



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 20, 2014

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
Innsbrook Technical Center
500 Dominion Boulevard
Glen Allen, VA 23060-6700

SUBJECT: MILLSTONE POWER STATION, UNITS 2 AND 3 - STAFF ASSESSMENT OF
RESPONSE TO 10 CFR 50.54(f) INFORMATION REQUEST REGARDING
NTTF 2.3 FLOODING WALKDOWNS (TAC NOS. MF0246 AND MF0247)

Dear Mr. Heacock:

By letter dated March 12, 2012, the Nuclear Regulatory Commission (NRC) issued a request for information pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.54(f) (hence referred to as the 50.54(f) letter). The request was issued as a part of implementing lessons learned from the accident at the Fukushima Dai-ichi nuclear power plant. The request addressed the methods and procedures for plants to conduct flooding hazard walkdowns to identify and address degraded, nonconforming, or unanalyzed conditions through the corrective action program, and to verify the adequacy of the monitoring and maintenance procedures.

By letter dated November 27, 2012, Dominion Nuclear Connecticut, Inc. (Dominion) submitted a Flooding Walkdown Report for Millstone Power Station, Units 2 and 3 as requested per Enclosure 4, "Recommendation 2.3: Flooding," of the 50.54(f) letter.

The NRC staff has reviewed the information provided and, as documented in the enclosed staff analysis, determined that you have provided sufficient information in response to the 50.54(f) letter. If you have any questions, please contact me at (301) 415-1476.

Sincerely,

A handwritten signature in cursive script that reads "Mohan C. Thadani".

Mohan C. Thadani, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-336 and 50-423

Enclosure:
Staff Analysis

cc w/encl: Distribution via Listserv

STAFF ANALYSIS BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO FLOODING WALKDOWN REPORT

MILLSTONE POWER STATION, UNITS 2 AND 3

DOCKET NOS. 50-336 AND 50-423

1.0 INTRODUCTION

On March 12, 2012,¹ the U.S. Nuclear Regulatory Commission (NRC) issued a request for information per Title 10 of the *Code of Federal Regulations*, Subpart 50.54(f) (50.54(f) letter) to all power reactor licensees and holders of construction permits in active or deferred status. The request was part of the implementation of lessons learned from the accident at the Fukushima Dai-ichi nuclear power plant. In Enclosure 4, "Recommendation 2.3: Flooding," to the 50.54(f) letter the NRC staff requested licensees to conduct seismic walkdowns to identify and address degraded, nonconforming, or unanalyzed conditions using the corrective action program (CAP), verify the adequacy of monitoring and maintenance procedures, and report the results to the NRC.

The 50.54(f) letters request licensees to include the following:

- a. Perform flood protection walkdowns using an NRC-endorsed walkdown methodology,
- b. Identify and address plant-specific degraded, nonconforming, or unanalyzed conditions, as well as, cliff-edge effects through the corrective action program, and consider these findings in the Recommendation 2.1 hazard evaluations, as appropriate,
- c. Identify any other actions taken or planned to further enhance the site flood protection,
- d. Verify the adequacy of programs, monitoring and maintenance for protection features, and,
- e. Report to the NRC staff the results of the walkdowns and corrective actions taken or planned.

In accordance with the 50.54(f) letter, Enclosure 3 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12056A049), Required Response Item 2, licensees were required to submit a response within 180 days of the NRC's endorsement of the flooding walkdown guidance. By letter dated May 21, 2012, the Nuclear Energy Institute (NEI) staff submitted NEI 12-07, Revision 0-A, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features" to the NRC staff to consider for endorsement². NEI 12-07 describes a methodology for performing walkdowns in a manner that will address requested information items 1.a through 1.j of Enclosure 4 of the 50.54(f) letter. By letter dated May 31,

¹ ADAMS Accession No. ML12053A340.

² The letter and guidance can be found at ADAMS Accession No. ML121440522. Additional guidance can be found at ADAMS Accession No. ML12173A215.

2012³, the NRC staff found that the performance and reporting of flooding protection walkdowns in accordance with the guidance would be responsive to the 50.54(f) letter.

