



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NO. NPF-21

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WPPSS NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

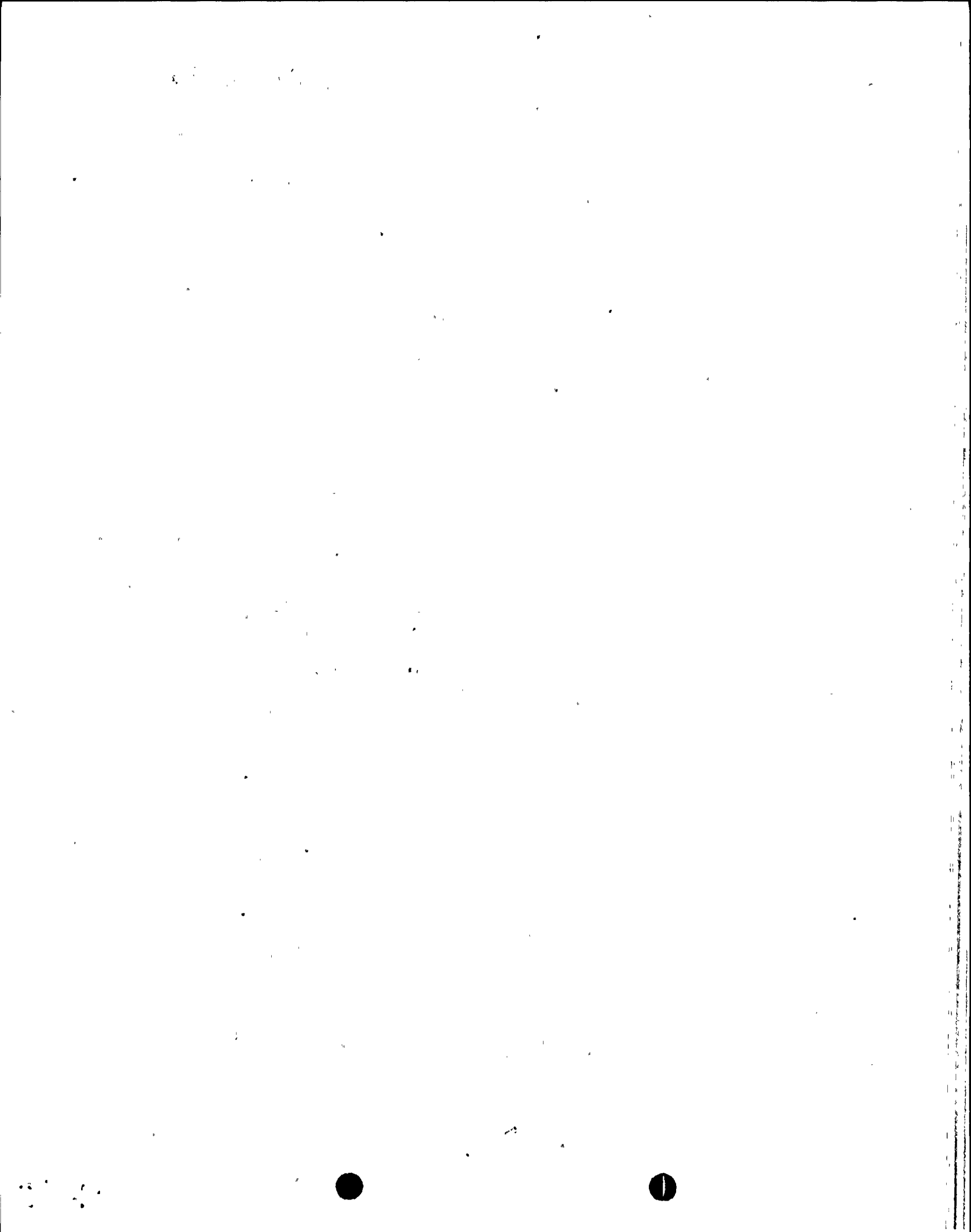
1.0 INTRODUCTION

Attachment 2, Paragraph 3.(a) of License Condition 2.C.(16) of the WNP-2 Operating License NPF-21, now requires that the licensee shall implement (install or upgrade) requirements of Regulatory Guide 1.97, Rev. 2, with the exception of flux monitoring, prior to startup following the first refueling outage. By letter dated March 28, 1986, the Supply System requested that implementation of this Regulatory Guide requirement be delayed until the second refueling outage for two specific systems: Suppression Pool Level Monitoring and Post Accident Sampling System. On May 8, 1986, the Supply System withdrew its request to delay implementation of the Regulatory Guide requirements for the Post Accident Sampling System. This evaluation, therefore, relates only to the Suppression Pool Level Monitoring System.

