



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

July 24, 2017

Mr. Mark E. Reddemann
Chief Executive Officer
Energy Northwest
P.O. Box 968 (Mail Drop 1023)
Richland, WA 99352-0968

SUBJECT: COLUMBIA GENERATING STATION - ISSUANCE OF AMENDMENT RE:
ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER
TSTF-545, REVISION 3 (CAC NO. MF8148)

Dear Mr. Reddemann:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 243 to Renewed Facility Operating License No. NPF-21 for the Columbia Generating Station. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated July 14, 2016, as supplemented by letter dated July 5, 2017.

The amendment deletes TS 5.5.6, "Inservice Testing Program." A new defined term, "Inservice Testing Program," is added to TS Section 1.1, "Definitions." In addition, existing uses of the term "Inservice Testing Program" in the TSs are capitalized throughout to indicate that it is now a defined term. These changes are based on NRC-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications Change Traveler TSTF-545, Revision 3, "TS Inservice Testing Program Removal & Clarify SR [Surveillance Requirement] Usage Rule Application to Section 5.5 Testing," dated October 21, 2015.

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

Sincerely,

A handwritten signature in black ink, appearing to read "L. John Klos" followed by a stylized flourish.

L. John Klos, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures:

1. Amendment No. 243 to NPF-21
2. Safety Evaluation

cc w/encls: Distribution via Listserv



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

ENERGY NORTHWEST

DOCKET NO. 50-397

COLUMBIA GENERATING STATION

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 243
License No. NPF-21

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Energy Northwest (licensee), dated July 14, 2016, as supplemented by letter dated July 5, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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-21 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 243 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert J. Pascarelli, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. NPF-21
and Technical Specifications

Date of Issuance: July 24, 2017

ATTACHMENT TO LICENSE AMENDMENT NO. 243

COLUMBIA GENERATING STATION

RENEWED FACILITY OPERATING LICENSE NO. NPF-21

DOCKET NO. 50-397

Replace the following pages of the Renewed Facility Operating License No. NPF-21 and Appendix A, Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Facility Operating License

REMOVE

INSERT

-4-

-4-

Technical Specification

REMOVE

INSERT

1.1-3

1.1-3

3.1.7-3

3.1.7-3

3.4.3-1

3.4.3-1

3.4.4-2

3.4.4-2

3.4.6-2

3.4.6-2

3.5.1-4

3.5.1-4

3.5.2-3

3.5.2-3

3.6.1.3-7

3.6.1.3-7

3.6.1.3-8

3.6.1.3-8

3.6.1.6-2

3.6.1.6-2

3.6.2.3-2

3.6.2.3-2

3.6.4.2-3

3.6.4.2-3

5.5-4

5.5-4

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 243 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- a. For Surveillance Requirements (SRs) not previously performed by existing SRs or other plant tests, the requirement will be considered met on the implementation date and the next required test will be at the interval specified in the Technical Specifications as revised in Amendment No. 149.

(3) Deleted.

(4) Deleted.

(5) Deleted.

(6) Deleted.

(7) Deleted.

(8) Deleted.

(9) Deleted.

(10) Deleted.

(11) Shield Wall Deferral (Section 12.3.2, SSER #4, License Amendment #7)

The licensee shall complete construction of the deferred shield walls and window as identified in Attachment 3, as amended by this license amendment.

(12) Deleted.

(13) Deleted.

*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

1.1 Definitions

END OF CYCLE RECIRCULATION PUMP TRIP (EOC-RPT) SYSTEM RESPONSE TIME	The EOC-RPT SYSTEM RESPONSE TIME shall be that time interval from initial signal generation by the associated turbine throttle valve limit switch or from when the turbine governor valve hydraulic control oil pressure drops below the pressure switch setpoint to complete suppression of the electric arc between the fully open contacts of the recirculation pump circuit breaker. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
INSERVICE TESTING PROGRAM	The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).
ISOLATION SYSTEM RESPONSE TIME	The ISOLATION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valves travel to their required positions. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
LEAKAGE	<p>LEAKAGE shall be:</p> <ol style="list-style-type: none"> a. <u>Identified LEAKAGE</u> <ol style="list-style-type: none"> 1. LEAKAGE into the drywell such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or 2. LEAKAGE into the drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE; b. <u>Unidentified LEAKAGE</u> <p>All LEAKAGE into the drywell that is not identified LEAKAGE;</p> c. <u>Total LEAKAGE</u> <p>Sum of the identified and unidentified LEAKAGE; and</p> d. <u>Pressure Boundary LEAKAGE</u> <p>LEAKAGE through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall.</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.7.6	Verify each pump develops a flow rate ≥ 41.2 gpm at a discharge pressure ≥ 1220 psig.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.1.7.7	Verify flow through one SLC subsystem from pump into reactor pressure vessel.	In accordance with the Surveillance Frequency Control Program
SR 3.1.7.8	Verify all heat traced piping between storage tank and pump suction valve is unblocked.	In accordance with the Surveillance Frequency Control Program <u>AND</u> Once within 24 hours after solution temperature is restored within the limits of Figure 3.1.7-1
SR 3.1.7.9	Verify sodium pentaborate enrichment is ≥ 44.0 atom percent B-10.	Prior to addition to SLC Tank

