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

November 4, 2010

EA-10-188

George H. Gellrich, Vice President
Calvert Cliffs Nuclear Power Plant, LLC
Constellation Energy Nuclear Group, LLC
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR GENERATING STATION – NRC INTEGRATED INSPECTION REPORT 050000317/2010004 AND 05000318/2010004 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Gellrich:

On September 30, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Calvert Cliffs Nuclear Power Plant (CCNPP) Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on October 15, 2010, with you 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.

This report documents one NRC-identified finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. However, because the finding is of very low safety significance and because it is entered into your corrective action program (CAP), the NRC is treating this finding as a non-cited violation (NCV) consistent with Section 2.3.2 of the NRC's Enforcement Policy. If you contest any NCV in this report, 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 1; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Calvert Cliffs. If you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I; and the NRC Resident Inspector at CCNPP.

Additionally, the inspectors reviewed Licensee Event Report (LER) 50-318/2010-002, which described the details associated with reactor coolant system (RCS) pressure boundary leakage from a pinhole leak at the socket weld attaching the packing leakoff line to the bonnet of valve 2HVRC-220 (pressurizer spray bypass line). Although this issue constitutes a violation of NRC requirements in that any RCS pressure boundary leakage at power constitutes a violation, the NRC concluded that this issue was not in Constellation's ability to foresee and correct, Constellation's actions did not contribute to the degraded condition, and that actions taken were

reasonable to address this matter. As a result, the NRC did not identify a performance deficiency. A risk evaluation was performed and the issue was determined to be of very low safety significance. Based on these facts, I have been authorized, after consultation with the Director, Office of Enforcement, and the Regional Administrator, to exercise enforcement discretion in accordance with Section 3.5 of the Enforcement Policy and refrain from issuing enforcement for the violation.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, 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 Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

David C. Lew, Director for
Division of Reactor Projects

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

Enclosure: Inspection Report 05000317/2010004 and 05000318/2010004
w/Attachment: Supplemental Information

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reasonable to address this matter. As a result, the NRC did not identify a performance deficiency. A risk evaluation was performed and the issue was determined to be of very low safety significance. Based on these facts, I have been authorized, after consultation with the Director, Office of Enforcement, and the Regional Administrator, to exercise enforcement discretion in accordance with Section 3.5 of the Enforcement Policy and refrain from issuing enforcement for the violation.

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Sincerely,

/RA by James W. Clifford Acting For/

David C. Lew, Director
Division of Reactor Projects

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.:	50-317, 50-318
License Nos.:	DPR-53, DPR-69
Report No.:	05000317/2010004 and 05000318/2010004
Licensee:	Constellation Energy Nuclear Group, LLC
Facility:	Calvert Cliffs Nuclear Power Plant, Units 1 and 2
Location:	Lusby, MD
Dates:	July 1, 2010, through September 30, 2010
Inspectors:	S. Kennedy, Senior Resident Inspector M. Osborn, Resident Inspector S. Barr, Senior Emergency Preparedness Specialist L. Casey, Resident Inspector C. Crisden, Emergency Preparedness Specialist C. Newport, Project Engineer
Approved by:	Glenn T. Dentel, Chief Reactor Projects Branch 1 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000317/2010004, 05000318/2010004; 7/1/10 – 9/30/10; Calvert Cliffs Nuclear Power Plant (CCNPP), Units 1 and 2: Emergency Preparedness

The report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. One Green finding, which was a non-cited violation (NCV), was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspects for the finding were determined using IMC 0310, "Components Within the Cross-Cutting Areas." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. 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

Green. The inspectors identified an NCV of 10 CFR Part 50.47(b)(4) for the failure to implement the emergency classification and action level scheme in a timely manner during an actual event. Specifically, on July 4, 2010, phone communications to St. Mary's County were lost which met the conditions requiring declaration of a Notice of Unusual Event (NOUE). However, Constellation did not declare the NOUE in a timely manner. Five hours after the phone communications were lost, Constellation determined that conditions met the declaration criteria for an NOUE. Prior to classifying the event, the phone lines were restored. The off-site phone lines are part of the site's communications system that provide means for prompt notification of local, State, and Federal officials of events that may require urgent actions. Constellation entered this issue into their corrective action program (CAP) for resolution. Immediate corrective action included establishing a standing order to provide operators guidance in the event of a loss of communications.

The finding is greater than minor because it is associated with the Emergency Preparedness (EP) cornerstone attribute of emergency response organization performance (actual event response) and it adversely affects the cornerstone objective to ensure that Constellation was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors determined that the finding is of very low safety significance in that it was associated with an actual event where the operators failed to declare an NOUE in a timely manner during a complete loss of communications to one off-site agency. This finding has a cross-cutting aspect in the area of human performance, decision making, because Constellation did not make a safety significant decision using a systematic process to declare the NOUE in a timely manner. Specifically, Constellation did not use a systematic process such as a standing order or procedure to provide guidance to operators to address a loss of communications. In addition, Constellation did not adequately implement emergency response organization's (ERO) roles and authorities as designed to obtain interdisciplinary input on safety significance decisions such as event classification (H.1.a of IMC 0310). (Section 1EP5)

Other Findings

None

REPORT DETAILS

Summary of Plant Status

Calvert Cliffs Unit 1 began the inspection period at 100 percent power. On the following dates, operators reduced power to clean condenser waterboxes: July 15, 2010, August 7, 2010, and September 11, 2010. The unit remained at or near 100 percent power for the remainder of the inspection period.

