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

May 18, 2015

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: AREVA M5™ ALLOY CLAD FUEL ASSEMBLIES (TAC NO. MF3917)

Dear Mr. Heacock:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 319 to Renewed Facility Operating License No. DPR-65 for the Millstone Power Station, Unit No. 2, in response to your application dated April 11, 2014. In the same letter you also requested an exemption from certain parts of Title 10 of the *Code of Federal Regulations*, Section 50.46 and Appendix K. The requested exemption was issued on May 12, 2015.

The amendment revises the Technical Specifications (TSs), adding the AREVA NP, Inc., Topical Report BAW-10240(P)-A, "Incorporation of M5 Properties in Framatome-ANP Approved Methods," to the analytical methods referenced in TS 6.9.1.8.b, "Core Operating Limits Report."

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Richard V. Guzman, Senior Project Manager
Plant Licensing Branch 1-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures:
1. Amendment No. 319 to DPR-65
2. Safety Evaluation

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

DOMINION NUCLEAR CONNECTICUT, INC.

DOCKET NO. 50-336

MILLSTONE POWER STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 319
Renewed License No. DPR-65

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the Millstone Power Station, Unit 2 (the facility) Renewed Facility Operating License No. DPR-65 filed by the Dominion Nuclear Connecticut, Inc., dated April 11, 2014, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conductzed in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 319, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance, and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Michael I. Dudek, Acting Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to License DPR-65
and the Technical Specifications

Date of Issuance: May 18, 2015

ATTACHMENT TO

LICENSE AMENDMENT NO. 319

RENEWED FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove	Insert
3	3

Replace the following page of Appendix A, Technical Specifications, with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
6-19	6-19

Connecticut, in accordance with the procedures and limitations set forth in this renewed operating license;

(2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;

(5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady-state reactor core power levels not in excess of 2700 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 319, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

CORE OPERATING LIMITS REPORT (CONT.)

8) XN-NF-621(P)(A), "Exxon Nuclear DNB Correlation for PWR Fuel Designs," Exxon Nuclear Company.

9) XN-NF-82-06(P)(A), and Supplements 2, 4 and 5, "Qualification of Exxon Nuclear Fuel for Extended Burnup," Exxon Nuclear Company.

10) ANF-88-133(P)(A) and Supplement 1, "Qualification of Advanced Nuclear Fuels PWR Design Methodology for Rod Burnups of 62 GWd/MTU," Advanced Nuclear Fuels Corporation.

11) XN-NF-85-92(P)(A), "Exxon Nuclear Uranium Dioxide/Gadolinia Irradiation Examination and Thermal Conductivity Results," Exxon Nuclear Company.

12) ANF-89-151(P)(A), "ANF-RELAP Methodology for Pressurized Water Reactors: Analysis of Non-LOCA Chapter 15 Events," Advanced Nuclear Fuels Corporation.

13) EMF-1961 (P)(A), "Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors," Siemens Power Corporation.

14) EMF-2130(P)(A), "SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors," Framatome ANP.

15) EMF-92-153(P)(A) and Supplement 1, "HTP: Departure from Nucleate Boiling Correlation for High Thermal Performance Fuel," Siemens Power Corporation.

16) EMF-92-116(P)(A) Revision 0, "Generic Mechanical Design Criteria for PWR Fuel Designs," Siemens Power Corporation.

17) BAW-10240(P)(A) Revision 0, "Incorporation of M5™ Properties in Framatome ANP Approved Methods," May 2004.

c. The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as SHUTDOWN MARGIN, and transient and accident analysis limits) of the safety analysis are met.

d. The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 319

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-65

DOMINION NUCLEAR CONNECTICUT, INC.

