September 16, 2008

Mr. J. V. Parrish
Chief Executive Officer
Energy Northwest
P.O. Box 968 (Mail Drop 1023)
Richland, WA 99352-0968

SUBJECT: COLUMBIA GENERATING STATION- ISSUANCE OF AMENDMENT RE: ADOPTION OF TSTF-484, "USE OF TS 3.10.1 FOR SCRAM TIME TESTING ACTIVITIES" (TAC NO. MD8687)

Dear Mr. Parrish:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 209 to Facility Operating License No. NPF-21 for Columbia Generating Station. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated May 7, 2008.

The amendment revises TS Limiting Condition for Operation (LCO) 3.10.1, and approves the associated Bases, to expand its scope to include provisions for temperature excursions greater than 200 degrees Fahrenheit as a consequence of inservice leak and hydrostatic testing, and as a consequence of scram time testing initiated in conjunction with an inservice leak or hydrostatic test, while considering operational conditions to be in Mode 4, “Cold Shutdown”. This operating license improvement was made available by the NRC on October 27, 2006, as part of the consolidated line item improvement process (CLIIP).

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 by Balwant K. Singal for/

Carl F. Lyon, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures: 1. Amendment No. 209 to NPF-21
2. Safety Evaluation

cc w/encls: See next page

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ADAMS Accession No.: Pkg. ML082380016,(Amendment ML082380017, License/TS Pgs ML082380018) NRR-058

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Columbia Generating Station

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ENERGY NORTHWEST

DOCKET NO. 50-397

COLUMBIA GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 209
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 May 7, 2008, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of 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. 209 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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

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

Date of Issuance: September 16, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 209

FACILITY OPERATING LICENSE NO. NPF-21

DOCKET NO. 50-397

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

Facility Operating License

REMOVE	INSERT
-3-	-3-

Technical Specification

REMOVE	INSERT
3.10.1-1	3.10.1-1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 209 TO

FACILITY OPERATING LICENSE NO. NPF-21

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

DOCKET NO. 50-397

1.0 INTRODUCTION

By application dated May 7, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081350610) Energy Northwest (the licensee) requested changes to the Technical Specifications (TS) for the Columbia Generating Station.

The proposed changes would revise Limiting Condition for Operation (LCO) 3.10.1, and the associated Bases, when considering operational conditions to be in Mode 4, to include provisions for temperature excursions greater than 200^{o}F for the following:

- As a consequence of inservice leak and hydrostatic testing

- As a consequence of scram time testing initiated in conjunction with an inservice leak or hydrostatic test

2.0 REGULATORY EVALUATION

In Section 50.36 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Technical Specifications," the U.S. Nuclear Regulatory Commission (NRC) established its regulatory requirements related to the content of TS. Pursuant to 10 CFR 50.36, TSs 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 operations (LCO), (3) surveillance requirements (SR), (4) design features, and (5) administrative controls. The rule does not specify the particular requirements to be included in a plant's TS. As stated in 10 CFR 50.36(d)(2)(i), the "[l]imiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility." The regulations in 10 CFR 50.36(d)(3) state that "[s]urveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components will be maintained within safety limits, and that the limiting conditions for operation will be met."

2.1 Inservice Leak and Hydrostatic Testing

The Reactor Coolant System (RCS) serves as a pressure boundary and also serves to provide a flow path for the circulation of coolant past the fuel. In order to maintain RCS integrity, Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) requires periodic hydrostatic and leakage testing. Hydrostatic tests are required to be performed once every ten years and leakage tests are required to be performed each refueling outage. Appendix G to 10 CFR Part 50 states that pressure tests and leak tests of the reactor vessel that are required by Section XI of the ASME Code must be completed before the core is critical.

NUREG-1433, "General Electric Plants, BWR/4, Revision 3, Standard Technical Specifications (STS)," and NUREG-1434, "General Electric Plants, BWR/6, Revision 3, STS," both currently contain LCO 3.10.1, “Inservice Leak and Hydrostatic Testing Operation.” LCO 3.10.1 was created to allow for hydrostatic and leakage testing to be conducted while in Mode 4, “Cold Shutdown” with average reactor coolant temperature greater than 200 degrees Fahrenheit (^{o}F), provided certain secondary containment LCOs are met.

Technical Specification Task Force (TSTF) traveler TSTF-484, Revision 0, "Use of TS 3.10.1 for Scram Time Testing Activities," modifies LCO 3.10.1 to allow a licensee to implement LCO 3.10.1, while hydrostatic and leakage testing is being conducted, should average reactor coolant temperature exceed 200^{o}F during testing. This modification does not alter current requirements for hydrostatic and leakage testing as required by Appendix G to 10 CFR Part 50.

2.2 Control Rod Scram Time Testing

Control rods function to control reactor power level and to provide adequate excess negative reactivity to shut down the reactor from any normal operating or accident condition at any time during core life. The control rods are scrammed by using hydraulic pressure exerted by the control rod drive (CRD) system. Criterion 10 of Appendix A to 10 CFR Part 50 states that the “[r]eactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences.” The scram reactivity used in design basis accidents (DBA) and transient analyses is based on an assumed control rod scram time.

NUREG-1433 and NUREG-1434 both currently contain surveillance requirements (SRs) to conduct scram time testing when certain conditions are met in order to ensure that Criterion 10 of Appendix A to 10 CFR Part 50 is satisfied. TS SR 3.1.4.1 requires scram time testing to be conducted after each refueling and after each reactor shutdown greater than or equal to 120 days. TS SR 3.1.4.4 requires scram time testing after work on control rod or the CRD System and after fuel movement within the reactor pressure vessel. Both SRs must be performed at reactor steam dome pressure greater than or equal to 800 psig (pounds per square inch gauge) and prior to exceeding 40 percent rated thermal power (RTP).