By letter dated November 27, 2012,⁴ Dominion Nuclear Connecticut, Inc., provided its response for Millstone Power Station (MPS). The NRC staff evaluated the licensee's submittals to determine if the information provided in the walkdown report met the intent of the walkdown guidance and if the licensee responded appropriately to Enclosure 4 of the 50.54(f) letter.

2.0 REGULATORY EVALUATION

The structures, systems, and components (SSCs) important to safety in operating nuclear power plants are designed either in accordance with, or meet the intent of Appendix A to 10 CFR Part 50, General Design Criterion (GDC) 2: "Design Bases for Protection Against Natural Phenomena;" and Appendix A to 10 CFR Part 100, "Reactor Site Criteria." GDC 2 states that SSCs important to safety at nuclear power plants shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunamis, and seiches without loss of capability to perform their safety functions.

For initial licensing, each licensee was required to develop and maintain design bases that, as defined by 10 CFR 50.2, identify the specific functions that an SSC of a facility must perform, and the specific values or ranges of values chosen for controlling parameters as reference for the design.

The design bases for the SSCs reflect appropriate consideration of the most severe natural phenomena that have been historically reported for the site and surrounding area. The design bases also reflect sufficient margin to account for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.

The current licensing basis is the set of NRC requirements applicable to a specific plant, including the licensee's docketed commitments for ensuring compliance with, and operation within, applicable NRC requirements and the plant-specific design basis, including all modifications and additions to such commitments over the life of the facility operating license.

3.0 TECHNICAL EVALUATION

3.1 Design Basis Flooding Hazard for Millstone Power Station Units 2 and 3

The design basis flood (DBF) hazard differs for MPS Unit 2 and MPS Unit 3 as described by two distinct final safety analysis reports (FSARs).

The licensee refers to Revision 30 of the MPS Unit 2 Final Safety Analysis Report (FSAR) in its flooding walkdown report (FWR). The licensee stated that the controlling flooding mechanism for MPS Unit 2 is the probable maximum hurricane (PMH) causing a probable maximum storm surge (PMSS). The licensee reported a PMSS at MPS Unit 2 of 18.1 ft above the mean sea level (MSL) without consideration of wind wave effects. Considering wind wave effects, the

³ ADAMS Accession No. ML12144A142.

⁴ The letter dated November 27, 2012, is available under ADAMS Accession No. ML12334A445.

licensee reported a maximum water-surface elevation of 21.3 ft above MSL. The licensee reported that the maximum wave resonance within the Unit 2 intake structure would produce a water-surface elevation up to 26.5 ft above MSL within about 10 hr after PMH surge conditions. The licensee reported that the effect of the maximum rainfall event reported in the MPS Unit 2 FSAR would not cause a more significant hazard than the PMH. The licensee determined that groundwater ingress was not a feasible or credible flooding event at MPS Unit 2. The licensee did not state expected warning times or duration of the DBF for MPS Unit 2.

The licensee refers to Revision 25 of the MPS Unit 3 FSAR in its FWR. The licensee stated that the controlling flooding mechanism at MPS Unit 3 is the PMH causing a PMSS of 19.7, or 23.8 ft above MSL when including wind wave run-up. The licensee stated that the DBF for MPS Unit 3 is 23.8 ft above MSL and that resonant waves can produce water-surface elevations of 41.2 ft above MSL at the MPS Unit 3 intake. The licensee stated that seiche events are not a limiting flood mechanism and that groundwater ingress and tsunamis are not credible events at MPS Unit 3. The licensee did not state expected warning times or duration of the DBF for MPS Unit 3.

3.2 Flood Protection and Mitigation

3.2.1 Flood Protection and Mitigation Description

The current licensing basis (CLB) is flood protection and mitigation to an elevation of 22.0 and 24.5 ft above MSL for MPS Units 2 and 3, respectively. The flood-protection and mitigation features were designed using the following assumptions and inputs:

The MPS Unit 3 PMP event analysis included the conservative assumptions of no credit for functionality of the site storm-drainage system and no precipitation losses.

The licensee stated that plant configurations (i.e., modes of operation) were not addressed in the CLB. Therefore the licensee assumed flood-protection functionality to be independent of plant configuration.

