



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

January 22, 2015

Mr. George H. Gellrich, Site Vice President
Calvert Cliffs Nuclear Power Plant, LLC
Exelon Generation Company, LLC
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT – NRC INTEGRATED
INSPECTION REPORT 05000317/2014005 AND 05000318/2014005

Dear Mr. Gellrich:

On December 31, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Calvert Cliffs Nuclear Power Plant (CCNPP), Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on January 21, 2015, 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) which was determined to involve a violation of NRC requirements. Additionally, a licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs), consistent with Section 2.3.2.a of the NRC Enforcement Policy. If you contest any NCVs 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 I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at CCNPP. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, or a finding not associated with a regulatory requirement, 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.

In accordance with Title 10 of the *Code of Federal Regulations* (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 component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA Andrew Rosebrook by direction/

Daniel L. Schroeder, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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

Enclosure: Inspection Report 05000317/2014005 and 05000318/2014005
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

In accordance with Title 10 of the *Code of Federal Regulations* (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 component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA Andrew Rosebrook by direction/

Daniel L. Schroeder, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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

Enclosure: Inspection Report 05000317/2014005 and 05000318/2014005
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

Distribution w/encl: (via email)

D. Dorman, RA
D. Lew, DRA
H. Nieh, DRP
M. Scott, DRP
R. Lorson, DRS
J. Trapp, DRS
D. Schroeder, DRP
A. Rosebrook, DRP
E. Andrews, DRP
A. Siwy, DRP
R. Clagg, DRP, SRI
E. Torres, DRP, RI
C. Fragman, DRP, AA
K. Morgan-Butler, RI, OEDO
RidsNrrPMCalvertCliffs Resource
RidsNrrDorlLpl1-1 Resource
ROPreports Resource

DOCUMENT NAME: G:\DRP\BRANCH1\Calvert_Cliffs\Inspection Reports\CC IR 2014-005\CC-IR-2014-005 final.docx
ADAMS ACCESSION NUMBER: **ML15022A208**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRP	RI/DRP	RI/DRP		
NAME	RClagg/RLC via email	ARosebrook/AAR	DSchroeder/DLS via email		
DATE	1/15/15	1/15/15	1/22/15		

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos. 50-317 and 50-318

License Nos. DPR-53 and DPR-69

Report Nos. 05000317/2014005 and 05000318/2014005

Licensee: Exelon Generation Company, LLC (Exelon)

Facility: Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Location: Lusby, MD

Dates: October 1, 2014 through December 31, 2014

Inspectors: R. Clagg, Senior Resident Inspector
E. Torres, Resident Inspector
H. Anagnostopoulos, Health Physicist
S. Barr, Senior Emergency Preparedness Inspector
E. Burket, Emergency Preparedness Inspector
P. Kaufman, Senior Reactor Inspector
J. Patel, Reactor Inspector
N. Perry, Senior Resident Inspector
D. Silk, Senior Operations Engineer

Approved by: Daniel L. Schroeder, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY	3
1. REACTOR SAFETY	5
1R01 Adverse Weather Protection	5
1R04 Equipment Alignment	6
1R05 Fire Protection	7
1R07 Heat Sink Performance	7
1R11 Licensed Operator Requalification Program	8
1R12 Maintenance Effectiveness	9
1R13 Maintenance Risk Assessments and Emergent Work Control	11
1R15 Operability Determinations and Functionality Assessments	12
1R18 Plant Modifications	12
1R19 Post-Maintenance Testing	13
1R22 Surveillance Testing	13
1EP2 Alert and Notification System Testing	14
1EP3 Emergency Response Organization Staffing & Augmentation System	14
1EP4 Emergency Action Level and Emergency Plan Changes	14
1EP5 Maintenance of Emergency Preparedness	15
2. RADIATION SAFETY	16
2RS1 Radiological Hazard Assessment and Exposure Controls	16
2RS3 In-Plant Airborne Radioactivity Control and Mitigation	17
4. OTHER ACTIVITIES	19
4OA1 Performance Indicator Verification	19
4OA2 Problem Identification and Resolution	20
4OA3 Follow-Up of Events and Notices of Enforcement Discretion	25
4OA6 Meetings, Including Exit	26
4OA7 Licensee-Identified Violations	26
ATTACHMENT: SUPPLEMENTARY INFORMATION	27
SUPPLEMENTARY INFORMATION	A-1
KEY POINTS OF CONTACT	A-1
LIST OF ITEMS OPENED, CLOSED AND DISCUSSED	A-1
LIST OF DOCUMENTS REVIEWED	A-2
LIST OF ACRONYMS	A-10

SUMMARY

Inspection Report 05000317/2014005, 05000318/2014005; 10/01/2014 – 12/31/2014; Calvert Cliffs Nuclear Power Plant (CCNPP), Units 1 and 2; Maintenance Effectiveness.

The report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The inspectors identified one finding of very low safety significance (Green) which was a non-cited violation (NCV). The significance of most findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," dated December 4, 2014. All violations of Nuclear Regulatory Commission (NRC) requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated July 9, 2013. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

Cornerstone: Barrier Integrity

- Green: The inspectors identified a Green NCV of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," paragraph (a)(2), because Exelon did not adequately demonstrate that the spent fuel pool cask handling crane (SFPCHC) (a)(2) performance was effectively controlled through performance of appropriate preventative maintenance. Specifically, Exelon did not identify and properly account for a maintenance rule functional failure (MRFF) of the SFPCHC in September 2013, and thereby did not recognize that the crane exceeded its performance criteria and required a Maintenance Rule (a)(1) determination. Exelon entered this issue in the corrective action program (CAP) as incident report (IR) 02422876. Exelon's immediate corrective actions were to reclassify the September 2013 failure as a MRFF and conduct a Maintenance Rule (a)(1) determination on the SFPCHC.

The inspectors reviewed IMC 0612, Appendix B, "Issue Screening," and determined the finding is more than minor because it is associated with the structure, system, and component (SSC) performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system (RCS), and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, following the MRFF of the SFPCHC in October 2014, Exelon personnel did not identify that the crane required a Maintenance Rule (a)(1) determination, to establish if the crane should be monitored in accordance with 10 CFR 50.65(a)(1). As a result, an excessive amount of time passed for Exelon to comply with the requirements of the Maintenance Rule. In accordance with IMC 0609.04, "Initial Characterization of Findings," issued on June 19, 2012, and IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3, "Barrier Integrity Screening Questions," issued on June 19, 2012, the inspectors determined that the finding was of very low safety significance (Green) because the finding did not result in handling errors, dropped storage cask, or crane operations over the spent fuel pool that caused mechanical damage to fuel clad and a detectable release of radionuclides. The inspectors determined that the finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because Exelon did not

thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, Exelon personnel failed to properly evaluate the issue that occurred in September 4, 2013 as a MRFF [P.2]. (Section 1R12)

Other Findings

A violation of very low safety significance was identified by Exelon and reviewed by the inspectors. Corrective actions taken or planned have been entered into Exelon's CAP. This violation and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at 100 percent power. On November 8, 2014, operators reduced power to 81 percent to conduct main turbine valve testing. Operators returned the unit to 100 percent power on November 8. The unit remained at or near 100 percent power for the remainder of the inspection period.

