

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-206/82-23

Docket No. 50-206 License No. DPR-13 Safeguards Group _____

Licensee: Southern California Edison Company

P. O. Box 800

Rosemead, California 91770

Facility Name: San Onofre Unit 1

Inspection at: San Onofre, California

Inspection conducted: July 1-30, 1982

Inspectors: *[Signature]* 8-11-82
J. L. Miller, Senior Resident Inspector, Unit 1 Date Signed

Date Signed

Approved by: *[Signature]* 8-11-82
B. P. Kirsch, Chief, Reactor Projects Section 3 Date Signed
Reactor Project Branch No. 2

Summary: Inspection on July 1-30, 1982 (Report No. 50-206/82-23)

Areas Inspected: Routine, resident inspection of plant operations during long-term shutdown; annual surveillance program review; monthly maintenance and surveillance activities; follow-up of Licensee Event Reports, inspector identified items, and licensee responses to Notices of Violation; and independent inspection. This inspection involved 90 inspection-hours by one NRC inspector.

Results: In the eight areas inspected, one violation was identified. (Failure to provide an adequate procedure for sampling the reactor coolant system - paragraph 4).

DETAILS

1. Persons Contacted

- *H. Ray, Station Manager
- *J. Reeder, Unit 1 Superintendent
- *J. Curran, Manager, Quality Assurance
- *W. Moody, Deputy Station Manager
- *P. Croy, Manager, Compliance and Configuration Control
- *B. Katz, Station Technical Manager
- *L. Brevig, Station Chemistry Supervisor
- *J. Dunn, Project Quality Assurance Supervisor, Unit 1
- *S. McMahan, Maintenance Engineer
- *J. Francis, Compliance Engineer

The inspector also interviewed other licensee and contractor personnel during this inspection.

*Denotes those attending the exit interview on July 30, 1982.

2. Inspection of Plant Operations During Long-Term Outage

The inspector frequently observed Control Room operations for proper shift manning, adherence to procedures and limiting conditions for operation, and appropriate recorder and instrument indications. The inspector discussed the status of annunciators with Control Room operators to determine the reasons for abnormal indications and to determine operator awareness of plant status.

The Control Operator's log was reviewed to obtain information on plant conditions and to determine whether regulatory requirements had been met. Other logs, including the Watch Engineer's log were also reviewed several times. Selected maintenance orders for the current month were reviewed. The licensee's system for identifying equipment deficiencies appeared to be functioning adequately. The equipment control, jumper, and clearance records were audited, and selected tags in the 4160 volt switchgear room and the Control Room were verified to have been hung properly. Nonconformance reports for July, 1982 were reviewed.

The inspector frequently toured the accessible areas of the facility to assess equipment conditions, radiological controls, security, and safety.

The inspector's tours indicated that Radiation Controlled Area access points were generally safe and clean. Several Radiation Exposure Permits were reviewed for completeness. Surveys and packaging of low specific activity material were observed and appeared adequate.

No potentially contaminated material was observed in spotchecks of garbage containers. Selected radiation measuring instruments in use appeared operable and were in calibration. The inspector witnessed the loading and survey of a shipment of low specific activity radioactive waste material on July 13, 1982. Independent survey measurements taken by the inspector on the periphery of the shipment vehicle were consistent with the licensee's survey.

Plant housekeeping appeared adequate. Preservation and painting of equipment in the turbine building and adjacent areas continued. Small amounts of combustible paper sacks and packages of paper towels were noted adjacent to safety-related equipment in controlled areas on July 16, 1982. A licensee representative stated that these would be promptly removed and greater attention to controlled area housekeeping would occur. This item is closed.

Manning of security posts, integrity of protected area barriers and isolation zones, conduct of search procedures, and personnel identification measures were all observed at intervals by the inspector. These appeared adequate except for an occurrence on July 19, 1982, described in Paragraph 9.

No items of noncompliance or deviations were identified.

