

November 9, 2005

Mr. George Vanderheyden  
Vice President - Calvert Cliffs Nuclear Power Plant  
Constellation Generation Group, LLC  
1650 Calvert Cliffs Parkway  
Lusby, Maryland 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER STATION - NRC EVALUATED  
EMERGENCY PREPAREDNESS EXERCISE - INSPECTION REPORT NOS.  
05000317/2005010 AND 05000318/2005010

Dear Mr. Vanderheyden:

On September 30, 2005, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Calvert Cliffs Nuclear Power Station. The enclosed inspection report documents the inspection results, which were discussed on September 30, 2005, with yourself 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 emergency plan procedures, previous drill reports, observed the exercise activities, and interviewed selected emergency preparedness personnel from your staff.

Based on the results of this inspection, no findings of significance were identified.

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

Sincerely,

*/RA/*

Raymond K. Lorson, Chief  
Plant Support Branch 1  
Division of Reactor Safety

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

Mr. George Vanderheyden

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Enclosure: Inspection Report Nos. 05000317/2005010 and 05000318/2005010  
w/Attachment: Supplemental Information

cc w/encl:

M. J. Wallace, President, Constellation Generation

J. M. Heffley, Senior Vice President and Chief Nuclear Officer

President, Calvert County Board of Commissioners

C. W. Fleming, Senior Counsel, Constellation Generation Group, LLC

Director, Nuclear Regulatory Matters

R. McLean, Manager, Nuclear Programs

K. Burger, Esquire, Maryland People's Counsel

State of Maryland (2)

D. Hammons, RAC Chair, FEMA, Region III

Mr. George Vanderheyden

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U. S. NUCLEAR REGULATORY COMMISSION REGION I  
REGION I

Docket Nos: 50-317, 50-318

License Nos: DPR-53, DPR-69

Report No: 05000317/2005010, 05000318/2005010

Licensee: Constellation Generation Group, LLC

Facility: Calvert Cliffs Nuclear Power Station

Location: Lusby, MD

Dates: September 26 - 30, 2005

Inspectors: D. Silk, Senior Emergency Preparedness Inspector, DRS (Lead)  
N. McNamara, Emergency Preparedness Inspector, DRS  
S. Barr, Senior Operations Engineer, DRS  
F. Arner, Senior Reactor Engineer, DRS

Approved by: Raymond K. Lorson, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000317/2005-010, 05000318/2005-010; 09/26/2005-09/30/2005; Calvert Cliffs Nuclear Power Station; Emergency Preparedness Exercise; Emergency Preparedness Performance Indicators.

This inspection was conducted by three region-based inspectors and an emergency preparedness specialist from NSIR. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated August 2000.

### **A. NRC-Identified Findings**

Cornerstone: Emergency Preparedness

None

### **B. Licensee-Identified Findings**

None.

## Report Details

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

#### 1EP1 Exercise Evaluation (71114.01 - 1 Sample)

##### a. Inspection Scope

Prior to the exercise, an in-office review was conducted of the exercise objectives and scenario submitted to the NRC to determine if the exercise would test major elements of the emergency plan as required by 10 CFR 50.47(b)(14). This inspection activity represents the completion of one sample on a biennial cycle.

The onsite inspection consisted of the following review and assessment:

- The adequacy of Constellation's performance in the biennial full-participation exercise regarding the implementation of the risk-significant planning standards (RSPS) in 10 CFR 50.47 (b) (4), (5), (9) & (10) which are emergency classification, offsite notification, radiological assessment, and protective action recommendations, respectively.
- The overall adequacy of Constellation's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Emergency Plan commitments. The facilities assessed were the control room simulator, the Technical Support Center (TSC), the Operations Support Center (OSC), and the Emergency Operations Facility (EOF).
- Other performance areas, such as, the emergency response organization's (ERO) recognition of abnormal plant conditions, command and control, intra- and inter-facility communications, prioritization of mitigation activities, utilization of repair and field monitoring teams, interface with offsite agencies, and the overall implementation of the emergency plan and its implementing procedures.
- Past performance issues from NRC inspection reports and Constellation's drill reports to determine effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10 CFR 50.47(b)(14).
- The post-exercise critique to evaluate Constellation's self-assessment of its ERO performance during the exercise and to ensure compliance with 10 CFR 50 Appendix E.IV.F.2.g.

