



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 107 TO FACILITY OPERATING LICENSE NO. DPR-64

POWER AUTHORITY OF THE STATE OF NEW YORK

INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

DOCKET NO. 50-286

1.0 INTRODUCTION

On December 20, 1989, the Power Authority of the State of New York (the licensee), submitted an application for amendment to the Technical Specifications (TS) for the Indian Point Nuclear Generating Unit No. 3. The proposed changes to Table 4.1-1 and to the Bases applicable to Section 4.1 would allow extension of surveillance intervals for channel operational tests of the Reactor Protection System (RPS) instrumentation and Engineered Safety Features System (ESFS) instrumentation from a 1-month interval to a 3-month interval. The proposed changes to the Bases associated with Section 3.5 would allow routine analog channel testing in a bypassed condition instead of a tripped condition.

2.0 EVALUATION

2.1 Extension of the surveillance intervals for channel operational tests of the RPS and ESFS instrumentation from 1 month to quarterly.

In justifying the request for extending the RPS and ESFS instrumentation surveillance intervals, the licensee states that the specified surveillance intervals have been determined in accordance with WCAP-10271 (Reference 1), WCAP-10271, Supplement 1 (Reference 2), and WCAP-10271, Supplement 2, Revision 1 (Reference 3), which were approved by the NRC (References 4 and 5). As stated in the licensee's submittal, several conditions were imposed by the NRC to allow use of WCAP-10271 for amending technical specifications. The licensee's responses to these conditions are discussed in this section.

- a. The licensee must implement procedures to identify common cause failures and to test other channels that may be affected by the common cause.

The licensee has committed to modify their procedures prior to the institution of quarterly testing, to require an evaluation for common cause failure should any RPS or ESFS channel fail during its quarterly test. Additional testing of other channels in the function will be performed if a determination is made that a plausible common cause exists. The staff finds this commitment to be acceptable.

- b. The instrument setpoint methodology must include sufficient adjustments to offset the drift anticipated as a result of less frequent surveillances.

The licensee based their justification for the extended surveillance intervals on the results of an evaluation of Indian Point 3 plant instrument drift data. The staff requested that the licensee perform a statistical analysis of the drift data to ensure that the data is representative of longer term instrument performance.

The licensee examined a sample of "as found" and "as left" RPS and ESFS test data that were gathered over a period of 12 months. The 12-month period was recommended by the vendor, Westinghouse, and has been accepted by the staff. The licensee analyzed the data sample to ensure the instrumentation drift data is within the required tolerances specified in the licensee's TS. Based on the results of the evaluations, the licensee concludes that the instrumentation drift will remain within the TS allowances for the entire extended surveillance interval (the licensee will retain their analyses for possible future NRC staff audit). The licensee's conclusions are acceptable to the staff.

- c. The licensee shall confirm the applicability of the generic WCAP-10271 analyses to the Indian Point 3 plant.

Indian Point 3 does not have a completely installed bypass capability and has not adopted the Westinghouse Standard Technical Specifications. Nevertheless, the licensee concurs with the Westinghouse studies (References 1, 2 and 3) and the proposed TS changes. The licensee does not concur with the suggested increase (to 6 hours) in the time an inoperable channel may remain untripped. Current plant "Off Normal Operating Procedures" require that the bistables for an instrument channel be tripped following an instrument failure. The licensee states that this is a more conservative action with regard to safety system availability than allowing an inoperable channel to remain untripped for up to 6 hours. The staff finds the licensee's conclusion acceptable.

Additionally, the licensee states that the Westinghouse analog channel fault tree analysis assumes that more than one channel will be tested at a time. The licensee states that the plant TS allows testing only one channel at a time, which is also more conservative than the Westinghouse assumption. The staff concurs.

2.2 Analog Channel Testing in Bypass Mode.

The licensee requested staff concurrence allowing routine analog channel testing in a bypassed condition instead of a tripped condition. The licensee states the plant does not have full bypass testing capability, although there is a commitment to implement hardware changes in the future that would allow this testing capability. The licensee further commits that only those instruments whose hardware capability does not require the lifting of leads

or installing of jumpers will be routinely tested in bypass. The staff concurs with these commitments, and agrees that the lifting of leads and the use of jumpers should be avoided.

The licensee had also proposed to correct a typographical error in Section 4.1 under "Testing." A letter "N" was mistakenly typed instead of the letter "M" as the last letter in the denominator of the equation. This proposed correction was included in the proposed TS change noticed in the Federal Register (55FR6115) on February 21, 1990. However, this error has previously been corrected per Amendment No. 97, issued on April 26, 1990.

3.0 SUMMARY

The staff accepts the licensee's justification for extending the monthly surveillance intervals to a quarterly frequency. The staff finds that routine analog channel testing with the channel in a bypassed condition instead of a tripped condition is acceptable. The staff also concurs with the licensee's statement that the testing of only one channel at a time per TS is more conservative than the Westinghouse assumption.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to surveillance requirements. The 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 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.

5.0 CONCLUSION

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 (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.

6.0 REFERENCES

- 1) WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," January 1983.
- 2) WCAP-10271, Supplement 1, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," July 1983.
- 3) WCAP-10271 Supplement 2, Revision 1, "Evaluation of Surveillance Frequencies and Out of Service Times for the Engineered Safety Features Actuation System," March 1987.
- 4) Letter from Mr. C. O. Thomas (NRC) to Mr. J. J. Sheppard (WOG), dated February 21, 1985, enclosing NRC Safety Evaluation for WCAP-10271 including Supplement 1.
- 5) Letter from Mr. C. E. Rossi (NRC) to Mr. R. A. Newton (WOG-WEPC), dated February 22, 1989, enclosing NRC Safety Evaluation for WCAP-10271 Supplement 2, and WCAP-10271 Supplement 2, Revision 1.

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