

January 29, 2001

Mr. Charles H. Cruse  
Vice President  
Constellation Nuclear  
Calvert Cliffs Nuclear Power Plant, Inc.  
1650 Calvert Cliffs Parkway  
Lusby, MD 20657-4702

SUBJECT: NRC's CALVERT CLIFFS NUCLEAR POWER PLANT INSPECTION REPORT  
05000317/2000-011, 05000318/2000-011

Dear Mr. Cruse:

On December 30, 2000, the NRC completed an inspection at your Calvert Cliffs Nuclear Power Plant Units 1 & 2. The enclosed report documents the inspection findings which were discussed on January 17, 2001, with Mr. Katz and other members of your staff.

The 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. No findings of significance were identified.

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Sincerely,

/RA/

Michele G. Evans, Chief  
Projects Branch 1  
Division of Reactor Projects

Docket Nos.: 05000317 and 05000318  
License Nos.: DPR-53 and DPR-69

Enclosure: Inspection Report 05000317/2000-011 and 05000318/2000-011

Charles H. Cruse

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos: 05000317  
05000318

License Nos.: DPR-53  
DPR-69

Report No: 05000317/2000-011;  
05000318/2000-011

Licensee: Calvert Cliffs Nuclear Power Plant, Inc.

Facility: Calvert Cliffs Nuclear Power Plant  
Units 1 and 2

Location: 1650 Calvert Cliffs Parkway  
Lusby, MD 20657-4702

Dates: November 12, 2000 to December 30, 2000

Inspectors: David Beaulieu, Senior Resident Inspector  
Fred Bower, Resident Inspector  
Tim Hoeg, Resident Inspector  
Ronald Nimitz, Senior Health Physicist

Approved by: Michele G. Evans, Chief, Projects Branch 1  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000317/2000-011, 05000318/2000-011, on 11/12/00-12/30/00, Calvert Cliffs Nuclear Plant, Inc.; Calvert Cliffs Nuclear Power Plant, Units 1 & 2. Maintenance Risk Assessment

The inspection was conducted by resident inspectors and a regional senior health physicist. The inspection identified one Green finding which was a non-cited violation. The significance of most/ all findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609 "Significance Determination Process" (SDP) (reference Attachment 1). Findings for which the SDP does not apply are indicated by "no color" or by the severity level of the applicable violation.

### A. Inspector Identified Findings

#### Cornerstone: Mitigating Systems

- **No Color.** The inspectors identified that a risk assessment, prescribed by the licensee's Maintenance Rule Program, was not performed prior to the containment spray headers being removed from service. In addition, four examples were identified where overall plant configuration was not adequately risk assessed, due to the subject equipment being taken out of service early or remaining out of service beyond the period that was originally risk assessed.

This finding represents a program deficiency which the licensee acknowledges as a performance concern. The consequence of the identified oversights was minimal because the licensee subsequently performed risk assessments for the periods associated with the above examples and determined that no risk management action thresholds were reached. The licensee entered this finding into their corrective action program. (Section 1R13)

### B. Licensee Identified Violations

Violations of very low significance, which were identified by the licensee, have been reviewed by the inspector. Corrective actions taken or planned by the licensee appear reasonable. These violations are listed in section 4OA7 of this report.

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## ATTACHMENT

Attachment 1 - NRC's REVISED REACTOR OVERSIGHT PROCESS

## Report Details

Units 1 and 2 operated at or near 100 percent power for the entire inspection period except for power reductions to 85 percent on December 15 (Unit 1) and December 8 (Unit 2) to support main turbine valve testing.

### 1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems and Barrier Integrity

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

The inspectors verified that systems, structures, and components associated with the condensate and refueling water storage tanks would remain functional when challenged by cold weather and freezing conditions. The inspectors reviewed the Updated Final Safety Analysis Report, Individual Plant Examination of External Events, Technical Specifications, and Operations Administrative Policy (OAP) 92-09, "Cold Weather Operations." Additionally, the inspectors walked down selected areas around the condensate storage and refueling water storage tanks to verify that the licensee properly implemented OAP 92-09.

##### b. Findings

No findings of significance were identified.

