UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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September 22, 2000

EA 00-176

Harold B. Ray, Executive Vice President
Southern California Edison Co.
San Onofre Nuclear Generating Station
P.O. Box 128
San Clemente, California 92674-0128

SUBJECT: NRC INTEGRATED RESIDENT AND REGIONAL REPORT NO. 50-361/00-10; 50-362/00-10

Dear Mr. Ray:

This refers to the inspection conducted on July 9 through August 26, 2000, at the San Onofre Nuclear Generating Station, Units 2 and 3, facility. The results of this inspection were discussed on August 11, 2000, with Mr. D. Nunn and other members of your staff, and on August 29, 2000, with Mr. R. Krieger and other members of your staff. The enclosed report presents the results of this inspection.

The NRC identified three issues that were evaluated under the risk significance determination process and were determined to be of very low safety significance (green). These issues have been entered into your corrective action program and are discussed in the summary of findings and in the body of the attached inspection report. Of these issues, all three were determined to involve violations of NRC requirements but, because of their very low safety significance, the violations are not cited. The first violation involved untimely corrective actions for loss of voltage relays that resulted in a missed surveillance of the relays. The second violation involved untimely corrective actions for stuck-open dampers in the ventilation system for the saltwater cooling pump rooms. The last violation involved your failure to set performance goals for and monitor one train of the saltwater cooling system in each unit after performance degraded as the result of an ineffective preventive maintenance program. If you contest these noncited violations, 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, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC, 20555-0001; and the NRC resident inspector at the San Onofre facility.

In accordance with 10 CFR 2.790 of the NRC's “Rules of Practice,” a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document

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

Sincerely,

/RA/

Charles S. Marschall, Chief
Project Branch C
Division of Reactor Projects

Docket Nos.: 50-361
50-362
License Nos.: NPF-10
NPF-15

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NRC Inspection Report No.
50-361/00-10; 50-362/00-10

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.:	50-361 50-362
License Nos.:	NPF-10 NPF-15
Report No.:	50-361/00-10 50-362/00-10
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:	July 9 through August 26, 2000
Inspectors:	J. A. Sloan, Senior Resident Inspector J. G. Kramer, Resident Inspector J. J. Russell, Resident Inspector C. E. Johnson, Senior Reactor Inspector J. E. Whittemore, Senior Reactor Inspector
Approved By:	C. S. Marschall, Chief, Project Branch C

ATTACHMENTS:

Attachment 1: Supplemental Information

Attachment 2: NRC's Revised Reactor Oversight Program

SUMMARY OF FINDINGS

IR05000361-00-10, IR05000362-00-10; 07/09-08/26/2000; Southern California Edison; San Onofre Nuclear Generating Station, Units 2 & 3; Integrated Resident & Regional Report; Maintenance Rule Implementation Quarterly, Surveillance Testing, Drill Evaluation.

The inspection was conducted by resident inspectors and regional reactor inspectors. This inspection identified three green findings, all of which were noncited violations, and one finding of no color. The significance of issues is indicated by their color (green, white, yellow, or red) and was determined by the significance determination process.

Cornerstone: Mitigating Systems

- Green. The licensee failed to include all required relay paths in its biennial response time testing of loss of voltage circuits. The inspectors identified that the test procedure did not include the 127X1 relays. When tested, 4 of the 16 relays failed the acceptance criteria specified in Surveillance Requirement 3.3.7.3. The relays had been functionally tested satisfactorily, but the response time had not been tested since 1997. This deficiency had been previously identified by the licensee in 1997, as documented in Licensee Event Report 361; 362/1997-001-03. At that time the licensee tested the relays using maintenance orders. However, the licensee failed to update the surveillance procedure, as it committed to do in the licensee event report, resulting in the relays not being tested during the 1999 performance of the surveillance procedure. The failure to correct the procedures in a timely manner was a violation of 10 CFR Part 50, Appendix B, Criterion XVI, which requires that conditions adverse to quality be promptly identified and corrected. This violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Action Request 000800580.

  The licensee determined that the as-found response time of the relays, while less than the minimum allowed value specified in the surveillance requirement, was within the limits of the licensee's safety analysis. The inspectors used the significance determination process and determined that the condition was of very low safety significance because operability of the system was not adversely affected (Section 1R22.2).

