

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-206/89-29, 50-361/89-29 and 50-362/89-29

Docket Nos. 50-206, 50-361 and 50-362

License Nos. DPR-13, NPF-10 and NPF-15

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


Facility Name: San Onofre Nuclear Generating Stations Units 1, 2, and 3

Inspection at: San Clemente, California

Inspection Conducted: October 16-November 5, 1989

Inspector: C. Clark, Reactor Inspector

Approved by:

  
F. R. Huey, Chief

11/22/89  
Date Signed

Inspection Summary:

Inspection During the Period October 16-November 5, 1989 (Report Nos. 50-206/89-29, 50-361/89-29 and 50-362/89-29)

Areas Inspected: A routine unannounced inspection by one regional inspector of the licensee performance on closing out NRC open items and the Unit 2 Inservice Inspection (ISI) activities. Inspection Procedures Nos. 30703, 73051, 73052, 73753, 73755, and 92701 were used as guidance for the inspection.

General Conclusions and Specific Findings:

- ° Licensee follow-up actions and the use of the San Onofre Commitment Register (SOCR) for identification and tracking of NRC identified concerns were found to have been slow and lacked attention to detail.

The licensee acknowledged the above noted problems, as identified in paragraph 6.a. of the report, and stated that there have been recent licensee organizational changes in the commitment tracking area that should prevent recurrence. The licensee committed to provide additional review of this area, to determine what additional corrective actions need be taken to ensure that all NRC identified concerns are addressed in an efficient and timely manner. Review of these corrective actions will be the subject of future inspections.

Open Item Summary: During this inspection, four open items were closed, and three open items were left open.

## DETAILS

### 1. Persons Contacted

- \*H. Morgan, Station Manager
- \*J. Reilly, Station Technical
- \*J. Shipwash, Compliance Supervisor
- \*D. Herbst, Quality Assurance (QA) Manager
- \*R. Plappert, Technical Support and Compliance Supervisor
- B. Hammer, Quality Control (QC)
- \*G. Gibson, Onsite Nuclear Licensing
- \*R. Baker, Onsite Nuclear Licensing
- \*J. Mundis, Operation and Maintenance Support Supervisor
- \*J. Boardman, ISI Engineer
- P. Blakeslee, Heat Removal Section Supervisor
- \*T. Cooper, Compliance
- J. Bognar, Compliance
- \*R. Sarouhan, QC Engineer

\* Denotes those personnel in attendance at the exit meeting on October 20, 1989

The inspector also held discussions with other licensee and contractor personnel during the course of the inspection.

### 2. Inservice Inspection-Review of Program (73051)

The inspector performed a general review of the basis of the licensee's ISI program. The Unit 2 ISI program is based on the requirements of the ASME Code, Section XI, 1977 Edition, with addenda through the summer of 1979. The ISI program examination area sheets from manual M38218 list the areas to be examined, the method and extent of the examination, calibration blocks required and other useful information. The ISI program is established by Operations and Maintenance (O&M) support order S0 123-IN-1, "Inservice Inspection Program." The ISI is implemented by O&M support procedure S0123-IN-1, "Inservice Inspection Program" and is updated and revised by the licensee per O&M support procedure S0123-SVII-1.1, "Inservice Inspection Program Maintenance".

The licensee's repair and replacement program is addressed in O&M support procedure S0123-XVII-3, "ASME Section XI repair and replacement program administration". This procedure meets the requirements of the ASME Code Section XI, for both a repair program (as specified in Article IWA-4000) and a replacement program (as specified in Article IWA-7000).

The quality assurance group performed at least three monitoring/surveillance reviews of the Unit 2 ISI activities, as reported in QA activity monitoring reports No. QAMR-104-89, QAMR-107-89 and QA surveillance Report No. SOS-157-89. These reports were reviewed by the inspector and found to be satisfactory.

No violations or deviations were identified in the areas reviewed.

3. Inservice Inspection-Review of Procedures (73052)

A sample review of ISI procedures did not identify any new revisions that had been issued since the last procedure review.

No violations or deviations were identified in the areas reviewed.

