEN (Reference 6). The temperature rating test results for abnormal conditions are provided in Section 4.5 of Westinghouse report EQ-QR-269 (Reference 5). Westinghouse documents WNA-DS-02957-GEN and EQ-QR-269 have previously been provided to the NRC staff (Reference 11).

b) For MPS2, the primary channel transmitter, control box, UPS, and display cabinets will be located within the Auxiliary Building Cable Vault at elevation (EL) 25'-6" which is directly below the Main Control Room (MCR). The backup channel displays, control box, and UPS will be mounted within the Auxiliary Building East 480 VAC Switchgear Room at EL 36'-6". These areas are described in the MPS2 environmental qualification (EQ) specification, "Environmental Conditions for Equipment Qualification," (Reference 7) and are not expected to exceed 104°F during normal operations. The MPS2 backup channel transmitter will be mounted within the Auxiliary Building Control Room Air Conditioning (CRAC) Room at EL 36'-6". This area is also described in the MPS2 EQ specification and is not expected to exceed 110°F during normal operations.

Under postulated BDB conditions, in which there is no AC power available to run heating ventilation and air conditioning (HVAC) systems, the maximum temperatures for the MPS2 SFPLI system equipment locations is not expected to exceed 120°F. Starting with the initial access for SFP water level readings, temperature monitoring will be performed in the areas of the control box, UPS, and display cabinets. Temperatures are expected to increase slowly and actions to control temperatures can be performed as necessary. Short and long term compensatory measures have been developed for the East 480 VAC Switchgear Room to ensure the temperature rating of 120°F is not exceeded. Similar short and long term compensatory actions such as opening doors, installing portable fans, and flexible ducts are available to reduce the room temperatures for the Cable Vault and CRAC Room, if necessary. The CRAC room at EL 36'-6" does not contain a display cabinet, therefore, personnel access is not required. However, the area will be monitored to ensure that the transmitter equipment

temperature rating of 140°F is not exceeded. The effectiveness of these available short and long term compensatory actions for the Cable Vault and CRAC Room areas to maintain habitability and equipment operability was confirmed (Reference 8).

SFPLI RAI No. 6

Please provide information indicating the maximum expected relative humidity in the rooms in which the system electronics will be located under BDB conditions, in which there are no AC power available to run HVAC systems, and whether the sensor electronics are capable of continuously performing its required functions under this expected humidity condition.

DNC Response:

For MPS2, the primary channel transmitter, UPS, and display cabinets will be located within the MPS2 Auxiliary Building at EL 25'-6", which is directly below the Main Control Room. The MPS2 backup channel transmitter, UPS, and display cabinets will be mounted within the Auxiliary Building at various locations on EL 36'-6".

The Auxiliary Building areas containing SFPLI system equipment are areas that have conditioned air with ventilation, cooling and heating as necessary. The single exception is the MPS2 CRAC Room which is cooled by the HVAC equipment that is operating inside the room. Accordingly, normal steady state relative humidity (RH) levels within these Auxiliary Building areas are typically well below the equipment limit of 95%. The moisture content of the air should remain relatively constant throughout a postulated BDB event as a result of the loss of power to the area HVAC systems. The stagnant air in the affected areas is expected to initially experience a rise in temperature due to residual heat sources, but will experience a temperature decrease over the life of the event. The effect on RH levels is expected to be modestly impacted as a result of the ambient temperature changes, but is not expected to vary significantly enough to approach the 95% RH equipment limit. Due to the presence of various heat loads in the Auxiliary Building (e.g. wall transmission loads from the SFP and the Containment), it is expected that the bulk average temperatures in the vicinity of the SFPLI system will always be greater than the outdoor temperature. Furthermore, since the equipment is energized, it is extremely unlikely that condensation could occur on the equipment surfaces. Accordingly, the maximum humidity for postulated BDB conditions in which there is no AC power available to run heating ventilation and air conditioning (HVAC) systems is expected to be less than 95% relative humidity for either unit's Auxiliary Building.

Equipment testing under normal and abnormal conditions with humidity levels up to 95% were performed by Westinghouse and the results documented in Section 4.5 of report EQ-QR-269, "Design Verification Testing Summary Report for the Spent Fuel

Pool Instrumentation System” (Reference 5). The results of the testing performed by Westinghouse and the expected maximum post-BDB humidity level of less than 95% form the basis to demonstrate reliability of the permanently installed electronic equipment located within the MPS2 Auxiliary Building under the post-BDB event RH conditions.

Westinghouse document EQ-QR-269 has previously been provided to the NRC staff (Reference 11).

SFPLI RAI No. 12

Please provide the NRC staff with the final configuration of the power supply source for each channel so that the staff may conclude that the two channels are independent from a power supply assignment perspective.

