U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-206/88-24, 50-361/88-25, 50-362/88-27

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

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

Licensee: Southern California Edison Company
P. O. Box 800, 2244 Walnut Grove Avenue
Rosemead, California 92770

Facility Name: San Onofre Units 1, 2 and 3

Inspection at: San Onofre, San Clemente, California

Inspection conducted: September 25 through November 17, 1988

Inspectors: C. W. Caldwell FOR — 12/16/88
F. R. Huey, Senior Resident Inspector, Units 1, 2 and 3 — Date Signed

C. W. Caldwell FOR — 12/16/88
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C. W. Caldwell FOR — 12/16/88
A. L. Hon, Resident Inspector — Date Signed

Approved By: C. W. Caldwell FOR — 12/16/88
P. H. Johnson, Chief
Reactor Projects Section 3 — Date Signed

Inspection Summary

Inspection on September 25 through November 17, 1988 (Report Nos. 50-206/88-24, 50-361/88-25, 50-362/88-27)

Areas Inspected: Routine resident inspection of Units 1, 2 and 3 Operations Program including the following areas: operational safety verification, radiological protection, security, evaluation of plant trips and events, monthly surveillance activities, monthly maintenance activities, independent inspection, licensee events report review, and follow-up of previously identified items. Inspection procedures 30703, 37700, 61726, 62703, 64704, 71707, 71710, 82301, 90712, 92700, 92701, 92702 and 92709 were covered.

Safety Issues Management System (SIMS) Items: None

Results:

General Conclusions and Specific Findings:

1. Several examples of plant operational deficiencies were noted, including: equipment control of safety injection pumps, maintenance of diesel generator governor oil levels, reset of diesel generator alarms, and plant housekeeping.

2. An example of improper control of maintenance activities was observed on Unit 1. Specifically, a section of safety related electrical conduit was improperly repaired using electrical tape, which did not conform to equipment environmental qualification requirements. The deficiency was not properly documented or evaluated by cognizant engineering personnel, nor were repairs properly dispositioned, as required by the licensee's quality assurance program. This was identified as a violation. (Paragraph 6.f)

3. Several examples of improper testing of safety related time delay relays (TDR) were noted. Specifically, the licensee's preventive maintenance program failed to require periodic calibration of TDRs associated with the alarm functions of several safety related switchgear components, as required by the plant technical specifications. This was identified as a violation. (Paragraph 6.g)

Open Items Summary:

During this report period, four new followup items were opened and 18 were closed; two were examined and left open.

DETAILS

1. Persons Contacted

Southern California Edison Company

C. McCarthy, Vice President, Site Manager
H. Morgan, Station Manager
D. Heinicke, Deputy Station Manager
D. Herbst, Quality Assurance Manager
D. Stonecipher, Quality Control Manager
*R. Krieger, Operations Manager
*D. Shull, Maintenance Manager
*J. Reilly, Technical Manager
P. Knapp, Health Physics Manager
D. Peacor, Emergency Preparedness Manager
P. Eller, Security Manager
J. Schramm, Operations Superintendent, Unit 1
*V. Fisher, Operations Superintendent, Units 2/3
*L. Cash, Maintenance Manager, Unit 1
*R. Santosuosso, Maintenance Manager, Units 2/3
C. Chiu, Assistant Technical Manager
*M. Wharton, Assistant Technical Manager
*C. Couser, Compliance Engineer

*Denotes those attending the exit meeting on November 17, 1988.

The inspectors also contacted other licensee employees during the course of the inspection, including operations shift superintendents, control room supervisors, control room operators, QA and QC engineers, compliance engineers, maintenance craftsmen, and health physics engineers and technicians.

2. Plant Status

All three units operated at essentially full power throughout this report period without any significant events. Unit 1, 2 and 3 had been in continuous power operation for 91 days, 72 days and 66 days, respectively.