- Green. The licensee failed to implement timely corrective actions after a damper in the ventilation system for the saltwater cooling pump rooms was found stuck open because of excessive corrosion and a linkage arm that was found missing in December 1999. This was a violation of 10 CFR Part 50, Appendix B, Criterion XVI, which requires that conditions adverse to quality be promptly identified and corrected. The damper was not completely repaired and similar dampers, later found stuck open, were not promptly corrected. This violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Action Request 000801431.

  Using the significance determination process the inspectors determined that the issue was of very low safety significance (green) because the saltwater cooling pumps remained operable (Section 1R12).

- Green. The licensee failed to correctly count unavailability hours for the Unit 2, Train B, and Unit 3, Train A, saltwater cooling system. This error resulted in these trains exceeding the licensee's performance criteria, which were therefore required to have been monitored under 10 CFR 50.65(a)(1). The licensee failed to set goals and monitor these trains of saltwater cooling, as required by 10 CFR 50.65(a)(1), as a result of the preventive maintenance program not effectively controlling the performance of the systems. This violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Action Request 000700218.

  The inspectors determined that the failure to establish performance goals and corrective actions to achieve those goals resulted in the systems being less available, which was a credible impact on safety. Using the significance determination process, the inspectors determined that the issue was of very low safety significance (green) because operability of the trains was not affected beyond the allowed outage times specified in the Technical Specifications (Section 1R12).

Cornerstone: Emergency Preparedness

- No Color. Performance during some of the 10 emergency preparedness drills, all of which used the same scenario, was affected by scenario foreknowledge. Some operators were able to hear elements of the scenario over the public address systems during a morning drill before they participated in the afternoon drill. Also, some personnel participated in more than one drill. Drill performance is measured and reported as a performance indicator and, if credit for correctly performing critical tasks (event classification, event notification, and protective action recommendations) is given when the performer or direct advisors have foreknowledge of the correct outcome, the performance indicator data might not be valid. Therefore, this has the potential to affect the ability of the NRC to perform its regulatory function.

  This issue had no credible impact on safety and was not evaluated using the significance determination process because it did not involve a failure to meet or implement a planning standard or other regulatory requirement (Section 1EP6).

Report Details

Summary of Plant Status:

Units 2 and 3 operated at essentially 100 percent power throughout this inspection period.

1. **REACTOR SAFETY**
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

The inspectors performed partial walkdowns during outages of the following systems to confirm the operability of the redundant trains:

- Auxiliary Feedwater Pump 2P140 (Unit 2)
- Auxiliary Feedwater Pump 2P141 (Unit 2)
- Containment Spray Pump 2P012 and High Pressure Safety Injection Pump 2P017 (Unit 2)
- Emergency Diesel Generator (EDG) 3G002 (Unit 3)

b. Findings

There were no findings identified during this inspection.

1R05 Fire Protection (71111.05)

a. Inspection Scope

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

- 45 foot electrical penetration room (Unit 3)
- 63 foot electrical penetration room (Unit 3)
- Charging Pump 2P190 room (Unit 2)
- Charging Pump 2P191 room (Unit 2)
- Charging Pump 2P192 room (Unit 2)

b. Findings

There were no findings identified during this inspection.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors performed a periodic walkdown of the following area susceptible to internal flooding. The inspectors evaluated the operational status of seals and barriers, sumps and drains, and level alarms and looked for the existence of other potentially unanalyzed internal flooding hazards:

- Saltwater cooling (SWC) structure and piping tunnel (Units and 3)

b. Findings

There were no findings identified during this inspection.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The inspectors reviewed licensed operator requalification testing and/or training, including the licensed operators' performance and evaluators' critique. The review compared performance in the simulator on July 24, 2000, with performance in the control room on July 26, 2000.

b. Findings

There were no findings identified during this inspection.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed the implementation of the requirements of the Maintenance Rule (10 CFR 50.65) for the following systems and components:

- Toxic gas isolation system sample pump failure (Units 2 and 3)
- SWC system outage, Train B (Unit 2)
- EDG outage, Train A (Unit 2)
- SWC room ventilation damper failures (Units 2 and 3)
- Loss of voltage relays response times out of specification (Units 2 and 3)

b. Findings

SWC System, Train B - Unit 2

On June 30, 2000, the inspectors identified that the licensee had failed to correctly count the unavailability hours for Unit 2, Train B, SWC. This SWC train was classified under 10 CFR 50.65(a)(2), until the inspectors identified this issue. This SWC train was

required to have been monitored under the more rigorous standards of 10 CFR 50.65(a)(1), based on the corrected unavailability hours.

