



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4005**

August 4, 2004

Harold B. Ray, Executive Vice President
San Onofre, Units 2 and 3
Southern California Edison Co.
P.O. Box 128, Mail Stop D-3-F
San Clemente, CA 92674-0128

**SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION - NRC INTEGRATED
INSPECTION REPORT 05000361/2004003; 050000362/2004003**

Dear Mr. Ray:

On June 26, 2004, the NRC completed an inspection at your San Onofre Nuclear Generating Station, Units 2 and 3. The enclosed report documents the inspection findings which were discussed on June 25, 2004, with Mr. D. Nunn and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has identified one issue that was evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that a violation was associated with this issue. The violation is being treated as a noncited violation (NCV), consistent with Section VI.A of the Enforcement Policy. The NCV is described in the subject inspection report. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the San Onofre Nuclear Generating Station, Units 2 and 3, facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

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Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

K. M. Kennedy, Chief
Project Branch C
Division of Reactor Projects

Dockets: 50-361
50-362
Licenses: NPF-10
NPF-15

Enclosure:
NRC Inspection Report 05000361/2004003; 05000362/2004003
w/attachment: Supplemental Information

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**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Docket: 50-361, 50-362

License: NPF-10, NPF-15

Report: 05000361/2004003 and 05000362/2004003

Licensee: Southern California Edison Co.

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

Location: 5000 S. Pacific Coast Hwy.
San Clemente, California

Dates: April 8 through June 26, 2004

Inspectors: C. C. Osterholtz, Senior Resident Inspector, Project Branch C, DRP
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Approved By: Kriss M. Kennedy, Chief, Project Branch C
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000361/2004003, 05000362/2004003; 04/08 - 06/26/04; San Onofre Nuclear Generating Station, Units 2 & 3; Integrated Resident and Regional Report; Problem Identification and Resolution.

The report covered a 3-month period of inspection by resident inspectors and a regional inspector. One Green noncited violation was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management's review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, because the licensee failed to correct deficiencies in Procedure SO23-I-5.4, "Saltwater Cooling Pump Removal and Installation," following the improper assembly of saltwater cooling Pump 3P307 on March 13, 2004.

The finding was more than minor since it affected the procedure quality attribute of the mitigating systems cornerstone. The finding was determined to have very low safety significance (Green) because the inadequate procedure did not result in an actual loss of safety function. This finding also had crosscutting aspects associated with problem identification and resolution based on the fact that the condition was entered into the corrective action program but no corrective actions were implemented (Section 4OA2).

B. Licensee-Identified Violations

None

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REPORT DETAILS

Summary of Plant Status

At the beginning of the inspection period, Unit 2 was at approximately 58 percent power. Operators were raising power following completion of the Cycle 13 refueling outage. On April 10, 2004, an intermittent ground in combination with a pinched wire in the feedwater control system caused Main Feedwater Control Valve 2FV1111 and Bypass Valve 2HV1105 to Steam Generator 1 (E089) to inadvertently close. As a result, both main feedwater pumps tripped on high discharge pressure, which caused operations personnel to manually trip the reactor. The pinched wire was replaced and the feedwater control system was successfully tested. On April 11, operations personnel commenced a reactor startup and Unit 2 entered Mode 2. Mode 1 was reached the next day and Unit 2 reached full power on April 13. Later that same day, a mechanical seal leak on feedwater heater drain Pump 2P059 caused operations personnel to reduce reactor power to approximately 94 percent. The leak was repaired and Unit 2 returned to approximately 100 percent reactor power on April 19, where it remained through the end of the inspection period.

Unit 3 began the period at approximately 100 percent reactor power. On June 4, the reactor was manually tripped when an excessive and rapid influx of seagrass clogged portions of the intake structure. The seagrass was removed from the rakes and screens in the intake, and operations personnel commenced a reactor startup on June 6. Unit 3 entered Mode 1 on June 6 and returned to approximately 100 percent reactor power on June 9, where it remained through the end of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

Partial System Walkdowns. The inspectors performed three partial walkdowns during this inspection period (three inspection samples). To evaluate the operability of the selected train or system when the redundant train or system was inoperable or out of service, the inspectors checked for correct valve and power alignments by comparing positions of valves, switches, and electrical power breakers to the appropriate procedures and chapters of the Updated Final Safety Analysis Report. The following walkdowns were performed:

- On April 14, the inspectors walked down the remaining Unit 2 auxiliary feedwater (AFW) system trains while Train A was out of service for corrective maintenance on AFW Pump 2P141.

