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GO2-19-119

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397
EXIGENT LICENSE AMENDMENT REQUEST FOR CHANGE TO
TECHNICAL SPECIFICATION 3.8.7 DISTRIBUTION SYSTEMS -
OPERATING**

Dear Sir or Madam:

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(6), Energy Northwest hereby requests a license amendment to revise the Columbia Generating Station (Columbia) Technical Specification (TS) 3.8.7 Distribution Systems – Operating. This amendment is requested to add a one-time extension of the Completion Time of Technical Specification (TS) Action 3.8.7.A specifically associated with Division 1 Alternating Current (AC) electrical power distribution inoperability.

This License Amendment Request (LAR) is necessitated by a needed repair of a degraded condition (reduced voltage output) associated with a transformer that feeds Division 1 of the electrical distribution buses required by Limiting Condition for Operation (LCO) 3.8.7. Repair work will involve removing the transformer from service and the initial repair estimates exceed the 8 hour allowed completion time of TS Condition 3.8.7.A. Currently the transformer is considered operable but degraded. The required repairs are estimated to take 12 hours, exceeding the Completion Time of TS Action 3.8.7.A for one subsystem (division) by 4 hours, thereby requiring a unit shutdown within 12 hours. The power panel (E-PP-7AF) in question primarily feeds remote shutdown panel indications, controls, and a few other miscellaneous items.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c) and it has been determined that this change involves no significant hazards considerations. The bases for these determinations are included in Enclosure 1 of this submittal.

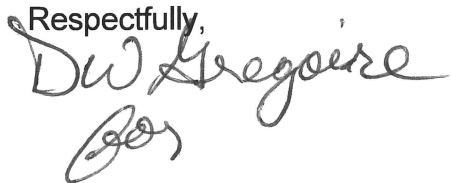
This submittal contains a commitment to maintain the compensatory measures documented in Attachment 1 of Enclosure 1.

In accordance with 10 CFR 50.91, Energy Northwest is notifying the State of Washington of this amendment request by transmitting a copy of this letter and enclosures to the designated state official.

Energy Northwest requests that the proposed TS change be reviewed and approved by August 26, 2019. The proposed CT extension for TS 3.8.7.A will expire on Saturday September 14, 2019 at 0800.

If there are any questions or if additional information is needed, please contact Mr. D.W. Gregoire, Regulatory Affairs Manager, at 509-377-8616.

I declare under penalty of perjury that the foregoing is true and correct.
Executed this 15th day of August, 2019.

Respectfully,

D.W. Gregoire

R.E. Schuetz
Site Vice President

Enclosures: As stated

cc: NRC RIV Regional Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
NRC NRR Division of Policy and Rulemaking (DPR) Director (e-mail)
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Evaluation of Proposed Technical Specification Change

1.0 SUMMARY DESCRIPTION

This evaluation supports a License Amendment Request (LAR) for Columbia Generating Station (Columbia) Technical Specification (TS) 3.8.7 Distribution Systems – Operating. This TS change will add a one-time extension of the Completion Time (CT) of TS Condition 3.8.7.A specifically associated with Division 1 Alternating Current (AC) electrical power distribution inoperability caused by inoperability of 120/240V power panel E-PP-7AF during repairs on its supply transformer E-TR-7A/2.

Implementation of this LAR will result in no physical modification to the plant. The proposed change has no adverse effect on the plant or plant safety.

2.0 DETAILED DESCRIPTION

2.1 System Design and Operation

Onsite Class 1E AC Power

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 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.

VOLTAGE	DIVISION 1	DIVISION 2	DIVISION 3
4160 V	SM-7	SM-8	SM-4
480 V	SL-71 and SL-73 Motor Control Centers 7A, 7AA, 7B, 7BA, 7BB, and 7F Power Panel PP-7AB	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 (AOO) or a postulated design basis accident (DBA). 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 (ESF) 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.

Power panel E-PP-7AF is one of the required 120/240V 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 to perform its function.

Remote Shutdown System

The Remote Shutdown System (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 is comprised of the remote shutdown panel (preferred) and the alternate remote shutdown panel. The preferred panel uses the Residual Heat Removal System loop B (RHR B) while the alternate panel uses RHR A. A safe shutdown condition is defined as mode 3. With the plant in mode 3, the Reactor Core Isolation Cooling (RCIC) System, the safety/relief valves, and the RHR System can be used to remove core decay heat and meet all safety requirements. The long term supply of water for the RCIC 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 panel and place and maintain the plant in mode 3. Not all controls and necessary transfer switches are located at the remote shutdown panel. Some controls and transfer switches will have to be operated locally at the switchgear, motor control panels, or other local stations. The plant is in mode 3 following a plant shutdown and can be maintained safely in mode 3 for an extended period of time.

