

May 8, 1996

Mr. J. V. Parrish (Mail Drop 1023)
Chief Executive Officer
3000 George Washington Way
Washington Public Power Supply System
P.O. Box 968
Richland, Washington 99352-0968

SUBJECT: ISSUANCE OF AMENDMENT FOR THE WASHINGTON PUBLIC POWER SUPPLY SYSTEM
NUCLEAR PROJECT NO. 2 (TAC NO. M94573)

Dear Mr. Parrish:

The Commission has issued the enclosed Amendment No. 144 to Facility Operating License No. NPF-21 for WPPSS Nuclear Project No. 2. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated January 19, 1996, as supplemented by letter dated March 19, 1996.

The amendment modifies the Technical Specifications (TS) for leak tests of containment isolation valves. The amendment replaces the current specified surveillance intervals for containment leak testing with new surveillance requirements to conduct containment leak testing according to a performance-based containment leak test program.

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,

Original Signed By

James W. Clifford, Senior Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures: 1. Amendment No.144 to NPF-2
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Mr. J. V. Parrish

- 2 -

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

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

DOCKET NO. 50-397

NUCLEAR PROJECT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 144
License No. NPF-21

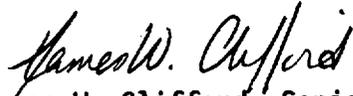
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Washington Public Power Supply System (licensee) dated January 19, 1996, as supplemented by letter dated March 19, 1996, complies with the standards and requirements of the Atomic Energy Act 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. 144 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. This amendment is effective as of its date of issuance to be implemented within 30 days of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



James W. Clifford, Senior Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: May 8, 1996

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 144 TO FACILITY OPERATING LICENSE NO. NPF-21

DOCKET NO. 50-397

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE

3/4 6-3
3/4 6-4
3/4 6-6
6-15b

INSERT

3/4 6-3

3/4 6-6
6-15b

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- c. The leakage rate to less than or equal to 11.5 scf per hour for any one main steam line isolation valve, and
- d. The combined leakage rate for all ECCS and RCIC containment isolation valves in hydrostatically tested lines which penetrate the primary containment to less than or equal to 1 gpm times the total number of such valves,

prior to increasing reactor coolant system temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 Perform required primary containment leakage rate testing in accordance with the Primary Containment Leakage Rate Testing Program described in Specification 6.8.4.f.

- a. Deleted
- b. Deleted
- c. Deleted
- d. Deleted
- e. Deleted
- f. Deleted
- g. Deleted
- h. Deleted
- i. Deleted
- j. Deleted

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each primary containment air lock shall be OPERABLE with:

- a. The interlock operable and engaged such that both doors cannot be opened simultaneously, and
- b. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, and
- c. An overall air lock leakage rate of less than or equal to $0.05 L_a$ at P_a .

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2* and 3.

ACTION:

- a. With the interlock mechanism inoperable:
 1. Maintain at least one operable air lock door closed and either return the interlock to service within 24 hours or lock at least one operable air lock door closed.
 2. Operation may then continue until the interlock is returned to service provided that one of the air lock doors is verified locked closed prior to each closing of the shield door and at least once per shift while the shield door is open.
 3. Personnel passage through the air lock is permitted provided an individual is dedicated to assure that one operable air lock door remains locked at all times so that both air lock doors cannot be opened simultaneously.
 4. The provisions of Specification 3.0.4 are not applicable.
- b. With one primary containment air lock door inoperable:
 1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.
 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed immediately prior to each closing of the shield door and at least once per shift while the shield door is open.

*See Special Test Exception 3.10.1.