3. Operational Safety Verification (71707)
Radiological Protection (71709)
Security (71881)

The inspectors performed several plant tours and verified the operability of selected emergency systems, reviewed the tag out log and verified proper return to service of affected components. Particular attention was given to housekeeping, examination for potential fire hazards, fluid leaks, excessive vibration, and verification that maintenance requests had been initiated for equipment in need of maintenance. The inspectors also observed selected activities by licensee radiological protection and security personnel to confirm proper implementation of and conformance with facility policies and procedures in these areas.

a. Independent Measurement of Reactor Coolant System (RCS) Leak Rate (Unit 1, 2 and 3) (61728)

The inspector independently verified measurements of RCS leak rate at steady-state, full power conditions for the three units. The computer program RCSLK9 developed by the NRC was utilized. The difference between the licensee's total leakage calculations and those using the NRC program were less than 0.2 gpm.

b. Restricted Operation Due to Power Calorimetric Uncertainties (Unit 2)

In reviewing the Unit 2 control room logs on October 23, 1988, the inspector noted that the Unit Superintendent had restricted Unit 2 operation such that administratively, the high pressure turbine governor valves were not allowed to be opened greater than 85%. The licensee imposed this restriction pending evaluation of apparent inaccuracies associated with the secondary calorimetric. Specifically, the licensee had observed (approximately two months after the unit was returned to service following a refueling outage) that the high pressure turbine governor valves on Unit 2 were remaining essentially full open. At the same time, for essentially the same plant conditions, the high pressure governor valves on Unit 3 were nominally 85% open for full power operation.

In evaluating this condition, the licensee determined that the feedwater flow measurement was in error, causing the secondary calorimetric calculation to be inaccurate and nonconservative (reactor power was as high as 101.3%). The licensee corrected this condition and returned the unit to 100% power, with no restrictions on governor valve position.

This item is unresolved, pending review of the circumstances that led to this problem and review of licensee corrective actions (50-361/88-25-01).

c. Housekeeping/Material Condition Problems (Units 2 and 3)

Although the licensee has made significant improvements in housekeeping on Units 2 and 3, the inspector observed a number of conditions that deserve additional attention. For example, the inspector made the following observations:

- On October 12, 1988, the inspector noted that the Unit 3 Train A emergency core cooling system (ECCS) pump room was cluttered with tools and debris, as a result of work being done on pipe supports. At the time of this observation, the inspector also noted that work was temporarily suspended and the room was left in this condition. The Shift Superintendent took immediate action to restore the room to an appropriate level of cleanliness.

- During routine tours of Units 2 and 3, the inspector noted many instances wherein hoses, ladders, scaffolding and tools were left in undesignated areas. The inspector also observed that

miscellaneous items were collecting outside several of the maintenance storage areas. In addition, the inspector observed that many lockers exist throughout both plants that are not permanently secured.

- In reviewing the housekeeping control tags that were attached to equipment that was temporarily staged in Units 2 and 3, the inspector observed many instances wherein the scheduled removal date had been altered to extend the removal date even though there did not appear to be any further need for the equipment. Many of the tags were not signed by the cognizant supervisor and did not reference a maintenance order or design change package number.

- During routine tours, the inspector noted several instances of clutter in the piping penetration areas of room 209 on Units 2 and 3.

- On November 1, the inspector observed that cloth tape had been installed over the floor drain in the room for boric acid pump 3P175. This deficiency was brought to the attention of the shift superintendent, who took action to have the tape removed. The Operations Manager stated that plant operators had been requested to be alert for these types of material deficiencies.

- On November 1, the inspector noted that the material condition of boric acid pump room 3P174 had significantly deteriorated. In particular, significant boric acid residue was present in the room, and poor condition of paint was contributing to rusting of components in the room. The equipment control supervisor acknowledged this concern and stated that maintenance requests had been initiated to complete a thorough overhaul of this room at the next unit outage.

- On November 1, 1988, the inspector found a knife, some sharp metal debris and other trash in the cable trays in the Unit 2 50-foot level cable spreading room. The unit was operating at full power at the time and no maintenance activities appeared to be in progress.

