

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-206/82-34
50-361/82-44
50-362/82-28

Docket No. 50-206, 50-361, 50-362 License No. DPR-13, NPF-10, Safeguards Group _____
NPF-15

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

Facility Name: San Onofre Units 1, 2 and 3

Inspection at: San Onofre, California

Inspection conducted: November 16 - December 16, 1982

Inspectors: Joseph P. Stewart 1-10-83
J. P. Stewart, Reactor Inspector Date Signed

Approved by: J. P. Stewart for 1-10-83
D. F. Kirsch, Chief, Reactor Projects Section No. 3 Date Signed
Reactor Projects Branch No. 2

Summary:

Inspections during the period of November 16 - December 16, 1982 (Report Nos. 50-206/82-34, 50-361/82-44 and 50-362/82-28).

Areas Inspected: Routine, unannounced inspections of: Quality Assurance Program and Program Administration, Station Organization and Administration, Qualification of Personnel, Calibration of Instrumentation, Surveillance of Pipe Supports and Restraints, and Review of Preoperational Test Results. The inspection activities involved 89 inspector hours on site and 30 inspector hours offsite by one regional based inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

- *+W. Moody, Deputy Station Manager
- @ +D. Schone, Station Quality Assurance Manager
- @*+P. Croy, Configuration Control and Compliance Manager
- +B. Katz, Technical Manager
- +P. King, Quality Assurance Supervisor, Units 2 & 3
- @*+M. Speer, Compliance Engineer, Unit 1
- +C. Horton, Quality Assurance Supervisor, Unit 3
- +G. Patterson, Quality Assurance Engineer, Unit 3
- * G. McDonald, Quality Assurance Supervisor, Unit 1
- @ V. Powers, Quality Assurance Engineer, Unit 1
- @ H. Timmons, Quality Assurance Engineer, Unit 1
- @ J. Iyer, Compliance Engineer
- @ J. Anaya, Instrumentation and Control Supervisor, Unit 1
- @ R. Santosuosso, Instrumentation and Control Supervisor
- @ H. Newton, Supervisor Plant Maintenance, Unit 1
- F. Glover, Maintenance Planner, Unit 1
- W. Smith, Maintenance Foreman, Unit 1
- +K. O'Connor, Startup Supervisor, Unit 3
- J. Salazar, Instrumentation and Control Foreman, Unit 1

+Denotes those attending exit interview on November 19, 1982. Also present at the exit interview were M. Mendonca, Reactor Inspector and A. Chaffee, Senior Resident Inspector.

* Denotes those attending exit interview on December 3, 1982. Also present at the exit interview was G. Hernandez, Reactor Inspector.

@ Denotes those attending exit interview on December 17, 1982.

The inspector also interviewed and talked with other licensee employees during the course of the inspections. These included station and contractor project engineers, quality assurance personnel and craftsmen.

2. QA Program Administration and Program Implementation (Unit 1)

The inspector reviewed the following Quality Assurance documents for changes and revisions since the previous inspections:

- . Quality Assurance Manual Unit 1
- . Quality Assurance Reference Procedures Manual Unit 1
- . Station Quality Assurance Program Unit 1, S01-A-112, Revision 6, June 24, 1982 (and listed references)

The above documents contained approximately thirty changes. All of the changes were inspected for compliance with the licensee's FSAR commitments (contained in Appendix D of Amendment 41) to the QA program defined in the Orange Book (WASH-1284, October 26, 1973) and associated references. All changes in the program appeared to be in compliance with the commitments.

The inspector also examined the following Quality Assurance Audit Reports:

- . Audit Reports S01-43-82 and S01-44-82, Technical Specifications 6.3, 6.4.1 and 6.5.2.8b, 10 CFR 50 Appendix B, Criteria II
- . Audit Report S01-50-82, Technical Specifications 6.1 and 6.2, Criterion I
- . Audit Report S01-52-82, Chapter 8 - SONGS Unit 1 QA Manual, Criterion 8, "Identification and Control of Materials, Parts and Components."
- . Audit Report S01-58-82, 10 CFR 50 Appendix B, Criterion XV, and QA Manual Chapter 15

Based upon the examination of the above audit reports, and recent revisions to the Quality Assurance Reference Procedures Manual, the inspector determined that the licensee had modified the QA program in areas which had previously been identified as having weaknesses.

No items of noncompliance or deviations were identified.