Calvert Cliffs Unit 2 began the inspection period at 100 percent power. On the following dates, operators reduced power to clean condenser waterboxes: July 4, 2010, July 8, 2010, July 26, 2010, July 31, 2010, August 14, 2010, and August 28, 2010. Additionally, on September 17, 2010, operators reduced power to 85 percent to perform main turbine valve testing. Operators returned the unit to 100 percent power on September 18, 2010. The unit remained at or near 100 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – Three Samples)

a. Inspection Scope

The inspectors reviewed the adverse weather preparations and mitigating strategies for adverse weather conditions associated with severe weather on August 4, 2010, August 12, 2010, and September 2, 2010. These reviews included an assessment of EP Procedure EP-1-108, "Severe Weather Preparation," and the Emergency Response Plan Implementation Procedure (ERPIP) 3.0, "Immediate Actions," Attachment 20, "Severe Weather." The inspectors verified that the operator actions specified in the associated procedures maintain readiness of essential equipment and systems to preclude weather induced initiating events. Additionally, prior to and during the adverse weather conditions, the inspectors performed field walkdowns to verify that equipment required for safe plant shutdown remained functional.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial Walkdown (71111.04Q – Three Samples)

a. Inspection Scope

The inspectors conducted partial walkdowns to verify equipment alignment of selected risk significant systems. The inspectors reviewed plant documents to determine the correct system and power alignments, as well as the required positions of critical valves and breakers. The inspectors verified that Constellation had properly identified and

resolved equipment alignment problems that could cause initiating events or potentially affect the availability of associated mitigating systems. The inspectors performed a partial walkdown of the following systems:

- 0C diesel generator (DG) 125 volts direct current (VDC) system during failure of No. 17 battery charger;
- No. 21 component cooling (CC) train during maintenance on No. 22 CC train; and
- 22A service water (SRW) heat exchanger (HX) during maintenance on 22B SRW HX.

b. Findings

No findings were identified.

.2 Complete Walkdown (71111.04S– One Sample)

a. Inspection Scope

The inspectors performed a complete system walkdown of the Unit 2 saltwater system to identify any discrepancies between the existing equipment lineup and the specified lineup. During the walkdown, the inspectors used system drawings and operating instructions to verify proper equipment alignment and the operational status. The inspectors reviewed open work orders (WOs) on the system for any deficiencies that could affect the ability of the system to perform its safety function. Inspectors also reviewed unresolved design issues such as temporary modifications, operator workarounds, and items tracked by plant engineering to assess their collective impact on system operation. Additionally, the inspectors reviewed the condition report (CR) database to verify that equipment alignment problems were being identified and appropriately resolved.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05Q – Five Samples)

Fire Protection Tours

a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that combustibles and ignition sources were controlled in accordance with Constellation's administrative procedures; the fire detection and suppression equipment was available for use; passive fire barriers were maintained in good material condition; and compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with Constellation's fire plan.

- DG 2A, fire area 31, room 422;
- Unit 1 east electrical penetration room, fire area 33, room 429;

- Unit 2 CC pump room, fire area 12, room 201;
- Unit 2 SRW pump room, fire area 40, room 205; and
- Unit 1 emergency core cooling system (ECCS) pump room, fire area 4, room 119.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – Two Samples)

a. Inspection Scope

The inspectors performed a review of selected risk significant plant areas to verify that Constellation's flooding mitigation plans and equipment were consistent with design requirements and risk analysis assumptions associated with internal flooding events at CCNPP. The Engineering Standard Summary, ES-001, "Flooding," the Updated Final Safety Analysis Report, and the Unit 1 and Unit 2 Total Risk Model Results described these internal flooding events. The inspectors reviewed the documents and performed walkdowns of two areas that contain risk significant systems and components. The following areas were reviewed:

- Unit 2 No. 22 ECCS; and
- Unit 1 auxiliary feedwater (AFW) pump room.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program

Resident Inspector Quarterly Review (71111.11Q - One Sample)

a. Inspection Scope

On July 14, 2010, the inspectors observed a licensed operator requalification scenario to assess operator performance and the adequacy of the licensed operator-training program. The scenario involved a toxic gas leak, a loss of off-site power, and various equipment issues. The inspectors verified the clarity and formality of communications, the completion of appropriate operator actions in response to alarms, the performance of timely control board operations and manipulations, and that the oversight and direction provided by the shift manager were in accordance with Constellation's administrative and technical procedures.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – Two Samples)

Resident Inspector Quarterly Review

a. Inspection Scope

The inspectors reviewed the maintenance effectiveness of the samples listed below for the following: 1) appropriate work practices; 2) identifying and addressing common cause failures; 3) scoping in accordance with 10 CFR Part 50.65(b) of the maintenance rule; 4) characterizing reliability issues for performance; 5) trending key parameters for condition monitoring; 6) recording unavailability for performance; 7) classification and reclassification in accordance with 10 CFR Part 50.65(a)(1) or (a)(2); and 8) appropriateness of performance criteria for structures, systems and components (SSCs) classified as (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs classified as (a)(1).

- Unit 2 saltwater subsystem air operated valve (2-CV-5208) failed to go full open (CR-2010-008242); and
- Unit 1 RV-201 pressure relief valve leakage (CR-2010-005182).

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – Three Samples)

a. Inspection Scope

The inspectors reviewed the following activities to verify that Constellation performed the appropriate risk assessments for planned maintenance of out of service equipment and emergent work. For the emergent work activities performed by station personnel, the inspectors verified that Constellation promptly reassessed and managed the plant risk. The inspectors compared the risk assessments and risk management actions with CNG-OP.4.01-1000, "Integrated Risk Management," and Constellation's risk assessment tool to the requirements of 10 CFR Part 50.65(a)(4) and the recommendations of the Nuclear Management and Resources Council 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." In addition, the inspectors assessed the adequacy of Constellation's identification and resolution of problems associated with maintenance risk assessments and emergent work activities.

- Planned maintenance on reconnecting the No. 22 battery to the No. 22 bus on July 27, 2010;
- Planned maintenance on the 2A DG on July 30, 2010; and
- Planned maintenance on the No. 12 SRW pump during high bay temperature on August 6, 2010.

b. Findings

No findings were identified.

