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

July 22, 2011

EA-11-164

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 05000317/2011003 AND 05000318/2011003 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Gellrich:

On June 30, 2011, 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 July 15, 2011, with Mr. James M. Yoe 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.

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

Additionally, the inspectors reviewed Licensee Event Report (LER) 50-318/2011-001, which described the details associated with reactor coolant system (RCS) pressure boundary leakage from an N3 pressurizer heater outer sleeve to weld pad J-Groove weld location. Although this issue constitutes a violation, the NRC concluded that this issue was not within 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 the results of the NRC's inspection and assessment, I have been authorized, after consultation with the Director, Office of Enforcement, to exercise enforcement discretion in accordance with Section 3.5 of the NRC Enforcement Policy, "Violations Involving Special Circumstances."

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,

Darrell J. Roberts, Director
Division of Reactor Projects

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

Enclosure: Inspection Report 05000317/2011003 and 05000318/2011003
w/Attachment: Supplemental Information

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Sincerely,

/RA/

Darrell J. Roberts, 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.:	05000317/2011003 and 05000318/2011003
Licensee:	Constellation Energy Nuclear Group, LLC
Facility:	Calvert Cliffs Nuclear Power Plant, Units 1 and 2
Location:	Lusby, MD
Dates:	April 1, 2011 through June 30, 2011
Inspectors:	S. Kennedy, Senior Resident Inspector N. Perry, Acting Senior Resident Inspector S. Ibarrola, Acting Resident Inspector M. Jennerich, Acting Resident Inspector E. Burket, Reactor Inspector M. Orr, Reactor Inspector K. Cronk, Project Engineer R. Rolph, Health Physicist
Approved by:	Glenn T. Dentel, Chief Reactor Projects Branch 1 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000317/2011003, 05000318/2011003; 4/1/2011 – 6/30/2011; Calvert Cliffs Nuclear Power Plant (CCNPP), Units 1 and 2, Routine Integrated Inspection Report.

The report covered a 3-month period of inspection by resident inspectors and region-based inspectors. 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.

No findings were identified.

REPORT DETAILS

Summary of Plant Status

Calvert Cliffs Unit 1 began the inspection period at 100 percent power. On June 4, 2011, operators reduced power to 85 percent for main turbine control valve testing. Operators returned the unit to 100 percent power on the same day. On June 24, 2011, operators reduced power to 90 percent to clean condenser waterboxes. Operators returned the unit to 100 percent power on the same day. 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 June 18, 2011, operators reduced power to 85 percent for main turbine control valve testing. Operators returned the unit to 100 percent power on the same day. On June 20, 2011, operators reduced power to approximately 10 percent to repair the main generator voltage regulator. Operators returned the unit to 100 percent power on June 23, 2011. 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 impending adverse weather conditions associated with a tornado watch on April 27, 2011. This review included an assessment of what the predicted conditions were and of the actions taken by site personnel. The inspectors verified that the operator actions specified in the associated procedures maintained readiness of essential equipment and systems to preclude weather induced initiating events. This inspection satisfied one inspection sample for an impending adverse weather condition.

The inspectors also reviewed the adverse weather preparation and mitigating strategies before the onset of hot weather operations and the high grid loading summer season. This review included an assessment of nuclear operations administrative procedure NO-1-119, "Seasonal Readiness." The inspectors assessed the effectiveness of Constellation's preparations for hot weather and grid related stress conditions to evaluate the site's readiness for seasonal susceptibilities. Risk-significant systems affected by hot weather and grid related stresses were selected for review. This review included a walk down of the 1A Emergency Diesel Generator (EDG) heating, ventilation, and air conditioning (HVAC) system and the 11 Switchgear Room HVAC system. These inspections included a review of operating instructions OI-22M, "1A and 0C DG Building HVAC" and OI-22H, "Switchgear Ventilation and Air Conditioning." The inspectors also performed a partial walk down of the offsite 500 kilovolt (kV) switchyard and onsite 13 kV transformers. The inspectors interviewed control room operators and system engineers to ensure protective measures applicable to these risk-significant systems were

available. This inspection satisfied one inspection sample associated with site's readiness for seasonal extreme weather conditions and one inspection sample for summer readiness of offsite and alternate alternating current power systems. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial Walkdown (71111.04Q – Four 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:

- No. 12 and No. 13 saltwater (SW) subsystems during the planned replacement of No. 11 SW pump motor on April 28, 2011;
- 0C diesel generator and 1B EDG during 1A EDG planned maintenance on May 26, 2011;
- Unit 1 steam driven auxiliary feedwater (AFW) train while the motor driven train was out of service for testing on June 11, 2011; and
- No. 12 and No. 13 SW subsystems while No. 11 SW subsystem was out of service for planned maintenance on June 29, 2011.

b. Findings

No findings were identified.

.2 Complete Walkdown (71111.04S – One Sample)

a. Inspection Scope

The inspectors performed a complete system walkdown of Unit 1 service water system SRW). 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 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 – Six Samples)

.1 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.

- No. 21 emergency core cooling system (ECCS) pump room, fire area 1, room 101;
- No. 22 ECCS pump room, fire area 2, room 102;
- Unit 2 fan room, 5' elevation, fire area 13, room 204;
- Unit 2 SRW pump room, fire area 40, room 205;
- Unit 1 and Unit 2 intake structure, fire area north service building, room intake structure; and
- Unit 1 27' switchgear room, fire area 19, room 317.

b. Findings

No findings were identified.

