



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

August 26, 2019

Mr. Bradley J. Sawatzke  
Chief Executive Officer  
Energy Northwest  
Mail Drop 1023  
76 North Power Plant Loop  
P.O. Box 968  
Richland, WA 99352-0968

SUBJECT: COLUMBIA GENERATING STATION - ISSUANCE OF AMENDMENT NO. 254  
RE: CHANGE TO TECHNICAL SPECIFICATION 3.8.7, "DISTRIBUTION  
SYSTEMS – OPERATING" (**EXIGENT CIRCUMSTANCES**)  
(EPID L-2019-LLA-0174)

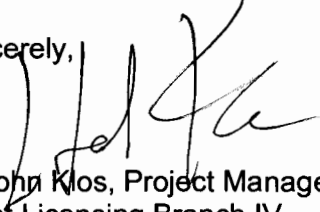
Dear Mr. Sawatzke:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 254 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 August 15, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19227A370), as supplemented by letters dated August 16, 2019; August 19, 2019; and August 20, 2019 (ADAMS Accession Nos. ML19228A291, ML19231A387, and ML19232A496, respectively).

The license amendment would add a one-time extension to the Completion Time of TS Action 3.8.7.A, from 8 hours to 16 hours, specifically associated with Division 1 alternating current electrical power distribution inoperability of the Division 1, 120/240-volt power panel E-PP-7AF, which will allow replacement and repairs on its supply transformer E-TR-7A/2.

A copy of the related safety evaluation is also enclosed. The safety evaluation describes the exigent circumstances under which the amendment is being issued and provides a final no significant hazards consideration determination. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,



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. 254 to NPF-21
2. Safety Evaluation

cc: 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. 254  
License No. NPF-21

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Energy Northwest (the licensee), dated August 15, 2019, as supplemented by letters dated August 16, 2019; August 19, 2019; and August 20, 2019, 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-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. 254 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 from the issuance date until 0800 Pacific Standard Time on September 14, 2019.

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 Renewed Facility  
Operating License No. NPF-21  
and the Technical Specifications

Date of Issuance: August 26, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 254  
TO RENEWED FACILITY OPERATING LICENSE NO. NPF-21  
COLUMBIA GENERATING STATION  
DOCKET NO. 50-397

Replace the following pages of 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.

Renewed Facility Operating License

REMOVE  
-4-

INSERT  
-4-

Technical Specifications

REMOVE  
3.8.7-1

INSERT  
3.8.7-1

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 254 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.

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\*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.

### 3.8 ELECTRICAL POWER SYSTEMS

#### 3.8.7 Distribution Systems - Operating

LCO 3.8.7 The following AC and DC electrical power distribution subsystems shall be OPERABLE:

- a. Division 1 and Division 2 AC electrical power distribution subsystems;
- b. Division 1 and Division 2 125 V DC electrical power distribution subsystems;
- c. Division 1 250 V DC electrical power distribution subsystem; and
- d. Division 3 AC and DC electrical power distribution subsystems.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Division 1 or 2 AC electrical power distribution subsystem inoperable.	A.1 Restore Division 1 and 2 AC electrical power distribution subsystems to OPERABLE status.	8 hours <sup>1</sup>  <u>AND</u>  16 hours from discovery of failure to meet LCO 3.8.7.a or b
B. Division 1 or 2 125 V DC electrical power distribution subsystem inoperable.	B.1 Restore Division 1 and 2 125 V DC electrical power distribution subsystems to OPERABLE status.	2 hours  <u>AND</u>  16 hours from discovery of failure to meet LCO 3.8.7.a or b

<sup>1</sup> The CT for Required Action A.1 may be extended up to 16 hours to support restoration of E-PP-7AF following work to repair/replace its supply transformer E-TR-7A/2. Upon successful restoration of E-PP-7AF following the repair of E-TR-7A/2, this footnote is no longer applicable and will expire at 0800 PST on September 14, 2019.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 254 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-21

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

DOCKET NO. 50-397

1.0 INTRODUCTION

By application dated August 15, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19227A370, as supplemented by letters dated August 16, 2019; August 19, 2019; and August 20, 2019 (ADAMS Accession Nos. ML19228A291, ML19231A387, and ML19232A496, respectively), Energy Northwest (the licensee) requested a license amendment to revise Columbia Generating Station (Columbia) Technical Specification (TS) 3.8.7, "Distribution Systems – Operating." This license amendment request (LAR) would add a one-time extension of the Completion Time (CT) of Technical Specification (TS) Action 3.8.7.A from 8 hours to 16 hours, specifically associated with Division 1 alternating current (AC) electrical power distribution inoperability of the Division 1, 120/240 volt power panel E-PP-7AF, which will allow replacement and repairs on its supply transformer E-TR-7A/2.

