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

November 30, 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. 3 - ISSUANCE OF AMENDMENT RE: IMPLEMENTATION OF WCAP-14333 AND WCAP-15376, REACTOR TRIP SYSTEM AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TEST TIMES AND COMPLETION TIMES (CAC NO. MF4131)

Dear Mr. Heacock:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the enclosed Amendment No. 266 to Renewed Facility Operating License No. NPF-49 for the Millstone Power Station, Unit No. 3. This amendment is in response to your application dated May 8, 2014, as supplemented by letters dated August 14, October 15, and October 16, 2014, and May 18 and July 27, 2015.

The amendment revises Technical Specification (TS) 3/4.3.1, "Reactor Trip System Instrumentation," and TS 3/4.3.2, "Engineered Safety Features Actuation System [ESFAS] Instrumentation," to adopt the Completion Time (CT) and bypass test time changes approved by the NRC in Westinghouse Electric Company LLC's Topical Reports WCAP-14333-P-A, Revision 1, "Probabilistic Risk Analysis of the RPS [Reactor Protection System] and ESFAS Test Times and Completion Times," October 1998, and WCAP-15376-P-A, Revision 1, "Risk-Informed Assessment of the RTS [Reactor Trip System] and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times," March 2003. The amendment extends the CTs and bypass test times for several required actions in TS 3/4.3.1 and TS 3/4.3.2.

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

Sincerely,

RGuzman

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

Docket No. 50-423

Enclosures:
1. Amendment No. 266 to NPF-49
2. Safety Evaluation

cc w/encls: Distribution via Listserv

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

DOMINION NUCLEAR CONNECTICUT, INC.

DOCKET NO. 50-423

MILLSTONE POWER STATION, UNIT NO. 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 266
Renewed License No. NPF-49

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

   A. The application for amendment by Dominion Nuclear Connecticut, Inc. (DNC) dated May 8, 2014, as supplemented by letters dated August 14, October 15, and October 16, 2014, and May 18 and July 27, 2015, 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 conducted 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. NPF-49 is hereby amended to read as follows:

    (2) Technical Specifications

    The Technical Specifications contained in Appendix A, revised through Amendment No. 266 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated into the license. DNC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance, and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Travis L. Tate

Travis L. Tate, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License
and Technical Specifications

Date of Issuance: November 30, 2015

ATTACHMENT TO LICENSE AMENDMENT NO. 266

RENEWED FACILITY OPERATING LICENSE NO. NPF-49

DOCKET NO. 50-423

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
4	4

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
3/4 3-2	3/4 3-2
3/4 3-3	3/4 3-3
3/4 3-5	3/4 3-5
3/4 3-6	3/4 3-6
---	3/4 3-6a
3/4 3-7	3/4 3-7
3/4 3-17	3/4 3-17
3/4 3-18	3/4 3-18
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20
3/4 3-21	3/4 3-21
3/4 3-24	3/4 3-24
---	3/4 3-24a
3/4 3-25	3/4 3-25
---	3/4 3-25a

(2) Technical Specifications

The Technical Specifications contained in Appendix A, revised through Amendment No. 266 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated into the license. DNC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) DNC shall not take any action that would cause Dominion Resources, Inc. (DRI) or its parent companies to void, cancel, or diminish DNC's Commitment to have sufficient funds available to fund an extended plant shutdown as represented in the application for approval of the transfer of the licenses for MPS Unit No. 3.

(4) Immediately after the transfer of interests in MPS Unit No. 3 to DNC, the amount in the decommissioning trust fund for MPS Unit No. 3 must, with respect to the interest in MPS Unit No. 3, that DNC would then hold, be at a level no less than the formula amount under 10 CFR 50.75.

(5) The decommissioning trust agreement for MPS Unit No. 3 at the time the transfer of the unit to DNC is effected and thereafter is subject to the following:

(a) The decommissioning trust agreement must be in a form acceptable to the NRC.

(b) With respect to the decommissioning trust fund, investments in the securities or other obligations of Dominion Resources, Inc. or its affiliates or subsidiaries, successors, or assigns are prohibited. Except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited.

(c) The decommissioning trust agreement for MPS Unit No. 3 must provide that no disbursements or payments from the trust, other than for ordinary administrative expenses, shall be made by the trustee until the trustee has first given the Director of the Office of Nuclear Reactor Regulation 30 days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the NRC.

(d) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30 days prior written notification to the Director of the Office of Nuclear Reactor Regulation.

TABLE 3.3-1
REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1, 2	1
	2	1	2	3*, 4*, 5*	11
2. Power Range, Neutron Flux					
a. High Setpoint	4	2	3	1, 2	2
b. Low Setpoint	4	2	3	1###, 2	2
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2
4. Deleted					
5. Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6. Source Range, Neutron Flux					
a. STARTUP	2	1	2	2##	4
b. Shutdown	2	1	2	3*, 4*, 5*	11
7. Overtemperature ΔT	4	2	3	1, 2	6A
8. Overpower ΔT	4	2	3	1, 2	6A
9. Pressurizer Pressure--Low	4	2	3	1**	6A (1)
10. Pressurizer Pressure--High	4	2	3	1, 2	6A (1)
11. Pressurizer Water Level--High	3	2	2	1**	6A

TABLE 3.3-1 (Continued)
REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT			TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
12.	Reactor Coolant Flow--Low						
	a.	Single Loop (Above P-8)	3/loop	2/loop	2/loop	1	6
	b.	Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop	1	6
13.	Steam Generator Water Level--Low-Low		4/stm. gen.	2/stm. gen.	3/stm. gen.	1, 2	6A (1)
14.	Low Shaft Speed--Reactor Coolant Pumps		4-1/pump	2	3	1**	6A
15.	Turbine Trip						
	a.	Low Fluid Oil Pressure	3	2	2	1***	12
	b.	Turbine Stop Valve Closure	4	4	4	1***	6A
16.	Deleted						
17.	Reactor Trip System Interlocks						
	a.	Intermediate Range Neutron Flux, P-6	2	1	2	2##	8
	b.	Low Power Reactor Trips Block, P-7					
		Power Range Neutron Flux, P-10 Input or	4	2	3	1	8
		Turbine Impulse Chamber Pressure, P-13 Input	2	1	2	1	8

TABLE 3.3-1 (Continued)

TABLE NOTATIONS

* When the Reactor Trip System breakers are in the closed position and the Control Rod Drive System is capable of rod withdrawal.

** Above the P-7 (At Power) Setpoint.

*** Above the P-9 (Reactor Trip/Turbine Trip Interlock) Setpoint.

\## Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.

\### Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.

(1) The applicable MODES and ACTION statements for these channels noted in Table 3.3-3 are more restrictive and, therefore, applicable.

(2) Including any reactor trip bypass breakers that are racked in and closed for bypassing a reactor trip breaker.

ACTION STATEMENTS

ACTION 1 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours,

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1, and

c. Either, THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range Neutron Flux Trip Setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 78 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.2.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

ACTION 3 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint, and

b. Above the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint but below 10% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 10% of RATED THERMAL POWER.

ACTION 4 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity additions.*

ACTION 5 - (Not used)

ACTION 6 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.

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* Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SDM.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

ACTION 6A- With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

ACTION 7 - (Not used)

ACTION 8 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

ACTION 9- (Not used)

ACTION 10- With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

ACTION 11- With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor Trip System breakers within the next hour.

ACTION 12- With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours, and

b. When the Minimum Channels OPERABLE requirement is met, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of the Turbine Control Valves.