#### 1R04 Equipment Alignment

##### .1 Partial Walkdown

##### a. Inspection Scope

The inspectors conducted an equipment alignment partial walkdown to evaluate the operability of a selected redundant train or backup system, while the affected train or system was inoperable or out of service. The walkdown included a review of system operating instructions to determine correct system lineup and verification of critical components to identify any discrepancies which could affect operability of the redundant train or backup system. The inspectors performed a partial system walkdown on the 1A Emergency Diesel Generator. The inspector verified that a minor discrepancy noted was appropriately documented in Issue Report IR3-045-037.

The inspectors reviewed the following Calvert Cliffs Nuclear Power Plant documentation:

- OI-16, 1A Emergency Diesel Generator
- Nuclear Operations Standing Orders 00-01, Rev. 1, "Component Mispositionings"

##### b. Findings

No findings of significance were identified.

#### 1R05 Fire Protection - Fire Area Tours

##### a. Inspection Scope

The inspectors conducted tours of areas important to reactor safety to evaluate conditions related to: (1) licensee control of transient combustibles and ignition sources; (2) the material condition, operational status, and operational lineup of fire protection systems, equipment and features; and (3) the fire barriers used to prevent fire damage or fire propagation. The inspectors used administrative procedure SA-1-100, Fire Prevention, during the conduct of this inspection.

The areas inspected included:

- 11 Emergency Core Cooling Pump Room
- 12 Emergency Core Cooling Pump Room
- 21 Emergency Core Cooling Pump Room
- 22 Emergency Core Cooling Pump Room

##### b. Findings

No findings of significance were identified.

#### 1R11 Licensed Operator Requalification

##### a. Inspection Scope

On December 18, 2000, the inspector observed licensed operator classroom and simulator training. This training focused on operating crew team building skills. The simulator scenario involved multiple concurrent plant problems which was designed to reinforce the classroom information regarding operating as a team. Following the simulator exercise, the inspector observed the training instructor's debrief and critique.

##### b. Findings

No findings of significance were identified.

#### 1R12 Maintenance Rule Implementation

##### a. Inspection Scope

The inspectors reviewed performance-based problems involving selected in-scope structures, systems, or components (SSCs) to assess the effectiveness of the maintenance program. Reviews focused on: (1) proper maintenance rule scoping, in accordance with 10 CFR 50.65; (2) characterization of failed SSCs; (3) safety significance classifications; (4) 10 CFR 50.65 (a)(1) and (a)(2) classifications; and (5) the appropriateness of performance criteria for SSCs classified as (a)(2), and goals and corrective actions for SSCs classified as (a)(1). The inspectors reviewed the most recent system health reports and system functional failures of the last two years. The following SSCs were reviewed:



- Unit 1 Main Feedwater System. The licensee has appropriately classified this system as (a)(1) based upon four failures of the main feedwater system to properly operate to maintain steam generator level. The inspector evaluated the acceptability of the licensee's corrective action plan documented under Issue Report IR3-030-552. The current corrective action plan addresses three initial problems related to: failure of the output module for the main feed regulating valve (MFRV); wear of trim internal to the MFRV; and faulty position feedback potentiometer for the MFRV bypass valve. Following implementation of this corrective action plan, the MFRV bypass valve positioner feedback linkage failed during the startup from a forced outage. The inspector discussed the main feedwater system with the system manager and reviewed the completed root cause analysis for acceptability. The system manager indicated that a revised corrective action plan had been drafted and was scheduled to be taken to the maintenance rule panel for approval.
- Unit 1 and Unit 2 4kV GE Magna-Blast Electrical Circuit Breakers. The licensee appropriately classified this system on both units as (a)(2) during year 2000 fourth quarter data collection due to acceptable breaker performance with no recorded Unit 1 functional failures and two functional failures on Unit 2. The licensee is replacing existing 4kV GE breakers with newly designed ABB replacement type breakers for life extension purposes. However, the breaker replacement project is currently on hold due to several unresolved failures of installed ABB type replacement breakers.
- Unit 1 Reactor Coolant System. On January 22, 1999, Issue Report IR3-029-103 documented the Unit 1 power operated relief valves (PORVs) entering an (a)(1) status due to the unavailability hours exceeding the performance criteria of 16 hours of unavailability per valve over two years. The inspector reviewed the licensee's justification for changing the performance criteria to 45 hours per unit over 2 years, which resulted in returning the PORVs to an (a)(2) status.

