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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 2 TO FACILITY OPERATING LICENSE NO. NPF-41

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 1

DOCKET NO. STN 50-528

Introduction

By letter dated August 5, 1985, the Arizona Public Service Company (APS) on behalf of itself, the Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, El Paso Electric Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), requested changes to the Technical Specifications (Appendix A to Facility Operating License NPF-41) for the Palo Verde Nuclear Generating Station, Unit 1. The August 5, 1985 letter requests a one time exception to Technical Specifications 3.4.1.2, 3.4.1.3 and 3.7.1.6 for approximately 24 hours to permit the conduct of the Natural Circulation Cooldown Test during the power ascension test program.

Discussion

Palo Verde Unit 1 is currently conducting its power ascension test program. Included in the program is the Natural Circulation Cooldown Test, which will be initiated from the 80% power level.

In its August 5, 1985 letter request, APS states that during the performance of the Natural Circulation Cooldown Test, the reactor coolant pumps must be de-energized for a period of time which is longer than the one hour allowed by the Limiting Condition for Operations in Technical Specifications 3.4.1.2 and 3.4.1.3. Also, the Atmospheric Dump Valves (ADVs) will be powered from their backup power sources during the testing in order to demonstrate compliance with BTP RSB 5-1. In addition, the surveillance requirements of Technical Specification 3.7.1.6 for the nitrogen accumulator tank pressure cannot be met during the performance of the test.

In order to be able to perform the Natural Circulation Cooldown Test, APS has requested a one-time exception to Technical Specifications 3.4.1.2, 3.4.1.3 and 3.7.1.6 for approximately 24 hours, and has identified certain compensatory measures to be taken during the test in a new proposed Technical Specification 3.10.9. These measures include:

(1) suspending operations involving a reduction in the boron concentration of the Reactor Coolant System,

(2) maintaining the core outlet temperature at least 10°F below the saturation temperature,

(3) not starting a reactor coolant pump with one or more of the Reactor Coolant System cold leg temperatures less than or equal to 255°F during cooldown, or 295°F during heatup, unless the secondary water temperature (saturation temperature corresponding to steam generator pressure) of each steam generator is less than 100°F above each of the Reactor Coolant System cold leg temperatures, and

(4) determining saturation margin by continuous monitoring or by calculations at least once every 30 minutes.

APS states that a natural circulation type of event has been previously evaluated in the accident analyses sections of the FSAR. Also, similar exceptions have been granted to other facilities (San Onofre and Diablo Canyon) for the purpose of performing a natural circulation cooldown test.

Evaluation

The staff has evaluated the licensees' request and concurs with APS that this one-time exception to the Technical Specifications will not create the possibility for an accident or malfunction of a different type than any evaluated previously in the FSAR since the previous analyses envelop the range of operating conditions expected during the Natural Circulation Cooldown Test. Also, during the conduct of the test, the reactor will be shutdown in either Mode 3 or Mode 4, and the reactor coolant pumps and all safety related equipment required for plant cooldown will be made available for use. In addition, the test will be closely monitored by plant operators and would be terminated in accordance with the criteria set forth in the test procedure.

The staff has also reviewed the compensatory measures to be placed into effect during the conduct of the test and finds them to be appropriate.

Therefore, the staff concludes that the one-time exception to Technical Specifications for the purpose of conducting the Natural Circulation Cooldown Test is acceptable.

Contact with State Official

The Arizona Radiation Regulatory Agency has been advised of the proposed determination of no significant hazards consideration with regard to this request for one-time exception to the Technical Specifications. No comments were received.

Environmental Considerations

The staff has determined that the amendment 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. Having made this determination, the staff has further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Part 51.5(d)(4), that an environmental impact statement, or a negative declaration and environmental impact appraisal, need not be prepared in connection with the issuance of this amendment.

Conclusion

The staff 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: October 31, 1985

ISSUANCE OF AMENDMENT NO. 2 TO FACILITY OPERATING
LICENSE NPF-41 FOR PALO VERDE UNIT 1

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