DNC Response:

Each instrument channel is normally powered by 120 VAC distribution panels to support continuous monitoring of the SFP level. The 120 VAC distribution panels for the primary and backup channels are powered by different 480 VAC buses. Therefore, the loss of either of the 480 VAC bus will not result in the failure of both instrument channels. On loss of normal 120 VAC power, each channel is equipped with a separate UPS that will automatically transfer to a dedicated 72-hour back-up battery. If normal power is restored, then the instrument channels will automatically transfer back to the normal 120 VAC power source. The backup batteries are maintained in a charged state by the associated UPS.

The instrument channels can also be powered through a manually selected alternate AC power source. The Westinghouse SFPLI system design does not include an optional external DC power input.

SFPLI RAI No. 15

a) The specific location for the primary and backup instrument channel display.

b) For any SFP level instrumentation displays located outside the MCR, please describe the evaluation used to validate that the display location can be accessed without unreasonable delay following a BDB event. Include the time available for personnel to access the display as credited in the evaluation, as well as the actual time (e.g., based on walk-through) that it will take for personnel to access the display. Additionally, please include a description of the radiological and environmental conditions on the paths personnel might take. Describe whether the display location remains habitable for radiological, heat and humidity, and other environmental conditions following a BDB event. Describe whether personnel are continuously stationed at the display or monitor the display periodically.

DNC Response:

a) For MPS2, the primary instrument channel display is located in the Cable Vault Room on EL 25'-6", directly below the Main Control Room (MCR) and is directly accessible via a stairwell located immediately outside the MCR. The backup channel display is located in the East 480 VAC Switchgear Room adjacent to the MCR.

Both display locations were selected based on proximity to the MCRs and both allow rapid access for the emergency response staff to and from the displays.

b) For MPS2, radiological habitability at the display locations has been evaluated against calculation CALC-RA-0045, (Reference 4). The access routes are physically separated from the SFP such that heat and humidity from a boiling SFP would not compromise habitability concerns with accessing these displays. Due to the physical distance from the SFP and shielding from structures, exposure to personnel monitoring SFP levels would remain less than emergency exposure limits allowable for emergency responders to perform this action per the MPS Emergency Plan. Calculation CALC-RA-0045 has previously been provided to the NRC staff and is available for their review (Reference 11).

SFP level display monitoring will be primarily the responsibility of the Auxiliary Building Plant Equipment Operator, who will normally perform periodic monitoring at the display locations, once dispatched from the MCR. The transit route to the primary display location is primarily contained within the Control Building boundary. The backup display is located within the Auxiliary Building boundary. These are both Category I structures. The transit routes to the primary and backup displays are different, but are both in close proximity to the MCR. Similar exposure rates are expected based on similar distance from the Containment and SFP structures.

SFPLI RAI No. 16

Please provide a list of the procedures addressing operation (both normal and abnormal response), calibration, test, maintenance, and inspection procedures that will be developed for use of the spent SFP instrumentation. The licensee is requested to include a brief description of the specific technical objectives to be achieved within each procedure.

DNC Response:

Appropriate quality assurance measures that are consistent with Appendix A-1 of NEI 12-02 (Reference 3) have been established for the SFPLI as required by order EA-12-051. Upon completion of installation, site specific procedures will be developed for system inspection, calibration and test, maintenance, repair, operation, and normal and abnormal responses in accordance with MPS procedural controls and will be based on recommended operation and maintenance procedures provided by Westinghouse. Technical objectives are achieved through MPS specific procedures based on the following general procedure types:

Type of Procedure -- Objective to be Achieved

- 1) System Inspection -- To verify the system components are in place, complete, and in the correct configuration, and that the sensor probe is free from significant boric acid deposition.
- 2) Calibration and Test -- To verify that the system is within specified accuracy, is functioning as designed, and is properly indicating SFP level.
- 3) Maintenance -- To establish and define scheduled and preventive maintenance requirements and activities necessary to minimize the possibility of interruption.
- 4) Repair -- To specify troubleshooting steps and component repair and replacement activities in the event of a system malfunction.
- 5) Operation -- To provide sufficient instructions for operation and use of the system by plant staff personnel.
- 6) FLEX Support Guideline (FSG) -- To define the actions to be taken upon observation of system level indications, including actions to be taken at the levels defined in NEI 12-02.

SFPLI RAI No. 17

Please provide the following:

a) Further information describing the maintenance and testing program the licensee will establish and implement to ensure that regular testing and calibration is performed and verified by inspection and audit to demonstrate conformance with design and system readiness requirements. Please include a description of the plans for ensuring that necessary channel checks, functional tests, periodic calibration, and maintenance will be conducted for the level measurement system and its supporting equipment.

b) Information describing compensatory actions when both channels are out-of-order, and the implementation procedures.

c) Additional information describing expedited and compensatory actions in the maintenance procedure to address when one of the instrument channels cannot be restored to functional status within 90 days.

