



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

June 11, 2015

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:  
EXTENSION OF IMPLEMENTATION PERIOD FOR AMENDMENT NO. 232  
CHANGING TECHNICAL SPECIFICATION TABLE 3.3.1.1-1 FUNCTION 7,  
"SCRAM DISCHARGE VOLUME WATER LEVEL – HIGH" (**EXIGENT  
CIRCUMSTANCES**) (TAC NO. MF6234)

Dear Mr. Reddemann:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 235 to Renewed Facility Operating License No. NPF-21 for the Columbia Generating Station. The amendment is in response to your application dated May 15, 2015, as supplemented by letter dated May 19, 2015.

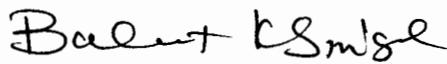
The amendment extends the implementation period for Amendment No. 232 changing Technical Specification Table 3.3.1.1-1 Function 7, "Scram Discharge Volume Water Level – High," which was issued on March 27, 2015. Amendment No. 232 was effective as of its date of issuance (i.e., on March 27, 2015), and was required to be implemented prior to restarting from refueling outage R-22, scheduled for spring 2015. As discussed in your application, the implementation period specified in Amendment No. 232 could not be met due to unforeseen circumstances associated with qualification of AMETEK trip units. Amendment No. 235 extends the implementation period for Amendment No. 232 from prior to restarting from current refueling outage R-22 to prior to restarting from refueling outage R-23, scheduled for spring 2017.

M. Reddemann

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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,



Balwant K. Singal, Senior Project Manager  
Plant Licensing Branch IV-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures:

1. Amendment No. 235 to NPF-21
2. Safety Evaluation

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NUCLEAR REGULATORY COMMISSION  
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ENERGY NORTHWEST

DOCKET NO. 50-397

COLUMBIA GENERATING STATION

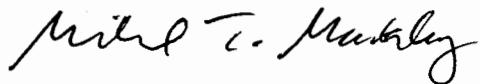
AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 235  
License No. NPF-21

1. The Nuclear Regulatory Commission (NRC, the Commission) has found that:
  - A. The application for amendment by Energy Northwest (licensee), dated May 15, 2015, as supplemented by letter dated May 19, 2015, 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 Renewed Facility Operating License No. NPF-21 is hereby amended to extend the implementation date of Amendment No. 232, issued on March 27, 2015, to prior to restarting from refueling outage R-23, scheduled for spring 2017.
3. The license amendment is effective as of its date of issuance and shall be implemented prior to restarting from refueling outage R-23, scheduled for spring 2017.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief  
Plant Licensing Branch IV-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: June 11, 2015



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 235 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-21

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

DOCKET NO. 50-397

1.0 INTRODUCTION

By application dated May 15, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15135A463), as supplemented by letter dated May 19, 2015 (ADAMS Accession Nos. ML15139A634), Energy Northwest (the licensee) submitted an amendment request to Renewed Facility Operating License No. NPF-21 for the Columbia Generating Station (CGS). The proposed amendment would extend the implementation period for Amendment No. 232 changing Technical Specification (TS) Table 3.3.1.1-1 Function 7, "Scram Discharge Volume Water Level – High," which was issued on March 27, 2015 (ADAMS Accession No. ML15063A010). Amendment No. 232 was effective as of its date of issuance (i.e., on March 27, 2015), and was required to be implemented prior to restarting from refueling outage R-22, scheduled for spring 2015. The implementation period specified in Amendment No. 232 could not be met due to unforeseen circumstances associated with qualification of AMETEK trip units. Amendment No. 235 extends the implementation period for Amendment No. 232 from prior to restarting from current refueling outage R-22, scheduled for spring 2015, to prior to restarting from refueling outage R-23, scheduled for spring 2017.

