

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING EXEMPTION FROM 10CFR 50.44 AND

AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE NO. NPF-21

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

RICHLAND, WASHINGTON

WPPSS NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

Introduction

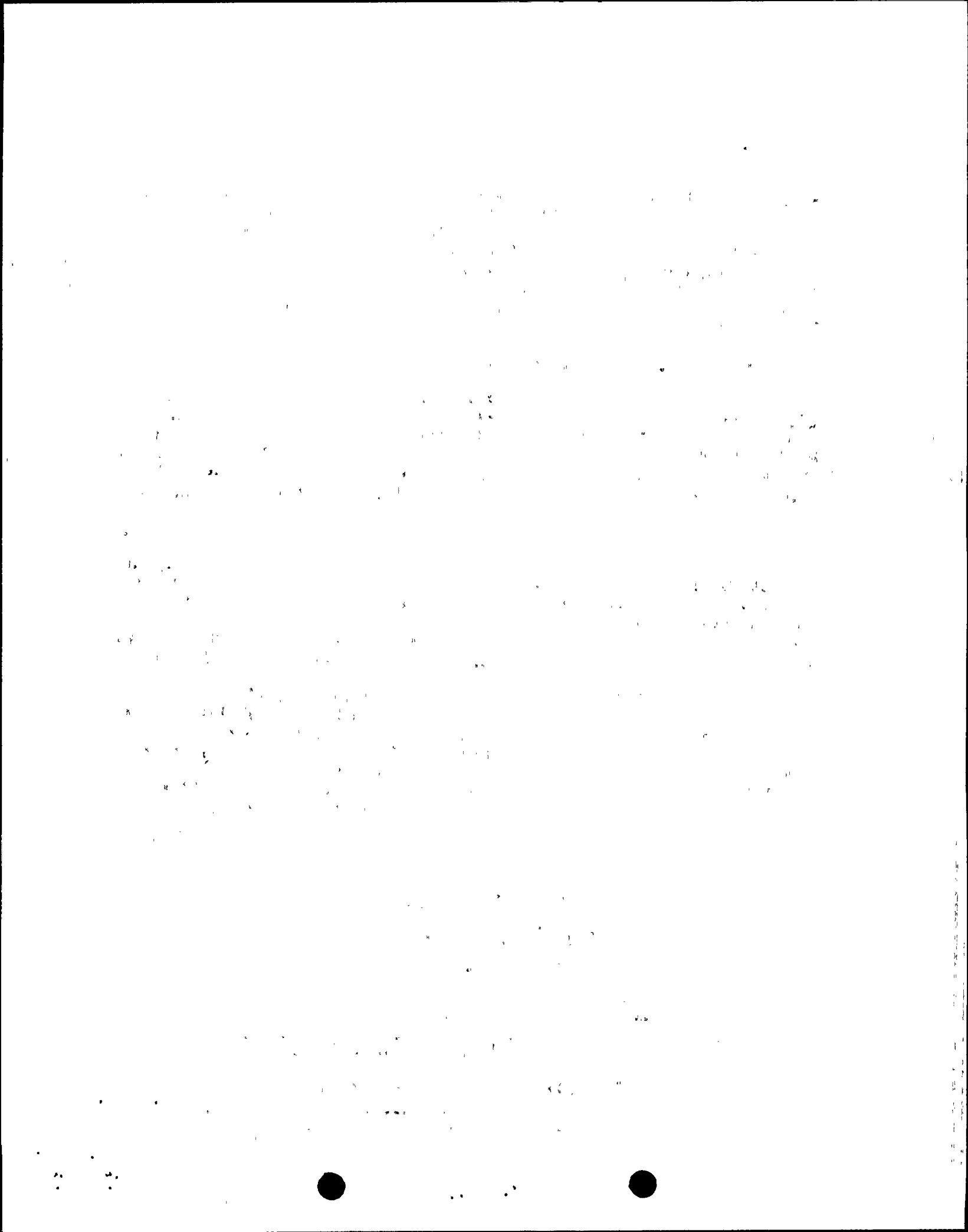
Inerting the containment for the WNP-2 plant is required by 10 CFR 50.44 (revised) and by the plant's Technical Specifications. In 10 CFR 50.44, "Standards for Combustible Gas Control System in Light Water Cooled Power Reactors," Section 50.44 (c).(3).(i) states in part that, "Effective May 4, 1982 or 6 months after initial criticality, whichever is later, an inerted atmosphere shall be provided for each boiling light-water nuclear power reactor with a Mark I or Mark II type containment."

