

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Certified by *W. O. Doherty*
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REGION V

Report No. 50-361/81-11

Docket No. 50-361 License No. CPPR-97 Safeguards Group _____

Licensee: Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770

Facility Name: San Onofre Unit 2

Inspection at: San Diego County, California

Inspection conducted: April 17 - May 15, 1981

Inspectors: *Talbert Young Jr. for* *6-23-81*
R. J. Pate, Senior Resident Inspector (San Onofre) Date Signed
Talbert Young Jr. for *6-23-81*
H. L. Canter, Senior Resident Inspector (Rancho Seco) Date Signed

Approved By: *Talbert Young Jr.* *6-23-81*
T. Young, Acting Chief, Reactor Project Section 2, Date Signed
Reactor Operations and Nuclear Support Branch.

Summary:

Inspection on April 17 to May 15, 1981 (Report No. 50-361/81-11)

Areas inspected: Routine, unannounced inspection of Licensee's preoperational test program and procedures, test results and independent inspection effort. The inspection involved 61 inspector-hours on site by two NRC inspectors.

Results: Of the four areas inspected, no items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

a. Southern California Edison Company (SCE)

- * K. A. Slagel, Startup, Management Supervisor
- * D. E. Nunn, Manager, Quality Assurance
- * V. E. Fisher, Supervisor Plant Coordination
- * G. A. Chavez, Project Startup Supervisor
- * M. L. Merlo, Supervisor, Startup Test Engineers
- * P. A. Croy, Site Project Quality Assurance Supervisor
- * D. Stonecipher, Operations QA Supervisor
- C. R. Horton, Startup Quality Assurance Supervisor
- * W. McGhee, Operations Training Administrator
- * V. B. Fisher, Supervisor, Plant Operations

B. Combustion Engineering

- * R. M. Bockhorst, Operations Site Manager

In addition, maintenance craftsmen, startup engineers and foremen were contacted during the inspection.

* Denotes attendees at Management Meeting on May 14, 1981.

2. Plant Status

This licensee reported the Unit 2 construction to be 98% complete as of May 13, 1981. The startup testing program is reported to be approximately 54% complete as of May 13, 1981.

3. Licensee Action on Previous Inspection Finding

The inspector examined the action taken by the licensee on a previous inspector-identified concerns as follows:

a. (Closed) Item of Noncompliance (50-361/81-05/03):

The inspector observed safety related electrical cable on the control room floor being walked on by operations and startup personnel.

The cable was pulled back through the panel and properly protected. The cable was visually inspected and high-pot tested to check for damage due to being bent beyond the minimum bend radius. No damage was found.

Both operating and startup personnel were instructed on the proper treatment of safety related cable.

The corrective action by the licensee appeared to be adequate. The inspector had no additional questions.

b. (Closed) Deviation (50-361/81-05/01)

The inspector observed a startup engineer smoking in a safety related area designated as no-smoking.

The licensee instructed the individual involved and all other startup and construction personnel in the proper observance of designated housekeeping area. The inspector has toured the safety related portions of the plant several times and have not observed any additional deviations from the housekeeping procedures. Therefore, the licensee's corrective action was judged to be satisfactory.

c. (Closed) Followup Items (50-361/80-21/01)

The inspector requested additional information on the accuracy and repeatability of the integrated leakage rate measuring system.

The inspector verified that the CILRT report, dated February 1981, pages 5 and 6, included the information requested. Also included on pages 5 and 6 were the appropriate calibration information and instrument serial numbers.

d. (Open) Followup Item (50-361/80-21/02)

The inspector requested the licensee to provide a means of control for the valves and caps on the vents and drains that are part of the containment boundary.

The licensee has developed an administrative control procedure (S023-3-3.10) which has the purpose of assuring the proper position of the test vent and drain line valves and caps discussed in the referenced report. Implementation of this control should help verify that the valve and cap positions are correct. Also the frequency of these checks will meet Appendix J to 10 CFR50 interpretations on the test vents and drains.

The licensee has not developed a procedure which verifies that these controls are in place during penetration testing, however the licensee committed to a July 1, 1981 date for completing the appropriate procedures.

This item remains open.

e. (Closed) Followup Item (50-361/80-21/03)

The inspector requested some additional statistical information for the CILRT.

The information requested was in correspondence from the licensee. This information was forwarded to NRC Headquarters for their information.

4. Operating Instructions Review

Reviewed Operating Instruction S023-3-2.30, Determination of Adequate Core Cooling. The procedure appeared to have the proper format and is technically adequate to accomplish its stated purpose. The licensee stated that paragraph 3.1 under "Prerequisites" would be deleted to remove any possible confusion as to the number of licensed operator required in the control room.

No items of noncompliance or deviations were identified.

5. Review of CILRT Report

The inspector reviewed the February 1981 submittal entitled "Reactor Containment Building Integrated Leak Rate Test Report". Independent calculations using the data submitted verified the results obtained during the performance of the test. All acceptance criteria were met for the Mass Point Leak Rate at the 95% Upper Confidence Level. The verification test information was also verified by the inspector to have met the acceptance criteria. In summary, the submitted report appears to accurately reflect information obtained during the witnessing of the CILRT in December, 1980.

The following comments from the inspectors review of the CILRT report were given to the Licensee during meetings on May 7, 1981 and May 19, 1981:

- a. On page 5 of the referenced report is listed local leakage rates in sccm for various penetrations which were not included in the CILRT. The leakage rates of "0" sccm for penetrations 46, 10B, and 34 were questioned from a technical viewpoint. The inspector stated that the instrumentation used to generate these results had a minimum accuracy which should have been used rather than "0" sccm. If the minimum sensitivity is "0" for all practical purposes, then a note to that effect would be appropriate. This comment holds for all local leak rate measurements. The licensee stated that they would look into this issue.
- b. A couple of report omissions were noted by the inspector. On page R-4 of 7, brackets and division symbols were missing from an equation, and on page R-7 of 7, Figure 1 was to follow Page R-7 of 7, but it did not. The inspector stated that these are not important omissions since the source information could be found in Bechtel Topical Report BN-TOP-1, 1972, entitled "Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants."
- c. Finally, an item of some significance was discussed. The inspector was of the opinion that Appendix Q, Instrument System Error Analysis, was not accurate. It appeared that criteria from ANS-N274 and BN-OTP-1 were combined to give an Instrument Selection Guide (ISG) number which was incorrect. The problem appeared to be in the calculation of errors associated with the measurement of change in pressure, vapor pressure, and temperature.

According to ANS-N274, this calculation consists of a root-mean-square combination of the error associated with the sensor and the error associated with the measurement system. The inspector informed the licensee of his position on May 7, and May 19, 1981.

This item is open pending resolution of the inspectors concerns and resubmittal to the NRC of an accurate Appendix Q. (50-361/81-11/01).

6. Plant Tour

The inspector toured Unit 2 several times during the report period. Particular attention was directed to observing housekeeping, equipment preservation, maintenance activities and work on completed systems. Listed below are the significant observations:

- a. The modification to add dual thermocouple wells to the hot leg. The inspector verified that the working conditions and procedure used were adequate for the task being performed.
- b. The damage to the reactor coolant pump motor due to the failure of the baffle ring supports was observed. The baffle ring came in contact with the stator damaging some of the windings. Repair of the motor has not started.

7. Management Interview

On May 14, 1981, the inspector met with licensee representatives identified in Paragraph 1 to discuss the scope and findings of the inspection.