While reviewing SWC availability data, the inspectors questioned the unavailability hours for Unit 2, Train B, which seemed low considering a major system outage that had occurred in March 2000. The licensee then confirmed that the unavailability hours for a component cooling water heat exchanger outage had been counted against the component cooling water train but had inadvertently not been counted against the SWC train that was also affected by the outage. The licensee also determined that a similar condition had occurred in Unit 3, Train A, and both trains should have been placed in goal setting as required by 10 CFR 50.65(a)(1). In the licensee's Maintenance Rule quarterly performance report dated July 31, 2000, the licensee documented placing Unit 2, SWC Train B, and Unit 3, Train A, into goal-setting (a)(1) for exceeding unavailability by 15 hours and 2 hours respectively.

The inspectors determined that the failure to establish performance goals and corrective actions to achieve those goals resulted in the system being less available, which was a credible impact on safety. Using the significance determination process (SDP) the inspectors determined that the issue was of very low safety significance because an actual loss of safety function of a single train was less than its Technical Specification allowed outage time (green). The licensee calculated that the resultant increase in cumulative core damage frequency risk was 3E-6/year for Unit 2 and 1.1E-6/year for Unit 3, both of which were considered small.

10 CFR 50.65(a)(1) requires that the licensee "shall monitor the performance or condition of structures, systems, or components, against licensee-established goals, in a manner sufficient to provide reasonable assurance that such structures, systems, and components . . . are capable of fulfilling their intended functions . . . ." Contrary to the above, the licensee failed to establish goals and monitor the Unit 2, SWC Train B, and Unit 3, SWC Train A. 10 CFR 50.65 (a)(2) provides relief from the requirements of paragraph (a)(1), provided that the preventive maintenance program is effectively controlling the unavailability of the systems. However, the preventive maintenance program was not properly controlling system unavailability, therefore, paragraph (a)(2) was not applicable. Licensee personnel failed to recognize the problem because system unavailability was not properly tracked. This violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy (NCV 361; 362/2000010-01). This violation is in the licensee's corrective action program as Action Request (AR) 000700218.

SWC Room Ventilation - Units 2 and 3

The licensee failed to take adequate corrective actions after finding a safety-related, SWC pump room ventilation backdraft damper that was missing a linkage arm and rusted in the open position. The damper vanes were freed, but the linkage arm was not replaced and two similar dampers, also rusted open, were not repaired in a timely manner.

Two SWC pump rooms contain four SWC pumps each, with half of the Unit 2 pumps and half of the Unit 3 pumps in each room. Each room also contains four ventilation fans that pump air out of the room. Filtered air intake is provided from outside air. The licensee had determined that the maximum room design temperature (104°F) would not be exceeded as long as the number of operating SWC pumps exceeded the number of operating fans by no more than one. Normally, two fans were operating and the ventilation lineup was switched monthly. All fans automatically start when the room temperature exceeds 85°F, although corresponding fan operation is not necessary for pump operability. Each fan has a backdraft damper, consisting of louvers in the fan discharge or suction air duct. The louvers are attached to a weighted arm, which shuts the louvers when the fan is not operating. The purpose of the back draft dampers is to prevent reverse rotation and possible overcurrent trip of the fan if it is started while reverse rotating. The dampers also provide a room seal such that only filtered air is drawn in from the outside. The dampers are Q-listed, Quality Class II components.

In 1992, the licensee replaced two of these backdraft dampers (2MA371, 3MA371) with stainless steel dampers. All eight of the dampers were made of a low alloy steel, which was susceptible to corrosion from salt in the air. Failures had occurred because the damper vanes had rusted. The damper vanes generally would not move from an open position. Failures had also occurred because debris had accumulated inside fan housings from unfiltered air backflow through stuck open dampers. Programmatically, no preventive maintenance was performed on the dampers.