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- On May 10, the inspectors walked down Train B of the Unit 2 high pressure safety injection system while Pump 2P017 of the Train A portion of the system was out of service for planned maintenance.
- On June 14, the inspectors walked down portions of the Units 2 and 3 electrical switchyard lineup following the declaration of offsite power being inoperable due to low switchyard frequency.

The inspectors used the licensee procedures and documents listed below to verify proper system alignment:

- Procedure SO23-3-3.25, "Once a Shift Surveillance (Modes 1-4)," Revision 23
- Procedure SO23-3-2.7, "Safety Injection System Operation," Revision 20
- Piping and Instrument Diagram 40112A, "Safety Injection System No. 1204," Revision 28
- Piping and Instrument Diagram 40112ASO3, "Safety Injection System No. 1204," Revision 35
- Operating Instruction SO23-2-4, "Auxiliary Feedwater System Operation," Revision 19
- Piping and Instrument Diagram 40160A, "Auxiliary Feedwater System/System No. 1305," Revision 39
- Piping and Instrument Diagram 40160B, "Auxiliary Feedwater Steam Supply/System No. 1301," Revision 20

Complete System Walkdown. The inspectors conducted a detailed inspection of the alignment and condition of the Unit 3 AFW system (one inspection sample). The inspectors used licensee procedures and documents listed below to verify proper system alignment.

- Piping and Instrument Diagram 40160ASO3, "Auxiliary Feedwater System/System No. 1305," Revision 34
- Piping and Instrument Diagram 40160BSO3, "Auxiliary Feedwater Steam Supply/System No. 1301," Revision 17
- Operating Instruction SO23-2-4, "Auxiliary Feedwater System Operation," Revision 19

The inspectors also verified the status of electrical power requirements, labeling, hangers and support installation, and associated support systems. Pumps were inspected for bearing oil leakage. The walkdown also included evaluation of system piping and supports against the following considerations:

- Evidence of the effects of water hammer on piping and pipe supports
- Degraded snubbers
- Degraded component foundations

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors performed routine fire inspection tours and reviewed relevant records for the following six plant areas important to reactor safety (six inspection samples):

- Unit 3 Train A vital switchgear room
- Unit 2 Train A emergency diesel generator room
- Unit 2 Train B emergency diesel generator room
- Technical Support Center
- Unit 2 85' electrical switchgear room
- Unit 2 AFW pump room

The inspectors observed the material condition of plant fire protection equipment, the control of transient combustibles, and the operational status of barriers. The inspectors compared in-plant observations with the commitments in portions of the Updated Fire Hazards Analysis Report.

b. Findings

No findings of significance were identified.

2. Annual Fire Drill Observation

a. Inspection Scope

On June 22, the inspectors observed an annual unannounced fire drill conducted by the licensee in the Unit 2 85' electrical switchgear room (one inspection sample). The inspectors reviewed Procedure SO123-XIII-21, "Fire Department Drills," Revision 9, and discussed the details of the drill with fire protection personnel. The inspectors also attended the postdrill critique.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalifications (71111.11)

a. Inspection Scope

The inspectors reviewed licensed operator requalification training activities, including the licensed operators' performance and the evaluators' critique (one inspection sample). The inspectors compared performance in the simulator on June 21, with performance observed in the control room during this inspection period.