3.2.2 Incorporated and Exterior Barriers

The site has incorporated and/or exterior barriers that are permanently in-place, requiring no operator manual actions. These barriers include:

- an external flood barrier associated with the Unit 2 Auxiliary Building that is identified by the licensee, but not fully described in the seventh deficiency (see Section 3.6.2 of this report and Section E of the flooding hazard reevaluation report (FHRR)).
- an external flood barrier associated with the Unit 2 Hot Shop that is identified by the licensee, but not fully described in the eighth deficiency (see Section 3.6.2 of this report and Section E of the FHRR).
- a flood wall between the decommissioned Unit 1 and Unit 2, credited as an inaccessible flood-protection feature, that is identified by the licensee, but not fully described.

3.2.3 Temporary Barriers and Other Manual Actions

The site has neither temporary barriers nor other manual actions that require operator action. The licensee did not describe any temporary barriers for flood mitigation or protection.

3.2.4 Reasonable Simulation and Results

The licensee stated that reasonable simulations were satisfactorily completed, found to be effective, and able to be completed within the time available. The licensee found that the required equipment was available for procedure implementation. The licensee's evaluations were based on its operating experience and tabletop discussions. The licensee found that the procedures could be executed within the available time and under the operational conditions expected with approaching severe weather. The licensee did not provide the specific procedures for which reasonable simulations were conducted.

3.3 Warning Systems

The licensee did not describe any flood-level warning systems based on offsite agreements with other entities.

The licensee stated that its emergency procedures are to be activated upon notification of certain severe weather conditions. The licensee did not state the expected source of these notifications.

3.4 Effectiveness of Flood Protection Features

The licensee identified 50 flooding walkdown packages and evaluated them in terms of flood-protection and mitigation adequacy for Unit 2; a total of 47 of the packages related to physical plant features. The remaining 3 were associated with procedures for Unit 3. The licensee identified 33 walkdown packages related to Unit 3; a total of 32 of these packages related to physical plant features.

The licensee stated that flood-protection features were evaluated as being effective in providing their intended flood-protection functions except in instances where acceptance criteria were not met or could not be readily determined. In these cases, the licensee made entries into its CAP.

The licensee stated that flood-protection procedures were evaluated using reasonable simulation activities, which were satisfactorily completed during the flooding walkdown. The licensee stated that sufficient time, equipment, tools, and personnel were available to implement these procedures. The licensee verified the adequacy based on operating experience and tabletop discussions. The licensee's evaluations were made in consideration of impending severe weather.

The licensee identified several features as having restricted access or as being inaccessible. The licensee identified two restricted access areas: (1) security electrical cable pull box PBG1 located on the west wall of the Unit 2 Turbine Building, and (2) a security electrical cable pull

box located in the west condenser pit of the Unit 2 Turbine Building. The licensee determined both of these as restricted access areas because scaffolding and rigging would be needed to remove large cover plates. The licensee stated that flooding walkdowns for these areas would be deferred until July 1, 2013. The licensee identified two inaccessible areas: (1) the credited flood wall between the decommissioned Unit 1 and Unit 2, and (2) a Unit 2 Enclosure Building wall section located above the 60-ft-deep tendon access pit. In the first area, drywall prevented a full visual inspection. In the second area, an electrical pull box and a tendon access pit prevented visual inspection. The licensee stated that each of these conditions was entered into the CAP.

The licensee discussed the effectiveness of conduit seals and differentiated the discussion based on conduit seals being on the uphill or downhill end of the conduit. The licensee stated that uphill end seal are less likely to catastrophically fail than downhill end seals.

The licensee reported that inspections revealed conduit seals that were degraded or missing. These conditions were entered into the CAP.

The licensee reported that it does not maintain a periodic monitoring program for flooding penetrations and conduit seals.

The licensee reported that programmatic controls are needed to control yard changes that could unnecessarily block onsite water-runoff pathways to ensure that storm drains perform their intended function.