As discussed in its application dated August 15, 2019, the licensee requested that the proposed amendment be processed by the U.S. Nuclear Regulatory Commission (NRC or the Commission) on an exigent basis in accordance with the provisions in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.91(a)(6). The NRC staff's evaluation regarding the exigent circumstances is discussed in Section 4.0 of this safety evaluation.

2.0 REGULATORY EVALUATION

2.1 System Description

Onsite Class 1E AC Power

In the LAR, the licensee stated that the onsite Class 1E AC electrical power distribution system is divided by division into three independent AC electrical power distribution subsystems consisting of 4160, 480, 120/240, and 120/208-volt (V) buses described in the table below. Each division is considered a "subsystem" of the Class 1E AC and direct current (DC) electrical power distribution system.

<b>VOLTAGE</b>	<b>DIVISION 1</b>	<b>DIVISION 2</b>	<b>DIVISION 3</b>
4160 V	Switchgear SM-7	Switchgear SM-8	Switchgear SM-4
480 V	Switchgear SL-71 and SL-73 Motor Control Centers 7A, 7AA, 7B, 7BA, 7BB, and 7F Power Panel PP-7AB	Switchgear SL-81 and SL-83 Motor Control Centers 8A, 8AA, 8B, 8BA, 8B-B, and 8F Power Panel PP-8AB	3 Phase Engine and Generator Auxiliary Loads Power Panel Motor Control Center 4A
120/240 V	1 Phase Power Panels PP-7AA, PP-7AF, PP-7AE, and PP-7A	1 Phase Power Panels PP-8AA PP- 8AF, PP-8AE, and PP-8A	1 Phase Power Panel PP-4A
120/208 V	3 Phase Power Panels PP-7AG and PP-7AAA	3 Phase Power Panels PP-8AG and PP-8AAA	

The required AC power distribution subsystems listed in the table above ensure the availability of AC electrical power for the systems required to shut down the reactor and maintain it in a safe condition after an anticipated operational occurrence or a postulated design-basis accident. Maintaining the Division 1, 2, and 3 AC (and DC) electrical power distribution subsystems OPERABLE ensures that the redundancy incorporated into the design of engineered safety features (ESFs) is not defeated. Any two of the three divisions of the distribution system are capable of providing the necessary electrical power to the associated ESF components. Therefore, a single failure within any system or within the electrical power distribution subsystems does not prevent safe shutdown of the reactor.

The primary AC distribution system consists of three 4.16-kilovolt ESF buses that are supplied from the transmission system by two physically independent circuits. The secondary plant AC distribution system includes 480-volt ESF load centers and associated loads, motor control centers, and transformers. Control power for the 480-volt breakers is from the Class 1E batteries. In addition, there are three independent 125-volt direct current electrical power distribution subsystems.

Power panel E-PP-7AF is one of the required 120/240-volt AC instrument buses required to be operable to support Division 1 AC subsystem operability. Power panel E-PP-7AF provides power primarily to a subset of remote shutdown panel instrumentation and control power as well as a few other miscellaneous loads (e.g., receptacle, 8-hour emergency light battery unit). De-energization of this panel will impact the capability of the remote shutdown system (RSS) to perform its function.

#### Remote Shutdown System

In the LAR, the licensee stated that the RSS provides the control room operator with sufficient instrumentation and controls to place and maintain the plant in a safe shutdown condition from a location other than the control room. This capability is necessary to protect against the possibility of the control room becoming inaccessible. At Columbia, the RSS comprises the remote shutdown panel (preferred) and the alternate remote shutdown panel. The preferred panel is associated with the residual heat removal system Loop B while the alternate panel is associated with residual heat removal system Loop A. A safe shutdown condition is defined as

MODE 3. With the plant in MODE 3, the reactor core isolation cooling system, the safety/relief valves, and the residual heat removal system can be used to remove core decay heat and meet all safety requirements. The long-term supply of water for the reactor core isolation cooling system and the ability to operate shutdown cooling from outside the control room allow extended operation in MODE 3.

