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

MAR 18 1986

Docket  
Files

Docket No. 50-397

Mr. G. C. Sorensen, Manager  
Regulatory Programs  
Washington Public Power Supply System  
P. O. Box 968  
3000 George Washington Way  
Richland, Washington 99352

Dear Mr. Sorensen:

Subject: Issuance of Exemption to a Provision of Appendix J and  
Amendment No. 21 to Facility Operating License No. NPF-21  
WPPSS Nuclear Project No. 2

The U.S. Nuclear Regulatory Commission has issued the enclosed exemption from a provision of Appendix J to 10 CFR Part 50, and the enclosed Amendment No. 21 to Facility Operating License No. NPF-21 for WPPSS Nuclear Project No. 2, located in Benton County near Richland, Washington. This exemption and the amendment of the license are issued in response to your application dated January 17, 1986.

The exemption permits postponement of the type B leak test of the drywell cover "O" ring seal until the reactor is shutdown for the first refueling outage - with shutdown to commence not later than May 15, 1986. Corresponding revisions are made to the facility Technical Specifications.

The safety evaluation for the exemption is incorporated in the accompanying exemption. A copy of the related safety evaluation supporting Amendment No. 21 to facility Operating License No. NPF-21 is enclosed. Also enclosed is a copy of a related notice of environmental assessment and finding of no significant impact which was published in the Federal Register on March 10, 1986. The notice of issuance of the amendment will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

*Elinor G. Adensam*  
Elinor G. Adensam, Director  
BWR Project Directorate No. 3  
Division of BWR Licensing

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Enclosures:

- 1. Exemption
- 2. Amendment No. 21 to Facility Operating License NPF-21
- 3. Safety Evaluation
- 4. Notice of Environmental Assessment

DESIGNATED ORIGINAL  
Certified By *[Signature]*

cc w/enclosures:  
See next page

Mr. G. C. Sorensen, Manager  
Washington Public Power Supply System

WPPSS Nuclear Project No. 2  
(WNP-2)

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Richland, Washington 99352

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of

WASHINGTON PUBLIC POWER  
SUPPLY SYSTEM  
(WPPSS Nuclear Project No. 2)

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Docket No. 50-397

EXEMPTION

I.

Washington Public Power Supply System (WPPSS or the licensee) is the holder of Facility Operating License No. NPF-21 which authorizes the operation of the WPPSS Nuclear Project No. 2 (WNP-2 or the facility) at steady-state power levels not in excess of 3323 megawatts thermal. The license provides, among other things, that the facility is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility is a boiling water reactor (BWR) located at the licensee's site in Benton County, Washington.

II.

On February 14, 1973, the Commission published Appendix J to 10 CFR 50, "Reactor Containment Leakage Testing for Water-Cooled Power Reactors" (38 FR 4386). Revisions to Appendix J were published in the Federal Register on September 22, 1980 (45 FR 62789). Paragraph II.G of Appendix J defines "Type B Tests", in part as those intended to detect local leaks and measure leakage across pressure-containing or leakage-limiting boundaries for primary reactor containment whose design incorporates resilient seals, gaskets or sealant compounds. Paragraph III.D.2.(a) of Appendix J states in part, "Type B tests, except tests for air locks, shall be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than two years." Facility

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Technical Specification 4.6.1.2.d also requires Type B tests to be performed at intervals no greater than 24 months (with specified exceptions not applicable to this action).

By letter dated January 17, 1986, the licensee requested an exemption from the 24 month requirement for the type B test of the drywell head "O" ring seals. The licensee also requested amendment of related Technical Specification 4.6.1.2.d, to permit the type B test of these seals to be extended beyond the 24 month limit. The licensee's request is prompted by the requirement the reactor be shutdown and a major shield plug be removed in order to perform this test. Instead of performing the test within the prescribed 24 month period (which expires March 19, 1986), the licensee proposes to perform the test during a refueling outage which is expected to commence within a few weeks following the March 19th date (between April 15 and May 15, 1986).