3. Monthly Maintenance and Modification Observations

The inspector witnessed portions of the following activities:

- a. S-I-6.11 Steam Generator Manway and Handhole Cover Removal and Installation
- b. Safety Injection Valve Post Maintenance Valve Stroking of valves HV 851B and HV 853B
- c. Saltwater Cooling Pump Refueling Preventive Maintenance, S01-I-5.5
- d. Seismic Modification Project

The inspector determined that procedures used for these activities were consistent with applicable limiting conditions for operation, clearances were obtained where necessary for protection of equipment and personnel, necessary tools were properly calibrated and used, and maintenance personnel coordinated their activities with licensed operators, where appropriate.

The inspector noted that the steam generator manway bolt torque specifications (Item a, above) given in the Westinghouse Technical Manual, "Vertical Steam Generator for SCE," TM1440-C77, Paragraph 5-5-5, were 750 foot pounds, less than the 1650 foot pounds used by the licensee. Licensee

personnel provided the inspector with a memorandum from Westinghouse which authorized and explained the higher torque setting used. This item is closed.

The inspector reviewed the status of the seismic project. This project has been divided into three categories:

- a. Civil Projects (east and south turbine building extension modifications, intake structure modification, spent fuel building wall bracing, and condensate and refueling water storage tank upgrading).
- b. Pipe Support Projects (Safe Shutdown Systems, Containment Spray Hangers, Accident Mitigation Systems, and Safe Shutdown Systems)
- c. Electrical Raceway Modifications

In this period, work was performed installing diagonal bracing in the east turbine building extension, and safe shutdown system pipe supports. In addition, approximately 220 pipe supports have been installed to make field piping configurations compatible with the latest seismic analysis input information. Selected portions of this work was frequently observed to assure adequate housekeeping and fire prevention practices were observed.

No items of noncompliance or deviations were identified.

4. Independent Inspection

The inspector learned on July 14, 1982, that approximately 500 gallons of reactor coolant had been inadvertently drained from the reactor coolant system on July 13, 1982. The inspector investigated this incident, and discussed it with licensee chemistry and operating personnel, including the Unit 1 Superintendent. The inspector determined that at 8:25 p.m. on July 13, the Unit 1 Control Operator had added 423 gallons of water and 49 gallons of boric acid to the reactor coolant system to compensate for unexpected slow leakage from the reactor coolant system observed on July 13. Licensee personnel investigated this leakage on July 13 and determined it to be due to an open demineralizer sample outlet valve off of the inlet line to the Boron Measuring Tank.

The inspector determined that Procedure S01-III-1.14, "Refueling Chemistry," defined a reactor coolant chemistry program which required a daily sample of reactor coolant chemistry, but Procedure S01-III-1.15, "Normal Operation of the Radioactive Sample System," described a sample method which could not be used to obtain a reactor coolant sample when the reactor coolant system was partially drained, as it was on July 13, 1982. Licensee personnel stated that no written procedure existed which described the sampling method. However, they believed that the responsible technician was aware that he was expected to take a primary sample from the demineralizer outlet and to secure the sample

lineup upon completion of the sample. The technician believed he had done this. The inspector noted that the verbal guidance provided had evidently been inadequate to prevent this incident, and the lack of a requirement to independently verify correct system restoration after sampling had contributed to it. A licensee representative stated that a procedure which described the appropriate sample method and which required independent verification of valve lineup following the sample would be implemented by July 30, 1982. The inspector stated at the Exit Interview that this action appeared to adequately correct the specific causes for this incident. The inspector also noted that the licensee had begun efforts to develop a sampling procedure prior to this occurrence. However, the inspector expressed concern that the event was similar to the July 31, 1981 violation which involved use of an unapproved secondary chemistry program for startup chemistry control. Corrective action for that violation included a September 10, 1981 licensee memorandum reminding licensee personnel to use approved chemistry procedures. In the latest incident, licensee personnel were operating without an approved written procedure to ensure a representative coolant sample was taken and to ensure the integrity of the reactor coolant pressure boundary. The inspector stated that a written procedure would have increased the likelihood of the correct performance of this activity. Technical Specification 6.8.1 and Paragraph 5.3.8 of ANSI N18.7-1976 require, in part, that procedures shall be provided for chemical and radiochemical control activities, including the nature of sampling. As described above, a procedure was not available in this case. This is an apparent Severity Level 5 (10 CFR Part 2, Appendix C) violation (50-206/82-23-01).