4. Inservice Inspection-Observation of Work and Work Activities (73753)

During this inspection, the licensee was conducting the Unit 2, cycle 5 refueling outage, which was the first refueling outage of the second period of the first ten year ISI interval.

The inspector reviewed the qualification and certification records for the ISI examiners, and the equipment certifications. Available Visual (VT), Ultrasonic (UT) and Liquid Penetrant (PT) examinations performed on reactor vessel studs and nuts, shutdown cooling system and the steam generator system were observed by the inspector.

During the inspection, it was identified that:

- o The original Unit 2 ISI reactor vessel stud and nut UT calibration standard assembly could not be located for use during this outage. A spare Unit 2 reactor vessel stud and nut assembly was machined to obtain a new UT calibration standard assembly. The loss of the Unit 2 ISI UT calibration standard is similar to the Unit 1 losses identified in Inspection Report No. 50-206/89-03. The licensee had identified that the existing Unit 1, 2 and 3 UT calibration standards are now handled in accordance with licensee procedure S0123-11-1.0, "Calibration and Control of Measure and Test Equipment," which should prevent similar losses of UT calibration standards.
- o Inspection of UT calibration block 32 per QA activity monitoring report QAMR-107-89, dated August 23, 1989, found calibration notches out of dimensional tolerance. The licensee identified that a problem review report would be issued to address questions such as:
  - a) What is the condition of all other SONGS calibration blocks?
  - b) What other previous ISI examinations may be suspect due to the use of calibration block #32 and others found to be incorrectly machined?
  - c) What is the cause of this condition?

No violations or deviations were identified in the areas reviewed.

5. Inservice Inspection - Data Review and Evaluation (73755)

The inspector reviewed all available NDE ISI data sheets and NCR's generated this outage, prior to and during this inspection and found them to be satisfactory.



No violations or deviations were identified in the areas reviewed.

6. Follow-up (92701)

- a. The inspector reviewed licensee audit report No. SCES-040-89, signed out October 3, 1989. This audit was performed September 7-13, 1989, to address an NRC concern brought to Nuclear Engineering Safety and Licensing (NES&L) management's attention as a result of NRC inspection reports 50-206/89-21 and 50-361/89-21.

This audit report identified that the audit was conducted to determine the effectiveness of the San Onofre Commitment Register (SOCR) in tracking NRC follow-up items.

This audit concluded that:

- There was a significant number of overdue items identified in SOCR. As of September 8, 1989, it was found that SOCR was tracking 617 NRC items, and 269 (44 percent) NRC items were identified as overdue/delinquent.
- Included among the overdue items were 4 items with commitment dates which had been specifically agreed to by the NRC.

The licensee recommendations for program improvement in this area were that:

- Licensee managers need to be more attentive to the initiation, tracking, and closure of commitments made to the NRC and hold the responsible personnel accountable.
- A number of interface and program improvements need to be made to make the initiation, tracking, and closure of NRC commitments more effective.

The licensee has assigned actions to responsible individuals for program improvements in this area. The actions taken by the licensee in this area will be reviewed during future NRC inspections.

- b. (Closed) 50-206/87-33-02; follow-up-"Fire Brigade Staffing Units 1, 2 & 3"

The inspection report identified a concern that the licensee had an offsite fire department agreement with the Camp Pendleton Fire Department that could reduce the minimum licensee site fire brigade staffing below the level required at all times by the licensee's technical specification (Section 6.2, organization). In response to this NRC concern, the licensee indicated that administrative procedures governing the fire brigade activities would be revised to require that at least five members of the fire brigade remain on site at all times.

During this inspection, the inspector held discussions with the licensee's fire department personnel and reviewed San Onofre fire department (SOFD) administrative procedures. A SOFD procedure titled, "San Onofre Fire Department/Camp Pendleton Fire Department Mutual Aid Procedure", dated February 9, 1989, addressed this concern. The third paragraph of this procedure stated:

"The senior officer on duty of the fire department receiving the request shall immediately take the following action:

- A. Determine if apparatus and personnel can be spared to respond to the call. (At no time will SOFD manning go below the level of five ESOs on site in order to respond to a mutual aid request.)"

Based on the above information, and other documentation reviewed, it appears the licensee has taken actions to resolve this concern.

This item is closed.