MILLSTONE POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

1.0 INTRODUCTION

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.90, and by application dated April 11, 2014 (Reference 1), Dominion Nuclear Connecticut, Inc. (the licensee), submitted a license amendment request (LAR) for Millstone Power Station, Unit No. 2 (MPS2). Specifically, the licensee proposed to revise the Technical Specifications (TSs), adding AREVA NP topical report BAW-10240(P)-A, Revision 0, "Incorporation of M5 Properties in Framatome-ANP Approved Methods," to the referenced analytical methods in TS 6.9.1.8.b, "Core Operating Limits Report," (COLR) which lists the analytical methods used to determine the core operating limits.

Similar amendments have been proposed by other licensees and approved by the U.S. Nuclear Regulatory Commission (NRC), e.g., see Reference 2.

The reactor core of MPS2, consists of 217 fuel assemblies. Each fuel assembly consists of up to 176 fuel rods which are arranged in 14 x 14 arrays. The fuel rods consist of slightly enriched uranium dioxide (UO_2) cylindrical ceramic pellets, encapsulated within a cylindrical Zircaloy tube cladding. The licensee is proposing to use the M5™ (hereafter referred as M5) alloy for fuel rod cladding in future operating cycle.

The current fuel cladding used is Zircaloy, according to the current licensing bases. M5 is a zirconium alloy composed of zirconium and niobium developed by AREVA NP. The properties of the M5 alloy material relevant to fuel design and safety analyses are documented in an NRC-approved topical report, BAW-10227(P)-A (Reference 3). The licensee stated that the proposed amendment will have no adverse impact on safety since all required safety limits for future operating cycles at MPS2, with M5 clad fuel would continue to be analyzed using NRC-approved methodologies.

2.0 REGULATORY EVALUATION

The regulations in Title 10 of the *Code of Federal Regulations*, Section 50.90, "Application for amendment of license, construction permit, or early site permit," allow a licensee to file an application for an amendment. Section 50.92, "Issuance of Amendment," specifies that, when considering an LAR, the Commission will be guided by the considerations that govern the

issuance of initial licenses to the extent applicable and appropriate in determining whether an amendment of a license will be issued to the applicant.

The licensee proposed to revise TS 6.9.1.8.b to add Topical Report BAW-10240(P)-A to the list of approved methodologies to permit the use of M5 alloy for fuel rod cladding in future operating cycles.

The NRC reviewed the licensee's application for amendment to ensure operation with M5 fuel cladding, in accordance with the proposed changes, will be within conditions of operation necessary for application of BAW-10227(P)-A, which describes AREVA NP M5 and provides justification for its use in pressurized water reactor (PWR) cladding and core structural components. The regulations for review of the fuel rod cladding materials and fuel system designs are provided in 10 CFR. 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," and Appendix A, "General Design Criteria [GDC] for Nuclear Power Plants,":

> Criterion 4 - *Environmental and dynamic effects design bases.* Structures, systems, and components important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents. These structures, systems, and components shall be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping, and discharging fluids, that may result from equipment failures and from events and conditions outside the nuclear power unit. However, dynamic effects associated with postulated pipe ruptures in nuclear power units may be excluded from the design basis when analyses reviewed and approved by the Commission demonstrate that the probability of fluid system piping rupture is extremely low under conditions consistent with the design basis for the piping.
>
> Criterion 10 - *Reactor design.* The reactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits [SAFDLs] are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences.
>
> Criterion 20 - *Protection system functions.* The protection system shall be designed (1) to initiate automatically the operation of appropriate systems including the reactivity control systems, to assure that specified acceptable fuel design limits are not exceeded as a result of anticipated operational occurrences and (2) to sense accident conditions and to initiate the operation of systems and components important to safety.
>
> Criterion 25 - *Protection system requirements for reactivity control malfunctions.* The protection system shall be designed to assure that specified acceptable fuel design limits are not exceeded for any single malfunction of the reactivity control systems, such as accidental withdrawal (not ejection or dropout) of control rods.