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.3 Safety/Relief Valves (SRVs) - $\geq 25\%$ RTP

LCO 3.4.3 The safety function of 12 SRVs shall be OPERABLE, with two SRVs in the lowest two lift setpoint groups OPERABLE.

APPLICABILITY: THERMAL POWER $\geq 25\%$ RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required SRVs inoperable.	A.1 Reduce THERMAL POWER to $< 25\%$ RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.3.1	Verify the safety function lift setpoints of the required SRVs are as follows:	In accordance with the INSERVICE TESTING PROGRAM
	<u>Number of SRVs</u>	
	<u>Setpoint (psig)</u>	
	2	
	1165 + 34.9 - 58.2	
	4	
	1175 + 35.2 - 58.7	
	4	
	1185 + 35.5 - 59.2	
	4	
	1195 + 35.8 - 59.7	
	4	
	1205 \pm 36.1 - 60.2	
	Following testing, lift settings shall be within $\pm 3\%$.	

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.4.4.1	<p>Verify the safety function lift setpoints of the required SRVs are as follows:</p> <table><thead><tr><th>Number of SRVs</th><th>Setpoint (psig)</th></tr></thead><tbody><tr><td>2</td><td>1165 + 34.9 - 58.2</td></tr><tr><td>4</td><td>1175 + 35.2 - 58.7</td></tr><tr><td>4</td><td>1185 + 35.5 - 59.2</td></tr><tr><td>4</td><td>1195 + 35.8 - 59.7</td></tr><tr><td>4</td><td>1205 ± 36.1 - 60.2</td></tr></tbody></table> <p>Following testing, lift settings shall be within ±3%.</p>	Number of SRVs	Setpoint (psig)	2	1165 + 34.9 - 58.2	4	1175 + 35.2 - 58.7	4	1185 + 35.5 - 59.2	4	1195 + 35.8 - 59.7	4	1205 ± 36.1 - 60.2	In accordance with the INSERVICE TESTING PROGRAM
Number of SRVs	Setpoint (psig)													
2	1165 + 34.9 - 58.2													
4	1175 + 35.2 - 58.7													
4	1185 + 35.5 - 59.2													
4	1195 + 35.8 - 59.7													
4	1205 ± 36.1 - 60.2													
SR 3.4.4.2	<p>-----NOTE-----</p> <p>Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test.</p> <p>-----</p> <p>Verify each required SRV opens when manually actuated.</p>	In accordance with the Surveillance Frequency Control Program												

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours
	<u>AND</u> B.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.6.1</p> <p>-----NOTE----- Only required to be performed in MODES 1 and 2. -----</p> <p>Verify equivalent leakage of each RCS PIV is ≤ 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm, at an RCS pressure of 1035 psig. The actual test pressure shall be ≥ 935 psig.</p>	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.2	<p>-----NOTE-----</p> <p>Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than 48 psig in MODE 3, if capable of being manually realigned and not otherwise inoperable.</p> <p>-----</p> <p>Verify each ECCS injection/spray subsystem manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.3	Verify ADS accumulator backup compressed gas system average pressure in the required bottles is ≥ 2200 psig.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.4	<p>Verify each ECCS pump develops the specified flow rate with the specified differential pressure between reactor and suction source.</p> <table> <tr> <th><u>SYSTEM</u></th><th><u>FLOW RATE</u></th><th><u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u></th></tr> <tr> <td>LPCS</td><td>≥ 6200 gpm</td><td>≥ 128 psid</td></tr> <tr> <td>LPCI</td><td>≥ 7200 gpm</td><td>≥ 26 psid</td></tr> <tr> <td>HPCS</td><td>≥ 6350 gpm</td><td>≥ 200 psid</td></tr> </table>	<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>	LPCS	≥ 6200 gpm	≥ 128 psid	LPCI	≥ 7200 gpm	≥ 26 psid	HPCS	≥ 6350 gpm	≥ 200 psid	In accordance with the INSERVICE TESTING PROGRAM
<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>												
LPCS	≥ 6200 gpm	≥ 128 psid												
LPCI	≥ 7200 gpm	≥ 26 psid												
HPCS	≥ 6350 gpm	≥ 200 psid												