- c. (Open) 50-361/88-10-20; follow-up - "Review of Adequacy of Periodic Checking of Nitrogen Leakage on CCW Surge Tank"

The inspection report identified that, "The inspector noted that the CCW surge tank is not periodically checked for nitrogen leakage with non-safety nitrogen supply secured. Additionally, it was not clear if maintenance of some minimum level of nitrogen pressure is important."

The licensee San Onofre Commitment Register (SOCR) program had identified this as Item No. 8810014, DOCMT No. 88-10, with the following information statement, "This task is for tracking of NRC open item only, pending additional NRC review. \*\* Task closed."

The licensee position on this subject was:

- o They had not been asked by the NRC to identify if a periodic nitrogen leakage check was required to be performed, so they had no action.
- o They had not been asked by the NRC if maintenance of some minimum level of nitrogen pressure is important, so they had no action.

After reviewing the licensee SOCR information, the NRC inspector identified to the licensee that when they see these kind of statements in an NRC inspection report with an open item number assigned to them, they can assume that licensee action is needed and that the NRC will follow up on the concerns in subsequent inspections.

The inspector held discussions with licensee cognizant system personnel, reviewed licensee documentation and identified the following information:



- As identified by the original inspector, the licensee was not performing a periodical check of the CCW surge tank for nitrogen leakage. Temporary Change Notice (TCN) 0-1, to site document S023-SPT-2, Revision 0, "Inservice testing of nitrogen and service water supply check valves to CCW", was issued October 3, 1989 to perform a CCW surge tank leakage test with the non-safety nitrogen supply secured, during CCW check valve testing performed each refueling outage. There is approximately two years between normal refueling outages.
- Calculation No. M27.12; "Estimated CCW Pump NPSHA During Selected Transients", issued August 9, 1988, identified that the CCW pump NPSHA during selected transients would be acceptable with seven days of continued nitrogen leakage of 1000 sccm. This document also identified that a positive nitrogen pressure could aid in postulated water hammer events.

The inspector asked the licensee to identify the design document that identified the design basis requirement for nitrogen in the CCW surge tank. The licensee could not provide this information to the inspector during the inspection. The licensee identified that they planned to issue a position letter on this subject within a week, and would provide a copy to Region V for review to close this item. The inspector identified that he would keep this inspection period open until November 5, 1989, to allow time for the licensee letter to reach Region V. On November 2, 1989 a licensee representative notified Region V, that the memo was held for rework and they did not know when it would be issued. This item will remain open until the licensee can identify the design basis document requirements for nitrogen in the CCW surge tank, and identify if a minimum level of nitrogen pressure is required to be maintained in the surge tank.

d. (Closed) 50-361/88-22-04; Other-Operator Actions

The inspection report identified that:

- Abnormal operating instruction no. S023-13.2, Revision 2 contained additional operator actions to isolate letdown, transfer local control of diesel generators and notify plant personnel of the event of a control room evacuation while operators were still inside the control room. The licensee indicated that this procedure would be modified to require that these actions are performed outside of the control room.
- The licensee indicated that reference to 10 CFR 50.54(x) throughout the procedure would be deleted or modified to indicate that this option is available only in the event that the established methodology and procedures for post-fire safe shutdown are ineffective and additional last resort measures are required to bring the reactor to safe shutdown.

During this inspection the inspector reviewed Temporary Change Notice (TCN), No. 2-3 and TCN No. 2-5 to Rev. 2 of licensee procedure S023-13-2, "Shutdown from Outside the Control Room". All

of the procedure changes discussed above have been incorporated into the procedure. Items 1, 2 and 3 of pre-shift brief number 278, dated December 7, 1988, discussed operator actions for the NRC concerns identified above.

This item is closed.

e. (Closed) 50-361/88-22-05; Other-Operator Instructions

The original inspection report identified that the licensee acknowledged that the instructions contained in Abnormal Operating Instructions No. S023-13-2 and No. S023-13-21 did not provide sufficient guidance to operators to alert them to the potential significance of a fire occurring in nine fire areas, where fire induced spurious actuation of the VCT outlet valve could cause the loss of all suction paths to the charging pumps. The licensee indicated that the procedure would be revised to contain this information.

