

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

May 11, 2005

SUBJECT: COLUMBIA GENERATING STATION - CORRECTION TO AMENDMENT
NO. 191 (TAC NO. MC3942)

Dear Mr. Parrish:

By letter dated April 12, 2005, the Commission issued Amendment No. **191** to Facility Operating License No. NPF-21 for the Columbia Generating Station. The amendment allowed a one-time extension of its Appendix J, Type A, Containment Integrated Leak Rate Test interval from the current 10-year interval to a proposed 15-year interval. The amendment was in response to your application dated August 5, 2004, as supplemented on January 17, 2005.

Enclosed are the corrected pages. The pages replaced are the cover letter, page 1 and page 9 of the safety evaluation issued in the letter dated April 12, 2005. We regret any inconvenience this may have caused you.

Sincerely,

/RA/
Brian Benney, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures: Cover letter, pages 1 and 9 of the SE

cc w/encls: See next page

Columbia Generating Station

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May 11, 2005

SUBJECT: COLUMBIA GENERATING STATION - CORRECTION TO AMENDMENT
NO. 191 (TAC NO. MC3942)

Dear Mr. Parrish:

By letter dated April 12, 2005, the Commission issued Amendment No. **191** to Facility Operating License No. NPF-21 for the Columbia Generating Station. The amendment allowed a one-time extension of its Appendix J, Type A, Containment Integrated Leak Rate Test interval from the current 10-year interval to a proposed 15-year interval. The amendment was in response to your application dated August 5, 2004, as supplemented on January 17, 2005.

Enclosed are the corrected pages. The pages replaced are the cover letter, page 1 and page 9 of the safety evaluation issued in the letter dated April 12, 2005. We regret any inconvenience this may have caused you.

Sincerely,

/RA/

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Docket No. 50-397

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OFFICIAL RECORD COPY

April 12, 2005

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: ONE-TIME EXTENSION OF APPENDIX J TYPE A INTEGRATED
LEAKAGE RATE TEST INTERVAL (TAC NO. MC3942)

Dear Mr. Parrish:

The Commission has issued the enclosed Amendment No. **191** to Facility Operating License No. NPF-21 for the Columbia Generating Station. This amendment is in response to your application dated August 5, 2004, as supplemented on January 17, 2005.

This amendment revises Technical Specification (TS) Section 5.5.12, "Primary Containment Leakage Rate Testing Program," to allow a one-time extension of its Appendix J, Type A, Containment Integrated Leak Rate Test interval from the current 10-year interval to a proposed 15-year interval.

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

Sincerely,

/RA by Jack Donohew for/
Brian Benney, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures: 1. Amendment No. **191** to License No. NPF-21
2. Safety Evaluation

cc w/encls: See next page

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 191 TO FACILITY OPERATING LICENSE NO. NPF-21
ENERGY NORTHWEST
COLUMBIA GENERATING STATION
DOCKET NO. 50-397

1.0 INTRODUCTION

By letter dated August 5, 2004, as supplemented on January 17, 2005, Energy Northwest (the licensee) submitted a request for changes to the Columbia Generating Station (CGS) Technical Specifications (TSs). The requested changes would revise TS Section 5.5.12, "Primary Containment Leakage Rate Testing Program," to allow a one-time extension of its Appendix J, Type A, Containment Integrated Leak Rate Test (ILRT) interval from the current 10-year interval to a proposed 15-year interval. The TS revision is based on the risk-informed approach developed using Regulatory Guide (RG) 1.174. The January 17, 2005, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix J, Option B, requires that a Type A test be conducted at a periodic interval based on historical performance of the overall containment system. The CGS TS 5.5.12, "Primary Containment Leakage Rate Testing Program," requires that leakage rate testing be performed as required by 10 CFR Part 50, Appendix J, Option B, as modified by Nuclear Regulatory Commission (NRC)-approved exemptions, and in accordance with the guidelines contained in RG 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, with certain exceptions specified in the TS. This RG endorses, with certain exceptions, Nuclear Energy Institute (NEI) report NEI 94-01, Revision 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," dated July 26, 1995.

A Type A test is an overall (integrated) leakage rate test of the containment structure. NEI 94-01 specifies an initial test interval of 48 months, but allows an extended interval of 10 years, based upon two consecutive successful tests. There is also a provision for extending the test interval an additional 15 months in certain circumstances. The most recent two Type A tests at the CGS have been successful, so the current interval requirement is 10 years.

The licensee is requesting a change to TS 5.5.12 which would add an exception from the guidelines of RG 1.163 and NEI 94-01, Revision 0, regarding the Type A test interval. Specifically, the exception states that the first Type A test performed after the July 20, 1994, Type A test shall be performed no later than July 20, 2009.

probabilistic risk assessment (PRA) in evaluating risk-informed changes to a plant's licensing basis. The licensee has proposed using RG 1.174 guidance to assess the acceptability of extending the Type A test interval beyond that established during the Option B rulemaking.

RG 1.174 defines very small changes in the risk-acceptance guidelines as increases in core damage frequency (CDF) less than 10^{-6} per year and increases in large early release frequency (LERF) less than 10^{-7} per year. Since the Type A test does not impact CDF, the relevant criterion is the change in LERF. The licensee has estimated the change in LERF for the proposed change and the cumulative change from the original frequency of three tests in a 10-year interval. RG 1.174 also discusses defense-in-depth and encourages the use of risk analysis techniques to help ensure and show that key principles, such as the defense-in-depth philosophy, are met. The licensee estimated the change in the conditional containment failure probability for the proposed change to demonstrate that the defense-in-depth philosophy is met.

The licensee provided its analyses, as discussed below. The following comparisons of risk from a change in test frequency from three tests in 10 years to one test in 15 years are considered to be bounding for CGS comparative frequencies of one test in 10 years to one test in 15 years. The following conclusions can be drawn from the analysis associated with extending the Type A test frequency:

1. Given the change from a three in 10-year test frequency to a one in 15-year test frequency, the increase in the total integrated plant risk is estimated to be less than 0.01 person-rem per year. This increase is comparable to that estimated in NUREG-1493, where it was concluded that a reduction in the frequency of tests from three in 10 years to one in 20 years leads to an "imperceptible" increase in risk. Therefore, the increase in the total integrated plant risk for the proposed change is considered small and supportive of the proposed change.
2. The increase in LERF resulting from a change in the Type A test frequency from the original three in 10 years to one in 15 years is estimated to be 4.8×10^{-8} per year based on the internal events PRA, and 8.0×10^{-8} per year including both internal and external events. However, there is some likelihood that the flaws in the containment estimated as part of the Class 3b frequency would be detected as part of the IWE/IWL visual examination of the containment surfaces (as identified in ASME Code, Section XI, Subsections IWE/IWL). Visual inspections are expected to be effective in detecting large flaws in the visible regions of containment, and this would reduce the impact of the extended test interval on LERF. The licensee's risk analysis considered the potential impact of age-related corrosion/degradation in inaccessible areas of the containment shell on the proposed change. The increase in LERF associated with corrosion events is estimated to be less than 1×10^{-8} per year. The NRC staff concludes that increasing the Type A interval to 15 years results in a very small change in LERF and is consistent with the acceptance guidelines of RG 1.174.
3. RG 1.174 also encourages the use of risk analysis techniques to help ensure and show that the proposed change is consistent with the defense-in-depth philosophy. Consistency with the defense-in-depth philosophy is maintained if a reasonable balance is preserved between prevention of core damage, prevention of containment failure, and consequence mitigation. The licensee estimates the change in the conditional