Criterion 28 - *Reactivity limits.* The reactivity control systems shall be designed with appropriate limits on the potential amount and rate of reactivity increase to assure that the effects of postulated reactivity accidents can neither (1) result in damage to the reactor coolant pressure boundary greater than limited local yielding nor (2) sufficiently disturb the core, its support structures or other reactor pressure vessel internals to impair significantly the capability to cool the core. These postulated reactivity accidents shall include consideration of rod ejection (unless prevented by positive means), rod dropout, steam line rupture, changes in reactor coolant temperature and pressure, and cold water addition.

Criterion 35 - *Emergency core cooling.* A system to provide abundant emergency core cooling shall be provided. The system safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented and (2) clad metal-water reaction is limited to negligible amounts.

In addition to the above citied regulations, the NRC staff also reviewed nuclear reactor fuel systems against the guidance of the Standard Review Plan (SRP), Section 4.2, "Fuel System Design," to ensure that:

(1) the fuel system is not damaged as a result of normal operation and anticipated operational occurrences (AOOs),
(2) fuel system damage is never so severe as to prevent control rod insertion when it is required,
(3) the number of fuel rod failures is not underestimated for postulated accidents, and
(4) coolability is always maintained.

10 CFR 50.46 requires that the calculated Emergency Core Cooling System (ECCS) performance for reactors with zircaloy or ZIRLO® fuel cladding meet certain criteria. 10 CFR Part 50, Appendix K, "ECCS Evaluation Models," presumes the use of zircaloy or ZIRLO® fuel cladding when doing calculations for energy release, cladding oxidation, and hydrogen generation after a postulated loss of coolant accident (LOCA). On May 12, 2015, the NRC granted an exemption to the licensee from these requirements.

3.0 TECHNICAL EVALUATION

The proposed amendment would revise TS 6.9.1.8.b, "Core Operating Limits Report," adding topical report BAW-10240 to the list of documents. This addition will have the effect of permitting the licensee to use the M5 advanced alloy as a fuel rod cladding material.

3.1 Summary of NRC Staff's Review of BAW-10227(P)-A and BAW-10240(P)-A

The properties of M5 alloy material relevant to fuel design and safety analyses are documented in the NRC-approved Topical Report BAW-10277(P)-A. (Reference 3). This report describes the use of the M5 alloy, a proprietary variant of Zr1Nb, to replace Zircaloy-4 in the construction of fuel assembly components such as fuel rod cladding, guide tubes, and spacer grids. The M5 alloy is a Framatome-ANP proprietary material composed of 1.0% niobium, 0.125% oxygen,

and the balance zirconium. M5 cladding provides improved performance against fuel cladding corrosion and hydrogen pickup.

Topical Report BAW-10240(P)-A describes the incorporation of the NRC-approved M5 material properties in a set of AREVA NP-approved mechanical analyses, small-break loss of coolant accident (SBLOCA), and non-LOCA methodologies (Reference 4). This topical report demonstrates that the effectiveness of the ECCS will not be affected by changing the cladding from Zircaloy to M5 alloy.

In Topical Report BAW-10227(P)-A (Reference 3), AREVA NP has evaluated the structural and material properties of the M5 alloy and determined that the use of M5 alloy as cladding would have either no significant impact or would produce an improvement in performance and increased margins for the following parameters and analyses:

(1) fuel rod internal pressure,
(2) cladding strain and stress criteria,
(3) fuel centerline melting temperature,
(4) fuel rod cladding fatigue,
(5) cladding creep collapse,
(6) fuel rod bow,
(7) high temperature swelling and rupture, and
(8) high temperature oxidation and crud buildup.

AREVA NP has evaluated fuel failure thresholds and analysis methods for failure mechanisms listed in the SRP. When failure thresholds are applied for normal operation, including AOOs, they are used as specified acceptable fuel design limits (SAFDLs) since fuel failure under these conditions should not occur according to the traditional conservative interpretation of GDC 10. When these thresholds are used for postulated accidents, fuel failures are permitted and must be accounted for in the dose assessments required by 10 CFR Part 100.