### III.

In support of this request the licensee states the twenty-four month test interval is based on exposure to service conditions for a period of that duration, and that due to plant outages, and conduct of the power ascension program during this initial fuel cycle, the "O" ring seals have not been exposed to the normal service operating environment for the full two year period. The licensee estimates the cumulative duration of outages and reduced power operation (resulting in a less severe operating environment since the last test in 1984) is approximately six months. Based on this, the licensee states a test concurrent with the Spring 1986 refueling outage would satisfy the intent of the two year interval specified in Appendix J.

As for the timing of the Spring 1986 outage, the licensee states it is difficult to predict exactly when the facility will shutdown for the planned refueling because an effort is made to coordinate operations with those of the Bonneville Power Administration (BPA). BPA operations, however, are affected by hydroelectric capacity - and this in turn is influenced by Spring runoff conditions. Nonetheless, taking into account the uncertainties, the licensee estimates the refueling outage would commence sometime between April 15 and May 15, 1986.

The licensee states that granting the exemption is in the public interest since it would eliminate the need for a special plant outage solely for the leak test, and the attendant loss of power generation capacity during a period of high demand (prior to the Spring runoff). In addition, the licensee states granting the exemption will contribute to the goal of maintaining personnel radiation exposures as low as reasonably achievable.

In reviewing the licensee's basis for this request, it is noted the regulations provide that type B tests "...shall be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than two years." It is thus seen that in addition to prescribing a surveillance interval experience had demonstrated to be appropriate and conservative for these tests, the wording of the regulation was selected based on the typical refueling interval of twelve to eighteen months. The two year limit was included to provide operational flexibility with respect to a nominal 18 month refueling interval, while placing a finite upper limit on that flexibility. The regulations, therefore, are based not only on technical requirements, but also on the normal or typical schedule of an operating facility.

While such a premise is appropriate for plants that have completed one or more operating cycles, it is less appropriate for facilities during the first operating cycle (i.e. prior to the first refueling). This is because such facilities frequently identify problems during the first cycle which require plant shutdown for corrective action; and this, of course, extends the duration of the cycle. Such has been the case for this facility. On December 20, 1983, the facility received an operating license permitting operation at up to 5% of rated thermal power (166 MWt). On March 19, 1984, the licensee completed the type B test of the drywell head "O" ring seals. Amendment No. 1 to the facility license, which permitted full power operation (3323 MWt), was issued on April 13, 1984; and, following completion of the power ascension tests, the facility achieved commercial operation on December 13, 1984. In early 1985, the facility experienced difficulty sustaining full power operation. This was due to vibration problems with one of the reactor recirculation pumps.

Although a refueling outage had originally been planned for the April-May period of 1985, delays experienced during power ascension testing and the power level limit imposed by the problems with one reactor recirculation pump combined to limit the fuel burnup achieved by that date. Therefore, based on the presence of sufficient reactivity in the fuel to permit operation for a substantial additional period without refueling, the licensee postponed the refueling activity. Nonetheless, because significant maintenance was necessary, the licensee initiated a reactor shutdown in early May 1985. This maintenance shutdown continued until June 29, 1985.

Discussions with the licensee indicate consideration was given to performing the type B test of the drywell head "O" ring seals at the time of this maintenance

shutdown. This option, however, was rejected because no other tasks scheduled to be performed during the outage required removal of the shield plug, and because removal of the shield plug and performance of the test at times other than during refueling outages would not be consistent with "as low as reasonably achievable" radiation exposure considerations. Accordingly, the licensee decided to postpone the test until the next refueling outage.

The two month maintenance outage in mid-1985, combined with reduced fuel burnup due to operation at a reduced power level (not exceeding 72%) since that time, however, has now served to extend the possible operating cycle beyond the two year limit. This, of course, has led to the situation which prompts the present exemption request.

The licensee justifies the extension of the test interval by stating:

(1) the two year criterion is based upon expected exposure of components to service conditions for such a period, and (2) that due to extended outages the "O" ring seals have not been exposed to service conditions for this full period. By "service conditions", the licensee is referring to the environmental conditions to which the seal material is exposed during operation of the reactor at power, which may cause the seal material to degrade. These include temperature, pressure, humidity, ionizing radiation, age, etc.