1R15 Operability Evaluations (71111.15 – Three Samples)

a. Inspection Scope

The inspectors reviewed operability evaluations and/or CRs to verify that the identified conditions did not adversely affect safety system operability or plant safety. The evaluations were reviewed using criteria specified in NRC Regulatory Issue Summary 2005-20, "Revision to Guidance formerly contained in NRC Generic Letter 91-18, Information to Licensees Regarding two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability," and Inspection Manual Part 9900, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety." In addition, where a component was inoperable, the inspectors verified the Technical Specification (TS) limiting condition for operation implications were properly addressed. The inspectors performed field walkdowns, interviewed personnel, and reviewed the following items:

- Unit 2 reactor protection system (RPS) channel D high power trip voltage out of specification during surveillance (CR-2010-007789);
- No. 22 CC HX normal outlet valve (2-CV-5208) failed to go full open during surveillance test (OD-2010-0008); and
- 12B SRW HX American Society of Mechanical Engineers code class 3 leak (OD-2010-0004).

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – One Sample)

a. Inspection Scope

The inspectors reviewed the plant modification listed below to verify that the modification did not affect the safety functions of systems important to safety. The inspectors verified that the system design and licensing bases did not degrade due to the modification to ensure the system maintained its availability, reliability, and functional capability. The inspectors conducted walkdowns of accessible portions of the modification to verify that Constellation personnel maintained the proper configuration control to ensure that the plant was not placed in an unsafe condition and that the modification was implemented in accordance with Constellation procedures.

- A temporary modification to swap inputs to computer point F1121, which affected the thermal power calculation (ECP-09-000019).

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – Seven Samples)

a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- Repair union and casing vent leaks on No. 23 AFW pump (WO #C220091765);
- Overhaul pressurizer to quench tank vent valve (WO #C120062298);
- Replace 23 high-pressure safety injection relay 2RYZA110/SA2 (C90670386);
- Replace Unit 1 RPS channel A power supply (WO #C120085872);
- Replace No. 12 saltwater pump motor (WO #C120091438);
- Replace 1-PCV-4512B for No. 12 AFW pump (WO #C120064187); and
- Repair No. 12 steam generator feedwater regulator valve due to low cylinder pressure (WO #C90992577).

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – Five Samples)

a. Inspection Scope

The inspectors observed and/or reviewed the surveillance tests listed below associated with selected risk-significant SSCs to determine whether the testing adequately demonstrated the ability to perform its intended safety function. The inspectors also verified that proper test conditions were established as specified in the procedures, no equipment preconditioning activities occurred, and that acceptance criteria had been satisfied.

- 4 kilovolt (kV) bus No.11 undervoltage relay calibration and response time check (STP-M-522A-1);
- 0C DG battery quarterly check (BAT-034);
- No. 12 Saltwater pump operability in-service test (STP-O-73A-1);
- No. 22 saltwater subsystem valve operability in-service test (STP-O-65P-2); and
- Test of 1A DG and No. 11 4 kV bus loss of coolant incident sequencer (STP-O-008A-1).

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness (EP)

1EP2 Alert and Notification System (ANS) Evaluation (71114.02 - One Sample)

a. Inspection Scope

An on-site review was conducted to assess the maintenance and testing of the Calvert Cliffs' ANS. During the inspection, the inspectors reviewed the Federal Emergency Management Agency's design report to ensure Constellation's compliance with design report commitments, system maintenance, test records, and applicable ANS procedures. Planning Standard 10 CFR Part 50.47(b) (5) and the related requirements of 10 CFR Part 50, Appendix E, were used as acceptance criteria.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03 – One Sample)

a. Inspection Scope

The inspectors conducted a review of Calvert Cliffs' ERO augmentation staffing requirements and the process for notifying and augmenting the ERO. This was performed to ensure the readiness of key licensee staff to respond to an emergency event and to ensure Constellation's ability to activate their emergency facilities in a timely manner. The inspectors reviewed the Calvert Cliffs' ERO roster, a sampling of training records, call-in reports, one drive-in report, applicable procedures, and CRs related to the ERO staffing augmentation system. Planning Standard 10 CFR Part 50.47(b)(2) and related requirements of 10 CFR Part 50, Appendix E, were used as acceptance criteria.

b. Findings

No findings were identified.

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

a. Inspection Scope

Since the last NRC inspection of this program area, Constellation implemented various changes to their EALs, emergency plan, and implementing procedures. Constellation had determined that, in accordance with 10 CFR Part 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 standards of 50.47(b) and the requirements of 10 CFR Part 50 Appendix E. The inspectors reviewed all EAL changes and a sample of emergency plan changes to evaluate for any potential decreases in effectiveness of the emergency plan. However, this review by the inspectors 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 inspections in their entirety. The requirements in 10 CFR Part 50.54(q) were used as acceptance criteria.

b. Findings

No findings were identified.

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05 – One Sample)

a. Inspection Scope

The inspectors reviewed a sampling of self-assessment and quality assurance (QA) assessment reports to assess Constellation's process for evaluating their EP program and performance. The inspectors reviewed a sampling of drill reports, 10 CFR Part 50.54(t) audits, and EP related CRs initiated by Constellation at Calvert Cliffs from drills, self-assessments and audits. In addition, the inspectors reviewed corrective actions related to an actual event involving a complete loss of communications. Planning Standard 10 CFR Part 50.47(b)(14) and the related requirements of 10 CFR Part 50, Appendix E, were used as acceptance criteria.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance (Green) associated with an NCV of 10 CFR Part 50.47(b)(4) for the failure to implement the emergency classification and action level scheme in a timely manner during an actual event associated with a complete loss of communications to one off-site agency.