The inspectors observed high-risk operator actions, operator activities associated with the emergency plan, and previous lessons learned items. These items were evaluated to ensure that operator performance was consistent with protection of the reactor core during postulated accidents.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

1. Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the implementation of the requirements of the Maintenance Rule (10 CFR 50.65) to verify that the licensee had conducted appropriate evaluations of equipment functional failures, maintenance preventable functional failures, unplanned capacity loss factor, and system unavailability (one inspection sample). The inspectors reviewed root causes and corrective action determinations for equipment failures and reviewed performance goals for ensuring corrective action effectiveness. The inspectors discussed the evaluations with the reliability engineering supervisor and the system engineers.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors verified the accuracy and completeness of risk assessment documents and that the licensee's maintenance risk assessment program was being appropriately implemented. The inspectors also ensured that plant personnel were aware of the appropriate licensee established risk categories for maintenance activities, according to the risk assessment results and licensee program procedures.

The inspectors also reviewed selected emergent work items to ensure that overall plant risk was being properly managed and that appropriate corrective actions were being properly implemented.

The inspectors reviewed the effectiveness of risk assessment and risk management for the following four activities (four inspection samples):

- Unit 2 manual reactor trip because of a pinched wire and intermittent ground in the feedwater control system circuitry on April 10 (Action Request (AR) 040400600)
- Hole in Unit 2 Train A saltwater cooling (SWC) discharge piping (ARs 040401543 and 040401630)
- Loss of Unit 2 480 Vac Load Center B10 (AR 030800892)
- Unit 2 broken resistor lead for Subgroup Relay K725 (AR 040600221)

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Nonroutine Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors observed operator response to nonroutine events during the inspection period. In addition to direct observation of operator performance, the inspectors reviewed procedural requirements, operator logs, and plant computer data to determine that the response was appropriate with that required by procedures and training. The following three operator responses were reviewed (three inspection samples):

- On April 10, the inspectors observed the site response to a trip of the Unit 2 reactor. Main Feedwater Control Valve 2FV1111 and Bypass Valve 2HV1105 to Steam Generator 1 (E089) both inadvertently closed. As a result, both

turbine-driven main feedwater pumps tripped on high discharge pressure, which led to operations personnel manually tripping the reactor. An intermittent electrical ground in combination with a pinched wire in the feedwater control system was determined to be the cause. The inspectors observed operations personnel respond to the event and effectively place the unit in a stable shutdown configuration.

- On June 4, the inspectors observed the site response to the unexpected grass intrusion in the Unit 3 intake to the circulating water pumps. Operations personnel manually tripped the unit after securing one circulating water pump and observing current fluctuations on the remaining three. The inspectors observed operations personnel respond to the event and effectively place the unit in a stable shutdown configuration.
- On June 15, the inspectors observed the site response to a high radiation alarm on Unit 3 Condenser Air Ejector Radiation Monitor RE 7870. The inspectors observed operations personnel enter their abnormal procedure for a reactor coolant leak and evaluate plant conditions for a possible steam generator tube leak. Subsequent evaluation of the radiation monitoring system and analysis of samples taken from the Unit 3 steam generators confirmed that Air Ejector Radiation Monitor RE 7870 had failed and that no actual reactor coolant leak had occurred.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed selected operability evaluations to evaluate technical adequacy and to verify that operability was justified. The inspectors considered the impact of the compensatory measures for each condition being evaluated and referenced the Updated Final Safety Analysis Report and Technical Specifications. The inspectors also discussed the evaluations with cognizant licensee personnel.

The inspectors reviewed three operability evaluations and cause assessments documented in the following ARs to ensure the operability was properly justified (three inspection samples):

- AR 040400696, Unit 2 AFW Pump 2P141 motor outboard bearing oil leak
- AR 040500035, Unit 2 high pressure safety injection (HPSI) Pump 2P019 minor oil leak

- AR 040600725, Unit 3 additional contact wired safety injection actuation signal Train B Motor-Driven Relay 3L035K302

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors observed and/or reviewed postmaintenance testing for the following six activities to verify that the test procedures and activities adequately demonstrated system operability (six inspection samples):