The inspectors also reviewed the following Calvert Cliffs Nuclear Power Plant documentation:

- Station Procedure MN-1-112, Managing System Performance
- Maintenance Rule Scoping Document, Revision 15
- Maintenance Rule Indicator Reports, 3rd Quarter 2000
- Maintenance Rule Indicator (a)(1) SSCs Report, December 2000

b. Findings

No findings of significance were identified.

## 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

### a. Inspection Scope

For selected maintenance activities, the inspectors verified: (1) risk assessments were performed in accordance with the Calvert Cliffs Maintenance Rule Risk Assessment Guideline; (2) risk of scheduled work was managed through the use of compensatory actions; and (3) applicable contingency plans were properly identified in the integrated work schedule. Specifically, the inspector reviewed the risk-assessment computer input and output files for the period December 4, 2000, to December 23, 2000. The input file provides a description of the activity, the assumed start date and time, and the assumed stop date and time. The risk assessment computer determines the maintenance activities that occur simultaneously based on the specified start and stop times and produces an output file that shows the numerical risk values associated with each of these combinations of maintenance activities. The inspector compared the risk assessment information to the actual equipment unavailability that occurred.

### b. Findings

The inspector identified the following four instances where a risk assessment was performed, but the equipment was removed from service before the specified risk assessment start time, or the equipment remained out of service beyond the specified risk assessment stop time, resulting in configurations that were not adequately risk assessed:

- On December 6, 2000, the No. 11 service water system was taken out of service 3.1 hours before the start time used in the risk assessment.
- On December 6, 2000, the No. 11 containment air cooler was taken out of service 3.1 hours before the start time used in the risk assessment and was returned to service 0.25 hours after the stop time used in the risk assessment.
- On December 18, 2000, the No. 12 instrument air compressor was taken out of service 0.5 hours before the start time used in the risk assessment and was returned to service on December 21, 2000, 9 hours after the stop time used in the risk assessment.
- On December 19, 2000, the No. 13 saltwater pump was returned to service 4 hours after the stop time used in the risk assessment.

The inspector also identified one example where the licensee did not perform a prescribed risk assessment per the Calvert Cliffs Maintenance Rule Risk Assessment Guideline. On December 15, 2000, the No. 21 and No. 22 containment spray headers were removed from service, one at a time, to fill the spray cross-connect piping following maintenance (Maintenance Order 2200001717). Discussions with the licensee indicated that they inappropriately screened out this activity as not affecting risk because they focused on the plant conditions to perform the work and did not recognize that system restoration (fill and vent) following the maintenance necessitated a risk assessment.

10 CFR 50.65 (a)(4) requires that prior to performance of maintenance activities, an assessment of the risk associated with the activity be performed, and the results of this assessment used to manage the risk impact. The failure to perform an adequate risk

assessment in the above examples is a violation of 50.65 (a)(4). The consequence of the identified oversights was minimal because the licensee subsequently performed risk assessments for the time periods associated with the above stated examples and determined that no risk management action thresholds, per the Calvert Cliffs Maintenance Rule Risk Assessment Guideline, were reached. Therefore, this issue constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. The issue is being documented in this report due to the extenuating circumstance that the issue indicates an adverse performance trend or pattern. The licensee acknowledged the program implementation shortcoming and entered this finding into their corrective action program under Issue Report IR3-033-778. To address the issue programmatically, the licensee stated they plan to change their Maintenance Rule Risk Assessment Guideline regarding the standard practices for determining the risk assessment period to provide greater scheduler flexibility.

#### 1R15 Operability Evaluations

##### a. Inspection Scope

The inspectors reviewed selected operability evaluations affecting risk significant mitigating systems to assess: (1) technical adequacy of the evaluations; (2) whether continued system operability was warranted; (3) whether other existing degraded conditions were appropriately addressed with respect to their collective impact on continued safe plant operation; and (4) where compensatory measures were involved, whether the measures were in place, would work as intended, and were appropriately controlled. The following evaluation was reviewed:

- Operability Determination 2000-08 Recent Failures of ABB 4KV Breakers

##### b. Findings

No findings of significance were identified.