5. Surveillance Program Review (Annual) and Monthly Surveillance Observations

The inspector verified that the following approved procedures included prerequisites, acceptance criteria and system restoration requirements:

- a. S01-II-1.3, Subcooled Monitoring System Calibration (Refueling)
- b. S01-II-1.73, Containment Isolation System (Refueling Interval)
- c. S01-12.8-17, Sphere Isolation Valve Test
- d. S01-12.9-9, SIS Check Valve Tests
- e. S01-12.8-9, Diesel Generator Test at Refueling
- f. S01-12.8-11, Main Steam Safety Valve and Steam Dump Valve Testing
- g. S01-1-2.4, Main Steam Safety Valve Pressure Setpoint
- h. S01-12.8-15, Fire Suppression System Functional Test
- i. S01-12.3-9, Fire Water Pump Operability Test
- j. S01-V-2.14.1, Auxiliary Feedwater Inservice Pump Test
- k. MOV 720A and MOV 720B Inservice Valve Tests

The inspector selected recent test records for each of these surveillances. These records indicated that the test results were in accordance with regulatory requirements, reviewed as required, performed on time by

qualified personnel, and that items not meeting acceptance criteria were recognized and corrective action taken. The inspector noted that each of these tests appeared to be technically adequate to meet the corresponding technical specification requirement.

Selected portions of the following tests were observed:

- a. S01-II-1.6, Semiannual Nuclear Instrument Calibration
- b. S01-10-1, Diesel Generator Operations
- c. S01-12.3-25, Monthly EFCOMATIC Valve Exercises
- d. S01-12.8-13, Recirculation System Leakage Test

For these tests, the inspector verified that the procedure was used, test equipment was calibrated prior to use, test prerequisites were met, and test discrepancies were identified and corrected where the test results did not meet the acceptance criteria.

No items of noncompliance or deviations were identified.

6. Follow-up on Previously Identified Items

- a. (Closed) Reactor Failure to Trip Procedure (OI 50-206/80-34-07)

The inspector verified that the title of Procedure S-3-5.33 had been changed to "Failure of the Reactor to Trip" when the procedure was revised. This item is closed.

- b. (Closed) Reactor Vessel Water Level Limiting Condition for Operation (OI 50-206/81-08-01)

The inspector concluded that this item will be evaluated adequately as part of the Systematic Evaluation Program. This item is closed.

- c. (Open) Drawing Reverification Program (OI 50-206/81-42-01)

The inspector met with licensee representatives on July 26, 1982, to discuss the licensee's progress in this program since the previous meeting on June 7, 1982. These personnel stated that the field verification for P&ID drawings inside containment was complete and that the verification outside containment for these drawings was about 35 percent complete. They estimated that the production of accurate P&ID drawings for the control room would be completed in 1982 as committed. They stated that numerous examples of small diameter "field-run" pipes had been discovered that were not reflected on the drawings, but to date no discrepancies which made a system inoperable had been found. The representatives also stated that the electrical drawing verification was in the final stages of organization, and drawing comparisons were expected to be completed as previously committed. The licensee's progress in drawing reverification appeared adequate. This item remains open pending further review of the reverification program.
(50-206/81-42-01)

d. (Closed) CV36, 37 Seismic Supports (OI-50-206/81-42-05)

The inspector determined that the feedwater recirculation lines to the condenser, including valves CV-36 and CV-37, would be reanalyzed using current criteria as part of the seismic reanalysis to be performed prior to restart from the current outage. The inspector observed that the valve supports had been reinforced with additional fixed diagonal supports. The inspector stated that this item is closed.

