December 7, 2001

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

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT - NRC INSPECTION REPORT 50-317/01-11, 50-318/01-11

Dear Mr. Cruse:

On November 10, 2001, 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 December 7, 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.

Since September 11, 2001, Calvert Cliffs has assumed a heightened level of security based on a series of threat advisories issued by the NRC. Although the NRC is not aware of any specific threat against nuclear facilities, the heightened level of security was recommended for all nuclear power plants and is being maintained due to the uncertainty about the possibility of additional terrorist attacks. The steps recommended by the NRC include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with local law enforcement and military authorities, and limited access of personnel and vehicles to the site.

The NRC continues to interact with the Intelligence Community and to communicate information to Constellation Nuclear. In addition, the NRC has monitored maintenance and other activities which could relate to the site's security posture.

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/reading-rm.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Docket Nos. 50-317
50-318
License Nos. DPR-53
DPR-69

Enclosure: Inspection Report 50-317/01-11 and 50-318/01-11

Attachment 1 - Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos: 50-317, 50-318

License Nos.: DPR-53, DPR-69

Report Nos: 50-317/01-11;
50-318/01-11

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: September 30, 2001 - November 10, 2001

Inspectors: David Beaulieu, Senior Resident Inspector
Leonard Cline, Resident Inspector
Ron Nimitz, Health Physicist

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

SUMMARY OF FINDINGS

IR 05000317-01-011, 05000318-01-011, on 09/30-11/10/2001, Calvert Cliffs Nuclear Plant, Inc.; Calvert Cliffs Nuclear Power Plant, Units 1 & 2. Resident Inspector Report.

The inspection was conducted by resident inspectors and a regional senior health physicist. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 “Significance Determination Process” (SDP). 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

No findings of significance were identified.

B. Licensee Identified Violations

None

Report Details

Unit 1 operated at or near 100 percent power for the entire inspection period. Unit 2 operated at or near 100 percent power for the entire inspection period, except for a three-day period beginning October 25, 2001, when the unit was shut down to repair a closed cooling water system leak to the 22A reactor coolant pump.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity.

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 partial system walkdowns on the following systems:

- Unit 2 service water system train A was inspected on October 29, 2001, while train B was out of service for planned maintenance.
- Unit 1 service water system train B was inspected on October 31, 2001, while train A was out of service to clean the 11A service water heat exchanger.

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

- Operating Instruction 15-1 & 15-2, “Service Water System.”

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:

- Units 1 & 2 Intake Structure
- Unit 1 Turbine Driven AFW Pump Room
- Unit 2 Turbine Driven AFW Pump Room
- Unit 1 27 foot Switchgear Room

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:

- 480 Volt Motor Control Center - The system turned (a)(1) because of a problem with the indicating lights. The indicating lights can fail and cause a short in the control circuit that results in the control circuit fuse blowing. This prevents operator action to control the affected component remotely. The corrective action is to replace all the indicating lights in the 480 Volt motor control centers. About 90 percent of the lamps have been replaced.

- The Reactor Coolant Pumps turned (a)(1) due to multiple failures of the vibration monitoring system due to both probe failures and indication failures. For the probe failures, the licensee is considering maintenance procedure enhancements and periodic testing of vibration probe components. For the indication failures, the licensee is considering a vendor assessment of the modules and racks.

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 Report, November 2001

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

For the selected maintenance orders (MO) listed below, the inspectors verified: (1) risk assessments were performed in accordance with Calvert Cliffs procedure NO-1-117, Integrated Risk Management; (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.

- MO 1200102370 12 Switchgear Ventilation Air Conditioning System Vent Flow Isolated on October 12, 2001.
- MO 1200004254 12 Switchgear Room Air Conditioning Compressor Removed from Service on October 10, 2001.

b. Findings

No findings of significance were identified.

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 evaluations were reviewed:

- Operability Determination 01-019, Small leak on the Unit 2 salt water system from a union in the branch connection to 2RV5206, the 21 component cooling heat exchanger thermal relief valve.
- Operability Determination 01-016, Inaccuracies in the loss of main feedwater accident analysis.

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 orders were reviewed:

- MO 1200104115 Adjust the #11 switchgear ventilation and air conditioning system receiver pressure regulator (1HVHVAC/A-267) set point in accordance with Temporary Alteration No. 1-01-0050. The retest involved a test run of the system in accordance with procedure OI-22H, Switchgear Ventilation and Air Conditioning.
- MO 120010103199 The 11A service water heat exchanger was retested following a cleaning by returning the heat exchanger to service in accordance with procedure OI-29-1, "Saltwater System," and ensuring no leakage from disturbed joints.
- MO 0200100873 The 11 and 12 control room heating ventilation and air conditioning chiller was retested after cleaning the coils by running the chiller to check for leaks and to verify appropriate temperatures and pressures.

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 procedure 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:

- PE 1-32-2-O-M Operations Performance Evaluation for the No. 11 and No. 12 Switchgear Ventilation Systems.
- STP M-212E-2 Reactor Protective System Matrix Functional Test.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas

a. Inspection Scope

The inspector toured selected areas within the radiological controlled area of Units 1 and 2. The inspector reviewed access controls to locked High Radiation Areas, conducted independent radiation surveys to verify boundary controls of such areas, reviewed radioactive material and contamination controls, and selectively observed worker performance.

Issue Report IR3 -072-016 was selectively reviewed to verify implementation of the problem identification and resolution program.