.2 Fire Protection - Drill Observation (71111.05A - One Sample)

a. Inspection Scope

The inspectors observed a fire brigade drill scenario conducted on May 3, 2011, that involved a simulated fire in the auxiliary boiler room diked fuel oil pump area. The inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that Constellation personnel identified deficiencies, openly discussed them in a self-critical manner at the debrief, and took appropriate corrective actions as required. The inspectors evaluated specific attributes as follows: (1) proper wearing of turnout gear and self-contained breathing apparatus; (2) proper use and layout of fire hoses; (3) employment of appropriate fire fighting techniques; (4) sufficient firefighting equipment brought to the scene; (5) effectiveness of command and control; (6) search for victims and propagation of the fire into other plant areas; (7) smoke removal operations; (8) utilization of pre-planned strategies; (9) adherence to the pre-planned drill scenario; and (10) drill objectives met. The inspectors verified that fire brigade actions were in accordance with Constellation's fire fighting strategies. Following the drill, the inspectors reviewed the post drill debriefing conducted between the assessment team and the fire brigade members.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – Three 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 (UFSAR), 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. In addition, the inspectors reviewed applicable documents and observed, by direct observation, Constellation's inspection activities of several manholes and underground cable conduits that contain risk significant systems and components. To the extent possible, the inspectors observed cable support structures and cable integrity. The following areas were reviewed:

- Unit 1 AFW pump room;
- Unit 2 SRW pump room; and
- Underground bunker/vault manholes and handholes 1MH22, 1MH23, and 1HH25 associated with safety-related cables for the 1A EDG.

b. Findings

No findings were identified.

1R07 Heat Sink Performance

.1 Annual Sample (71111.07A – One Sample)

a. Inspection Scope

The inspectors reviewed the thermal performance test and inspection activities for the 11A service water heat exchanger (SRWHX). The inspectors reviewed the performance data and evaluated the test acceptance criteria to ensure that the design basis requirements were satisfied. The inspectors evaluated the heat transfer capabilities based on completed flow verification tests to ensure that specific safety functions could be performed in accordance with design specifications. The inspectors also reviewed Constellation's periodic maintenance methods to verify that they conformed to the guidelines delineated in Electric Power Research Institute Report NP-7552, "Heat Exchanger Performance Monitoring Guidelines."

b. Findings

No findings were identified.

2. Triennial Heat Sink Performance (71111.07T – Two Samples)

a. Inspection Scope

Based on plant specific risk assessment, previous inspections, recent operational experience, and resident inspector input, the inspectors selected the following heat sink samples:

- 11B SRWHX; and
- Performance of the ultimate heat sink SW system piping integrity and intake structure functionality

The Chesapeake Bay functions as the ultimate heat sink for both CCNPP units. The safety-related SW pumps take suction from the Chesapeake Bay and supply cooling to the SRWHXs through redundant supply headers for each unit. In addition, the SW system supplies cooling to the ECCS pump room air coolers, and component cooling heat exchanger.

The inspectors reviewed Constellation's methods (inspection, cleaning, maintenance, and performance monitoring) used to ensure heat removal capabilities for the 11B SRWHX and compared them to Constellation's commitments made in response to Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment." The inspectors reviewed inspection work orders to verify that the as-found and as-left condition of the SRWHX was bounded by assumptions in the engineering analyses and provided reasonable assurance of continued operability. The inspectors reviewed engineering analyses to verify that the minimum calculated SW flowrate, in conjunction with the heat transfer capability of the SRWHX, supported the minimum heat transfer rates assumed during accident and transient conditions. The inspectors compared SRW surveillance data to the established acceptance criteria to verify that the results were acceptable and that operation was consistent with design.

The inspectors reviewed Constellation's procedures for SW and intake structure operation, abnormal SW operations, adverse weather conditions, and SW leak isolation. The inspectors verified that Constellation maintained these procedures consistent with their design and licensing basis and that plant operators could reasonably implement the procedures as written. The inspectors independently verified that SW instrumentation that operators rely on for decision making was available and functional.

The inspectors reviewed Constellation's SW pipe inspection and monitoring program to assess the condition and structural integrity of the SW piping. The inspectors reviewed a sample of SW pipe nondestructive examination records, intake structure inspections, maintenance history, and associated engineering evaluations to ensure that Constellation appropriately identified and dispositioned any SW piping or intake structure degradation.

The inspectors performed walkdowns of the intake area (including the trash racks, SW pumps, SW traveling water screens, and structural supports), the Unit 1 SRW pump room and accessible areas of the auxiliary buildings containing SW piping to look for

indications of piping leakage and/or degradation. Additionally, the inspectors walked down control room instrument panels and reviewed operator logs.

The inspectors also reviewed a sample of CRs related to the SW system valves, pumps, and piping integrity to ensure that Constellation appropriately identified, characterized, and corrected problems related to these essential systems, structures, and components (SSCs).

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11Q – One Sample)

Resident Inspector Quarterly Review

a. Inspection Scope

On May 23, 2011, the inspectors observed a licensed operator requalification scenario to assess operator performance and the adequacy of the licensed operator training program. The scenario involved solar magnetic disturbances that resulted in equipment malfunctions and operator challenges that required operators to implement abnormal operating procedures (AOPs), emergency operating procedures (EOPs), and emergency response plan implementing procedures. The inspectors focused on high-risk operator actions performed during the implementation of AOPs and EOPs including the timely and appropriate evaluation of emergency action level criteria. The inspectors verified the clarity and formality of communications, the completion of appropriate operator actions in response to alarms, the performance of 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 – Three 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 SSCs classified as (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs classified as (a)(1).