#### 1R19 Post-Maintenance Testing

##### a. Inspection Scope

The inspectors reviewed post-maintenance test procedures and associated testing activities for selected risk significant mitigating systems to assess whether: (1) the effect of testing on the plant had been adequately addressed by control room and engineering personnel; (2) testing was adequate for the maintenance performed; (3) acceptance criteria were clear and adequately demonstrated operational readiness, consistent with design and licensing basis documents; (4) test instrumentation had current calibrations, range, and accuracy for the application; (5) tests were performed, as written, with applicable prerequisites satisfied; and (6) that equipment was returned to the status required to perform its safety function. The following maintenance order (MO) activities were reviewed:

- MO 1200003034 Loose Parts Monitor Operability Test

- MO 1200002617 13 Salt Water Pump Motor, Breaker and Controls Inspection
- MO 1200003845 11 Main Steam Isolation Valve Shuttle Valve Replacement

The inspectors also reviewed the following Calvert Cliffs Nuclear Power Plant documentation:

- Updated Final Safety Analysis Report
- Technical Specifications

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed performance of surveillance test procedures and reviewed test data of selected risk-significant systems, structures, and components (SSCs) to assess whether the SSCs satisfied Technical Specifications, Updated Final Safety Analysis Report, Technical Requirements Manual, and licensee procedural requirements. The inspectors assessed whether the testing appropriately demonstrated that the SSCs were operationally ready and capable of performing their intended safety functions. The following tests were witnessed:

- STP-O-8A-1, 1A Emergency Diesel Generator Fast Speed Start
- STP-47-B-1, Unit 1 Main Steam Isolation Valve Partial Stroke Test
- STP O-107-1, Safety Injection Tank Boron Concentration

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed a risk significant temporary modification to assess: (1) the adequacy of the 10 CFR 50.59 evaluation; (2) that the installations were consistent with the modification documentation; (3) that drawings and procedures were updated as applicable; and, (4) the adequacy of the post-installation testing. The following temporary alteration was inspected:

- 1-00-0072 Add Capacitors to Saltwater System Flow Instrument Loop to Address Spurious Alarms due to Electrical Noise

b. Findings

No findings of significance were identified.

## 2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety

### 2OS1 Access Control to Radiologically Significant Areas

#### a. Inspection Scope

The inspector observed the below listed activities and reviewed the associated documents to determine the effectiveness of radiological controls, including access controls to radiologically significant areas. The reviews in this area were against criteria contained in 10 CFR 20 and applicable licensee radiation protection procedures.

- Six locked High Radiation Area access points were physically inspected to determine if access controls were sufficient to preclude unauthorized entry, as appropriate.
- Outdoor radioactive material storage areas were reviewed and selective radiation measurements were made to evaluate the adequacy of the control of radioactive materials. The inspector also verified that radiation areas, in particular those areas expected to exhibit radiation levels in excess of 100 mR/hr, were posted and controlled as High Radiation Areas and locked, if appropriate.
- The transfer of a high integrity container of spent resin from a transfer shield to a transportation cask at the Lake Davies area was observed on November 28, 2000. The inspector reviewed the adequacy of radiological controls, including High Radiation Area Access controls. The inspector reviewed conformance with radiation work permit requirements and procedures for loading, observed radiological briefing activities, and reviewed radiological surveys.

The inspector reviewed the following issue reports to verify proper implementation of the problem identification and resolution program:

- Issue Report IR3-035-685
- Issue Report IR3-004-446/447
- Issue Report IR3-056-678
- Issue Report IR3-041-419

#### b. Findings

No findings of significance were identified.

### 2OS2 ALARA Planning and Controls

#### a. Inspection Scope

The inspector selectively reviewed the adequacy and the effectiveness of the licensee's program to reduce occupational radiation exposure to as low as is reasonably achievable (ALARA). The review was against criteria contained in 10 CFR 20 and applicable licensee procedures. The following matters were reviewed:

- The current status of integrated work planning for the upcoming March 2001 Unit 2 outage was reviewed. The inspector reviewed the status of planned work, the status of completion of ALARA planning efforts, the status of open ALARA planning for tasks with projected exposure greater than 5 person-rem, principal exposure reduction efforts to be implemented, and the radiological risk classification efforts of selected planned activities.
- Licensee assessments of previous outage (March 2000, Unit 1) radiological work activities were reviewed, including the implementation of lessons learned for ten radiation work permits (five licensee defined high risk, five licensee defined medium risk) planned for the March 2001 Unit 2 outage.
- Issue Report IR3-052-609 was reviewed to verify implementation of the problem identification and resolution program.
- The implementation of the licensee's program to minimize the occupational exposure of declared pregnant workers was reviewed to evaluate licensee performance in this area.