During this inspection the inspector identified that the nine fire areas discussed in the original inspection report, appeared to be 2AC-70-63, 3AC-70-65, 2AC-30-20, 2AC-9-5, 3AC-9-6, 2AC-9-14, 3AC-9-7, 2AC-30-28, and 3AC-30-21.

The inspector reviewed:

- ° The latest issue of licensee procedures No. S023-13-2 and No. S023-13-21 and the information indicated above has been incorporated into the applicable procedures.
- ° Item 5 of pre-shift briefing number 278, dated December 7, 1988, identified procedural changes had been made to address this NRC concern.

Based on the above information and other documentation reviewed, it appears that the licensee has taken actions to resolve this concern.

This item is closed.

f. (Close) 50-361/88-22-06; Other-Potential Station Blackout

The inspection report identified a concern that the alternate control room shutdown methodology for eight fire areas appeared to consider placing the fire affected unit in a station blackout for approximately 27 minutes. In response, the licensee indicated that the specific aspects of the methodology that requires disabling of AC power and the time line involved, would be identified to the NRC in a separate submittal by November 30, 1988.

During this inspection the inspector reviewed licensee letters No. JWN:0448n dated November 4, 1988 and No. JWN:0546n, dated December 1, 1988, from M.O. Medford to NRR. The December 1, 1988 letter provided the licensee response to the above identified NRC concern, and stated the train A ESF bus would be deenergized for



approximately 3 minutes. After reviewing the above letters; licensee procedure S023-13-2, Revision 2, TCN No. 2-5, "Shutdown from Outside the Control Room"; and other licensee documentation; it appears the licensee has taken satisfactory actions to address this concern.

This item is closed.

g. (Open) 50-361/88-22-07; Other-Evaluation of AC Loads

The inspection report identified that an evaluation of safe shutdown and non-safe shutdown loads during the period that all AC power is unavailable to the plant will be performed and submitted to the NRC by November 30, 1988.

The licensee provided a copy of letter No. JWM: 0488n, dated November 4, 1988, from M.O. Medford to NRR and stated the licensee SOCR identified this letter as the closure document for this item. After reviewing this letter, the inspector requested the licensee to identify what area of this letter addressed the NRC concern, involving identification of safe shutdown and non-safe shutdown loads. The licensee could not provide this information during the inspection, but stated they would provide the information to Region V for the inspector's review. This item will remain open until the requested information is provided, and it has been demonstrated to an inspector that the required actions can be accomplished.

h. (Open) 50-361/88-22-08; Unresolved VCT Outlet Valve Spurious Closure

The inspection report identified an NRC concern that fire induced circuit damage to the Volume Control Tank (VCT) outlet valve control cables, pressurizer low level instrumentation cables, and charging pump automatic start control cables could cause an automatic start of all charging pumps coincident with the loss of suction flow to the charging pump. The report also identified that the licensee indicated that proposed corrective actions for these deficiencies would be provided in a submittal to the NRC by November 4, 1988.

During this inspection, the licensee provided a copy of licensee letter No. JWN:0488n, dated November 4, 1988, from M. O. Medford to NRR. The inspector reviewed the licensee proposed corrective actions in the letter, licensee procedure S023-13-2, (Revision 2, TCN No. 2-5, "Shutdown from Outside the Control Room"), pre-shift briefing Number 278 of December 7, 1988, and other licensee documentation. In the case of an identified fire, the reviewed documentation required:

- o Immediate operator actions to select manual control and stop all charging pumps.
- o Operator verification that at least one of the five charging pump suction paths is available prior to restarting pumps.



To close this item the licensee will have to demonstrate to an inspector the capability to accomplish these equipment actions from outside the control room, if fire induced electrical faults affecting the equipments have occurred.

7. Exit Meeting (30703)

The inspector met with the licensee management representatives denoted in paragraph 1, on October 20, 1989. The scope of the inspection and the inspector's finding up to the time of the meeting were discussed. At this meeting the inspector identified that he had obtained some information and requested some additional information be sent to the regional office, that would be reviewed later in the region, with the findings documented in this report. The available information was reviewed and the findings included in paragraph 6 of this report.