



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

GENERIC IMPLICATIONS OF SALEM ATWS EVENT

GENERIC LETTER 83-28, ITEMS 3.1.1 AND 3.1.2

SAN ONFRE NUCLEAR GENERATING STATION - UNIT 1

DOCKET NO 50-206

1.0 INTRODUCTION

On February 25, 1983, during startup of the Salem Unit 1 plant, both circuit breakers in the Reactor Trip System failed to open automatically upon receipt of a valid trip signal. As a result of that event the NRC's Office of Inspection and Enforcement issued IE Bulletin 83-01 which described the event and requested specified prompt corrective and preventive actions by licensees. As the cause and ramifications of the event were more clearly developed, the NRC's Office of Nuclear Reactor Regulation issued on July 8, 1983, Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events". This letter addressed issues related to reactor trip system reliability and general management capability. The letter was sent to all licensees of operating reactors, applicants for operating licenses and holders of construction permits.

One of the areas of reactor trip system reliability considered in Generic Letter 83-28 (GL 83-28), is that of post-maintenance testing of reactor trip system components. This is identified in GL 83-28 as Items 3.1.1 and 3.1.2. This evaluation addresses the acceptability of the response to these items provided by the Southern California Edison (the licensee) for San Onofre Nuclear Generating Station, Unit 1 (the facility).

2.0 EVALUATION

Items 3.1.1 and 3.1.2 of GL 83-28 state as follows:

- "1. Licensees and applicants shall submit the results of their review of test and maintenance procedures and Technical Specifications to assure that post-maintenance operability testing of safety-related components in the reactor trip system is required to be conducted and that the testing demonstrates that the equipment is capable of performing its safety functions before being returned to service.
- "2. Licensees and applicants shall submit the results of their check of vendor and engineering recommendations to ensure that any appropriate test guidance is included in the test and maintenance procedures or the Technical Specifications, where required."

By letter dated November 28, 1983, the licensee responded to a number of GL 83-28 items, including Items 3.1.1 and 3.1.2. In response to questions raised by the staff, the licensee provided revised and updated information by letter dated July 24, 1985. Regarding Item 3.1.1, the licensee's July 24, 1985 letter states "...all safety-related equipment

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in the reactor trip system is tested following maintenance activity....At the minimum, this post-maintenance testing demonstrates that the equipment operates per design documents and is capable of performing its safety function." Based on these statements, the staff concludes that the licensee has completed the actions requested by Item 3.1.1 and that the licensee's program meets the requirements of this item.

Regarding Item 3.1.2, the licensee's letter of July 24, 1985 states a comprehensive Preventive Maintenance Project has recently (December 1984) been completed. Part of this project included review of vendor and engineering recommendations to assure their incorporation into maintenance procedures. The licensee states this review included reactor trip system components, and that test and maintenance activities have been revised based on the results of this review. The licensee also stated all maintenance procedures for safety-related components undergo a biennial review, which includes checking vendor and engineering recommendations to assure their incorporation in the maintenance procedures. Based on these statements, the staff concludes that the licensee has completed the actions requested by Item 3.1.2.

3.0 CONCLUSION

Based on the licensee's verification that all reactor trip system components are required to be tested following maintenance and that such testing demonstrates the capability of the component to perform its safety function, the staff concludes that the licensee has acceptably satisfied the requests contained in Item 3.1.1 of Generic Letter 83-18.

Based on the licensee's verification that vendor and engineering recommendations have been incorporated in the maintenance procedures for reactor trip system components, the staff concludes that the licensee has acceptably satisfied the request contained in Item 3.1.2 of Generic Letter 83-28.

4.0 ACKNOWLEDGEMENT

This Safety Evaluation was prepared by G. Zwetzig.

Dated: November 4, 1985.