Description: On July 4, 2010, at approximately 11:22 a.m., the control room operators were notified by security that the off-site phone lines were out-of-service. The off-site phone lines are part of the site's communications system that provide means for prompt notification of local, State, and Federal officials of events that may require urgent actions. Security proceeded to contact the Calvert County Control Center to inform them of the loss of off-site lines and to perform a radio check. The control room operators verified that both the 800 MHz radio stack and the microwave phone system were working properly. The operators determined that the NRC Emergency Notification System was not operational and immediately implemented compensatory measures. Following questions from the NRC Senior Resident Inspector, the operators attempted to contact each off-site agency using the Dedicated Off-Site Agency phone. All agencies were contacted with the exception of St. Mary's County. At approximately 4:10 p.m. the shift manager informed the Director of EP that St. Mary's County could not be contacted using either the dedicated off-site agency line or the outside line. The Director of EP contacted the St. Mary's County's Director of the Department of Public Safety to inform him that Calvert Cliffs planned to conduct a radio communications test. At 4:22 p.m., the Director of EP was notified by the control room supervisor that the St. Mary's County control cell did not respond to the radio call. At 4:46 p.m., the Director of EP recommended the declaration of an NOUE for a loss of communications. Prior to classifying the event, the lines were restored at 4:50 p.m. and contact was established with St. Mary's County using both the dedicated off-site agency phone and the outside line.

Section 2 of the Calvert Cliffs' Emergency Plan states, in part, that initiating conditions established as EAL for determining an NOUE classification are listed in the ERPIP. An NOUE is declared any time that respective EALs are met or exceeded. ERPIP 3.0, Immediate Actions, Attachment 1, EAL A.U.5.1.1, "Loss of Communications", indicates that an NOUE should be declared based on a loss of all communications affecting the ability to either: Perform routine operations or Notify off-site agencies or personnel. In addition, Nuclear Plant Operations Section Standing Order 09-08, Emergency Action Level Classification Improvement Protocol, provides the expectation that operators should classify events within 15 minutes. The inspectors determined that the conditions for a loss of communications were present from 11:22 a.m. to 4:50 p.m., and Constellation should have been more proactive in verifying the availability of communications systems to all affected counties. The inspectors concluded that it was reasonable for Constellation to have identified the loss of communications to St. Mary's County prior to 4:22 p.m. and classified the emergency event earlier. In addition, at 4:22 p.m., once Constellation determined that the EAL declaration criteria was met, Constellation did not make the classification within the 15 minutes expectation established for operators in Standing Order 09-08. Constellation entered this issue into their CAP for resolution.

Analysis: The performance deficiency is that Constellation did not declare an NOUE in a timely manner during an actual event associated with a complete loss of communications to one off-site agency. The finding is greater than minor because it is associated with the EP cornerstone attribute of emergency response organization performance (actual event response) and it adversely affects the cornerstone objective to ensure that Constellation was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors determined that the finding is of very low safety significance (Green) using IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 2, "Actual Event Implementation Problem." The finding is associated with an actual event where the operators failed to declare, in a timely manner, an NOUE for the complete loss of communications to one off-site agency. This finding has a cross-cutting aspect in the area of human performance, decision making, because Constellation did not make a safety significant decision using a systematic process to declare the NOUE in a timely manner. Specifically, Constellation did not use a systematic process such as a standing order or procedure to provide guidance to operators to address a loss of communications. In addition, Constellation did not adequately implement ERO's roles and authorities as designed to obtain interdisciplinary input on safety significance decisions such as event classification (H.1.a of IMC 0310).

Enforcement: 10 CFR Part 50.54(q) requires, in part, that a power reactor licensee shall follow and maintain in effect emergency plans which meet the standards in 10 CFR Part 50.47(b) and Appendix E to part 50. 10 CFR Part 50.47(b)(4) requires, in part, that the nuclear facility licensee have a standard emergency classification and action level scheme in use, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial off-site response measures. Contrary to the above, on July 4, 2010, from 11:22 a.m. to 4:50 p.m., Constellation did not implement, in a timely manner, the EAL scheme contained in their emergency plan to declare an NOUE after a loss of all communications to one off-site agency. Immediate corrective action included establishing a standing order to provide operators guidance in the event of a loss of communications. Because of the very low safety significance and because it is entered into your CAP (CR-2010-007246), the NRC

is treating this as an NCV, consistent with Section 2.3.2 of the NRC's Enforcement Policy. **(NCV 05000317/318/20004-01: Untimely Declaration of Notice of Unusual Event)**

1EP6 Drill Evaluation (71114.06 – Three Samples)

a. Inspection Scope

The inspectors evaluated an EP drill on July 14, 2010. The scenario involved a toxic gas leak, a loss of off-site power, and various equipment issues. The inspectors observed the ERO's performance in the simulated control room, the Technical Support Center, the Operational Support Center, and the Emergency Operations Facility. The inspectors verified that the classification, notification, and protective actions were accurate and timely. Additionally, the inspectors assessed the ability of Constellation's critique to address EP performance deficiencies identified during the drill.

The inspectors evaluated a simulator-based training evolution on August 18, 2010. The scenario was part of the triennial force-on-force exercise and involved operator response during simulated hostile actions at the site. The inspectors observed communications, event classification, and event notification activities by the shift manager in the simulated control room. The inspectors reviewed the EP-related corrective actions from a previous inspection conducted by the NRC's Office of Nuclear Security and Incident Response to determine whether they had been completed and adequately addressed the cause of the previously identified weaknesses. The inspectors also observed portions of the post-drill critique to determine whether their observations were also identified by the licensee's evaluators.

The inspectors evaluated an EP drill on August 31, 2010. The scenario involved a toxic gas leak, a large break loss-of-coolant accident (LOCA), and various equipment issues. The inspectors observed the simulated control room operators' responses. The inspectors verified that the classification and notification were accurate and timely. Additionally, the inspectors assessed the ability of Constellation's critique to address EP performance deficiencies identified during the drill.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator (PI) Verification (71151 – Nine Samples)

.1 Initiating Events

a. Inspection Scope

The inspectors reviewed Constellation's PI program to evaluate, collect, and report information on the following Unit 1 and Unit 2 PIs: 1) Unplanned Transients; 2) Unplanned Scrams; and 3) Unplanned Scrams with Complications. The inspectors reviewed these PIs for the period of October 2009 through June 2010. The inspectors used the guidance provided in Nuclear Energy Institute (NEI) 99-02, "Regulatory

Assessment PI Guideline," to assess the accuracy of PI data collected and reported. The inspectors reviewed the Licensee Event Reports (LERs), monthly operating reports, power history charts, NRC inspection reports, and operator narrative logs.

b. Findings

No findings were identified.