As noted above, each of the above items was reviewed with licensee Operations supervisors, who were responsive to the NRC concerns and initiated appropriate corrective actions. This item is closed (50-361/88-25-02).

d. <u>Improper Diesel Generator Governor Oil Levels (Units 1 and 2)</u>

On October 21, the inspector observed that the oil level in the Woodward governor for Unit 2 emergency diesel generator 2G003 engine #1 was out of sight high in the governor sight glass, contrary to the sign posted on the governor, which stated that oil level should be visible in the sight glass. The inspector discussed this finding with the Operations Manager, noting that similar observations had been previously brought to his attention. The inspector noted that

the governor vendor cautions users to not overfill the governor since overfilling can result in unit malfunction. The Operations Manager agreed and stated that he believed that overfilling was the result of failure to wait for equilibrium conditions after oil is added to the governor. The Operations Manager stated that operators had been specifically retrained to be alert to this problem.

On November 1, the inspector observed that Woodward governor oil levels were out of sight high on both Unit 1 emergency diesel generators. The inspector also noted that Unit 1 governors did not include the warning sign affixed to Unit 2/3 diesel governors. The inspector asked the Operations Manager why the same problem addressed for Unit 2/3 diesel governors had not been addressed on Unit 1. The Operations Manager stated that this had been an organizational oversight and reaffirmed the intent to apply lessons learned on one unit to all units. He also stated that station engineers had determined that governor oil levels must be greater than 8 oz. above the top of the sight glass to result in governor inoperability. He also confirmed that Unit 1 and 2 diesel governor oil levels were significantly less than 8 oz. above the top of the sight glasses.

This item is closed (50-206/88-24-01).

e. Safety Injection Equipment Control Problems (Unit 2)

On November 7, the inspector observed that Unit 2 was in a 72-hour technical specification action statement, due to the simultaneous maintenance outage of two of the three high pressure safety injection (HPSI) pumps, 2P017 and 2P019. The inspector noted that HPSI pump 2P019 had been taken out of service on October 31 for extended maintenance activities, and that HPSI pump 2P017 had been placed out of service on November 7 to perform mandatory inservice testing. The inspector addressed the following concern with the Operations Manager. In particular, the inspector questioned why operations equipment control personnel had not ensured that the required surveillance was up to date on redundant safety equipment before HPSI pump 2P019 was released for extended maintenance. The Operations Manager acknowledged that it is the licensee's intent to minimize the unavailability of important plant safety equipment during plant operation. He stated that additional emphasis would be placed on this goal during equipment outage planning.

This item is closed (50-361/88-25-03).

f. Improper Reset of Diesel Generator Alarms (Unit 2)

On November 7, the inspector observed that the fuel transfer pump high strainer pressure annunciator was illuminated on the local control panel (2L-160) for diesel generator 2G002. Several hours later, the inspector noted that the same annunciator was still activated on panel 2L-160. The inspector questioned the common control operator, who stated that the annunciator had come in that morning during a surveillance test of the fuel transfer pump. The operator stated that it was common for that alarm to activate when

the pump is first started, due to small pressure surges when the previously voided pipe fills with fuel oil. The operator stated that he had acknowledged the alarm when it activated; however, he had neglected to reset the alarm upon completion of the surveillance. The shift supervisor reviewed the need to reset the alarm with the involved operator. The inspector questioned whether the strainer alarm was functioning properly and whether the activated alarm at the local control panel would affect subsequent valid alarms in the main control room. The station cognizant engineer agreed to evaluate these questions.

This item remains open, pending additional licensee action (50-361/88-25-04).

g. Spent Fuel Pool Anti-siphon Isolation Concerns (Unit 2)

In preparation for fuel transshipment during the Unit 1 Cycle X refueling outage (transfer of Unit 1 spent fuel to Unit 2 spent fuel pool), the licensee determined that it would be necessary to lower the Unit 2 spent fuel pool (SFP) level by approximately 2 feet (to 24' 10" above the Unit 2 spent fuel). This action was required to allow fuel cask handling without submerging the crane hook in the Unit 2 SFP.

As discussed in paragraph 3.c of Inspection Report 50-362/88-16, the SFP purification system suction piping for Units 2 and 3 is not provided with anti-siphon devices. To remedy this situation, the licensee committed to maintain pool skimmers unisolated to act as anti-siphon protection any time the SFP purification system was placed in operation on Unit 2 or 3. The skimmers are located approximately 29' above the fuel and, in order to drain the SFP to 24' 10" above the fuel, the skimmers would have to be isolated. For potential long term corrective action, the licensee was evaluating the possibility of installing an anti-siphon device.