As indicated earlier, the required test interval stated in Appendix J is primarily established based on accumulated operating experience. Further, experience to date has shown such an interval, based on typical refueling outage frequencies, or two years, to be acceptable. In addition, however, it is noted this experience typically involves exposure of the sealing components and materials to full service conditions over the full duration of an operating

cycle. The licensee's request, therefore, is in essence a request that the two year limit be waived and the facility be allowed to perform the leak test following exposure of the seal to full or near-full service conditions for a cumulative duration not exceeding that of a full operating cycle.

Regarding exposure of the seal to service conditions for the full operating cycle, we have examined the monthly operating reports issued by the facility for the period from initial criticality through November, 1985. This examination indicates the reactor generated 20,581 GWh of thermal energy during this 20-month period. This is approximately 47% of the 43,694 GWh of thermal energy that theoretically could have been generated if the reactor had operated at full power for 18 months, or 56% of the energy that could have been generated at full power in fifteen months. From the fact the reactor has generated less than half the thermal energy possible under existing regulatory limits (based on 18-months of full power operation), it is clear the seals theoretically could be exposed to full service conditions for an additional nine months of full power operation without exceeding the exposure permitted by the regulations. More realistically, even allowing for fifteen months of full power operation in an 18-month operating cycle, 6.6 months of full power operation would remain before reaching the service conditions possible with 15 months of operation. It is noted that this additional 6.6 months of operation (measured from December 1985) would allow operation until mid-May, 1986. Based on the present limit on reactor power (72% - a value which is unlikely to be changed prior to refueling), the plant could actually operate through July, 1986 before equalling the exposure to service conditions associated with fifteen months of full power operation.

Based on the above considerations, the Commission concludes permitting the licensee to postpone the type B test of the drywell head "O" ring seals beyond the normal twenty-four month limit specified in Appendix J until a refueling outage scheduled to commence no later than May 15, 1986, will not subject the drywell head "O" ring to service conditions more severe than those already permitted by the regulations.

Because requiring literal conformance with the two year test requirement of Appendix J in this instance would cause a loss of electrical power generating capacity during a period of high demand (prior to the spring runoff), we also conclude granting the requested exemption is in the public interest.

Finally, because requiring literal conformance with the two year test requirement would cause personnel radiation exposure not required by technical considerations of safety, we conclude granting the requested exemption conforms to the Commission's policy of maintaining radiation exposures as low as reasonably achievable.

#### IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, this exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(iii), are present justifying the exemption, namely that application of the regulation in the particular circumstances would result in undue hardship and other costs that are significantly in excess of those contemplated when the regulation was adopted and that are significantly in excess of those incurred by others similarly situated. If the plant were forced to shut-

down by March 19, 1986, solely to comply with the Appendix J regulation, an undue hardship and financial burden would result from the loss of power generation during a period of high demand (prior to the spring runoff) that would be significantly in excess of that contemplated when the regulation was adopted. When the regulation was adopted, it was contemplated that the testing would be accomplished during the normally anticipated and scheduled refueling outages. Since the Commission has previously granted similar exemptions, e.g. Browns Ferry Unit 2, Brunswick Unit 1, and TMI Unit 1 under similar circumstances, the cost and hardship imposed on WNP-2 by failing to grant the exemption would be considerably in excess of that incurred by others similarly situated. Therefore the Commission hereby approves the following exemption request:

With respect to the type B test of the drywell head "O" ring seals at the subject facility, which, pursuant to the regulations, is due to be performed no later than March 19, 1986, exemption is granted from the provision of Section III.D.2 of Appendix J to 10 CFR 50 requiring such tests to be performed at intervals not greater than two years. The exemption is granted subject to the following conditions:

- (1) The licensee is to commence shutdown for the first refueling outage no later than May 15, 1986, and
- (2) The licensee is to perform this test prior to startup following the first refueling outage.

It is further determined the exemption does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. In light of this determination and as reflected in the Environmental Assessment and Finding of No Significant

Impact prepared pursuant to 10 CFR 51.2 and 51.30 through 51.32, it is concluded the instant action is insignificant from the standpoint of environmental impact and an environmental impact statement need not be prepared.

