U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-206/82-20

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: June 7-30, 1982

Inspectors: 7/14/82
L. Miller, Senior Resident Inspector, Unit 1 Date Signed

Date Signed

Approved by: 7/14/82
G. B. Zwetzig, Chief, Reactor Projects Section 1 Date Signed
Reactor Operations Project Branch

Summary:

Inspection on June 7-30, 1982 (Report No. 50-206/82-20)

Areas Inspected: Routine, resident inspection of plant operations during long-term shutdown; monthly maintenance and surveillance activities; follow-up of Licensee Event Reports, and previously identified items and independent inspection. This inspection involved 65 inspection-hours by one NRC inspector.

Results: In the six areas inspected, no items of noncompliance were identified.

## DETAILS

1. Persons Contacted

H. Ray, Station Manager
*J. Reeder, Unit 1 Superintendent
*J. M. Curran, Manager, Quality Assurance
*W. Moody, Deputy Station Manager
*P. Croy, Manager, Compliance and Configuration Control
*B. Katz, Station Technical Manager
*G. McDonald, Quality Assurance/Control Supervisor, Unit 1
*J. Dunn, Project Quality Assurance Supervisor, Unit 1
D. Hall, INPO Coordinator, ASTA
*E. Gulbrand, Assistant Manager, Maintenance
*F. Briggs, Compliance Engineer
*D. McCloskey, Manager, Station Emergency Preparedness

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

*Denotes those attending the exit interview on June 25, 1982.

2. Follow-up on Previously Identified Items

a. (CLOSED) Equipment Control Concerns (OI 50-206/82-17-01)

The inspector reviewed the licensee's evaluation of a March 19, 1982 incident which occurred when a worker commenced work on the hypochlorinator discharge piping before the piping had been depressurized. The inspector noted that this event was similar to the May 13, 1982 saltwater cooling pump flooding event, in that both events were partially caused by insufficient understanding of the potential hazards of the work. The inspector believes that the corrective action to be specified by the licensee in response to the saltwater flooding event notice of violation issued on June 16, 1982, will adequately provide for correction of this item as well. This item is closed.

b. (OPEN) Drawing Reverification Program (OI 50-206/81-42-01)

The inspector met with licensee representatives on June 7, 1982, to discuss the licensee's plans to ensure that recent modification work had been reflected in the drawings. A licensee representative stated that, in lieu of reviewing all modifications performed since 1980 to ensure that drawings had been correctly updated, the following would be done:

(1) A comparison of all control room electrical wiring diagrams versus elementary and logic drawings would be performed. Any discrepancies between these drawings would be resolved by nonconformance reports and a field inspection. Those systems judged most important to safety would be checked first, so that a significant fraction of this comparison will be completed in 1982.

(2) Pending completion of the overall drawing verification program, single drawings which reflect all the identified changes or discrepancies in an approved drawing will be issued for the drawings in the control room. These so-called "composite CC" drawings will be updated until replaced by baseline as-built drawings.

The inspector stated that these commitments were acceptable in lieu of the commitment to review all modifications since 1980. This item remains open pending further review of the progress of the drawing reverification program (50-206/81-42-01).

No items of noncompliance or deviations were identified.

3. Inspection of Plant Operations During Long-Term Outage

The inspector observed Control Room operation frequently for proper shift manning, for 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 the operator's 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 and clearance records were audited, and selected tags in the 480 volt switchgear room and the Control Room were verified to have been hung properly.

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 in calibration. However, on June 8, 1982, the inspector observed a Health Physics Technician leaving a frisking station without surveying his feet as required by the licensee's contamination control procedures. The inspector questioned a licensee representative and was informed that the Technician's actions were not approved and that he had been reprimanded. The inspector stated that, since this appeared to have been an isolated occurrence with no direct safety consequences, this action was adequate. This item is closed.

Plant housekeeping appeared adequate. The inspector noted that preservation and painting of equipment in the circulating water intake structure was performed, and suggested that component cooling water piping in the containment sphere at the minus 10-foot elevation needed similar maintenance. Licensee personnel acknowledged this comment. The inspector also noted accumulations of dust from construction work on the instrument air drier controller and in an inverter cubicle in the 480-volt switchgear room, and recommended that the licensee examine other electrical equipment located in the turbine building to prevent excessive dust in this equipment from accumulating. Licensee personnel agreed to investigate the extent of this problem.

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.

No items of noncompliance or deviations were identified.

4. Monthly Surveillance Observations

The inspector witnessed portions of the following surveillances:

No. 1 Diesel Generator Preoperational Testing (SPE-604)

No. 1 Diesel Generator Operations (SO1-10-1)

Control Rod Drive Mechanism Coil Insulation Tests (SO1-II-11.161)

Determination of Chloride Ion by Mercuric Nitrate Titration (S-III-2.5)

The inspector verified that the procedures used were consistent with applicable limiting conditions for operation, test instrumentation used had been calibrated, test results were acceptable, the systems tested were properly removed from and returned to service as appropriate, and test personnel discussed the test with licensed operators where appropriate to control equipment.

No items of noncompliance or deviations were identified.