During this draindown evolution, the licensee proposed to station an operator at the SFP in direct communication with the control room to monitor the water level, with instructions to unisolate the skimmers should a siphon event occur. The inspector noted that the licensee's plans did not call for unisolating the skimmers upon completion of this evolution, which would leave the SFP purification piping primed. The Operations Superintendent decided to unisolate the skimmers upon completion of the evolution as an extra precautionary measure. The licensee also decided to leave SFP skimmers valved in any time an operator is not stationed to specifically monitor SFP water level.

The inspector considered the licensee's actions to be acceptable. This item is closed. (50-361/88-25-05).

No violations or deviations were noted during the inspection.

4. Evaluation of Plant Trips and Events (93702)

Spurious Cable Tray Fire System Actuations (Units 2/3)

A number of spurious deluge actuations have occurred, as follows:

- On June 29, 1988, a deluge actuation occurred on Unit 3 due to maintenance activities. While trying to inspect one pull station (3TSH8955), the adjacent pull switch was inadvertently actuated. There was insufficient clearance between the two pull stations, and when the cover on 3TSH8955 was opened, it was forced against the adjacent pull station, causing it to actuate. This inspection was being conducted as part of the licensee corrective actions for previous spurious deluge actuations, discussed in paragraph 2.a of Inspection Report 50-361/88-15.

- On October 6, 1988, a deluge actuation occurred on Unit 2 while maintenance was being performed on pull station 2TSH8950. The deluge actuation occurred when electricians mistakenly worked on the wrong pull station (2TSH8949).

- On October 19, 1988, a spurious deluge actuation occurred on Unit 3 due to an electrical fault. The involved pull station had been previously removed from its junction box for inspection as part of the licensee's corrective actions for spurious deluge actuations. When the pull station was inspected following the event, the licensee observed that electrical wires had been damaged and subsequently became grounded. The junction box apparently was not deep enough and did not provide sufficient clearance, such that the electrical wires were pinched upon reinstallation of the pull switch.

Additional followup inspection relative to this issue will be documented under Open Item 50-361/88-15-01.

No violations or deviations in this area were noted during the inspection.

5. Monthly Surveillance Activities (61726)

The inspectors observed the following routine activities during this inspection period:

a. Observation of Routine Surveillance Activities (Unit 1)

SO1-12.3-2 (TCN-4-6)	Hot Operational Test of Safety Injection (SI) System (SI Pumps)
SO1-12.3-26 (TCN 1-3)	Auxiliary Feedwater Pump Operability Test (G-10S)
MO88100593	Monitor Stroke Time of valves SV-2900 and SV-3900

b. Observation of Routine Surveillance Activities (Unit 2)

SO2-3-3.13 (TCN 0-6)	Containment Cooling Monthly Test
SO23-3-3.8 (TCN 5-5)	Safety Injection Monthly Tests
SO23-3-3.37 (TCN 9-7)	Reactor Coolant System Water Inventory Balance

c. Observation of Routine Surveillance Activities (Unit 3)

SO23-II-1.1.2 (TCN 2-4)	Surveillance Requirement, Reactor Plant Protection System, Channel B, Channel Functional Test (31 Day Interval)
SO23-V-3.13 (TCN 5-7)	Containment Penetration Leak Rate Testing (Paragraph 6.21: Penetration 18 - Normal Containment Purge)
SO23-3-3.37 (TCN 9-7)	Reactor Coolant System Water Inventory Balance

No violations or deviations were noted during the inspection.

6. Monthly Maintenance Activities (62703)

The inspectors observed the following maintenance activities during this period:

a. Observation of Routine Maintenance Activities (Unit 1)

MO 87020793	Overhaul Spent Fuel Pit Cooling Pump
MO 88080019	Calibrate Control Room Rod Position Recorder YR-404
MO 88090917	Replace Nuclear Instrument System (NIS) 1202 Drawer with the Spare

b. Observation of Routine Maintenance Activities (Unit 2)

MO 88101004	Steam Generator E-089 Auxiliary Feedwater Control Valve 2HV-4706 70% Electrical Ground
MO 88101325	Core Exit Thermocouple C9 Temperature Fluctuations

c. Observation of Routine Maintenance Activities (Unit 3)

