SAFETY EVALUATION
AMENDMENT NO. 17 TO NPF-11 AND
AMENDMENT NO. 2 TO NPF-18
LA SALLE COUNTY STATION, UNITS 1 & 2
DOCKET NOS. 50-373 AND 50-374

Introduction

By letter dated May 25, 1984, Commonwealth Edison Company (the licensee) proposed amendments that would change the La Salle Units 1 and 2 Technical Specifications setpoints in Table 3.3.2-2 for primary containment Group 1 isolation main steam tunnel differential temperature 12°F, from $\leq$ 24°F to $\leq$36°F and the corresponding allowable values from $\leq$30°F to $\leq$42°F. High temperature difference between the outlet and inlet ventilation air for the main steam tunnel is monitored by dual element thermocouples to detect a leak in a main steamline. A high temperature difference signal is used to isolate all four main steamlines and the main steamline drain. The isolation trip setpoint should be selected far enough above the differential temperature expected during operation at rated power to avoid spurious isolations, yet low enough to initiate prompt isolation following a steamline leak. The setpoint is selected low enough to detect a 25 gpm leak in the main steamline tunnel.

Evaluation

The isolation setpoint of $\leq$24°F was calculated by Sargent and Lundy, the architect-engineer for the licensee, based on design information rather than actual plant conditions. These calculations were used as the theoretical basis for establishing the Technical Specification setpoint and calculated a normal temperature rise between the inlet air sensors and the outlet air sensors of 6°F. The actual normal (no leakage) differential temperature has been measured as high as 22°F. The differencesbetween the calculated and actual values have been attributed to: (1) lower actual total air flow and a different air distribution in the steam tunnels than used in the original calculation, (2) lower inlet air temperatures to the steam tunnels than originally assumed, and (3) higher heat transfer rates through the main steamline insulation than was used in the original calculations. Sargent and Lundy has performed a reanalysis to determine the proper isolation trip setpoint based on actual plant conditions. The results of this analysis indicate that the main steam tunnel high differential temperature should be set at 36°F with an allowable value of 42°F.

The licensee has stated that the actual differential temperature is so close to the current trip setpoint of 24°F that sufficient margin does not exist to accommodate minor plant ventilation changes or instrument drift without resulting in unnecessary and undesirable spurious isolations. Visual inspections of the steam tunnel have been performed to ensure that no leakage exists. The licensee has experienced problems with spurious single channel trips (half isolations). The licensee, in addition, has stated that the revised differential temperature leak detection setpoint of 36°F will still provide isolation capability for leakage rates at or below 25 gpm.

Based on our review of the licensee's submittal, we conclude that raising the main steam tunnel high differential temperature isolation trip setpoint to

36°F (and corresponding allowable value to 42°F) is necessary to avoid spurious isolations and unnecessary challenges to plant systems, and will still provide early detection and initiate isolation of a steamline leak. The proposed changes to the La Salle Units 1 & 2 Technical Specifications do not change previous staff findings that the main steam tunnel differential temperature instrumentation used to detect and isolate main steamline leaks complies with the criteria listed in Section 7.3 of the Standard Review Plan (NUREG-0800) and, therefore, are acceptable.

Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area. The staff has determined that the amendment involves no significant increase in the amounts of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupation 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 Sec 51.22(c)(9). Pursuant to 10 CFR 51.2(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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: July 03,1984