- Unit 2 HPSI Pump 2P017 postmaintenance test per Procedure SO23-3-3.60.1, "High Pressure Safety Injection Pump and Valve Testing," Revision 4, performed on May 13
- Unit 3 AFW Pump 3P140 postmaintenance test per Procedure SO23-3-3.30.6, "Auxiliary Feedwater System Online Valve Test," Revision 8, performed on May 25
- Unit 2 feeder breaker for Motor Control Center 2BRB postmaintenance test per Procedure SO23-I-2.58, "480V ABB Circuit Breaker Inspection and Testing," Revision 10, performed on May 25
- Unit 3 HPSI Pump 3P018 postmaintenance test per Procedure SO23-3-3.60.1, "High Pressure Safety Injection Pump Testing," Revision 4, performed on May 28
- Unit 3 Atmospheric Dump Valve 3HV8421 postmaintenance test per Maintenance Order 04010903000 performed on June 2
- Unit 2 Engineered Safety Feature Actuation System Relay K725 postmaintenance test per Maintenance Order 04060233000 performed on June 3

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed and/or reviewed performance and documentation for the following seven surveillance tests to verify that the structures, systems, and components were capable of performing their intended safety functions and to assess their operational readiness (seven inspection samples):

- Unit 2 trisodium phosphate biennial surveillance per Procedure SO123-III-1.14.23, "Trisodium Phosphate Rack Inspection, Sample Collection, and Testing," Revision 5, performed on February 12
- Unit 2 Train A SWC Pump 2P114 surveillance test per Procedure SO23-3-3.60.4, "Saltwater Cooling Pump and Valve Testing," Revision 6, performed on April 19
- Unit 3 Train B SWC Pump 3P113 surveillance test per Procedure SO23-3-3.60.4, "Saltwater Cooling Pump and Valve Testing," Revision 6, performed on May 3
- Unit 2 Train A Emergency Diesel Generator 2G002 24-month surveillance per Procedure SO23-3-3.23.1, "Diesel Generator Refueling Interval Tests," Revision 20, performed May 11
- Units 2 and 3 control room emergency air-cleanup system tracer gas testing per Procedure SO23-XXVI-11.2002.4008.23-43.1, "Control Room Envelope Air In-leakage Test," Revision 0, completed on May 25
- Unit 3 vital instrument bus weekly surveillance per Procedure SO23-3-3.27.2, "Weekly Electrical Bus Surveillance," Revision 13, performed on June 14
- Unit 3 vital instrument bus weekly surveillance per Procedure SO23-3-3.27.2, "Weekly Electrical Bus Surveillance," Revision 13, performed on June 15. This surveillance was performed after the licensee determined that faulty test equipment had been used during the surveillance conducted on June 14.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the following temporary plant modification to verify that the safety functions of safety systems were not affected (one inspection sample):

- Hazard barrier impairment and blocking open of radioactive waste building Doors AR307 and AR311as documented in ARs 040501479, 040501534, 040601408, and 040601760 (Units 2 and 3)

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

Cornerstone: Emergency Preparedness

a. Inspection Scope

The inspector performed an in-office review of Revision 16 to Section 6 and Revision 13 to Sections 7 and 8 and Appendix A of the San Onofre Nuclear Generating Station Emergency Plan, submitted April 8, 2004. This revision: (1) added additional description concerning recommendations for distribution of potassium iodide to the general public, (2) added additional description concerning recommendations for shelter following an accident at Unit 1, (3) updated emergency response facility diagrams, and (4) updated references to licensing commitments concerning the site fire department. The revision was compared to its previous revision and to the requirements of 10 CFR 50.47(b) and 50.54(q) to determine if the revision decreased the effectiveness of the plan.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the following emergency preparedness drills to evaluate the drill conduct and the adequacy of the licensee's performance critique. The inspectors observed two site-wide drills from the simulator and the emergency operations facility on April 28 and May 5 (two inspection samples).

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope

The inspectors sampled the three licensee PIs for Units 2 and 3 listed below for the last 3 quarters of 2003 and the first quarter of 2004.

