

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-361/82-28
50-362/82-21

Docket No. 50-361; 50-362 License No. NPF-10 Construction Permit No. CPPR-98 Safeguards Group

Licensee: Southern California Edison Company
P. O. Box 800
2244 Walnut Grove Avenue
Rosemead, California 91770

Facility Name: San Onofre - Unit 2 and 3

Inspection at: San Onofre Site, San Clemente, California

Inspection conducted: August 20 through September 22, 1982

Inspectors: *D. Kirsch* 9/28/82
Jr A. Chaffee, Senior Resident Inspector, Unit 2 Date Signed

D. Kirsch 9/28/82
Jr G. Johnston, Reactor Inspector Date Signed

D. Kirsch 9/28/82
Jr M. Mendonea, Reactor Inspector Date Signed

Approved by: *D. Kirsch* 9/28/82
D. Kirsch, Chief, Reactor Projects Section No. 3 Date Signed

Reactor Projects Branch No. 2
 Date Signed

Summary:

Inspection on August 20, 1982 through September 22, 1982
(Report Nos. 50-361/82-28 and 50-362/82-21)

Areas Inspected: Routine, unannounced inspection of the Unit 2 Startup Test Program including the following areas: follow-up on inspector identified items; low power physics test witnessing; monthly maintenance observation; operational safety verification; and plant trips - safety system challenges. In addition, inspection of the Unit 3 Preoperational Test Program was conducted in the following areas; preoperational test witnessing; plant tour; and independent inspection effort. This inspection involved 86 inspector hours by three NRC inspectors.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted - Units 2 & 3

- +*W. Moody, Deputy Station Manger
- +*J. Iyer, Compliance Engineer
- +*D. Schone, Project Quality Assurance Supervisor
- + J. Curran, Manager, Quality Assurance
- + T. Garven, Quality Assurance Engineer, Lead
- + W. McRory, Unit 2 & 3 Operator Training Administrator
- + D. Breig, Startup Engineer
- +*P. Croy, Manager, Configuration Control and Compliance
- +*G. Gibson, Unit 3 Lead Compliance Engineer
- +*C. Horton, Startup Quality Assurance Supervisor
- *P. Knapp, Manager Station Health Physics
- *B. Katz, Manager, Station Technical
- *C. Kergis, Quality Assurance Engineer
- *R. Reiss, Quality Assurance Engineer
- *P. King, Operations Quality Assurance Supervisor
- *M. Merlo, Unit 2 Startup Supervisor
- *H. Richter, Unit 2 & 3 Project Engineer
- *J. Tate, Unit 2 & 3 Project Engineer
- *R. Santosuosso, Instrumentation and Control Supervisor
- *W. Marsh, NSSS Engineering Supervisor
- *R. Gray, Unit 2 & 3 Health Physics Supervisor
- *R. Warnock, Health Physics Engineering Supervisor

The inspectors also interviewed and talked with other licensee employees during the course of the inspection; these included shift supervisors, control room operators, startup engineers, and quality assurance personnel.

+Denotes those persons attending the exit interview on September 3, 1982.

*Denotes those persons attending the exit interview on September 17, 1982.

Also present at the September 3 exit interview was J. Stewart, Reactor Inspector, and at the September 17 exit interview were M. Mendonca, Reactor Inspector, M. Cillis, Radiation Specialist, and D. Kirsch, Chief, Reactor Projects Section No. 3.

2. Follow-up on Previously Identified Items - Unit 2

a. (Closed) (OI-82-25-04) In-service Testing Program (Valves)

The licensee stated that his review revealed that the valves in question were not inoperable during any period when operability was required. This item is closed.

b. (Open) (OI-82-25-05) In-service Testing Program (Valves) - Position Indication Tests

The licensee committed to complete the upgrading of the Position Indication Test program by October 1, 1982.

c. (Open) (OI-82-25-06) In-service Testing Program (Valves) - Position Indication Retest Requirements

The licensee committed to complete the action required by this item by October 18, 1982.

No items of noncompliance or deviations were identified.

3. Low Power Physics Testing Witnessing - Unit 2

The inspectors observed portions of the following Low Power Physics tests:

- . moderator temperature coefficient
- . control rod worths

During the performance of these tests, the inspectors verified on a selected basis, by observation and discussion with licensee personnel, that those portions of the tests observed were conducted in accordance with an approved procedure, that the test equipment was properly calibrated, that the test data was collected and recorded, and that the test adequately demonstrated conformance with applicable acceptance criteria.

No items of noncompliance or deviations were identified.

4. Maintenance - Unit 2

Corrective maintenance conducted on Auxiliary Feedwater Pump 140 was reviewed by the inspector. Observations by the inspector verified that requirements for system clearance, and tests of redundant equipment were satisfied, as appropriate, prior to this maintenance activity being performed. The inspectors verified that qualified personnel performed the maintenance using appropriate maintenance procedures. Replacement parts were examined to determine the proper certification of materials, workmanship, and tests. During the actual performance of this maintenance activity, the inspectors checked for proper fire protection controls and housekeeping, as appropriate. Upon completion of the maintenance activity, the inspectors verified that the component or system was properly tested prior to returning the system or component to service.