5. Monthly Maintenance Observations

The inspector witnessed portions of the following activities:

Steam Generator Secondary Side Video Inspection

Safety Injection Valve HV-853B Accumulator Pressure Adjustment (SO1-I-6.54)

Instrument Air System Verification (SPE-325)

The inspector determined that procedures used for these activities were consistent with applicable conditions for operation, clearances were obtained where necessary for protection of equipment and personnel, necessary tools were properly calibrated and used, and maintenance personnel discussed the scope of their work with licensed operators prior to performing the work.

The video inspection of the steam generators was completed in this period. Five steam generator tube sheet wrapper plate support bars were retrieved from the steam generators, while three remained intact in the steam generators. No deformation of the steam generator tubes around the steam generator periphery was visible. This item is closed.

The inspector noted that the accumulator pressure adjustment procedure did not contain detailed instructions. However, licensee personnel who performed the work had received special training in the vendor-approved technique which was used. The inspector agreed that the method used was adequate.

At the exit interview, licensee personnel agreed to revise the procedure to formally incorporate this technique. Subsequently, the inspector reviewed this revised procedure and found it acceptable. This item is closed.

Licensee personnel informed the inspector that several gallons of water had been drained from the service air system during maintenance on the safety injection hydraulic valves. Because temporary air compressors had been installed to provide air to the instrument and service air systems during the seismic upgrading of the turbine building, the inspector reasoned that this installation might have introduced this moisture. Accordingly, the inspector requested that the licensee investigate the origin and amount of this moisture, and consider whether or not any deleterious effects on safety-related valve operation could result. At the exit interview, a licensee representative stated that this analysis would be performed. In addition, the representative stated that the instrument air system would be verified to be dry. (OI 50-206/82-20-02)

No items of noncompliance or deviations were identified.

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

a. (CLOSED) LER 82-014: Hydraulic Shock Suppressor Failure

The inspector reviewed this report and discussed it with licensee maintenance personnel. The inspector expressed concern that the existing inspection procedures did not clearly define a technically adequate method for performing functional testing of a snubber found to have an empty reservoir. The inspector noted that the inspection records associated with this event indicated an adequate inspection of the empty shock suppressors was performed. Licensee personnel stated that the inspection procedures would be modified to clarify the guidance for functional testing of suppressors with empty reservoirs. This LER is closed.

b. (CLOSED) LER 82-015: Loss of Saltwater Cooling due to Flooding

The inspector noted that this event resulted in a Notice of Violation dated June 16, 1982 (Inspection Report No. 50-206/82-17). Corrective action for the violation will be confirmed following the licensee's response to that Notice. This LER is closed.

c. (CLOSED) LER 82-012: Loss of Boric Acid Flow Path

The inspector noted that this event resulted in a Notice of Violation dated June 16, 1982 (Inspection Report 50-206/82-17). Corrective action for this violation will be confirmed following the licensee's response to that Notice. This LER is closed.

d. (CLOSED) LER 82-011: Lapsed Surveillance of Valves

This LER is discussed in paragraph 7 of this report. This LER is closed.

e. (OPEN) LER 81-025: Containment Isolation Valve Failure

The inspector met several times with licensee personnel to confirm the details of this LER. Some licensee personnel stated that the failure of the valves had been traced to inadequate design of the latch coil for the containment isolation relays. The inspector noted that the LER had not addressed this issue accurately. At the exit interview, the inspector requested that a revised LER be submitted if it appeared appropriate after reconsideration of this valve failure. A licensee representative agreed to this request.

f. (CLOSED) LER 82-016: Reactor Coolant System Boron Dilution

On June 10, 1982, the inspector was informed by a licensee representative that on June 9, 1982, while containment integrity was not maintained, the reactor coolant system boric acid concentration decreased from 2,358 ppm to 2,147 ppm. This occurred when the licensed operators neglected to properly saturate the north mixed bed demineralizor with boric acid prior to returning it to service following regeneration. The licensee representatives also stated that all licensed operators involved had been disciplined since the procedure was neither ambiguous nor unfamiliar. The inspector confirmed that Operating Instruction SO1-4-11, "Letdown Demineralizer System," which required this saturation, had not been followed. The inspector noted that Technical Specification 3.6.1B(3) requires that positive reactivity changes not be made whenever containment integrity is not maintained. The inspector concluded that this event was a violation of the Technical Specifications. However, in consideration of the licensee's prompt identification and corrective action, and because it was neither a repetitive violation nor of serious safety significance, this event is categorized as a licensee identified item of noncompliance. This item is closed.

7. Independent Inspection

Surveillance and Reporting Program Deficiencies

The inspector reviewed four instances of failures by the licensee to satisfy surveillance or reporting requirements of the Technical Specifications. Based on this review, the inspector concluded that management control of surveillance activities has been inadequate in the areas reviewed.