The inspectors reviewed the documents listed in Attachment 1 to this report.

Enclosure

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator (PI) Verification (71151: 3 Samples)

a. Inspection Scope

The inspectors reviewed data for the EP PIs which are: (1) Drill and Exercise Performance (DEP); (2) ERO Drill Participation; and (3) Alert and Notification System (ANS) Reliability. The inspector reviewed supporting documentation from drills and ANS testing in the third and fourth quarters of 2004 and the first three quarters of 2005 to verify the accuracy of the reported data. The review of these performance indicators was conducted in accordance with NRC Inspection Procedure 71151. The acceptance criteria used for the review were 10 CFR 50.9 and NEI 99-02, Revision 2, "Regulatory Assessment Performance Indicator Guidelines." This inspection activity represents the completion of three samples on an annual cycle.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152: 1 Sample)

a. Inspection Scope

The inspectors reviewed Constellation's critique findings as documented in drill and exercise reports from 2004 and 2005. These reviews were conducted to determine if significant performance trends exist and to determine the effectiveness of licensee corrective actions based upon ERO performance during this exercise. The inspectors verified that issues identified during this exercise were entered into Constellation's corrective action program and are listed in the attachment to this report. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 01. 10 CFR 50.47(b)(14); and Appendix E IV.F.2.g were used as reference criteria.

b. Findings and Observations

No findings of significance were identified. The inspectors noted that the licensee was self-critical at identifying issues during this exercise.

The inspector reviewed root cause analysis report (RCA) IR200400503 that was performed in response to an adverse trend involving recommendations for evacuation of unnecessary zones during exercises. Constellation had previously implemented corrective actions for each of the individual examples. The inspector determined that Constellation's assessment of causes, extent of condition, and corrective actions as

described in the RCA were reasonable. However, during the September 27, 2005 exercise, licensee players made an over-conservative PAR (which was identified by Constellation during its critique). The inspector noted that while the Drill and Exercise Performance Indicator (which evaluates licensee performance in this area) remained in the "Green" Band, this recent issue indicated that continued focus in this area appeared appropriate and noted that Constellation initiated an apparent cause evaluation (IRE-008-517) to review the issue.

#### 40A6 Meetings, including Exit

The inspectors presented the inspection results to Mr. Vanderheyden, Site Vice President, and other members of the licensee's staff at the conclusion of the inspection via tele-conference on September 30, 2005. The licensee had no objections to the NRC observations. No proprietary information was provided to the inspectors during this inspection.



**ATTACHMENT**

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

E. Roach, Emergency Preparedness Director  
G. Rudiger, Emergency Planning Staff

**LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened/Closed/ Discussed

None

**LIST OF DOCUMENTS REVIEWED**

**Section 1EP1: Exercise Evaluation**

Calvert Cliffs Emergency Plan  
Emergency Plan Implementing Procedures

**Section 4OA2: Identification and Resolution of Problems**

September 9, 2002, Emergency Response Drill  
June 24, 2003, Emergency Response Drill  
September 9, 2003, Emergency Response Drill  
October 21, 2003, Emergency Response Drill  
June 15, 2004, Emergency Response Drill  
July 27, 2004, Emergency Response Drill  
October 5, 2004, Emergency Response Drill  
October 19, 2004, Emergency Response Drill  
January 11, 2005, Emergency Response Drill  
August 2, 2005, Emergency Response Plan Implementation Procedure Drill  
Category 1 Root Causal Analysis IR200400503  
IRE-008-431  
IRE-008-433  
IRE-008-440  
IRE-008-441  
IRE-008-442  
IRE-008-443  
IRE-008-444

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IRE-008-482  
IRE-008-497  
IRE-008-500  
IRE-008-503  
IRE-008-517  
IRE-008-534

#### LIST OF ACRONYMS

ANS	Alert and Notification System
AR	Action Report
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
ERO	Emergency Response Organization
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
IR	Issue Report
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
RCA	Root Cause Analysis
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center