TSTF-484, Revision 0, "Use of TS 3.10.1 for Scram Time Testing Activities," would modify LCO 3.10.1 to allow SR 3.1.4.1 and SR 3.1.4.4 to be conducted in Mode 4 with average reactor coolant temperature greater than 200^{o}F. Scram time testing would be performed in accordance with LCO 3.10.4, “Single Control Rod Withdrawal - Cold Shutdown.” This modification to

LCO 3.10.1 does not alter the means of compliance with Criterion 10 of Appendix A to 10 CFR Part 50.

3.0 TECHNICAL EVALUATION

The existing provisions of LCO 3.10.1 allow for hydrostatic and leakage testing to be conducted while in Mode 4 with average reactor coolant temperature greater than 200°F, while imposing Mode 3 secondary containment requirements. Under the existing provision, LCO 3.10.1 would have to be implemented prior to hydrostatic and leakage testing. As a result, if LCO 3.10.1 was not implemented prior to hydrostatic and leakage testing, the hydrostatic and leakage testing would have to be terminated if average reactor coolant temperature exceeded 200°F during the conduct of the testing. TSTF-484, Revision 0, "Use of TS 3.10.1 for Scram Time Testing Activities," modifies LCO 3.10.1 to allow a licensee to implement LCO 3.10.1, while hydrostatic and leakage testing is being conducted, should average reactor coolant temperature exceed 200°F during testing. The modification will allow completion of testing without the potential for interrupting the test in order to reduce reactor vessel pressure, cool the RCS, and restart the test below 200°F. Since the current LCO 3.10.1 allows testing to be conducted while in Mode 4, with average reactor coolant temperature greater than 200°F, the proposed change does not introduce any new operational conditions beyond those currently allowed.

TS SR 3.1.4.1 and SR 3.1.4.4 require that control rod scram time be tested at reactor steam dome pressure greater than or equal to 800 psig and before exceeding 40 percent RTP. Performance of control rod scram time testing is typically scheduled concurrent with inservice leak or hydrostatic testing while the RCS is pressurized. Because of the number of control rods that must be tested, it is possible for the inservice leak or hydrostatic test to be completed prior to completing the scram time test. Under existing provisions, if scram time testing can not be completed during the LCO 3.10.1 inservice leak or hydrostatic test, scram time testing must be suspended. Additionally, if LCO 3.10.1 is not implemented and average reactor coolant temperature exceeds 200°F while performing the scram time test, scram time testing must also be suspended. In both situations, scram time testing is resumed during startup and is completed prior to exceeding 40 percent RTP. TSTF-484, Revision 0, "Use of TS 3.10.1 for Scram Time Testing Activities," modifies LCO 3.10.1 to allow a licensee to complete scram time testing initiated during inservice leak or hydrostatic testing. As stated earlier, since the current LCO 3.10.1 allows testing to be conducted while in Mode 4 with average reactor coolant temperature greater than 200°F, the proposed change does not introduce any new operational conditions beyond those currently allowed. Completion of scram time testing prior to reactor criticality, and power operations results in a more conservative operating philosophy with attendant potential safety benefits.

It is acceptable to perform other testing concurrent with the inservice leak or hydrostatic test provided that this testing can be performed safely and does not interfere with the leak or hydrostatic test. However, it is not permissible to remain in TS 3.10.1 solely to complete such testing following the completion of inservice leak or hydrostatic testing and scram time testing.

Since the tests are performed with the reactor pressure vessel (RPV) nearly water solid, at low decay heat values, and near Mode 4 conditions, the stored energy in the reactor core will be very low. Small leaks from the RCS would be detected by inspections before a significant loss of inventory occurred. In addition, two low-pressure emergency core cooling systems (ECCS) injection/spray subsystems are required to be operable in Mode 4 by TS 3.5.2, "ECCS-Shutdown." In the event of a large RCS leak, the RPV would rapidly depressurize and

allow operation of the low pressure ECCS. The capability of the low pressure ECCS would be adequate to maintain the fuel covered under the low decay heat conditions during these tests. Also, LCO 3.10.1 requires that secondary containment and the standby gas treatment system be operable and capable of handling any airborne radioactivity or steam leaks that may occur during performance of testing.

The protection provided by the normally required Mode 4 applicable LCOs, in addition to the secondary containment requirements required to be met by LCO 3.10.1, minimizes potential consequences in the event of any postulated abnormal event during testing. In addition, the requested modification to LCO 3.10.1 does not create any new modes of operation or operating conditions that are not currently allowed.

Based on the above, the NRC staff concludes that the proposed change is acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Washington State official was notified of the proposed issuance of the amendment. 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, and there has been no public comment on such finding issued on July 15, 2008 (73 FR 40630). 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) 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.

7.0 REFERENCES

1. NUREG-1433, “General Electric Plants, BWR/4, Revision 3, Standard Technical Specifications (STS)”, August 31, 2003.

2. NUREG-1434, General Electric Plants, BWR/6, Revision 3, Standard Technical Specifications (STS)”, August 31, 2003.

3. Request for Additional Information (RAI) Regarding TSTF-484, April, 7, 2006. (ADAMS Accession No. ML060970568)

4. Response to NRC RAIs Regarding TSTF-484, June 5, 2006. (ADAMS Accession No. ML061560523)

5. TSTF-484 Revision 0, "Use of TS 3.10.1 for Scram Times Testing Activities", May 5, 2005. (ADAMS Accession No. ML052930102)

6. TSTF Response to NRC Notice for Comment, September 20, 2006. (ADAMS Accession No. ML062650171)

Principal Contributor: A. Lewin

Date: September 16, 2008