3.5 Walkdown Methodology

By letter June 11, 2012,⁵ the licensee responded to the 50.54(f) letter that they intended to utilize the NRC endorsed walkdown guidelines contained in NEI 12-07, Revision 0-A "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features."⁶ The licensee's walkdown submittal dated November 27, 2012, indicated that the licensee implemented the walkdowns in accordance with the guidance provided in NEI 12-07. The licensee did not identify any exceptions from NEI 12-07.

The licensee stated that no changes to the walkdown methodology were required and that its walkdown process was consistent with NEI guidance. The licensee stated that, as needed, the licensee made minor additions to the NEI guidance for site-specific procedure processes. The licensee did not detail these minor deviations in its FWR. The staff were unable to assess these additions.

⁵ The letter dated June 11, 2012, is available under ADAMS Accession No. ML12171A006

⁶ The guidance can be found at ADAMS Accession No. ML12173A215.

3.6 Walkdown Results

3.6.1 Walkdown scope

Based on the above evaluation, the NRC staff concludes that the licensee performed walkdowns of 79 flood-protection features including conduit seals, penetrations, walls, roof and yard drainage, and the storm-drainage system. In addition, the licensee performed reasonable simulations of manual actions. The licensee stated that reasonable simulations were performed for procedures to be performed in preparation or in response to severe weather events. These simulations were based on operating experience and tabletop discussions.

The licensee evaluated flood-protection features and procedures against its CLB. The licensee did not mention any consideration of concurrent environmental conditions.

The licensee stated that plant configurations (i.e., modes of operation) were not addressed in the CLB. Therefore, the licensee assumed that flood-protection functionality was not a function of plant configuration.

The licensee used acceptance criteria in accordance with NEI 12-07.

3.6.2 Licensee evaluation of flood protection effectiveness, key findings, and identified deficiencies

The licensee performed an evaluation of the overall effectiveness of the plant's flood protection features.

The licensee determined the effectiveness of (1) the credited flood wall between MPS Unit 1 and MPS Unit 2, and (2) the credited Radwaste Building flood wall. The licensee stated that these flood walls were designed to provide flood protection to MPS Unit 2. The licensee stated that deficiencies were found during the walkdown at these flood walls. The licensee stated that flood protection features were found to be effective at meeting their intended credit functions except where deficiencies were found. These deficiencies are discussed below.

The licensee determined the feasibility of several abnormal procedures that are in place for MPS Unit 2 and MPS Unit 3. These procedures included: (1) the Corporate Hurricane Response Plan, (2) Emergency Plans, (3) the Millstone 2 and 3 Common Operating Procedure, (4) Millstone 2 Site-Specific Abnormal Operating Procedures, and (5) Millstone 3 Site-Specific Abnormal Operating Procedures. The licensee stated that reasonable simulation activities were used to determine the effectiveness of credited procedures. The licensee determined that the procedure could be feasibly executed.

NEI 12-07 defines a deficiency as follows: "a deficiency exists when a flood protection feature is unable to perform its intended function when subject to a design basis flooding hazard." The licensee identified 13 deficiencies because of the flood walkdowns.

Licensee-identified deficiencies included the following:

1. A failure of the Unit 2 condensate east condenser pit plug leading to water ingress through a floor seal was found. The licensee stated that this issue was resolved during a subsequent refueling outage. The licensee did not state when this occurred or whether it was entered into the CAP.
2. A non-functional flood wall penetration seal was found in the Unit 2 and Unit 1 separation flood wall in the East Radwaste Building. The licensee stated that this issue was resolved during a subsequent refueling outage. The licensee did not state when this occurred or whether it was entered into the CAP.
3. An unsealed wall penetration was found in the south wall of the Unit 2 Auxiliary Building. The licensee stated that a seal was installed during a subsequent refueling outage. The licensee did not state when this occurred or whether it was entered into the CAP.
4. A Unit 3 Fire Water Pump House block wall credited with flood protection for Unit 2 was found to have several cracks. The licensee stated that these cracks were repaired and an evaluation of the structural integrity of the block wall was to be completed by March 31, 2013. The licensee did not state whether this was entered into the CAP.
5. Two unsealed ventilation ducts in the Unit 2 Auxiliary Building were found to be below the minimum flood-protection elevation. The licensee stated that this issue was resolved during a subsequent refueling outage. The licensee did not state when this occurred or whether it was entered into the CAP.
6. Several seals between cables and conduits were missing in the Unit 2 Turbine Building cable pits; seals were also missing between the Turbine Building cable pits and the intake structure service-water pump room. The licensee stated that seals were installed during a subsequent refueling outage. The licensee did not state when this occurred or whether it was entered into the CAP.
7. A conduit seal was missing in the south wall of the Unit 2 Auxiliary Building. The licensee stated that a seal was installed during a subsequent refueling outage. The licensee did not state when this occurred or whether it was entered into the CAP.
8. Several electrical conduits were found to be unsealed in the Unit 2 Hot Shop. The licensee stated that seals were installed during a subsequent refueling outage. The licensee did not state when this occurred or whether it was entered into the CAP.
9. Documentation was lacking for the design, installation, and inspection of Unit 3 conduit seals credited for flood protection. The licensee stated that the condition was entered into the CAP and that an evaluation was to be completed on July 1, 2013.
10. Documentation was lacking for Unit 2 seals credited with flood protection. The licensee stated that the condition was entered into the CAP and that an evaluation was to be completed on July 1, 2013.
11. The integrity of a group of four Unit 2 Turbine Building conduit seals could not be determined. The licensee stated that the condition was entered into the CAP and that work to repair these deficiencies was to be completed on July 1, 2013.

12. The Unit 2 circulating-water discharge tunnel vent was found in a degraded condition that permitted water leakage. The licensee stated that the condition was entered into the CAP and that work to repair this deficiency was to be completed on June 1, 2014.
13. Several unsealed electrical conduits were found on a Unit 2 service-water-pipe tunnel wall. The licensee did not state whether the condition was entered into the CAP, but did state that the work to repair these deficiencies was to be completed on July 1, 2013.

A total of 5 of the 13 deficiencies described by the licensee were noted as having been entered into the CAP. The licensee stated that the deficiencies were either addressed during a subsequent refueling outage, identified as 2R21, or would be addressed by a future date (i.e., March 31, 2013, July 1, 2013, or June 1, 2014). A total of 12 of the 13 deficiencies were associated with Unit 2. The licensee stated with reasonable assurance that no adverse conditions would prevent the 13 identified features from performing their credited functions in the CLB.

NEI 12-07 requires licensees to identify observations in the CAP that were not yet dispositioned at the time the walkdown report was submitted. The licensee did identify observations awaiting disposition. The licensee's observations, CAP status, and any associated pending scheduled dispositions are described above.

3.6.3 Flood Protection and Mitigation Enhancements

The licensee has implemented or planned the following enhancements that improve or increase flood protection or mitigation:

The licensee stated that some flood-protection and mitigation enhancements, while not identified as deficiencies, were necessary.

The licensee indicated that its storm drain systems are in need of preventative maintenance to ensure CLB conformance. This observation was entered into the CAP. The licensee stated that this enhancement was to be in place by December 31, 2013.

The licensee indicated a need for programmatic controls to ensure that water-runoff pathways and storm drains are not blocked. This observation was entered into the CAP. The licensee stated that these programmatic controls would be in place by December 31, 2013.

3.6.4 Planned or newly installed features

The licensee determined that changes were necessary during the flooding walkdowns.

During its flooding walkdown, the licensee identified the following three instances where new or modified flood-protection features were needed: (1) programmatic controls for tracking storm drain and yard changes, (2) programmatic controls for inspection and maintenance of conduit and penetration seals, and (3) an enhancement to one abnormal procedure and one flood-protection procedure. The licensee stated that these changes would be in place by December 31, 2013.

The licensee stated that no other new or modified flood-protection equipment, features, or procedures were identified as needed as a result of the flooding walkdowns.

3.6.5 Deficiencies Noted and Actions Taken or Planned to Address

The licensee noted the 13 deficiencies and actions taken or planned to address the deficiencies described in Section 3.6.2 of this report.