Reactor Safety Cornerstone

- IE3 unplanned power changes per 7000 critical hours
- MS1 emergency ac power system unavailability
- MS2 HPSI system unavailability

The definitions and guidance of NEI (Nuclear Energy Institute) 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify that the licensee accurately reported PI data during the assessment period. The inspectors reviewed the licensee's performance indicator data, including licensee operating logs, to determine whether the licensee adequately collected, evaluated, and distributed PI data for the period reviewed. The inspectors discussed the status of the PIs and compilation of data with engineering personnel.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

1. Semiannual Review

a. Inspection Scope

The inspectors performed a semiannual review of licensee internal documents, reports, audits, and PIs to identify trends that might indicate the existence of more significant safety issues. The inspectors reviewed the following:

- ARs generated during the previous 6 months
- Station performance reports
- Weekly production performance reviews
- Corrective maintenance backlog

- Quality assurance audit executive summaries
- SONGS system health reports
- San Onofre performance indicators

b. Findings

No findings of significance were identified. However, during the review, the inspectors noted that the following AR's did not originally identify or correct generic deficiencies in interdepartmental communication and coordination that contributed to complications in the resolution of the problems:

- AR 040101988: On February 3, the inspectors reviewed AR 040101988 and discovered that the AR had been closed without a maintenance order assignment to correct an oil leak on Unit 3 AFW Pump 3P504. The inspectors subsequently interviewed maintenance and engineering personnel that were involved in the initial evaluation of the oil leak when it was identified on January 29, 2004. The individuals interviewed indicated that, at the time of the initial identification of leakage on January 29, both a maintenance supervisor and an engineering manager determined that a maintenance order needed to be generated to have the oil leak corrected. The engineering manager indicated that neither one of them initiated the necessary maintenance order because each one thought that the other one would generate the order. This resulted in the issuance of a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI (see NRC Inspection Report 05000361; 05000362/2004002).
- AR 040401086: On April 19, operations personnel entered Technical Specification 3.0.3 for Unit 2. Operations personnel declared Train B SWC Pump 3P114 inoperable, following an unsatisfactory surveillance test while a portion of the Unit 2 Train A control room emergency air cleanup system was out of service. This temporarily caused the Train B control room emergency air cleanup system to be without its SWC support system, resulting in the Technical Specification 3.0.3 entry. The SWC Pump 3P114 surveillance was deemed unsatisfactory because one check valve in the service water system, that supplies normal cooling to the saltwater pump bearings, failed the surveillance. As a result, SWC Pump 3P114 was declared inoperable. Engineering personnel subsequently determined that the failure of the check valve to pass its acceptance criteria did not affect saltwater cooling pump operability because adequate emergency saltwater cooling flow was available to the pump bearings; therefore, entry into Technical Specification 3.0.3 was not required. The inspectors reviewed SWC pump surveillances over the previous 8 quarters and discovered four instances in which the check valve similarly failed, resulting in operations personnel unnecessarily declaring the SWC pumps inoperable. In each instance, engineering personnel's analysis reiterated that pump operability

was maintained. However, operations and engineering personnel failed to coordinate to correct the surveillance procedure to prevent operations personnel unnecessarily declaring the pump inoperable.

- AR 040501479: On May 24, the inspectors discovered hazard barrier Door AR307 blocked open without an active impairment. The door is located in the Unit 2 radioactive waste building and leads outside to the east road within the radiological control area. A similar hazard barrier, Door AR311, exists within Unit 3. The following day, Door AR311 was discovered by the licensee to be blocked open without an active impairment. The licensee implemented interim corrective actions which included, in part, a site-wide communication to employees on the requirements for hazard barrier door operation and the installation of a key for Doors AR307 and AR311. Despite these actions, on June 21, hazard barrier Door AR311 was discovered by the licensee to be blocked open without an active impairment and the key removed. The licensee determined that site security personnel blocked the door open and removed the key. The licensee indicated that the reason security personnel took those actions was that the interim corrective actions were not effectively communicated to the security division. The key was subsequently replaced but was removed again by security personnel on June 24. In that instance, the licensee indicated that the interim corrective actions had not been effectively communicated within the security organization. In response to the inspectors' concerns, the licensee initiated an apparent cause evaluation, AR 040601408, to address the interdepartmental communication problems.
- AR 040600988: On June 14, the Unit 3, Channel A, Vital 120 Vac Inverter 3Y001 failed its weekly surveillance test. The output voltage as indicated on digital test equipment indicated 126 Vac with a surveillance requirement of between 119.4 Vac and 125.0 Vac. This prompted operations personnel to enter a 2-hour Technical Specification action statement to supply the inverter from its alternate AC source per Technical Specification 3.8.7.A.1. Operations personnel subsequently discovered that the breaker for the alternate source was damaged and could not be immediately closed. The 2-hour action statement specified in Technical Specification 3.8.7.A.1 expired and operations personnel entered Technical Specification 3.8.7.B.1, which required Unit 3 to be in Mode 3 within 6 hours. One hour and 35 minutes after entry into Technical Specification 3.8.7.B.1, the licensee discovered that the original inverter surveillance test failure was due to an errant reading from a faulty digital multimeter and concluded that Inverter 3Y001 had been at approximately 123 Vac the entire time. Technical Specification 3.8.7.B.1 was exited just prior to the actual planned initiation of a Unit 3 shutdown. The inspectors noted that it took 3 hours and 35 minutes for operations, engineering, and the electrical maintenance departments to determine that a faulty multimeter was the cause of the failed surveillance. The inspectors considered that the coordination between operations, engineering, and electrical maintenance departments to resolve this