Additionally, the currently effective Technical Specifications for the WNP-2 plant includes a requirement for the plant to be operated with an inerted containment. However, provision 3.10.5 of these Technical Specifications (special test requirement) suspends the inerting requirement during the performance of the startup test program until six months after initial criticality.

Evaluation

Since WNP-2 achieved its initial criticality on January 19, 1984, the plant is required to be inerted by July 19, 1984, per the 10 CFR 50.44 requirement set forth above. By its letter dated May 11, 1984, the licensee requested a temporary exemption from the requirement of 10 CFR 50.44 so that it may continue operating the plant with a non-inerted containment during the balance of the initial startup test program as originally planned.

The proposed change to Technical Specification Section 3.10.5 and an exemption from the regulation is required in order to complete the balance of the power ascension test program (PATP) in accordance with the licensee's test plan. The licensee's test plan is based on maintaining the containment in a non-inerted condition until after completing the 100% rated thermal trip test, a condition which normally would be expected to occur within about 120 effective full power days of core burn-up. No changes are being made in the maximum full power days of core burn-up normally expected before inerting is required. In fact to assure this, the maximum expected value of 120 effective full power days is made part of the proposed action. The licensee's PATP



schedule has not been maintained as originally planned. This has resulted in a simple stretch out of the time required to complete all post criticality PATP tests.

It is advantageous to operate the reactor without inerting during the PATP, as an uninerted containment would permit unscheduled inspections or identification of possible problems important to safety during this period. The anticipated high frequency of containment entries during the PATP period and the required deinerting and re-inerting time (about 24 hours) would tend to discourage early and frequent containment entries for identifying and correcting any potential safety problems before they become serious safety problems.

Further, the NRC staff believes that to now require inerting before the PATP tests have been completed could result in less assurance of safety, because of the added time and/or decreased ability to directly examine and evaluate components and systems inside containment while the PATP tests are under way. Completing the PATP tests with an uninerted containment (exemption granted) then would reduce the likelihood of development of an event requiring protective safety actions both during the period of exemption and later. Because of the low level of fission product inventory during the PATP period, (less than 10 effective full power days at present increasing to the maximum of only 120 FPD) and the short duration anticipated for the exemption (until about September 1984), there is an extremely low likelihood that the inerting system would be required. The inerting system is now fully operable and ready for service if needed.

Based on the information provided by the licensee and the staff's assurance that the remainder of the PATP tests will be performed in essentially the same manner as originally planned with respect to the magnitude and duration of power levels for each remaining PATP test. The NRC staff concludes that there will be no increase in the risks of operation through completion of the PATP tests with the proposed limited exemption regarding initial inerting over the risks that were contemplated for the duration of the PATP tests at the time the plant was licensed. Therefore, since there is no perceived increase risk by the mere fact of extending the time allowed for completion of the PATP tests under uninerted conditions, the NRC staff finds that operation would be as safe under the conditions proposed by the exemption as it would have been had the test been completed in the shorter calendar time of six months after initial criticality.

After the containment has once been inerted, inspection personnel entering the containment after it has then been deinerted may be in some danger, because of the possibility that non-breathable nitrogen pockets may remain if the operator fails to initiate the mixing system. These risks are minimized during normal plant operation. However, during PATP, the risk is greater due to the large number of personnel entries into the containment.

The inerting requirement resulted from a staff judgement that the safety benefits attributable to having an inerted containment during normal operations outweighed the associated disadvantages. This judgement does not prevail during the PATP because of the need for frequent containment entries

for inspection and surveillance purposes. The staff has reviewed the licensee's submittals, agrees with the statements, and finds that the proposed exemption from 10 CFR 50.44, paragraph (c)(3)(i) is acceptable.

As set forth in the Commission's decision in Shoreham (Long Island Lighting Company) (Shoreham Nuclear Power Station, Unit 1), CLI-84-8 (May 16, 1984), the Commission regards the use of the exemption authority under 10 CFR § 50.12 as extraordinary. The availability of an exemption requires a finding of exigent circumstances that favor the granting of an exemption. Pursuant to the Commission's Shoreham decision, a determination as to whether exigent circumstances warrant an exemption should include a consideration of the stage of the facility's life, any financial or economic hardships, any internal inconsistencies in the regulation, the applicant's good faith effort to comply with the regulation from which an exemption is sought, the public interest in adherence to the Commission's regulations, and the safety significance of the issue involved.

