



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-21

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WPPSS NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

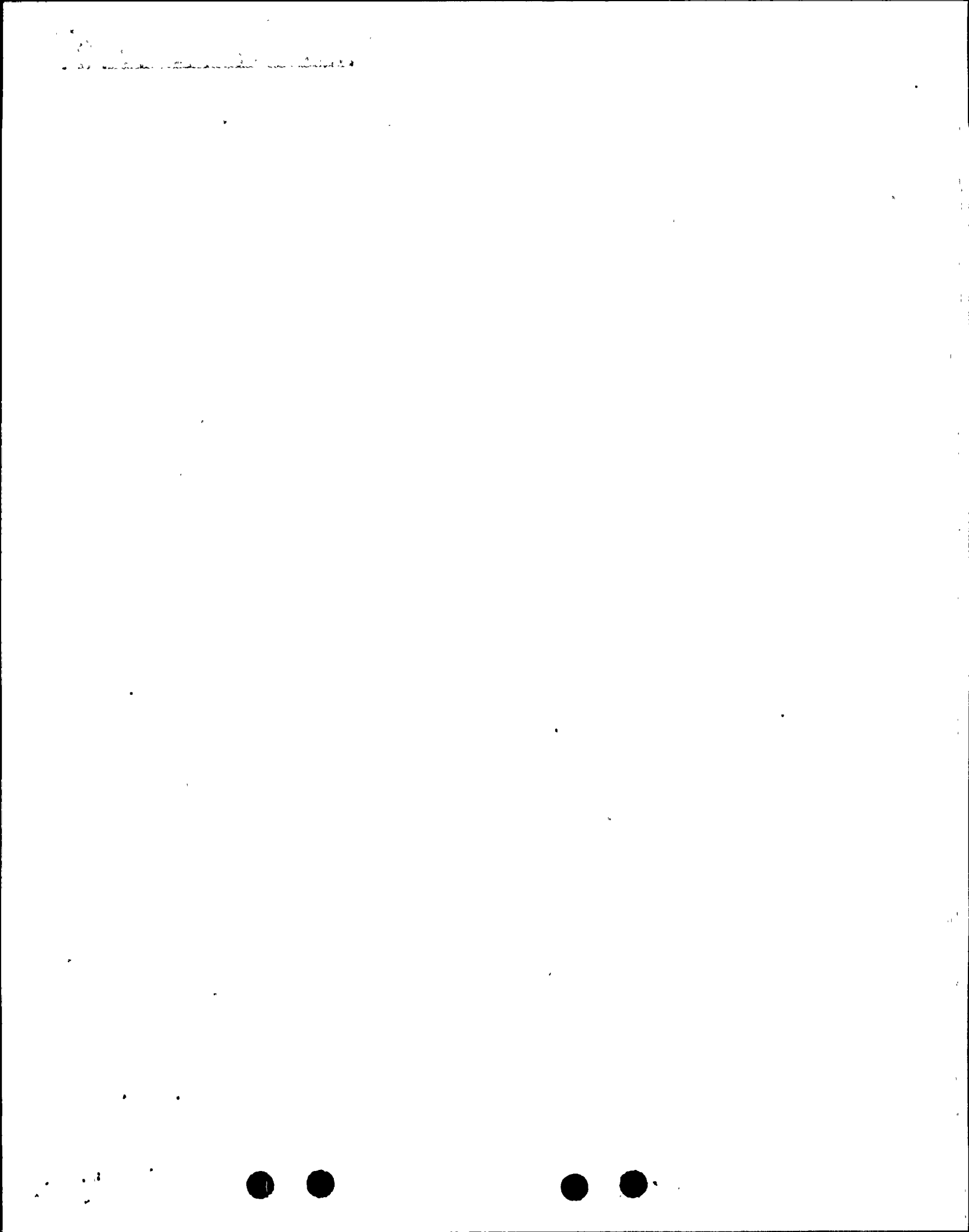
1.0 INTRODUCTION

By letter dated April 8, 1986, as clarified by letter dated November 20, 1986, the Washington Public Power Supply System (WPPSS) submitted an application to amend Washington Nuclear Project, Unit 2 (WNP-2) License NPF-21. The request involves the deletion of the chlorine detection system due to permanent plant changes involving the elimination of chlorine gas storage from the site. As a result, the licensee has concluded that the threat to control room habitability due to chlorine gas incapacitation has been eliminated.

2.0 EVALUATION

Chlorine gas previously was stored on the WNP-2 site for use in circulating water chemical treatment. Hence, in order to meet the guidance of Regulatory Guide 1.95, Revision 1, "Protection of Nuclear Power Plant Control Room Operators Against An Accidental Chlorine Release", the control room was equipped with redundant quick response chlorine detectors with provision for automatic isolation. This provision ensured control room habitability following a chlorine release on site. WPPSS has recently changed the circulating water treatment system to a system using sodium hypochlorite. As a result, chlorine gas is no longer used and is no longer stored on the WNP-2 site. Hence, the WNP-2 chlorine detection system is no longer needed to ensure control room habitability in the event of a chlorine gas release.

Other nuclear facilities located within a five mile radius of WNP-2 are the DOE's Fast Flux Test Facility (located 2.7 miles SSW of WNP-2) and the WPPSS's deferred WNP-1 Project (located one mile ESE of WNP-2). Neither of these facilities stores chlorine gas; therefore neither represents a threat to the control room habitability at WNP-2. Chlorine gas is used at several Department of Energy (DOE) facilities on the Hanford site at distances beyond five miles. The primary destination (and primary areas of use) from which chlorine is distributed to other facilities is the 100-N Area located 18 miles NW of WNP-2. Prior to July 1983, chlorine was transported to the 100-N Area on flatbed rail cars, each loaded with 15 1-ton cylinders. Shipment frequency was one carload every 4-6 months. At its closest approach, the railroad is about 750 ft. from the control room air intake (and about 90 ft. lower) on the east side of the plant. Since mid-1983, chlorine has been transported to the 100-N Area by truck and trailer in the same quantities and frequencies as before. Two or three times per year a single fuel



cylinder is trucked from the 100-N Area to the 300 Area located 7.5 miles SSE of WNP-2. The truck route passes 1.5 miles to the SW. In the future, shipments to 100-N Area could be either by truck or rail. On the basis of the licensee-described DOE purchase agreement and anticipated usage, the upper limits of quantity and frequency of chlorine shipments in the vicinity of WNP-2 appears to be as follows: northbound - 15 1-ton cylinders four times per year (by truck or rail); southbound - a 1-ton cylinder four times per year (by truck). These shipment frequencies are within the guidelines of Regulatory Guide 1.78.

On the basis of our review, the staff finds that the hazard represented by chlorine gas stored on site has been eliminated because of the change to a water purification system using sodium hypochlorite. There is no other facility within a five mile radius of the WNP-2 site that stores chlorine gas on site. In addition, the quantity and the frequency of chlorine gas shipments in the WNP-2 vicinity are within the guidelines of Regulatory Guide 1.78. Therefore, the staff concludes that the licensee's proposed amendment to WNP-2 Technical Specification for the deletion of the chlorine detection system is acceptable.

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 and changes in surveillance requirements. 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 32281) on September 10, 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.

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Dated: January 21, 1987

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