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

REGION V

Report No. 50-206/79-04

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

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

Facility Name: San Onofre Unit 1

Inspection at: San Onofre

Inspection Conducted: February 16, 1979 and March 13-15, 1979

Inspectors: H. L. Canter, Reactor Inspector — 4-9-79 Date Signed

P. Johnson, Reactor Inspector — 4-9-79 Date Signed

G. Johnston, Reactor Inspector — 4/9/79 Date Signed

D. Haist, Reactor Inspector (2/16/79 only) — April 9, 1979 Date Signed

Approved By: B. H. Faulkenberry, Chief, Reactor Projects Section #2, Reactor Operations and Nuclear Support Branch — 4/11/79 Date Signed

Summary:

Inspection on February 16, 1979 and March 13-15, 1979 (Report No. 50-206/79-04)

Areas Inspected: Routine, unannounced inspection of requalification training; review of plant operations; nonroutine reporting program; CILRT report review; licensee event followup; followup on inspector identified items; and, independent inspection effort. The inspection involved 72 inspector-hours by four NRC inspectors.

Results: No items of noncompliance were identified within six areas; one apparent item of noncompliance was found in one area (deficiency - failure to document review of design changes in accordance with the requalification program - Paragraph 7).

DETAILS

1. Persons Contacted:

*J. Curran, Plant Manager
*R. Brunet, Superintendent, Unit 1
*B. Curtis, Supervising Engineer
W. Frick, Engineer
*G. McDonald, Site QA Supervisor
*P. Penseyres, Engineer
J. Reeder, Watch Engineer & Training Administrator
F. Ricks, Engineer
J. Ryan, Watch Engineer
M. Short, Engineer
*J. Tate, Watch Engineer

The inspectors also interviewed several other licensee employees including reactor operators and maintenance personnel.

*Denotes attendance at exit interview.

2. Review of Containment Integrated Leak Rate Test (CILRT) Report

The September 20-22, 1978, CILRT report was submitted to the NRC on January 11, 1979, in accordance with 10 CFR 50, Appendix J requirements. The inspector examined this report for regulatory compliance.

The licensee's mass point leak rate calculations agreed with the independent calculations made by the inspector to within 4.5%. Both figures were less than the 0.09 weight-per-cent-per-24 hour limit as stated in Paragraph 4.3.I.B in the Technical Specifications.

Changes to test procedure S-V-1.12 (Rev. 8), Containment Penetration Leak Rate Testing, were examined. These changes had been made as a result of errors discovered by the inspector during the performance of the CILRT (see IE Report No. 50-206/78-13). The examination of the changes and the new local leak rate test results indicate that regulatory requirements were met.

The inspectors discussed the results of these examinations with licensee representatives and stated they had no further questions.

No items of noncompliance or deviations were identified.

3. Independent Inspection Effort

As part of the inspector's independent inspection effort, a check on technical specification accuracy was conducted. The inspector pointed out that the cooldown rate noted in Section 3.1.3.C in the NRC's copy of technical specifications is 200° F per hour, while the licensee's technical specifications lists 195° F per hour. Also, the fifth paragraph in Section 5.3 does

not agree with the NRC's copy of the technical specifications. The licensee representatives stated that these errors may be due to typographical errors made when the NRC issued documents were retyped to meet SCE pagination requirements. Consequently, a licensee representative committed to review the NRC issued license and technical specification amendments for the purpose of detecting and correcting any other errors that may exist. (79-04-01)

Technical Specification Sections 3.1.1, 4.1, and 4.4 were examined for compliance. No areas of concern were identified during this review.

Also, the inspector attempted to verify compliance to technical specification Sections 3.1.3A and B which deal with heat up and cool down curves and updating of same. The licensee will look into verifying compliance to these two technical specifications as they relate to the accuracy of Figures 3.1.3a and 3.1.3b, and the use of the methods of Appendix G to Section III of the ASME Boiler and Pressure Vessel Code in obtaining the allowable P-T relationships for the reactor coolant system. This item is unresolved pending the licensee response. (79-04-02)

No items of noncompliance or deviations were identified.