The following documents were reviewed:

- Summary of 2001 Refueling Outage Planning, dated November 29, 2000.
- 2001 Outage Updated, dated November 17, 2000.
- Backlog Report, dated November 28, 2000.
- Procedure RP1-102, Rev. 6, Control of Radiation Protection Risk Significant Work.
- Procedure NO-1-117, Rev. 5, Integrated Risk Management.
- Procedure OM-1-100, Rev. 6, Managing Outages.
- Integrated Planning and Risk Management Section, 2000 RFO Self-Assessment, dated May 24, 2000.
- Third Quarter ALARA Self-Assessment.

b. Findings

No findings of significance were identified.

2SO3 Radiation Monitoring Instrumentation

a. Inspection Scope

The inspector selectively reviewed elements of the radiation monitoring instrumentation calibration program to evaluate the adequacy and effectiveness of the program. The review of this area was against criteria contained in 10 CFR 20, applicable licensee instrument calibration procedures, and applicable industry standards.

The following activities were reviewed:

- The use, calibration, and source checking of radiation survey instrumentation used by radiation safety personnel to make radiological measurements on November 28, 2000, during transfer of a high integrity container.
- On November 30, 2000, the re-validation of standardization of a shielded source calibration assembly (Shepard Model 89 Calibration Assembly) used for calibration of radiation survey instruments was reviewed to verify that the source was calibrated consistent with established calibration procedures and that appropriate standards, traceable to the National Institute of Standards Technology (NIST), were used.

The following issue reports (IRs) were reviewed to verify proper implementation of the problem identification and resolution program:

- Issue Report IR3-035-425
- Issue Report IR3-008-308
- Issue Report IR3-056-308
- Issue Report IR3-049-466
- Issue Report IR3-051-063
- Issue Report IR3-044-238
- Issue Report IR3-049-481
- Issue Report IR3-051-863

The following documents were reviewed:

- Procedure ITEC -619, Rev. 1, Certification of the J.L. Shepard Calibrator Model 89.
- Procedure ITEC-617, Rev. 0, Calibration of Eberline PRM-4/4A Survey Meter and AC-3 Detector.
- Procedure ITEC -613, Rev. 0, Calibration of Eberline/Automess 611B (Analog) Teletector.
- Procedure ITEC-614, Rev. 0, Calibration of Eberline RM-14 Radiation Monitor and GM Detector.

- Procedure ITEC -618, Calibration of Eberline Ion Chamber Models R0-2 and RO-2a.
- Procedure ITEC -620, Rev 2, Calibration of Eberline Scintillation Alpha Counter Model SAC-4.
- Procedure RP-2-103, Rev. 0, Sealed Source Control Program.
- Procedure ITEC -636, Rev 0, Calibration of the NMC DS33/PCC 11T Proportional Counting System.
- Procedure RSP 3-690, Rev. 0, Generation of Control Charts for Counter Scaler Systems.
- NIST Reports of Calibration, dated August 22, 1997, and August 29, 2000.

b. Findings

No findings of significance were identified.

**4 OTHER ACTIVITIES**

40A1 Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed performance indicator (PI) data for the below listed cornerstone to verify individual PI accuracy and completeness. This inspection examined data and plant records from 1999 through the third quarter of 2000, including review of PI Data Summary Reports and chemistry sample records.

- Reactor Coolant System Activity

b. Findings

No findings of significance were identified.

40A3 Event Follow-up

Inspector review of Licensee Event Report 05000317&318/2000-003-00 is documented in Section 40A7 of this report.

40A6 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on January 17, 2000. The licensee acknowledged the findings presented.