The first instance was reported by the licensee in Licensee Event Report (LER) 82-011 dated April 16, 1982. This report detailed the licensee's failure to perform monthly manual channel tests of the containment isolation valves, the containment purge and exhaust valves, and the pressurizer power operated relief valves in accordance with the requirements of Technical Specifications 4.1.4 and 4.1.6. This lapse existed from the effective date of the Technical Specification requirement (December 17, 1981) until the commencement of a long term outage during which the tests were not required (February 28, 1982). The licensee committed in this LER to improve interdepartmental communication and coordination to ensure that changes implemented by license amendments were fully complied with in the future. The inspector requested that a plan be developed to ensure specific assignment of responsibility for actions required by Technical Specification amendments. A licensee representative stated that this would be done by September 1, 1982.

In addition, it was agreed that any Technical Specifications approved in the interim would receive a special review to ensure specific assignment of responsibility.

The second example was reported by the licensee in a Special Report dated April 23, 1982. This report detailed the failure to fully perform the surveillance of the spray/sprinkler system as required by Technical Specification 4.15.B.(2). This surveillance lapse existed from September 15, 1980 (when it was 25 percent overdue) until June 11, 1981. The licensee originally identified this problem in September, 1981, when records of the surveillance could not be located during a QA audit. When the records were subsequently located, the licensee believed that all surveillances had been completed, but did not verify this by detailed inspection of the records. A second audit in April 1982 found that this surveillance had not, in fact, been performed. A Severity Level 5 violation was issued to the licensee on May 20, 1982, for the failure to perform this surveillance.

In its response dated June 18, 1982, to the Notice of Violation (OI 50-206/82-15-02), and in the corrective actions outlined in the Special Report dated April 23, 1982, the licensee made several commitments to ensure that responsibility for the performance of the fire protection surveillances was clearly assigned and understood by August 31, 1982. In addition, the licensee agreed to review fire equipment-related surveillances to ensure that any other lapses which had occurred were reported as required. The inspector confirmed by review of records that subsequent testing of the spray/sprinkler systems on January 13, 1981, and June 11, 1981, had been performed. This testing indicated that the systems were operable at the end of the interval.

The third instance was reported by the licensee in a Special Report dated June 16, 1982. This report detailed the discovery on May 17, 1982, that the 4160 volt switchgear room fire detectors had not been tested during July 1981 as required by Technical Specification 4.15.D.(1). The inspector reviewed the record of Maintenance Procedure SOI-I-2.22, "Smoke and Flame Detectors Semi-Annual PM," for this work dated July 20-27, 1981. It had been signed by the worker and his supervisor on July 27, 1981, and clearly annotated to show that the 4160 volt switchgear room fire detectors had not been tested. The inspector also reviewed records which showed that the detectors were tested on January 27, 1981 and January 28, 1982, before and after the lapsed surveillance. Licensee personnel stated that no compensatory measures for the missed surveillance were taken when the surveillance interval lapsed, nor was a timely Special Report made as required.

In its Special Report of June 16, 1982, the licensee outlined a program of corrective action. First, the licensee stated that the tracking system for maintenance orders already required an investigation and corrective action to ensure maintenance order completion by the "late date" specified on the maintenance order. The inspector reviewed

memoranda to maintenance personnel dated February 26 and March 1, 1982, which substantiated this statement. The licensee's corrective program also reiterated the commitment to review all fire protection systems surveillance to ensure that frequency requirements had been met, and planned to revise the maintenance order tracking procedures to better ensure the timely completion of maintenance.

The fourth instance was discovered by the inspector on June 30, 1982. On June 14, 1982, the inspector noted that the fire detector for the sphere enclosure building (Zone 16) was alarming. Station personnel were requested to identify the date that the zone began to alarm. Licensee personnel stated that the Zone 16 alarm was received periodically due to welding smoke, rain, humidity, or wind, but was not considered inoperable in these cases unless it continued to alarm for several hours. These personnel also stated that no annunciator response procedure for these alarms existed, but a procedure did exist requiring hourly fire patrols and a report to the NRC for inoperable fire detectors. The inspector reviewed this procedure, SO1-11-5, "Inoperable Fire Detection Instruments." As stated by licensee personnel, it implemented the patrol and reporting requirements of Technical Specification 3.14B(4). The inspector reviewed the Fire Protection Zone Inspection Logs required by this procedure from February 28, 1932, to June 28, 1982. These logs showed that Zone 16 detectors were patrolled hourly for ten days between February 28 and March 19, 1982, and since April 26, 1982. The inspector concluded that the Zone 16 detectors had been considered out of service since April 26, 1982. The inspector observed that this inoperability was required to have been reported by Technical Specification 3.14A(4)b no later than June 9, 1982. A licensee representative stated that a report addressing the cause for the recurrent alarm would be send promptly.

The inspector discussed these failures with licensee representatives. The inspector noted that the licensee's quality assurance program had detected three of the failures, albeit well after their occurrence. In addition, the corrective actions formulated by the licensee appeared to outline a program which may detect similar lapses and prevent their recurrence. However, the inspector expressed serious concern that the failures, taken together, indicated that from mid-1980 to mid-1982 the licensee's control of surveillance and reporting did not adequately conform to the Technical Specification surveillance and reporting requirements in two areas: fire protection, and valve surveillance requirements imposed by Amendment 58.

This area will be inspected further during a subsequent inspection. (OI 50-206/82-20-03)

8. Exit Interview

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