When the Maintenance Rule was implemented in 1996, the SWC pump room function of the normal ventilation system was placed in the a(1) category. The licensee initiated a program to inspect and change the remaining dampers to stainless steel. In April and May 1998, three dampers were found rusted and were replaced by stainless steel dampers (2MA373, 3MA372, 3MA373). In December 1999, the licensee initiated maintenance orders to inspect the remaining three dampers. The first damper (2MA372) was found rusted open, and the linkage arm between the damper vanes and the counter weight was found to be missing. The maintenance craft documented this condition in Maintenance Order 99090337 and removed excessive rust from the damper and lubricated it, such that the vanes were free to move. The linkage arm was not replaced. The remaining two dampers (2MA370, 3MA370) were not inspected because no scaffolding was available for the inspection. The craft documented that the condition of the remaining two dampers was probably similar to the damper inspected; however, no AR was generated to initiate any type of operability assessment or to facilitate scaffold erection. In August 2000, the remaining three dampers were replaced with the stainless steel dampers; the two previously uninspected dampers were found to be rusted in place.

In December 1999, the licensee found a condition adverse to quality; Damper 2MA372 was rusted open and was missing a linkage arm. 10 CFR Part 50, Appendix B, Criterion XVI, states, in part, that conditions adverse to quality shall be promptly identified and corrected. Contrary to this, the licensee failed to generate an AR in order to identify the scope of the condition, including as-found operability. The licensee also failed to promptly inspect and repair the remaining dampers and to reinstall the linkage arm. This violation of 10 CFR Part 50, Appendix B, is being treated as a noncited

violation (NCV 361; 362-2000010-02) consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as AR 000801431.

Using the SDP, the inspectors determined that the issue was of very low safety significance because the SWC pumps remained operable.

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

a. Inspection Scope

The inspectors reviewed the effectiveness of risk assessment and risk management for the following activities:

- Auxiliary Feedwater Pump 2P141 outage and online test of loss of voltage sequencing relays and circuits (Unit 2)
- EDG 3G002 outage (Unit 3)
- Auxiliary Feedwater Pump 3P504 outage (Unit 3)

b. Findings

There were no findings identified during this inspection.

1R14 Personnel Performance During Nonroutine Plant Evolutions (71111.14)

Licensee Event Report (LER) Evaluation

a. Inspection Scope

The inspectors reviewed an LER to determine the extent to which human errors contributed to the event and to evaluate the safety significance of the event.

b. Findings

(Closed) LER 361; 362/2000-008-00: radiography causes control room isolation signal actuation. This was a minor issue and is closed.

There were no findings identified during this inspection.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the operability evaluations in the following ARs to ensure the operability was properly justified:

- Nonenvironmentally qualified wires found in several transmitter circuits (AR 000601114) (Unit 2)

- EDG 3G002 automatic voltage regulator motor-operated potentiometer failure (AR 000700682) (Unit 3)

- As-left total thrust for Valve 3HV8153, Shutdown Cooling Heat Exchanger E003 inlet isolation, exceeded acceptance criteria (AR 000700301) (Unit 3)

b. Findings

There were no findings identified during this inspection.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors performed the biennial review of permanent plant modifications. The inspectors reviewed procedures governing plant modifications to evaluate the effectiveness of the licensee's programs for implementing modifications to risk-significant systems, structures, and components, such that these changes did not adversely affect the design and licensing basis of the facility. The inspectors also reviewed 20 permanent plant modification packages (7 design change packages, and 13 field change requests) to verify that they were performed in accordance with plant procedures. Procedures and permanent plant modifications reviewed are listed in Attachment 1.

The inspectors conducted a field walkdown of one permanent plant modification. The cognizant engineer for the identified modification was interviewed as to his understanding of the modification package.

The inspectors evaluated the effectiveness of the licensee's corrective action process to identify and correct problems concerning the performance of permanent plant modifications. In this effort, the inspectors reviewed action requests, nonconformance reports, and the subsequent corrective actions pertaining to licensee-identified problems and errors in the performance of permanent plant modifications. Action requests and nonconformance reports reviewed are listed in Attachment 1.

b. Issues and Findings

There were no findings identified during this inspection.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed postmaintenance testing for the following activity to verify that the test procedures and activities adequately demonstrated system operability:

- EDG Train B maintenance (Unit 2)

b. Findings

There were no findings identified during this inspection.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Observations

a. Inspection Scope

The inspectors observed and/or reviewed documentation for the following surveillance tests to verify that the structures, systems, and components are capable of performing their intended safety functions and to assess their operational readiness:

- Battery Charger 2B001 biennial performance test (Surveillance Requirement (SR) 3.8.4.6) (Unit 2)

- EDG 2G002 semiannual surveillance (SR 3.8.1.7) and Engineered Safety Feature Subgroup Relay K-401A Semiannual Test (SR 3.3.6.2) (Unit 2)

- Containment purge Penetrations 18 and 19 local leak rate test (Unit 2)

b. Findings

There were no findings identified during this inspection.

