

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-206/86-38, 50-361/86-28 and 50-362/86-27

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

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

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

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

Inspection at: San Onofre, San Clemente, California

Inspection Conducted: September 2-5, 1986

Inspector:

Dennis J. Willett  
Dennis Willett, Reactor Inspector

9-18-86  
Date Signed

Approved By:

DR Willett for  
Stuart Richards, Chief  
Engineering Section

9-18-86  
Date Signed

Summary:

Inspection on September 2-5, 1986 (Report Nos. 50-206/86-38, 50-361/86-28 and 50-362/86-27)

Areas Inspected: Routine, unannounced safety inspection of licensee action on previous inspection findings, TMI (NUREG-0737) Items, TDI Emergency Diesel Generator 10 CFR Part 21 follow-up. NRC inspection modules 37702, 30703, 36100, 94702 and 25565 were covered during this inspection.

Results: Of the areas inspected, no violations or deviations were identified.

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## DETAILS

### 1. Persons Contacted

#### Licensee Personnel

#M.A. Wharton, Deputy Station Manager  
#C.A. Couser, Compliance Engineer  
#J. McKinnon, Quality Assurance Engineer  
#D.L. Johnson, Engineer, HVAC  
#W.G. Zintl, Manager, Compliance  
#J.A. Mangum, Maintenance Engineer  
#N. Maringas, ISEG  
M.F. Freedman, Compliance Engineer  
J.L. Beal, Corporate EQ Engineer Licensing  
R.L. Phelps, Corporate EQ Engineer, Safety/Licensing  
M.J. Speer, Compliance Engineer  
K. Meddings, Compliance Engineer  
T. Jones, Training Engineer  
J. Ibarra, Corporate Human Factors Engineer, Licensing

The inspectors also held discussions with other licensee and contract personnel during this inspection. These included plant staff engineers, technicians, administrative assistants and quality assurance personnel.

#Denotes those present during the entrance meeting on September 5, 1986

### 2. Follow-up of unresolved open items Unit 1

- a. 86-25-01 (closed): The Control Room Ventilation System was demonstrated to be within design values and independent of the Technical Support Center (TSC), prior to the restart of the unit.
- b. 86-25-02 (closed): A documentation review of nonconformances (NCR S01-P-2570, NCR S01-P-2691) and their close-out (CWO 4006-70, MO 85071243000), did not identify any inconsistencies or improprieties in the resolution and disposition of these nonconformances.

### 3. 10 CFR Part 21 Reports for Transamerica DeLaval Inc. (TDI) Diesel Generator

The inspector reviewed documentation associated with the inspection, testing and maintenance of the TDI diesels and discussed the status of the owners group recommendations with the cognizant engineer and owners group representative. Phase II of the owners group recommendations has now been completed for both Unit 1 TDI diesels (# 1 and 2).

The two Part 21 reports which are currently open for the TDI diesels are:

- a. TDI # 132, November 6, 1986

Problem: Intake and Exhaust spring failure potential

Resolution: Replace with qualified springs

Schedule: Four to six months as parts are available

- b. TDI # 136, July 2, 1986

Problem: Insufficient torquing to connecting rod bolting.

Resolution: Torque per new TDI procedures (pending)

Schedule: indeterminate

4. Outstanding TMI (NUREG-0737) Issues Units 2 and 3

- a. Item I.D.2 SPDS (closed): The SPDS function is performed by the Critical Function Monitoring System (CFMS) and the Qualified Safety Parameter Display System (QSPDS) which contains those parameters that are seismically qualified. The CFMS and QSPDS have been tested and verified at Units 2 and 3. These systems have been modeled on the plant specific simulator and are being used by licensee personnel during training.
- b. Item II.F.2 (closed): This item was partially closed-out in IR# 50-361/85-13. Now that the Heated Junction Thermocouple installation has been completed, instrumentation for detection of inadequate core cooling is completed. The Subcooling Margin Monitor (SMM) has been removed from the vertical control boards. This was the result of a human factors engineering study which concluded that it was redundant to the SMM available on the seismically qualified QSPDS. The procedure review for inadequate core cooling was completed during the close-out of TMI item I.C.1 in this report.
- c. Item I.C.1 (closed): This item was partially closed out in IR# 50-361/86-13. The inspector reviewed the system description for CFMS and QSPDS (SD-S023-820), and the following Emergency Operating Instructions (EOI'S):

S023-12-4 "Steam Generator Tube Rupture"

S023-12-8 "Functional Recovery"

S023-12-5 "Steam Line Break"

These emergency procedures utilize the SPDS (CFMS & QSPDS) to detect inadequate core cooling and to provide information pertinent to the emergency.

5. Follow-up of Violations Regarding Environmental Qualification (EQ)

A team inspection reviewing the environmental qualification program at the San Onofre units 1, 2, and 3 identified five noncompliances in their inspection report (50-206/85-30, 50-361/85-29, 50-362/85-28) that were later issued as violations. This report also identified that "no generic documentation deficiencies were found."

Corrective action identified in the licensee's May 9, 1986 response to the Notice of Violation issued by Region V NRC on April 2, 1986 was reviewed by the inspector and closed as follows:

- a. Galite Cable (closed): The licensee contacted the manufacturer and verified the similarity between the Galite and Prestolite process for applying insulation material to conductors.
- b. Firewall EP Cable (closed): The licensee obtained an additional test report supporting the conclusion that Firewall EP cable is qualified for use at San Onofre Unit 1.
- c. Target Rock Solenoid Valves (closed): The licensee revised the qualified life calculations for nine valves, based on a reverification of valve energization status, following the EQ team inspection.
- d. Rockbestos Firewall III Cable(closed): The licensee obtained test data for Rockbestos Firewall III cable. This data supports the conclusion that Firewall III cable is qualified for use at San Onofre units 1, 2, and 3.
- e. Honeywell Transducer (closed): The licensee maintains that the qualification package was in error when it specified a steam environment. The NRC maintains that the package was in error because the equipment was qualified by analysis instead of type testing which would have been required if it was subject to a steam environment as indicated. The licensee agrees that type testing would have been required if the equipment was subject to a steam environment. The equipment is qualified, no further action is required.

6. Exit Interview

The inspection team met with representatives (denoted in paragraph 1) on September 5, 1986. The scope and findings of the inspection, which were discussed during this meeting are summarized as set forth in paragraphs 1 through 5 of this report.