



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 104 TO FACILITY OPERATING LICENSE NO. DPR-50

METROPOLITAN EDISON COMPANY
JERSEY CENTRAL POWER AND LIGHT COMPANY
PENNSYLVANIA ELECTRIC COMPANY
GPU NUCLEAR CORPORATION

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-289

INTRODUCTION

By letters dated June 1, 1984, as revised and supplemented July 11, August 2 and September 11, 1984, the licensee has submitted Technical Specification (TS) Change Request No. 135 requesting a change to the TSs for Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit 1 (TMI-1).

The proposed amendment would revise Tables 3.21-2 and 4.21-2, and Section 3.22.2 of the TSs, that relate to the allowable concentration of hydrogen and oxygen in the waste gas holdup system and the associated hydrogen/oxygen monitoring instrumentation. The proposed amendment would remove the current limit on oxygen content provided that the hydrogen content is below 4% and would remove the current limit on hydrogen content provided that the oxygen content is below 2%. The proposed TSs would require two hydrogen monitors and two oxygen monitors to assure compliance with the proposed hydrogen and oxygen limits; the proposed TSs also include action statements to be followed if the hydrogen or oxygen limits are exceeded and operability requirements for the monitors.

EVALUATION

The objective of the Standard Radiological Effluent Technical Specifications (NUREG-0472) regarding hydrogen and oxygen monitoring and concentrations is 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 to prevent an explosion that could rupture the system. Maintaining the concentration of hydrogen and oxygen below their flammability limits assures the integrity of the waste gas holdup system and therefore 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.

The proposed specifications regarding the number of hydrogen and oxygen monitor channels required to be operable, and limits on concentrations of hydrogen and oxygen in the waste gas holdup system are consistent with the Standard Radiological Effluent Technical Specifications and, therefore, are acceptable.

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The proposed sampling and analysis requirements for operation during monitoring channel inoperability are consistent with the requirements of the Standard Radiological Effluent Technical Specifications and, therefore, are acceptable.

The proposed actions to be taken if the minimum operability requirement is not met differ from the Standard Radiological Effluent Technical Specifications in that operation of the waste gas holdup system is allowed if an inoperable hydrogen or oxygen channel is not restored to service within 14 days, provided that a special report is submitted to the NRC Regional Administrator describing the cause of monitor inoperability, the action being taken to restore the instrument to service, and the action to be taken to prevent recurrence. In regard to this, the proposed specification provides a level of protection against the uncontrolled release of radioactive materials which is equivalent to the level of protection afforded by the Standard Radiological Effluent Technical Specifications.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. This amendment also relates to changes in recordkeeping, reporting, or administrative procedures or requirements. We have 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) and (10). 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.

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 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: February 4, 1985

The following NRC personnel have contributed to this Safety Evaluation:
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