issue was untimely, given the short time-frame of the Technical Specification action statement. The inspectors further noted that an analog voltage meter not used in the surveillance test on the front of Inverter 3Y001 had read 123 Vac both prior to and following the surveillance. Additionally, during review of the issue on June 24, the inspectors discovered that AR 040600988 had been closed with no corrective actions either identified or initiated. Licensee management indicated that the closure of AR 040600988 did not meet their expectations and AR 040600988 was reopened for further evaluation.

2. Annual Sample Review

a. Inspection Scope

The inspectors reviewed the corrective actions the licensee took in response to the improper assembly of SWC Pump 3P307 as documented in ARs 040301211 and 040301163. The review was conducted to ensure that the full extent of the issues was identified and evaluated and that appropriate corrective actions were determined.

b. Findings

Introduction. A Green, noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, was identified for the licensee's failure to correct a condition adverse to quality associated with an inadequate maintenance procedure.

Description. During the Unit 2, Cycle 13 refueling outage, SWC Pump 3P307 was replaced. The pump was part of the Unit 3 Train B SWC system and was physically located in the Unit 2 intake structure. On March 13, 2004, a postmaintenance test was performed on the pump following its assembly and installation. During the test, maintenance personnel observed that the packing for SWC Pump 3P307 began to overheat and that the pump's cyclone separator was leaking. Upon inspection of the pump, the licensee determined that the cause of the pump packing overheating was because the packing lantern ring and the packing stuffing box were excessively filled with grease. This condition prevented adequate water flow to cool the pump's packing. In addition, the licensee determined that the cyclone separator leak was caused by an o-ring that was not installed during pump reassembly. The licensee subsequently installed the o-ring and properly greased the packing before successfully returning SWC Pump 3P307 to service. The licensee generated ARs 040301211 and 040301163 to identify the problems and to evaluate potential corrective actions.

The inspectors reviewed the two ARs and discovered that both ARs had been closed without any corrective action assignments identified or planned. On June 16, 2004, the inspectors reviewed licensee Procedure SO23-I-5.4, "Saltwater Cooling Pump Removal and Installation," and verified that the procedure had not been properly revised to address the deficiencies that led to the problems encountered during the March 13, 2004, postmaintenance test of SWC Pump 3P307. The licensee indicated that the

issue had been intended to be evaluated for corrective actions in March, but because of a human performance error, corrective actions were not implemented. The licensee indicated that they are in the process of replacing all eight SWC pumps over the next 2 years and, as a result, will be relying on Procedure SO23-I-5.4 to ensure that the pumps are properly assembled and installed. Furthermore, the potential for overgreasing the pump's packing exists on a more frequent basis because the SWC pumps are subjected to annual maintenance, which includes greasing the pumps' packing. In response to the inspectors' concerns, the licensee generated AR 040601251 to correct the deficiencies in Procedure SO23-I-5.4.