ACTION 13- With one of the diverse trip features (undervoltage or shunt trip attachments) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply ACTION 10. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

ACTION 13A- With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable Channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

TABLE 3.3-3
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Safety Injection (Reactor Trip, Feedwater Isolation, Control Building Isolation (Manual Initiation Only), Start Diesel Generators, and Service Water).					
a. Manual Initiation	2	1	2	1, 2, 3, 4	19
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14A
c. Containment Pressure--High-1	3	2	2	1, 2, 3	20A
d. Pressurizer Pressure--Low	4	2	3	1, 2, 3#	20A
e. Steam Line Pressure--Low	3/steam line in each operating loop	2/steam line in any operating loop	2/steam line in each operating loop	1, 2, 3#	20A
2. Containment Spray (CDA)					
a. Manual Initiation	2	1 with 2 coincident switches	2	1, 2, 3, 4	19

TABLE 3.3-3 (Continued)
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
2. Containment Spray (CDA) (Continued)					
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14A
c. Containment Pressure--High-3	4	2	3	1, 2, 3, 4	17
3. Containment Isolation					
a. Phase "A" Isolation					
1) Manual Initiation	2	1	2	1, 2, 3, 4	19
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14A
3) Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
b. Phase "B" Isolation					
1) Manual Initiation	2	1 with 2 coincident switches	2	1, 2, 3, 4	19
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14A

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
3. Containment Pressure--High-3	4	2	3	1, 2, 3, 4	17
c. DELETED					
4. Steam Line Isolation					
a. Manual Initiation					
1. Individual	1/steam line	1/steam line	1/operating steam line	1, 2, 3, 4	24
2. System	2	1	2	1, 2, 3, 4	23
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	22
c. Containment Pressure--High-2	3	2	2	1, 2, 3, 4	20A
d. Steam Line Pressure--Low	3/steam line in each operating loop	2/steam line in any operating loop	2/steam line in each operating loop	1, 2, 3#	20A
e. Steam Line Pressure - Negative Rate--High	3/steam line in each operating loop	2/steam line in any operating loop	2/steam line in each operating loop	3****	20A

TABLE 3.3-3 (Continued)
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. Turbine Trip and Feedwater Isolation					
a. Automatic Actuation Logic and Actuaion Relays	2	1	2	1, 2	25
b. Steam Generator Water Level--High-High (P-14)	4/stm. gen. in each operating loop	2/stm. gen. in any operating loop	3/stm. gen. in each operating loop	1, 2, 3	20A, 21
c. Safety Injection Actuation Logic	2	1	2	1, 2	22
d. T_{ave} Low Coincident with P-4	1 T_{ave}/loop	1 T_{ave} in any two loops	1 T_{ave} in any three loops	1, 2	20

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6. Auxiliary Feedwater					
a. Manual Initiation	2	1	2	1, 2, 3	23
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	22
c. Stm. Gen. Water Level--Low-Low					
1) Start Motor-Driven Pumps	4/stm. gen.	2/stm. gen. in any operating stm. gen.	3/stm. gen. in each operating stm. gen.	1, 2, 3	20A
2) Start Turbine-Driven Pump	4/stm. gen.	2/stm. gen. in any 2 operating stm. gen.	3/stm. gen. in each operating stm. gen.	1, 2, 3	20A
d. Safety Injection Start Motor-Driven Pumps	See Item 1. above for all Safety Injection initiating functions and requirements.				
e. Loss-of-Offsite Power Start Motor-Driven Pumps	2	1	2	1, 2, 3	19

TABLE 3.3-3 (Continued)

TABLE NOTATIONS

\# The Steamline Isolation Logic and Safety Injection Logic for this trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

* MODES 1, 2, 3, and 4.
During movement of recently irradiated fuel assemblies.

**** Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on low steam line pressure is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 14A - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 15 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed until performance of the next required ANALOG CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition within 72 hours and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS

ACTION 18 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 7 days. After 7 days, or if no channels are OPERABLE, immediately suspend movement of recently irradiated fuel assemblies, if applicable, and be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 19 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 20 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. the Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 20A - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 21 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 22 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 23 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 24 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

ACTION 25 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 26 - DELETED

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 266

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.

DOCKET NO. 50-423

MILLSTONE POWER STATION, UNIT NO. 3

1.0 INTRODUCTION

By letter dated May 8, 2014 (Reference 1), as supplemented by letters dated August 14, October 15, and October 16, 2014, and May 18 and July 27, 2015 (References 2, 3, 4, 5, and 6, respectively), Dominion Nuclear Connecticut, Inc. (DNC, the licensee), submitted to the U.S. Nuclear Regulatory Commission (NRC, the Commission) a license amendment request (LAR) for changes to the Millstone Power Station, Unit No. 3 (MPS3), Technical Specifications (TSs). In the supplemental letter dated August 14, 2014, the licensee deleted certain changes requested in the May 8, 2014, application. The proposed changes were deleted because they were determined by the NRC staff to be unsupported by the scope of the provisions of the NRC approved Westinghouse Commercial Atomic Power (WCAP)–14333–P–A, Revision 1, "Probabilistic Risk Analysis of the RPS [Reactor Protection System] and ESFAS [Engineered Safety Features Actuation System] Test Times and Completion Times," issued October 1998.

The May 8, 2014, application, as modified by the supplemental letters dated August 14, October 15, and October 16, 2014, was noticed in the *Federal Register* (FR) on December 23, 2014 (79 FR 77044). The supplemental letters dated May 18 and July 27, 2015, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination.

The proposed amendment adopts Westinghouse Electric Company LLC's topical report WCAP-14333-P-A, Revision 1, which had been approved by the NRC in a letter dated July 13, 1998 (Reference 7). Implementation of the proposed changes is in accordance with Technical Specification Task Force (TSTF) Traveler TSTF-418, Revision 2, "RPS and ESFAS Test Times and Completion Times (WCAP-14333)" (Reference 8). The NRC approved TSTF-418 by letter dated April 2, 2003 (Reference 9).

In addition, the proposed amendment adopts WCAP-15376-P-A, Revision 1, "Risk-Informed Assessment of the RTS [Reactor Trip System] and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times," dated March 2003, which had been approved by the NRC in a letter dated December 20, 2002 (Reference 10). Implementation of the proposed changes is in accordance with TSTF-411, Revision 1, "Surveillance Test Interval Extension for Components of the Reactor Protection System (WCAP-15376)" (Reference 11). The NRC approved TSTF-411, Revision 1, by letter dated August 30, 2002 (Reference 12).

The proposed change revises MPS3 RPS TS Completion Times (CTs) and bypass test times; and a detailed description of all the changes is provided in Section 3.1 of this safety evaluation (SE). These include revisions to the originally proposed changes in order to remain consistent with the scope of TSTF-411, Revision 1 and TSTF-418, Revision 2. These revised proposed changes are to add ACTION 6A and ACTION 14A to TS Table 3.3-1, and to add ACTION 20A to TS Table 3.3-3.

The topical reports state that the proposed changes to CTs and bypass test times will allow additional time to perform tests and maintenance, enhance safety, provide additional operational flexibility, and reduce the potential for forced outages related to compliance with the RPS and ESFAS instrumentation TS.

1.1 Background

The Pressurized-Water Reactor Owners Group (PWROG), formerly the Westinghouse Owners Group (WOG), Technical Specifications Optimization Program (TOP) evaluated changes to surveillance test intervals (STIs) and CTs for the analog channels, logic cabinets, master and slave relays, and reactor trip breakers (RTBs). The methodology evaluated increases in surveillance intervals, test and maintenance out-of-service times, and the bypassing of portions of the RPS during test and maintenance. In 1983, the PWROG submitted WCAP-10271-P, "Evaluation of Surveillance Frequencies and Out-of-Service Times for the Reactor Protection Instrumentation System," which provided a methodology for justifying revisions to a plant's RPS TSs. The PWROG stated in WCAP-10271 that plant staff devoted significant time and effort to perform, review, document, and track surveillance activities that, in many instances, may not be necessary because of the high reliability of the equipment. Part of the justification for the changes was their anticipated small impact on plant risk.