- No. 24 containment air cooler (CAC) breaker tripped (CR-2011-003714);
- Unit 2 turbine bypass valve (2-CV-3940) will not manually stroke (CR-2011-002728); and
- No. 21 SRW header turbine building isolation valve (2-CV-1637) exceeded its limited value full stroke time (CR-2011-001486).

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – Six 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 (OOS) 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 the 2B EDG on April 22, 2011;
- Emergent risk assessment associated with No. 22 charging pump OOS due to packing failure on May 20, 2011;
- Planned maintenance on the 1A EDG on May 23, 2011;
- Emergent risk assessment associated with No. 13 high pressure safety injection (HPSI) pump OOS due to higher than expected recirculation flow on June 11-12, 2011;
- Planned maintenance associated with No. 13 AFW pump OOS and maximum emergency generation alert declaration on June 9, 2011; and
- Emergent risk assessment associated with No. 22 AFW pump OOS due to replacement of discolored oil on June 10, 2011.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – Six 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 Chapter (IMC) 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:

- Abnormal noise coming from No. 12 control room HVAC (CR-2011-004749).
- 11B safety injection tank level alarm (CR-2011-004534);
- 0C diesel building supply fan motor increased vibrations (CR-2011-004975);
- Component cooling discharge valve from No. 11 shutdown cooling heat exchanger (1-CV-3828), upper limit switch not making up (CR-2011-005676);
- Unit 2 demineralized water containment isolation valve (2-CV-5460) stroked in the alert range (CR-2011-005775); and
- 11B AFW air accumulator pressure low (CR-2011-006530).

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – Two Samples)

a. Inspection Scope

The inspectors reviewed the plant modifications listed below to verify that the modifications 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 modifications to ensure the system maintained its availability, reliability, and functional capability. The inspectors conducted walkdowns of accessible portions of the modifications 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 modifications were implemented in accordance with Constellation's procedures.

- Temporary modification to replace the drip pans for No. 23 HPSI pump with tygon tubing (ECP-11-000150); and
- Permanent modification to replace Unit 1 containment radiation monitor system (ES200500562-000).

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – Eight 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 were 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.

- Troubleshoot and repair engineered safety features bistable trip for No. 11 4 kV bus (WO #C91277705);
- Disassemble, clean, and reassemble 11A SRWHX (WO #C90889880);
- Replace No. 11 SW pump (WO #C91041188);
- Replace No. 11 SW pump motor (WO #C90624251);
- Replace the 1A EDG 125V direct current batteries (WO #C120081801);
- Troubleshoot and repair No. 24 CAC starter (WO #C91237719);
- Troubleshoot and repair security equipment power supply panel (IP82) (WO #C91268903); and
- Repair No. 22 steam generator AFW flow control valve (2-CV-4535) (WO #C91397782).

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.

- SW pump and check valve quarterly operability in-service test (STP O-73A-1);
- Unit 1 Reactor coolant system (RCS) leakage evaluation (STP O-27-1);
- Unit 2 RCS leakage evaluation (STP O-27-2);

- AFW system quarterly surveillance test (STP O-005A-2); and
- Containment atmosphere radiation monitoring channel functional test (STP M-486-2).

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation (71114.06 – One Sample)

a. Inspection Scope

The inspectors evaluated an EP drill on April 6, 2011. The scenario involved a seismic event, loss of containment integrity via the emergency airlock, a loss of coolant accident, and various equipment failures. The inspectors observed the emergency response organization's performance in the simulated control room, the Technical Support Center, and the Nuclear Security Facility. The inspectors verified that the classification, notification, and protective actions were accurate and timely. Additionally, the inspectors verified that Constellation conducted an assembly and accountability of station personnel as required. Finally, the inspectors assessed the ability of Constellation's critique to address EP performance deficiencies identified during the drill.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2RS08 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage and Transportation

a. Inspection Scope

During the period April 11 to 15, 2011, the inspectors conducted the following activities to verify that the radioactive material processing and transportation program complies with federal regulations. The inspectors reviewed shipment documentation, toured facilities, and observed work activities.

Inspection Planning

The inspectors reviewed the CCNPP's UFSAR description of the radioactive waste processing system. The inspectors reviewed the recent radiological release report for information on the type and amount of radioactive waste disposed.

Radioactive Material Storage

The inspectors toured the radioactive material storage areas in the plant and at the material processing area. The inspectors verified that containers of radioactive material were labeled in accordance with 10 CFR Part 20.1904 and controlled in accordance with 10 CFR Part 20.1905.

The inspectors verified that radioactive material storage areas were controlled and posted in accordance with the requirements of 10 CFR Part 20. The inspectors also verified that materials stored or used in the controlled or unrestricted areas were secured against unauthorized removal in accordance with 10 CFR Part 20.1801 and 10 CFR Part 20.1802.

The inspectors verified that Constellation has established a process for monitoring the impact of long-term storage sufficient to identify potential unmonitored, unplanned releases.

The inspectors verified that no signs of swelling, leakage, or deformation existed on nine containers of stored radioactive material.

Radioactive Waste System Walkdown

The inspectors walked down the accessible portions of the Nukem ion exchange system. The inspector verified that the system is as described in the UFSAR, the Offsite Dose Calculation Manual, and the Process Control Program (PCP).

The inspectors verified that the reactor coolant waste evaporator has administrative and physical controls established to ensure that the equipment will not contribute to an unmonitored release path or affect operating systems or be a source of unnecessary personnel exposure.

The inspectors verified that no changes have been made to the radioactive waste processing systems since the last inspection.

The inspectors verified for resin transfers to the high integrity containers (HIC), that waste stream mixing, sampling, and the methodology for waste concentration averaging are consistent with the PCP, and provide representative samples of the waste product for the purposes of waste classification.