Amendment No. 232 revised TS Table 3.3.1.1-1, "Reactor Protection System Instrumentation," Function 7, "Scram Discharge Volume Water Level – High," as follows:

- Function 7.a: changed the term "Transmitter/Trip Unit" to "Transmitter/Level Indicating Switch" and added Surveillance Requirement (SR) 3.3.1.1.1 to require performance of a Channel Check every 12 hours;
- Function 7.b: changed the term "Float Switch" to "Transmitter/Level Switch" and added footnotes (d) and (e) to SR 3.3.1.1.10 for the new scram discharge instrumentation; and
- Added footnotes (d) and (e) to SR 3.3.1.1.10 of Function 7.b in accordance with Option A of TS Task Force (TSTF) change traveler TSTF-493,

Revision 4, "Clarify Application of Setpoint Methodology for LSSS [Limiting Safety System Settings] Functions."

As discussed in its application dated May 15, 2015, the licensee requested that the proposed amendment be processed by the U.S. Nuclear Regulatory Commission (NRC) 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's evaluation regarding the exigent circumstances is discussed in Section 4.0 of this safety evaluation (SE).

## 2.0 REGULATORY EVALUATION

Amendment No. 232 was issued to better describe the existing and replacement scram discharge volume water level instruments, include additional surveillance requirement, and to include footnotes to clarify application of setpoint methodology for LSSS described in Table 3.3.1.1-1, "Reactor Protection System Instrumentation," of CGS TSs.

In issuing an amendment to an operating license, the NRC staff specifies when the amendment is effective and when the amendment must be implemented. Enclosure 1 to the NRC's letter dated March 27, 2015, contained Amendment No. 232 for CGS. The amendment stated, in part, that:

This license amendment is effective as of its date of issuance and shall be implemented prior to restarting from refueling outage R-22, scheduled for spring 2015.

There are no specific regulatory requirements regarding the time period for amendment implementation. The NRC staff generally specifies an implementation period consistent with that requested in the licensee's application. For CGS Amendment No. 232, the implementation period to implement the amendment prior to restarting from refueling outage R-22 was requested in Energy Northwest's letter dated March 24, 2014 (ADAMS Accession No. ML14098A400).

The licensee planned to implement the plant modifications prior to restarting from refueling outage R-22 to avoid the need for another plant shutdown. The NRC staff determined that there was no immediate safety concern and approved the proposed implementation period under Amendment No. 232.

## 3.0 TECHNICAL EVALUATION

The key objective of the design change approved in Amendment No. 232 was to address the issue of inherent crud traps resulting in elevated general area radiation levels and increased personnel exposure. The NRC staff evaluated the impact of operation for one additional cycle (approximately 2 years) on personnel dose considering the additional controls in place to minimize radiation dose exposure to personnel.

As discussed in Section 1.0 of this SE, CGS Amendment No. 232 was effective as of the date of issuance (i.e., on March 27, 2015) and was required to be implemented prior to restarting from refueling outage R-22, scheduled for spring 2015. Due to unforeseen difficulties associated with

qualification of AMETEK trip units described in the following paragraph, the licensee requested that the implementation period be extended. Specifically, the licensee requested that implementation not be required until prior to restarting from refueling outage R-23, scheduled for spring 2017.

The licensee encountered unforeseen difficulties and delays in qualifying the new scram discharge volume instrumentation electronic level switches, referred to as AMETEK trip units. The trip units required commercial grade dedication by a qualified vendor in order to qualify the parts for safety-related applications. Receipt of the parts from the vendor was significantly delayed, and the trip units had been modified by the vendor to obtain acceptable electromagnetic interference (EMI) and radiofrequency interference (RFI) testing, which met Regulatory Guide (RG) 1.180, Revision 1, "Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems," October 2003 (ADAMS Accession No. ML032740277). Due to the modifications, the licensee had to re-evaluate the suitability of the new instruments and discovered that the modification and external wiring requirements for the trip units received from the vendor were incompatible and required requalification to match the plant configuration. As a result, the trip units had to be returned to the vendor for reconfiguration, dedication, and requalification, which has delayed implementation of the proposed design change to the next refueling outage.