Unit 2 began the inspection period at 100 percent power. On October 17, 2014, operators reduced power to 88 percent to conduct main condenser waterbox cleaning. On October 18, the unit was returned to 100 percent power. On December 6, operators reduced power to 84 percent to conduct main turbine valve testing. The unit was returned to 100 percent power on December 6. The unit remained at or near 100 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors performed a review of Exelon's readiness for the onset of seasonal low temperatures. The review focused on the 12 condensate storage tank. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications (TS), control room logs, and the CAP to determine what temperatures or other seasonal weather could challenge this system, and to ensure Exelon personnel had adequately prepared for these challenges. The inspectors reviewed station procedures, including Exelon's seasonal weather preparation procedure and applicable operating procedures. The inspectors performed walkdowns of the selected system to ensure station personnel identified issues that could challenge the operability of the system during cold weather conditions. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q – 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- Unit 1 'A' emergency core cooling system (ECCS) train during 'B' ECCS train out of service for maintenance on October 6, 2014
- 12 post loss of coolant incident (LOCI) filter during 11 post LOCI filter out of service for maintenance on October 8, 2014
- 1A emergency diesel generator (EDG) and alternate alternating current diesel during 1B EDG out of service for maintenance on October 16, 2014

The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable procedures, system diagrams, the UFSAR, TS, condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether Exelon's staff had properly identified equipment issues and entered them into the CAP for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

.2 Full System Walkdown (71111.04S – 1 sample)

a. Inspection Scope

On October 15, 2014, the inspectors performed a complete system walkdown of accessible portions of the 125 volts direct current (VDC) system to verify the existing equipment lineup was correct. The inspectors reviewed operating procedures, emergency operating procedures (EOP), surveillance tests, drawings, equipment line-up check-off lists, and the UFSAR to verify the system was aligned to perform its required safety functions. The inspectors performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. Additionally, the inspectors reviewed a sample of related CRs and work orders (WOs) to ensure Exelon appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

1R05 Fire ProtectionResident Inspector Quarterly Walkdowns (71111.05Q – 2 samples)a. Inspection Scope

The inspectors conducted a tour of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that Exelon controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of service, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Fire Area 43, Unit 2, auxiliary feedwater pump room on December 3, 2014
- Fire Area IS, Intake Structure, intake structure outside, and intake structure pump room on December 4, 2014

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07 – 1 sample)a. Inspection Scope

The inspectors reviewed the 12 component cooling heat exchanger to determine its readiness and availability to perform its safety functions. The inspectors reviewed the design basis for the component and verified Exelon's commitments to NRC Generic Letter 89-13. The inspectors observed actual performance tests for the heat exchangers and/or reviewed the results of previous inspections of the 12 component cooling heat exchanger. The inspectors discussed the results of the most recent inspection with engineering staff and reviewed pictures of the as-found and as-left conditions. The inspectors verified that Exelon initiated appropriate corrective actions for identified deficiencies. The inspectors also verified that the number of tubes plugged within the heat exchanger did not exceed the maximum amount allowed.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11Q – 2 samples; 71111.11A – 1 sample)

.1 Quarterly Review of Licensed Operator Regualification Testing and Training

a. Inspection Scope

The inspectors observed licensed operator simulator training involving the loss of the 22 125 VDC bus, 11B reactor coolant pump locked rotor, and an anticipated transient without scram that resulted in an Alert declaration on October 21, 2014. The inspectors evaluated operator performance during the simulated event and verified completion of risk significant operator actions, including the use of abnormal procedures and EOPs. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the TS action statements entered by the shift manager. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room

a. Inspection Scope

During the inspection period, the inspectors conducted observations of licensed reactor operators actions and activities, during the events below, to ensure that the activities were consistent with the licensee procedures and regulatory requirements. As part of this assessment, the inspectors observed the following elements of operator performance: (1) operator compliance and use of plant procedures including TS; (2) control board/in-plant component manipulations; (3) use and interpretation of plant instruments, indicators and alarms; (4) documentation of activities; (5) management and supervision of activities; and, (6) communication between crew members.

- Main control room observation during shift turnover and routine plant operations on December 22, 2014

b. Findings

No findings were identified.

.3 Licensed Operator Regualification Program

a. Inspection Scope

On December 30, 2014, one NRC region-based inspector conducted an in-office review of results of Exelon-administered annual operating tests for 2014, for CCNPP, Units 1 and 2 operators. (The biennial requalification written examination was not administered

in 2014. Two operators have not yet completed the 2014 annual operating test. The inspection assessed whether pass rates were consistent with the guidance of IMC 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)," issued on December 6, 2011. The review verified that the failure rate (individual or crew) did not exceed 20 percent.

- 1 out of 83 operators failed at least one section of the annual exam. The overall individual failure rate was 1.2 percent.
- 0 out of 15 crews failed the simulator test. The crew failure rate was 0.0 percent.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 2 samples)

a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on SSC performance and reliability. The inspectors reviewed system health reports, CAP documents, maintenance WOs, and maintenance rule basis documents to ensure that Exelon was identifying and properly evaluating performance problems within the scope of the maintenance rule. For each sample selected, the inspectors verified that the SSC was properly scoped into the maintenance rule in accordance with 10 CFR 50.65 and verified that the (a)(2) performance criteria established by Exelon staff was reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2). Additionally, the inspectors ensured that Exelon's staff was identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- Alarms on control room panels 1C07, 08, 09, & 10 will not clear (action report (AR) 02391252)
- Auxiliary building cask handling crane auxiliary hoist encoder does not trigger the emergency brake (CR-2013-007353)

b. Findings

Introduction: The inspectors identified a Green NCV of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," paragraph (a)(2), because Exelon did not adequately demonstrate that the SFPCHC (a)(2) performance was effectively controlled through performance of appropriate preventative maintenance. Specifically, Exelon did not identify and properly account for a MRFF of the SFPCHC in September 2013, and thereby did not recognize that the crane exceeded its performance criteria and required a Maintenance Rule (a)(1) determination.