Dominion Response:

a) Channel Check is not a specified requirement in NEI 12-02 (Reference 3). If the plant staff determined a need to confirm that the two channels are performing as expected, the two channels may be read at their display locations. While the SFP is operating within design basis and at normal level, the indicators may be compared to fixed marks within the SFP by visual observation to confirm indicated level. The periodic calibration verification will be performed within 60 days of a refueling outage considering normal testing scheduling allowances (e.g., 25%). Calibration verification is not required to be performed more than once per 12 months. These calibration requirements will be consistent with the guidance provided in Section 4.3 of NEI 12-02. Periodic calibration verification procedures will be in place and will be based on information provided by Westinghouse in WNA-TP-04709-GEN, "Spent Fuel Pool Instrumentation System Calibration Procedure" (Reference 10). Preventive maintenance procedures which include periodic calibration verification, tests, inspection and periodic replacement of the backup batteries will be developed based on recommendations from Westinghouse. The Recurring Task Evaluations (RTEs) that prepare and implement the corresponding site specific preventative maintenance (PM) activities using recommended vendor guidance are under development and PM activities will be created upon completion. Westinghouse document WNA-TP-04709-GEN has previously been provided to the NRC staff. (Reference 11)

b) Provisions associated with out-of-service (OOS) or non-functional equipment including allowed outage times and compensatory actions are consistent with the guidance provided in Section 4.3 of NEI 12-02. If one OOS channel cannot be restored to service within 90 days, appropriate compensatory actions, including the use of alternate suitable equipment, will be taken. If both channels are OOS, actions would be initiated within 24 hours to restore one of the channels to operable status and to

implement appropriate compensatory actions, including the use of alternate suitable equipment and/or supplemental personnel, within 72 hours. Additionally, if both channels are OOS, a Condition Report will be initiated and addressed through DNC's corrective action program.

MPS will maintain sufficient spare parts for the SFPLI system, taking into account the lead time and availability of spare parts, in order to expedite maintenance activities, when necessary, to provide assurance that a channel can be restored to service within 90 days.

c) See response to RAI 17b.

SE Review Item 6

Electromagnetic compatibility assessment.

DNC Response:

The base configuration necessary to meet Criterion B (instrument will function before and after an Electro-Magnetic Compatibility (EMC) event) was confirmed during EMC qualification testing performed by Westinghouse. NRC representatives audited the Westinghouse test documents. As a result, Westinghouse specified materials, installation, and grounding requirements necessary to ensure the installed SFPLI system meets the tested Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) qualifications. These requirements and characteristics are detailed in Westinghouse proprietary letter LTR-EQ-14-32, Rev. 2 dated August 1, 2014 (Reference 11), which is available for review upon request.

Additionally, placards have been installed in the Unit 2 Auxiliary Building. The placards read, "Be aware that use of hand-held radios within 3 ft. may cause interference with the SFP level channels. The reading returns to normal when radio usage is stopped."

References:

1. Millstone Power Station, Units 2 and 3: NRC Interim Staff Evaluation and Request for Additional Information Regarding the Overall Integrated Plan for Implementation of Order EA-12-051, Reliable Spent Fuel Pool Instrumentation, dated October 29, 2013 (ML13291A115).
2. Dominion Nuclear Connecticut, Inc., Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2014 (Serial No. 12-165E). (ML14069A013).
3. NEI 12-02, Rev. 1, "Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated August 2012.
4. Calc-RA-0045, Rev. 0, "Radiological Evaluation following a Beyond Design Basis MPS2 SFP Draindown for NEI 12-02," dated February 14, 2014.
5. Westinghouse document EQ-EE-269, "Design Verification Testing Summary Report for the Spent Fuel Pool Instrumentation System," dated April 2014.
6. Westinghouse document WNA-DS-02957-GEN, "Spent Fuel Pool Instrumentation System-System Design Specification," dated March 2014.
7. SP-M2-EE-332, Rev. 5, "Specification for Millstone Unit 2 – Environmental Conditions for Equipment Qualification," dated June 30, 2014.
8. MISC-11806, Rev 0, "MPS-2 Heatup Analysis of the Control Room A/C Mechanical Equipment Room (EQ-A52) and the Cable Vault Area (EQ A40) Following an ELAP BDB Scenario," dated June 17, 2014.
9. IEEE 338-1987, "IEEE Standard Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems."
10. Westinghouse document WNA-TP-04709-GEN, "Spent Fuel Pool Instrumentation System Calibration Procedure," dated March 2014.
11. Westinghouse letter LTR-EQ-14-32, Rev. 2, "Spent Fuel Instrumentation System – Hardware Configuration for EMC testing to satisfy Performance Criteria B," dated August 1, 2014.
12. NRC letter to All Operating Reactor Licensees and Holders of Construction Permits, "Online Reference Portal for Nuclear Regulatory Commission Review of Fukushima Near-Term Task Force Related Documents," dated August 1, 2013 (ML13206A427).