



SACRAMENTO MUNICIPAL UTILITY DISTRICT □ P. O. Box 15830, Sacramento CA 95852-1830, (916) 452-3211
 AN ELECTRIC SYSTEM SERVING THE HEART OF CALIFORNIA

JUN 08 1987

GCA 87-089

Frank J. Miraglia, Jr.
 Associate Director for Projects
 U. S. Nuclear Regulatory Commission
 Washington, DC 20555

Docket 50-312
 Rancho Seco Nuclear Generating Station Unit #1
 REG. GUIDE 1.97 PRESSURIZER LEVEL

Dear Mr. Miraglia:

The District has committed to provide pressurizer level in accordance with Reg. Guide 1.97 Category 1 requirements. As part of the pressurizer level instrumentation, the District has provided temperature based density compensation to improve the accuracy of the level indication. However, the temperature instrument loop does not meet the Reg. Guide 1.97 Category 1 requirements, specifically the separation requirements of Reg. Guide 1.75.

Therefore, the District takes exception to these requirements for the temperature based density compensation input to pressurizer level. The District considers this to be an acceptable position because:

- 1) The portions of the temperature instrument loop that do not meet the Reg. Guide 1.75 requirements for separation are a) one dual RTD installed in a single thermowell for both channels and b) approximately 4 feet of common conduit carrying both channels from the terminal block at the RTD head to a common junction box from where the cables and channels are separated.
- 2) The remainder of the circuit is properly separated from the common junction box to the signal isolation cabinets (H4SIA and H4SIB) for signal processing.
- 3) The common RTD head, common conduit and common junction box have been analyzed for HELBA and missiles. The analysis concluded that the RTD head, conduit and junction box would not be affected.

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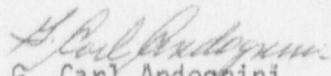
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- 4) The common conduit for both channels is noncombustible and the cables are rated at 600 volts with hypalon fire resistant covering. In addition, these signals are very low energy levels.
- 5) Each RTD is separately powered by channelized isolated power supplies through the RTD transmitter. Therefore, a short between channels would not affect any power sources.
- 6) The pressurizer level and temperature signals are fed to computers through an Anatec multiplexer where the density compensation is performed by a software algorithm. All signals are isolated from each other in the Anatec Multiplexer. Thus, the failure of any signal will not propagate to affect other signals.
- 7) Any failure in the temperature circuit will be alarmed via IDADS in the control room.
- 8) If both temperature channels are lost, the pressurizer level can be calculated using the uncompensated pressurizer level and hot leg or incore temperature. Existing plant procedure A.3 "Pressurizer and Pressurizer Relief" provides direction for doing this calculation. The Operators are trained on its use.

Based on the discussion above, the District considers that the existing design is adequate for providing indication of pressurizer level.

If you have any questions, please contact Robert Roehle of my staff.

Sincerely,


G. Carl Andognini
Chief Executive Officer,
Nuclear

cc: George Kalman, NRC - Bethesda (2)
A. D'Angelo, NRC - Rancho Seco