



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
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August 7, 2000

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 INSPECTION REPORT NO. 50-361/00-07; 50-362/00-07

Dear Mr. Ray:

This refers to the inspection conducted on May 21 through July 8, 2000, at the San Onofre Nuclear Generating Station, Units 2 and 3, facility. The enclosed report presents the results of this inspection, which were discussed on July 11, 2000, with Mr. R. Krieger and other members of your staff.

Based on 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 enclosed inspection report. All three of these issues were determined to involve violations of NRC requirements, but because of their very low safety significance the violations are not cited. 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 Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

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

Sincerely,

*/RA/*

Kriss M. Kennedy, Chief  
Branch C  
Division of Reactor Projects

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

Enclosure:  
NRC Inspection Report No.  
50-361/00-07; 50-362/00-07

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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.: 50-361/00-07  
50-362/00-07

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: May 21 through July 8, 2000

Inspectors: J. A. Sloan, Senior Resident Inspector  
J. G. Kramer, Resident Inspector  
J. J. Russell, Resident Inspector

Approved By: Kriss M. Kennedy, Chief, Project Branch C

**ATTACHMENTS:**

Attachment 1: Supplemental Information

Attachment 2: NRC's Revised Reactor Oversight Program

## SUMMARY OF FINDINGS

San Onofre Nuclear Generating Station, Units 2 and 3  
NRC Inspection Report No. 50-361/00-07; 50-362/00-07

The report covers a 7-week period of resident inspection. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the significance determination process described in Inspection Manual Chapter 0609.

### Cornerstone: Initiating Events

- Green. Operators on two different crews failed to comply with a Unit 2 annunciator response procedure. During planned borations of the reactor coolant system, an equipment malfunction resulted in more boric acid being added to the reactor coolant system than was planned by the operators. Actual boric acid flow rate deviated from programmed flow rate by greater than the annunciator setpoint, and operators failed to stop the boration, contrary to the procedure. The failure to follow procedures and stop the boration contributed to the excess boration of the reactor coolant system. These failures constitute two examples of a violation of Technical Specification 5.5.1.1.a. 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 000601485. Additionally, the inspectors observed poor chemical and volume control system procedural use during a simulator scenario.

The issue was characterized as a "green" finding using the significance determination process. This issue was determined to be of very low safety significance because mitigation equipment was not affected (Section 1R11).

### Cornerstone: Mitigating Systems

- Green. The inspectors identified that rubber matting in the four Unit 2 Class 1E battery rooms had not been included in the licensee's transient combustible control program as required by station procedures. The licensee confirmed that the same condition existed in the Unit 3 battery rooms and in five other spaces. The licensee subsequently determined that the matting did not cause any of the spaces to exceed the limit for transient combustible fire loading. This violation of Technical Specification 5.5.1.1.d 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 000600911.

The issue was characterized as a "green" finding using the significance determination process. The issue was determined to be of very low safety significance because the total fire loading, including the previously unevaluated materials, did not exceed the allowable fire loading for any affected areas (Section 1R05).

- Green. On three separate occasions, operators recorded out-of-specification servo housing positions for the turbine-driven Auxiliary Feedwater Pump 3P140 governor, but failed to recognize that the measurement did not meet the procedural acceptance criteria. In addition, senior reactor operators failed to identify the unacceptable

conditions during their review of the test results. These occurrences constituted three examples of a violation of Technical Specification 5.5.1.1.a for failure to follow procedure. 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 000501616.

Using the significance determination process, the inspectors determined that the issue was of very low safety significance because the condition did not affect the operability of the auxiliary feedwater pump (Section 1R15.1).



## 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

##### a. Inspection Scope

The inspectors performed a partial walkdown of the Unit 2 Train B emergency diesel generator and a complete walkdown of the Unit 2 auxiliary feedwater system. Plant procedures and drawings were used to verify the correct lineup for these systems.

##### b. Findings

There were no findings identified during this inspection.

#### 1R05 Fire Protection

##### a. Inspection Scope

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

- Class 1E battery rooms (Unit 2)
- Train A Emergency Chilled Water Chiller ME336 Room (common to Units 2 and 3)
- Train B Emergency Chilled Water Chiller ME335 Room (common to Units 2 and 3)
- Train A Class 1E Switchgear Room (Unit 3)

The inspectors observed the material condition of plant fire protection equipment, the control of transient combustibles, and the operational status of fire barriers.