As stated previously, power panel E-PP-7AF provides power to a subset of instrumentation and controls associated with the remote shutdown panels and not all RSS instrumentation and controls will be lost upon de-energization of E-PP-7AF. However, for the purposes of the technical evaluation in this LAR, it is assumed that no capability exists at the remote shutdown panels (i.e., neither the remote shutdown panel

nor the alternate shutdown panel) while power panel E-PP-7AF is de-energized. The risk associated with this postulated condition will bound the scope of instruments and controls actually lost. TS Limiting Condition of Operation (LCO) 3.3.3.2 provides the requirements for operability associated with the remote shutdown system.

2.2 Current Technical Specifications Requirements

LCO 3.8.7 Distribution Systems – Operating

This LCO requires Division 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. 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.

The second Completion Time of 16 hours from discovery of failure to meet the LCO 3.8.7a or b for Required Action A.1 establishes a limit on the maximum time allowed for any combination of required distribution subsystems (AC or DC) to be inoperable during any single contiguous occurrence of failing to meet the LCO.

LCO 3.3.3.2 – Remote Shutdown System

This LCO requires the Remote Shutdown System functions to be operable whenever Columbia is in Modes 1 and 2. With one or more functions inoperable, TS Condition 3.3.3.2.A requires restoration of the function operability within 30 days. If the required action of TS Condition 3.3.3.2.A cannot be met, the plant must be in MODE 3 within an additional 12 hours in accordance with TS Condition 3.3.3.2.B. No changes to this TS are being requested. The 30 day completion time bounds the planned duration for the repair work on transformer E-TR-7A/2.

2.3 Reason for the Proposed the Change

An unforeseen low voltage condition was identified on July 25, 2019 on the supply transformer (E-TR-7A/2) to one of the required AC electrical distribution panels (E-PP-7AF). The power panel is used primarily to support various instrumentation and controls on Columbia's Remote Shutdown Panels. The most likely cause for the reduced voltage output is degradation of the voltage regulator due to age.

Power panel E-PP-7AF voltage is monitored weekly through surveillance test procedures. On July 25, 2019 during the weekly surveillance it was first noted that voltage was less than the administrative limit but above the minimum allowable. An adverse condition monitoring and contingency plan was developed to provide oversight and action on the condition. On August 2, 2019, a slight downward trend on voltage was noted and a recommendation was made by Engineering to replace the transformer at the earliest opportunity.

On August 12, 2019, based on a review of the proposed scope of work and the use of a decision making matrix, a determination was made by plant management to pursue repairs during the week of August 26, 2019 (currently scheduled for August 27, 2019).

The transformer replacement and post-maintenance testing is scheduled to take approximately 12 hours, exceeding 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.

Energy Northwest is taking action to minimize the overall time this power panel will be out of service and inoperable. This includes ensuring that the replacement parts will be staged for the required work and that Maintenance crews will have conducted dry runs.

Exigent Circumstances

Consistent with the requirements of 10 CFR 50.91(a)(6), Energy Northwest believes an exigent circumstance exists based on the following:

- 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 24 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.

2.4 Description of the Proposed the Change

The proposed change would revise both CTs for TS 3.8.7.A by adding a footnote to the completion time for restoring Division 1 and 2 AC electrical power distribution subsystems to OPERABLE status to allow a one-time, 24 hour completion time. This footnote will state:

¹ The CT for Required Action A.1 may be extended up to 24 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.

The markup to TS 3.8.7.A is provided in Attachment 2 of this letter.

3.0 TECHNICAL EVALUATION

3.1 Probabilistic Risk Assessment (PRA) Evaluation

3.1.1 Introduction

Regulatory Guide (RG) 1.177 specifies an approach and acceptance guidelines for the evaluation of plant licensing basis changes. This RG identifies a three-tiered approach for the evaluation of the risk associated with a proposed TS change:

- Tier 1 addresses risk metric requirements for one-time TS CT changes of ICCDP less than 1.0×10^{-6} and ICLERP less than 1.0×10^{-7} .
- Tier 2 identifies and evaluates any potential risk-significant plant equipment outage configurations associated with the proposed plant change.
- Tier 3 provides for the establishment of a configuration risk management program.