Description: On September 4, 2013, during the yearly preventive maintenance of the SFPCHC, HE-19, "116/15 Ton Spent Fuel Cask Handling Crane Annual Inspection," the auxiliary hoist emergency band brake did not trigger. The SFPCHC consist of a main hoist, rated to 150 tons, and an auxiliary hoist, rated to 15 tons. As a result of the

emergency band brake failure, the SFPCHC auxiliary hoist was not “single-failure-proof,” in accordance with the design requirements of NUREG-0612, “Control of Heavy Loads at Nuclear Power Plants.” The UFSAR, subsection 9.7.2.4 “Spent Fuel Cask Handling Crane,” states, “Heavy loads (loads in excess of 1600 lbs) are prohibited from travel over the spent fuel assemblies in the spent fuel pit unless such loads are handled by a single-failure-proof device.” Exelon entered this issue into their CAP (CR-2013-007353). The SFPCHC vendor was brought on site and made a slight adjustment to the emergency band brake trigger cable to resolve the problem.

The SFPCHC is scoped into the CCNPP Maintenance Rule program and its performance is monitored in accordance with guidance provided in ER-AA-310, “Implementation of the Maintenance Rule,” Revision 9. The maintenance rule function for the SFPCHC is to ensure transfer of loads over safety-related equipment by ensuring load bearing components and any load lifting or lowering safety devices perform as required. Exelon initially determined that the September 2013 SFPCHC issue was not a MRFF because it was assumed that the problem occurred during the maintenance activity and the problem would have been fixed before return to service. On December 1, 2014, the inspectors reviewed AR 02422876, “Aux Hoist Emergency Brake Found Out of Spec,” that documented an event that occurred on October 27, 2014, in which a MRFF was counted against the SFPCHC, the inspectors questioned the September 2013 MRFF determination. Exelon entered this issue into the CAP (AR 02422876) and subsequently determined that the September 2013 issue was a MRFF and that the SFPCHC required a Maintenance Rule (a)(1) determination.

In accordance with procedure ER-AA-310-1005, “Maintenance Rule – Dispositioning Between (a)(1) and (a)(2),” Revision 7, a Maintenance Rule (a)(1) determination needs to be completed within 30 days of (a)(1) determination IR and presented to a Maintenance Rule expert panel within 45 days of the IR. The inspectors determined that the first opportunity for Exelon to comply with the Maintenance Rule was October 27, 2014, when the second failure occurred. The inspectors concluded that by the time the Maintenance Rule expert panel was scheduled to convene, an excessive amount of time would have passed for Exelon to comply with requirements of the Maintenance Rule.

Analysis: The inspectors determined that Exelon’s failure to identify the September 4, 2013, SFPCHC auxiliary hoist emergency band break as a MRFF, and the failure to perform an evaluation of the system under 50.65(a)(1) and thereby evaluate the necessity to specify goals, corrective actions, and monitoring, was a performance deficiency. The inspectors reviewed IMC 0612, Appendix B, “Issue Screening,” and determined the finding is more than minor because it is associated with the SSC performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, RCS, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, following the MRFF of the SFPCHC in October 2014, Exelon personnel did not identify that the crane required a Maintenance Rule (a)(1) determination to establish if the crane should be monitored in accordance with 10 CFR 50.65(a)(1). As a result, an excessive amount of time passed for Exelon to comply with the requirements of the Maintenance Rule. In accordance with IMC 0609.04, “Initial Characterization of Findings,” issued on June 19, 2012, and IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 3, “Barrier Integrity Screening Questions,” issued on June 19, 2012, the inspectors determined that the finding was of very low safety significance (Green) because the

finding did not result in handling errors, dropped storage cask, or crane operations over the spent fuel pool that caused mechanical damage to fuel clad and a detectable release of radionuclides.

The inspectors determined that the finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because Exelon did not thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, Exelon personnel failed to properly evaluate the issue that occurred in September 4, 2013 as a MRFF [P.2].

Enforcement: 10 CFR 50.65 (a)(1), requires, in part, that the holders of an operating license shall monitor the performance or condition of SSCs within the scope of the rule as defined by 10 CFR 50.65 (b), against licensee established goals, in a manner sufficient to provide reasonable assurance that such SSCs are capable of fulfilling their intended functions. 10 CFR 50.65 (a)(2) states, in part, that monitoring as specified in 10 CFR 50.65 (a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended function. Contrary to the above, as of October 27, 2014, Exelon personnel failed to demonstrate that the performance or condition of the SFPCHC auxiliary hoist had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee established goals. Specifically, Exelon personnel failed to identify and properly account for a MRFF of the SFPCHC auxiliary hoist on September 4, 2013, which demonstrated that the performance or condition of this SSC was not being effectively controlled through the performance of appropriate preventive maintenance and, as a result, a Maintenance Rule (a)(1) determination was required. Exelon's immediate corrective actions were to reclassify the September 2013 failure as a MRFF and conduct a Maintenance Rule (a)(1) determination on the SFPCHC. Because this violation is of very low safety significance (Green) and has been entered into Exelon's CAP (IR 02422876), this violation is being treated as an NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 05000317;318/2014005-01: Spent Fuel Pool Cask Handling Crane 10 CFR 50.65(a)(2) Performance Demonstration Not Met)**

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

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that Exelon performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that Exelon personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When Exelon performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Updated maintenance risk assessment for Yellow risk activities associated with 'B' ECCS train out of service on October 6, 2014

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 2 samples)

a. Inspection Scope

The inspectors reviewed operability determinations listed below. The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to Exelon's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by Exelon. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

- Fairbanks Morse diesel generator design includes vulnerability to cold weather (AR 01700400) on October 16, 2014
- Charger 24 not operating properly (AR 02411204) on December 4, 2014

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – 1 sample)

a. Inspection Scope

The inspectors evaluated the permanent modification ECP-14-000734, Fairbanks Morse diesels ventilation modification, to determine whether the modification affected the safety functions of systems that are important to safety. The inspectors verified that the design bases, licensing bases, and performance capability of the affected systems were not degraded by the modification. In addition, the inspectors reviewed modification documents associated with the upgrade and design changes, including operational impact design evaluation, installation and testing instructions, and drawings changes associated with the modification.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 3 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.