In the event that the control room becomes inaccessible, the operators can establish control at the remote shutdown panels and place and maintain the plant in MODE 3. Not all controls and necessary transfer switches are located at the remote shutdown panels. Some controls and transfer switches will have to be operated locally at the switchgear, motor control panels, or other local stations. The plant can be maintained safely in MODE 3 for an extended period of time.

Power panel E-PP-7AF provides power to a subset of instrumentation and controls associated with the remote shutdown panels; not all RSS instrumentation and controls are lost upon de-energization of E-PP-7AF.

#### Current TS 3.8.7 Limiting Conditions for Operation Requirements

TS Limiting Condition for Operation (LCO) 3.8.7, "Distribution Systems – Operating," currently requires Divisions 1, 2, and 3 AC electrical power distribution subsystems to be operable whenever Columbia is in MODE 1, 2, or 3. With one subsystem (Division) inoperable, TS Condition 3.8.7.A currently requires restoration of the subsystem within 8 hours. This condition also specifies a second CT of 16 hours that establishes a limit on the maximum time allowed for any combination of required distribution subsystems to be inoperable during any single contiguous occurrence of failing to meet the LCO.

If the required action of TS Condition 3.8.7.A cannot be met, the plant must be in MODE 3 within an additional 12 hours in accordance with TS Condition 3.8.7.C.

#### 2.2 Reason for the Proposed Change

In the LAR, the licensee stated that an unforeseen low voltage condition was identified on July 25, 2019, on the supply voltage regulating transformer (E-TR-7A/2) to the required AC electrical distribution panel E-PP-7AF. The power panel is used primarily to support various instrumentation and controls on remote shutdown panels. The most likely cause for the reduced voltage output is degradation of the voltage regulator due to age. During weekly surveillance, on July 25, 2019, voltage on power panel E-PP-7AF was observed to be less than the administrative limit, but above the minimum acceptable value. The licensee developed an adverse condition monitoring and contingency plan to provide oversight on the condition. On August 2, 2019, a slight downward trend on voltage was noted, and the licensee decided to replace the transformer at the earliest opportunity.

The licensee determined to pursue repairs during the week of August 26, 2019. The transformer replacement and post-maintenance testing is scheduled for approximately 12 hours, which would exceed the CT of TS Condition 3.8.7.A by 4 hours, thereby requiring a unit shutdown in accordance with TS Condition 3.8.7.C. This condition (LCO 3.8.7.C) currently requires that if the inoperable electrical power distribution system cannot be restored to OPERABLE status within the associated CTs, then the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. Therefore, considering any

unexpected circumstances, the licensee has requested a one-time extension in TS Action 3.8.7.A CT from 8 hours to 16 hours.

### 2.3 Proposed TS Changes

The proposed change would revise the CT for TS Action 3.8.7.A by adding a footnote to the CT for restoring Division 1 and 2 AC electrical power distribution subsystems to OPERABLE status to allow a one-time, 16 hours CT. This footnote would state:

The CT for Required Action A.1 may be extended up to 16 hours to support restoration of E-PP-7AF following work to repair/replace its supply transformer E-TR-7A/2. Upon successful restoration of E-PP-7AF following the repair of E-TR-7A/2, this footnote is no longer applicable and will expire at 0800 PST on September 14, 2019.

### 2.4 Applicable Regulatory Requirements

The NRC staff reviewed the LAR based on the following regulatory requirements.

Under Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.92(a), determination on whether to grant an applied-for license amendment is to be guided by the considerations that govern the issuance of initial licenses or construction permits to the extent applicable and appropriate. Both the common standards for licenses and construction permits in 10 CFR 50.40(a), and those specifically for issuance of operating licenses in 10 CFR 50.57(a)(3), provide that there must be "reasonable assurance" that the activities at issue will not endanger the health and safety of the public.