As stated in Section 3.6.2, a total of 5 of the 13 deficiencies described by the licensee were noted as having been entered into the CAP. The licensee stated that the deficiencies were either addressed during a subsequent refueling outage, identified as 2R21, or would be addressed by a future date (i.e., March 31, 2013, July 1, 2013, or June 1, 2014). A total of 12 of the 13 deficiencies were associated with Unit 2. The licensee stated with reasonable assurance that no adverse conditions would prevent the 13 identified features from performing their credited functions in the CLB.

3.6.6 Walkdowns Not Performed for Flood Protection Features

3.6.6.1 Restricted Access

The licensee identified two restricted access areas: (1) security electrical cable pull box PBG1 located on the west wall of the Unit 2 Turbine Building, and (2) security electrical cable pull box located in the west condenser pit of the Unit 2 Turbine Building. The licensee determined both of these as restricted access areas because scaffolding and rigging would be needed to remove large cover plates. The licensee stated that flooding walkdowns for these areas would be deferred until July 1, 2013.

3.6.6.2 Inaccessible Features

The licensee identified two inaccessible areas: (1) the credited flood wall between the decommissioned Unit 1 and Unit 2, and (2) a Unit 2 Enclosure Building wall section located above the 60-ft-deep tendon access pit. In the first area, drywall prevented a full visual inspection. In the second area, an electrical pull box and a tendon access pit prevented visual inspection. The licensee stated that each of these conditions was entered into the CAP.

3.6.7 Staff analysis of walkdowns

The NRC staff reviewed the licensee's walkdown report dated November 27, 2012, and conducted a site audit of the walkdown report at the Millstone's site in July 2013 (see Section 3.8). Based on the review of the walkdown report and the site audit, the NRC staff concludes that the licensee did perform the walkdowns in accordance with NEI 12-07.

Upon inspection and review of the licensee's reasonable simulation worksheets, the NRC staff concluded that, with the exception of the four items discussed in detail below, the information and data captured on the worksheet forms provided an adequate simulation of the relevant elements of the "Flood Emergency Procedure." Concurrent conditions (such as high winds, heavy rainfall, and wet or inundated ground surfaces) were adequately considered in the

simulations. The simulations demonstrated a reasonably robust procedure for evaluating the effectiveness of each step of the "Flood Emergency Procedure," as demonstrated by the complexity of some of the simulations conducted.

The following issues were identified with respect to the reasonable simulations that were performed:

- It was unclear how the licensee conducted the reasonable simulation with respect to erecting the scaffolding that would be needed to stage the portable Darley pump and to relocate that pump to higher elevations using the scaffolding during the rising water event.
- The licensee possibly under-reported to the NRC the number of hours to complete removing the reactor vessel heads. That is, a cross-check by the NRC staff of the data from previous outage logs appears to indicate that the times determined from the reasonable simulations did not agree with, and were shorter than, the time actually needed to conduct this activity.
- On their timeline of "Flood Emergency Procedure" activities, the licensee sequenced the de-energization of plant loads prior to the time the spent fuel gates were removed. Removal of these gates would require the use of a crane powered from plant loads. In the absence of power, it is not clear how the spent fuel gates could be removed as sequenced/scheduled.
- A minor documentation issue was identified when the licensee did not document the Darley pump on a separate walkdown form. This portable pump should have been classified as an active temporary flood protection feature credited to mitigate the external effects of the current licensing basis flood. Therefore, documentation of the field observations for the proposed use of the Darley pump should have been recorded on a form in the walkdown package and not solely in a reasonable simulation worksheet.

3.6.8 Available Physical Margin

During the site audit discussed in section 3.8, staff reviewed the processes used to calculate and address the available physical margin (APM) at flood protection features. The NRC staff concluded that the licensee met the intent of the APM process.

3.7 Independent Verification

On June 27, 2012, the NRC issued Temporary Instruction (TI) 2515/187.⁷ The TI directed NRC inspectors to independently verify that licensees were implementing the flooding walkdowns in accordance with the NRC endorsed walkdown methodology by accompanying licensee personnel on a sample of walkdowns. Additionally, the TI directed the inspectors to independently perform walkdowns of a sample of flood protection features. In Inspection Report 05000254/2012005 and 05000265/2012005, dated January 31, 2013, the results of this inspection were documented. No findings of significance were identified.