3.1.2 Technical Adequacy

The Columbia PRA model of record is Revision 8.0.1. The Columbia PRA modeling is highly detailed, including a wide variety of initiating events, modeled systems, operator actions, and common cause. The Columbia PRA uses the “large fault tree/small event tree” approach to identify and quantify individual accident sequences.

The Columbia full power internal events (FPPIE) PRA model meets the Capability Category II of Addendum A of the ASME ANS Standard, ASME/ANS RA-Sa-2009, as clarified by RG 1.200, Rev.2.

In 2009, the Columbia PRA Rev 7.0 received a full scope review against the ASME/ANS PRA Standard RA-Sa-2009, as clarified by Regulatory Guide 1.200, Rev 2. Since Rev 7.0, there have been many updates to the PRA, to incorporate plant design

changes, data updates, F&O dispositions and self-assessments. The Columbia PRA underwent an F&O closure review in 2018 and all findings from the 2009 peer review were closed. The Columbia PRA has undergone a focused scope peer review. All findings from the focused scope peer review have been closed.

The fire and seismic PRA models do not meet all aspects of the RG 1.200 guidance, but the PRA models are judged to be of sufficient quality to provide risk insights for this application. The fire and seismic PRA have also been updated to utilize the current internal events PRA model of record. The fire and seismic PRA have been used to obtain insights for past licensing submittals including RHR-A and RHR-B completion time extensions that were approved by the NRC.

Based on these considerations, the Columbia PRA is therefore technically adequate to address PRA applications that require Capability Category II. Columbia maintains a PRA Configuration Control Program to ensure that the current PRA model remains technically adequate and reflect the as-built, as operated plant.

3.1.2.1 Risk Evaluation

The average maintenance PRA Rev 8.0.1 model was used to calculate ICCDP and ICLERP. E-PP-7AF provides power primarily to a subset of the remote shutdown panel instrumentation and control as well as a few miscellaneous loads. De-energization of this panel will impact the capability of the remote shutdown system to perform its function. Not all remote shutdown instrumentation and control will be lost upon de-energization of E-PP-7AF. However, for the purpose of this technical evaluation, it is assumed that no capability exists at the remote shutdown panel. Therefore, the average maintenance model is solved with all Human Reliability Actions (HRA) related to Control Room evacuation and remote shutdown panel operation set to true. This PRA configuration guarantees that the remote shutdown panel is not available to mitigate any accident sequences. This evaluation is conservative and bounding because it is assumed that no capability exists at the remote shutdown panel.

The ICCDP and ICLERP are computed using the definitions in RG 1.177. The formulas are as follows:

$$\text{ICCDP}(\text{YOOS}) = (\text{CDFYOOS} - \text{CDFBASELINE}) * \Delta T$$

Where:

ICCDP(YOOS) is the ICCDP with all human actions set to true,
CDFYOOS is the CDF computed with human actions above set to true,
CDFBASELINE is the baseline, average-maintenance case CDF, and
 ΔT is the extension of the CT converted to units consistent with the CDF frequency units (1 day * 1 yr / 365 days = 2.74E-3 yr).

Similarly, ICLERP is computed as follows:

$$\text{ICLERP}(\text{YOOS}) = (\text{LERFYOOS} - \text{LERFBASELINE}) * 2.74\text{E-}3 \text{ yr}$$

Where:

ICLERP(YOOS) is the ICLERP with all human actions set to true ,
 LERFYOOS is the LERF computed with human actions above set to true, and
 LERFBASELINE is the LERF baseline, average-maintenance case LERF.

3.1.2.2 The Results:

The ICCDP and ICELERP results are:

CDF	Baseline	PP-7AF	Delta	ICCDP	Criteria
Internal	2.35E-06	1.04E-05	8.07E-06		
Fire	4.89E-06	6.43E-05	5.94E-05		
Seismic	4.34E-06	4.34E-06	0.00E+00		
Total	1.16E-05	7.91E-05	6.75E-05	1.85E-07	1.00E-06
LERF	Baseline	PP-7AF	Delta	ICLERP	
Internal	1.60E-07	1.60E-07	0.00E+00		
Fire	2.43E-07	2.43E-07	0.00E+00		
Seismic	2.43E-06	2.43E-06	0.00E+00		
Total	2.84E-06	2.84E-06	0.00E+00	0.00E+00	1.00E-07

ICCDP is less than the acceptance criteria. ICLERP is zero because the remote shutdown panel does not impact LERF mitigation functions.

3.1.2.3 Risk-Significant Configurations

The FPIE risk-significant contributors are control room HVAC and flooding that impacts control room HVAC. The fire risk-significant contributors are control room fire and cable chase fire.