.2 Loss of Voltage Signal (LOVS) Circuit Testing - Unit 2

a. Inspection Scope

The inspectors reviewed and observed performance of Procedure SO2-II-11.1A-2, "Surveillance Requirement Unit 2 ESF Train A Channel (Online) Test of Loss of Voltage [Signal] (LOVS), Degraded Voltage (SDVS, DGVSS) and Sequencing Relays and Circuits," Revision 0. The inspectors reviewed Maintenance Orders 97020999, 97021000, 97021004, 97021013, and 00080588-591; ARs 970200708, 970200855, and 000800580; and Elementary Diagrams 30299, and 30220, Sheets 1 and 2.

b. Findings

The licensee failed to perform adequate corrective actions as a result of a previously identified missed Technical Specification SR and therefore again failed to perform the SR until identified by the inspectors.

b.1 System Overview

The 4.16 kV loss of voltage protection includes four undervoltage relays (127F1, F2, F3, and F4) that sense a loss of voltage on each 4.16 kV safety-related bus. Each of these relays with combinations of Relays X1, X2, and X3 create a single LOVS relay channel. For example, one relay channel would include the following sets of relay chains: 127F1, 127F1X3, and 127F1X1 and 127F1, 127F1X3, and 127F1X2. There are additional sets of relay channels for Relays 127F2, 127F3, and 127F4 to create a four channel logic. A two-out-of-four logic is required to generate a LOVS.

b.2 Missed Surveillance

On August 11, 2000, the inspectors compared Technical Specification SR 3.3.7.3 to Procedure SO2-II-11.1A-2, which implemented the requirement. The inspectors then discussed with the licensee concerns that the procedure did not test all of the LOVS protection relays and therefore did not implement the SR. Specifically, the procedure did not test the time of loss of input voltage at 127F relays to contact closure of the X1 relays for the four LOVS relay channels for each 4.16 kV bus.

At 2:40 p.m. the licensee determined that indeed the required relays were not tested and had not been tested within the required surveillance interval. The licensee entered SR 3.0.3 for both Units 2 and 3, which allowed for a delay period of up to 24 hours to complete the surveillance before complying with the required actions limiting condition for operation. The licensee initiated maintenance orders to test/reset the applicable relays, and by 10:50 p.m. had exited SR 3.0.3 for both units. Four of the sixteen relay channels failed the as-found criteria by being outside the Technical Specification surveillance band and required adjusting. All relays were left with acceptable times.

b.3 Previous Identification

On February 14, 1997, during the performance of a Technical Specification self-assessment, the licensee identified that SR 3.3.7.3.b was not current upon implementation of the Technical Specification Improvement Project on August 5, 1996 (see LER 361; 362/1997-001-03). Prior to August 5, 1996, the specified time limit for LOVS testing only included the 127F relays; in contrast, after August 5, the entire LOVS channel as described above was required to be tested. Consequently, the licensee did not have a surveillance record demonstrating the actual response time of the LOVS function. The licensee initiated maintenance orders to test and reset the applicable relays. The maintenance orders properly included the testing of both the X1 relay chains and the X2 relay chains.

Corrective actions for the missed surveillance included revising the applicable

surveillance procedures to include testing the entire LOVS relay channels and not just the 127F relays. However, when revising the procedures, the licensee only included the X2 relay chains and failed to incorporate the X1 relay chains. In 1999, the licensee performed the Technical Specification 3.3.7.3 SR for both units but failed to test the X1 relay chains due to the inadequate procedure.

b.4 Enforcement and Safety Significance

10 CFR Part 50, Appendix B, Criterion XVI, states, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, the licensee failed to correct the implementing procedure for the Technical Specification 3.3.7.3 SR to include all aspects of the LOVS relay channels after previously identifying an inadequate procedure. This failure resulted in a missed Technical Specification SR. This violation of 10 CFR Part 50, Appendix B, Criterion XVI, is being treated as a noncited violation (NCV 361; 362/2000010-03) consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as AR 000800580.

The inspectors reviewed AR 000800580, Assignment 6. In the assignment the licensee documented that, although four relays were found outside the Technical Specification SR limit, the as-found values were within the allowable as-found values of Calculation E4C-098, Calculation Change Notice 25. Using the SDP, the inspectors determined that the issue was of very low safety significance (green) because the equipment would have remained capable of performing its required safety function.