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.5.2.3	Verify, for each required ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.2.4	<p>-----NOTE-----</p> <p>One low pressure coolant injection (LPCI) subsystem may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned and not otherwise inoperable.</p> <p>-----</p> <p>Verify each required ECCS injection/spray subsystem manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	In accordance with the Surveillance Frequency Control Program												
SR 3.5.2.5	<p>Verify each required ECCS pump develops the specified flow rate with the specified differential pressure between reactor and suction source.</p> <table> <tr> <th><u>SYSTEM</u></th><th><u>FLOW RATE</u></th><th><u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u></th></tr> <tr> <td>LPCS</td><td>≥ 6200 gpm</td><td>≥ 128 psid</td></tr> <tr> <td>LPCI</td><td>≥ 7200 gpm</td><td>≥ 26 psid</td></tr> <tr> <td>HPCS</td><td>≥ 6350 gpm</td><td>≥ 200 psid</td></tr> </table>	<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>	LPCS	≥ 6200 gpm	≥ 128 psid	LPCI	≥ 7200 gpm	≥ 26 psid	HPCS	≥ 6350 gpm	≥ 200 psid	In accordance with the INSERVICE TESTING PROGRAM
<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>												
LPCS	≥ 6200 gpm	≥ 128 psid												
LPCI	≥ 7200 gpm	≥ 26 psid												
HPCS	≥ 6350 gpm	≥ 200 psid												

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. <p>-----</p> <p>Verify each primary containment isolation manual valve and blind flange that is located inside primary containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.</p>	<p>Prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days</p>
SR 3.6.1.3.4	Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.5	Verify the isolation time of each power operated, automatic PCIV, except for MSIVs, is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.1.3.6	Verify the isolation time of each MSIV is ≥ 3 seconds and ≤ 5 seconds.	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.7	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.8	Verify a representative sample of reactor instrument line EFCVs actuate to the isolation position on an actual or simulated instrument line break signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.9	Remove and test the explosive squib from each shear isolation valve of the TIP System.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.10	Verify the combined leakage rate for all secondary containment bypass leakage paths is $\leq 0.04\%$ primary containment volume/day when pressurized to $\geq P_a$.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.11	Verify leakage rate through each MSIV is ≤ 16.0 scfh when tested at ≥ 25.0 psig.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.12	Verify combined leakage rate through hydrostatically tested lines that penetrate the primary containment is within limits.	In accordance with the Primary Containment Leakage Rate Testing Program

Reactor Building-to-Suppression Chamber Vacuum Breakers
3.6.1.6

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two or more lines with one or more reactor building-to-suppression chamber vacuum breakers inoperable for opening.	E.1 Restore all vacuum breakers in two lines to OPERABLE status.	1 hour
F. Required Action and associated Completion Time of Condition A, B or E not met.	F.1 Be in MODE 3. <u>AND</u>	12 hours
	F.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.6.1 -----NOTES-----</p> <ol style="list-style-type: none"> Not required to be met for vacuum breakers that are open during Surveillances. Not required to be met for vacuum breakers open when performing their intended function. <p>-----</p> <p>Verify each vacuum breaker is closed.</p>	In accordance with the Surveillance Frequency Control Program
<p>SR 3.6.1.6.2 Perform a functional test of each vacuum breaker.</p>	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.2.3.2	Verify each RHR pump develops a flow rate ≥ 7100 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.2.1	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. Valves and blind flanges in high radiation areas may be verified by use of administrative controls. 2. Not required to be met for SCIVs that are open under administrative controls. <p>-----</p> <p>Verify each secondary containment isolation manual valve and blind flange that is not locked, sealed, or otherwise secured, and is required to be closed during accident conditions is closed.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.2.2	Verify the isolation time of each power operated, automatic SCIV is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.4.2.3	Verify each automatic SCIV actuates to the isolation position on an actual or simulated automatic isolation signal.	In accordance with the Surveillance Frequency Control Program