For further details with respect to this action, see the licensee's request dated January 17, 1986, which is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Richland Public Library, Swift and Northgate, Richland, Washington 99352. Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this Exemption will have no significant impact on the environment (51 FR 8258 dated March 10, 1986).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert M. Bernero, Director  
Division of BWR Licensing  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland  
this 18 day of March , 1986.



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

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

DOCKET NO. 50-397

WPPSS NUCLEAR PROJECT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

License No. NPF-21  
Amendment No. 21

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by the Washington Public Power Supply System, (the Supply System or licensee) dated January 17, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's Rules and 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 regulation;
  - D. The issuance of this amendment will not be inimical to the common defense and security or 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, Facility Operating License No. NPF-21 is amended to revise the Technical Specifications as indicated in the attachment to this amendment, and paragraph 2.C.(2) of Facility Operating License 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. 21, 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.

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3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Elinor G. Adensam, Director  
BWR Project Directorate No. 3  
Division of BWR Licensing

Enclosure:  
Changes to the Technical  
Specifications

Date of Issuance: ~~MAR 18 1968~~

ATTACHMENT TO LICENSE AMENDMENT NO. 21

FACILITY OPERATING LICENSE NO. NPF-21

DOCKET NO. 50-397

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains a vertical line indicating the area of change.

Remove Page

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Insert Page

3/4 6-4

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- d. Type B and C tests shall be conducted with gas at  $P_a$ , 34.7 psig,\* at intervals no greater than 24 months\*\* except for tests involving:
  - 1. Air Locks
  - 2. Main steam line isolation valves,
  - 3. Valves pressurized with fluid from a seal system,
  - 4. ECCS and RCIC containment isolation valves in hydrostatically tested lines which penetrate the primary containment, and
  - 5. Purge supply and exhaust isolation valves with resilient seals.
- e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- f. Main steam line isolation valves shall be leak tested at least once per 18 months.
- g. Leakage from isolation valves that are sealed with fluid from a seal system may be excluded, subject to the provisions of Appendix J, Section III.C.3, when determining the combined leakage rate provided the seal system and valves are pressurized to at least  $1.10 P_a$ , 38.2 psig, and the seal system capacity is adequate to maintain system pressure for at least 30 days.
- h. ECCS and RCIC containment isolation valves in hydrostatically tested lines which penetrate the primary containment shall be leak tested at least once per 18 months.
- i. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE per Surveillance Requirements 4.6.1.8.2 and 4.6.1.8.3.
- j. The provisions of Specification 4.0.2 are not applicable to 24-month or  $40 \pm 10$ -month surveillance intervals.

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\*Unless a hydrostatic test is required per Table 3.6.3-1.

\*\*The 24 month type B test of the drywell head "O" rings is deferred until the first refueling outage but not later than May 15, 1986.



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

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

1.0 INTRODUCTION

By letter dated January 17, 1986, the Supply System requested an exemption to the 10 CFR Part 50 Appendix J regulations on an amendment to the WNP-2 Technical Specifications. The exemption would permit postponement of the type B leak test of the drywell cover "O" ring seal until the reactor is shutdown for the first refueling outage. A corresponding revision to the surveillance requirements, Section 4.6.1.2, of the facility Technical Specifications was requested.

2.0 EVALUATION

The safety evaluation is contained in Section III of the Exemption document which is attached.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation of a facility component located within the restricted area as defined in 10CFR Part 20. The 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 this amendment involves no significant hazards consideration and there has been no public comments on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10CFR Section 51.22(c)(9). Pursuant to 10CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Per 10 CFR 50.92 a proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from an accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The licensee has evaluated this request and determined that it does not:

- (1) involve a significant increase in the probability or consequences of an accident previously evaluated because, due to outages and the power ascension test program completion during the two year period, there were six months in which the "O" rings were not exposed to an operating environment; or
- (2) create the possibility of a new or different kind of accident from an accident previously evaluated because no new designs or plant operating modes are affected by this amendment; or
- (3) involve a significant reduction in a margin of safety because, as discussed in (1) above, the total time of operation under the amended technical specifications will not exceed that of the Appendix J requirement, i.e. 24 months.