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 4. The provisions of Specification 3.0.4 are not applicable.
- c. With the primary containment air lock inoperable, except as a result of an inoperable air lock door or an inoperable interlock mechanism, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each primary containment air lock shall be demonstrated OPERABLE:

- a. By verifying interlock operation (i.e., that only one door in each air lock can be opened at a time).
 1. Prior to using the air lock in Operating Conditions 1, 2 and 3 but not required more than once per 6 months,
 2. Following maintenance that could affect the interlock mechanism.
- b. Within 72 hours following each closing, except when the air lock is being used for multiple entries, then at least once per 72 hours, by verifying seal leakage rate less than or equal to $0.025 L_a$ when the gap between the door seals is pressurized to 10 psig.
- c. By conducting an overall air lock leakage test at P_a , and by verifying that the overall air lock leakage rate is within its limit:
 1. At intervals determined in accordance with 10 CFR 50 Appendix J using the methods and provisions outlined in the Primary Containment Leakage Rate Testing Program described in Specification 6.8.4.f, and
 2. Prior to establishing PRIMARY CONTAINMENT INTEGRITY when maintenance had been performed on the air lock that could affect the air lock sealing capability*.

*Exception to Appendix J of 10 CFR 50.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

d. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table II, Column 2,
- 3) Monitoring, sampling and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days.
- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31 day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY conforming to the doses associated with 10 CFR Part 20, Appendix B, Table II, Column I,
- 8) Limitations on the annual and quarterly air dose resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

d. Radioactive Effluent Controls Program (continued)

- 9) Limitations on the annual and quarterly dose to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 10) Limitations on venting and purging of the containment through the Standby Gas Treatment System to maintain releases as low as reasonably achievable, and
- 11) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

e. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM.
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in the Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

f. Primary Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing for the primary containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines of Regulatory Guide 1.163 dated September 1995, "Performance-Based Containment Leak-Test Program", as modified by the following exceptions:

1. Compensation for flow meter inaccuracies in excess of those specified in standard ANSI/ANS 56.8-1994 will be accomplished by increasing the actual instrument reading by the amount of the full scale inaccuracy when assessing the effect of local leak rates against the criteria established in Technical Specification 3.6.1.2.b.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 144 TO FACILITY OPERATING LICENSE NO. NPF-21
WASHINGTON PUBLIC POWER SUPPLY SYSTEM
NUCLEAR PROJECT NO. 2
DOCKET NO. 50-397

1.0 INTRODUCTION

By letter dated January 19, 1996, as supplemented by letter dated March 19, 1996, the Washington Public Power Supply System (the Supply System, or the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License No. NPF-21) for the WPPSS Nuclear Project No. 2. The amendment replaces the current specified surveillance intervals for containment leak testing with new surveillance requirements to conduct containment leak testing according to a performance-based containment leak test program. The proposed changes are based on implementation of 10 CFR Part 50, Appendix J, Option B. The licensee has established a "Containment Leakage Rate Testing Program" and proposed adding this program to the TS. The program references Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak Test Program" (September 1995), which specifies a method acceptable to the NRC for complying with Option B.

The March 19, 1996, supplemental letter provided additional clarifying information and did not change the staff's original no significant hazards consideration determination published in the Federal Register on February 14, 1996 (61 FR 5820).

2.0 BACKGROUND

Compliance with 10 CFR Part 50, Appendix J, provides assurance that the primary containment, including those systems and components which penetrate the primary containment, do not exceed the allowable leakage rate specified in the TS and Bases. The allowable leakage rate is determined so that the leakage assumed in the safety analyses is not exceeded.

On February 4, 1992, the NRC published a notice in the Federal Register (57 FR 4166) that discussed a planned initiative to begin eliminating requirements marginal to safety which impose a significant regulatory burden. The staff considered Appendix J of 10 CFR Part 50 for this initiative and undertook a study of possible changes to this regulation. The study examined the previous performance history of domestic containments and examined the effect on risk of a revision to the requirements of Appendix J. The results of this study are reported in NUREG-1493, "Performance-Based Leak-Test Program."

Based on the results of this study, the staff developed a performance-based approach to containment leakage rate testing. On September 12, 1995, the NRC approved issuance of this revision to 10 CFR Part 50, Appendix J, which was subsequently published in the Federal Register on September 26, 1995, and became effective on October 26, 1995. The revision added Option B, "Performance-Based Requirements," to Appendix J to allow licensees to voluntarily replace the prescriptive testing requirements of Appendix J with testing requirements based on both overall and individual component leakage rate performance.