e. (Closed) Reactor Power Indicators (OI 50-206/81-27-01)

The inspector reviewed Procedure S-0-104, "Reactor Standard for Operation," and verified that operators were required to compare similar indications on different indicators of reactor power. This item is closed.

f. (Closed) CV532 Valve Operating Nitrogen (OI 50-206/81-27-03)

The inspector reviewed Procedure S-12.3-6, "Reactor Coolant System Safety Related Valve Alignment," and verified that the position of nitrogen block valves was checked with this alignment. This item is closed.

g. (Closed) Circuit Breaker Training (OI 50-206/82-10-10)

The inspector discussed training on the 4160-volt circuit breaker charging spring location with licensee personnel, and concluded that this training was adequate. This item is closed.

No items of noncompliance or deviations were identified.

7. Follow-up on Licensee Event Reports (LERs)

a. (Open) LER 81-06: Raychem Cable Splices Environmental Qualification

The inspector determined that the licensee believed that the environmental qualification tests for these splices had been done. At the exit interview a licensee representative stated that these would be made available the week of August 1-7, 1982. This item remains open.

b. (Closed) LER 82-06: Inadvertent Partial Containment Spray

The inspector reviewed this report and confirmed that it accurately reflected the event of November 20, 1981, which was reviewed when it occurred. The inspector noted that the containment inspection indicated that only superficial cosmetic damage to painted surfaces in a few localized areas had occurred as a result of the inadvertent containment spray. This LER is closed.

c. (Open) LER 81-025: Containment Isolation Valve Failure

The inspector requested the results of the licensee's reevaluation of this event. Licensee representatives stated that this would be done by August 27, 1982.

d. (Closed) Failed Feedwater Pipe Supports (50-206/82-09)

The inspector reviewed this report, which supplemented previous reports and discussed the supporting metallurgical analysis with a licensee representative. This analysis and the licensee's commitment to reanalyze and modify the affected piping appear adequate. This item is closed.

No items of noncompliance or deviations were identified.

8. Follow-up on Notices of Violation

a. (Closed) Acceptance Criteria for Calibration Procedures (50-206/82-04-03)

The inspector discussed with licensee personnel the committed review of all technical specification calibration procedures. These personnel stated that these reviews had been completed and calibration procedures were modified where necessary. The inspector verified that selected calibration procedures included acceptance criteria. This item is closed.

b. (Closed) Inadequate Flux Map Procedure (50-206/82-15-01)

The inspector reviewed revised Procedure S01-V-1.6, "Incore Flux Mapping." The inspector verified that it addressed the use of the INCORE-3 program which had been used previously without procedural guidance. This item is closed.

c. (Closed) Missed Spray Sprinkler Surveillance (50-206/82-15-02)

The inspector integrated the assessment of the licensee's corrective action for this violation into the evaluation of the licensee's response to Inspection Report 50-206/82-20, dated July 14, 1982. Separate NRC tracking of this item is not required now and this open item is closed.

d. (Closed) Unauthorized Facility Modification (50-206/82-04-01)

The inspector noted that the licensee conducted documented training on proposed facility change control for the Maintenance Department, as committed to in the licensee response to this violation, dated March 29, 1982. This item is closed.

No items of noncompliance or deviations were identified.

9. Plant Security

At approximately 3:00 p.m. on July 19, 1982, the inspector observed a workman passing Tube-Loc scaffolding through an opening at the bottom edge of a chainlink fence. The fence separated the protected area outside the auxiliary feedwater pump rollup door and the vital area surrounding the fire and saltwater cooling pumps. The opening was in the fence where the fence extends east from the northeast corner of the intake structure. It was at grade (20 foot MLLW) level. The inspector notified licensee personnel and verified that the opening was promptly repaired.

This item is closed.

10. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) on July 30, 1982, to summarize the scope and findings of this inspection. The licensee acknowledged the apparent violation identified in this report and discussed the corrective actions under consideration to prevent recurrence.