By letter dated February 21, 1985, the NRC accepted WCAP-10271, including Supplement 1, with conditions. In 1989, the NRC staff issued a safety evaluation report (SER) for WCAP-10271, Supplement 2 that approved similar relaxations for the ESFAS. An additional supplemental SER issued in 1990 provided consistency between RTS and ESFAS STIs and CTs. The NRC subsequently adopted the TS changes proposed by WCAP-10271 in NUREG-1431, "Standard Technical Specifications Westinghouse Plants," Revision 0, issued September 1992. After the approval of WCAP-10271 and its supplements, the PWROG submitted WCAP-14333-P in May 1995. The purpose of this topical report was to provide justification for the following TS relaxations beyond those approved in WCAP-10271:

- Increase the bypass test times and CTs for both the solid-state and relay protection system RTS and ESFAS designs for the analog channels, increase the CT from 6 hours to 72 hours and the bypass test time from 4 hours to 12 hours for the logic cabinets, master relays, and slave relays, increase the CT from 6 hours to 24 hours.

- For cases in which the logic cabinet and RTB both cause their train to be inoperable when in test or maintenance, allow bypassing of the RTB for the period of time equivalent to the bypass test time for the logic cabinets, provided that both are tested at the same time and the plant design is such that both the RTB and the logic cabinet cause their associated electrical trains to be inoperable during test or maintenance.

The NRC staff accepted WCAP-14333 by letter dated July 15, 1998. Following the approval of WCAP-14333, the PWROG submitted WCAP-15376 to the NRC staff on November 8, 2000, which the staff subsequently approved by letter dated December 20, 2002.

WCAP-15376 specifically evaluated the analog channels, logic cabinets, master relays, and RTBs. WCAP-15376 evaluated both the solid-state protection system (SSPS) and the relay protection system. WCAP-15376 provided justification for the following TS relaxations:

- Additional extension of the STIs for components of the RPS and ESFAS to those previously approved in WCAP-10271.

- Extension of the STI, CT, and bypass test times for the RTBs.

2.0 REGULATORY EVALUATION

2.1 Applicable Regulations

The categories of items required to be in the TSs are provided in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36(c). As required by 10 CFR 50.36(c)(2)(i), the TSs will include limiting conditions for operation (LCOs), which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. Per 10 CFR 50.36(c)(2)(i), when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met. Section 50.36(c)(3) of 10 CFR requires TSs to include items in the category of surveillance requirements, which are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met. Also, the regulation at 10 CFR 50.36(a)(1) states that a summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the TSs.

The Maintenance Rule, 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," requires licensees to monitor the performance or condition of SSCs against licensee-established goals in a manner sufficient to provide reasonable assurance that SSCs are capable of fulfilling their intended functions. The implementation and monitoring program guidance of Section 2.3 of Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," issued November 2002 (Reference 14), and Section 3 of RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," issued August 1998 (Reference 15), states that monitoring performance in compliance with the Maintenance Rule can be used when it is sufficient for the

SSCs affected by the risk-informed application. In addition, the Maintenance Rule (10 CFR 50.65(a)(4)), as it relates to the proposed surveillance, bypass test times, and CTs, requires the assessment and management of the increase in risk that may result from the proposed maintenance activity.

According to 10 CFR Part 50, Appendix A General Design Criterion (GDC) 1, "Quality standards and records," appropriate records of the design, fabrication, erection, and testing of structures, systems, and components important to safety shall be maintained by or under the control of the nuclear power unit licensee throughout the life of the unit.

According to 10 CFR Part 50, Appendix A GDC 13, "Instrumentation and control," the licensee shall provide appropriate controls to maintain these variables and systems within prescribed operating ranges.

Attachment 1, Section 5.2, of the licensee's submittal references additional regulatory requirements and criteria applicable to the licensee's implementation of WCAP-14333 and WCAP-15376.

2.2 Applicable Regulatory Guidance

RG 1.105 (Reference 13) describes a method acceptable to the NRC staff for complying with the NRC's regulations for ensuring that setpoints for safety-related instrumentation are initially within, and remain within, the TS limits.

RG 1.174 (Reference 14) describes a risk-informed approach with associated acceptance guidelines for licensees to assess the nature and impact of proposed permanent licensing basis changes by considering engineering issues and applying risk insights.

RG 1.177 (Reference 15) describes an acceptable risk-informed approach and additional acceptance guidance geared toward the assessment of proposed permanent TS CT changes. RG 1.177 identifies a three-tiered approach for the licensee's evaluation of the risk associated with a proposed CT TS change, as discussed below:

- Tier 1 assesses the risk impact of the proposed change in accordance with acceptance guidelines consistent with the Commission's Safety Goal Policy Statement, as documented in RGs 1.174 and 1.177. The first tier assesses the impact on operational plant risk based on the change in core damage frequency (ΔCDF) and change in large early release frequency (ΔLERF). It also evaluates plant risk while equipment covered by the proposed CT is out of service, as represented by incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP). Tier 1 also addresses probabilistic risk assessment (PRA) quality, including the technical adequacy of the licensee's plant-specific PRA for the subject application. Tier 1 also considers the cumulative risk of the present TS change in light of past (related) applications or additional applications under review along with uncertainty/sensitivity analysis with respect to the assumptions related to the proposed TS change.

- Tier 2 identifies and evaluates any potential risk-significant plant equipment outage configurations that could result if equipment, in addition to that associated with the proposed license amendment, is taken out of service simultaneously, or if other risk--significant operational factors, such as concurrent system or equipment testing, are also involved. The purpose of this evaluation is to ensure that appropriate restrictions are in place such that risk-significant plant equipment outage configurations will not occur when equipment associated with the proposed CT is implemented.

- Tier 3 addresses the licensee's overall configuration risk management program (CRMP) to ensure that adequate programs and procedures are in place for identifying risk-significant plant configurations resulting from maintenance or other operational activities and that the licensee takes appropriate compensatory measures to avoid risk-significant configurations that may not have been considered during the Tier 2 evaluation. Compared with Tier 2, Tier 3 provides additional coverage to ensure that the licensee identifies risk-significant plant equipment outage configurations in a timely manner and appropriately evaluates the risk impact of out-of-service equipment before performing any maintenance activity over extended periods of plant operation. Tier 3 guidance can be satisfied by the Maintenance Rule (10 CFR 50.65(a)(4)), which requires a licensee to assess and manage the increase in risk that may result from activities such as surveillance testing and corrective and preventive maintenance, subject to the guidance provided in RG 1.177, Section 2.3.7.1, and the adequacy of the licensee's program and PRA model for this application. The purpose of the CRMP is to ensure that the licensee will appropriately assess from a risk perspective equipment removed from service before or during the proposed extended CT.

RGs 1.174 and 1.177 also describe acceptable implementation strategies and performance monitoring plans to help ensure that the assumptions and analyses used to support the proposed TS changes will remain valid. The monitoring program should include means to adequately track the performance of equipment that, when degraded, can affect the conclusions of the licensee's evaluation for the proposed licensing basis change. RG 1.174 states that monitoring performed in accordance with the Maintenance Rule can be used when such monitoring is sufficient for the SSCs affected by the risk-informed application.

Section 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" (Reference 16), hereafter referred to as the Standard Review Plan (SRP), provides general guidance for evaluating the technical basis for proposed risk-informed changes. SRP Section 16.1, Risk-Informed Decision Making: Technical Specifications" (Reference 17), provides more specific guidance related to risk-informed TS changes, including CT changes as part of risk-informed decision-making. SRP Section 19.1, "Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities" (Reference 18), addresses the technical adequacy of a baseline PRA used by a licensee to support license amendments for an operating reactor. SRP Section 19.2 states that a risk-informed application should be evaluated to ensure that the proposed changes meet the following five key principles:

1) The proposed change meets the current regulations, unless it explicitly relates to a requested exemption or rule change.

2) The proposed change is consistent with the defense-in-depth philosophy.

3) The proposed change maintains sufficient safety margins.

4) When proposed changes increase CDF or risk, the increase(s) should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.

5) The licensee should monitor the impact of the proposed change using performance measurement strategies.

The NRC staff's guidance for review of the TSs is in Chapter 16, "Technical Specifications," of NUREG-0800, "Standard Review Plan," Revision 3, dated March 2010 (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared Standard Technical Specifications (STS) (NUREG-1430 to NUREG-1434) for each of the light-water reactor nuclear steam supply systems (NSSSs) and associated balance-of-plant equipment systems. Accordingly, the NRC staff's review includes consideration of whether the proposed TSs are consistent with the applicable reference TSs (i.e., the current STS), as modified by NRC approved TSTF Travelers such as TSTF-411 and 418. Special attention is given to TS provisions that depart from the reference TS and NRC approved TSTF Travelers to determine whether proposed differences are justified by uniqueness in plant design or other considerations, to ensure that 10 CFR 50.36 is met.