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:

- July 17, 2000 (simulator-based drill)
- July 31, 2000 (simulator-based drill)
- August 7, 2000 (site-wide drill)

b. Findings

Simulator drills were conducted morning and afternoon on 5 consecutive weeks. Three site-wide drills, in which most or all of the emergency response facilities were activated, were conducted in conjunction with the simulator drills. All the drills used the same scenario. Operators in the simulator building for other training activities were able to hear public address system announcements from the morning drill, including a summary discussion of the scenario during the postdrill critique. The operators thus had foreknowledge of aspects of the scenario, including event classification, before they participated in the afternoon drill.

Some key personnel were qualified in multiple positions and participated in more than one drill. They therefore had detailed foreknowledge of the event scenario before participating in the second drill. For example, the Units 2 and 3 Operations Superintendent participated as Operations Leader in the simulator for the July 31 drill, then participated as the Emergency Advisor-Operations in the Technical Support Center for the August 7 site-wide drill. In his role as Emergency Advisor-Operations, he advised the Station Emergency Director regarding event classifications. In another example, a person performing a drill controller function in the simulator on July 31 was the senior reactor operator briefer in the Emergency Operations Facility for the August 7 drill, advising the Corporate Emergency Director, who was responsible for protective action recommendations.

Foreknowledge of the event scenario by personnel involved in event classification, event notification, and protective action recommendation activities affects their performance in these critical tasks. Licensee personnel involved in these drills did not discuss previous knowledge of the scenario during the licensee's post-drill critiques. The previous knowledge of certain personnel had no credible potential to impact safety. The inspectors did not evaluate the issue using the SDP because it did not involve a failure to meet or implement a planning standard or other regulatory requirement. However, drill performance is measured and reported as a performance indicator, and this issue did relate to collecting performance indicator data such that a threshold could be exceeded. If credit for correctly performing a critical task is given when the performer has foreknowledge of the correct outcome, the performance indicator data might not be valid. Therefore, this issue has the potential to affect the ability of the NRC to perform its regulatory function and is a finding of No Color (FIN 361; 362/2000010-04).

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors verified the accuracy of data reported by the licensee for the following performance indicators to ensure that the performance indicator color was correct:

- MS1 Emergency AC Power System Unavailability (Units 2 and 3)
- IE1 Unplanned Scrams (Units 2 and 3)

b. Findings

There were no findings identified during this inspection.

4OA5 Other

(Closed) Unresolved Item 362/2000006-04: reactor scram with a loss of normal heat removal not included in a performance indicator. The inspectors submitted a frequently asked question to determine if a licensee event involving a feedwater regulating valve

failing open, a Unit 3 reactor scram, and the tripping of the main feedwater pumps should be included in the performance indicator. The response to the question indicated that, in this case, the licensee had appropriately reported the performance indicator by not including the above event. This item is closed.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the results of the permanent plant modifications inspection to Mr. D. Nunn and other members of licensee management at the conclusion of the inspection on August 11, 2000. The licensee acknowledged the findings presented.

Additionally, the inspectors presented the results of the remaining inspections to Mr. R. Krieger and other members of licensee management at an exit meeting on August 29, 2000. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Allen, Supervisor, Reliability Engineering
C. Anderson, Manager, Site Emergency Preparedness
D. Axline, Licensing Engineer
D. Brieg, Manager, Station Technical
R. Clark, Manager, Quality Engineering and Fuels
G. Cook, Supervisor, Compliance
T. Elkins, Supervisor, Nuclear Construction
J. Fee, Manager, Maintenance
R. Krieger, Vice President, Nuclear Generation
J. Madigan, Manager, Health Physics
D. Nunn, Vice President, Engineering and Technical Services
R. Richter, Supervisor, Fire Protection Engineering
A. Scherer, Manager, Nuclear Oversight and Regulatory Affairs
M. Short, Manager, Site Technical Support
D. Stickney, Manager, Civil/Electrical Design
T. Vogt, Plant Superintendent, Units 2 and 3
R. Waldo, Manager, Operations