Based on considerations of the three criteria given above, the Commission has made a determination that the amendment request involves no significant hazards consideration.

#### 5.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register on March 10, 1986 (51 F.R. 8258). No public comments were received. Consultation with the State of Washington was conducted by telephone on March 13, 1986. The State of Washington had received the Supply System's request for amendments, had reviewed it and has no comment.

Due to exigent circumstances in that the plant would have been forced to shutdown solely for the purpose of performing the surveillance tests which have been deferred by this amendment, the Commission shortened the comment period from the 30-days usually granted for filing of comments. The Commission finds that the exigent circumstances were not attributable to the licensee, in that its application was timely filed on January 17, 1986. The NRC staff, however, was unable to process it in the normal time period.

We have 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; and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Gerald B. Zwetzig

Dated: MAR 18 1986

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of

WASHINGTON PUBLIC POWER  
SUPPLY SYSTEM  
(WPPSS Nuclear Project No. 2)

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Docket No. 50-397

EXEMPTION

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II.

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### III.

In support of this request the licensee states the twenty-four month test interval is based on exposure to service conditions for a period of that duration, and that due to plant outages, and conduct of the power ascension program during this initial fuel cycle, the "O" ring seals have not been exposed to the normal service operating environment for the full two year period. The licensee estimates the cumulative duration of outages and reduced power operation (resulting in a less severe operating environment since the last test in 1984) is approximately six months. Based on this, the licensee states a test concurrent with the Spring 1986 refueling outage would satisfy the intent of the two year interval specified in Appendix J.

As for the timing of the Spring 1986 outage, the licensee states it is difficult to predict exactly when the facility will shutdown for the planned refueling because an effort is made to coordinate operations with those of the Bonneville Power Administration (BPA). BPA operations, however, are affected by hydroelectric capacity - and this in turn is influenced by Spring runoff conditions. Nonetheless, taking into account the uncertainties, the licensee estimates the refueling outage would commence sometime between April 15 and May 15, 1986.

The licensee states that granting the exemption is in the public interest since it would eliminate the need for a special plant outage solely for the leak test, and the attendant loss of power generation capacity during a period of high demand (prior to the Spring runoff). In addition, the licensee states granting the exemption will contribute to the goal of maintaining personnel radiation exposures as low as reasonably achievable.

In reviewing the licensee's basis for this request, it is noted the regulations provide that type B tests "...shall be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than two years." It is thus seen that in addition to prescribing a surveillance interval experience had demonstrated to be appropriate and conservative for these tests, the wording of the regulation was selected based on the typical refueling interval of twelve to eighteen months. The two year limit was included to provide operational flexibility with respect to a nominal 18 month refueling interval, while placing a finite upper limit on that flexibility. The regulations, therefore, are based not only on technical requirements, but also on the normal or typical schedule of an operating facility.

While such a premise is appropriate for plants that have completed one or more operating cycles, it is less appropriate for facilities during the first operating cycle (i.e. prior to the first refueling). This is because such facilities frequently identify problems during the first cycle which require plant shutdown for corrective action; and this, of course, extends the duration of the cycle. Such has been the case for this facility. On December 20, 1983, the facility received an operating license permitting operation at up to 5% of rated thermal power (166 MWt). On March 19, 1984, the licensee completed the type B test of the drywell head "O" ring seals. Amendment No. 1 to the facility license, which permitted full power operation (3323 MWt), was issued on April 13, 1984; and, following completion of the power ascension tests, the facility achieved commercial operation on December 13, 1984. In early 1985, the facility experienced difficulty sustaining full power operation. This was due to vibration problems with one of the reactor recirculation pumps.

Although a refueling outage had originally been planned for the April-May period of 1985, delays experienced during power ascension testing and the power level limit imposed by the problems with one reactor recirculation pump combined to limit the fuel burnup achieved by that date. Therefore, based on the presence of sufficient reactivity in the fuel to permit operation for a substantial additional period without refueling, the licensee postponed the refueling activity. Nonetheless, because significant maintenance was necessary, the licensee initiated a reactor shutdown in early May 1985. This maintenance shutdown continued until June 29, 1985.