The inspectors verified that tank recirculation is not required as a composite sample is obtained during resin transfers to the HIC which provides a representative sample.

The inspectors verified that the PCP describes the methods and procedures for dewatering and waste stabilization.

Waste Characterization and Classification

The inspectors verified for dry activated waste and for resins, the sample analysis results are sufficient to support radioactive waste characterization as required by 10 CFR Part 61. The inspectors also verified that Constellation's use of scaling factors and

calculations to account for difficult-to-measure radionuclides is technically sound and based on current 10 CFR Part 61 analyses.

The inspectors verified that the CCNPP chemistry department monitors reactor coolant radiochemistry parameters for changes and identifies when new 10 CFR Part 61 analyses may be required. The inspectors noted, with the exception of equipment malfunction, that each resin transfer has a sample taken and analyzed for 10 CFR Part 61 analyses.

The inspectors verified that the scope of Constellation's audit program meets the requirements of the NRC regulations.

Shipment Preparation

The inspectors observed shipment packaging, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifests, shipping papers provided to the driver, driver placement of the shipping papers in the vehicle, and the licensee verification of shipment readiness.

The inspectors observed radiation protection technicians during the conduct of radioactive waste processing and radioactive material shipment preparation. The inspectors verified that the personnel were knowledgeable of the shipping regulations and demonstrated adequate skills to accomplish the package preparation requirements for public transport.

Shipping Records

The inspectors reviewed four non-excepted package shipment records. The inspectors verified that the shipping documents indicated the proper shipping name, accurate curie content and volume, appropriate waste classification, transport index, identification number, and emergency response information. The inspectors verified operation of the emergency response contact telephone number.

Problem Identification and Resolution

The inspectors reviewed quality assurance audits, self-assessments and CRs related to the radioactive material processing and transportation program performed since the last inspection. The inspectors also reviewed the corrective action reports written against the associated condition reports.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES (OA)

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

.1 Barrier Integrity

a. Inspection Scope

The inspectors reviewed Constellation's PI program to evaluate, collect, and report information on the following Units 1 and 2 PIs: RCS specific activity and RCS leak rate. The inspectors reviewed the PIs for the period of April 2010 through March 2011. The inspectors used the guidance provided in Nuclear Energy Institute 99-02, "Regulatory Assessment PI Guideline," to assess the accuracy of PI data collected and reported. The inspectors reviewed RCS sample analysis, control room logs of daily measurements for RCS leakage and compared that information to the data reported by the PI. Additionally, the inspectors observed surveillance activities that determined the RCS identified leakage rate, and chemistry personnel taking and analyzing an RCS sample.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – Two Samples)

.1 Reviews of Items Entered Into the Corrective Action Program (CAP)

a. Inspection Scope

The inspectors performed a daily screening, as required by Inspection Procedure (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 Semi-Annual Review

a. Inspection Scope

The inspectors performed a semi-annual review of site issues to identify trends that might indicate the existence of more significant safety issues, as required by IP 71152, "Identification and Resolution of Problems." The inspectors included in this review, repetitive or closely-related issues that may have been documented by Constellation outside of the CAP, such as trend reports, PIs, system health reports, and quality assurance assessments. The inspectors also reviewed the Constellation CAP database to assess CRs written in various subject areas (equipment problems, human performance issues, etc.), as well as individual issues identified during the NRC's daily

CR review (Section 4OA2.1). The inspectors reviewed Constellation's quarterly trend report for the first quarter of 2011 for selected departments to verify that Constellation personnel were appropriately evaluating and trending adverse conditions in accordance with applicable procedures.

b. Findings and Observations

No findings were identified.

In general, the licensee identified trends and appropriately addressed the trends within their CAP. No trends were noted that indicated a potentially safety significant issue. Examples of trends identified by Constellation were trends in the areas of configuration control, foreign material exclusion, and Unit 2 equipment reliability.

.3 Annual Sample: No. 24 CAC Motor Starter Failure

a. Inspection Scope

The inspectors reviewed the identification, evaluation, and corrective actions taken by Constellation associated with No. 24 CAC motor starter. This condition was identified on March 30, 2011, when CAC breaker 52-2414 tripped during performance of its quarterly surveillance test. Constellation entered the issue into the CAP as CR-2011-003714. The inspectors reviewed the associated apparent cause evaluation, corrective action reports, performance data, maintenance history, vendor technical manuals, and interviewed engineering and operations personnel to evaluate component performance and the effectiveness of Constellation's corrective actions.

b. Findings and Observations

No findings were identified.

The inspectors determined that Constellation adequately implemented the corrective action process following the discovery of the issue. Constellation determined that the cause of the failure of the No. 24 CAC breaker to trip was a degraded mechanical interlock. The degraded interlock allowed the closure of both the low speed and the fast speed contactors at the same time. This caused a phase-to-phase short across the motor power supply during a shift of the CAC from fast to low speed. Constellation replaced the mechanical interlock and the damaged contactors. Additional corrective actions planned include scheduling inspections for the remaining CACs for both units and updating the preventive maintenance checklist to include a check for proper adjustment of the mechanical interlock. The inspectors determined that corrective actions were timely and appropriate to address the cause of this issue.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153 - Two samples)

.1 Unit 2 Main Generator Voltage Regulator Failure

a. Inspection Scope

On June 20, 2011, operators commenced a power reduction to approximately 10 percent to remove the main turbine from service due to a failure of the voltage regulator to control in automatic. At approximately 20 percent power, a feedwater flow transient occurred when operators placed No. 21 steam generator feed pump (SGFP) mini-flow controller in automatic. Operators implemented AOP 3G, "Main Feedwater Malfunctions," and stabilized the feedwater flow oscillations. Following completion of the main voltage regulator repairs and resolving No. 21 SGFP mini-flow controller issue, operators restored the unit to 100 percent power on June 23, 2011. The inspectors observed portions of the downpower, and discussed the event with operators, and reviewed control room logs, plant computer data, and procedures to gain an understanding of the event and to determine if operators' response was appropriate.

b. Findings

No findings were identified.