The NRC's guidance for the format and content of TSs can be found in NUREG-1431, "Standard Technical Specifications Westinghouse Plants," Revision 4.0 (Reference 19).

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's analyses in support of its proposed license amendment, which are described in the submittal dated May 8, 2014, as supplemented by letters dated August 14, October 15, and October 16, 2014, and May 18 and July 27, 2015.

3.1 Detailed Description of the Proposed Change

The LAR, as supplemented, provides the revised marked-up TS changes and the related functional units subject to the proposed changes, which are consistent with the scope of WCAP-14333 and WCAP-15376. The proposed revisions are summarized as follows:

1) Revise Table 3.3-1, ACTION 2 by extending the CT in ACTION 2.a from 6 hours to 72 hours, extending the bypass testing time in ACTION 2.b from 4 hours to 12 hours, and changing the CT for ACTION 2.c from 4 hours to a total of 78 hours (the total time for completing ACTIONS 2.a and an additional 6 hours for THERMAL POWER and Power Range Neutron Flux Trip Setpoint changes).

2) Revise TS Table 3.3-1 by adding ACTION 6A. The new ACTION 6A is similar to ACTION 6 but extends the CT in ACTION 6A.a from 6 hours to 72 hours and extends the bypass testing time in ACTION 6A.b from 4 hours to 12 hours.

3) Revise TS Table 3.3-1, ACTION 10 by adding a CT of 24 hours for restoring the inoperable channel to operable (this change is contained in NUREG-1431, Revision 3.1). This will effectively change the CT for being in HOT STANDBY from 6 hours in the current TS to a total of 30 hours (the total time for restoring the inoperable channel to operable and reaching HOT STANDBY conditions). ACTION 10 is also revised by extending the bypass testing time from 2 hours to 4 hours for surveillance testing per TS 4.3.1.1 provided the other channel is OPERABLE.

4) Revise TS Table 3.3-1, ACTION 12 by extending the CT in ACTION 12.a from 6 hours to 72 hours and extending the bypass testing time in ACTION 12.b from 4 hours to 12 hours.

5) Revise TS Table 3.3-1, ACTION 13A by extending the CT from 6 hours to 24 hours.

6) Revise TS Table 3.3-3 by adding ACTION 14A. The new ACTION 14A is similar to ACTION 14 but extends the CT from 6 hours to 24 hours.

7) Revise TS Table 3.3-3 ACTION 17 by specifying a CT of 72 hours for placing the inoperable channel in the bypassed condition and extending the bypass testing time from 4 hours to 12 hours.

8) Revise TS Table 3.3-3 by adding ACTION 20A. The new ACTION 20A is similar to ACTION 20 but extends the CT in ACTION 20A.a from 6 hours to 72 hours and extends the bypass testing time in ACTION 20A.b from 4 hours to 12 hours.

9) Revise TS Table 3.3-3 ACTION 22 by extending the CT from 6 hours to 24 hours.

10) Revise TS Table 3.3-3 ACTION 25 by extending the CT from 6 hours to 24 hours.

The following table summarizes the proposed WCAP-14333 changes, as applicable to MPS3 for the CT and bypass test time.

RPS/ESFAS Components	CT		Bypass Test Time	
	Current (Hour)	Proposed (Hour)	Current (Hour)	Proposed (Hour)
Analog Channels	6	72	4	12
	4[1]	72+6[1]	Not Applicable[1]	Not Applicable[1]
Logic Cabinets	6	24	No relaxation*	
Actuation Relays	6	24	No relaxation*	
* No relaxation beyond TOP (WCAP-10271 and its supplements)				

Note: [1] TS Table 3.3-1 ACTION 2.c

The following table summarizes the proposed WCAP-15376 changes, as applicable to MPS3 for the CT and bypass test time. No revisions are being made to the proposed changes to surveillance test intervals as addressed in TSTF-411, Revision 1.

RPS Component	CT		Bypass Test Time	
	Current (Hour)	Proposed (Hour)	Current (Hour)	Proposed (Hour)
Reactor Trip Breakers	6[1]	24+6[1]	2	4

Note: [1] TS Table 3.3-1 ACTION 10.

WCAP-14333 does not directly revise the RTB CT and bypass test times, and it is assumed that the bypass test times for the RTBs and the logic cabinets are separate and independent. However, WCAP-14333 assumes that with either a logic cabinet or RTB in test or maintenance, their associated train is also unavailable. Based on this, the analysis presented in WCAP-14333 includes a provision to accept a bypass test time of the RTBs equivalent to the bypass test time for the logic cabinets provided that (1) both are tested concurrently, and (2) the plant design is such that both the RTB and the logic cabinet cause their associated electrical trains to be inoperable during test or maintenance. Therefore, the RTB bypass test time is extended to 4 hours for this maintenance configuration. With the implementation of WCAP-15376, the RTB bypass test time is increased to 4 hours consistent with the logic cabinet.

3.2 Review of Methodology

In accordance with SRP Sections 19.1, 19.2, and 16.1, the NRC staff reviewed the MPS3 incorporation of WCAP-14333 and WCAP-15376 using the three-tiered approach and the five key principles of risk-informed decision-making presented in RGs 1.174 and 1.177 and the SER conditions and limitations for WCAP-14333 and WCAP-15376.

3.3 Comparison to Regulatory Criteria/Guidelines

The following sections present the NRC staff's evaluation of the licensee's proposed amendment to extend CTs and bypass test times using the three-tiered approach and the five key principles outlined in RGs 1.174 and 1.177.

3.3.1 Traditional Engineering Evaluation

The traditional engineering evaluation addresses key principles 1, 2, 3, and 5 of the NRC staff's philosophy of risk-informed decision-making, which concern compliance with current regulations, evaluation of defense in depth, evaluation of safety margins, and performance measurement strategies. The NRC staff previously performed a generic evaluation of WCAP-15376 and WCAP-14333. The NRC staff's review of the changes found that WCAP-15376 and WCAP-14333 were consistent with the accepted guidelines of RG 1.174 and RG 1.177, and NRC staff guidance as outlined in the SRP. From traditional engineering insights, the NRC staff found that the proposed changes in WCAP-15376 and WCAP-14333 continue to meet the regulations, have no impact on the defense-in-depth philosophy, and would not involve a significant reduction in the margin of safety. Section 3.3.3 of this SE provides the NRC staff's evaluation of the licensee's implementation and monitoring program.

3.3.2 Risk Evaluation

The changes proposed by the licensee employ a risk-informed approach to justify changes to CTs and bypass test times. The risk metrics, ΔCDF, ΔLERF, ICCDP, and ICLERP, developed in the topical report and that the licensee used to evaluate the impact of the proposed changes, are consistent with those presented in RGs 1.174 and 1.177.

3.3.2.1 Applicability of WCAP-14333 and WCAP-15376 to MPS3

To determine that WCAP-14333 and WCAP-15736 are applicable to MPS3, the licensee addressed the conditions and limitations of the NRC staff's SERs and the implementation guidance developed by PWROG that compares plant-specific data to the generic analysis assumptions. The evaluation compared the general baseline assumptions, including surveillance, maintenance, calibration, actuation signals, procedures, and operator actions, to confirm that the generic evaluation assumptions used in the topical reports are also applicable to MPS3.

The licensee also evaluated the NRC staff's SER conditions and limitations of WCAP-14333 and WCAP-15376, and this evaluation is discussed below.

(1) A licensee should confirm the applicability of the WCAP-14333 and WCAP-15376 analyses for its plant.

The LAR Attachment 3, "The Applicability Determination for WCAP-14333-P-A, Revision 1 and WCAP-15376-P-A, Revision 1," provides the evaluation of MPS3 parameters and assumptions against WCAP-14333 and WCAP-15376 in Tables 1 through 5. Data included plant-specific signals, component test and maintenance intervals, procedures, and anticipated transient without scram information.