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed During this Inspection

361; 362/2000010-01	NCV	failure to monitor SWC system performance as required (Section 1R12.b)
361; 362/2000010-02	NCV	failure to implement timely corrective actions for corroded-open ventilation dampers (Section 1R12.b)
361; 362/2000010-03	NCV	failure to perform response time surveillance of loss of voltage relays because of inadequate corrective actions (Section 1R22.2.b.4)
361; 362/2000010-04	FIN	drill performance affected by scenario foreknowledge (Section IEP6.b)

Previous Items Closed

361; 362/2000-008-00	LER	radiography causes control room isolation system actuation (Section 1R14.b)
362/2000006-04	URI	reactor scram with a loss of normal heat removal not included in a performance indicator (Section 4OA5)

LIST OF DOCUMENTS REVIEWED

Procedures

NUMBER	DESCRIPTION	REVISION
SO123-CC-2	Configuration Management Program	4
SO123-XXIV-8.7	Drawings and Design Change Notice Conversion	2
SO123-XXIV-10.16	Development, Review, Approval, and Release of Conceptual Engineering Packages and SO123-XXIV-Design Change Packages	3
SO123-XXIV-10.21	Field Change Notices and Field Interim Design Change Notices	7
SO23-3-3.23	Diesel Generator Operations	15
SO23-12-8	Station Blackout	15
SO23-12-9	Emergency Operating Instruction Functional Recovery	20

Action Requests

AR 960600829	AR 970900924	AR 980600231	AR 981101222
AR 970401346	AR 971001487	AR 980900635	AR 990401293
AR 970800441	AR 980101028	AR 981101191	AR 991200682

Nonconformance Reports

NCR 990401629
NCR 960501131

Construction Work Orders

NUMBER	DESCRIPTION	REVISION
96111016000	DCP 2&3-7048.00SE, Unit to Unit Diesel Generator Cross-Tie Speed Droop Circuit Testing	0
97040660000	DCP 2&3-7048.00SE, Unit to Unit Diesel Generator Cross-Tie Breaker Interlock Testing	0

Field Change Notices

NUMBER	DESCRIPTION	REVISION
F13931M	RCS Instrument Nozzle Repair with Mechanical Nozzle Seal Assembly	0
F14476M	Install Throttle Valve for CCW Surge Tank Make Up Water	0
F15237E	Elementary Diagram Battery Room Space Heaters	0
F15304E	Addition of Cables in Unit 3 Fire Zone	0
F15793M	Unit 2 and 3 Diesel Fuel Oil Tank Interior Coatings	0
F16340M	EDG Pressurized Fuel Piping Leakage Detection System	0
F16382M	Install Relief Valves in Steam Generator Boron Injection Flow Paths	0
F16528M	RCP Motor Lower Bearing Lube Oil Addition Hopper Installation Details (Unit 2)	0
F16658M	Unit 3 High Pressure Safety Injection Stop Check Valve	0
F16682M	Re-scale Flow Detection and Measuring Instrument Loop for Safety Injection Flow Path	0
F1832C	Electrical and Piping Underground Tunnel Plans-Sections and Details	0
F6805J	Change Waste Gas Analyzer Dilution and Alarm Setpoints	0
F7726J	Change Waste Gas Analyzer Dilution and Alarm Setpoints	0

Design Change Packages

NUMBER	DESCRIPTION	REVISION
2-2002.00SM	Unit 2 and 3 Cycle 10 Replant, Low Pressure Turbine	0
2-6683.06S	Unit 2 and 3 Snubber Reduction	0

Design Change Packages

NUMBER	DESCRIPTION	REVISION
2&3-2075.00SJ	RCS Drain Down Level Monitoring System	0
2&3-2079.00SM	Secondary Side Boric Acid Injection System	0
2&3-2081-00SM	Reactor Coolant System Temperature Reduction	0
2&3-2980-00SE	Replacement of Shutdown Cooling Inverters with Manual Transfer Switches	0
2&3-7048-00SE	Installation of Unit to Unit Diesel Generator Cross-Tie Capability	0

Miscellaneous Documents

NUMBER	DESCRIPTION	REVISION
90469	DCP 2&3-7048-00SE Test Summary Document	0

LIST OF ACRONYMS USED

AR	action request
CFR	Code of Federal Regulations
EDG	emergency diesel generator
LER	licensee event report
LOVS	loss of voltage signal
NCV	noncited violation
NRC	Nuclear Regulatory Commission
SDP	significance determination process
SR	surveillance requirement
SWC	saltwater cooling
URI	unresolved item

ATTACHMENT 2

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.