- WO C92505527, Replace 12 shutdown cooling heat exchanger outlet solenoid valve on October 27, 2014
- WO C92448769, Replace 12 component cooling heat exchanger outlet valve pressure control valve on November 3, 2014
- WO C92848267, 2B EDG ventilation modification on November 12, 2014

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 3 samples)a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TS, the UFSAR, and Exelon's procedural requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

- STP-O-027-1, RCS leakage evaluation on October 21, 2014
- STP-O-73D-2, Charging pump performance test on October 23, 2014 (in-service test)
- STP-O-007D-2, Quarterly 'B' train engineered safety features logic test on November 12, 2014

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness**1EP2 Alert and Notification System Testing (71114.02 – 1 sample)****a. Inspection Scope**

An onsite review was conducted to assess the performance, maintenance, and testing of the CCNPP alert and notification system (ANS). During this inspection, the inspectors conducted a review of the ANS testing and maintenance programs. The inspectors reviewed the associated ANS procedures and the Federal Emergency Management Agency approved ANS design report to ensure Exelon has complied with design report commitments for system maintenance and testing. The inspection was conducted with 10 CFR 50.47(b)(5) and the related requirements of 10 CFR 50, Appendix E, as criteria for determining compliance.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Staffing & Augmentation System (71114.03 – 1 sample)**a. Inspection Scope**

The inspectors conducted a review of the CCNPP emergency response organization (ERO) augmentation staffing requirements and the process for notifying and augmenting the ERO. The review was performed to verify the readiness of key Exelon staff to respond to an emergency event and to verify Exelon's ability to activate their emergency response facilities (ERF) in a timely manner. The inspectors reviewed the CCNPP emergency plan for ERF activation and ERO staffing requirements, the ERO duty roster, applicable station procedures, augmentation test reports, the most recent drive-in drill reports, and corrective action reports related to this inspection area. The inspectors also reviewed a sample of ERO responder training records to verify training and qualifications were up to date. The inspection was conducted with 10 CFR 50.47(b)(2) and the related requirements of 10 CFR 50, Appendix E, as criteria for determining compliance.

b. Findings

No findings were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 – 1 sample)**a. Inspection Scope**

Exelon implemented various changes to the CCNPP Emergency Action Levels (EALs), Emergency Plan, and Implementing Procedures. Exelon had determined that, in accordance with 10 CFR 50.54(q)(3), any change made to the EALs, Emergency Plan, and its lower-tier implementing procedures, had not resulted in any reduction in effectiveness of the Plan, and that the revised Plan continued to meet the standards in 50.47(b) and the requirements of 10 CFR 50 Appendix E.

The inspectors performed an in-office review of all EAL and Emergency Plan changes submitted by Exelon as required by 10 CFR 50.54(q)(5), including the changes to lower-tier emergency plan implementing procedures, to evaluate for any potential reductions in effectiveness of the Emergency Plan. 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 inspection in their entirety. The requirements in 10 CFR 50.54(q) were used as criteria for determining compliance.

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05 – 1 sample)

a. Inspection Scope

The inspectors reviewed a number of activities to evaluate the efficacy of Exelon's efforts to maintain the CCNPP emergency preparedness (EP) program. The inspectors reviewed: letters of agreement with offsite agencies; the 10 CFR 50.54(q) emergency plan change process and practice; Exelon's maintenance of CCNPP plant equipment important to EP; records of evacuation time estimate population evaluation; and provisions for, and implementation of, primary and backup ERF maintenance. The inspectors also verified Exelon's compliance at CCNPP with new NRC EP regulations regarding: EALs for hostile action events; protective actions for on-site personnel during events; emergency declaration timeliness; ERO augmentation and alternate facility capability; evacuation time estimate updates; on-shift ERO staffing analysis; and ANS back-up means.

The inspectors further evaluated Exelon's ability to maintain the CCNPP EP program through the identification and correction of EP weaknesses, by reviewing a sample of drill reports, actual event reports, self-assessments, 10 CFR 50.54(t) reviews, and EP-related CRs. The inspectors reviewed a sample of EP-related CRs initiated at CCNPP from January 2013 through October 2014. The inspection was conducted with 10 CFR 50.47(b) and the related requirements of 10 CFR 50, Appendix E, as criteria for determining compliance.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety and Occupational Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01 – 1 sample)

a. Inspection Scope

During December 1 - 5, 2014, the inspectors reviewed Exelon performance in assessing the radiological hazards and exposure control in the workplace. The inspectors used the requirements in 10 CFR 20, "Standards For Protection Against Radiation," guidance in Regulatory Guide (RG) 8.38, "Control of Access to High and Very High Radiation Areas of Nuclear Plants," Revision 1, TS, and Exelon procedures required by TS as criteria for determining compliance.

Inspection Planning

The inspectors reviewed 2014 Exelon performance indicators for the occupational exposure cornerstone for CCNPP. The inspectors reviewed the results of radiation protection (RP) program audits. The inspectors reviewed any reports of operational occurrences related to occupational radiation safety since the last inspection.

Radiological Hazard Assessment

The inspectors determined if there have been changes to plant operations since the last inspection that resulted in new radiological hazards for onsite workers or members of the public. The inspectors reviewed the adequacy of the last two radiological surveys from the materials processing facility, the steam generator storage facility, and the 27' elevation of the auxiliary building.

Instructions to Workers

The inspectors selected three containers of radioactive materials and assessed whether the containers were labeled and controlled in accordance with requirements. The inspectors reviewed two occurrences where a worker's electronic personal dosimeter alarmed. The inspectors evaluated whether workers responded appropriately and whether the issue was included in the CAP and whether compensatory dose evaluations were conducted as appropriate.

Contamination and Radioactive Material Control

The inspectors observed one location where Exelon monitored potentially contaminated material leaving the radiological control area and inspected the methods and radiation monitoring instrumentation used for control, survey, and release. The inspectors selected three sealed sources from the Exelon inventory records and assessed whether the sources were accounted for and were tested for loose surface contamination. The inspectors evaluated whether any recent transactions involving nationally tracked sources were reported in accordance with requirements.

Radiological Hazards Control and Work Coverage

The inspectors evaluated in-plant radiological conditions and performed independent radiation measurements during walk-downs of the facility. The inspectors assessed whether the conditions were consistent with applicable posted surveys, radiation work permits (RWP), and associated worker briefings. The inspectors examined the control of highly activated or contaminated materials stored within the spent fuel pools. The inspectors examined the posting and physical controls for selected high radiation areas (HRA), locked HRAs, and very high radiation areas (VHRA) to verify conformance with the occupational performance indicator.

Risk-Significant HRA and VHRA Controls

The inspectors reviewed the controls and procedures for HRAs, VHRAs, and radiological transient areas in the plant areas.

Radiation Worker Performance

The inspectors reviewed five radiological CRs since the last inspection that attributed the cause of the event to human performance errors.

RP Technician Proficiency

The inspectors reviewed four radiological CRs since the last inspection that attributed the cause of the event to RP technician error.

b. Findings

No findings were identified.

