



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 174 TO

FACILITY OPERATING LICENSE NO. NPF-6

ENERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

1.0 INTRODUCTION

By letter dated April 4, 1995, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Arkansas Nuclear One, Unit 2 (ANO-2) Technical Specifications (TSs). The requested changes would combine TS surveillance requirements and extend the interval between the combined surveillances. Existing surveillance specifications require cycling the high pressure turbine stop valves and the low pressure turbine combined stop and intercept valves once every 7 days. A separate surveillance specification requires cycling the high pressure turbine stop valves and control valves and the low pressure turbine combined stop and intercept valves every 31 days. The requested change combines the two surveillance requirements and extends the interval between the combined surveillance to 92 days.

2.0 EVALUATION

The turbine overspeed protection system is designed to prevent the main turbine-generator (MTG) rotating assembly from attaining a catastrophic overspeed condition. If this condition were to exist, the turbine could mechanically fail and generate potentially damaging missiles which might impact and damage safety related components, equipment or structures. This system is comprised of both a mechanical overspeed trip device and a backup electric overspeed trip device. Both devices function by dumping electro-hydraulic oil pressure from the stop, control and combined stop and intercept valve actuators allowing them to cycle closed upon the MTG reaching the overspeed trip setpoint.

The ability of the turbine valves to close is verified by performing a periodic surveillance test which cycles each valve fully closed, one at a time. The main stop valves and the combined stop and intercept valves are currently tested weekly. The licensee has stated that this test impacts the operation of ANO-2 by creating steam flow imbalances during the stop valve cycles, which need to be compensated for by the main feedwater system, and load swings during the cycling of the combined stop and intercept valves. The turbine control valves are currently tested on a monthly frequency. At ANO-2, a reduction in MTG load is necessary to close the #3 and #4 control valves until there is sufficient capacity available to compensate for the cycling of

the control valves. The typical load reduction required for this surveillance is approximately 100 megawatts. Once the load reduction is complete, the load control must be transferred which can cause MTG load swings and secondary system instability.

The licensee has requested a change in the surveillance frequency of the above tests to require performance at least once per 92 days. The proposed changes have been requested in accordance with NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," and Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation." The licensee stated in its April 4, 1995, submittal, that the proposed test frequency has been endorsed by the vendor, General Electric (GE), in Technical Information Letter (TIL) 969-3 R1, "Periodic Turbine Steam Valve Test-Nuclear Steam Turbines," dated December 27, 1993. TIL 969-3 R1 states, "Specifically, this revised recommendation permits a valve test interval of three months for 1) units having all monoblock (integral) turbine rotors, ..." The ANO-2 MTG is equipped with monoblock turbine rotors.

In addition to relaxing the test frequency of the turbine valves, the revised surveillance specifies, "direct observation of the movement" of these valves as necessary to demonstrate operability. The licensee has stated that direct observation is currently required during the performance of the monthly surveillance and is procedurally required for the weekly surveillance.

The staff has reviewed the proposed changes and finds them acceptable based upon the fact that the changes conform to the guidance provided in GL 93-05 and NUREG-1366. The administrative changes contained in this amendment consist of renumbering surveillance requirement 4.3.4.1.2 due to the consolidation of requirements a. and b. into one test. The remaining surveillance requirements, 4.3.4.1.2.c. and d. were moved to page 3/4 3-58 and page 3/4 3-59 was deleted.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arkansas State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding

(60 FR 35069). Accordingly, the 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 the amendment.

5.0 CONCLUSION

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

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Date: December 22, 1995