3. Plant Organization and Administration (Units 1, 2 and 3)

The inspector examined the onsite organization and determined that the minimum requirements shown in the Technical Specifications were exceeded. The inspector also examined the qualifications of the individuals filling the following positions:

- Station Manager
- Deputy Station Manager
- Operations Manager
- Material and Administrative Services
- Manager Station Security
- Configuration, Control and Compliance Manager
- Emergency Preparedness Manager
- Maintenance Manager
- Assistant Manager, Maintenance (Unit 1 and Units 2 & 3)
- Technical Manager
- Supervising Engineer, NSSS Support
- Supervising Engineer, NSSS
- Supervising Engineer, Shift Technical Advisors
- Supervisor of Instrumentation and Control
- Supervisor of Chemistry
- Supervising Computer Engineer

- Shift Technical Advisors
- Instrumentation and Control Supervisors
- Instrumentation and Control Foremen
- Shift Supervisors (SRO)
- Assistant Shift Supervisors (SRO)
- Reactor Operators (RO)
- Quality Assurance Manager (Offsite)
- Quality Assurance Manager (Onsite)

In addition, the inspector examined the qualifications of the individuals filling each of the following positions on a sampling basis:

- Health Physics Foremen
- Nuclear Operators (non-licensed)
- Instrumentation and Control Foremen
- Instrumentation Technicians
- Onsite Technical Engineering Staff
- Quality Control Inspectors
- Non-destructive Testing Personnel
- Quality Assurance Auditors
- Material Receiving Inspectors
- Plant Chemistry Technicians

Based upon examination of the qualifications of the above individuals, the inspector determined that the above personnel meet or exceed the requirements of ANSI N18.1-1971 as specified by the Technical Specifications.

No items of noncompliance or deviations were identified.

4. Personnel Qualification Program (Units 1, 2 and 3)

The inspector examined the site personnel qualification program for both station personnel and onsite Quality Assurance personnel. The personnel qualification requirements for the station staff are defined in Section 6 of the Technical Specifications. The requirements for Quality Control Inspectors and Quality Assurance Auditors are defined in the Quality Assurance Reference Procedures Manual. The inspector examined the Technical Specifications and the following procedures contained in the Quality Assurance Reference Procedures Manual:

- . QAP N9.01 - Qualification and Certification of Nondestructive Examination Personnel

- . QAP N10.10 - Qualification and Certification of Inspection, Examination and Testing Personnel
- . QAP N10.21 - Qualification and Certification of VT-2 Visual Examination and Testing Personnel
- . QAP N18.05 - Qualification of Quality Assurance Organization Auditors

Based upon examination of the above procedures, unit technical specifications, and individual qualification records, the inspector determined that the licensee's personnel qualification program was current and that implementation of the program appeared adequate.

No items of noncompliance or deviations were identified.

5. Calibration (Unit 1)

The inspector examined selected procedures and records of calibration of components and equipment associated with safety-related systems. The following procedures were examined:

- . S01-II-1.4-1C through 28C Reactor Plant Instrumentation Calibration (refueling interval)
- . S01-II-1.1 Reactor Plant Instrumentation Testing (two week interval)
- . S01-II-1.6 Nuclear Instrumentation System Calibration (6 month interval)
- . S01-II-1.2 Reactor Plant Instrumentation Calibration (monthly interval)
- . S01-II-1.3 Reactor Plant Instrumentation Testing (quarterly interval)
- . S01-II-1.73 Containment Isolation System (refueling interval)
- . S01-II-1.80 Monthly Containment Isolation Channel Test
- . S01-II-1.250 Power Relief Valves CV-545 and CV-546 Bistable Calibration/ Testing (monthly calibration)

In addition, the inspector examined calibration and test results of the above procedures on a sampling basis, except for procedures S01-II-1.4 and S01-II-1.73. The inspector also verified the traceability of several test instruments to appropriate National Bureau of Standards secondary standards. The inspector noted that the abbreviation "MA" was used to indicate microamps in procedure S01-II-1.6. The licensee's representative indicated that a procedure change notice would be initiated to correct the incorrect designation. The inspector also noted that the instrument technicians were inconsistent in initialing the spaces used to indicate step completion in the calibration

procedures. For example, the test data (volts or amps) being verified would be written in the space provided for the technician's initials. The licensee's representative stated that the technicians would be instructed regarding data entry and verification requirements. Observations of required calibrations performance will be conducted during a future inspection (50-206/82-34-01).

The qualifications of personnel reviewing and approving calibration procedures were examined. Technician qualifications were examined on a sampling basis. All qualification records examined conformed to regulatory requirements.

No items of noncompliance or deviations were identified.