In its letter dated May 15, 2015, the licensee stated, in part, that

The functional objective of the design change is to address issues with the existing scram discharge instrument volumes, level instruments and associated small bore, socket welded piping and valves, which are inherent crud traps that have resulted in elevated general area radiation levels and increased personnel dose exposure. Operation for an additional cycle with the existing instrumentation will have no impact on nuclear safety. Administrative controls will continue to be utilized to minimize radiation dose to personnel.

The basis for selecting the implementation period of prior to restarting from refueling outage R-22 was to match the planned acquisition and installation of the new equipment. The NRC staff had previously found reasonable assurance that: operating the plant with the existing equipment could be conducted without endangering the health and safety of the public; and that such activities will be conducted in compliance with the Commission's regulations.

Continuing to use the existing equipment until refueling outage R-23 does not invalidate conclusions of Amendment No. 232. Although it is true that the licensee anticipates that usage of the new equipment will reduce the radiation exposure to site personnel, with respect to occupational dose, the licensee is already required to implement "as low as reasonably achievable (ALARA)" requirements of 10 CFR 20.1101(b). The regulation requires the licensee to take steps to address the "inherent crud traps" and associated exposure.

The NRC staff determined that Amendment No. 235 does not modify the regulatory conclusions of Amendment No. 232. The proposed amendment neither involves any physical changes to the plant nor any changes in the operation of the plant. Operation of the plant with the currently installed instruments does not raise any safety concerns. The licensee will continue to take

steps to minimize radiation dose to personnel. Based on the above, the NRC staff concludes that the proposed amendment is acceptable.

#### 4.0 EXIGENT CIRCUMSTANCES

##### 4.1 Background

As discussed in the licensee's application dated May 15, 2015, as supplemented by letter dated May 19, 2015, the licensee requested that the proposed amendment be processed by the NRC on an exigent basis.

Where the Commission finds that exigent circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the Commission to publish a *Federal Register* notice allowing 30 days for prior public comment, and it also determines that the amendment involves no significant hazards considerations, then the Commission will provide for a reasonable opportunity for the public to comment, using its best efforts to make available to the public whatever means of communication it can for the public to respond quickly, and, in the case of telephone comments, have these comments recorded or transcribed, as necessary and appropriate. The Commission will also require the licensee to explain the exigency and why the licensee cannot avoid it, and use its normal public notice and comment procedures in 10 CFR 50.91(a)(2) if it determines that the licensee has failed to use its best efforts to make a timely application for the amendment in order to create the exigency and to take advantage of this procedure.

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 (<http://www.tri-cityherald.com>), a newspaper local to CGS's facility from June 2 through June 4, 2015.

##### 4.2 Licensee's Basis for Exigent Circumstances

The licensee is basing exigent circumstances on the following:

During implementation of Amendment No. 232, the licensee encountered unforeseen difficulties and delays in qualifying the new scram discharge volume instrumentation electronic level switches, referred to as AMETEK trip units. The trip units required commercial grade dedication by a qualified vendor in order to qualify the parts for safety-related applications. Receipt of the parts from the vendor was significantly delayed, and the trip units had been modified by the vendor to obtain acceptable EMI and RFI testing, which met RG 1.180, Revision 1. Due to the modifications, the licensee had to re-evaluate the suitability of the new instruments and discovered that the modification and external wiring requirements for the trip units received from the vendor were incompatible and required requalification to match the plant configuration. As a result, the trip units had to be returned to the vendor for reconfiguration, dedication, and requalification, which have delayed implementation of the proposed design change. The reconfigured, dedicated, and requalified instruments are not scheduled to arrive before restart

from refueling outage R-22 scheduled for spring 2015. The plant will not be able to restart for a significant duration, if the implementation schedule is not extended to next refueling outage (refueling outage R-23) creating the need for exigency.