The NRC staff considered the following fuel rod failure mechanisms listed in the SRP for M5 clad fuel (Reference 3):

(1) Hydriding,
(2) Cladding collapse,
(3) Overheating of cladding,
(4) Overheating of fuel pellets,
(5) Pellet cladding interaction (OPCI),
(6) Cladding rupture, and
(7) Fuel rod mechanical fracturing.

The NRC staff considered the criteria to maintain core coolability during postulated accidents as required by several GDCs, mainly GDC 27 and 35. The NRC staff evaluated the severe damage mechanisms that are listed in the SRP against the criteria for core coolability for M5 clad fuel, and found that the M5 clad fuel is acceptable for the phenomena generally associated with fuel coolability during a postulated accident (e.g., fragmentation of embrittled cladding, violent expulsion of fuel, clad ballooning, burst, and pre-rupture strain damage mechanisms).

AREVA NP has performed an assessment of the impact of M5 alloy on the safety performance of the fuel for generic accidents for both a LOCA and non-LOCA. AREVA NP concludes that the results of accident evaluations will approximate those for current cladding and not comprise a decrease in the safety performance for plants using the M5 cladding. AREVA NP has shown that the use of M5 alloy will have no significant adverse impact on radiological doses calculated for those accidents for which the release of radionuclides is postulated.

3.2 Evaluation of the licensee's Proposed Use of M5 Alloy as Fuel Cladding Material

Topical Report BAW-10240(P)-A describes the incorporation of the NRC-approved M5 material properties in to a set of AREVA NP mechanical analysis, SBLOCA, and non-LOCA methodologies. The NRC staff evaluated the licensee's proposal to include this topical report into TS 6.9.1.8.b, "Core Operating Limits Report." The NRC staff did not review Section 4.1, "Assessment of Methodologies not Discussed in BAW-10240(P)-A," of the licensee's application as this was deemed beyond the scope of the current review.

The NRC staff's approval of Topical Report BAW-10240(P)-A was subject to four conditions as stated in Section 4.0 of the safety evaluation (SE) approving this topical report. The conditions are listed below with explanations as to how the licensee has addressed these conditions.

Condition 1: *The corrosion limit, as predicted by the best-estimate model will remain below 100 microns for all locations of the fuel.*

The licensee stated that the restriction that corrosion limit, as predicted by the best-estimate model, will remain below 100 microns for all locations of the fuel is implemented in AREVA design processes. Additionally, the licensee stated in its application that the limit is verified for each reload as part of the cycle-specific reload analysis. On the basis that the licensee is ensuring the corrosion limit will remain below 100 microns, the NRC staff determined that this condition has been satisfied.

Condition 2: *All of the conditions listed in the SEs for all FANP [Framatome ANP] methodologies used for M5 fuel analysis will continue to be met, except that the use of M5 cladding in addition to Zircaloy-4 cladding is now approved.*

The licensee has incorporated the conditions from the approved SEs as restrictions in AREVA design procedures and guidelines that control the core reload designs provided to MPS2. Additionally, the licensee stated in its application that this is verified for each reload as part of the cycle-specific reload analysis. On the basis that the licensee is ensuring that all of the conditions listed in the SEs will be met, the NRC staff has determined that this condition has been satisfied.

Condition 3: *All FANP methodologies will be used only within the range for which M5 data was acceptable and for which the verifications discussed in BAW-10240 (P) was performed.*

The licensee stated that the limitations – which ensure FANP methodologies will be used only within the range for which M5 data was acceptable, and for which the verifications discussed in BAW-10240(P) were performed -- are incorporated as restrictions in AREVA design procedures

and guidelines that control the core reload designs provided for MPS2. Additionally, the licensee stated in its application that this is verified for each reload as part of the cycle-specific reload analysis. On the basis that the licensee is ensuring that all of the conditions listed in the SEs will be met, the NRC staff determined that this condition has been satisfied.