6. Preoperational Test Results Evaluation (Unit 3)

The inspector examined the following completed preoperational test results:

- . 3HA-102-01, Thermal Expansion
- . 3PE-223-05, Concentrated Boric Acid System Test
- . 3HA-102-03, Dynamic Effects Test-Hot Functional Test
- . 3HA-102-02, Steady State Vibration Test Hot Functional
- . 3AC-483-01, Radio Communication System
- . 3PE-223-03, Reactor Coolant System Charging Sybsystem
- . 3PE-101-03, Primary Reactor Containment Structural Integrity Test
- . 3PE-101-02, Local Leak Rate Test
- . 3HA-212-05, Reactor Coolant System Leakage Measurement
- . 3HA-212-04, Pressurizer Performance
- . 3HA-212-06, Primary and Secondary Water Chemistry

Based upon the above examinations, the inspector identified a condition wherein it appeared that the licensee had overlooked test data correlations. In Test Procedure 3HA-212-06, the test results, taken in step 8.3 on pages 9 and 10, were stated in different units. The San Onofre Unit 3 Chemistry Laboratory and an independent laboratory had analyzed identical samples from the San Onofre Unit 3 Reactor Coolant System and one steam generator (SG E088). In one case, the steam generator chloride sample from the independent laboratory was reported as ten times greater (0.5 ppm or 500 ppb) than the Unit 3 laboratory results (0.05 ppm) on the same sample. The licensee's test review group had approved the results without questioning the different results obtained on the two samples. The differences in results varied from 25 percent to an order of magnitude. The licensee's representative agreed to evaluate this matter. This item will be reviewed during a future inspection (50-362/82-28-01).

In Test Procedure 3HA-102-03, by Test Exception Report No. 3, the Test Working Group (TWG) approved the deletion of vibration testing the auxiliary spray line to the pressurizer when two charging pumps are operating. It is possible for two or three charging pumps to provide flow into the auxiliary spray piping, a condition for which the piping has not been vibration tested. The licensee's representatives indicated that the matter would be evaluated. This item will be examined during a future inspection (50-362/82-28-02).

7. Surveillance of Pipe Supports and Restraint Systems (Unit 1)

The inspector examined the following procedures governing the surveillance, maintenance, and testing of the pipe supports and restraint systems:

- . S01-I-2.10, Revision 2, Routine Tests of Inaccessible Hydraulic Snubbers
- . S01-I-2.17, Revision 3, Routine Inspection of Accessible Mechanical Snubbers
- . S01-I-2.29, Revision 3, Routine Inspection of Inaccessible Mechanical Snubbers
- . S01-I-2.30, Revision 5, Routine Inspection of Inaccessible Hydraulic Snubbers
- . S01-I-2.31, Revision 2, Routine Tests of Accessible Hydraulic Snubbers
- . S01-I-2.32, Revision 4, Routine Inspection of Accessible Hydraulic Snubbers

The inspector determined that the above procedures had been revised several times since the last inspection. The revisions were primarily made to reflect changes to plant technical specifications and implement a commitment to the NRC establishing improved acceptance criteria for non-adjustable snubbers. Examination of procedures S01-I-2.10 and S01-I-2.31 established that the improved acceptance criteria for non-adjustable snubbers appeared to be adequate. This item (50-206/81-33-01) is closed.

The inspector examined procedures S01-I-2.17 and S01-I-2.29 to evaluate the licensee's stated acceptance criteria for mechanical snubbers and determined that the acceptance criteria on attachment 9.3 to S01-I-2.17 and attachment 9.6 to S01-I-2.29 (also contained in paragraph 7.0, page 5 of both procedures) was inadequate. Step 3 of the acceptance criteria states "This only applies to small pipes and should not be construed to be a requirement applying to all situations" without adequately defining approved exceptions. Also, the maintenance data record forms in procedures S01-I-2.17 and S01-I-2.29 do not provide for documenting of the freedom of movement test, used to verify that the mechanical snubber is not frozen. Additionally, the procedures, in step 6.0, require functional testing of mechanical snubbers which appear inoperable as determined by visual inspection. The inspector found that no procedures existed to functionally test mechanical snubbers. A licensee representative indicated that revisions to S01-I-2.17 and S01-I-2.29, requiring functional testing of mechanical snubbers, were recently issued and that development of the test procedures would be completed prior to the restart of Unit 1.

Further, the licensee stated that procedures S01-I-2.17 and S01-I-2.29 would be revised to correct the observed deficiencies prior to the restart of Unit 1. This area will be examined during a future inspection (50-206/82-34-02).

The inspector examined maintenance procedures S01-I-2.30 and S01-I-2.32 to verify implementation of the licensee's commitment to provide revised hydraulic snubber minimum reservoir oil level acceptance criteria and determined that the revised acceptance criteria appeared to be acceptable. This item (50-206/81-33-02) is closed.

