R. Boyd, Assistant Director for Reactor Projects THRU: S. Levine, Assistant Director for Reactor Technology, DRL 5 V. Moore, Chief

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Instrumentation & Power Technology Branch, DRL

SACRAMENTO MUNICIPAL UTILITY DISTRICT, DOCKET NO. 50-312, QUECTIONS RELATING TO INSTRUMENTATION AND CONTROL

ILPTB: DRL: ODP - RT-478

(8004030568)

2PP.

Please include the following questions among those now in preparation for transmittal to the applicant. The review was performed by Mr. Olan D. Parr of the ILTT Branch.

- 1. The differences between the SMID Station, Beboock & Wilcox designed protection systems which initiate reactor trip and sugineered safety fasture setion the those to be incorplaned in the force Hills Friend Station (Docket 10, 50-289) should be discussed and svaluated. The discussion should include the preliminary design of the complete circuit from sensors to ectuation logic.
- 2. With respect to the reactor protection and engineered safety feature actuation circuits to be designed by other than Babcock and Milcox, the design features which conflict with the proposed IEEE standard for Buclear Power Plant Protection Systems should be identified. Justification for any conflicts should be provided.
- 3. The criterion for the physical identification of the reactor protection and engineered safety feature equipment including penals, components, and cables should be described and evaluated.
- 4. Bescribe and evuluate the changes which will be made in the design of the instrumentation and control systems as a result of the ACRS recommendations contained in the Three Mile Island letter. Include in the discussion:
 - (a) Diversity of engineered safety feature actuation signals.
 - (b) Separation of control and protection systems.
- 5. Identify the instrumentation and electrical equipment which must function in an accident environment. Discuss and evaluate the qualification testing which is necessary to insure that this equipment will function in the combined socident environment of temperature, pressure, and humidity. Your intentions with wassast to abtaining the required data should be discussed.

- R. Joyd
- 6. Where reactor protection and engineered safety feature signals feed annunciators and/or a data logging computer, the design criterion to be used to assure circuit isolation should be described and evaluated.
- 7. The differences between the SMED Station, Babcock and Wilcox designed control systems and those to be incorporated in the Three Mile Island Station (Docket No. 50-289) should be identified and discussed. This discussion should include an evaluation of the safety significance of each system.
- 8. The differences between the SMED Station in-core instrumentation and that to be incorporated in the Three Mile Island Station (Docket Bo. 50-289) should be identified, discussed and evaluated.
- 9. Describe the control room ventilation system and evaluate the need for placing the system automatically in a recirculation mode utilizing an airborne rediction detector which monitors the intake duct.
- co: 8. Levine
 - V. Moore
 - W. Butler
 - D. Kmuth

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