Based on the NRC staff evaluation of Tier 1 presented in Section 3.3.2.1 of this SE, the NRC staff considers condition 1 to be satisfied for MPS3.

(2) Under WCAP-14333, the licensee should address the Tier 2 and Tier 3 analyses, including CRMP insights, by confirming that these insights are incorporated into its decision-making process before taking equipment out of service. Also, under WCAP-15376, the licensee should address the Tier 2 and Tier 3 analysis, including risk-significant configuration insights, and confirm that these insights are incorporated into the plant-specific CRMP.

Based on the evaluation presented below in Sections 3.3.2.2 (Tier 2) and 3.3.2.3 (Tier 3) of this SE, the NRC staff considers condition 2 to be satisfied for MPS3.

(3) The licensee should evaluate the risk impact of concurrent testing of one logic cabinet and associated RTB on a plant-specific basis to ensure conformance with the WCAP-15376 evaluation, including the guidance of RGs 1.174 and 1.177.

WCAP-15376 did not specifically evaluate or preclude concurrent testing of one logic cabinet and associated RTB. Based on this, the NRC staff questioned the applicability of the topical report to this particular maintenance configuration. In response to an NRC staff request for additional information (RAI) on WCAP-15376, the PWROG provided risk estimates for this more limiting configuration. The resulting generic ICCDP estimate was within the acceptance guidelines of RG 1.177. The licensee showed that the generic analysis presented in WCAP-15376 is applicable to MPS3. Based on the applicability of WCAP-15376 to MPS3 and an ICCDP estimate within the acceptance guidelines of RG 1.177, the staff considers condition 3 to be satisfied for MPS3.

(4) To ensure consistency with the reference plant, the licensee should confirm that the model assumptions for human reliability in WCAP-15376 are applicable to the plant-specific configuration.

The licensee confirmed that the assumptions regarding human reliability used in WCAP-15376 are applicable to MPS3. This review concluded that for the operator actions identified in WCAP-15376, plant procedures are available consistent with the assumptions in WCAP-15376; therefore, the NRC staff considers condition 4 to be satisfied for MPS3.

(5) For future digital upgrades with increased scope, integration, and architectural differences beyond those of Eagle 21, the NRC staff finds that the generic applicability of WCAP-15376 to a future digital system is not clear and should be considered on a plant-specific basis.

As stated in its LAR dated May 8, 2014, the licensee determined that condition 5 is not applicable to the implementation of WCAP-15376 at MPS3.

(6) WCAP-15376 included an additional condition based on the PWROG response to a staff RAI that requested that each plant commit to reviewing its plant-specific setpoint calculation methodology to ensure that the extended STIs do not adversely impact the

plant-specific setpoint calculations and assumptions for instrumentation associated with the extended STIs.

The LAR is not proposing changes to surveillance test intervals, so condition 6 is not applicable to MPS3

3.3.2.1.1 Tier 1: Probabilistic Risk Assessment Capability and Insights

The first tier evaluates the impact of the proposed changes on plant operational risk based on the MPS3 implementation of WCAP-14333 and WCAP-15376. The Tier 1 NRC staff review involves (1) evaluation of the validity of the PRA and its application to the proposed changes, and (2) evaluation of the PRA results and insights based on the licensee's proposed application.

(I) PRA Technical Adequacy

PRA Quality

The objective of the PRA technical adequacy review is to determine whether WCAP-14333 and WCAP-15376, which are used in evaluating the proposed RPS and ESFAS CT and test bypass times, are of sufficient scope and detail for this application. WCAP-14333 and WCAP-15376 provided a generic PRA model for the evaluation of the CT and bypass test times. The NRC staff found this generic model and the WCAP-14333/WCAP-15376 evaluations to be acceptable on a generic basis in the SERs dated July 13, 1998, and December 20, 2002, respectively. Although the SERs accepted the use of a representative model as generally reasonable, the application of the representative model and the associated results to a specific plant introduces a degree of uncertainty because of modeling, design, and operational differences. Therefore, each licensee adopting WCAP-14333 and WCAP-15376 would need to confirm that the topical report analyses and results are applicable to its plant.

In the SER for WCAP-14333 and WCAP-15376, the NRC staff found that the applicability of the generic PRA analysis for the proposed CT and bypass test times to other Westinghouse plants may not be representative based on design variations in actuated systems and the contribution to plant risk from accident classes impacted by the proposed change. The NRC staff concluded that each licensee would need to address any differences between its plant and the representative plant that could increase the CT and bypass test time. The licensee reviewed the scope and detail of the MPS3 PRA using the representative topical report PRA parameters to demonstrate the plant-specific applicability of the proposed CT and bypass test times. The licensee compared actuation logic; component test, maintenance, and calibration times/intervals; at-power maintenance; anticipated transient without scram; total internal events CDF; transient events; operator actions; RTS trip actuation signals; and ESFAS actuation signals to plant specific values. The licensee also evaluated MPS3 component failure probabilities and containment failure modes with respect to the WCAP-15376 analyses.

The comparison of the WCAP-15376 assumed total transient frequency and the MPS3 plant-specific transient frequency, in Table 4 of the LAR, showed that the plant-specific transient frequency was significantly less. In its May 18, 2015, response to PRA RAI 10, the licensee provided justification for the plant-specific total transient frequency. The licensee demonstrated the applicability of plant-specific plant trip data and the exclusion of historical plant trips as a result of improved operating performance. The NRC staff concludes that this treatment for the initiating event (IE) frequency is consistent with the American Society of Mechanical Engineers/American Nuclear Society (ASME/ANS) RA-Sa-2009 PRA standard (Reference 20) IE supporting requirement IE-C2, and, therefore, is acceptable.

In Table 1 of the LAR, a comparison between WCAP-14333 analysis assumptions and plant specific parameters shows significant differences for slave relays (component test intervals) and RTBs (typical at-power maintenance intervals). In its July 27, 2015, response to PRA RAI 12.01, the licensee stated that the unavailability of these components will be less than that assumed in WCAP-14333 since less testing and maintenance is being performed on some slave relays and the RTBs. Based on this information, the NRC staff concludes that the WCAP-14333 parameters bound these plant-specific parameters and this issue is resolved.

WCAP-1433 and WCAP-15376 assumed that maintenance on master and slave relays, logic cabinets, and analog channels while at power occurs only after a component failure, and that preventive maintenance does not occur. The topical reports do not preclude the practice of at-power preventive maintenance but limit the total time a component is unavailable due to corrective or preventive maintenance to the values used in the analysis. In its May 18, 2015, response to PRA RAI 11, the licensee confirmed by review of plant-specific data, that the unavailability for components evaluated in WCAP-14333 and WCAP-15376 are consistent with the plant-specific estimates at MPS3, and do not exceed those assumed in the analysis.

Based on the plant-specific comparison to the WCAP-14333 and WCAP-15376 analyses provided in the LAR to determine applicability, and the licensee's responses to PRA RAI 10, 11, and 12.01, the NRC staff concludes that the licensee has confirmed that WCAP-14333 and WCAP-15376 are applicable to MPS3.

Peer Review

A WOG peer review of the MPS3 internal events PRA was performed in 1999. All findings and observations (F&Os) from this peer review have been addressed. In addition, the licensee performed a self-assessment of the MPS3 internal events PRA in 2007, using the guidance in RG 1.200, Revision 1, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," January 2007 (Reference 21). The internal events PRA model (M310A) addressed F&Os from the self-assessment, and included model upgrades. Science Applications International Corporation performed a focused-scope peer review in June 2012, considering clarifications and qualifications in RG 1.200, Revision 2 (Reference 22), for the model upgrades against the ASME/ANS RA-Sa-2009 PRA standard. The licensee addressed the "gaps" between the internal events PRA model and the PRA standard from the self-assessment and the focused-scope peer review, and provided them in Tables 8A and 8B of the LAR. The NRC staff reviewed the gaps and concludes that the licensee dispositioned the F&Os by adequately addressing the review comments for the supporting requirements of the standard, or demonstrating that the review comments did not have a significant risk impact for the application.

