SAFETY EVALUATION REPORT IPSAR SECTION 4.12.1, THERMAL-OVERLOAD PROTECTION OF MOTOR-OPERATED VALVES DRESDEN UNIT 2

I. INTRODUCTION

The final Integrated Plant Safety Assessment Report (IPSAR) for Dresden Nuclear Power Station Unit 2 (NUREG-0823) concluded that the licensee would evaluate the thermal-overload relays for the motor operator for each engineered safety feature (ESF) valve. If thermal-overload relay setpoints could not be conservatively established, the licensee was to bypass the device.

II. EVALUATION

The licensee provided the results of the evaluation of thermal-overload devices in the Dresden 2 Plant in letters dated November 4, 1983, and January 2, 1985. In particular, the licensee notes that the thermal-overload heaters were resized approximately eight years ago and, since that time, there have not been any motor-operated failures associated with an improperly sized heater (i.e., thermal-overload setpoint).

The staff has reviewed the information submitted by the licensee relative to IEEE Standard 279-1971 and Regulatory Guide 1.106. In the January 2, 1985 letter, the licensee described the thermal-overload heater sizing procedure and provided a sample calculation. Based on that information, the staff concludes that the licensee has a coherent method for sizing thermal-overload heaters such that the trip setpoints are conservative with all uncertainties resolved in favor of completing the safety-related valve function.

III. CONCLUSION

The staff concludes that the licensee has adequately demonstrated that the thermal-overload setpoints (i.e., heater sizing) have been conservatively established such that the associated motor-operated valves will operate as intended under accident conditions. Therefore, the staff considers the issue in IPSAR Section 4.12.1 acceptably resolved.