3.1.2.4 Configuration Risk Management Program

Columbia has a configuration risk management program. Plant risk is assessed and management in accordance with PPM 1.5.14, Risk Assessment and Management for Maintenance/Surveillance Activities. Paragon is the software tool used to implement the program.

3.1.3 Compensatory Measures

Based on the risk-significant contributors the following compensatory measures will be taken as prudent measures during the 24 hours CT for E-PP-7AF out of service to avoid risk-significant plant configurations.

- Power panel E-PP-8AF, Control Room HVAC will be protected.
- Pre-job briefs will be conducted to increase operator awareness of the following: control room fire, flooding from control room 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.

3.1.4 Conclusions

The following conclusions were reached as a result of this analysis:

- All quantitative results for ICCDP and ICLERP for the CT extension application are less than the guidance thresholds.
- Prudent compensatory measures are proposed and have not been directly quantified in the PRA model, but are judged to further reduce the risk for this plant configuration.
- The PRA models are adequate to support this risk assessment and the resulting risk is acceptable and consistent with the NRC safety goals.

3.2 Impact on Submittals under Review by NRC

The NRC is presently reviewing Energy Northwest's LAR for Licensing Basis Change to Emergency Control Room Chiller supporting activities in the Main Control Room. The request in this LAR has no impact on the Chiller LAR as the presumption is that it supports the repair work on transformer E-TR-7A/2 which only affects the capability of the Remote Shutdown Panel and not the capability of Main Control Room.

The NRC is also reviewing Energy Northwest's LAR to Remove Operating License Condition 2.C.(11) and Attachment 3. This request in this LAR has no impact on the LAR to amend the Operating License.

4.0 REGULATORY EVALUATION

The proposed TS amendment:

- Does not result in any change in the qualifications of any component; and
- Does not result in the reclassification of any component's status in the areas of shared, safety-related, independent, redundant, and physically or electrically separated.

4.1 Applicable Regulations

Section 182a of the Atomic Energy Act (Act) requires applicants for nuclear power plant operating licenses to include TS as part of the license. These TS are derived from the plant safety analyses. In Section 50.36, "Technical specifications," of Title 10 of the Code of Federal Regulations (10 CFR), the NRC established its regulatory requirements related to the content of TS.

Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements; (4) design features; and (5) administrative controls. The rule does not specify the particular requirements to be included in a plant's TS. The regulation in 10 CFR 50.36(c)(2) states that LCOs are the lowest functional capability or performance level of equipment required for safe operation of the facility and when LCOs are not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the LCO can be met.

The proposed change will be less restrictive than the current requirements contained in LCO 3.8.7 Condition A, but nonetheless still affords adequate assurance of safety when judged against current regulatory standards described in this section and section 4.2.

Applicable 10 CFR 50 Appendix A General Design Criteria (GDC)

The relevant GDCs are discussed below:

GDC Criterion 17—Electric power systems

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

Electric power from the transmission network to the onsite electric distribution system shall be supplied by two physically independent circuits (not necessarily on separate rights of way) designed and located so as to minimize to the extent practical the likelihood of their simultaneous failure under operating and

postulated accident and environmental conditions. A switchyard common to both circuits is acceptable. Each of these circuits shall be designed to be available in sufficient time following a loss of all onsite alternating current power supplies and the other offsite electric power circuit, to assure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. One of these circuits shall be designed to be available within a few seconds following a loss-of-coolant accident to assure that core cooling, containment integrity, and other vital safety functions are maintained.

Provisions shall be included to minimize the probability of losing electric power from any of the remaining supplies as a result of, or coincident with, the loss of power generated by the nuclear power unit, the loss of power from the transmission network, or the loss of power from the onsite electric power supplies.

Columbia's compliance with GDC 17 is described in section 3.1.2.2.8 of Columbia's Final Safety Analysis Report (FSAR), as updated. Neither the extension of the allowed completion time nor the scope of the repair work planned for the Division 1 AC electrical power transformer will alter Columbia's compliance with this GDC. Following completion of repairs, the necessary Class 1E AC electrical power subsystems will be restored to service meeting all existing electrical power system requirements.

Criterion 18—Inspection and testing of electric power systems

Electric power systems important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features, such as wiring, insulation, connections, and switchboards, to assess the continuity of the systems and the condition of their components. The systems shall be designed with a capability to test periodically (1) the operability and functional performance of the components of the systems, such as onsite power sources, relays, switches, and buses, and (2) the operability of the systems as a whole and, under conditions as close to design as practical, the full operation sequence that brings the systems into operation, including operation of applicable portions of the protection system, and the transfer of power among the nuclear power unit, the offsite power system, and the onsite power system.