##### b. Findings

The inspectors identified that rubber matting covering a majority of the floors in all four of the Unit 2 Class 1E battery rooms was not being tracked as a transient combustible and the licensee failed to identify this condition during monthly inspections.

On June 9, 2000, the inspectors performed walkdowns of the four Unit 2 Class 1E battery rooms and observed rubber matting on the floors and vinyl aprons hanging in the rooms. The inspectors discussed the observations with the supervisor of fire protection engineering. The licensee determined that, while the vinyl aprons would not support combustion, the rubber mats would and should be controlled as transient combustibles. The licensee identified nine additional areas that contained matting that was not addressed in the Updated Fire Hazards Analysis (UFHA) nor in a transient combustion request. The licensee wrote Action Request (AR) 000600753 to initiate the transient combustion requests and AR 000600911 to identify the cause and corrective actions for not accounting for the rubber matting in the fire loading for the affected spaces.

The licensee evaluated the fire loading in each of these spaces and determined that, in the worst case room, a Unit 3 battery room, the fire loading went from approximately 36 to 51 percent of the maximum permissible fire loading as stated in the UFHA. Using the fire protection significance determination process (SDP), the inspectors determined that the issue was of very low risk significance (Green) because the fire loading in the affected rooms remained below the maximum permissible fire loading as stated in the UFHA.

Unit 2 Technical Specification 5.5.1.1.d requires that written procedures shall be established, implemented, and maintained for fire protection program implementation. Procedure SO123-XIII-4.14, "Monthly Inspection for Control of Combustibles and Transient Fire Loads," Attachment 4, Acceptance Criteria 3.b, requires, in part, that Class A transients (wood, paper, rubber, or plastic) that exceed 25 pounds and will be in the area for longer than 24 hours must be on an approved transient combustion request. Contrary to the above, the licensee failed to initiate a transient combustion request for rubber matting in excess of 25 pounds being in battery rooms for greater than 24 hours. The matting, in most cases greater than 100 pounds, had been in the rooms for years. This violation of Technical Specification 5.5.1.1.d is being treated as a noncited violation (50-361/2000007-01), consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as AR 000600911.

#### 1R11 Licensed Operator Requalification Program

##### a. Inspection Scope

The inspectors observed licensed operator simulator training on June 14, 2000, observed control room operations by the same crew on June 26, 2000, and reviewed licensee evaluations of crew training performance since January 2000. The inspectors also compared operator performance observed during the simulator training with operator performance in the control room during normal plant operations. Specifically, the inspectors reviewed an evolution in which operators failed to take appropriate actions in response to an alarm received during boration of the reactor coolant system. As a result, more boron was added to the Unit 2 reactor coolant system than was planned (AR 000601485).

b. Findings

The inspectors observed noncompliances in the use of procedures for the chemical and volume control system in the simulator and identified a procedural noncompliance associated with two over-boration events in the plant. These performance issues involved three different operating crews.

During a simulator scenario observed on June 14, the inspectors observed that operators did not operate the chemical and volume control system in accordance with the system operating procedure on two occasions. These errors were identified by the licensee's training personnel and discussed with the crew during the training critique.

The inspectors reviewed AR 000601485 that documented additional errors made by operators during operation of the chemical and volume control system in the Unit 2 control room. On June 25, 2000, during a scheduled downpower from 100 to approximately 94 percent power, operators added more boric acid to the reactor coolant system than they had intended. Operators intended to add 10 gallons of boric acid into the reactor coolant system, but, due to a microprocessor failure, approximately 80 gallons of boric acid was added. To begin the boration, the operators selected a 4 gallon per minute (gpm) boric acid flow rate and a 10 gallon total boric acid amount and positioned the mode selector switch to borate. Annunciator Window 58A06, "Boric Acid to VCT Flow Hi/Low," illuminated as soon as the boration commenced. Although this is an expected alarm when boration is commenced, it normally clears after approximately one minute. On this occasion, the alarm remained illuminated for the approximate 4-minute duration of the boration. The setpoint for this annunciator was 1 gpm deviation between demanded and actual boric acid flow rate. Due to the microprocessor failure, the actual boric acid flow rate was approximately 20 gpm and the indicated flow rate was 3 gpm. The 1 gpm deviation between demanded boric acid flow and actual boric acid flow caused the annunciator to remain in alarm for the duration of the boration. Operators did not question the duration of the alarm and, as a result, did not take the required actions to address the alarm. Specifically, Procedure SO23-15-58.A, "Annunciator Panel 58A, CVCS," Temporary Change Notice 4-3, Section 58A06, "Boric Acid To VCT Flow Hi/Lo," step 1, "Required Actions," stated that "If unable to obtain required boric acid flow during automatic or manual operation of 2(3) FIC-210Y, then SECURE flow to prevent unplanned boration or dilution of the Reactor Coolant System." Contrary to this, operators failed to secure the boration even though the operators had indications available that the deviation between the demanded and actual boric acid flow rate exceeded 1 gpm.