2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03 – 1 sample)

a. Inspection Scope

During December 1 - 5, 2014, the inspectors reviewed the control of in-plant airborne radioactivity and the use of respiratory protection devices in these areas. The inspectors used the requirements in 10 CFR 20, "Standards For Protection Against Radiation," RG 8.15, "Acceptable Programs for Respiratory Protection," Revision 1; RG 8.25, "Air Sampling in the Workplace," Revision 1; NUREG/CR-0041, "Manual of Respiratory Protection Against Airborne Radioactive Material," TS, and Exelon procedures required by TS as criteria for determining compliance.

Inspection Planning

The inspectors reviewed the CCNPP UFSAR to identify areas of the plant designed as potential airborne radiation areas and any associated ventilation systems and airborne monitoring instrumentation. The inspectors reviewed the respiratory protection program, TS, and emergency planning documents to identify the location and quantity of respiratory protection devices stored for emergency use. The inspectors reviewed the procedures for maintenance, inspection, and use of respiratory protection equipment including self-contained breathing apparatus (SCBA), as well as, procedures for air

quality maintenance. The inspectors reviewed reported performance indicators to identify any related to unintended dose resulting from personnel intakes of radioactive material.

Engineering Controls

The inspectors reviewed Exelon's use of permanent and temporary ventilation to control airborne radioactivity. The inspectors selected one permanent ventilation system and evaluated whether the ventilation system operating parameters were consistent with the design. The inspectors selected two temporary ventilation system setups used to support work in contaminated areas and assessed whether the use of these systems were consistent with requirements. The inspectors reviewed the adequacy of air monitoring instrumentation alarms and set-points. The inspectors assessed whether Exelon had established threshold criteria for evaluating levels of airborne beta-emitting and alpha-emitting radionuclides.

Use of Respiratory Protection Devices

The inspectors reviewed records of air testing for supplied-air devices and SCBA bottles to assess whether the air used in these devices meets or exceeds Grade D quality. The inspectors chose ten respiratory protection devices staged and ready for use in the plant. The inspectors assessed the physical condition of the device components and reviewed records of equipment inspection and maintenance for each type of equipment. The inspectors reviewed the qualifications of onsite personnel that perform repairs of respiratory protection equipment.

SCBA for Emergency Use

The inspectors reviewed the status and surveillance records of selected SCBAs staged for use during emergencies. The inspectors reviewed Exelon's capability for refilling and transporting SCBA air bottles to and from the control room and the operations support center during emergency conditions.

The inspectors selected ten individuals on control room shift crews and from other staff currently assigned emergency duties, to assess whether applicable emergency response staff were trained and qualified in the use of SCBA. The inspectors evaluated whether personnel assigned to refill bottles were trained and qualified for that task.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with the control and mitigation of in-plant airborne radioactivity were being identified by Exelon at an appropriate threshold and were properly addressed for resolution in Exelon's CAP.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Unplanned Scrams, Unplanned Power Changes, and Unplanned Scrams with Complications (6 samples)

a. Inspection Scope

The inspectors reviewed Exelon's submittals for the following Initiating Events Cornerstone performance indicators for the period of October 1, 2013 through September 30, 2014:

- Unit 1 unplanned scrams (IE01)
- Unit 2 unplanned scrams (IE01)
- Unit 1 unplanned power changes (IE03)
- Unit 2 unplanned power changes (IE03)
- Unit 1 unplanned scrams with complications (IE04)
- Unit 2 unplanned scrams with complications (IE04)

To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7. The inspectors also reviewed Exelon's operator narrative logs, CRs, event reports, system health reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.2 Occupational Exposure Control Effectiveness (1 sample)

a. Inspection Scope

During December 1 – 5, 2014, the inspectors sampled Exelon submittals for the occupational exposure control effectiveness performance indicator (OR01) for the period of October 1, 2013 through September 30, 2014. The inspectors used definitions and guidance contained in NEI 99-02 to determine the accuracy of the performance indicator data reported.

The inspectors reviewed electronic personal dosimeter dose alarms, dose reports, and dose assignments for any intakes that occurred during the time period reviewed to determine if there were potentially unrecognized performance indicator occurrences. The inspectors also conducted walk-downs of numerous locked HRA and VHRA entrances to determine the adequacy of the controls in place for these areas.

b. Findings

No findings were identified.

.3 Radiological Effluent Technical Specification/Offsite Dose Calculation Manual
Radiological Effluent Occurrences (1 sample)

a. Inspection Scope

During December 1 – 5, 2014, the inspectors sampled licensee submittals for the radiological effluent technical specification/Offsite Dose Calculation Manual radiological effluent occurrences performance indicator (PR01) for the period of October 1, 2013 through September 30, 2014. The inspectors used definitions and guidance contained in NEI 99-02 to determine if the performance indicator data was reported properly during this period.

The inspectors reviewed Exelon's CAP database and selected individual reports generated during the performance indicator inspection period to identify any potential occurrences. The inspectors reviewed gaseous and liquid effluent summary data and the results of associated offsite dose calculations for selected dates during the performance indicator inspection period to determine if indicator results were accurately reported.

b. Findings

No findings were identified.

.4 Emergency Preparedness Performance Indicators (3 samples)

a. Inspection Scope

The inspectors reviewed data for the following three EP performance indicators: (1) drill and exercise performance (EP01); (2) ERO drill participation (EP02); and (3) ANS reliability (EP03). The last NRC EP inspection at CCNPP was conducted in the fourth calendar quarter of 2013. Therefore, the inspectors reviewed supporting documentation from EP drills and equipment tests for the period of October 1, 2013 through September 30, 2014, to verify the accuracy of the reported performance indicator data. The acceptance criteria documented in NEI 99-02 was used to determine compliance.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 5 samples)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that Exelon entered issues into the CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive

equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the CAP.

b. Findings

No findings were identified.

.2 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a semi-annual review of site issues, as required by Inspection Procedure 71152, "Problem Identification and Resolution," to identify trends that might indicate the existence of more significant safety issues. In this review, the inspectors included repetitive or closely-related issues that may have been documented by Exelon personnel outside of the CAP, such as trend reports, performance indicators, major equipment problem lists, system health reports, maintenance rule assessments, and maintenance or CAP backlogs. The inspectors also reviewed Exelon's CAP database for the third and fourth quarters of 2014 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 Exelon staff's quarterly trend report for the third quarter of 2014, conducted under PI-AA-125-1005, "Coding and Analysis Manual," Revision 0, to verify that Exelon personnel were appropriately evaluating and trending adverse conditions in accordance with applicable procedures.

b. Findings and Observations

No findings were identified.

The inspectors evaluated a sample of departments that are required to provide input into the quarterly trend reports, which included maintenance and engineering departments. This review included a sample of issues and events that occurred over the course of the past two quarters to objectively determine whether issues were appropriately considered or ruled as emerging or adverse trends, and in some cases, verified the appropriate disposition of resolved trends. The inspectors verified that these issues were addressed within the scope of the corrective action program, or through department review and documentation in the quarterly trend report for overall assessment. All trends noted by the inspectors were previously identified by Exelon and addressed in their CAP.