.2 Emergency Preparedness

a. Inspection Scope

The inspectors reviewed data for the Calvert Cliffs' EP PIs, which are: (1) Drill and Exercise Performance; (2) ERO Drill Participation; and, (3) ANS Reliability. The inspectors reviewed these PIs for the period of October 2009 through June 2010 to verify the accuracy of the reported data. The inspectors used the guidance in NEI-99-02 as acceptance criteria.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – One Sample)

.1 Reviews of Items Entered Into the CAP

a. Inspection Scope

The inspectors performed a daily screening, as required by IP 71152, "Identification and Resolution of Problems," of items entered into Constellation's CAP. The review facilitated the identification of potentially repetitive equipment failures or specific human performance issues for follow-up inspection. The inspectors reviewed the description of each new CR and attended screening meetings.

b. Findings

No findings were identified.

.2 Annual Sample: Follow-Up Review of Loose Electrical Connections

a. Inspection Scope

The inspectors performed an in-depth review of a selection of CRs including CR-2008-001005 and CR-2010-005173 related to deficient electrical connections. The inspectors reviewed the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The inspectors assessed whether the evaluation identified likely causes for the issues and identified appropriate corrective actions to address the identified cause. The inspectors assessed whether Constellation's evaluations considered extent of condition, generic implications, common cause, and previous occurrences. The inspectors reviewed the potential impact on nuclear safety and risk to verify that Constellation had taken corrective actions

commensurate with the significance of the issue. In accordance with OpESS FY 2009-01, "Inspection of Electrical Connections for Motor Control Centers, Circuit Breakers and Interfaces," the inspectors assessed the adequacy of Constellation's processes such as procedures and maintenance instructions for maintaining proper electrical connections. The inspectors evaluated these actions against the requirements of Constellation's CAP and 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions."

b. Findings

No findings were identified. The inspectors determined that Constellation's corrective actions were adequate and commensurate with the safety significance of the issues.

4OA3 Followup of Events and Notices of Enforcement Discretion

.1 (Closed) LER 05000317/2010-001-01, Reactor Trip Due to Water Intrusion into Switchgear Protective Circuitry

On February 18, at 8:24 a.m., the Unit 1 reactor automatically tripped from 93 percent reactor power in response to a reactor coolant system (RCS) low flow condition. Water leaked through the auxiliary building roof into the 45' switchgear room causing an electrical ground, which tripped the 12B reactor coolant pump (RCP), thereby initiating the RPS trip on RCS low flow. Three of four Unit 1's RCPs continued operating. The electrical ground and failure of a ground fault protection relay caused service transformer P-13000-2 to isolate, thereby deenergizing the No. 14 4 kV safety bus and the 1Y10 120 volt instrument bus. The 1B DG automatically started and reenergized the No. 14 bus as designed. This supplemental LER documented a description of corrective actions after the event analysis and cause determinations were completed. Corrective actions included repairs on the auxiliary building roof and the RCP bus. In addition, the ground fault protection relay and the current transformers were replaced. Long-term corrective actions planned include implementing improved processes for categorization, prioritization, and management of roofing issues. Findings associated with this event were documented in IR 2010006. No new findings were identified in the inspectors' review. This LER is closed.

.2 (Closed) LER 05000318/2010-001-01, Reactor Trip Due to Partial Loss of Offsite Power

On February 18, at 8:24 a.m., the Unit 2 reactor automatically tripped from 99.5 percent reactor power due to a loss of power to all four RCPs and the associated RPS RCS low flow trip. The event emanated from a ground fault on Unit 1 (see Section 4OA3.1 above). A ground overcurrent relay failed to actuate as designed permitting the Unit 1 ground overcurrent condition to reach Unit 2. Unit 2 electrical protection responded by deenergizing the 500 kV "Red Bus" off-site power supply and multiple on-site electrical buses including the No. 24 4 kV safety bus. The 2B DG started as designed, but tripped on low lube oil pressure. The causes of the 2B DG to trip were determined to be the failure of the agastat relay in the time delay circuit and thick, viscous oil in the lube oil pressure sensing line. This supplemental LER documented a description of corrective actions after the event analysis and cause determinations were completed. Corrective actions included replacement of the agastat relay. In addition, the lube oil pressure sensing lines were drained and refilled. Long-term corrective actions planned include the revision of relay calibration procedures and a review of maintenance practices associated with flushing, filling, and venting of oil sensing lines in critical applications.

Findings associated with this event were documented in IR 2010006. No new findings were identified in the inspectors' review. This LER is closed.

.3 (Closed) (LER 05000317/2010-003-00, Reactor Trip Due to Loose Connection in Switchyard Breaker Panel Board

On May 12, 2010, at 1:51 p.m., Unit 1 experienced an automatic reactor trip from 100 percent power. In the events leading up to the trip, workers were performing a wiring modification to the 500 kV switchyard breakers protective relay circuitry. While restoring direct current (DC) control power, a switchyard breaker tripped open and disconnected the Unit 1 main generator from the grid. RCS and secondary pressure rapidly increased until a valid high pressurizer pressure trip occurred. Both pressurizer power-operated relief valves and several main steam safety valves lifted as a result of the transient. The cause of the Unit 1 switchyard breaker tripping was determined to be a loose connection located within a 125 VDC switchyard distribution panel that provided DC control power for the switchyard breakers. The 125 VDC switchyard distribution system supplies power to the switchyard dc loads for the operation of switchyard circuit breakers, emergency lights, and protective relays. Corrective actions included repair of the loose connection and a check of the125 VDC distribution panel electrical connections for tightness. Long-term corrective actions planned include implementing preventive maintenance tasks to periodically check the tightness of 125 VDC electrical connections. Findings associated with this event were documented in IR 2010003. No new findings were identified in the inspector's review. This LER is closed.