5.5 Programs and Manuals

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the FSAR, Table 3.9-1, Note 1, cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Deleted



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 243 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-21

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

DOCKET NO. 50-397

1.0 INTRODUCTION

By application dated July 14, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16196A419), as supplemented by letter dated July 5, 2017 (ADAMS Accession No. ML17186A435), Energy Northwest (licensee) requested changes to the Technical Specifications (Appendix A to Renewed Facility Operating License No. NPF-21) for the Columbia Generating Station (Columbia). Specifically, the licensee requested changes to the TSs consistent with Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-545, Revision 3, "TS Inservice Testing Program Removal & Clarify SR [Surveillance Requirement] Usage Rule Application to Section 5.5 Testing," dated October 21, 2015 (ADAMS Accession No. ML15294A555).

The licensee's proposed changes delete Columbia TS 5.5.6, "Inservice Testing Program," and adds a new defined term, "INSERVICE TESTING PROGRAM," to the TSs. All existing references to the "Inservice Testing Program" in the Columbia TS SRs are replaced with "INSERVICE TESTING PROGRAM" so that the SRs refer to the new definition in lieu of the deleted program.

The supplemental letter dated July 5, 2017, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the U.S. Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (FR) on September 27, 2016 (81 FR 66304).

2.0 REGULATORY EVALUATION

2.1 Description of Inservice Testing Requirements and TSTF-545

An inservice test is a test to assess the operational readiness of a structure, system, or component after first electrical generation by nuclear heat. The American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) provides requirements for inservice testing of certain components in light-water nuclear power plants. The ASME OM Code identifies the components subject to the testing (i.e., pumps,

valves, pressure relief devices, and dynamic restraints), responsibilities, methods, intervals, parameters to be measured and evaluated, criteria for evaluating results, corrective actions, personnel qualification, and recordkeeping. Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.55a(f), "Inservice testing requirements," requires that inservice testing of certain ASME Code Class 1, 2, and 3 components must meet the requirements of the ASME OM Code and applicable addenda. The facility's TSs also prescribe inservice testing requirements and frequencies for ASME Code Class 1, 2, and 3 components.

The regulation in 10 CFR 50.55a(f)(5)(ii) states, in part, "If a revised inservice test program for a facility conflicts with the technical specifications for the facility, the licensee must apply to the Commission for amendment of the technical specifications to conform the technical specifications to the revised program." TSTF-545, Revision 3, provides guidance to licensees on how to request license amendments that would eliminate conflicting requirements between 10 CFR 50.55a, "Codes and standards," and the TSs. TSTF-545, Revision 3, proposes elimination of the Inservice Testing Program from the Administrative Controls section of the TSs. The TSs contain surveillances that require testing or test intervals in accordance with the Inservice Testing Program. The elimination of the Inservice Testing Program from the TSs could cause uncertainty regarding the correct application of these SRs. Therefore, TSTF-545, Revision 3, also proposes adding a new definition, "INSERVICE TESTING PROGRAM," to the TSs, which would be defined as "the licensee program that fulfills the requirements of 10 CFR 50.55a(f)." TSTF-545, Revision 3, proposes replacement of existing uses of the term, "Inservice Testing Program," with the defined term, as denoted by capitalized letters, throughout the TSs.

The NRC approved TSTF-545, Revision 3, by letter dated December 11, 2015 (ADAMS Package Accession No. ML15317A071), and published a notice of availability in the *Federal Register* on March 28, 2016 (81 FR 17208).

2.2 Proposed Technical Specifications Changes

The licensee requested to delete TS 5.5.6 from the Administrative Controls section of TSs and replace it with the word "Deleted." TS 5.5.6 currently states:

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves.

- a. Testing Frequencies applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as follows:

<u>ASME OM Code and applicable Addenda terminology for inservice testing activities</u>	<u>Required Frequencies for performing inservice testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and to other normal and accelerated Frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.