⁷ TI 2515/187 can be found at ADAMS Accession No. ML12129A108.

3.8 Staff Audit

The NRC staff performed an audit of MPS during the week of June 17, 2013. During the audit, the staff gained a better understanding of the process used by the licensee to perform the walkdowns, including the available physical margin determinations. The staff identified and conveyed to the licensee the specific issues to be addressed. The NRC staff also noted that the licensee discussed several self-identified issues. The audit report dated February 19, 2014,⁸ provides the results of this audit for MPS, Unit 2.

3.9 SSCs to be Walked Down at a Later

The licensee identified restricted access features. See sections 3.6.6.1 for a summary of restricted areas.

The licensee did not provide justification for the delay in walkdowns of restricted access features. All of the features require plant shutdown and cooldown for access. The licensee entered the restricted access features into the CAP, but did not provide a date by which these features would be walked down.

4.0 CONCLUSION

The NRC staff concludes that the licensee's implementation of flooding walkdown methodology meets the intent of the walkdown guidance. The NRC staff concludes that, through the implementation of the walkdown guidance activities and, in accordance with plant processes and procedures, the licensee verified the plant configuration with the current flooding licensing basis; addressed degraded, nonconforming, or unanalyzed flood conditions; and verified the adequacy of monitoring and maintenance programs for protective features. Furthermore, the NRC staff notes that no immediate safety concerns were identified. The NRC staff concludes that the licensee responded appropriately to Enclosure 4 of the 50.54(f) letter, dated March 12, 2012.

⁸ ADAMS Accession No. ML14002A103

March 20, 2014

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
Innsbrook Technical Center
500 Dominion Boulevard
Glen Allen, VA 23060-6700

SUBJECT: MILLSTONE POWER STATION, UNITS 2 AND 3 - STAFF ASSESSMENT OF
RESPONSE TO 10 CFR 50.54(f) INFORMATION REQUEST REGARDING
NTTF 2.3 FLOODING WALKDOWNS (TAC NOS. MF0246 AND MF0247)

Dear Mr. Heacock:

By letter dated March 12, 2012, the Nuclear Regulatory Commission (NRC) issued a request for information pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.54(f) (hence referred to as the 50.54(f) letter). The request was issued as a part of implementing lessons learned from the accident at the Fukushima Dai-ichi nuclear power plant. The request addressed the methods and procedures for plants to conduct flooding hazard walkdowns to identify and address degraded, nonconforming, or unanalyzed conditions through the corrective action program, and to verify the adequacy of the monitoring and maintenance procedures.

By letter dated November 27, 2012, Dominion Nuclear Connecticut, Inc. (Dominion) submitted a Flooding Walkdown Report for Millstone Power Station, Units 2 and 3 as requested per Enclosure 4, "Recommendation 2.3: Flooding," of the 50.54(f) letter.

The NRC staff has reviewed the information provided and, as documented in the enclosed staff analysis, determined that you have provided sufficient information in response to the 50.54(f) letter. If you have any questions, please contact me at (301) 415-1476.

Sincerely,
/ra/

Mohan C. Thadani, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Regulation
Office of Nuclear Reactor Regulation

Docket Nos. 50-336 and 50-423

Enclosure:
Staff Analysis

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC	LPLI-1 R/F	RidsAcrcAcnw_MailCTR Resource
RidsNrrDorlDpr Resource	RidsNrrDorlLpl1-1 Resource	RidsNrrDssSbpb Resource
RidsNrrLKGGoldstein Resource	RidsNrrPMMillstone Resource	RidsRgn1MailCenter Resource

ADAMS Accession Number: ML14057A716

*See memo dated February 14, 2014

OFFICE	LPLI-1	LPLI-1/PM	LPLI-1/LA	JLD/PMB/PM	DSEA/RHMB/BC	LPLI-1/BC
NAME	JKim	MThadani	KGoldstein	RKuntz	CCook*	BBeasley
DATE	3/19/14	3/20/14	3/20/14	2/14/14	2/14/14	3/19/14

OFFICIAL RECORD COPY