With regard to the stage of the facility's life, WNP-2 construction is complete and the PATP is in progress, with a commercial operation declaration scheduled for September 1984. Absent the requested exemption and consequent authorization to continue the PATP with deinerted containment atmosphere, access to containment will be severely restricted. Frequent containment entries are required during PATP to adjust control systems, calibrate instruments and monitor containment conditions as the plant ascends in power. Without the requested exemption, considerable delay to deinert and reinert before and after containment entries will be encountered. At this point in the PATP, to require inerting would significantly extend the time to complete the PATP and, therefore, delay commercial operation. The stage of the facility's life would appear to favor issuance of the exemption.

With regard to financial or economic hardship, the licensee projects commercial operation for September 1984. Absent the requested exemption, several delays in the PATP can be expected for containment entries. As noted above, such delays would extend the commercial operation date. Due to the Pacific Northwest power distribution system, actual costs lost due to a delay in commercial operation are difficult to determine but are estimated to be \$500,000 for each day's delay in commercial operation. In these circumstances, denial of the requested exemption would appear to have a significant financial and economic impact. On the other hand, the staff has identified no financial or economic hardships which would result if the exemption were granted. Financial and economic considerations appear to favor issuance of the exemption.

No internal inconsistencies in the regulation are apparent and in this instance, this factor appears to weigh neither in favor or nor against a finding of exigent circumstances and issuance of the requested exemption.

As to good faith efforts, the installation and acceptance testing of the Nitrogen Inerting System has been completed and the system is ready for service if needed. The licensee states that the regulatory requirement from which exemption is sought anticipated that power ascension test programs could be completed within six months and consequently the core fission product inventory that would build up over the life of the program was acceptable. While the regulation contemplated a six month period, typical BWR



programs have proven to actually require an average of 330 days. With this simple stretch in time, no significant increase in core inventory occurs and the same effective core history is experienced. Accordingly, for the reasons stated above, frequent containment entries, and the potential danger to the health and safety of plant operators, the staff agrees with the licensee that the containment should remain deinerted until completion of the PATP. In this instance the licensee has made a bona fide effort to comply, and is able and ready to do so if safety considerations warrant compliance. Therefore, the equities lie in favor of granting the exemption.

Notice of Consideration of Issuance of Amendment and Opportunity for Prior Hearing in connection with the action involving this exemption to the regulations was published in the Federal Register on June 18, 1984 (49 FR 24957). No request for hearing or petition for leave to intervene was filed following this notice. One letter, dated July 13, 1984, was received from Mr. Larry Caldwell in response to this Federal Register Notice. He objected to the proposed changes and exemption stating in part, "Any increment of safety for the public, be it ever so small, should supersede the 'speed and convenience' these proposed changes and exemptions would provide..." As stated above, there is no adverse increment of safety in the proposed action. On the contrary, not to grant the action proposed would be denying the licensee the advantages of permitting prompt containment entries for early identification and correction of any potential safety problems that might arise during this initial power ascension test program.

Finally, while the public interest favors adherence to the Commission's regulations, the staff has concluded that in this instance, where an exemption from compliance with 10 CFR 50.44 for containment inerting has no adverse safety significance (as noted above). Therefore, the granting of this exemption will have no effect on the public health and safety and will also efficient and expeditious testing of facility components and systems, and should therefore be granted.

In accordance with the Commission's directions in Shoreham then, taking into account the equities of the situation, the staff finds that those equities weigh in favor of granting the requested exemption. In sum, the staff finds, based on the status of the facility PATP, the potential for adverse economic impacts absent an exemption, the licensees good faith efforts at compliance with the regulation and lack of adverse safety significance or any detriment to the public interest from granting the requested exemption, that exigent circumstances exist which favor the granting of an exemption under 10 CFR § 50.12(a).

Based on the foregoing, conditioned as noted, and in accord with the Commission's decision on Shoreham, CLI-84-8, and 10 CFR 50.12(a), the staff has concluded that the exemption from the requirements of 10 CFR 50.44 paragraph (c).(3).(i) as discussed above is authorized by law, will not endanger life or property or the common defense and security and is otherwise in the public interest.

This amendment involves an exemption from the requirement of 10 CFR 50.44 in addition to the change to the Technical Specification, Special Test



Requirement 3.10.5. Because an exemption is involved, this amendment does not meet the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.21, an environmental assessment and finding of no significant impact was prepared in connection with the issuance of this amendment and published in the Federal Register on July 24, 1984 (49 FR 29885).

Conclusion

With respect to this amendment, we have concluded, based on the considerations discussed above, that, there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and 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 of to the health and safety of the public.

Dated:

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| LB#2/DL | CSB/DSI | LB#2/DL |
| RAuluck:dh | WButler | ASchwencer |
| 07/ 26/84 * | 07/23/84 * | 07/26/84 * |

*See previous concurrence.