.2 (Closed) Licensee Event Report (LER) 50-318/2011-001-00, Pressure Boundary Leakage Caused by Primary Water Stress Corrosion Cracking

On February 27, 2011, while Unit 2 was in a refueling outage (Mode 6), Constellation identified (during a bare metal inspection) dry boric acid on pressurizer heater N3 outer sleeve to weld pad J-Groove weld location (not normally accessible by plant personnel during plant operation at power), indicating reactor coolant leakage. Constellation determined that this leakage constituted an RCS pressure boundary leak. Based on both visual inspection and chemical analysis performed during and after the discovery of boric acid at the N3 penetration, it was determined that the leak most likely existed during plant operation. Constellation performed destructive and non-destructive examinations at the weld. The evaluation concluded that the root cause of the crack was primary water stress corrosion cracking. As part of their corrective actions, in accordance with American Society of Mechanical Engineers (ASME) code, Constellation installed a welded plug at the N3 location. Following the repairs, Constellation conducted visual and surface examinations (dye penetrant testing) as well as pressure testing during Mode 3 at normal operating pressure and temperature, with satisfactory results. This LER reported that Calvert Cliffs had been in a condition prohibited by TS 3.4.13.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 was 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. The inspectors conducted an initial significance determination screening using IMC 0609 Attachment 4,

"Phase 1 – Initial Screening and Characterization of Findings." Using the Initiating Events cornerstone screening criteria in Table 4a, and assuming worst case degradation the inspector concluded a Phase 3 risk evaluation was warranted. A Region I Senior Reactor Analyst performed a Phase 3 qualitative assessment of the observed RCS leakage condition and concluded the risk to core damage was very low (Green). The basis for this qualitative risk determination was that the observed leakage was minimal (quantified as a few drops per minute), well within the capability of the charging system, and the licensee's analysis confirmed that the ASME Code allowable stress limits for the affected penetration were within all design specifications. In addition, the design capability of RCS boundaries and associated piping systems are premised on the "leak before break" construction and fabrication methodologies and credits periodic in-service inspections to identify and correct potential or actual RCS boundary defects prior to further degradation or catastrophic failure. This issue is of very low safety significance (Green) and was appropriately identified and corrected per the licensee's ongoing in-service inspection program.

Because this issue was of very low safety significance and it was not reasonable for Constellation to have foreseen and prevented the leakage, absent a performance deficiency, the NRC has decided to exercise enforcement discretion in accordance with Section 3, "Use of Enforcement Discretion," of the NRC Enforcement Policy and has refrained from issuing enforcement action for the violation of TS (EA-11-164). 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.

4OA5 Other Activities

.1 (Closed) NRC Temporary Instruction 2515/183, "Followup to the Fukushima Daiichi Nuclear Station Fuel Damage Event"

The inspectors assessed the activities and actions taken by the licensee to assess its readiness to respond to an event similar to the Fukushima Daiichi nuclear plant fuel damage event. This included: (1) an assessment of the licensee's capability to mitigate conditions that may result from beyond design basis events, with a particular emphasis on strategies related to the spent fuel pool, as required by NRC Security Order Section B.5.b issued February 25, 2002, as committed to in severe accident management guidelines, and as required by 10 CFR Part 50.54(hh); (2) an assessment of the licensee's capability to mitigate station blackout conditions, as required by 10 CFR Part 50.63 and station design bases; (3) an assessment of the licensee's capability to mitigate internal and external flooding events, as required by station design bases; and (4) an assessment of the thoroughness of the walk downs and inspections of important equipment needed to mitigate fire and flood events, which were performed by the licensee to identify any potential loss of function of this equipment during seismic events possible for the site.

Inspection Report 05000317/2011009 and 05000318/2011009 (ML111310243) documented detailed results of this inspection activity.

.2 (Closed) NRC Temporary Instruction 2515/184, "Availability and Readiness Inspection of Severe Accident Management Guidelines (SAMGs)"

On May 20, 2011, the inspectors completed a review of the licensee's SAMGs implemented as a voluntary industry initiative in the 1990's to determine (1) whether the SAMGs were available and updated, (2) whether the licensee had procedures and processes in place to control and update its SAMGs, (3) the nature and extent of the licensee's training of personnel on the use of SAMGs, and (4) licensee personnel's familiarity with SAMG implementation.

The results of this review were provided to the NRC task force chartered by the Executive Director for Operations to conduct a near-term evaluation of the need for agency actions following the Fukishima Daiichi fuel damage event in Japan. Plant-specific results for Calvert Cliffs were provided in an Attachment to a memorandum to the Chief, Reactor Inspection Branch, Division of Inspection and Regional Support, dated May 27, 2011 (ML111470361).