MO 88100229	Remove Spectrum Analyzer (M&TE #M1-1145) from Vibration and Loose Parts Monitor for Calibration
MO 88110341	Test and Calibrate Agastat Relays for Breaker S31805ESBY35

d. Maintenance Procedure Adequacy/Adherence Problems (Unit 1)

During spent fuel pit cooling pump overhaul, the inspector observed several problems associated with the maintenance activity. One example involved the need to remove the pump after it had been installed, because associated piping had not been reinstalled in the proper order. The inspector reviewed the procedure and found it to be ambiguous. Another example involved a licensee-identified instance of improper grinding of a pipe, when the procedure only allowed buffing to remove linear indications. The licensee

acknowledge the inspector's concern regarding the control of maintenance activities and procedure adequacy. The licensee initiated a maintenance incident investigation and determined the root causes to be personnel error and procedure inadequacy. The licensee disciplined the responsible individuals and revised the related procedures. The inspector considered the licensee's corrective action to be satisfactory.

This item is closed (50-206/88-24-02).

e. Inadequate Thread Engagement (Unit 3)

While inspecting the Unit 3 Train B safety injection pump room on October 12, 1988, the inspector observed that two nuts associated with a flanged connection for safety injection system suction header split disc check valve MU-002 (24" diameter) did not have sufficient thread engagement. The nuts had a nominal thickness of 1 1/4", and one nut was lacking full thread engagement by a couple of threads while the other nut was lacking full thread engagement by approximately 1". Other examples of inadequate thread engagement were discussed previously in paragraph 5.h of Inspection Report 362/88-08. In these previous examples, it appeared that maintenance personnel were not cognizant of programmatic requirements to maintain full thread engagement, as defined by the Torque Manual (M-37204) and as emphasized by the licensee in a memo to all maintenance personnel dated September 12, 1988.

With regard to MU-002, the inspector observed that maintenance order (MO) 86080299 was written to remove MU-002 from the safety injection system to satisfy inservice testing requirements. After the check valve was manually exercised, it was reinstalled on May 6, 1988.

The Assistant Maintenance Manager stated that the September 12 memo had reinforced thread engagement requirements and maintenance personnel are now sensitive to this concern. The inspector noted that maintenance on MU-002 predated the September 12 memo; this observation was therefore not indicative of continuing problems in maintaining adequate thread engagement.

This item is closed (50-362/88-27-01).

f. Inadequate Control of Maintenance Activities on Environmentally Qualified Equipment (Unit 1)

On October 16, the inspector observed that electrical tape had been installed on the electrical conduit for a Unit 1 safety injection switchover valve limit switch (FWS-ZSC-2852B1). The inspector noted that this conduit is required to be environmentally qualified and questioned the use of electrical tape to repair the conduit. The licensee investigated this concern and determined that the electrical tape had not been installed in accordance with an approved maintenance procedure. The licensee stated that the electrical tape had apparently been informally installed by maintenance personnel to cover a tear in the plastic jacket of the conduit. The licensee was

unable to determine when the tape was installed on the conduit. Licensee engineers reviewed the environmental qualification (EQ) package for this conduit and confirmed that the plastic covering is part of the qualified configuration and is required for qualification of the conduit. The licensee took immediate action to remove the electrical tape and performed a properly qualified repair of the conduit.

The inspector stated that the failure of station personnel to properly document nonconforming conditions on safety related equipment and the failure to use an approved procedure for plant equipment repair represented a violation of station procedures. The inspector also emphasized that such unauthorized actions can result in significant safety consequences, similar to the previous failure of a Unit 1 auxiliary feedwater pump which resulted from an unauthorized repair to a bearing lubricating oil sight glass. The licensee acknowledged the inspector's concern and stated that appropriate measures would be taken to preclude recurrence of this problem.

This is an apparent violation (50-206/88-24-03).

g. Inadequate Calibration Program for Safety Related Alarm Devices (Units 2 and 3).