The inspectors found that a similar event had occurred on June 23, 2000. Unit 2 operators intended to borate 10 gallons in order to lower reactor coolant system temperature by 1/2°F. The operators actually added approximately 80 gallons of boric acid. Indications on the main control boards were the same as described above, with Annunciator 58A06 remaining in alarm during the duration of the boration. A resultant decrease in temperature of more than 1/2°F indicated that approximately 80 gallons had actually been injected. Although the operators performing the downpower on June 25

were generally aware of this occurrence 2 days before, no corrective action had been initiated to identify and correct any equipment problems or provide compensatory measures. Consequently, the event recurred.

Technical Specification 5.5.1.1.a requires that written procedures be implemented covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Procedure SO23-15-58.A is applicable to Regulatory Guide 1.33. Contrary to this, the licensee failed to fully implement Procedure SO23-15-58.A on two occasions, as described above. This violation of Technical Specification 5.5.1.1.a is being treated as a noncited violation (50-361/2000007-02), consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as AR 000601485. Using the SDP, the inspectors determined that the issue was of very low safety significance because, although the issue contributed to the likelihood of a reactor trip, mitigation equipment remained operable (Green).

#### 1R12 Maintenance Rule Implementation

##### a. Inspection Scope

The inspectors verified that the licensee adequately implemented the requirements of the Maintenance Rule (10 CFR 50.65) for the following systems and components:

- Emergency Chillers ME335 and ME336 (common to Units 2 and 3)
- Radiation Monitoring System (Units 2 and 3, and Common)
- Saltwater Cooling Train A (Unit 2)
- Chemical and Volume Control System (Unit 3)

##### b. Findings

There were no findings identified during this inspection.

#### 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

##### a. Inspection Scope

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

- AFW Pump 3P141 outage (Unit 3)
- Train A EDG 2G002 outage (Unit 2)
- Low Pressure Safety Injection Pump 2P016 outage (Unit 2)
- AFW Pump 2P504 outage (Unit 2)

##### b. Findings

There were no findings identified during this inspection.

1R14 Nonroutine Plant Evolutions

.1 Sodium Hypochlorite Tank Rupture - Units 2 and 3

a. Inspection Scope

The inspectors observed personnel performance during the following nonroutine plant condition:

- Rupture of Sodium Hypochlorite Tank T139 (Units 2 and 3)

b. Findings

There were no findings identified during this inspection.

.2 Licensee Event Report (LER) Evaluations

a. Inspection Scope

The inspectors reviewed LERs to determine the extent to which human errors contributed to the events and to evaluate the risk significance of the events.

b. Findings

(Closed) LER 361/2000-005-00: electrical power alignment may place control room emergency air cleanup system outside design basis. This issue was discussed in NRC Inspection Report 50-361; 362/00-03, and is closed.

(Closed) LER 361/2000-006-00, -01: inoperable saltwater cooling valve causes violation of Technical Specification 3.7.8, "Salt Water Cooling System." This issue was discussed in NRC Inspection Report 50-361; 362/00-06, and is closed.

(Closed) LER 361; 362/2000-007-00: valve position verification required for Surveillance 3.6.6.1.1 not implemented as specified in Technical Specification Bases.

On June 1, 2000, the licensee determined that the monthly containment spray surveillance procedure allowed the valve position verification to be performed by observing position indications in the control room, rather than "through a system walkdown" as specified in the basis for Surveillance Requirement 3.6.6.1.1. The surveillance had been improperly performed since August 1996, when the Improved Technical Specifications were implemented and the licensee had not recognized the different words in the Technical Specification Bases. A field verification confirmed that the valves were in the proper position. The failure to perform the surveillance in accordance with Technical Specifications was a violation of Surveillance Requirement 3.6.6.1.1. This failure constitutes a violation of minor significance and is not subject to formal enforcement action. The violation was in the licensee's corrective action program as AR 000600036.

