



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 72 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. DPR-74
INDIANA AND MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT UNIT NOS. 1 AND 2
DOCKET NOS. 50-315 AND 50-316

Introduction

By letter dated April 14, 1983, Indiana and Michigan Electric Company requested Radiological Effluent Technical Specification changes to Facility Operating License Nos. DPR-58 and DPR-74. The subject changes involve Sections 3.3.3.10 and 3.11.2.5 of the Technical Specifications for Unit Nos. 1 and 2. The licensee has proposed to amend Section 3.3.3.10 of the Technical Specifications by changing Table 3.3-13, as follows:

- (a) Provide for operation of the waste gas holdup system for up to 30 days (rather than the present 14 days) with less than two oxygen monitors operable.
- (b) Include for clarity the term "Unit Vent" in the heading to read "Unit Vent, Auxiliary Building Ventilation System," since the Auxiliary Building Ventilation System is part of the Unit Vent System.
- (c) Clarify the ACTION regarding sampling and analysis when iodine sampler cartridges and particulate samplers are not operable to indicate only sampling and analysis of charcoal samples and particulate samples, respectively, of the auxiliary building vent.

Section 3.11.2.5 of the Technical Specifications provides requirements concerning the concentrations of oxygen and hydrogen in the waste gas holdup system. The specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Maintaining the concentration of hydrogen and oxygen below the flammability limit provides assurance that the release of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

Evaluation

The model Radiological Effluent Technical Specifications (RETS) described in NUREG-0472 are based on systems that meet the requirements of the Standard Review Plan (SRP), NUREG-0800. The Donald C. Cook Nuclear Plant Explosive Gas Monitoring Systems does not meet the requirements of SPR 11.3 of NUREG-0800 for dual hydrogen analyzers with automatic control functions to preclude the formation or buildup of explosive hydrogen-oxygen mixtures. Therefore, Technical Specification 3.11.2.5 and the part of Technical Specification 3.3.3.10 that addresses the Explosive Gas Monitoring System are designed to afford a degree of protection against a hydrogen-oxygen explosion similar to the provisions of the model RETS described in NUREG-0472.

Technical Specification 3.11.2.5 provides that the concentration in the waste gas holdup system is to be limited at all times to less than or equal to 2% oxygen if the hydrogen in the system is greater than or equal to 4% by volume, and that if the concentration in the waste gas holdup system is outside this limit the concentration is to be reduced to within this limit within 48 hours. If the concentration of either hydrogen or oxygen is kept below a concentration of .4% by volume, any gas mixture within the system will be below the flammability limit. The proposed change to Technical Specification 3.11.2.5 would limit the concentration in the waste gas holdup system to less than or equal to 3% oxygen by volume if the hydrogen in the system is greater than or equal to 4% by volume. This provides a margin between 3% and 4% oxygen by volume outside the flammability limit. The proposed change to Technical Specification 3.11.2.5 would also provide that if the concentration in the waste gas holdup system is outside the limit, the concentration is to be reduced to within the limit within 96 hours rather than within 48 hours.

Technical Specification 3.3.3.10 provides, in part, that the waste gas holdup system may be operated for up to 14 days with less than two oxygen monitors operable, but that with no oxygen monitor operable grab samples must be taken and analyzed every 12 hours. The proposed change to Technical Specification would allow for operation of the waste gas holdup system as described above for 30 days rather than for 14 days. With the proposed limit, as determined under the proposed amendment by operable hydrogen and oxygen monitors or with no operable hydrogen or oxygen monitor, the prescribed periodic sampling and analysis, adequate protection is afforded against a hydrogen-oxygen explosion and assurance is provided that the release of radioactive materials will be controlled in conformance with the requirements of General Design Criteria 60 of Appendix A to 10 CFR Part 50.

The other proposed amendments to Section 3.3.3.10 are for clarification only.

Summary

In view of the above considerations, we have concluded that the proposed amendment to Sections 3.3.3.10 and 3.11.2.5 of the Technical Specifications for Unit Nos. 1 and 2 are acceptable.

Environmental Consideration

We have determined that the amendments do 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, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: April 25, 1983

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