On November 1, 1988, the inspector noted that the licensee's preventive maintenance program for a number of time delay relay controls on safety related feeder breakers did not include periodic calibration requirements to maintain the time delay setting. These relays require a 13-second time delay setting to alert plant operators to conditions involving a loss of control power to the feeder breakers for the following safety related control valves:

- S31805ESBZ10 Volume Control Tank Discharge Valve 3LV0227B
- S31805ESBZ28 Refueling Water Tank Outlet Valve 3HV9301
- S31805ESBZ32 Reactor Coolant Heat Exchanger Isolation Valve 3TV9267
- S31805ESBZ13 Boric Acid Makeup Tank 3T072 to Charging Pump Suction Valve 3HV9235
- S31805ESBZ14 Boric Acid Makeup Tank 3T071 to Charging Pump Suction Valve 3HV9240
- S31805ESBY35 Salt Water from Component Cooling Water (CCW) Heat Exchanger Valve 3HV6497
- S31805ESBY09 Safety Injection Pump Mini Flow Valve 3HV9306
- S31805ESBE14 Low Pressure Safety Injection (LPSI) Header to Reactor Coolant Loop 1B Valve 3HV9325
- S21805ESBZ28 Refueling Water Tank Outlet Valve 2HV9301
- S21805ESBZ32 Reactor Cooling Heat Exchanger Isolation Valve 2TV9267

- S21805ESBZ13 Boric Acid Makeup Tank 2T072 to Charging Pump Suction Valve 2HV9235
- S21805ESBZ14 Boric Acid Makeup Tank 2T071 to charging Pump Suction Valve 2HV9240

In response to the inspector's inquiry, the licensee reviewed equipment calibration records and found that these relays had not been calibrated since initial plant startup (1982 for Unit 2, 1983 for Unit 3). The licensee attributed this deficiency to improper coordination of Test Technician and Electrical group work activities.

This is an apparent violation (50-362/88-27-02).

In response to the above finding, the licensee initiated the following corrective actions:

- Retest the above relays and recalibrate as necessary.

- Establish the appropriate test frequency for all safety related time delay relays not covered by other test programs.

- Identify all safety related time delay relays and include them in above test program. In this regard, the licensee informed the inspector that a preventive maintenance program audit had been initiated in August 1988 to identify and correct problems of this nature. The time delay relay calibration will be covered by this audit.

- Evaluate the need for change to procedure SO123-II-11.157 (relay calibration) to define a method to identify and preclude misadjustment of the time relay settings after calibration.

7. Engineered Safety Feature Walkdown (71710)

During this reporting period, the inspector verified the flowpath and electrical alignment of the auxiliary feedwater system associated with Unit 3. The system was aligned as required by Operating Instruction SO23-2-4 TCN 9-11, Auxiliary Feedwater System Operation (Attachments 4 and 6).

No violations or deviations were noted during the inspection.

8. Review of Licensee Event Reports (90712, 92700)

Through direct observations, discussion with licensee personnel, or review of the records, the following Licensee Event Reports (LERs) were closed:

Unit 1

87-06 Environmental Qualification of Electrical Connectors

87-11 Spurious Containment Isolation System (CIS) Train A Actuation

87-11 R1 Spurious CIS Train A Actuation

88-06 R1 Backup Nitrogen System Not In Full Compliance With Design Basis

88-09 R1 Potential Diesel Generator Loads in Excess of Regulatory Commitments

Unit 2

86-32 Unit 2/3 Toxic Gas Isolation System (TGIS) Actuations

86-34 Eight ESF Actuations During Planned Maintenance

88-23 Toxic Gas Isolation System Actuation Due to Spurious High Ammonia Signal

88-25 Control Room Isolation System Spurious Actuations Due to Relay Failure

88-26 Control Room Isolation System Train B Spurious Actuation Due to Personnel Error

Unit 3

88-08 Fuel Handling Isolation System Train A Actuation Due to Failure of Test Connector

88-09 Delinquent Surveillance of Radiation Effluent Monitor Due to Personnel error

No violations or deviations were identified.