SR 3.0.2 allows an extension of inservice testing intervals by up to 25 percent. If it is discovered that a surveillance associated with an inservice testing activity was not performed within the required interval, SR 3.0.3 allows the licensee to delay declaring the associated limiting condition for operation not met in order to perform the missed surveillance. The licensee did not request changes to SR 3.0.2 or SR 3.0.3.

The licensee requested to revise the Definitions section of TSs by adding the term, "INSERVICE TESTING PROGRAM," with the following definition: "The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f)." The licensee also requested that all existing occurrences of "Inservice Testing Program" in TS SRs be replaced with "INSERVICE TESTING PROGRAM," so that the SRs refer to the new definition in lieu of the deleted program.

2.3 Regulatory Requirements and Guidance

The NRC staff considered the following regulatory requirements, guidance, and licensing information during its review of the proposed changes:

Technical Specifications

Paragraph 50.36(c) of 10 CFR requires TSs to include the following categories: (1) safety limits, limiting safety systems settings, and control settings; (2) limiting conditions for operation; (3) SRs; (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notification; and (8) written reports. Section 50.36(c)(3) of 10 CFR states that "[s]urveillance requirements 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 limiting conditions for operation will be met." Section 50.36(c)(5) of 10 CFR states that "[a]dministrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner."

The NRC staff's guidance for review of the TSs is in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition," Chapter 16, "Technical Specifications," Revision 3, dated March 2010 (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the staff has prepared improved STSs for each of the LWR nuclear steam supply systems and associated balance-of-plant equipment systems. The licensee's proposed amendment is based on TSTF-545, Revision 3, which is an NRC-approved change to the improved STSs. The staff's review includes consideration of whether the proposed changes are consistent with

TSTF-545, Revision 3. Special attention is given to TS provisions that depart from the improved STSs, as modified by NRC-approved TSTF travelers, to determine whether proposed differences are justified by uniqueness in plant design or other considerations so that 10 CFR 50.36 is met. In addition, the guidance states that comparing the change to previous STS can help clarify the TS intent.

Inservice Testing

Pursuant to 10 CFR 50.54, "Conditions of licenses," the applicable requirements of 10 CFR 50.55a are conditions of every nuclear power reactor operating license issued under 10 CFR Part 50. These requirements include inservice testing of pumps and valves at nuclear power reactors in accordance with the ASME OM Code as specified in 10 CFR 50.55a(f). The regulations in 10 CFR 50.55a(f) state, in part:

Systems and components of boiling and pressurized water-cooled nuclear power reactors must meet the requirements of the ASME BPV [Boiler and Pressure Vessel] Code and ASME Code for Operation and Maintenance of Nuclear Power Plants as specified in this paragraph. Each operating license for a boiling or pressurized water-cooled nuclear facility is subject to the following conditions [referring to 10 CFR 50.55a(f)(1) through (f)(6)]. . . .

The ASME OM Code is a consensus standard, which is incorporated by reference into 10 CFR 50.55a. During the incorporation process, the NRC staff reviewed the ASME OM Code requirements for technical sufficiency and found that the ASME OM Code inservice testing program requirements were suitable for incorporation into the NRC's rules.

The regulation in 10 CFR 50.55(a)(f)(5)(ii) states, in part: "If a revised inservice test program for a facility conflicts with the technical specifications for the facility, the licensee must apply to the Commission for amendment of the technical specifications to conform the technical specifications to the revised program."

NUREG-1482, Revision 2, "Guidelines for Inservice Testing at Nuclear Power Plants: Inservice Testing of Pumps and Valves and Inservice Examination and Testing of Dynamic Restraints (Snubbers) at Nuclear Power Plants," Final Report, October 2013 (ADAMS Accession No. ML13295A020) provides guidance for the inservice testing of pumps and valves.

NUREG-0800, Section 3.9.6, "Functional Design, Qualification, and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints," Revision 3, March 2007 (ADAMS Accession No. ML070720041), provides guidance and acceptance criteria for the NRC staff review of the inservice testing program for pumps and valves.

3.0 TECHNICAL EVALUATION

The NRC staff evaluated the licensee's application to determine if the proposed changes are consistent with the guidance, regulations, and licensing information discussed in Section 2.3 of this safety evaluation. In determining whether an amendment to a license will be issued, the Commission is guided by the considerations that govern the issuance of initial licenses to the extent applicable and appropriate. Among the considerations are whether the TSs, as amended, would provide the necessary administrative controls per 10 CFR 50.36(c)(5) (i.e., provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner).

