



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

December 7, 2009

James A. Spina, Vice President  
Calvert Cliffs Nuclear Power Plant, Inc.  
Constellation Generation Group, LLC  
1650 Calvert Cliffs Parkway  
Lusby, Maryland 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT – NRC EVALUATED  
EMERGENCY PREPAREDNESS EXERCISE – INSPECTION REPORT NOS.  
05000317/2009502 AND 05000318/2009502

Dear Mr. Spina:

On October 28, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the October 20, 2009, evaluated emergency preparedness exercise at your Calvert Cliffs Nuclear Power Plant. The enclosed inspection report documents the inspection results, which were discussed on October 23, 2009, with you and other members of your staff. A final exit meeting was conducted via telephone on October 28, 2009, with Mr. James Jones, Fleet Emergency Preparedness Director, following the Federal Emergency Management Agency (FEMA) public meeting.

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.

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 the 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,

James A. Trapp, Chief  
Plant Support Branch 1  
Division of Reactor Safety

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

Enclosure: NRC Inspection Report Nos. 05000317/2009502 and 05000318/2009502

cc w/Encl: Distribution via ListServ

December 7, 2009

James A. Spina, Vice President  
Calvert Cliffs Nuclear Power Plant, Inc.  
Constellation Generation Group, LLC  
1650 Calvert Cliffs Parkway  
Lusby, Maryland 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT – NRC EVALUATED  
EMERGENCY PREPAREDNESS EXERCISE – INSPECTION REPORT NOS.  
05000317/2009502 and 05000318/2009502

Dear Mr. Spina:

On October 23, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the October 20, 2009, evaluated emergency preparedness exercise at your Calvert Cliffs Nuclear Power Plant. The enclosed inspection report documents the inspection results, which were discussed on October 23, 2009, with you and other members of your staff. A final exit meeting was conducted via telephone on October 28, 2009, with J. Jones, Fleet Emergency Preparedness Director, following the Federal Emergency Management Agency (FEMA) public meeting.

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.

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 the 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/

James A. Trapp, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket No. 50-317, 50-318  
License No. DPR-53, DPR-69

Enclosure: NRC Inspection Report 05000317/2009502 and 05000318/2009502

cc w/encl: Distribution via ListServ

SUNSI Review Complete: JMT (Reviewer's Initials)

ADAMS ACC #ML093410563

DOCUMENT NAME: G:\DRS\Plant Support Branch 1\BARR\EP Ex09 CC\CC EP EX 2009 Report.doc

After declaring this document "An Official Agency Record" it will be released to the Public.

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure

"N" = No copy

OFFICE	RI/DRS	RI/DRP	RI/DRS				
NAME	STBarr/STB	GTDentel/GTD	JTrapp/JMT				
DATE	12/07/09	12/07/09	12/07/09				

OFFICIAL RECORD COPY

J. Spina

2

Distribution w/encl: (via E-mail)

S. Collins, RA (**R1ORAMail Resource**)  
M. Dapas, DRA (**R1ORAMail Resource**)  
D. Lew, DRP (**R1DRPMail Resource**)  
J. Clifford, DRP (**R1DRPMail Resource**)  
L. Trocine, RI OEDO  
G. Dentel, DRP  
N. Perry, DRP  
J. Hawkins, DRP  
S. Sloan, DRP  
S. Kennedy, DRP, SRI  
M. Davis, DRP, RI  
C. Newgent, DRP, Resident OA  
RidsNrrPMCalvertCliffs Resource  
RidsNrrDorlLp11-1 Resource  
ROPreportsResource@nrc.gov  
R. Kahler, NSIR/EPD  
S. LaVie, NSIR/EPD  
D. Roberts, DRS (**R1DRSMail Resource**)  
P. Wilson, DRS (**R1DRSMail Resource**)  
J. Trapp, DRS  
S. Barr, DRS

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 05000317, 05000318

License No.: DPR-53, DPR-69

Report No.: 05000317/2009502, 05000318/2009502

Licensee: Constellation Nuclear Generation

Facility: Calvert Cliffs Nuclear Power Plant

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

Dates: October 19-28, 2009

Inspectors: S. Barr, Senior Emergency Preparedness Inspector, DRS, Region I (Lead)  
M. Davis, Acting Senior Resident Inspector, DRP, Region I  
D. Johnson, Acting Resident Inspector, DRP, Region I  
R. Rolph, Health Physicist, DRS, Region I  
C. Crisden, Emergency Preparedness Inspector, DRS, Region I

Approved By: James A. Trapp, Chief  
Plant Support Branch 1  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000317/2009502, 05000318/2009502; 10/19/2009 – 10/28/2009; Calvert Cliffs Nuclear Power Plant; Exercise Evaluation; Emergency Action Level and Emergency Plan Changes; Emergency Preparedness Performance Indicators.

This was an announced inspection conducted by three region-based inspectors, and two resident inspectors. 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 4, dated December 2006.