PRA Update/Procedures

The MPS3 PRA model of record for the LAR is M310A, which includes an update to reflect the current plant configuration and accumulation of plant operating history and component failure data that, addresses several not-met supporting requirements, and enhances the documentation. The MPS3 PRA procedures maintain configuration control of PRA models, data, and software. MPS3 also implements a PRA configuration control database for PRA implementation tracking.

(II) PRA Results and Insights

Cumulative Risk

WCAP-15376 evaluated the cumulative CDF risk from the pre-TOP condition (WCAP-10271 not incorporated in the plant licensing) to WCAP-15376 implementation. This cumulative CDF risk includes the WCAP-14333 analysis. The cumulative impact on the change in CDF for 2-out-of-4 logic was within the RG 1.174 acceptance guidelines of less than 1E-6/year, representing a very small change. The cumulative impact on CDF for 2-out-of-3 logic was slightly above the RG 1.174 acceptance guideline for a very small change, but within the acceptance guidelines for a small change. To address this issue further analysis was performed for WCAP-15376 for the cumulative change in CDF. WCAP-15376 Table 8.33 reported that the change in CDF met the acceptance guideline for 2-out-of-4 logic, and was 1.1E-6/yr for 2-out-of-3 logic. For MPS3, the cumulative risk is from the TOP condition (WCAP-10271 incorporated in plant licensing) to WCAP-15376 implementation. The change in cumulative risk is less than the change from the pre-TOP to the WCAP-15376 estimates, and therefore it satisfies the RG 1.174 change in CDF acceptance guideline.

External Events

The licensee evaluated the change in risk qualitatively from external events and focused on the effect that these events have on MPS3 and whether the plant relies on RPS/solid-state protection system to mitigate the event. In its May 18, 2015, response to PRA RAI 13, the licensee determined that the Tier 1 WCAP analyses (WCAP-14333 and WCAP-15376) for the proposed changes bound the external events contribution. The licensee determined that there was no quantifiable affect for fire risk increase due to the expected minimal increase in unavailability time. For seismic, high winds, floods, and other external events, their initiating events have a low frequency of occurrence that would cause damage to mitigating systems. The most likely external events either lead to a loss of offsite power without any direct loss of mitigating equipment or a plant shutdown in advance of adverse weather, and the frequency of these events is small compared with the transient event frequency used in the WCAP analyses. Therefore, based on expected minimal increase in unavailability, low frequency of external events, and qualitative considerations regarding mitigation, the NRC staff expects external events to have a very small risk contribution.

Total Risk Contribution

RG 1.174 states that when the calculated increase in CDF and LERF is very small, which is taken as being less than 1E-6/yr per reactor year and 1E-7/yr per reactor year, respectively, the change will be considered regardless of whether there is a calculation of the total CDF and LERF. Based on the NRC staff's SE for WCAP-15376 conclusions for Tier 1 and the qualitative evaluation of external events risk contribution for the proposed TS changes, the NRC staff conclude that the Tier 1 acceptance guidelines are satisfied.

3.3.2.1.2 Tier 2—Avoidance of Risk-Significant Plant Configurations

A licensee should provide reasonable assurance that risk-significant plant equipment outage configurations will not occur when specific plant equipment is taken out of service in accordance with the proposed TS change.

In its May 18, 2015, response to PRA RAI 2, the licensee described its process to confirm the WCAP-14333 and WCAP-15376 Tier 2 analysis results for MPS3. Tier 2 restrictions were assessed qualitatively using a defense-in-depth approach. Accident scenarios that the out-of-service equipment is designed to mitigate were identified, and scheduled maintenance was restricted on remaining equipment designed to mitigate those accident scenarios. The NRC staff's review, however, identified Tier 2 concerns, which are discussed below.

One important configuration identified in the NRC staff's SE for WCAP-15376 is when one logic cabinet and associated RTB are out of service simultaneously. The LAR Section 4.2.2 proposed a Tier 2 restriction when a logic cabinet or an RTB were inoperable for maintenance. In its May 18, 2015, response to PRA RAI 3, the licensee clarified that the Tier 2 restriction applies for the condition of one cabinet being removed from service when an RTB is out of service. Therefore, the NRC staff concludes that this issue is resolved.

The LAR provided an evaluation of WCAP-14333 Tier 2 restrictions, and stated that there are no Tier 2 limitations when a slave relay, master relay, or analog channel is inoperable. In its July 27, 2015, response to PRA RAI 5.1 regarding this conclusion, the licensee stated that information from the Westinghouse evaluation in Table Q11.1 and Table Q18.1 was considered when determining Tier 2 restrictions. The response also stated that with respect to the analog channels and, master relays and slave relays, the Westinghouse evaluation determined the importance ranking among the affected systems did not change, and this is the basis for the conclusion that there are no Tier 2 restrictions. Given that the LAR Section 4.4.3 confirms the applicability of WCAP-14333, and the licensee evaluated the information in Table Q11.1 and Table Q18.1 when determining Tier 2 restrictions for MPS3, the NRC staff concludes that this issue is resolved.

LAR Section 4.5.5 identified some fire area vulnerabilities. In its May 18, 2015, response to PRA RAI 6, the licensee described its process to determine if Tier 2 or Tier 3 compensatory measures are needed for the LAR proposed changes with respect to fire-related risk. Based on the process described, the NRC staff noted that some components may not be qualitatively (or quantitatively) considered for Tier 2 or Tier 3 during the proposed TS bypass test times or CTs, which are less than or equal to 72 hours. In its July 27, 2015, response to PRA RAI 6.1, the licensee performed a Tier 2 evaluation to identify which components have a TS allowed outage time less than or equal to 72 hours, require transitioning to mode 5, and are not removed from consideration. The evaluation identified the turbine-driven auxiliary feedwater pump for Tier 2 restrictions; however, this component was already included in the proposed Tier 2 restrictions (i.e., auxiliary feedwater system components will not be removed from service when an RTB is inoperable for maintenance). As a result, the licensee identified no additional Tier 2 or Tier 3 compensatory measures. Based on the licensee's re-assessment, the NRC staff concludes that the Tier 2 process has been addressed for the proposed TS changes and this issue is resolved.

The LAR originally stated that Tier 2 restrictions do not apply when bypass capability is being used. This was noted for a logic train being tested under:

- TS 3.3.2, ACTION 14 or TS 3.3.2, ACTION 22;
- TS 3.3.2 ACTION 17 for ESFAS functional units 2.c and 3.b.3; and,
- an RTB train for TS 3.3.1 ACTION 10.

In its May 18, 2015, response to PRA RAI 1 requesting the basis for not applying Tier 2 restrictions when bypass capability is being used, the licensee withdrew the request to not apply Tier 2 restrictions to the ESFAS functional units 2.c and 3.b.3 in bypass, and revised Commitment 3 in Attachment 4 of the LAR to reflect this. In its July 27, 2015, response to follow-up PRA RAI 1.1 regarding the applicability of Tier 2 restrictions during bypass for TS 3.3.2, ACTION 14, TS 3.3.2, ACTION 22, and an RTB train for TS 3.3.1 ACTION 10, the licensee clarified that the Tier 2 restrictions, provided in Attachment 4 of the LAR and revised in the PRA RAI 4 response, apply when a logic train or an RTB are tested in bypass. Based on the licensee's responses to PRA RAIs 1 and 1.1, the NRC staff concludes that the Tier 2 process has been addressed and this issue is resolved.

The licensee evaluated concurrent component outage configurations and confirmed the applicability of Tier 2 restrictions for MPS3. Based on the above, the NRC staff concludes the licensee's Tier 2 analysis supports the implementation of WCAP-14333 and WCAP-15376 at MPS3 and satisfies the condition and limitations of the staff's SERs for WCAP-14333 and WCAP-15376 regarding Tier 2.