.3 Review of Institute of Nuclear Power Operations Report

The inspectors completed a review of the interim report for the Institute of Nuclear Power Operations/World Association of Nuclear Operators, October 2010 Evaluation, dated January 7, 2011. No new safety issues were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On July 15, 2011, the resident inspectors presented the inspection results to Mr. James M. Yoe and other members of the Constellation staff who acknowledged the findings. The licensee did not indicate that any of the information presented at the exit meeting was proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Constellation Personnel

G. Gellrich, Site Vice President
J. Yoe, Acting Plant General Manager
A. Ball, Supervisor, Radiation Protection Operations
K. Bodine, Supervisor, Engineering
J. Delgado, Senior Engineer
J. Etzweiler, Principal Engineer
D. Frye, Manager, Operations
J. Gines, Principal Engineer
K. Gould, General Supervisor, Radiation Protection
D. Lauver, Director, Licensing
J. Lenhart, Supervisor, Radiation Materials Processing
K. Mills, General Supervisor, Shift Operations
C. Neyman, Licensing, Senior Engineering Analyst
K. Riggleman, Engineering Program Manager
A. Simpson, Supervisor, Licensing
J. Stanley, Manager, Engineering Services
M. Stanley, Fire Marshal
C. Thomas, Engineer
T. Unkle, Licensing, Engineering Analyst
J. Wilson, Supervisor, Engineering
J. York, General Supervisor, Chemistry

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Closed

05000318/2011-001-00	LER	Pressure Boundary Leakage Caused by Primary Water Stress Corrosion Cracking (Section 4OA3.2)
05000317/318/2515/183	TI	Followup to the Fukushima Daiichi Nuclear Station Fuel Damage Event (Section 4OA5.1)
05000317/318/2515/184	TI	Availability and Readiness Inspection of Severe Accident Management Guidelines (Section 4OA5.2)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
EP-1-108, Severe Weather Preparation, Revision 0
ERPIP-3.0, Immediate Actions, Attachment 20, Severe Weather, Revision 04901
NO-1-119, Nuclear Operations Administrative Procedure, Seasonal Readiness, Revision 00600
OI-21A, 1A Diesel Generator, Revision 20
OI-22M, 1A and 0C Diesel Generator Building HVAC, Revision 7

OI-22H, Switchgear Ventilation and Air Conditioning, Revision 22
AOP-7M, Major Grid Disturbances, Revision 1

Condition Reports
CR-2011-005774
CR-2011-006045

Miscellaneous
SA-2011-000176, Pre Summer Assessment 2011
Master List of Seasonal Readiness Representative Tasks

Section 1R04: Equipment Alignment

Procedures
OI-21B-1, 1B Diesel Generator, Revision 01803
OI-21C, 0C Diesel Generator, Revision 02302
OI-27C, 4.16 kV System, Revision 23
OI-29-1, Saltwater System, Revision 65
OI-15-1, Service Water System, Revision 44
OI-32A-1, Auxiliary Feedwater System, Revision 02204

Condition Reports
CR-2011-006577
CR-2011-006574
CR-2011-004163
CR-2010-007000

Drawings
60708SH0001, Circulating Saltwater Cooling System, Revision 43
60708SH0002, Circulating Saltwater Cooling System, Revision 108
60708SH0003, Circulating Saltwater Cooling System, Revision 17
60583SH0001, Auxiliary Feedwater System (Steam), Revision 0063
60583SH0002, Auxiliary Feedwater System (Condensate) Revision 0002

Work Orders
WO #C90940176
WO #C90916502

Section 1R05: Fire Protection

Procedures
FP-0002, Fire Hazards Analysis Summary Document, Revision 0
SA-1-100, Fire Prevention, Revision 16
SA-1-105, Fire Brigade Training, Revision 00101

Condition Reports
CR-2011-005562

Miscellaneous
Fire Drill Scenario 11-04, Fire in the Auxiliary Boiler Room Diked Fuel Oil Pump Area
SA-FFSM-PA12, Fire Fighter Strategies for 12 Foot Areas of the Turbine Building, Revision 0100
SA-FFSM-NSB-43, Fire Fighter Strategies for the Intake Structure, Revision 1
Badge Access Transactions for Intake Structure from 5/25/11 0000 to 5/27/11 1000
SA-FFSM-TB317, Fire Fighter Strategies for the Unit 1 27' Switchgear Room

Section 1R06: Flood Protection Measures

Procedures
1-C10-ALM, ESFAS 13 Alarm Manual, Revision 41

Condition Reports
CR-2011-004298
CR-2011-005586

Drawings
60733SH0003, Miscellaneous Drain and Sump Piping Turbine and Diesel Building and Yard, Revision 59
61087SH0014U, Annunciator Initiating Devices ESF 1C10 J01-J24, Revision 23
61237SH0002, Underground Conduit West of Turbine Building Plan, Revision 0
63874SH0003, Underground Conduit West of Turbine Building Plan, Revision 0
63874SH0005, Underground Conduit West of Turbine Building Plan, Revision 0

Miscellaneous
ES-001, Flooding, Revision 3

Work Orders
WO #C91131161

Section 1R07: Heat Sink Performance

Condition Reports
CR-2011-004163
CR-2011-004396

Drawings
60708SH0003, Circulating Salt Water Cooling System, Revision 17

Miscellaneous
ESR-09-003888, Evaluate Results of 2009 SRW Heat Exchanger 89-13 Testing, 10/6/2009

Drawings
60706SH0002, Service Water Cooling System, Auxiliary Building & Containment, Revision 75
60708SH0001, Circulating Salt Water Cooling System, Revision 43
60708SH0002, Circulating Salt Water Cooling System, Revision 108
60708SH0003, Circulating Salt Water Cooling System, Revision 17
62708SH0001, Circulating Water Cooling System, Revision 33
62708SH0002, Circulating Water Cooling System, Revision 107
62708SH0003, Circulating Saltwater System, Revision 7