The regulation in 10 CFR 50.36, "Technical specifications," establishes the requirements related to the content of the TSs. Pursuant to 10 CFR 50.36(c), TSs are required to include items in five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) LCOs; (3) surveillance requirements; (4) design features; and (5) administrative controls. The proposed changes in this LAR relate to the LCO category.

The regulation in 10 CFR 50.36(c)(2)(i) states, in part that

Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

To issue the amendment, the NRC must find reasonable assurance that the continued operation during the 16-hour CT will not endanger the health and safety of the public.

In Columbia's Final Safety Analysis Report (FSAR), Section 3.1, "Conformance with NRC General Design Criteria," the licensee described that Columbia meets the intent of NRC General Design Criteria (GDC) for Nuclear Power Plants, in Appendix A to 10 CFR Part 50, effective May 21, 1971, and subsequently amended on July 7, 1971.

### 3.0 TECHNICAL EVALUATION

#### 3.1- NRC Staff Evaluation

The licensee proposed a one-time extension in the CT for TS Action 3.8.7.A, from 8 hours to 16 hours to support restoration of Division 1 power transformer (E-TR-7A/2) that provides power to 120/240-volt AC power panel E-PP-7AF. Power panel E-PP-7AF is a required electrical distribution panel to satisfy Division 1 AC subsystem operability.

The NRC staff has evaluated the proposed change considering both deterministic and risk-insight factors to determine if the licensee justified continued operation during the additional 8 hours.

#### 3.2 Deterministic Evaluation

The deterministic evaluation is based on a defense-in-depth concept, and to ensure that the remaining ESF systems can safely shut down the plant during an anticipated operational occurrence and a design-basis accident.

In the supplement dated August 16, 2019, the licensee provided the following information to support the deterministic evaluation:

##### Main Control Room

The licensee has proposed to revise the CT for TS 3.8.7.A, from 8 hours to 16 hours to support restoration of the Division 1 power transformer (E-TR-7A/2) that provides power to 120/240-volt AC power panel E-PP-7AF. Power panel E-PP-7AF is a required electrical distribution panel to satisfy Division 1 AC subsystem operability.

LCO 3.8.7, APPLICABILITY requires that the electrical power distribution subsystems are required to be OPERABLE in MODES 1, 2, and 3 to ensure that:

- a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of anticipated operational occurrences or abnormal transients; and
- b. Adequate core cooling is provided, and containment OPERABILITY and other vital functions are maintained, in the event of a postulated design-basis accident.

The licensee's supplement dated August 16, 2019, provided the following information to support deterministic evaluation:

During the time Power Panel E-PP-7AF is de-energized, the Main Control Room will remain available to provide sufficient controls and indications for normal operation and to safely shutdown the reactor and maintain it shutdown should it be necessary.

### Remote Shutdown System (RSS)

In its supplement dated August 16, 2019, the licensee stated that:

Power Panel E-PP-7AF provides a small subset of indications and controls on the remote shutdown panels. Other electrical panels that provide power to indications and controls on the remote shutdown panels include 120 V AC panel E-PP-8AF and 125 V DC Panels E-DP-S1/1D, E-DP-S1/2D. These power panels will be maintained in service and operable to support remote shutdown panel capabilities while work is being conducted on supply transformer E-TR-7A/2.

In the supplement, the licensee also provided evaluation of the loss of each of the impacted loads from Power panel E-PP-7AF, to determine the impact on the RSS ability for (a) prompt hot shutdown of the reactor including necessary instrumentation and controls to maintain the unit in a safe condition during hot shutdown, and (b) the capability for subsequent cold shutdown of the reactor through the use of suitable procedures. The licensee stated that there was sufficient redundancy in the plant design or acceptable alternatives described in procedural guidance to support the conclusion that the loss of loads powered from E-PP-7AF would not impact the ability of the RSS to safely support its required functions. In addition to the RSS capabilities, further defense in depth is provided outside the main control room by implementation of FLEX mitigating strategies at the plant consistent with Nuclear Energy Institute (NEI) 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 2 (ADAMS Accession No. ML16005A625), which can be used to address extended loss of all AC power which bounds the loss of Power panel E-PP-7AF.