.3 Annual Sample: Review of the Operator Workaround Program

a. Inspection Scope

The inspectors reviewed the cumulative effects of the existing operator workarounds, operator burdens, existing operator aids and disabled alarms, and open main control room deficiencies to identify any effect on emergency operating procedure operator actions, and any impact on possible initiating events and mitigating systems. The inspectors evaluated whether station personnel had identified, assessed, and reviewed operator workarounds as specified in Exelon procedure OP-AA-102-103, "Operator Work-Around Program," Revision 3. The inspectors reviewed Exelon's process to

identify, prioritize, and resolve main control room distractions to minimize operator burdens. The inspectors reviewed the system used to track these operator workarounds and recent Exelon self-assessments of the program. The inspectors also toured the control room and discussed the current operator workarounds with the operators to ensure the items were being addressed on a schedule consistent with their relative safety significance.

b. Findings and Observations

No findings were identified.

The inspectors determined that the issues reviewed did not adversely affect the capability of the operators to implement abnormal or emergency operating procedures. The inspectors also verified that Exelon entered operator workarounds and burdens into the CAP at an appropriate threshold and planned or implemented corrective actions commensurate with their safety significance.

.4 Annual Sample: Follow-Up of Selected Issues

Unit 1 11 Saltwater Pump Thrust Bearing Temperatures

a. Inspection Scope

A problem identification and resolution sample inspection was conducted on the identification, evaluation, and corrective actions associated with CR-2013-005710, which was initiated to assess the 11 saltwater (SW) pump elevated temperatures of the tapered roller thrust bearing that challenged pump operation from April 2013 to July 2013.

The inspectors reviewed the procedures that described Exelon's CAP at CENPP when this issue was identified. The inspectors assessed Exelon's problem identification threshold, prioritization, and timeliness of corrective actions to verify that the 11 SW pump elevated temperatures of the tapered roller thrust bearings were appropriately evaluated and corrective actions implemented to resolve the identified component deficiency.

The inspectors reviewed documents and interviewed engineering personnel to assess the effectiveness of implemented corrective actions. The inspectors compared the actions taken to the requirements of Exelon's CAP and 10 CFR 50, Appendix B.

b. Findings and Observations

No findings were identified.

The elevated temperatures of the thrust bearing on the 11 SW pump were appropriately identified, screened, coded, and corrective actions implemented in accordance with the CAP to resolve elevated temperature condition of the thrust bearing that challenged pump operation.

The tapered roller thrust bearing temperature monitoring was appropriately performed in accordance with station procedure OI-29-1, "Saltwater System," Revision 69, Section

6.27, run-in after maintenance criteria requirements. The thrust bearing temperature trend data from April 2013 to July 2013 showed that tapered roller thrust bearing temperature rates were bounded by the metallurgical temperature limit of the bearing.

Based on the lubrication methods implemented on the tapered roller thrust bearings, Exelon determined that lubrication starvation was the apparent cause of the elevated temperatures. After revising re-lubrication practices, and injecting grease from below the lower tapered roller thrust bearing, the temperatures decreased and stabilized at acceptable levels. A reasonable expectation of continued operation was performed and 11 SW pump run-in per OI-29 was satisfactorily completed on July 19, 2013.

The inspectors concluded Exelon's response and corrective actions were appropriate.

.5 Annual Sample: Submerged Cables

a. Inspection Scope

The inspectors performed an in-depth review of Exelon's apparent cause evaluation (ACE) and corrective actions associated with CR-2011-010518. CR-2011-010518, which was generated as a result of a NRC-identified Green NCV, (NCV 50-317&318/2011004-01), documented that CCNPP did not identify the submerged/continuously wetted SW pump motor cables as a condition adverse to quality and did not take adequate measures to initiate a CR, evaluate, and place them in medium voltage cable program (MVCP). The CR required an ACE be conducted to determine the cause and identify potential corrective actions. The ACE included a comparative timeline and a hazard target barrier analysis to identify the apparent cause of the issue. Exelon determined that the most probable apparent cause was the organizational weakness during the identification and review of the medium voltage cables being included in the MVCP. Exelon's immediate corrective actions were to add cables to the MVCP and perform an operability determination. Exelon determined that although these cables were not identified in the MVCP, they were tested annually to meet the requirements in the UFSAR. UFSAR Table 9-17A, "Single Failure Analysis," required all SW pump motor cables to be tested annually by a 2500 volt megger as a means of detecting any cable degradation.

The inspectors assessed Exelon's problem identification threshold, causal analysis, extent of condition reviews, and the prioritization and timeliness of Exelon's corrective actions to determine whether Exelon was appropriately identifying, characterizing, and correcting problems associated with this issue and whether the planned or completed corrective actions were appropriate. The inspectors reviewed documentation associated with this issue, interviewed engineering and maintenance personnel, and performed visual inspection of cables within two junction boxes that were affected by ground water intrusion. The inspectors compared the actions taken to the requirements of Exelon's CAP and 10 CFR 50, Appendix B.

b. Findings and Observations

No findings were identified.

The inspectors found that Exelon appropriately identified the cause of the issue. Exelon determined the apparent cause to be the organization weakness in the development of

the MVCP. Exelon identified that self-checks and peer-checks were not properly applied in the final review of the cables being included in the program. The program owner was working through the qualification while implementing the program. A contributing cause was that the back-up program owner was not qualified to review the initial list of cables. Exelon provided training to individuals performing this task to address the apparent cause and verified that program owner and back-up program owner are qualified. An extent of cause review was completed to identify any other safety-related or maintenance rule medium voltage cables that could have been missed. Exelon implemented a design change to address its long term corrective action that is to repair the conduit and install new cables. The design change consisted of installing a waterproof liner (sleeve) in a spare conduit and utilizing that conduit to pull new cables that provide power to the 22 SW pump. The inspectors performed visual inspection of the new sleeve to verify that it maintained the cable in dry conditions.

The performance deficiency described above was previously reviewed and documented as an NCV (NCV 50-317&318/2011004-01). The inspectors determined that Exelon's overall response to the submerged cable issue was commensurate with safety significance, and the actions taken and planned were reasonable to restore the nonconforming conditions. No additional performance deficiencies were identified.

.6 Annual Sample: Reactor Coolant Sample Sink Safety injection Actuation Signal (SIAS) Override Switch

a. Inspection Scope

The inspectors performed a review of CR-2014-006887, "Keyswitch, 1-HS-5464A, RC Sample Isolation SIAS is Broken." On August 11, 2014, during a control room control board walkdown, the inspectors noted that switch 1-HS-5464A was out of service. The inspectors reviewed CR-2014-006887, "Keyswitch, 1-HS-5464A, RC Sample Isolation SIAS is Broken," and interviewed Exelon personnel.