The review of the above matters was against requirements contained in 10 CFR 20, Technical Specifications, and applicable station procedures.

b. Findings

No findings of significance were identified.

2OS3 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 inspector selected instruments for review that were identified in use within the radiological controlled area and used to support radiological work activities (e.g., Unit 1 containment entry on August 25, 2001 and chemical and volume control system work conducted July 13, 2001). The inspector reviewed licensee actions to evaluate previous radiological survey data when portable survey instruments failed source checks.

The calibration records, checking, and operation, as appropriate, of the following instrumentation were reviewed:

Portable:

- PIC 6B (Sn 1359)
- RM-14 (Sn.7451, 976)
- NRD Model 12 (Sn. 83459)
- Air samplers (Sn. 60392, 60322, 60259, 60258))
- RO2A (Sn 3845, 4756)

- E-600 (Sn 664)
- Sac-4 alpha (Sn 578)
- EC-4 (area monitor) (Sn. 11890, 11888, 813,811, 716)
- AMS-4 (Sn. 193, 196)
- Low volume air sampler (Sn. 5278, 689)
- Personnel electronic dosimetry PD-4/PDE-4 (Sn RE1268, RE1191, RT 1483, RT1321)
- Electronic dosimetry (Sn. 7606, 6993, 7362, 7564, 7464, 7606, 6993, 7564, 7464, 7363)
- RO-7 (Sn. 136, 242)
- RO-20 (Sn. 561, 560)
- E-520 (Sn. 820)

Whole body counter
- Sn. 96-8206

Lab Instruments
- NMC-14 (Sn. 84-2660-14)
- MS-2/1 (Sn.138)

In addition, during station tours, the inspector selectively verified that staged and in-use portable radiation monitoring instrumentation were calibrated and source checked, as appropriate. The inspector also reviewed the adequacy of radiation, and other calibration standards, used for the calibration activities.

The inspector also reviewed the calibration, functional testing, and checking of various station process and area monitoring systems designed to alert the licensee to changes in radiological conditions. The following monitors were reviewed, including most recent records of calibration, functional testing and checking.

Process Instrumentation
- Units 1 & 2 High Range Containment Monitors
- Units 1 & 2 Containment Area Monitors
- Unit 2 Containment Atmosphere
- New Fuel Storage Area monitor
- Drum Storage Area monitor
- Waste Gas Equipment Room Area monitor
- Auxiliary Building Spent fuel monitor
- Chemistry Lab Area monitor
- Steam Generator blow down monitor

The inspector also conducted a review of the licensee's maintenance of self-contained breathing apparatus (SCBA) and verified they were staged and ready for use. The inspector inspected four SCBA units and their associated air cylinders (Control Room units 113 and 383; Operations Support Center units 150 and 452). The review included review of training records to verify that control room personnel (18 individual from Section 1 and 16 individuals from Section 2) and shift support emergency response personnel were trained and qualified in operation of SCBA devices including changing of air cylinders. Included in the review was verification of quarterly functional testing of devices including flow testing of regulators and conduct of required hydrostatic testing of cylinders.

The inspector reviewed selected items contained within the licensee's corrective action program and reviewed selected audits and self assessments. The following documents were reviewed:

- Issue Reports (IR3-070-032, IR3-041-726, IR3-071-905, IR3-045-984)
- National Institute of Standards Technology Audit -100501
- Internal Dosimetry and Respiratory Protection Self-assessment, March 30, 2001

The review in the above areas was against applicable licensee procedures, Technical Specifications, and industry standards.

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 cornerstones to verify individual PI accuracy and completeness. This inspection examined data and plant records through the third quarter of 2001, including review of PI Data Summary Reports, Licensee Event Reports, and operator narrative logs. In addition, the inspectors reviewed corrective action program records for occurrences involving high radiation areas, very high radiation areas, and unplanned personnel exposures since the last inspection in this area.

Mitigating Systems Cornerstone
- Safety System Functional Failures
- Reactor Coolant System Leakage

Radiation Safety Cornerstone
- Occupational Exposure Control Effectiveness

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

The inspector presented the inspection findings to members of licensee management on December 7, 2001. The license acknowledged the findings.

ATTACHMENT 1

a. Key Points of Contact

C. Cruse, Vice President
P. Katz, Plant General Manager
M. Geckle, Director, Nuclear Regulatory Matters
D. Holm, Superintendent, Nuclear Operations
M. Korsnick, Superintendent, Work Management
M. Navin, Superintendent, Technical Support
K. Nietmann, Manager, Nuclear Performance Assessment Department
T. Pritchett, Manager, Nuclear Engineering Department
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R. Szoch, General Supervisor, Plant Engineering
L. Weckbaugh, Manager, Nuclear Support Services
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M. Haney, Radiation Protection Supervisor
T. Kirkham, Senior Plant Health Physicist
S. Sanders, General Supervisor-Radiation Safety
L. Smialek, Radiation Protection Manager
J. York, Assistant General Radiation Supervisor

b. List of Items Opened, Closed, and Discussed

None

c. List of Acronyms

CCNPPI	Calvert Cliffs Nuclear Power Plant, Inc.
CFR	Code of Federal Regulations
IR	Inspection Report
MO	Maintenance Order
NRC	Nuclear Regulatory Commission
PI	Performance Indicator
SDP	Significance Determination Process
SSC	Structure, System, or Component