In making its determination as to whether to amend the license, the staff considered those regulatory requirements that are automatically conditions of the license through 10 CFR 50.54. Where the regulations already condition the license, there is no need for a duplicative requirement in the TSs; the regulations provide the necessary reasonable assurance of the health and safety of the public.

3.1 Deletion of the Inservice Testing Program from the TSs

TS 5.5.6 requires the licensee to have an inservice testing program that provides controls for inservice testing of ASME Code Class 1, 2, and 3 components (i.e., pumps and valves). Through 10 CFR 50.54, the applicable requirements of 10 CFR 50.55a are conditions of every nuclear power reactor operating license issued under 10 CFR Part 50. These requirements include 10 CFR 50.55a(f), which specifies the requirements for the inservice testing of pumps and valves. Therefore, requiring the licensee to have an inservice testing program in TSs is duplicative of the license condition in 10 CFR 50.54. Thus, with the proposed TS changes, the licensee will still be required to maintain an inservice testing program in accordance with the ASME OM Code, as specified in 10 CFR 50.55a(f). For the reasons explained below, it is not necessary to have additional administrative controls in the TSs relating to the inservice testing program to assure operation of the facility in a safe manner.

Consideration of TS 5.5.6.a

The ASME OM Code requires testing to normally be performed within certain time periods. TS 5.5.6.a sets inservice testing frequencies more precisely than those specified in the ASME OM Code and applicable addenda (e.g., "at least once per 31 days" contrasted with "monthly"). However, the NRC staff determined that the more precise inservice testing frequencies are not necessary to assure operation of the facility in a safe manner.

Consideration of TS 5.5.6.b

TS 5.5.6.b allows the licensee to extend, by up to 25 percent, the interval between inservice testing activities, as required by TS 5.5.6.a and for other normal and accelerated frequencies specified as 2 years or less in the inservice testing program. Similar to TS 5.5.6.b, the NRC authorization of ASME Code Case OMN-20, "Inservice Test Frequency," by letter dated December 9, 2014 (ADAMS Accession No. ML14337A449), also permits the licensee to extend the inservice testing intervals specified in the ASME OM Code by up to 25 percent.

The NRC staff determined that the TS 5.5.6.b allowance to extend inservice testing intervals is not needed to assure operation of the facility in a safe manner. Therefore, the NRC staff determined that deletion of TS 5.5.6.b is acceptable. The deletion of TS 5.5.6.b does not impact the licensee's ability to extend inservice testing intervals using Code Case OMN-20, as authorized by the NRC.

Consideration of TS 5.5.6.c

TS 5.5.6.c allows the licensee to use SR 3.0.3 when it discovers that an SR associated with an inservice test was not performed within its specified frequency. SR 3.0.3 allows the licensee to delay declaring a limiting condition for operation not met in order to perform the missed surveillance. The use of SR 3.0.3 for inservice tests is limited to those inservice tests required by an SR. In accordance with 10 CFR 50.55a, the licensee may also request relief from the ASME OM Code requirements to address issues associated with a missed inservice test.

Deletion of TS 5.5.6.c does not change any of these requirements, and SR 3.0.3 will continue to apply to those inservice tests required by SRs. Based on the above, the NRC staff determined that deletion of TS 5.5.6.c is acceptable.

Consideration of TS 5.5.6.d

TS 5.5.6.d states that nothing in the ASME OM Code shall be construed to supersede the requirements of any TS. However, the regulations in 10 CFR 50.55a(f)(5)(ii) address what to do if a revised inservice testing program for a facility conflicts with the TSs for the facility; they require the licensee to apply for an amendment to the TSs to conform the TSs to the revised program at least 6 months prior to the start of the period for which the provisions become applicable. Accordingly, there is no need for a TS stating how to address conflicts between the TSs and the inservice testing program because the regulations specify how conflicts must be resolved.

Conclusion Regarding Deletion of TS 5.5.6

The NRC staff determined that the requirements currently in TS 5.5.6 are not necessary to assure operation of the facility in a safe manner. Based on this evaluation, the staff concludes that deletion of TS 5.5.6 from the licensee's TSs is acceptable, because TS 5.5.6 is not required by 10 CFR 50.36(c)(5).