3.3.2.1.3 Tier 3—Risk-Informed Configuration Risk Management Program

The CRMP provides a proceduralized risk-informed assessment to manage the risk associated with equipment inoperability. The licensee stated that MPS3 has the capability to perform a configuration-dependent assessment of the overall impact on risk of proposed plant configurations prior to, and during, the performance of maintenance activities that remove equipment from service. MPS3 re-assesses risk if an equipment failure or malfunction or emergent condition produces a plant configuration that has not been previously assessed. According to the PRA RAI 7 response dated May 18, 2015, the licensee determined the MPS3 CRMP meets the guidance in RG 1.177 to ensure that it appropriately assesses equipment removed from service from a risk perspective. The staff determined that the licensee's program provides for the assessment and management of increased risk during maintenance activities as required by the Maintenance Rule (Section (a)(4)) and satisfies the RG 1.177 guidelines for a CRMP for the proposed change.

According to the PRA RAI 15 response dated May 18, 2015, the MPS3 CRMP model provides modeling of the reactor trip and ESFAS systems and components. The CRMP model includes a test and maintenance term for the reactor trip signal, the automatic ECCS actuation signal, and the signal to each component that gets an automatic ECCS actuation signal, which makes the reactor trip signal and automatic ECCS actuation for the affected train unavailable. In support of online maintenance, the licensee implements a PRA risk management procedure at MPS3. This procedure defines the requirement for ensuring that the PRA model used to evaluate on-line maintenance activities is an accurate model of the current plant design and operational characteristics.

For planned maintenance activities, the LAR states, in part, that:

> Work is not scheduled that is highly likely to exceed a TS or Technical Requirements Manual (TRM) CT requiring a plant shutdown. For activities that are expected to exceed 50% of a TS CT, compensatory measures and contingency plans are considered to minimize SSC unavailability and maximize SSC reliability.

However, regarding the SSCs in WCAP-14333 and WCAP-15376, the expected maintenance is corrective rather than preventive. According to RG 1.177 CRMP key component 1, the CRMP is invoked in a time frame defined by the plant's Corrective Action Program (Criteria XVI of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50). In its May 18, 2015, response to PRA RAI 8, the licensee explained that there are plant procedures which ensure the emergent risk assessment process will be performed in a time frame defined by the plant's corrective action program consistent with this RG 1.177 guidance. Therefore, based on this information, the NRC staff considers this issue resolved.

The CRMP program referenced by RG 1.174 may be implemented by a licensee through the Maintenance Rule (10 CFR 50.65(a)(4)), which requires that before performing maintenance activities, the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activity. Maintenance Rule guidance was revised subsequent to the NRC staff's SEs for TSTF-411 and TSTF-418: Nuclear Management and Resources Council (NUMARC) 93-01, Revision 2 (Reference 23), and RG 1.160, Revision 2 (Reference 24), were revised to NUMARC 93-01, Revision 4A (Reference 25), and RG 1.160, Revision 3 (Reference 26). In its May 18, 2015, response to PRA RAI 9, the licensee confirmed that MPS3 follows the current NUMARC 93-01, Revision 4A guidance and RG 1.160, Revision 3 for Maintenance Rule evaluations.

The NRC staff concludes that the licensee's program to control risk is capable of adequately assessing the activities being performed to ensure that high-risk plant configurations do not occur and/or compensatory actions are implemented if a high-risk plant configuration or condition should occur. As such, the licensee's program provides for the assessment and management of increased risk during maintenance activities as required by the Maintenance Rule and satisfies the RG 1.177 guidelines for a CRMP for the proposed change.

3.3.3 Implementation and Monitoring Program

RGs 1.174 and 1.177 also establish the need for an implementation and monitoring program to ensure that extensions to TS CT or bypass test times do not degrade operational safety over time and that no adverse effects occur from unanticipated degradation or common-cause mechanisms. The purpose of an implementation and monitoring program is to ensure that the impact of the proposed TS change continues to reflect the reliability and availability of SSCs impacted by the change. In addition, the application of the three-tiered approach in evaluating the proposed CT and bypass test times provides additional assurance that the changes will not significantly impact the key principle of defense in depth.

RG 1.174 states that monitoring performed in conformance with the Maintenance Rule can be used when such monitoring is sufficient for the SSCs affected by the risk-informed application. The licensee monitors the reliability and availability of the RTS and ESFAS instrumentation under the Maintenance Rule (10 CFR 50.65(a)(1)), which requires a licensee to monitor the performance or condition of SSCs against licensee-established goals. Based on the above, MPS3 satisfies the RG 1.174 and RG 1.177 guidelines for an implementation and monitoring program for the proposed change.

3.4 Comparison with Regulatory Guidance

The proposed changes conform to TSTF-411, Revision 1, and the analysis performed in WCAP-15376, as approved by the NRC staff, including limitations and conditions identified in the NRC staff's SER. Additionally, proposed changes conform to TSTF-418, Revision 2, and the analysis performed in WCAP-14333, as approved by the NRC staff, including limitations and conditions identified in the NRC staff's SER. As such, the implementation of WCAP-14333 and WCAP-15376 at MPS3 is within the RG 1.174 and RG 1.177 acceptance guidance for ΔCDF, ΔLERF, ICCDP, and ICLERP.

3.5 NRC Staff Conclusion

The NRC staff concludes that the licensee has demonstrated the applicability of WCAP-14333 and WCAP-15376 to MPS3 and has met the limitations and conditions as outlined in the NRC staff's SERs. The staff found the risk impacts for ΔCDF, ΔLERF, ICCDP, and ICLERP, as estimated by WCAP-14333 and WCAP-15376, to be applicable to MPS3 and within the acceptance guidelines for RG 1.174 and RG 1.177. The licensee showed the applicability of the specified functional units to the topical report evaluations and results. The licensee's Tier 2 analysis evaluated concurrent outage configurations and confirmed the applicability of the risk-significant configurations identified by the WCAP-14333 and WCAP-15376 SER limitations and conditions and topical report analysis to ensure control of these configurations. The licensee's Tier 3 CRMP was found to be consistent with the RG 1.177 CRMP guidelines and the Maintenance Rule (10 CFR 50.65(a)(4)) for the implementation of WCAP-14333 and WCAP-15376. The licensee monitors the reliability and availability of the RTS and ESFAS instrumentation under the Maintenance Rule (10 CFR 50.65(a)(1)). The NRC staff concludes that the TS revisions proposed by the licensee are consistent with the CTs and bypass test times approved for WCAP-14333 and WCAP-15376 and meet the staff's SER conditions and limitations for WCAP-14333 and WCAP-15376.

The regulations in 10CFR 50.36(c)(2) and (c)(3) prescribe the broad categories of items required to be contained in the TS, but do not specify the contents of individual TS. This amendment only changes the CT for Required Actions and the bypass time permitted for testing purposes and does not change the LCO's and SR's. Therefore, the NRC staff finds that the TS continue to meet the regulations in 10 CFR 50.36(c)(2) and (c)(3). The review guidance in

NUREG-0800 states that if a TS is justified by reference to a topical report, the staff should verify that the conditions for reliance on the topical report are met. As described above, the NRC staff concluded that the conditions for reliance on the topical report are satisfied. Therefore, based on the above evaluation, the NRC staff concludes that the proposed amendment to extend RPS and ESFAS CTs and bypass test times is acceptable.

4.0 REGULATORY COMMITMENTS

The licensee made the following regulatory commitments[1] related to WCAP-14333 and WCAP-15376. Regulatory commitments specify the items for which the licensees volunteer to perform in support of its licensing applications. The regulatory commitments do not require prior NRC approval of subsequent changes, and therefore, they are not enforceable licensing requirements. In its review of license applications, the NRC staff does not use the regulatory commitments as a basis in the safety evaluation for approving license amendments.