Discussions with the licensee indicate consideration was given to performing the type B test of the drywell head "O" ring seals at the time of this maintenance

shutdown. This option, however, was rejected because no other tasks scheduled to be performed during the outage required removal of the shield plug, and because removal of the shield plug and performance of the test at times other than during refueling outages would not be consistent with "as low as reasonably achievable" radiation exposure considerations. Accordingly, the licensee decided to postpone the test until the next refueling outage.

The two month maintenance outage in mid-1985, combined with reduced fuel burnup due to operation at a reduced power level (not exceeding 72%) since that time, however, has now served to extend the possible operating cycle beyond the two year limit. This, of course, has led to the situation which prompts the present exemption request.

The licensee justifies the extension of the test interval by stating:

(1) the two year criterion is based upon expected exposure of components to service conditions for such a period, and (2) that due to extended outages the "O" ring seals have not been exposed to service conditions for this full period. By "service conditions", the licensee is referring to the environmental conditions to which the seal material is exposed during operation of the reactor at power, which may cause the seal material to degrade. These include temperature, pressure, humidity, ionizing radiation, age, etc.

As indicated earlier, the required test interval stated in Appendix J is primarily established based on accumulated operating experience. Further, experience to date has shown such an interval, based on typical refueling outage frequencies, or two years, to be acceptable. In addition, however, it is noted this experience typically involves exposure of the sealing components and materials to full service conditions over the full duration of an operating

cycle. The licensee's request, therefore, is in essence a request that the two year limit be waived and the facility be allowed to perform the leak test following exposure of the seal to full or near-full service conditions for a cumulative duration not exceeding that of a full operating cycle.

Regarding exposure of the seal to service conditions for the full operating cycle, we have examined the monthly operating reports issued by the facility for the period from initial criticality through November, 1985. This examination indicates the reactor generated 20,581 GWh of thermal energy during this 20-month period. This is approximately 47% of the 43,694 GWh of thermal energy that theoretically could have been generated if the reactor had operated at full power for 18 months, or 56% of the energy that could have been generated at full power in fifteen months. From the fact the reactor has generated less than half the thermal energy possible under existing regulatory limits (based on 18-months of full power operation), it is clear the seals theoretically could be exposed to full service conditions for an additional nine months of full power operation without exceeding the exposure permitted by the regulations. More realistically, even allowing for fifteen months of full power operation in an 18-month operating cycle, 6.6 months of full power operation would remain before reaching the service conditions possible with 15 months of operation. It is noted that this additional 6.6 months of operation (measured from December 1985) would allow operation until mid-May, 1986. Based on the present limit on reactor power (72% - a value which is unlikely to be changed prior to refueling), the plant could actually operate through July, 1986 before equalling the exposure to service conditions associated with fifteen months of full power operation.

Based on the above considerations, the Commission concludes permitting the licensee to postpone the type B test of the drywell head "O" ring seals beyond the normal twenty-four month limit specified in Appendix J until a refueling outage scheduled to commence no later than May 15, 1986, will not subject the drywell head "O" ring to service conditions more severe than those already permitted by the regulations.

Because requiring literal conformance with the two year test requirement of Appendix J in this instance would cause a loss of electrical power generating capacity during a period of high demand (prior to the spring runoff), we also conclude granting the requested exemption is in the public interest.

Finally, because requiring literal conformance with the two year test requirement would cause personnel radiation exposure not required by technical considerations of safety, we conclude granting the requested exemption conforms to the Commission's policy of maintaining radiation exposures as low as reasonably achievable.

#### IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, this exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(iii), are present justifying the exemption, namely that application of the regulation in the particular circumstances would result in undue hardship and other costs that are significantly in excess of those contemplated when the regulation was adopted and that are significantly in excess of those incurred by others similarly situated. If the plant were forced to shut-

down by March 19, 1986, solely to comply with the Appendix J regulation, an undue hardship and financial burden would result from the loss of power generation during a period of high demand (prior to the spring runoff) that would be significantly in excess of that contemplated when the regulation was adopted. When the regulation was adopted, it was contemplated that the testing would be accomplished during the normally anticipated and scheduled refueling outages. Since the Commission has previously granted similar exemptions, e.g. Browns Ferry Unit 2, Brunswick Unit 1, and TMI Unit 1 under similar circumstances, the cost and hardship imposed on WNP-2 by failing to grant the exemption would be considerably in excess of that incurred by others similarly situated. Therefore the Commission hereby approves the following exemption request:

With respect to the type B test of the drywell head "O" ring seals at the subject facility, which, pursuant to the regulations, is due to be performed no later than March 19, 1986, exemption is granted from the provision of Section III.D.2 of Appendix J to 10 CFR 50 requiring such tests to be performed at intervals not greater than two years. The exemption is granted subject to the following conditions:

- (1) The licensee is to commence shutdown for the first refueling outage no later than May 15, 1986, and
- (2) The licensee is to perform this test prior to startup following the first refueling outage.

It is further determined the exemption does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. In light of this determination and as reflected in the Environmental Assessment and Finding of No Significant

Impact prepared pursuant to 10 CFR 51.2 and 51.30 through 51.32, it is concluded the instant action is insignificant from the standpoint of environmental impact and an environmental impact statement need not be prepared.

For further details with respect to this action, see the licensee's request dated January 17, 1986, which is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Richland Public Library, Swift and Northgate, Richland, Washington 99352. Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this Exemption will have no significant impact on the environment (51 FR 8258 dated March 10, 1986).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert M. Bernero, Director  
Division of BWR Licensing  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland  
this 18 day of March , 1986.



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

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

DOCKET NO. 50-397

NOTICE OF ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.D.2.(a) to the Washington Public Power Supply System (WPPSS or the licensee), holder of Facility Operating License No. NPF-21 which authorizes operation of the WPPSS Nuclear Project No. 2 (WNP-2 or the facility). The facility is a boiling water reactor and is located in Benton County, Washington.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action: The exemption from 10 CFR 50, Appendix J, Section III.D.2.(a) would allow the licensee to delay the performance of a type B leak test on the drywell head "O" ring seals for not more than two months beyond the two year frequency established by Appendix J.

The Need for the Proposed Action: The exemption is needed to avoid the requirement of a special plant shutdown prior to March 19, 1986, for the sole purpose of performing this test. Such a shutdown would come at a time when there is a high demand for the electric output from the facility (prior to the spring runoff) and would result in plant personnel receiving greater radiation exposure than if the test were delayed till the next refueling outage (scheduled to commence not later than May 15, 1986).

Environmental Aspects of the Proposed Action: There are no environmental impacts of the proposed action. The proposed exemption involves a change in

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the installation or use of the facility's components located within the restricted areas as defined in 10 CFR Part 20. The staff has determined that the proposed exemption 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. As indicated above, it is expected that granting the exemption will result in a reduction in cumulative occupational exposure.

With regard to potential non-radiological impacts, the proposed exemption involves systems located entirely within the restricted area as defined in 10 CFR Part 20. It does not affect non-radiological plant effluents and, by allowing better management of hydroelectric resources may have a positive environmental impact. Therefore, the Commission concludes there are no significant adverse non-radiological environmental impacts associated with the proposed exemption.

Alternative to the Proposed Action: We have concluded there is no measurable adverse environmental impact associated with the proposed exemption. The principal alternative would be to deny the requested exemption. This would not reduce the environmental impacts of plant operation.

Alternative Use of Resources: This action does not involve the use of resources not previously considered in connection with the "Final Environmental Statement Related to the Operation of WPPSS Nuclear Project No. 2" dated December 1981.

Agencies and Persons Consulted: The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

FINDINGS OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for the proposed exemption.

Based on the foregoing environmental assessment, we conclude the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see the request for exemption dated January 17, 1986, which is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C., and at the Richland Public Library, Swift and Northgate, Richland, Washington 99352.

Dated at Bethesda, Maryland this 4<sup>th</sup> day of March 1986.

FOR THE NUCLEAR REGULATORY COMMISSION

*Elinor G. Adensam*

Elinor G. Adensam, Director  
BWR Project Directorate No. 3  
Division of BWR Licensing  
Office of Nuclear Reactor Regulation