### Compensatory Measures

In the LAR, the licensee stated that based on the risk-significant determination, the following compensatory measures will be taken as prudent measures during the entire 16 hours CT (not just during the additional 8 hours) for E-PP-7AF out of service to avoid risk-significant plant configurations:

- Power panel E-PP-8AF, Control Room HVAC [heating, ventilation, and air conditioning] will be protected.
- Pre-job briefs will be conducted to increase operator awareness of the following: control room fire, flooding from control room heating, HVAC, and the importance of establishing alternate cooling if control room HVAC is lost.
- Establishment of a fire tour for the cable chase and cable spreading room.
- Verification that severe weather conditions are not forecasted for the duration of the work.

In response to the NRC staff request, in the supplement dated August 20, 2019, the licensee provided tabulation of voltages at power panel E-PP-7AF of Division 1, and power panel E-PP-8AF of Division 2 during the last four weekly surveillances. Based on these voltage values, the staff finds that no common cause failure currently exists between Division 1 and Division 2 power panels.

The NRC staff reviewed the information provided by the license in the LAR and supplements. The staff finds that considering the compensatory measures, the plant would have adequate defense in depth to continue operating during the additional 8 hours granted via the amended CT.

### 3.3 Risk-Insights

In the supplement dated August 16, 2019, the licensee stated that this LAR was a one-time exigent request based on a deterministic evaluation that was further supported with risk insights described in the letter dated August 15, 2019. The licensee further stated that the request was based on the need to replace the power transformer (E-TR-7A/2) that provided power to 120/240-volt AC power panel E-PP-7AF and the time required to replace the transformer, which exceeded the allowed CT described in TS 3.8.7 Condition A. The licensee provided the deterministic evaluation for the proposed change in the supplement dated August 16, 2019. Therefore, the subject LAR is not a risk-informed request and a risk evaluation was not required for making a regulatory decision.

The NRC staff determined that "special circumstances," as discussed in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition," Section 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance" (ADAMS Accession No. ML071700658), did not exist. If special circumstance did exist, then the NRC might have requested any additional risk information associated with the review of this LAR.

The licensee provided risk insights related to the proposed change in Section 3.1, "Probabilistic Risk Assessment (PRA) Evaluation," of Enclosure 1 to the application dated August 15, 2019. The risk insights provided by the licensee included numerical results. However, the staff considered the licensee-provided qualitative risk insights to aid in the deterministic review of the proposed change and reviewed NRC's Standardized Plant Analysis Risk (SPAR) model for Columbia to determine the adequacy of the compensatory actions and dominant contributors. The NRC staff's review confirmed the licensee-provided qualitative risk insights and supported the traditional engineering conclusions associated with the proposed change, as well as the licensee's proposed compensatory actions. The NRC staff concludes that the available risk insights do not challenge the engineering conclusions.

Because this is not a risk-informed LAR, the PRA models used to derive risk insights were not reviewed by the NRC staff to determine their technical acceptability to support this LAR. As a result, the staff did not rely on the numerical results provided by the licensee. The staff did not consider the guidance in Regulatory Guide (RG) 1.174, Revision 3, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," and RG 1.177, Revision 1, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications" (ADAMS Accession Nos. ML17317A256 and ML100910008, respectively), which were cited by the licensee in Section 4.2, "Applicable Regulatory Guidance," of the Enclosure to the LAR, for the same reason.

The staff's review of the Columbia SPAR model and of the licensee-provided qualitative risk insights supported the traditional engineering conclusions associated with the proposed change and supported the licensee's proposed compensatory actions. The NRC staff concludes that the available risk insights do not challenge the engineering conclusions.

### 3.4 Technical Evaluation Conclusion

Based on the technical evaluation described in Section 3.0 above, the NRC staff finds the proposed changes to TS Action 3.8.7.A are acceptable and will provide reasonable assurance that the activities at issue will not endanger the health and safety of the public. With the additional 8 hours of CT, there is still reasonable assurance that the activities at issue will not endanger the health and safety of the public.

## 4.0 EXIGENT CIRCUMSTANCES

### 4.1 Background

As discussed in the licensee's application dated August 15, 2019, the licensee requested that the proposed amendment be processed by the NRC on an exigent basis.