The inspector examined the test results of the six hydraulic snubbers, which were identified to be low on oil during a previous inspection, and verified that the licensee had performed repairs and functional testing of the snubbers, as required. This item (50-206/81-33-03) is closed.

In order to verify that required snubber surveillance, maintenance and testing had been performed, the inspector examined selected records of these activities. Based upon those examinations it appears that snubber surveillance was being performed in accordance with the technical specifications. Unit 1 is presently on the minimum surveillance inspection frequency interval for hydraulic snubbers. This item (50-206/81-33-04) is closed. The inspector noted that the licensee's retrieval of snubber maintenance records was achieved with great difficulty and that this has been a recurring problem area. The licensee identified that the problem was due to filing the completed work record under the maintenance order number instead of the procedure number or equipment number, and stated that a machinery history file would be maintained on each individual snubber to improve records retrievability.

The inspector examined the status of oil used in various hydraulic snubbers and determined that the licensee was presently using a white clear colored oil (Specification No. SF96-1000) to refill snubbers with low oil reservoir levels. The licensee stated, and the oil usage records examined indicated, that snubbers with a different oil were being rebuilt and refilled when the oil reservoir level became low. This item (50-206/81-33-05) is closed.

The inspector accompanied a maintenance department machinist and foreman during the performance of procedure S01-I-2.32, "Routine Inspection of Accessible Hydraulic Snubbers." The inspector visually examined approximately forty safety-related snubbers and another ten snubbers on non-safety related piping not covered by the procedure. The inspector, and the licensee, identified 5 snubbers that did not have freedom of movement, 6 snubbers that were leaking, and several snubber locations where the snubbers had been removed, by the licensee's Projects Department, and scheduled to be replaced by mechanical snubbers. One snubber, 2-S-17-SW-9, was found to have a loose nut on the piston rod, and the snubber was also being used as a conduit support. An electrical conduit had been clamped to the snubber preventing freedom of movement. The licensee indicated that this condition had occurred inadvertently because of the large amount of seismic-upgrade modifications being performed in the surrounding area. The licensee took appropriate corrective action to resolve the identified deficiencies. The inspector requested the work authorization documentation on the snubbers which had been removed. The licensee, however, could not provide the records for two of the removed snubbers. This item will be examined during a future inspection (50-206/82-34-03).

In the course of the observed snubber inspection, the inspector noted a deficiency in the area of maintenance training. The machinist performing the inspection had the understanding that snubbers which were frozen and had no freedom of movement were satisfactory and required no further investigation. The inspector observed that this interpretation was not consistent with the actual requirements of the technical specifications and the procedure being used by the licensee's inspector. The licensee stated that both the technical specification and procedure had been recently revised, that this was the the first time the procedure had been used, and that the licensee had not previously trained that inspector on the criteria and use of the newly revised procedure. The licensee committed to develop and implement training on the inspection requirements and criteria for inspection of both hydraulic and mechanical snubbers. The licensee took immediate corrective action on those snubbers which failed the freedom of movement test. The licensee's corrective actions in the area of snubber inspection training will be examined during a future inspection (50-206/82-34-04).

The inspector observed several inoperable non-safety related hydraulic snubbers, including one that was partially disassembled and another which had its reservoir inverted, thus draining essentially all oil out of the snubber into the reservoir. The inspector expressed concern regarding the maintenance of non-safety related hydraulic snubbers to the licensee. The licensee stated that the non-safety related snubbers had not been included in a surveillance or preventive maintenance program and that a preventive maintenance program would be established.

Based upon observations made during the snubber inspection, the inspector concluded that interdepartmental communication continued to be a problem, an observation also noted in the recent 1981-1982 SALP Report. The inspector observed that the station maintenance department was not aware of which safety-related snubbers were removed by Projects Department. The maintenance department was visually determining which snubbers had been removed by inspecting on a monthly basis in lieu of formal communications between the two departments.

No items of noncompliance or deviations were identified.

8. Circular 81-13 (Closed) (Unit 1) "Torque Switch Electrical Bypass-Circuit Missing on Safeguard Valve Motors"

The licensee has reviewed this matter and determined that the safeguard service valve motors equipped with torque switch electrical bypass circuits are installed as designed and that the integrity of the circuits will be maintained.

9. Exit Meeting

The inspector met with the licensee's representatives (denoted in Paragraph 1) on November 19, December 3, and on December 17, 1982. The scope and results of the inspections were discussed and summarized.