### **Cornerstone: Emergency Preparedness**

#### A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

#### 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 October 20, 2009, emergency preparedness exercise, the NRC inspectors conducted an in-office review of the exercise objectives and scenario, which Constellation had submitted to the NRC, to determine if the exercise would test major elements of the Calvert Cliffs Emergency Plan as required by 10 CFR 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

The exercise evaluation 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) described in 10 CFR 50.47(b)(4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; and protective action recommendations, respectively.
- The overall adequacy of Constellation's Calvert Cliffs 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, Operations Support Center (OSC), Technical Support Center (TSC), Emergency Operations Facility (EOF), and Joint Information Center (JIC).
- A review of other performance areas, such as: the Calvert Cliffs emergency response organization's (ERO's) recognition of abnormal plant conditions; command and control; intra- and inter-facility communications; prioritization of mitigating activities; utilization of repair and field monitoring teams; interface with offsite agencies; staffing and procedure adequacy; and the overall implementation of the emergency plan and its implementing procedures.
- A review of past performance issues from the last NRC Calvert Cliffs exercise inspection report and Constellation's Calvert Cliffs EP drill reports, to determine the effectiveness of licensee corrective actions as demonstrated during the October 20, 2009, exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- The licensee's post-exercise critiques, to evaluate Constellation's self-assessment of its ERO performance during the October 20, 2009, exercise and to ensure compliance with 10 CFR 50, Appendix E, Section IV.F.2.g.

- A review of the Federal Emergency Management Agency (FEMA) observations of the involved offsite response organizations' performance during the exercise, including any FEMA deviations or areas requiring corrective action. The inspectors attended the FEMA public exit meeting conducted on October 27, 2009, at the Joint Information Center.

The inspectors reviewed the documents listed in the attachment to this report.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04 – 1 Sample)

a. Inspection Scope

Since the last NRC inspection of this program area, in November 2008, Constellation implemented various revisions of the different sections of the Constellation Calvert Cliffs Emergency Plan. Constellation had determined that, in accordance with 10 CFR 50.54(q), any change made to the Plan, and its lower-tier implementing procedures, had not resulted in any decrease in effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspectors reviewed all EAL changes that had been made since November 2008, and conducted a sampling review of other Emergency Plan changes, including the changes to lower-tier emergency plan implementing procedures, to evaluate for any potential decreases in effectiveness of the Emergency Plan. However, this review was not documented in an NRC Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

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 Calvert Cliffs EP PIs, which are: (1) Drill and Exercise Performance (DEP); (2) Emergency Response Organization (ERO) Drill Participation; and, (3) Alert and Notification System (ANS) Reliability. The last NRC EP inspection at Calvert Cliffs was conducted in the fourth quarter of 2008, so the inspectors reviewed supporting documentation from EP drills, training records, and equipment tests from the fourth calendar quarter of 2008 through the third quarter of 2009, to verify the accuracy of the reported PI data. The review of these PIs was conducted in accordance

with NRC Inspection Procedure 71151, using the acceptance criteria documented in NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 6.

Additionally, the inspector performed NRC Temporary Instruction (TI) 2515/175, ensured the completeness of the licensee's completed Attachment 1 from the TI, and forwarded that data to NRC Headquarters.

This inspection activity represented the completion of three samples on an annual cycle.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On October 23, 2009, the inspectors presented the results of this inspection to Mr. J. Spina, Site Vice President, and other members of the Constellation staff. A final exit meeting was conducted via telephone on October 28, 2009, with J. Jones, Fleet Emergency Preparedness Director, following the Federal Emergency Management Agency (FEMA) public meeting. No proprietary information was provided to the inspectors during this inspection.

**ATTACHMENT**

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

**Licensee Personnel**

J. Spina, Site Vice President  
L. Larragoite, Fleet Manager of Emergency Preparedness  
J. Jones, Fleet Director of Emergency Preparedness

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

None

**LIST OF DOCUMENTS REVIEWED**

**Section 1EP1: Exercise Evaluation**

Calvert Cliffs Nuclear Power Plant Emergency Response Plan (Revision 40)  
Calvert Cliffs Emergency Plan Implementing Procedures  
Calvert Cliffs October 20, 2009, Emergency Exercise Scenario Package  
Calvert Cliffs Emergency Preparedness Drill Reports, January 2008 – September 2009  
Condition Reports generated as a result of the October 20, 2009, exercise (As documented in Calvert Cliffs Emergency Preparedness Drill Report 10-28-09 (GCR))

**Section 1EP4: Emergency Action Level and Emergency Plan Changes**

Calvert Cliffs Nuclear Power Plant Emergency Response Plan (Revision 40)  
CNG-CM-1.01-1003, Design Engineering and Configuration Control (Revision 00100)  
CNG-FES-007, Preparation of Design Inputs and Change Impact Screening (Revision 00000)  
CNG-NL-1.01-1011, 10CFR50.59/10CFR72.48 Applicability Determinations, Screenings, and Evaluations (Revision 00001)  
EP-1-100, Preparation and Conduct of the Emergency Plan (Revision 00300)  
EP-1-301, Administration of Revisions and Changes to the Emergency Response Plan Implementation Procedures and the Emergency Response Plan (Revision 00200)  
Emergency Response Plan Screenings 08-31 through 08-34, and 09-01 through 09-34  
Emergency Response Plan Effectiveness Reduction Evaluations 09-01 through 09-05

**Section 40A1: Performance Indicator Verification**

CGN-NL-1.01-1010, NRC and INPO Performance Indicator Reporting (Revision 0100)

RM-1-323, Preparation of Emergency Preparedness Cornerstone NRC Performance Indicators (Revision 3)

ERO Drill Participation PI data, October 2008 – September 2009

Alert Notification System PI data, October 2008 – September 2009

DEP PI data, October 2008 – September 2009

**LIST OF ACRONYMS**

ANS	Alert Notification System
CR	Condition Report
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
JIC	Joint Information Center
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center