.4 (Closed) LER 50-318/2010-002-00, RCS Pressure Boundary Leakage in Valve Leakoff Line Weld

On February 23, 2010, while Unit 2 was in Cold Shutdown (Mode 5) during a forced outage, Constellation identified a pinhole leak on the packing leakoff line of 2HVRC-220 (pressurizer spray bypass valve). Constellation determined that this leakage constituted an RCS pressure boundary leak. Based on visual inspection performed during a routine boric acid walkdown, the leak most likely existed during plant operation. Constellation performed a progressive non-destructive examination of the pinhole leak site to further characterize the flaw in the socket weld. The evaluation concluded that the flaw was a single pore through the socket weld and that the apparent cause of the pinhole was a latent weld defect created during the original valve manufacturing process. The weld was repaired and inspected satisfactorily prior to startup from the Unit 2 forced outage. 2HVRC-220 is not normally accessible by plant personnel during plant operation at power. This LER reported that Calvert Cliffs had been in violation of TS 3.14.13.a, which limits pressure boundary leakage during plant operation to zero.

The issue is considered within the traditional enforcement process because there was no performance deficiency identified and IMC 0612, Appendix B, "Issue Screening," directs disposition of this issue in accordance with the Enforcement Policy. The inspectors used the Enforcement Policy, Section 6.1, Reactor Operations, to evaluate the significance of this violation. The inspectors concluded that the violation is more than minor and best characterized as Severity Level IV (very low safety significance) because it is similar to Enforcement Policy, Section 6.1, example d.1. Additionally, the inspectors evaluated this finding using IMC 0609 Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors screened the issue and determined that RCS leakage is considered a LOCA initiator, and evaluated it using the

Initiating Event criteria in Appendix A. Assuming worst case degradation, the leakage would not result in exceeding the TS limit for identified RCS leakage (10 gallons per minute) nor would the leakage have likely affected other mitigation systems resulting in a total loss of their safety function. As a result, this issue would screen as very low safety significance (Green).

Because this issue is of very low safety significance and it has been determined that it was not reasonable for Constellation to be able to foresee and prevent this leakage, and as such no performance deficiency exists, the NRC has decided to exercise enforcement discretion in accordance with Section 3.5 of the NRC Enforcement Policy and refrain from issuing enforcement action for the violation of TS (EA-10-188). Further, because Constellation's actions did not contribute to this violation, it will not be considered in the assessment process or the NRC's Action Matrix. This LER is closed.

.5 Unplanned Hot Spot on 22 Shutdown Cooling HX

a. Inspection Scope

On August 9, 2010, the inspectors responded to a radiological event. During a routine radiological survey, radiation protection personnel discovered an unplanned radiation field greater than 100 millirem per an hour on the 22 shutdown cooling HX. The control room declared a radiological event per ERPIP 3.0, Attachment 19, "Radiological Event." The inspectors verified that Constellation took appropriate action during the event and ensured that plant personnel had not exceeded exposure limits.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On October 15, 2010, the resident inspectors presented the inspection results to Mr. George H. Gellrich and other members of Constellation staff who acknowledged the findings. The licensee did not indicate that any of the information presented at the exit meeting was proprietary.

ATTACHMENTS: SUPPLEMENTAL INFORMATION

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Constellation Personnel

G. Gellrich, Site Vice President
T. Trepanier, Plant General Manager
D. Bartnik, Director, Security
K. Bodine, Supervisor, Engineering
H. Crockett, Senior Engineer
B. Dansberger, Supervisor, Radiation Protection
B. Ficke, Emergency Preparedness Analyst
M. Fick, Director, Emergency Preparedness
D. Frye, Operations Manager
J. Gines, System Manager
C. Grooms, General Supervisor, Operations Support
J. Herron, Supervisor, Engineering
C. Jackson, Senior Engineering Analyst
D. Lauver, Director, Licensing
S. Loeper, Principal Engineer
K. Mills, General Supervisor, Shift Operations
T. Riti, General Supervisor, System Engineering
A. Simpson, Supervisor, Engineering, Licensing
J. Stanley, Manager, Engineering Services
M. Stanley, Fire Marshal
J. Wilson, Supervisor, Engineering
J. Wynn, Principal Engineer

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000317/318/2010004-01	NCV	Untimely Declaration of Notice of Unusual Event (Section 1EP5)

Closed

05000317/2010-001-01	LER	Reactor Trip Due to Water Intrusion Into Switchgear Protective Circuitry (Section 4OA3.1)
05000318/2010-001-01	LER	Reactor Trip Due to Partial Loss of Offsite Power (Section 4OA3.2)

05000317/2010-003-00	LER	Reactor Trip Due to Loose Connection in Switchyard Breaker Panel Board (Section 4OA3.3)
05000318/2010-002-00	LER	Reactor Coolant System Pressure Boundary Leakage in Valve Leakoff Line Weld (Section 4OA3.4)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
ERPIP 3.0, Immediate Actions, Attachment 20, Severe Weather, Revision 04700
EP-1-108, Severe Weather Preparation, Revision 0200

Miscellaneous
RAN97-031, Calvert Cliffs Individual Plant Examination of External Events, Revision 0

Condition Reports
CR-2010-008370

Section 1R04: Equipment Alignment

Procedures
OI-29-2, Saltwater System, Revision 58
OI-16-2, Component Cooling System, Revision 29
OI-26A, 125 Volt Vital DC, Revision 15
OI-15-1, Service Water, Revision 44

Condition Reports

CR-2010-007873	CR-2010-007475
CR-2010-005891	CR-2010-002321
CR-2009-002777	CR-2009-000450
CR-2009-000459	CR-2009-000448

IRE-030-913

Calculations
D-E-92-002, DC Calculation For New Generator Buildings, Revision 0002
DCA05979, Maximum SRW Pump temperature during a LOCA/LOOP or Appendix R scenario, Revision 0