The inspectors assessed Exelon's problem identification threshold, cause analyses, extent of condition reviews, compensatory actions, and the prioritization and timeliness of Exelon's corrective actions to determine whether Exelon was appropriately identifying, characterizing, and correcting problems associated with this issue and whether the planned or completed corrective actions were appropriate. The inspectors compared the actions taken to the requirements of Exelon's CAP and 10 CFR 50, Appendix B. In addition, the inspectors performed field walkdowns and interviewed engineering personnel to assess the effectiveness of the implemented corrective actions.

b. Findings and Observations

No findings were identified.

On August 9, 2014, when the switch failure occurred, Exelon assigned a priority 2 to the switch replacement WO. However, the inspectors determined that Exelon did not evaluate the impact of the switch being out of service on the emergency plan and thus, no compensatory actions were established. After questions from the inspectors on August 11, 2014, Exelon implemented compensatory measures to override the SIAS signal to the RCS sample sink isolation valves. On August 19, 2014, 1-HS-5464A was replaced and returned to service. Through subsequent interviews with Exelon

personnel, the inspectors determined that with 1-HS-5456A out of service, during a steam line rupture inside containment or a steam generator tube rupture, operations personnel would have to wait until SIAS initiating conditions had cleared in containment in order to open the reactor coolant sample sink isolation valve by resetting the SIAS signal. The inspectors determined that the lack of compensatory actions could have affected Exelon's ability to make an Alert declaration under initiating condition FA1.1, loss or potential loss of the fuel clad barrier, since reactor coolant activity and post-accident sample results are two of the four means for confirming a loss of the fuel clad barrier. However, all methods for determining a potential loss of the fuel clad barrier (reactor vessel water level, core exit thermo couples, containment radiation levels) and primary methods for determining loss of the fuel cladding barrier (core exit thermo couple and containment radiation monitors) as well as main steam line radiation monitors were available. The inspectors determined that because of the alternative indications available, for the same initiating condition a timely and accurate declaration would still be made.

The inspectors determined that Exelon's failure to establish compensatory measures, after the failure of 1- HS-5464A, to ensure that EAL initiating condition FA1.1 could be assessed in a timely manner as required by the emergency plan was a performance deficiency. The inspectors reviewed IMC 0612, Appendix B, "Issue Screening," issued on September 7, 2012, and IMC 0609 Appendix B, "Emergency Preparedness Significance Determination Process," and determined that the performance deficiency was minor because other thresholds in the fuel clad barrier EAL would allow the operators to determine that the barrier had failed and make a timely and accurate declaration. This was a minor violation of 10 CFR 50.54, "Conditions of Licenses," paragraph (q)(2); because Exelon did not maintain the effectiveness of the emergency plan to meet the planning standard of 10 CFR 50.47(b)(4) which is not subject to enforcement action in accordance with the NRC's Enforcement Policy. However, Exelon is required to enter the issue into their CAP, correct the condition, and restore compliance. Exelon entered this issue into their CAP as IR 02438014.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 2 samples)

.1 (Closed) Licensee Event Report (LER) 05000317/2014-007-00: Reactor Coolant System Pressure Boundary Leakage in Reactor Coolant Pump Differential Pressure Transmitter Tubing

On July 20, 2014, Exelon observed that the Unit 1 containment radiation particulate monitor indicated increased counts and the Unit 1 containment sump drain frequency increased. Subsequent investigation by Exelon included three containment entries which determined at 11:15 pm on July 24, 2014, that a leak existed on the high pressure sensing line tubing for the 11A reactor coolant pump differential pressure transmitter (1PDT123A). Exelon entered TS limiting condition for operation (LCO) 3.4.13.B for RCS pressure boundary leakage which required the unit be placed in Mode 3 within 6 hours and Mode 5 within 36 hours. A downpower of Unit 1 commenced at 11:21 pm on July 24, 2014. Exelon isolated the RCS pressure boundary leak by shutting the root isolation valves for 1PDT123A and exited TS LCO 3.4.13.B at 2:50 am on July 25, 2014. Unit 1 was returned to 100 percent power at 4:30 am on July 26, 2014. Exelon determined that the most probable cause for the tubing leak was a missing support that allowed the sensing line tubing to fret on a piece of retired in place packing leak off line. Exelon instituted a leakage monitoring plan to continually verify the effectiveness of the leakage

isolations. Long term corrective actions include tubing repair and support replacement, confirmation of the cause of the leakage, and extent of condition walkdowns during the next Unit 1 refueling outage.

The inspectors did not identify any new issues during the review of the LER. This LER is closed.

.2 (Closed) LER 05000318/2014-002-00: Diesel Generator Technical Specification Surveillance Requirement Missed Due to Human Performance Error

On June 9, 2014, at 5:35 pm, Exelon observed that the 2A EDG field flash monitoring relay alarmed in the main control room. Initial investigation by Exelon incorrectly concluded that this alarm was caused by an alarm card problem and that the operability of the EDG was not impacted. On June 11, 2014, at 10:35 am, subsequent investigation by Exelon determined that the alarm was caused by a loose fuse clip which would have prevented the flashing of the 2A EDG generator field thus rendering the 2A EDG inoperable. Repairs were made, post-maintenance testing was completed, and the 2A EDG was declared operable on June 11, 2014 at 4:32 pm. An ACE concluded that the operations staff incorrectly determined that the 2A EDG was operable based on the available indications without determining the cause of the alarm. The 2A EDG was inoperable for 46 hours and 57 minutes which is a condition that required entry into TS LCO 3.8.1.B for one EDG inoperable. TS LCO 3.8.1.B requires five actions with required completion times ranging from 1 hour to 14 days. Four of these required actions were not performed within the required completion time thus TS Condition 3.8.1.J should have been entered which required the unit to be placed in Mode 3 within 6 hours and Mode 5 within 36 hours from entry into the condition. Neither action of TS LCO 3.8.1.J was taken within the required time, therefore, the condition existed for a time longer than allowed by TS.

The enforcement aspects of this issue are as discussed in Section 4OA7 of this report. The inspectors did not identify any new issues during the review of the LER. This LER is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On January 21, 2015, the inspectors presented the inspection results to Mr. George Gellrich, Site Vice President, and other members of the Exelon staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) or Severity Level IV were identified by the licensee and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy, for being dispositioned as an NCV.