9. Followup of Previously Identified Items (92701)

a. (Closed) 50-206/88-10-01 (Violation) Environmental Qualification Deficiencies

This item involved a Notice of Violation and civil penalty issued as a result of the discovery of numerous Unit 1 safety related electrical components which were not properly environmentally qualified. The inspector reviewed the licensee's response to the Notice of Violation. The licensee identified several breakdowns in the administrative control programs for Unit 1 environmental qualification. In view of these programmatic breakdowns, the licensee implemented a comprehensive review of all Unit 1 electrical components and reestablished the qualification requirements for all components. The licensee had completed all actions needed to establish proper qualification for all components identified by this review. In addition to correcting the programmatic breakdowns which resulted in these deficiencies, the licensee has implemented a broad based, long term program to upgrade the quality and coordination of engineering work at San Onofre. This item is closed.

b. (Closed) 50-206/88-13-01 (Followup Item) Hydrostatic Testing

During a previous inspection, the inspector noted several hydrostatic testing concerns:

- o Inadequate test procedure
- o Inadequate interface control between different departments involved in the test.
- o Inadequate instrumentation to monitor the plant pressure once the test instrumentation was isolated during the test.
- o Inadequate Health Physics (HP) involvement during the test when a contaminated system was pressurized.

During this inspection, the inspector observed that significant corrective actions had been taken by the licensee. The licensee had initiated an interdepartmental hydrostatic test task force to revamp the test program. Testing is now conducted by operations personnel under procedure SO123-0-23, "Control of System Alignment," which defines the necessary steps for each test, including abnormal test termination. HP coverage is also maintained during the pertinent phases of testing.

The inspector witnessed the hydrostatic testing of the spent fuel pool cooling system piping and found it to be satisfactory. This item is closed.

c. (Open) Unresolved Item (361/86-34-05), EQ of Limitorque Valve Wiring

This item remains unresolved pending RV/NRR review.

d. (Closed) Violation (361/88-03-02), Failure to Document Discrepant Conditions During Maintenance

The inspector reviewed the licensee's response to the Notice of Violation. Although the licensee did not deny the violation, the licensee does not intend for discrepancies such as the ones discussed in the Notice of Violation to be included in the scope of General Procedure SO123-XV-5.0 (TCN 1-5), titled Nonconforming Materials, Parts or Components. The licensee stated that the observed conditions were, in fact, proper and the problem involved drawing errors rather that component deficiencies. The licensee implemented corrective actions to revise the program for identification and correction of drawing errors. This item is closed.

e. (Closed) Open Item (361/87-09-01), Failure of Charging System Pulsation Dampeners

The licensee addressed the inspector's concerns in a memo to file dated August 30, 1988. The licensee's evaluation concluded that, should a bladder rupture in a pulsation dampener, the associated

charging pump would not become air bound even under the worst case conditions. The licensee also changed the procedure for charging the pulsation dampeners to require the charging pumps to be isolated to ensure that bladder overcharging does not occur. The last aspect of this item dealt with the accumulation of air at a high point in the charging pump suction piping which caused check valve banging. The licensee concluded that this condition resulted from inadequate system venting following maintenance, and stated that station engineering would periodically monitor the charging system piping for any recurrence of this condition. This item is closed.

f. (Closed) Unresolved Item (362/86-38-08), Inadequate Engineering Review of Rigging From Safety Related Piping

The licensee revised Maintenance Procedure S0123-I-7.24, titled Rigging - Standards and Guidelines for Maintenance Activities, to address the inspector's concerns. The inspector reviewed the revised procedure and determined that the licensee's actions were acceptable. This item is closed.

g. (Open) Open Item (362/87-10-02), Technical Specifications for Atmospheric Steam Dump Valves

This item remains open pending additional RV/NRR review.

h. (Closed) Open Item (362/87-22-02), Suction Pressure Fluctuations Associated with Charging Pump 3P-192

As discussed earlier in this report, this item was addressed by the licensee in a memo to file dated August 30, 1988. This item is closed.

10. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable items, violations, or deviations. Unresolved items addressed during this inspection are discussed in Paragraph 3.b and 9 of this report.

11. Exit Meeting (30703)

On November 17, 1988, an exit meeting was conducted with the licensee representatives identified in Paragraph 1. The inspectors summarized the inspection scope and findings as described in the Results section of this report.

The licensee acknowledged the inspection findings and noted that appropriate corrective actions would be implemented where warranted. The licensee did not identify as proprietary any of the information provided to or reviewed by the inspectors during this inspection.