Drawings
62708SH0002, Circulating Water System, Revision 106
62708SH0003, Circulating Water System, Revision 7
60706SH0002, Piping & Instrument Diagram Cooling System Auxiliary Building and Containment, Unit 1, Revision 75
61024SH0003, DG0C 125 VDC System Bus 15, Revision 3

Section 1R05: Fire Protection

Miscellaneous
FP-0002, Fire Hazards Analysis Summary Document, Revision 0
SA-1-100, Fire Prevention, Revision 16
Fire Fighting Strategies, Revision 0
UFSAR Section 9.9, Calvert Cliffs Power Plant Fire Protection Program, Revision 39

Section 1R06: Flood Protection Measures

Calculations
M-90-170, Flood Height Resulting From a Pipe Break in the Radiation Exhaust Ventilation Equipment Rooms, Revision 0
M-90-191, Maximum Flood Height Resulting From a Pipe Break in the AFW Pump Rooms, Revision 0

Miscellaneous
ES-001, Flooding, Revision 02

Section 1R11: Licensed Operator Requalification Program

Procedures
ERPIP 3.0, Immediate Actions, Revision 04700
CNG-OP-1.01-1000, Conduct of Operations, Revision 00300

Miscellaneous
Emergency Preparedness Drill Scenario CCL-EP-ID-10-2

Section 1R12: Maintenance Effectiveness

Procedures
CNG-AM-1.01, Equipment Reliability, Revision 0000
CNG-AM-1.01-1023, Maintenance Rule Program, Revision 00100
STP-O-65P-2, 22 Saltwater Subystem Valve Quarterly Operability Test, Revision 00512

Condition Reports

CR-2010-009028	CR-2010-008314	CR-2010-008242
CR-2010-008242	CR-2010-005182	
CR-2010-005191	CR-2010-002321	
CR-2009-000448	CR-2008-008327	
CR-2008-002234	CR-2008-000664	

Maintenance Orders/Work Orders
C90874297

Miscellaneous
LER-2010-002-00

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
Maintenance Rule Risk Assessment Guideline, Revision 7
CNG-OP-4.01-1000, Integrated Risk Management, Revision 00601

Drawings
61027SH003, Diesel Generator 0C 480V MCC 023, Revision 1

Section 1R15: Operability Evaluations

Condition Reports
CR-2010-007789 CR-2010-008242
CR-2010-007873 CR-2010-007148

Miscellaneous
OD-2010-0008
OD-2010-0004
CNG-OP-1.01-1002, Conduct of Operability Determinations/Functionality Assessments, Revision 00101

Section 1R18: Plant Modifications

Condition Reports
CR-2009-004355

Miscellaneous
IRE-020-409, 1-FT-1121, 12 Steam Generator Feed Flow
ECP-09-000019, Temporary Change to Swap Inputs to Computer Point F1121 which Affects the Thermal Power Calculation, Revision 0

Section 1R19: Post-Maintenance Testing

Procedures
STP-O-05A-1, Auxiliary Feedwater System Quarterly Surveillance, Revision 02204
STP-O-63-1, Remote Shutdown and Post Accident Monitoring Instrument Channel Check, Revision 03305
STP-O-65P-2, 22 Saltwater Subystem Valve Quarterly Operability Test, Revision 00514
STP-O-73A-1, Saltwater Pump Operability Test, Revision 02100
STP-M-510F-1, RPS Thermal Margin Calculator and Reactor Coolant Temperature Calibration, Revision 00401
OI-12A, Feedwater System, Revision 04100
OI-29-1, Saltwater System, Revision 06501
EN-4-104, Surveillance Testing, Revision 0700
EN-4-108, ASME Inservice Test, Revision 0300

Maintenance Orders/Work Orders
WO #C220091765 WO #C120091438 WO #C90670386
WO #C120062298 WO #C120064187
WO #C120085872 WO #C90992577

Condition Reports
CR-2009-002357 CR-2010-006999
CR-2010-009136 CR-2010-009524
CR-2010-009638

Section 1R22: Surveillance Testing

Procedures
BAT-034, Diesel Generator Quarterly Check, Revision 00200
STP-M-522A-1, 4 kV Undervoltage Relay Calibration and Response Time Check, Revision 00101
STP-O-65P-2, 22 Saltwater Subystem Valve Quarterly Operability Test, Revision 00514
STP-O-65H-1, Pressurzier Power-Operated Relief Block Valves Quarterly Operability Test, Revision 00400
STP-O-73A-1, Saltwater Pump Operability Test, Revision 02000
STP-O-008A-1, Test of 1A DG and 11 4kV bus LOCI Sequencer, Revision 02701

Miscellaneous
Emergency Preparedness Drill Scenario CCL-EP-ID-10-2
Constellation Energy (CCNPP Unit 1) IST Program: Pump and Valve Inservice Testing Program Fourth Ten-Year Interval, Revsion 00

Condition Reports
CR-2010-000702
CR-2010-006999

Section 1EP2: Alert and Notification System Evaluation

Procedures
EP-1-106, Management and Configuration of the Public Alert and Notification System (PANS) – Sirens, Revision 1
S-W-4, Siren Test Procedure for the PANS System, Revision 5

Miscellaneous
Upgraded Public Alert and Notification System (ANS) Calvert Cliffs Nuclear Power Plant
FEMA Approval Letter to upgrade the Alert and Notification System
Maryland Emergency Management Agency Letter to FEMA for approval to change siren testing
FEMA Approval Letter to change siren testing
2009 Annual Inspection Work Order and Results

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Procedures
Calvert Cliffs Nuclear Power Plant Emergency Response Plan, Revision 41
EP-1-107, Emergency Response Organization Expectations and Responsibilities, Revision 00200
EP-1-306, Calvert Cliffs Emergency Response Organization Training, Revision 00501
EP-1-307, Emergency Response Organization Personnel Assignment and Qualifications, Revision 00400
ET-W-27, Personnel Notification/Recall, Revision 26