Prior to initial plant startup, the licensee installed a suppression pool water level monitoring system (wide range) to satisfy the requirements of GDC 13 and 19 as discussed in Regulatory Guide (R.G.) 1.97, Revision 2. Suppression pool water level is considered to be a Type C Category 1 variable.

The level monitoring system was custom built for WNP-2 and was designed with the objective to function both in normal and postulated accident environments. Thus it was expected that the wide range level monitoring system would perform the required safety function for post-accident monitoring and thus was considered qualifiable. The WNP-2 operating license was conditioned (License Condition No. 2.C(16)) to require that the wide range level instrumentation undergo environmental qualification testing to verify its operability under the expected post-accident environmental conditions. It was further required that this verification program be completed prior to startup after the first refueling outage. Subsequently, the licensee initiated a test program to verify the design accuracy capability of the system. During the test phase, excessive instrument drift (beyond design specifications) was noted while conducting temperature cycling tests. Two separate tests were conducted to resolve the drift problem with the equipment. Both tests proved unsuccessful. The licensee has abandoned any further efforts to qualify the currently installed instrumentation. The licensee has provided information by letter dated March 28, 1986, and May 7, 1986, requesting a deferral (i.e., until second refueling outage) of License Condition No. 2.C(16), Attachment 2, Item 3(a) as related to this issue. The staff's evaluation of this information follows.

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## 2.0 EVALUATION

The licensee is considering alternate designs that will employ qualified instruments to preclude the above described situation from reoccurring. The staff has been informed through discussions with the licensee that the level monitoring system presently being procured consists of a nitrogen bubbler system and signal conditioning instrumentation all of which has been identified as qualified instrumentation based on existing qualification data. Also, as an alternative to the bubbler system, the licensee is considering a resistance temperature detector (RTD) arrangement at various levels and a differential pressure transmitter using the RCIC suction line as a variable leg.

The licensee has stated that procurement of materials and installation of the new design cannot be accomplished within the present refueling outage schedule (restart scheduled for May 20, 1986). Given temporary relief from the requirement, the licensee proposes to utilize the currently installed wide range suppression pool level monitoring instrumentation until the second refueling outage (scheduled for spring of 1987). The licensee has verified that this additional time would support the required instrument procurement schedules (currently forecasted for January 1987) to obtain a fully qualified system. The installed wide range channels have accurately indicated suppression pool level since installation and are currently indicating within three (3) inches of one another and the narrow range instrumentation, which is qualified, at a suppression pool temperature of 70°F.

As discussed above, the temperature qualification testing performed by Wyle Laboratories resulted in channel inaccuracies that were outside the range of required design specifications. However, the test data have been reviewed by the licensee to substantiate and quantify the error as a result of temperature increases. The Wyle Laboratories data were obtained at 20°F intervals over a range of 70° to 270°F (worst-case temperature expected for suppression pool level instrumentation). The results indicate a 2% drift of full range per 20°F temperature increase. The licensee has committed to incorporate a curve into the emergency procedures to account for the error that would be expected due to temperature increases from 70°F (normal operating conditions). This curve shall be implemented prior to startup from the first refueling which is currently underway. This implementation will require verification by the WNP-2 Resident Inspector prior to plant startup.

Based on the above evaluation, the staff accepts the licensee's proposal to utilize the currently existing wide range suppression pool level monitoring system for continued interim operations. This acceptance is based on first



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cycle operational performance of the currently installed wide range level indicating channels, conservative application of the test data, addition of correction curve to emergency procedures (to be verified by the Resident Inspector), and the licensee's commitment to install a fully qualified wide range level indicating system at the second refueling outage.

### 3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation and use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that this 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 comment on such finding. Accordingly, this 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 this amendment.

### 4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (51 FR 15418) on April 23, 1986, and consulted with the state of Washington. No public comments were received, and the state of Washington did not have any comments.

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 Contributor: Robert W. Steven, NRR

Dated: May 23, 1986

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