The staff developed RG 1.163 to provide a method acceptable to the staff for implementing Option B. This regulatory guide states that the Nuclear Energy Institute (NEI) guidance document NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," provides methods acceptable to the staff for complying with Option B with four exceptions which are described therein.

Option B requires that the RG or other implementation document used by a licensee to develop a performance-based leakage rate testing program must be included, by general reference, in the plant TS. The licensee has referenced RG 1.163 in the WNP-2 TS.

Regulatory Guide 1.163 specifies an extension in Type A test frequency to at least one test in 10 years based upon two consecutive successful tests. Type B tests may be extended up to a maximum interval of 10 years based upon completion of two consecutive successful tests and Type C tests may be extended up to 5 years based on two consecutive successful tests.

By letter dated October 20, 1995, NEI proposed generic TS to implement Option B. After some discussion, the staff and NEI agreed on final generic TS which were attached to a letter from C. Grimes (NRC) to D. Modeen (NEI) dated November 2, 1995. These TS are to serve as a model for licensees to develop plant-specific TS in preparing amendment requests to implement Option B.

To determine the performance of each component, a licensee must establish factors that are indicative of, or that affect, performance, such as an administrative leakage limit. The administrative limit is selected to be indicative of the potential onset of component degradation. Although these limits are subject to NRC inspection to assure that they are selected in a reasonable manner, they are not TS requirements. Failure to meet an administrative limit requires the licensee to return to the minimum value of the test interval.

Option B requires that the licensee maintain records to show that the criteria for Type A, B, and C tests have been met. In addition, the licensee must maintain comparisons of the performance of the overall containment system and the individual components to show that the test intervals are adequate. These records are subject to NRC inspection.

3.0 EVALUATION

The licensee's January 19, 1996, and March 19, 1996, letters to the NRC proposed to establish a "Containment Leakage Rate Testing Program" and proposed to add this program to the TS. The program references RG 1.163, which specifies a method acceptable to the NRC for complying with Option B. This requires a change to existing TS 4.6.1.2 and 4.6.1.3 and the addition of the "Containment Leakage Rate Testing Program" to Section 6.8.4.f.

Option B permits a licensee to choose Type A; or Type B and C; or Type A, B, and C; testing to be done on a performance basis. The licensee has elected to perform Type A, B, and C testing on a performance basis.

The licensee requested an exception to the ANSI/ANS Standard 56.8-1994, which contains the specific testing requirements and is referenced in NEI 94-01, Revision 0. When using the flow makeup leak detection method, the licensee proposed to use a flow meter accuracy of 4 percent rather than the 2 percent value specified in ANSI/ANS 56.8-1994. This exception was requested because the licensee's present flow meter has a 4 percent accuracy. To compensate, the licensee stated in its January 19, 1996, letter that the actual readings taken during the tests will be increased by the amount of the full scale inaccuracy when assessing the overall LLRT results against the TS limits. This is conservative and the staff finds this proposed exception acceptable. This exception is explicitly stated in the Primary Containment Leakage Rate Testing Program in Section 6.8.4.f of the technical specifications.

On April 19, 1987, the staff issued two exemptions to Appendix J for WNP-2. The exemptions permitted the licensee to meet its unique refueling requirements, based on the regional availability of hydroelectric power, which necessitated an annual refueling of WNP-2. These circumstances led the licensee to request a 27-month interval for Type B and C tests. Regulatory Guide 1.163 recommends Type B and C test intervals of 30 months. Therefore, the exemptions are no longer required.

The TS changes proposed by the licensee are in compliance with the requirements of Option B and are consistent with the guidance of RG 1.163 and the generic TS of the NRC staff's November 2, 1995, letter to NEI with the one exception discussed above which the staff finds acceptable. Therefore, the program proposed by the licensee, including the proposed changes to the technical specifications, 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 surveillance requirements. 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 (61 FR 5280). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). This amendment also involves changes in recordkeeping, reporting or administrative procedures or requirements. Accordingly, with respect to these items, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). 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.

Principal Contributor: Richard Lobel

Date: May 8, 1996