4. Nonroutine Reporting Program

The inspector verified that administrative controls have been established for:

a. Prompt review and evaluation of off normal operating events to assure identification of safety related events.

b. Prompt review of planned and unplanned maintenance and testing activities to assure identification of technical specification violations.

c. Reporting safety related operating events internally and to the NRC in accordance with technical specifications.

d. Completion of corrective actions relating to safety related operating events as appropriate.

e. Review and evaluation of vendor bulletins and circulars as appropriate.

In addition, the responsibilities for implementing the above listed administrative controls have been established in writing or have been directed by appropriate plant management

The applicable documents which implement the above controls and which were reviewed or discussed with licensee representatives were S-A-132, S-V-2.23, CAR forms, NCR forms, and the Station Incident Report (SIR) form.

The subject of the administrative controls on the reporting of reportable occurrences was discussed with licensee representatives. A licensee representative committed to reporting items such as environmental events and overexposures in accordance with NUREG-0161 (1977). This implies the use of the Licensee Event Report (LER) for items which were previously reported only by letter. The use of the occurrence codes listed on pages 28-31 of the referenced document should increase the accuracy of the LER data base for San Onofre.

No items of noncompliance or deviations were identified.

5. Licensee Event Followup

The circumstances and corrective actions described in Licensee Event Reports (LER) submitted since the previous inspection were verified. The report of each event had been submitted to the NRC Regional Office within the required time interval. The LERs examined and comments on this examination by the inspector are as follows:

a. (Open) LER 78-12: This LER dealt with class 2 pipe cracks. The licensee reported cracks in portions of the reactor coolant pump seal water return line and an elbow fitting in the charging pump discharge line.

   The inspector reviewed the results of further analyses of the reported pipe cracks in line numbers 2002 and 2014 and the results of liquid penetrant examinations on lines 3006 and 2005.

   Followup items 78-15-03 through 78-15-07 are discussed in Section 6 of this report and provide further findings regarding this LER. A licensee representative stated that a followup report to LER 78-12 will be submitted. This item will remain open pending review of the followup report.

b. (Closed) LER 78-13: This LER dealt with the inoperability of the "C" steam/feedwater flow mismatch channel due to the dislodging of the "C" flow straightener, and an earlier reported similar occurrence on the "B" channel. There was no degradation of plant safety during this incident because the other two channels were verified to be operable. The fix that was applied to the "A" and "B" loops will be applied to the "C" loop during the next cold shutdown if appropriate.

   The inspector had no further questions on this item.

c. (Closed) LER 78-14: A valve was inadvertantly left partially open after a surveillance test which allowed some dilution of the spray hydrazine tank, and a release of activity below the 10 CFR 20 limits for unrestricted area releases. The inspectors verified that a review of the incident by operations personnel was tendered. Also, procedure S-3-3.3 was revised to include specific steps on the lineup of this system before, during, and after tests.

The inspector had no further questions on this item.

d. (Closed) LER 79-01: CV 515, a containment isolation valve on the cooling water return line from the sphere handling units, failed to close during testing. An engineering evaluation for the cause of the failure is underway. The evaluation includes a branch test of a spare valve of the same type that failed to attempt to discover failure mechanisms. Once the potential failure mechanisms are known, appropriate corrective action will be taken to modify all ten such valves that are in operation in the plant. During the next refueling outage, a 100% inspection of these Efcomatic valves will be done with the objective of looking for possible defects. In the interim, the licensee is cycling all ten Efcomatic valves every two weeks to maintain an increased surveillance on them.

The inspector had no further questions on this item.

No items of noncompliance or deivations were identified.

6. Followup on Inspector Identified Items

The inspector had no further questions on the following items:

a. (Closed) 78-15-01: This item dealt with the lack of a method for communicating QA program and procedure changes between the site and QA organizations. Procedure S-V-2.23, Rev. 2, was examined to determine whether the licensee's commitment to correct this item was complete. The inspector noted that the procedure was completely revised and retitled to include a review of Quality Assurance manual revisions. The procedure has been implemented as referenced by a review of a 2/7/79 memorandum to file which indicated changes to station orders S-A-113 and S-A-116 per various changes to the QA manual.

b. (Closed) OI 78-15-03: The inspector reviewed the plant chemist's report on residual sand in the pipe trench indicating a chloride content of up to 1,000 ppm.