The NRC's regulations contain provisions for issuance of amendments when the usual 30-day public comment period cannot be met. These provisions are applicable under exigent circumstances. Consistent with the requirements in 10 CFR 50.91(a)(6), exigent circumstances exist when: (1) a licensee and the NRC must act quickly; (2) time does not permit the NRC to publish a *Federal Register* notice allowing 30 days for prior public comment; and (3) the NRC determines that the amendment involves no significant hazards consideration.

Under the provisions in 10 CFR 50.91(a)(6), the NRC notifies the public in one of two ways: (1) by issuing a *Federal Register* notice providing an opportunity for hearing and allowing at least 2 weeks from the date of the notice for prior public comments; or (2) by using local media to provide reasonable notice to the public in the area surrounding the licensee's facility. In this case, the NRC used the second approach and published a public notice in the *Tri-City Herald*, located in Kennewick, Washington 99336 (<https://www.tri-cityherald.com>), a newspaper local to the licensee's facility, from August 18, 2019, through August 20, 2019.

### 4.2 Licensee's Basis for Exigent Circumstances

The licensee is basing exigent circumstances on the following four factors:

- The station has acted timely to an unforeseen degraded condition on a transformer that feeds one of the required Class 1E AC electrical panels.

On August 2, 2019 through monitoring and trending of the low output voltage condition on E-TR-7A/2, a degrading condition was identified and a recommendation was made to replace the transformer at the next opportunity since further degradation may occur.

Through work scope planning it was determined that the replacement activity and restoration of operability of the affected required panel would take up to 4 hours longer than the allowed completion time of 8 hours (i.e., up to 12 hours).

- Internal operating experience associated with a failure of this type of transformer in 2007 has shown that lightly loaded transformers of this type are susceptible to accelerated degradation.

- Extending the allowed completion time to 16 hours would allow for corrective maintenance and subsequent retest and would prevent the station from an unnecessary plant shutdown without a corresponding health and safety benefit.

The technical analysis through the use of risk insights supports the conclusion that the resulting risk is acceptable and consistent with the NRC safety goals.

- The proposed amendment involves a no significant hazards consideration.

#### NRC Staff Conclusion

The licensee and the Commission must act quickly because this amendment action allows the earliest opportunity for repair and replacement of the supply transformer E-TR-7A/2 and avoids any further plant impact that may be created should the transformer continue to degrade. The licensee acted in a quick and timely manner with the submission of this amendment request. Based on these findings, and the determination that the amendment involves no significant hazards consideration, as discussed below, the NRC staff has determined that a valid need exists for issuance of the license amendment using the exigent provisions of 10 CFR 50.91(a)(6).

#### 5.0 PUBLIC COMMENTS

Under the provisions in 10 CFR 50.91(a)(6), the NRC notifies the public in one of two ways: (1) by issuing a *Federal Register* notice providing an opportunity for hearing and allowing at least 2 weeks from the date of the notice for prior public comments; or (2) by using local media to provide reasonable notice to the public in the area surrounding the licensee's facility. In this case, the NRC used the second approach and published a public notice in the *Tri-City Herald*, located in Kennewick, Washington 99336 (<https://www.tri-cityherald.com>), a newspaper local to the licensee's facility, from August 18, 2019, through August 20, 2019. The notice included the NRC staff's proposed no significant hazards consideration determination. The notice also provided an opportunity for public comment until August 20, 2019, regarding the staff's proposed no significant hazards consideration determination.

No public comments were received regarding the proposed amendment.

#### 6.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The NRC's regulation in 10 CFR 50.92(c) states that the NRC may make a final determination, under the procedures in 10 CFR 50.91, that a license amendment involves no significant hazards consideration if operation of the facility, in accordance with the amendment, would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

As required by 10 CFR 50.91(a), in its application dated August 15, 2019, the licensee provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed amendment does not increase the probability of an accident because the onsite Class 1E alternating current (AC) electrical power distribution cannot initiate an accident. The onsite Class 1E AC electrical power distribution system ensures the availability of AC electrical power for the systems required to shut down the reactor and maintain it in a safe condition after an anticipated operational occurrence or a postulated design basis accident.