Number	Commitment
1	DNC will implement administrative controls to ensure that activities that degrade the availability of the RCS [reactor coolant system] pressure relief system, the auxiliary feedwater system, AMSAC [ATWS (anticipated transient without scram) mitigating system actuation circuitry], or turbine trip should not be scheduled when an RTB is inoperable for maintenance.
2	DNC will implement administrative controls to ensure that one complete ECCS [emergency core cooling system] train and its cooling systems (e.g., service water and component cooling water) that can be actuated automatically must be available when a logic train is inoperable for maintenance.
3	DNC will implement administrative controls to ensure that activities that cause RTS and ESFAS master relays or slave relays in the available train to be unavailable, and activities that cause RTS and ESFAS analog channels to be unavailable, should not be scheduled when a logic train and an RTB train is inoperable for maintenance.
4	DNC will implement administrative controls to ensure that activities that result in the inoperability of electrical systems (e.g., AC [alternating current] and DC [direct current] power) that support the RCS pressure relief system, the AFW [auxiliary feedwater] system, and AMSAC, turbine trip should not be scheduled when an RTB train is inoperable for maintenance. DNC will implement administrative controls to ensure that activities that result in the inoperability of electrical systems (e.g., AC and DC power) that support the available train should not be scheduled when a logic train and an RTB train is inoperable for maintenance.

[1] The licensee's regulatory commitments were initially submitted in the LAR dated May 8, 2014, and subsequently revised by letter dated May 18, 2015.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified on September 8, 2015, of the proposed issuance of the amendment. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or 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 the 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 published in the *Federal Register* (FR) on December 23, 2014 (79 FR 77044). 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.

7.0 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.

8.0 REFERENCES

1. Sartain, M. D., Dominion Nuclear Connecticut, Inc., letter to U.S. Nuclear Regulatory Commission, "License Amendment Request, Implementation of WCAP-14333 and WCAP-15376, Reactor Trip System Instrumentation and Engineered Safety Feature Actuation System Instrumentation Test Times and Completion Times," dated May 8, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14133A009).

2. Sartain, M. D., Dominion Nuclear Connecticut, Inc., letter to U.S. Nuclear Regulatory Commission, "Supplemental Information to License Amendment Request, Implementation of WCAP-14333 and WCAP-15376, Reactor Trip System Instrumentation and Engineered Safety Feature Actuation System Instrumentation Test Times and Completion Times," dated August 14, 2014 (ADAMS Accession No. ML14234A097).

3. Sartain, M. D., Dominion Nuclear Connecticut, Inc., letter to U.S. Nuclear Regulatory Commission, "Supplemental Information to License Amendment Request, Implementation of WCAP-14333 and WCAP-15376, Reactor Trip System

Instrumentation and Engineered Safety Feature Actuation System Instrumentation Test Times and Completion Times," dated October 15, 2014 (ADAMS Accession No. ML14294A452).

4. Sartain, M. D., Dominion Nuclear Connecticut, Inc., letter to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information Regarding License Amendment Request for Implementation of WCAP-14333 and WCAP-15376, Reactor Trip System Instrumentation and Engineered Safety Feature Actuation System Instrumentation Test Times and Completion Times (TAC No. MF4131)," dated October 16, 2014 (ADAMS Accession No. ML14294A451).

5. Sartain, M. D., Dominion Nuclear Connecticut, Inc., letter to U.S. Nuclear Regulatory Commission, "Response to Second Request for Additional Information Regarding License Amendment Request for Implementation of WCAP-14333 and WCAP-15376, Reactor Trip System Instrumentation and Engineered Safety Feature Actuation System Instrumentation Test Times and Completion Times (TAC No. MF4131)," dated May 18, 2015 (ADAMS Accession No. ML15147A018).

6. Sartain, M. D., Dominion Nuclear Connecticut, Inc., letter to U.S. Nuclear Regulatory Commission, "Response to Third Request for Additional Information Regarding License Amendment Request for Implementation of WCAP-14333 and WCAP-15376, Reactor Trip System Instrumentation and Engineered Safety Feature Actuation System Instrumentation Test Times and Completion Times (TAC No. MF4131)," dated July 27, 2015 (ADAMS Accession No. ML15215A368).

7. Essig, T. H., U.S. Nuclear Regulatory Commission, letter to Louis F. Liberatori, Jr., Westinghouse Owners Group, "Review of Westinghouse Owners Group Topical Reports WCAP-14333P and WCAP-14333NP, dated May 1995, 'Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times,'" dated July 13, 1998 (ADAMS Accession No. ML15320A563).

8. Pietrangelo, A. R., Nuclear Energy Institute, letter to U.S. Nuclear Regulatory Commission, "Forwarding of TSTF [-418, Revision 2, 'RPS and ESFAS Test Times and Completion Times (WCAP-14333)'']," dated March 3, 2003 (ADAMS Accession No. ML030650848).

9. Beckner, W. D., U.S. Nuclear Regulatory Commission, letter to Anthony Pietrangelo, Nuclear Energy Institute, forwarding "Safety Evaluation on Proposed Changes to NUREG-1431, Rev. 2, Standard Technical Specifications Westinghouse Plants," dated April 2, 2003 (ADAMS Accession No. ML030920633).

10. Ruland, W. H., U.S. Nuclear Regulatory Commission, letter to Robert H. Bryan, Westinghouse Owners Group, "Acceptance for Referencing of Topical Report WCAP-15376-P, Rev. 0, "Risk-Informed Assessment of the RTS and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times (TAC No. MB0983)," dated December 20, 2002 (ADAMS Accession No. ML023540534).

11. Technical Specification Task Force (TSTF) Traveler TSTF-411, Revision 1, "Surveillance Test Interval Extension for Components of the Reactor Protection System (WCAP-15376-P)," dated August 7, 2002 (ADAMS Accession No. ML022470164).

12. Beckner, W. D., U.S. Nuclear Regulatory Commission, letter to Anthony Pietrangelo, Nuclear Energy Institute, regarding review of TSTF-411, Rev. 1 proposed changes to NUREG-1431, Rev. 2, dated August 30, 2002 (ADAMS Accession No. ML022460347).

13. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.105, Revision 3, "Setpoints for Safety-Related Instrumentation," December 1999 (ADAMS Accession No. ML993560062).

14. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.174, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," May 2011 (ADAMS Accession No. ML100910006); Revision 1, November 2002 (ADAMS Accession No. ML023240437).

15. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," August 1998 (ADAMS Accession No. ML003740176).

16. U.S. Nuclear Regulatory Commission, NUREG-0800, Standard Review Plan Section 19.1, Revision 2, "Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," June 2007 (ADAMS Accession No. ML071700657).

17. U.S. Nuclear Regulatory Commission, NUREG-0800, Standard Review Plan Section 16.1, Revision 1, "Risk-Informed Decision Making: Technical Specifications," March 2007 (ADAMS Accession No. ML070380228).

18. U.S. Nuclear Regulatory Commission, NUREG-0800, Standard Review Plan Section 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance," June 2007 (ADAMS Accession No. ML071700658).

19. U.S. Nuclear Regulatory Commission, NUREG-1431, Standard Technical Specifications, Westinghouse Plants, Revision 4.0, Volume 1, Specifications," April 2012 (ADAMS Accession No. ML12100A222).

20. American Society of Mechanical Engineers/American Nuclear Society (ASME/ANS) PRA Standard ASME/ANS RA-Sa-2009, Addenda to ASME RA-S-2008, "Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications."

21. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.200, Revision 1, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment

Results for Risk-Informed Activities," January 2007 (ADAMS Accession No. ML070240001).

22. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," March 2009 (ADAMS Accession No. ML090410014).

23. NUMARC 93-01, Revision 2, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Nuclear Management and Resources Council, Washington, DC, April 1996 (ADAMS Accession No. ML101020415).

24. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.160, Revision 2, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," March 1997 (ADAMS Accession No. ML003761662).

25. NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 4A, Nuclear Energy Institute, Washington, DC, April 2011 (ADAMS Accession No. ML11116A198).

26. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.160, Revision 3, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," May 2012 (ADAMS Accession No. ML113610098).

Principal Contributors: D. O'Neal
K. Sturzebecher
D. Ki

Date: November 30, 2015

A copy of the related Safety Evaluation is also enclosed. 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 I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-423

Enclosures:
1. Amendment No. 266 to NPF-49
2. Safety Evaluation

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ADAMS Accession No.: ML15288A004 *SE memo dated **Concurrence via email

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