3.2 Definition of INSERVICE TESTING PROGRAM and Revision to SRs

The licensee proposes to revise the TS Definitions section to include the term, "INSERVICE TESTING PROGRAM," with the following definition: "The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f)." The proposed definition of the INSERVICE TESTING PROGRAM is consistent with the definition in TSTF-545, Revision 3. The definition is acceptable to the NRC staff because it correctly refers to the inservice testing requirements in 10 CFR 50.55a(f).

The licensee requested that all existing references to the "Inservice Testing Program" in SRs be revised to "INSERVICE TESTING PROGRAM" to reference the new TS defined term in lieu of the deleted program. The proposed change is consistent with the intent of TSTF-545, Revision 3, to replace the current references in SRs with the new definition. The NRC staff verified that for each SR reference to the "Inservice Testing Program," the licensee proposed to change the reference to "INSERVICE TESTING PROGRAM." The proposed change does not alter how the SR testing is performed. However, the inservice testing frequencies could change because the TSs will no longer include the more precise test frequencies in TS 5.5.6.a. As discussed in Section 3.1 of this safety evaluation, the staff determined that the TSs do not need to include the more precise testing frequencies currently in TS 5.5.6.a. Based on its review, the staff determined that revising the SRs to refer to the new definition is acceptable because these SRs will continue to be performed in accordance with the requirements of 10 CFR 50.55a(f). The staff also determined that, with the proposed changes that allow less-precise testing frequencies, 10 CFR 50.36(c)(3) will continue to be met because the SRs will continue to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

3.3 Deviations from TSTF-545

In Attachment 2 of its application dated July 14, 2016, the licensee identified the following deviations from TSTF-545, Revision 3:

1. TSTF-545, Revision 3, completely deletes TS 5.5.6 from the TSs and renumbers the subsequent TS programs. The licensee proposes to delete the content of TS 5.5.6, but retains the TS number, and adds the word "Deleted." The licensee did not propose to renumber the subsequent TS programs.
2. Some of the numbering and wording for the SRs that are modified does not match TSTF-545, Revision 3. However, the licensee stated that the SRs are equivalent.
3. The licensee proposes to replace all existing references to the "Inservice Testing Program" in the Columbia TS SRs with "INSERVICE TESTING PROGRAM," including plant-specific SRs that are not listed in TSTF-545, Revision 3. The licensee states that the Columbia plant-specific SRs are consistent with the intent of TSTF-545, Revision 3.
4. Several SRs included in TSTF-545, Revision 3 are not contained in the Columbia TSs and thus, not included in the application. The licensee states that this is an administrative deviation from TSTF-545, Revision 3.

The NRC staff finds that the proposed deviations are editorial in nature and the licensee's proposed TS changes remain consistent with the intent of TSTF-545, Revision 3. Therefore, the staff finds that the licensee's proposed TS changes are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Washington State official was notified of the proposed issuance of the amendment on June 26, 2017. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes SRs. 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* on September 27, 2016 (81 FR 66304). 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.

Principal Contributors: Blake Purnell, NRR
Caroline Tilton, NRR
John Huang, NRR

Date: July 24, 2017

SUBJECT: COLUMBIA GENERATING STATION - ISSUANCE OF AMENDMENT RE:
ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER
TSTF-545, REVISION 3 (CAC NO. MF8148) DATED JULY 24, 2017

DISTRIBUTION:

PUBLIC	RidsNrrLAPBlechman Resource	CTilton, NRR
LPL4 Reading	RidsNrrPMColumbia Resource	JHuang, NRR
RidsACRS_MailCTR Resource	RidsRgn4MailCenter Resource	BPurnell, NRR
RidsNrrDorlLpl4 Resource	RidsNrrDeEpnB Resource	AKlett, NRR
RidsNrrDssStsb Resource	MWatford, NRR	

ADAMS Accession No.: ML17187A257

*via email

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DSS/STSB/BC(A)*	NRR/DE/EPNB/BC*
NAME	JKlos (MWatford for)	PBlechman	JWhitman	DAley
DATE	07/10/17	07/10/17	07/07/17	07/13/17
OFFICE	OGC – NLO	NRR/DORL/LPL4/BC	NRR/DORL/LPL4/PM	
NAME	RNorwood	RPascarelli	JKlos (MWatford for)	
DATE	07/19/17	07/24/17	07/24/17	

OFFICIAL RECORD COPY