



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

SAFETY EVALUATION
AMENDMENT NO. 4 TO NPF-13
GRAND GULF NUCLEAR STATION, UNIT 1
DOCKET NO. 50-416

Introduction

The licensee proposed changes to the License for Grand Gulf Unit 1 which are as follows:

- a) Technical Specification 3/4.6.5, Drywell Post-LOCA Vacuum Breakers (MP&L letter dated July 2, 1982; Additional information in MP&L letters dated June 10, 1982 and August 5, 1982). A new license condition, 2.C.(46) was also requested.
- b) Technical Specification Table 3.8.4.1-1, Molded Case Circuit Breaker Response Time (MP&L letter dated September 13, 1982).

Evaluation

a) Drywell Post-LOCA Vacuum Breakers

During preoperational testing of the vacuum breaker check valves, the lever arms and contact-type switches associated with the position indication system interfered with the functioning of the valves and were removed. By letter dated July 2, 1982, Mississippi Power and Light (MP&L) proposed revisions to their Technical Specifications pertaining to the removal of the position indicators from the check valves located in the Post-LOCA Vacuum Relief System and the Drywell Purge Systems. A total of six check valves are affected: 2 valves in the Post-LOCA Vacuum Relief System and 2 valves in each of the two redundant Drywell Purge Systems.

Justification for the proposed change to the Technical Specifications was contained in MP&L's letters dated June 10, 1982, July 2, 1982 and August 5, 1982. Removal of the position indication on the check valves can be substantiated based on potential drywell bypass leakage considerations. In both the Post-LOCA Vacuum Relief System and the Drywell Purge System, there is in series with the check valves, a motor operated valve (MOV) which is provided with position indication. Assuming both an electrical failure which will cause the MOV to open and failure of one check valve in each of the failed MOV line, the drywell bypass leakage area would be approximately 0.74 square feet. This is less than the drywell bypass leakage area of 0.90 square feet that was determined for the Grand Gulf Nuclear Station in our review of the FSAR. In order to obtain a drywell bypass leakage area of greater than 0.90 square feet, a failure of the MOV and two check valves which are in series would have to be postulated.

Considering the above, we believe that the drywell bypass leakage limit of 0.90 square feet for Grand Gulf would not be exceeded. Even, if one considers failure of five valves (2 check valves and 1 MOV in one line and 1 check valve and 1 MOV in another line), the drywell leakage area would not exceed 1.09 square feet. Due to the low probability of this multiple failure event, we find the proposed changes to the Technical Specifications acceptable for the first cycle of reactor operation.

MP&L intends to provide non-contact type position indication switches on the vacuum breakers check valves at a future date. Switches for this application are currently not available but are expected to be installed during the first regularly scheduled refueling outage. We have added a license condition to require that position indicators with readout and alarm in the control room be provided for the vacuum breaker check valves prior to startup following the first refueling outage. Our basis for this requirement is contained in Section 6.2.1.1.C.III.5 of the Standard Review Plan.

b) Table 3.8.4.1-1, Molded Case Circuit Breaker Response Time

The licensee has requested an increase in the response time to 0.1 seconds for Type NZM circuit breakers. This change revises the fuse types used in the Grand Gulf design. For a worst-case condition, a limiting factor is the heating of a #1/0 penetration pigtail in 0.147 seconds to 250 C. Type NZM molded case circuit breakers will respond within the worst-case condition time limit. Based on NUREG-0588, "Equipment Qualification of Safety-Related Electrical Equipment", the thermal capability of this unit with this response time is within the allowable limits. Therefore, we find the proposed change to the Technical Specification acceptable.

In Amendment No. 3 to the Grand Gulf Operating License dated September 20, 1982, we issued the above safety evaluation for Table 3.8.4.1-1 and the associated revised page 3/4 8-38 in the Technical Specifications to incorporate the accepted fuse types. Inadvertently, the approved revisions for the response time for Type NZM circuit breakers in Section b.2 of Table 3.8.4.1-1 were omitted. These revisions are included in this amendment.

Environmental Consideration

We have determined that this amendment does not authorize a change in effluent types or total amount nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that this amendment involves action which is insignificant from the standpoint of environmental impact, and, pursuant to 10 CFR Section 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 this statement.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: October 14, 1982