(Closed) LER 362/2000-002-00: missed reactor coolant system leak rate surveillance.

On May 3, 2000, the inspectors identified a missed reactor coolant system surveillance. The licensee accurately described the event, cause of the event, corrective actions, and safety consequence in LER 362/2000-002-00. Unit 3 Technical Specification Surveillance Requirement 3.4.13.1 requires that a water inventory balance be performed every 72 hours. Contrary to this, the licensee performed water inventory balances on January 31 and February 3, 2000, resulting in a period of 94 hours between water inventory balances. This failure constitutes a violation of minor significance and is not subject to formal enforcement action. This violation is in the licensee's corrective action program as AR 000500347.

1R15 Operability Evaluations

.1 AFW Governor Servo Length Measurement - Unit 3

a. Inspection Scope

The inspectors reviewed an operability evaluation contained in AR 000501616 associated with the servo housing measurement for the AFW pump governor valve exceeding its acceptance criteria.

b. Findings

On three occasions in the past 18 months, Unit 3 operators recorded servo measurements for AFW Pump 3P140 Governor Valve 3SV4700 that were outside the acceptance band. In each of these instances, operators failed to recognize that the acceptance criteria for the measurements was not met, and senior reactor operators failed to identify the unacceptable condition during their review of the test data. The fact that the measurement did not meet the acceptance criteria was not evaluated for the impact on the operability of the AFW pump.

On May 31, 2000, the licensee performed Procedure SO23-3-3.60.6, "Auxiliary Feedwater Pump and Valve Testing," Revision 6, Attachment 2, "Auxiliary Feedwater Pump 2(3)MP-140 and Valve Testing." During the performance of the test, the operators measured the distance from the top of the servo housing to the shoulder of the threaded section of the servo rod. This measurement was recorded as 2 1/4 inches, which was outside the acceptance band specified in the test procedure of between 2 1/16 and 2 3/16 inches. The licensee initiated AR 000501616 to evaluate and document the condition. The licensee determined that the pump remained operable in the as-found condition because there had been no degradation in the measurement over time and the pump continued to pass its surveillance test with no indications of abnormalities. The licensee identified that adjustments were made to the valve linkages in June 1997 and that the acceptance criteria specified in the procedure should have been re-evaluated and revised at that time.

During their operability evaluation, the licensee identified three additional instances in the past 18 months in which the valve measurement was recorded outside the

acceptance criteria. However, in each of these instances, operators failed to recognize that the acceptance criteria for the measurements was not met, and senior reactor operators failed to identify the unacceptable condition during their review of the test data. The fact that the measurement did not meet the acceptance criteria was not evaluated for the impact on the operability of the AFW pump at the time.

Technical Specification 5.5.1.1.a requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33 recommends procedures for the performance of surveillance tests. Surveillance Procedure SO23-3-3.60.6, Attachment 2, step 2.7.2, requires, in part, that the operators measure and record the distance from the top of the servo housing to the shoulder of the threaded section of the servo rod, and mark whether the test acceptance criteria for Valve 3SV4700 were satisfied (SAT) or not (UNSAT). Contrary to the above, on November 20, 1998, February 10, 1999, and December 9, 1999, the operators incorrectly recorded the acceptance criteria as having been satisfied (SAT) when the actual measured values were unsatisfactory. This violation of Technical Specification 5.5.1.1.a is being treated as a noncited violation (50-362/2000007-03), consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as AR 000501616.

Using the SDP, the inspectors determined that the issue was of very low safety significance because the AFW pump remained operable (Green).

## .2 AR Operability Evaluations

### a. Inspection Scope

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

- 000600846 Automatic voltage regulator motor-operated potentiometers would not return to the preset position from the full lower position for EDG 2G002 (Unit 2)
- 000601304 Kiene valve packing nuts loose on EDG 2G002 (Unit 2)

### b. Findings

There were no findings identified during this inspection.

## 1R16 Operator Workarounds

### a. Inspection Scope

On June 8, the inspectors reviewed operator workarounds to evaluate their effect on the operator's ability to implement abnormal or emergency operating procedures.

b. Findings

There were no findings identified during this inspection.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors performed a review of Design Change Notice ABG-16319 that replaced the existing cylinder test valves with test valves supplied by a different vendor on Unit 2 EDG 2G002.

b. Findings

There were no findings identified during this inspection.