Analysis. The failure to take corrective actions for an inadequate maintenance procedure was considered to be a performance deficiency. The finding was more than minor since it affected the procedure quality attribute of the mitigating systems cornerstone. Based on the results of the Significance Determination Process, Phase 1 evaluation, the finding was determined to have very low safety significance (Green) since the inadequate procedure did not result in an actual loss of safety function.

This finding also had crosscutting aspects associated with problem identification and resolution, based on the fact that the condition was entered into the corrective action program, but no corrective actions were implemented.

Enforcement. Appendix B, Criterion XVI of 10 CFR Part 50, states, in part, that measures shall be established to ensure that conditions adverse to quality are promptly identified and corrected. Contrary to this criterion, the licensee failed to correct Procedure SO23-I-5.4, "Saltwater Cooling Pump Removal and Installation," to address deficiencies in the procedure for the greasing of SWC pump packing and the assembling of the cyclone separator. This violation is being treated as a noncited violation (NCV 05000361; 05000362/2004003-01, failure to correct deficiencies in SWC pump assembly and installation procedure) consistent with Section VI.A of the Enforcement Policy. This violation was entered into the licensee's corrective action program as AR 040601251.

3. Quarterly Review of Corrective Action Documents

a. Inspection Scope

In addition to the ARs discussed previously, the inspectors reviewed a selection of ARs written during this period to determine if the licensee was entering conditions adverse to quality into the corrective action program at an appropriate threshold, the ARs were appropriately categorized and dispositioned in accordance with the licensee's procedures, and, in the case of conditions significantly adverse to quality, the licensee's root cause determination and extent of condition evaluation were accurate and of sufficient depth to prevent recurrence of the condition.

b. Findings

No findings of significance were identified.

4OA5 Other

Temporary Instruction (TI) 2515/156, "Offsite Power System Operational Readiness"

a. Inspection Scope

The inspectors reviewed licensee event reports and corrective action documents and procedures and interviewed appropriate plant staff to collect data necessary to complete TI 2515/156. The data was gathered to assess the operational readiness of the offsite power systems in accordance with NRC requirements such as Appendix A to 10 CFR Part 50, General Design Criterion 17; Criterion XVI of Appendix B to 10 CFR Part 50, Plant Technical Specifications for offsite power systems; 10 CFR 50.63; 10 CFR 50.65(a)(4), and licensee procedures. Documents reviewed for this TI are listed in the attachment.

b. Findings

No findings of significance were identified. Based on the inspection, no immediate operability issues were identified. In accordance with TI 2515/156 reporting requirements, the inspectors provided the required data in the worksheets provided with the TI to the headquarters staff for further analysis.

4OA6 Meetings, including Exit

On May 20, 2004, the inspector conducted a telephonic exit interview to present the inspection results to Mr. D. Richards, Supervisor, Onsite Emergency Planning, and other members of his staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On June 25, 2004, the resident inspectors presented the inspection results to Mr. D. Nunn and other staff members who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

C. Anderson, Manager, Site Emergency Preparedness
D. Brieg, Manager, Maintenance Engineering
M. Cooper, Manager, Plant Operations
M. Love, Manager, Maintenance
J. Madigan, Manager, Health Physics
C. McAndrews, Manager, Nuclear Oversight and Assessment
D. Nunn, Vice President, Engineering and Technical Services
N. Quigley, Manager, Mechanical/Nuclear Maintenance Engineering
A. Scherer, Manager, Nuclear Regulatory Affairs
M. Short, Manager, Systems Engineering
T. Vogt, Manager, Operations
R. Waldo, Station Manager
T. Yackle, Manager, Design Engineering
J. Wambold, Vice President, Nuclear Generation

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed

05000361;362/2004003-01 NCV Failure to correct deficiencies in SWC pump assembly and installation procedure (Section 4OA2)

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 4OA5: TI 2515/156, "Offsite Power System Operational Readiness"

Procedures

SO23-6-30, "Switchyard Inspection and Operation," Revision 13
SO23-13-4, "Operation During Major System Disturbances," Revision 6
GCC Operating Procedure: SONGS Voltage
Transmission Control Agreement, Appendix E, Nuclear Protocols

ARs

000100457 and 030900504