Condition 4: *The burnup limit for this approval is 62 GWd/MTU.*

The licensee stated that the burnup limitation is not changed. Burnup limits identified in approved methodologies are contained in MPS2's, core functional requirements and AREVA design processes, which are currently limited to 62 GWd/MTU. Additionally, the licensee stated in its application that the limit is verified for each reload as part of the cycle-specific reload analysis. On the basis that the licensee is ensuring that the burnup limit is limited to 62 GWd/MTU, the NRC staff has determined that this condition has been satisfied.

3.3 Summary of Technical Evaluation

The NRC staff finds that the licensee's application for amendment provided reasonable assurance that, under both normal and accident conditions, the licensee would be able to safely operate the plant and comply with applicable NRC regulations.

The NRC staff completed its review of the licensee's application for amendment to use the M5 advanced alloy for fuel rod cladding in lieu of Zircaloy or ZIRLO® for non-LOCA analysis only. The NRC staff concludes that it is acceptable to operate MPS2, with M5 clad fuel as long as operation is within the bounds of the analyses performed with the specific methodologies applicable to the unit as stated in the licensee's application, and as specified in the unit's TSs and current licensing basis. This SE provides the basis for operation of the unit with its core partially or fully loaded with M5 clad fuel assemblies.

The NRC staff acknowledges that the use of M5 cladding is not approved with the unit's current large-break LOCA (LBLOCA) methodology of topical report EMF-2087(P)(A), "SEM/PWR-98: ECCS Evaluation Model for PWR LBLOCA Applications." As stated in the licensee's application, Section 4.2, a future amendment will be needed to replace this EMF-2087(P)(A) methodology, which is currently also listed in TS Section 6.9.1.8.b, with a methodology which is acceptable for use with the M5 fuel rod cladding material.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified on April 22, 2015, of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in amounts, and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously

issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (79 *Federal Register* 70212, November 25, 2014). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

(1) Sartain, Mark D. (Dominion Nuclear Connecticut, Inc.) to U.S. Nuclear Regulatory Commission, "Dominion Nuclear Connecticut, Inc. Millstone Power Station Unit 2 proposed license amendment and exemption request for the use of M5 fuel rod cladding," Dominion Nuclear Connecticut, Inc., April 11, 2014 (ADAMS Accession No. ML14112A072).

(2) Billoch Colon, Araceli T. (U.S. Nuclear Regulatory Commission) to Christopher L. Burton (Progress Energy Carolinas, Inc.), "Shearon Harris Nuclear Power Plant, Unit 1 – Issuance of Amendment RE: The Use of AREVA's M5™ Advanced Alloy in Fuel Cladding and Fuel Assembly Components (TAC NO. ME5409)," March 30, 2012 (ADAMS Accession No. ML12058A133).

(3) BAW-10227(P)-A, Revision 0, "Evaluation of Advanced Cladding and Structural Material (M5) in PWR Reactor Fuel," Framatome Cogema Fuels, February 2000 (ADAMS Accession Nos. ML003671021/ML003686365 (Non-Publicly Available/Publicly Available)).

(4) BAW-10240(P)-A, Revision 0, "Incorporation of M5 Properties in Framatome-ANP Approved Methods," Framatome-ANP, Inc., May 2004. (ADAMS Accession Nos. ML042800316/ML042800314 (Non-Publicly Available/Publicly Available)).

Principal Contributor: Joshua S. Kaizer

Date: May 18, 2015

May 18, 2015

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: AREVA M5™ ALLOY CLAD FUEL ASSEMBLIES (TAC NO. MF3917)

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A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,
/RA/
Richard V. Guzman, Senior Project Manager
Plant Licensing Branch 1-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures:
1. Amendment No. 319 to DPR-65
2. Safety Evaluation

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ADAMS Accession No.: ML15093A441 *See memo dated 3/18/15, ML15056A282

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DATE	4/03/2015	4/13/2015	4/14/2015	3/18/2015
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DATE	4/28/2015	5/18/2015	5/18/2015	

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