1R19 Postmaintenance Testing

a. Inspection Scope

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

- Train B Low Pressure Safety Injection Pump 2P016 maintenance (Unit 2)
- Train B Emergency Chiller ME335 maintenance (common to Units 2 and 3)
- Train A EDG maintenance (Unit 2)
- Clean, inspect, and adjust Train A High Pressure Safety Injection Pump 2P017 Breaker 2A0408 (Unit 2)

b. Findings

There were no findings identified during this inspection.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed and/or reviewed documentation for the following surveillance tests:

- Procedure SO23-V-1.12, "Power Distribution Monitoring," Revision 17 (Units 2 and 3)
- Inservice test - Saltwater Cooling Pump 3P113 (Unit 3)



- Control Room Emergency Cleanup System Train A monthly test (Units 2 and 3)
- Inservice test of AFW Pump 2P140 (Unit 2)

b. Findings

There were no findings identified during this inspection.

1R23 Temporary Plant Modifications

a. Inspection Scope

On June 13, 2000, the inspectors reviewed the licensee's temporary modification log to determine if any temporary modifications affected the safety functions of important safety systems. The log listed one active temporary modification, TFM 2-00-SBB-001, which was not risk significant.

b. Findings

There were no findings identified during this inspection.

4. **OTHER ACTIVITIES**

4OA5 Other

.1 Temporary Instruction 2515/144, "Performance Indicator Data Collecting and Reporting Process Review."

a. Inspection Scope

The inspectors reviewed the licensee's data collecting and reporting process for the following performance indicators:

- IE3, Unplanned Power Changes per 7000 Critical Hours
- MS1, Emergency AC Power System Unavailability
- EP2, Emergency Response Organization Drill Participation
- OR1, Occupational Exposure Control Effectiveness
- PP1, Protected Area Security Equipment Performance Index

b. Findings

For each of the performance indicators, the inspectors determined that the data collecting and reporting process was consistent with the guidance provided in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 0, and in the Frequently Asked Questions posted as of June 12, 2000.

There were no findings identified during this inspection.

4OA6 Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. R. Krieger and other members of licensee management at an exit meeting on July 11, 2000. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether or not 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

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D. Brieg, Manager, Station Technical  
J. Fee, Manager, Maintenance  
T. Hook, Manager, Nuclear Safety Group  
R. Krieger, Vice President, Nuclear Generation  
J. Madigan, Manager, Health Physics  
D. Nunn, Vice President, Engineering and Technical Services  
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M. Short, Manager, Site Technical Support  
T. Vogt, Plant Superintendent, Units 2 and 3  
R. Waldo, Manager, Operations

##### NRC

W. Jones, Senior Reactor Analyst

#### ITEMS OPENED, CLOSED, AND DISCUSSED

##### Opened and Closed During this Inspection

361/2000007-01	NCV	Failure to follow procedure for transient combustible materials in battery rooms (Section 1R05)
361/2000007-02	NCV	Failure to follow annunciator response procedure for boric acid makeup flow mismatch (Section 1R11)
362/2000007-03	NCV	Failure to record unacceptable servo position as unsatisfactory during AFW pump surveillance test (Section 1R15.1)

##### Previous Items Closed

361/2000-005-00	LER	Electrical power alignment may place control room emergency air cleanup system outside design basis (Section 1R14.2)
361/2000-006-00, -01	LER	Inoperable saltwater cooling valve causes violation of Technical Specification 3.7.8, "Saltwater Cooling System" (Section 1R14.2)

361; 362/2000-007-00	LER	Valve position verification required for Surveillance 3.6.6.1.1 not implemented as specified in Technical Specifications Bases (Section 1R14.2)
362/2000-002-00	LER	Missed reactor coolant system leak rate surveillance (Section 1R14.2)

#### LIST OF ACRONYMS USED

AFW	auxiliary feedwater
AR	action request
CFR	Code of Federal Regulations
EDG	emergency diesel generator
gpm	gallons per minute
LER	licensee event report
NCV	noncited violation
NRC	Nuclear Regulatory Commission
SDP	significance determination process
UFHA	Updated Fire Hazard Analysis

#### PARTIAL LIST OF DOCUMENTS REVIEWED

Action Requests 000600604 and 000601604  
Procedure SDG-SO123-G-24, "NRC/NEI Data Tracking Guideline," Revision 0

## 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**

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

### **Radiation Safety**

- Occupational
- Public

### **Safeguards**

- Physical Protection

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, or 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>.