No items of noncompliance or deviations were identified.

5. Operational Safety Verification - Unit 2

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators. The inspector verified the operability of selected emergency systems and reviewed tagout records. Tours of the safety equipment building, radwaste building and turbine building were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations, and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector, by direct observation and interview, verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls.

No items of noncompliance or deviations were identified.

6. Plant Trips - Safety System Challenges - Unit 2

- a. While at 3 percent power, an unscheduled reactor trip occurred at 0745 PST on September 16, 1982 due to high steam generator (088) level. The reactor protection system performed as designed. The licensee made a red phone notification at 0800 PST. Steam generator level was being controlled by remote manual throttling of the feedwater bypass valves as required. A blowdown was in progress of approximately 150 gpm. However, due to previously identified problems in the blowdown control system the blowdown rate was oscillating between 0 and 150 gpm. The blowdown flow oscillations combined with the lack of bypass feedwater flow rate indication and operator inattentiveness during shift turnover resulted in a loss of steam generator level control and the resultant trip. The licensee has stated that operator inattentiveness was the main cause of this event.

The corrective actions include:

- (a) The licensee is developing plans for installing a temporary bypass feedwater flow indication.
- (b) The licensee has subsequently retuned the blowdown process system. This has resulted in stable operation for flow rates as high as 175gpm. However, for higher flow rates, up to the maximum of 300gpm, instabilities still occur. The licensee is in the process of instrumenting this system to provide further investigation into the cause of the instabilities.

- (c) The licensee has reemphasized to the operators the need for careful operation of the main feedwater system when in manual control at low power levels especially during non-steady state periods.
- b. While at approximately 3 percent power, a second unscheduled reactor trip occurred at 0350 on September 17, 1982, due to high steam generator (088) level. The reactor protection system performed as designed, the licensee made a red phone notification at 0354 PST. The operators were controlling steam generator level by manually feeding with auxiliary feedwater.

The operator controlling steam generator level was not free of other duties. Thus, while being distracted by other evolutions he was required to perform, he lost control of steam generator level.

The plant superintendent subsequently issued a special order 82-27, dated 9/17/82 requiring a dedicated operator be provided for manual steam generator level control during any period when steady state operation is not maintained. This includes manual control on either auxiliary or main feedwater when less than 15 percent power.

No items of noncompliance or deviations were identified.

7. Preoperational Test Witnessing - Unit 3

The inspectors observed selected portions of the Diesel Generator Load Sequencing Test (3PE-472-03). During the performance of this test the inspectors verified, on a selected basis, by observation and discussion with licensee personnel that those portions of the test observed were conducted using an approved procedure, test equipment was properly calibrated, test data were collected and recorded, and that the test adequately demonstrated conformance with applicable acceptance criteria.

No items of noncompliance or deviations were identified.

8. Plant Tour - Unit 3

The inspector toured Unit 3 and observed that housekeeping was satisfactory and fire protection equipment appeared to be properly maintained and distributed. The inspector also spot checked the adequacy of various testing activities in progress.

No items of noncompliance or deviations were identified.

9. Independent Inspection - Unit 3

a. Proposed Technical Specification Meeting

The inspector attended the proposed Unit 3 Technical Specification meeting conducted by NRR with the licensee on September 13 and 14, 1982.

At the conclusion of this meeting it appeared that the technical specifications were nearly complete. The inspector did not identify any areas of significant confusion from an enforcement standpoint. The Unit 3 Technical Specifications are essentially the same as Unit 2.

No items of noncompliance or deviations were identified.

b. Plant Protection System Response Time Testing

The inspector discussed the status of work on preoperational procedure No. 3PE-358-01 with the licensee.

No items of noncompliance or deviations were identified.

c. Damage to Unit 3 Diesel Generator G003

On 8/28/82 at 0155 PST, while performing 3PE-472-01 (Diesel Generator Sequencing Test), significant diesel generator vibration was observed for about 1 second. Subsequent licensee follow-up identified the cause to be an out of phase synchronization of diesel generator G003 (approximately 30 degree out of phase). The operator was synchronizing this generator in accordance with operating procedure SO23-2-13, Rev. 4 (Diesel Generator Operation), step 6.2.7. The procedure appears adequate and the event was apparently caused by operator error. The licensee's Quality Assurance organization issued Corrective Action Request SE-F-296 on September 8, 1982. The licensee station organization is required to respond by October 8, 1982. The inspector will review the licensee corrective action at this time. (OI-82-21-01)

No items of noncompliance or deviations were identified.

10. Exit Interview - Units 2 and 3

The inspector met with licensee representatives (denoted in Paragraph 1) on September 3, and September 17, 1982, and summarized the scope and results of the inspection. The licensee made the commitments contained in Paragraph 2.