The proposed one time 24-hour Completion Time (CT) extension does not alter the conditions, operating configurations, or minimum amount of operating equipment assumed in the safety analysis for accident mitigation. No changes are proposed in the manner in which the electrical power distribution provides plant protection or which create new modes of plant operation. In addition, a probabilistic risk assessment (PRA) evaluation concluded that the risk contribution of the increased CT is a very small increase in risk. The proposed change in CT will not affect the probability of any event initiators. There will be no degradation in the performance of, or an increase in the number of challenges imposed on, safety related equipment assumed to function during an accident situation. There will be no change to normal plant operating parameters or accident mitigation performance.

Therefore there is no significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously analyzed?

Response: No.

The proposed amendment will not create the possibility of a new or different kind of accident because inoperability of Division 1 AC electrical power distribution is not an accident precursor. There are no hardware changes nor are there any changes in the method by which any plant system performs a safety function. This request does not affect the normal method of plant operation. The proposed amendment does not introduce new equipment, or new way of operation of the system which could create a new or different kind of accident. No new external threats, release pathways, or equipment failure modes are created. No new accident scenarios, transient precursors, failure mechanisms, or limiting single failures are introduced as a result of this request.

Therefore, the implementation of the proposed amendment will not create a possibility for an accident of a new or different type than those previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

Columbia's AC and DC electrical power distribution subsystems are designed with sufficient redundancy such that a one division may be removed from service for maintenance or testing and the remaining subsystems are capable of providing electrical loads to satisfy the FSAR requirements for accident mitigation or plant shutdown. A PSA [probabilistic safety assessment] evaluation concluded that the risk contribution of the CT extension is within allowable limits. There will be no change to the manner in which safety limits or limiting safety system settings are determined nor will there be any change to those plant systems necessary to assure the accomplishment of protection functions. For these reasons, the proposed amendment does not involve a significant reduction in a margin of safety.

Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Further, in the licensee's supplement dated August 19, 2019, the licensee modified its requested action, stating in part that the additional time requested for Required Action A.1 will be limited to 16 hours instead of 24 hours. The licensee stated, "The No Significant Hazards Consideration Determination (NSHCD) provided in the original submittal is not altered by this submittal."

The NRC staff reviewed the licensee's no significant hazards consideration analysis. The staff noted that the originally-requested 24-hour CT bounded the now-requested 16-hour CT. Based on the review and on the NRC staff's evaluation of the underlying license amendment request as discussed above, the NRC staff concludes that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has made a final determination that no significant hazards consideration is involved for the proposed amendment and that the amendment should be issued as allowed by the criteria contained in 10 CFR 50.91.

## 7.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Washington State official was notified of the proposed issuance of the amendment on August 21, 2019. The State official had no comments.

## 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to 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 published in the *Tri-City Herald* on August 18, 2019; August 19, 2019; and August 20, 2019. This safety evaluation documents a final no significant hazards consideration determination and 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: V. Goel  
R. Grover  
D. Wu

Date: August 26, 2019

SUBJECT: COLUMBIA GENERATING STATION - ISSUANCE OF AMENDMENT NO. 254  
 RE: CHANGE TO TECHNICAL SPECIFICATION 3.8.7, "DISTRIBUTION  
 SYSTEMS – OPERATING" (**EXIGENT CIRCUMSTANCES**)  
 (EPID L-2019-LLA-0174) DATED AUGUST 26, 2019

**DISTRIBUTION:**

PUBLIC	RidsNrrDraAplb Resource	DWu, NRR
PM File Copy	RidsNrrDeEeob Resource	RGrover, NRR
RidsACRS_MailCTR Resource	RidsNrrLAPBlechman Resource	VGoel, NRR
RidsNrrDorlLpl4 Resource	RidsNrrPMColumbia Resource	
RidsNrrDssStsb Resource	RidsRgn4MailCenter Resource	

**ADAMS Accession No.: ML19234A016**

\*by memorandum

\*\*by e-mail

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DE/EEOB/BC(A)**	NRR/DSS/STSB/BC
NAME	JKlos	PBlechman	DWilliams (KNguyen for)	VCusumano
DATE	8/21/2019	8/22/2019	8/20/2019	8/21/2019
OFFICE	NRR/DRA/APLB/BC(A)*	OGC – NLO**	NRR/DORL/LPL4/BC	NRR/DORL/LPL4/PM
NAME	MReisi Fard (SVasavada for)	DRoth	RPascarelli	JKlos
DATE	8/19/2019	8/23/2019	8/26/2019	8/26/2019

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