



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 156 TO FACILITY OPERATING LICENSE NO. DPR-63

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION UNIT NO. 1

DOCKET NO. 50-220

1.0 INTRODUCTION

In a submittal dated January 24, 1995, Niagara Mohawk, the licensee for Nine Mile Point Unit 1 (NMP1) proposed to revise the Technical Specifications (TSs) 3.4.1, "Leakage Rate" and the Associated Bases to revise the Reactor Building leakage rate from 2000 cfm to 1600 cfm. The licensee indicated that this change is being proposed based on Reactor Building and Reactor Building Emergency Ventilation System (RBEVS) design. On March 29, 1992, it was determined that Surveillance Test N1-ST-C5, "Secondary Containment and Reactor Building Emergency Ventilation System Operability Test" did not meet TS surveillance requirements for Reactor Building leakage rate (Section 4.4.1). Licensee Event Report (LER) 92-06 was written to address the inconsistency between the TS and other design documents. Procedure N1-ST-C5 was revised to require the use of the more conservative 1600 cfm leakage rate to address the corrective action of the LER.

2.0 EVALUATION

The Reactor Building is designed for a maximum in-leakage of 100% of the building volume per day at 0.25 inch of water internal vacuum under zero or low wind conditions and the RBEVS is designed to maintain that vacuum. In performing the associated surveillance test, the building is completely isolated except for the outlet through the emergency ventilation system. The system is then placed in operation and the RBEVS flow adjusted to 1600 cfm. The building differential pressure must be greater than -0.25 inches water gauge referenced to 0 mph wind speed.

The licensee stated that the 2000 cfm Reactor Building in-leakage was a preliminary flow rate used to size the RBEVS. The equipment is rated/designed for that limit with the exception of the filters which have design flow of 1600 cfm. The exhaust dampers limit the flow to approximately 1600 cfm based upon the controller settings. A calculation for the Reactor Building volume has determined the volume to be 2,137,000 cubic feet of air space. The calculation has accounted for floors, columns, rooms, major structures and also allowed for a 10% volume reduction due to equipment, piping and other miscellaneous items. Based on this volume, an emergency ventilation fan flow rate of 1484 cfm would be necessary for one volume change in 1 day. Hence, a



leakage rate of 1600 cfm upon which the radiological analysis is based, now appropriately reflects the actual building volume. Past tests have demonstrated building tightness at a pressure of 0.25 inches water gauge vacuum at flow rates less than 1600 cfm. Each train of the RBEVS is designed for a minimum flow equal to one building air change per day at 0.25 inches water gauge vacuum. Surveillance Test Procedure N1-STS-C5 for RBEVS operability test limits flow to less than or equal to 1600 cfm. Therefore, the proposed change to the Reactor Building in-leakage rate from 2000 cfm to 1600 cfm is consistent with system design, is more conservative and has no adverse effect on the radiological consequences since the radiological analysis does not assume any exfiltration.

Based on the above, the staff finds the proposed change in Reactor Building in-leakage from 2000 cfm to 1600 cfm in Specification 3.4.1 and the Associated Basis acceptable because it is consistent with system design and reflects the leakage rate associated with approximately one building volume change per day and has no adverse effect on radiological consequences. The lower Reactor Building leakage specification more closely reflects the staff's SRP 6.2.3 position that secondary containment leakage be limited to less than 100% of the volume per day.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York 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. 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 11134). 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



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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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