Miscellaneous
First Quarter 2010 ERO Notification Results
Second Quarter 2010 ERO Notification Results
First Quarter 2009 ERO Notification Results
Second Quarter 2009 ERO Notification Results
Third Quarter 2009 ERO Notification Results
Fourth Quarter 2009 ERO Notification Results

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Procedures
CNG-EP-1.01-1004, 50.54(Q) Effectiveness Review, Revision 00001
CNG-NL-1.01-1011, 10 CFR 50.59/10 CFR 72.48 Applicability Determinations, Screenings and Evaluations, Revision 00200

Miscellaneous
ERPIP - 3.0, R04500, Attachment 1, 11/23/2009
ERPIP - 3.0, R04700
ERPIP - 3.0, R04800
ERPIP - 3.0 and 99-01 EALs, R04600 and R00200

Section 1EP5: Correction of Emergency Preparedness Weaknesses

Procedures
CNG-CA-1.01-1000, Corrective Action Program, Revision 00400
SA-2009-000193, Emergency Response
SA-2009-000194, Public Notification
SA-2009-000195, Notification of Off-site Agencies
SA-2010-000010, CAP Program 1st Quarter

Miscellaneous
2008-010, QPA Assessment Report, 2007 Calvert Cliffs Safety Culture Assessment
2009-027, QPA Assessment Report, May 19, 2009 Integrated Emergency Response Drill
2009-060, QPA Assessment Report, Emergency Preparedness Evaluated Exercise, CALVEX
2009-062, QPA Assessment Report, Emergency Preparedness Self Assessment and Benchmark Program
2009-063, QPA Assessment Report, Emergency Preparedness Response for Red Performance Rating
2009-067, QPA Assessment Report, Emergency Preparedness Annual Medical Drill
2010-011, QPA Assessment Report, Second Assessment of EP Response Plan for Red Performance
2010-021, QPA Assessment Report, Third Assessment of EP Response Plan for Red Performance
2010-051, QPA Assessment Report, Final Assessment of EP Response Plan for Red Performance
Report of Audit EPP-10-01-C, Emergency Preparedness Program, July 30, 2010
Report of Audit EPP-09-01-C, Emergency Preparedness Program, October 18, 2009
Report of Audit EPP-08-01-C, Emergency Preparedness Program, September 12, 2008
Emergency Preparedness Drill Report, 7/14/2010
Emergency Preparedness Drill Report, 07/01/2010
Emergency Preparedness Drill Report, 02/01/2010

October 20, 2009 CALVEX Report
September 15, 2009 Integrated Drill Report
May 19, 2009 Integrated Drill Report
EP Focused Self-Assessment Report, December 10, 2008

Condition Reports

CR-2010-008161	CR-2010-007246
CR-2010-007525	CR-2010-007313
CR-2010-007129	CR-2010-007045
CR-2010-007033	CR-2010-006888
CR-2010-006692	CR-2010-004121
CR-2010-002669	CR-2009-001158
CR-2008-002967	CR-2008-002297
CR-2008-002283	CR-2008-002231
CR-2008-002063	CR-2008-001563
CR-2008-001562	CR-2008-001561
CR-2008-000036	

Section 1EP6: Drill Evaluation

Procedures
ERPIP 3.0, Immediate Actions, Revision 04700
CNG-OP-1.01-1000, Conduct of Operations, Revision 00300
ERPIP-201, Technical Support Center, Revision 01200
ERPIP-301, Operational Support Center, Revision 12

Miscellaneous
Emergency Preparedness Drill Scenario CCL-EP-ID-10-2
Emergency Preparedness Drill Report for Drill Conducted on 7/14/2010
Emergency Response Plan, Revision 41
99-01-EAL-TB Emergency Action Level Technical Bases, Revision 0300

Section 4OA1: Performance Indicator Verification

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

Miscellaneous
Performance Indicator Data, Emergency Preparedness, 4th Quarter 2009 – 2nd Quarter 2010
Performance Indicator Data, Initiating Events, 4th quarter 2009 – 2nd quarter 2010

Section 4OA2: Problem Identification and Resolution

Condition Reports
CR-2008-001005
CR-2010-005173

Procedures
FTE-51A, 4 KV General Electric Cubicle Inspection, Revision 00300
FTE-51, 4 KV General Electric Magna-Blast Circuit Breaker, Revision 01902

E-19, Clean and Inspect ITE Series 5600, Wyle-Spectrum Technologies, and Nuclear Logistics Inc. Motor Control Centers (MCC) Cubicles

Section 4OA3: Followup of Events and Enforcement Discretion

Procedures
ERPIP 3.0, Immediate Actions, Attachment 19, Radiological Event, Revision 04700
ERPIP 107, Chemistry Shift Technician, Revision 00700

Miscellaneous
99-01-EAL-TB Emergency Action Level Technical Bases, Revision 0300

Condition Reports
CR-2009-009652

LIST OF ACRONYMS

ADAMS	Agency-Wide Documents Access and Management System
AFW	Auxiliary Feedwater
ANS	Alert and Notification System
CAP	Corrective Action Program
CC	Component Cooling
CCNPP	Calvert Cliffs Nuclear Power Plant
CFR	Code of Federal Regulations
CR	Condition Report
DG	Diesel Generator
DC	Direct Current
EAL	Emergency Action Level
ECCS	Emergency Core Cooling System
EP	Emergency Preparedness
ERO	Emergency Response Organization
ERPIP	Emergency Response Plan Implementation Procedure
HX	Heat Exchanger
IMC	Inspection Manual Chapter
IP	Inspection Procedure
kV	Kilovolt
LER	Licensee Event Report
LOCA	Loss-of-Coolant Accident
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NOUE	Notice of Unusual Event
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PI	Performance Indicator
QA	Quality Assurance
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RPS	Reactor Protection System
SSC	Structures, Systems, and Components
SDP	Significance Determination Process
SRW	Service Water
TS	Technical Specification
VDC	Volts Direct Current
WO	Work Order