#### 4.3 NRC Staff Conclusion

Based on the above circumstances, the NRC staff determines that the licensee made a timely application for the proposed amendment following identification of the issue. In addition, the NRC staff determines that the licensee will be able to comply with the implementation schedule authorized by Amendment No. 232 and will not be able to restart from refueling outage R-22 for a significant duration if the implementation schedule is not extended to next refueling outage (refueling outage R-23) justifying the exigency. Based on these findings, the NRC staff has determined that exigent circumstances exist.

#### 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 (<http://www.tri-cityherald.com>), a newspaper local to CGS's facility from June 2 through June 4, 2015. The notice included the NRC staff's proposed no significant hazards consideration determination. The notice also provided an opportunity for public comment until 5:00 p.m. on June 8, 2015, regarding the staff's proposed no significant hazards consideration determination.

No public comments were received regarding the proposed amendment.

#### 6.0 NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

As required by 10 CFR 50.91(a), in its application dated May 15, 2015, as supplemented by letter dated May 19, 2015, the licensee has provided its analysis of the issue of no significant hazards consideration, using the standards in 10 CFR 50.92, 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 implementation schedule extension is administrative in nature and does not require any physical plant modifications, physically affect any plant systems or components, or entail changes in plant operation. The amendment implementation schedule extension does not increase the probability or consequences of an accident previously evaluated in the Final Safety Analysis Report. The change in the implementation schedule of the scram discharge volume instrumentation float switches and Technical Specification changes will

have no impact on the initiation or the consequences of any accidents previously evaluated. Technical Specification requirements that govern operability or routine testing of plant instruments are not assumed to be initiators of any analyzed event. The change in implementation schedule will not increase the consequences of an accident since the existing scram discharge volume instrumentation is in accordance with the plant's design and licensing bases. All acceptance criteria continue to be met. Therefore, the proposed amendment does not involve a 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 evaluated?

Response: No.

There are no postulated hazards, new or different, contained in this amendment. The proposed amendment implementation schedule extension is administrative in nature and does not require any physical plant modifications, physically affect any plant systems or components, or entail changes in plant operation. Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

Response: No.

The proposed amendment implementation schedule extension is administrative in nature and does not require any physical plant modifications, physically affect any plant systems or components, or entail changes in plant operation. The existing scram discharge volume instrumentation maintains the required redundancy, diversity and capability to ensure there is sufficient volume available to accommodate a reactor scram. Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

The Commission has reviewed the licensee's information and determined that the amendment request involves no significant hazards consideration. Under the Commission regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the amendment, does 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. Accordingly, per 10 CFR 50.91(a)(6), the notice for public comment via newspaper is acceptable.

#### 7.0 STATE CONSULTATION

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

#### 8.0 ENVIRONMENTAL CONSIDERATION

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

#### 9.0 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: Balwant K. Singal, NRR/DORL/LPLIV-1  
Rossnyev Alvarado, NRR/DE/EICB

Date: June 11, 2015

M. Reddemann

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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,

/RA/

Balwant K. Singal, Senior Project Manager  
Plant Licensing Branch IV-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures:

1. Amendment No. 235 to NPF-21
2. Safety Evaluation

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MC Chernoff, NRR/DSS/STS B

**ADAMS Accession No.: ML15154A800**

OFFICE	NRR/DORL/LPL4-1/PM	NRR/DORL/LPL4-1/LA	NRR/DSS/STS B/BC	NRR/DE/EICB/BC
NAME	BSingal	JBurkhardt	RElliott	JThorp
DATE	6/9/15	6/4/15	6/9/15	6/9/15
OFFICE	OGC -NLO	NRR/DORL/LPL4-1/BC	NRR/DORL/LPL4-1/PM	
NAME	DRoth	MMarkley	BSingal	
DATE	6/10/15	6/11/15	6/11/15	

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