Non-Destructive Examination Records
CC09-BU-012
CC10-BU-009

Work/Maintenance Orders
WO# C120074501
WO# C90889898
MO 1200805887

Procedures
EN-1-327, Service Water Reliability Program (Generic Letter 89-13), Revision 00500
SW-04, Salt Water Piping Cement Lining Repair, Revision 1

Operating Procedures
AOP-7A, Loss of Saltwater Cooling, Revision 14
AOP-7L, Circulating Water/Intake Malfunctions, Revision 11
OI-29, Saltwater System, Revision 65
OI-15, Service Water System, Rev. 44

Miscellaneous
1C13-ALM, SRW and MISC Station Services Alarm Manual, Revision 53
ECP ES200800185-000, Demolish and Remove Retired Towerbrom 960 Salt Water Chemical Addition (SWCA) System, Revision 0000
Final Response to Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," dated 6/30/94
Fourth Interval Inservice Inspection Pressure Testing Program Plan for Calvert Cliffs Nuclear Power Plant Units 1 & 2, Revision 0
System Description No. 010, Salt Water Chemical Addition System, Revision 06
System Description No. 012, Saltwater System, Revision 7
Unit 1 Saltwater Cooling System Health Report from 10/1/10-12/31/10
Unit 2 Saltwater Cooling System Health Report from 10/1/10-12/31/10
Water Intake Structure 1 & 2 Walkdown Results dated 8/4/09

Calculations
CA03387, Unit 1 SW Flow Analysis, Revision 1
CA03477, Service Water Plate Heat Exchanger Thermal Performance Evaluation, Revision 2
CA04339, Unit 2 SW Flow Analysis, Revision 1

Condition Reports
CR-2008-000313
CR-2008-002324
CR-2009-002888
CR-2009-003133
CR-2009-003361
CR-2009-003469
CR-2009-005973
CR-2009-007839
CR-2009-008779
CR-2010-000167
CR-2010-001986
CR-2010-003754
CR-2010-003924
CR-2010-004042
CR-2010-007148
CR-2010-008353
CR-2010-010761
CR-2011-000290
CR-2011-001503
CR-2011-002242
CR-2011-003907
CR-2011-004663
CR-2011-005256*
CR-2011-005257*
CR-2011-005350*
CR-2011-005378*
IRE-032-690

* identified during inspection

Surveillance Testing
Reptask 10112097(B), Disassemble, Clean and Reassemble 11B Service Water Heat Exchanger 1HXSRW11B, performed 4/13/11
SRWHX-04, Service Water Heat Exchanger Cleaning and Inspection, performed 4/13/11
STP O-73A-1, Saltwater Pump and Check Valve Quarterly Operability Test, performed 5/2/11
SW-03, Saltwater Pipe Cleaning and Inspection, performed 4/5/11

Section 1R11: Licensed Operator Requalification Program

Procedures
AOP-7M, Major Grid Disturbances, Revision 00102
EOP-2, Loss of Offsite Power, Revision 01401
EOP-7, Station Blackout, Revision 01601
ERPIP-611, Severe Accident Management Restorative Actions, Revision 00301

Miscellaneous
AOP-7M/EOP-2 & 7, Training for the Licensed Operator Requalification Program at the Calvert Cliffs Nuclear Power Plant
AOP-7M-TB, AOP-7M Technical Basis, Revision 00102

Section 1R12: Maintenance Effectiveness

Procedures
CNG-AM-1.01-1023, Maintenance Rule Program, Revision 00100

Condition Reports
CR-2010-010680
CR-2011-003711
CR-2011-004182
CR-2011-002728
CR-2011-001486

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

Work Orders
WO #C90989133
WO #C91030797

Section 1R15: Operability Determinations and Functionality Assessments

Procedures
EOP 3, Loss of Feedwater, Revision 01803
EOP 5, Loss of Coolant Accident, Revision 02400
EOP 8, Functional Recovery Procedure, Revision 03300
EOP Attachment 2, EOP Attachment, Revision 1700
EN-4-108, ASME In-service Testing of Power-Operated Valves and Manual Valves, Revision 00300
STP O-65D-2, Miscellaneous Containment Isolation Valve Quarterly Testing, Revision 00702
CNG-OP-1.01-1002, Conduct of Operability Determinations/Functionality Assessments, Revision 00101

Drawing
60710SH0002, Component Cooling System Unit 1, Revision 37

Condition Reports
CR-2011-004749
CR-2011-004975
CR-2011-004534
CR-2011-005676
CR-2011-005677
CR-2011-005775
CR-2011-006042
CR-2011-006530

Miscellaneous
Engineering Programs Memorandum 2011-004, dated June 3, 2011

Section 1R18: Plant Modifications

Condition Reports
CR-2011-003474
CR-2011-004803
CR-2011-005422
CR-2011-005982
CR-2011-005981
CR-2011-005992
CR-2011-005944

Miscellaneous
ECP-11-000150, Replace the Drip Pans for the 23 HPSI Pump with Tygon Tubing, Revision 0000
ES200500562-000, RMS Unit 1 5280/5281

Section 1R19: Post-Maintenance Testing

Procedures
BAT-034, Diesel Generator Battery Quarterly Check, Revision 00200
BAT-35, Diesel Generator Battery Intercell Connection Inspection, Revision 0
OI-29, Saltwater System, Revision 65
PUMP-3A, Saltwater Pump Removal and Replacement, Revision 00103
STP-O-8A-1, Test of 1A DG and 11 4kV Bus LOCI Sequencer, Revision 27

Condition Reports
CR-2011-004363
CR-2011-005590

Drawings
82656, Elementary Wiring Diagram Potential Circuits Bus 11 & 12 GE 4kV Switchgear, Revision 15