c. (Closed) OI 78-15-04: The inspector reviewed the action taken to identify the failure mechanism of the charging line no. 2002 elbow. Several cracks occurred in the area of the fillet weld attaching the elbow to the outboard end of the line. Three micro sections were

taken through the weld area. Microstructure examination showed extensive patterns of transgranular cracking both in the elbow and pipe section. Cracking is attributed by the licensee to the high chloride environment and slightly elevated operating temperature which was diagnosed as the cause of the seal water return line no. 2014 failure.

d. (Closed) OI 78-15-05: The inspector reviewed a chloride analysis of insulation present in the pipe trench on a 3/8-inch non-safety related sample line. Chloride content was 8.5 ppm and 0.5 ppm at the outside and inside surfaces, respectively, indicating that the chlorides were from the sand surrounding the insulation.

e. (Closed) OI 78-15-06: The inspector reviewed records of the results of additional dye penetrant examinations on safety-related lines in the pipe trench. Examination of the purification letdown line no. 3006 revealed no indications. Examination of charging pump line no. 2005 revealed several additional indications, which appeared to be of the same general pattern as those identified on the other lines in the trench. According to the records, the defects were removed by grinding without exceeding the minimum wall thickness of the pipe and were re-examined to verify their removal. The defects were attributed to the high chloride environment that previously existed in the trench.

f. (Closed) OI 78-15-07: The licensee pointed out that their review of schedule 10 stainless steel piping is not directly related to the problem of class 2 pipe cracks identified in LER 78-12, except that one cracked line happened to be schedule 10. The inspector agreed that appropriate action has been taken with respect to the cracked schedule 10 line and that the failure mechanism appears to be isolated and unrelated to other schedule 10 stainless steel lines in the plant.

No items of noncompliance or deviations were identified.

7. Requalification Training

The inspection included an examination of the licensee's operator requalification program implemented in accordance with 10 CFR 50.54(i-1) and 10 CFR 55, Appendix A. The current revision to the licensee's program was approved by the AEC on June 6, 1974. The inspector's review included examination of annual written examinations and results, attendance at scheduled off-shift lectures, completion of specified on-shift study and required reading, records of individual reactivity control manipulations and other significant experiences, and selected individual training records.

Inspection findings in the areas outlined above showed the licensee to have, overall, an effective requalification program. The following specific inspection findings were discussed with the acting Training Administrator during the inspection and at the exit interview:

Two off-shift training lectures initially sheduled for 1978 were postponed because of an operator strike followed by a refueling outage. Scheduling of these lectures was in response to the results of the December 1977 annual written exam. These lectures will be conducted in 1979, consistent with the licensee's approved retraining program.

Facility design changes were on file in the conrol room, and licensee representatives stated that these were normally reviewed by operating personnel. The approved requalification program (Paragraph 3.1.4) states that Form PSSD 121 is utilized as a record of this review. Records verifying operator review for three of four selected design changes could not be located by the licensee. The inspector stated that this represented noncompliance with 10 CFR 50.54(i-1) and the approved retraining program. (79-04-03)

8. Plant Operations

A review of plant operations was conducted, including examination of the jumper log, the Watch Engineer's Log (February 16 to March 2), the Control Room Log (January 20 to February 5), and the on-shift surveillance log. The condition of control panel indications was examined, and the status of the plant was discussed with licensed operators on duty. During a tour of the plant, observations were made regarding the status of alarms, monitoring instruments, seismic restraints, fire protection equipment, and other plant conditions.

No items of noncompliance or deviations were identified.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. One unresolved item (79-04-02) dealing with the technical specification heatup and cooldown limits and curves was disclosed during the inspection and is discussed in Paragraph 3.

10. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on February 16, 1979 (D. Haist only) and at the conclusion of the inspection on March 15, 1979. The inspectors summarized the purpose, scope and the findings of the inspection.

Licensee representatives stated that a review of NRC issued technical specification amendments will be performed to verify the accuracy of the licensee's copies of the technical specifications (see Paragraph 3). (79-04-01)

The licensee representatives stated that a compilation of information to verify compliance with technical specification 3.1.3A and B is underway. This item is unresolved pending disussion and examination of this information during a future inspection (see Paragraph 3). (79-04-02)

A licensee representative stated that the LER will be used to report items in accordance with the occurrence codes listed in NUREG 0161 (1977) (see Paragraph 4).

One item of noncompliance (a deficiency) dealing with the apparent lack of recording reviews of design changes as required by the approved requalification program was discussed (see Paragraph 7). (79-04-03)