Columbia's compliance with GDC 18 is described in section 3.1.2.2.9 of Columbia's FSAR. Neither the extension of the allowed completion time nor the scope of the repair work planned for the Division 1 AC electrical power transformer will alter Columbia's compliance with this GDC. Following completion of repairs, the necessary Class 1E AC electrical power subsystems will be restored to service meeting all existing inspection and testing requirements.

Criterion 19—Control room

A control room shall be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions, including loss-of-coolant accidents. Adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident. Equipment at appropriate locations outside the control room shall be provided (1) with a design capability for prompt hot shutdown of the reactor, including necessary instrumentation and controls to maintain the unit in a safe condition during hot shutdown, and (2) with a potential capability for subsequent cold shutdown of the reactor through the use of suitable procedures.

Columbia's compliance with GDC 19 is described in section 3.1.2.2.10 of Columbia's FSAR. Neither the extension of the allowed completion time nor the scope of the repair work planned for the Division 1 AC electrical power transformer will alter Columbia's compliance with this GDC. Following completion of repairs, the necessary Class 1E AC electrical power subsystems and Remote Shutdown System will be restored to service meeting all GDC requirements.

4.2 Applicable Regulatory Guidance

The regulatory guidance that the NRC staff used in its review of the risk information submitted in support of the LAR consisted of the following:

- Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment [PRA] in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 3, January 2018, describes an acceptable method for licensees and the NRC to use for assessing the nature and impact of proposed changes to the licensing basis by considering engineering issues and applying risk insights. This regulatory guide also provides risk-acceptance guidelines for evaluating the results of such evaluations.
- RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decision making: Technical Specifications," Revision 1, May 2011, describes methods acceptable to the NRC for assessing the nature and impact of proposed permanent TS changes, including allowed outage times, by considering engineering issues and applying risk insights. This regulatory guide also provides risk acceptance guidelines for evaluating the results of such assessments.

The technical evaluation provided in this LAR follows the method described in RG 1.77 for assessing the nature and impact of the proposed TS change completion time by considering engineering issues and applying risk insights. The principles of risk-

informed regulation described in this regulatory guide are discussed in section 3.0 of this LAR.

5.0 PRECEDENT

In January 2016, Susquehanna Nuclear, LLC, requested an Amendment to Extend TS 3.8.7 completion time for Unit 2. (Agencywide Documents Access and Management System (ADAMS) Accession No. ML 16029A031.) The change was granted by the NRC in January 2017. (ADAMS Accession No. ML 17004A250.)

While Susquehanna's was not an exigent request, the impacted LCO contained in its LAR is the same as Columbia's, with the exception that Energy Northwest is requesting for a completion time of 24 hours instead of 7 days.

6.0 SIGNIFICANT HAZARDS CONSIDERATION

Energy Northwest has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed 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 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 does 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 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.

Based on the above, Energy Northwest concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

7.0 CONCLUSIONS

Based on the considerations discussed above: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the applicable regulations as identified herein, 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 ENVIRONMENTAL CONSIDERATION

Energy Northwest has determined that the proposed amendment would change requirements with respect to installation or use of a facility component located within Columbia's restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. Energy Northwest has evaluated the proposed change and has determined that the change does not involve, (i) a significant hazards consideration, (ii) a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion in accordance with 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

List of Regulatory Commitments

The following table identifies the regulatory commitments in this document. Any other statements in this submittal regarding intended or planned actions, are provided for information purposes, and are not considered to be regulatory commitments.

COMMITMENT	TYPE SCHEDULED		COMPLETION DATE
	one-time	continuing compliance	
Compensatory measures outlined in section 3.1.3 of this letter will be implemented prior to and during the period of the 24 hour completion time.	X		Completion of the repair work but no later than 0800 PST on September 14, 2019.

Enclosure 2

Proposed Columbia Technical Specification Changes (Mark-Up)

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 ¹ <u>AND</u> 16 hours from discovery of failure to meet LCO 3.8.7.a or b ¹
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

¹ The CT for Required Action A.1 may be extended up to 24 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.

Enclosure 3

Proposed Columbia Technical Specification Changes (Re-Typed)

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 ¹ <u>AND</u> 16 hours from discovery of failure to meet LCO 3.8.7.a or b ¹
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

¹ The CT for Required Action A.1 may be extended up to 24 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.