Work Orders
WO #120081801
WO #C90624251
WO #C90889880
WO #C91041188
WO #C91277705
WO #C91237719
WO #C91397782
WO #C91268903

Section 1R22: Surveillance Testing

Procedures
EN-1-110, Control of Core Reload Design, Revision 02201
EN-4-107, ASME Inservice Testing of Pumps, Revision 00300
STP O-027-1, Reactor Coolant System Leakage Evaluation, Revision 02002
STP O-027-2, Reactor Coolant System Leakage Evaluation, Revision 01802
STP O-73A-1, Saltwater Pump and Check Valve Quarterly Operability Test, Revision 02203
STP O-005A-2, Auxiliary Feedwater System Quarterly Surveillance Test, Revision 02300

STP M-486-2, Containment Atmosphere Radiation Monitoring Channel Function Test, Revision 00003

Condition Reports
CR-2011-005281

Miscellaneous
Constellation Energy (CCNPP Unit 1) IST Program, Pump and Valve Inservice Testing Program Fourth Ten-Year Interval, Revision 0
Constellation Energy (CCNPP Unit 1) IST Program Component Basis Information
PR-1-302, Operations Procedure Development & Modification Acceptance Unit Control of Work Processes, Revision 5, Attachment 13, Procedure Basis Data Entry Form, Basis Number B0441, Engineering Evaluation to Provide Numerical Bases for STP-O-27

Section 1EP6: Drill Evaluation

Miscellaneous
Emergency Response Plan
SP-5C, Scenario Time Line

Section 2RS08: Radioactive Solid Waste Processing and Radioactive Material Handling, Storage and Transportation

Procedures:
CH-1-110, Process Control Program, Revision 0
CP-616, Shipment of Radioactive Materials Definitions, Revision 0
CP-617, Shipment of Radioactive Material General Requirements, Revision 0
CP-618, Packaging for Shipment or Transportation of Radioactive Material, Revision 00102
CP-619, Radioactive Material Quantification, Identification and Waste Characterization, Revision 0
CP-622, Shipment of Radioactive Materials (Type A or Type B), Revision 0
CP-630, 10 CFR 61 Scaling Factors, Revision 0

Condition Reports:
CR-2010-002134
CR-2010-005162
CR-2010-008688
CR-2010-009677
CR-2010-010785
CR-2010-010978
CR-2010-012741
CR-2010-012756

Audits, Assessments and Reports:
2010-1004 Q & PA Report
2010-0056 Quality Assessment Report
SA-2010-000110, Snapshot Self-Assessment

Radioactive Shipment Records:

10-052,	172	Curies
10-054,	1.06	Curies
11-010,	1.45	Curies
11-062,	0.011	Curies

Section 4OA1: Performance Indicator Verification

Procedures
CNG-OP-2.01-2001, Gamma Spectroscopy Data Interpretation, Revision 0000
CP-0204, Specification and Surveillance Primary Systems, Revision 4502
CP-0401, Nuclear Steam Supply System Sampling, Revision 0800
CP-0935, Determination of Reactor Coolant Isotopic Activity, Revision 0401
CP-0977, Operation of Gamma Spectroscopy Counting System, Revision 0700

Condition Reports
CR-2011-004820
CR-2011-005007

Section 4OA2: Problem Identification and Resolution

Procedures
CNG-AM-1.01-1018, Preventative Maintenance Program, Revision 00600
STP O-7B-2, "B" Train Engineered Safety Features Logic Test, Revision 05904

Condition Reports
CR-2011-003714
CR-2011-006659
CR-2010-002052
CR-2010-012957
CR-2010-011213
CR-2011-003764
IR4-035-330
IRE-015-414

Drawings
82572SH0002, Layout Drawing Size 5 Starter Assembly, Revision 0
82572SH0003, Bill of Materials Size 5 Starter Assembly, Revision 2

Miscellaneous
20600012[B], *RP* 24 Cnmt Clg Fan Mtr Inspect 52-2414, 2NB414 Controls Inspection
EPM60600, Maintenance Checklist, Revision 0
ES199501715, Motor Control Center Replacement Units and Starters, Revision 7
VTM 12095-138, Instruction Manual for Cutler Hammer A200 Line Size 5 Starter Assembly, Revision 0
Engineering 1st Quarter Cognitive Trend Report
Maintenance 1st Quarter Cognitive Trend Report
Site Roll Up 1st Quarter 2011 Trend Report

LIST OF ACRONYMS

ADAMS	Agency-Wide Documents Access and Management System
AFW	Auxiliary Feedwater
ASME	American Society of Mechanical Engineers
AOP	Abnormal Operating Procedure
CAC	Containment Air Cooler
CAP	Corrective Action Program
CCNPP	Calvert Cliffs Nuclear Power Plant
CFR	Code of Federal Regulations
CR	Condition Report
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
EP	Emergency Preparedness
HIC	High Integrity Containers
HPSI	High Pressure Safety Injection
HVAC	Heating, Ventilation, and Air Conditioning
IMC	Inspection Manual Chapter
IP	Inspection Procedure
kV	Kilovolt
LER	Licensee Event Report
NRC	Nuclear Regulatory Commission
OI	Operating Instruction
OOS	Out of Service
PARS	Publicly Available Records
PCP	Process Control Program
PI	Performance Indicator
RCS	Reactor Coolant System
SAMG	Severe Accident Management Guidelines
SGFP	Steam Generator Feed Pump
SRW	Service Water System
SRWHX	Service Water Heat Exchanger
SSC	System, Structure and Component
SW	Saltwater
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report