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



4OA7 Licensee Identified Violations

- .1 (Closed) Licensee Event Report (LER) 05000317&318/2000-003-00: Incomplete channel calibration procedure leads to missed surveillance. The licensee identified that the surveillance test procedure which tests the power-operated relief valve (PORV) actuation circuitry did not perform a complete channel calibration, as required by Technical Specification (TS) Surveillance Requirement (SR) 3.4.12.6. Although the TS definition requires a channel calibration of the entire channel, including the sensor, the licensee found they had not been including the resistance temperature detector (RTD) sensors. The RTDs measure reactor coolant system (RCS) cold leg temperatures. When RCS low temperature overpressure protection (LTOP) is required in Modes 3, 4, 5, and 6, the PORV actuation circuitry utilizes the RTD signals to calculate the PORV lift pressure setpoint. The RTDs had not been included in the PORV actuation circuitry channel calibration since 1991. The licensee determined that in 1991 the RTDs were replaced with a new make and model and a new Surveillance Test Procedure (STP) was created. As corrective action, the licensee corrected the Unit 1 STP and performed the procedure during the 2000 Unit 1 refueling outage. The Unit 1 RTDs were all found to be within calibration. The licensee plans to change the Unit 2 STP and perform the calibrations prior to the next planned entry into a low temperature over-pressure protection (LTOP) condition.

The failure to perform a complete PORV actuation circuit channel calibration was determined to have more than minor significance because of the credible impact on safety in that the purpose of the periodic calibration is to verify PORV operability. This issue was determined to be of very low significance (Green) by the Significance Determination Process because the Unit 1 RTDs were found to be within calibration and therefore operable. For Unit 2, previous calibration results demonstrate that the RTDs are generally not susceptible to drift. Further, scheduled testing will verify Unit 2 RTDs are operable before the circuit is required to be in service and operable for LTOP protection.

The failure to perform a complete channel calibration of the PORV actuation circuitry per TS SR 3.4.12.6 is a violation. The licensee incorporated this issue into the corrective action program under Issue Report IR3-016-892. This licensee identified violation is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A.1 of the Enforcement Policy, issued May 1, 2000, (65 FR 25368). If you contest this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Resident Inspector at the Calvert Cliffs Nuclear Power Plant. **(NCV 05000317 & 05000318/2000-011-01)**

PARTIAL LIST OF PERSONS CONTACTED

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ITEMS OPENED AND CLOSEDOpened and Closed

05000317&318/2000-011-001	NCV	The failure to perform a complete channel calibration of the PORV actuation circuitry per TS SR 3.4.12.6. (4OA7)
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Closed

05000317&318/2000-003-00	LER	Failure to Perform Surveillances of PORV LTOP Circuitry RTDs (4OA7)
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LIST OF ACRONYMS USED

ALARA	As Low As is Reasonably Achievable
CCNPPI	Calvert Cliffs Nuclear Power Plant, Inc.
CFR	Code of Federal Regulations
IR	Issue Report
LER	Licensee Event Report
LTOP	Low Temperature Overpressure Protection
MFRV	Main Feed Regulating Valve
MO	Maintenance Order
NCV	Non-Cited Violation
NIST	National Institute of Standards Technology
NRC	Nuclear Regulatory Commission
OAP	Operations Administrative Policy
PI	Performance Indicator
PORV	Power Operated Relief Valve
RCS	Reactor Coolant System
RTD	Resistance Temperature Detector
SDP	Significance Determination Process
SR	Surveillance Requirement
SSC	Structure, System and Component
STP	Surveillance Test Procedure
TS	Technical Specification

## ATTACHMENT 1

### NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) 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 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:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>● Initiating Events</li><li>● Mitigating Systems</li><li>● Barrier Integrity</li><li>● Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>● Occupational</li><li>● Public</li></ul>	<ul style="list-style-type: none"><li>● Physical Protection</li></ul>

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 little effect on safety. WHITE findings indicate issues with some increased importance to safety, which may require additional NRC inspections. YELLOW findings are more serious issues with an even higher potential to affect safety and would require the NRC to take additional actions. RED findings represent an unacceptable loss of safety margin and would result in the NRC taking significant actions that could include ordering the plant shut down.

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 incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. The color for an indicator corresponds to levels of performance that may result in increased NRC oversight (WHITE), performance that results in definitive, required action by the NRC (YELLOW), and performance that is unacceptable but still provides adequate protection to public health and safety (RED). GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections.

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. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, as described in the matrix. 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.