- On June 9, 2014, at 5:35 pm, Exelon observed that the 2A EDG field flash monitoring relay alarmed in the main control room. Initial investigation by Exelon incorrectly

concluded that this alarm was caused by an alarm card problem and that the operability of the EDG was not impacted. On June 11, 2014, at 10:35 am, subsequent investigation by Exelon determined that the alarm was caused by a loose fuse clip which would have prevented the flashing of the 2A EDG generator field thus rendering the 2A EDG inoperable. Repairs were made, post-maintenance testing was completed, and the 2A EDG was declared operable on June 11, 2014, at 4:32 pm. An ACE concluded that the operations staff incorrectly determined that the 2A EDG was operable based on the available indications without determining the cause of the alarm. The 2A EDG was inoperable for 46 hours and 57 minutes which is a condition that required entry into TS LCO 3.8.1.B for one EDG inoperable. TS LCO 3.8.1.B requires five actions with required completion times ranging from 1 hour to 14 days. Four of these required actions were not performed within the required completion time thus TS Condition 3.8.1.J should have been entered which required the unit to be placed in Mode 3 within 6 hours and Mode 5 within 36 hours from entry into the condition. Neither action of TS LCO 3.8.1.J was taken within the required time, therefore, the condition existed for a time longer than allowed by TS. The inspectors reviewed Exelon's ACE and other related documents and determined that no performance deficiency existed because Exelon's actions in response to the 2A EDG field flash monitoring relay alarm was not inconsistent with station documents and their action were reasonable based on the information available to the operators at that time.

The inspectors reviewed LER 05000318/2014-002-00 and determined that traditional enforcement applies in accordance with IMC 0612, "Power Reactor Inspection Reports," Section 0612-09 and 0612-13 and the Enforcement Policy, Section 2.2.4.d, because a violation of NRC requirements existed without an associated performance deficiency. This issue was considered to be a Severity Level IV NCV of TS LCO 3.8.1.J, in accordance with the Enforcement Policy, Section 6.1.d. This Severity Level IV licensee-identified NCV was entered into Exelon's CAP as CR-2014-006670.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

G. Gellrich, Site Vice President
 M. Flaherty, Plant General Manager
 P. Amos, Manager, Emergency Preparedness
 J. Baker, Radiation Protection Technician
 C. Brevig, Radiation Protection Technician
 I. Byrnes, Plant Health Physicist
 L. Cahill, Chemistry Analyst
 R. Courtney, Supervisor, Materials Processing
 R. Cox, Component Specialist – ROT Equipment
 H. Crockett, Manager, CMO
 J. Detchemendy, Supervisor, Radiation Protection Operations
 K. Eiane, Engineer 2
 B. Erdman, Supervisor, Radiation Protection Operations
 M. Fick, Principle Regulatory Engineer
 K. Greene, Principle Regulatory Engineer
 J. Herron, Engineering Manager
 A. Kelly, Licensed Operator Requalification Training Program Lead Instructor
 D. Lauver, Manager, Site Regulatory Assurance
 G. Oldfield, Senior Plant Health Physicist
 R. Terrents, Senior Engineer
 M. Thompson, Senior Radioactive Materials Protection Technician
 J. York, General Supervisor, Radiation Protection

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000317/318/2014-005-01	NCV	Spent Fuel Pool Cask Handling Crane 10 CFR 50.65(a)(2) Performance Not Met (Section 1R12)
--------------------------	-----	---

Closed

05000317/2014-007-00	LER	Reactor Coolant System Pressure Boundary Leakage in Reactor Coolant Pump Differential Pressure Transmitter Tubing (Section 4OA3.1)
05000318/2014-002-00	LER	Diesel Generator Technical Specification Surveillance Requirement Missed Due to Human Performance Error (Section 4OA3.2)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

SY-AA-101-146, Severe Weather Preparation and Response, Revision 000
ERPIP-3.0, Immediate Actions, Revision 04901
WC-AA-107, Seasonal Readiness, Revision 014
OAP 92-9, Operations Administrative Policy Cold Weather Operations, Change 7
NO-1-203, Operations Section Performance Evaluations, Revision 01400

Drawings

60717sh0001, Well Water, Pretreated Water, Demineralized Water and Condensate Storage System, Revision 101

Miscellaneous

Rosemount 1153 Series D Alphaline® Nuclear Pressure Transmitter Product Data Sheet
SP-0328, Design Specification for Safety Related Rosemount Electronic Transmitters, Revision 52
Winter Readiness System Reviews

Section 1R04: Equipment Alignment

Procedures

OI-3A, Safety Injection and Containment Spray, Revision 29
OI-22F, Control Room and Cable Spreading Rooms Ventilation, Revision 27

Drawings

60723sh0004, Ventilation Systems Control Room and Cable Spreading Room HVAC, Revision 53
63017sh0001, Reactor 480V MCC 204R, Revision 44

Section 1R07: Heat Sink Performance

Procedures

EN-1-237, Service Water Reliability Program (Generic Letter 89-13), Revision 00600
ETP-01-004R, Single Tube Thermal Performance Testing for 11 & 12 CCHX, Revision 0300

Miscellaneous

12 CCHX Eddy Current Inspection Report

Section 1R11: Licensed Operator Regualification Program

Procedures

AOP-7A, Loss of Salt Water Cooling, Revision 14
AOP-7J, Loss of 120 Volt Vital AC or 125 Volt Vital DC Power, Revision 20
EOP-0, Post-Trip Immediate Actions, Revision 13
EOP-8, Functional Recovery Procedure, Revision 35

Section 1R12: Maintenance Effectiveness

Procedures

ER-AA-310, Implementation of the Maintenance Rule, Revision 9
ER-AA-310-1003, Maintenance Rule – Performance Criteria Selection, Revision 4
ER-AA-310-1004, Maintenance Rule – Performance Monitoring, Revision 11
ER-AA-310-1005, Maintenance Rule – Dispositioning Between (a)(1) and (a)(2), Revision 7
ER-AA-310-1006, Maintenance Rule – Expert Panel Roles and Responsibilities, Revision 5

Condition Reports

AR 02391252
AR 02402232
AR 02422876
CR-2013-007353

Work Orders

C92325629
C92328072

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

WC-AA-104, Integrated Risk Management, Revision 22
EOOS Guidelines – Dominant Risk Activities, Revision 0
EOOS Risk Monitor Guidelines – Senior Reactor Operators, Revision 1
OP-AA-108-117-0, Protected Equipment Program, Revision 004
OI-3A, Safety Injection and Containment Spray, Revision 29

Section 1R15: Operability Determinations and Functionality Assessments

Procedures

OP-AA-108-115, Operability Determinations (CM1), Revision 15
OP-AA-108-115-1002, Supplemental Consideration for On-Shift Immediate Operability Determinations (CM1), Revision 3

Condition Reports

AR 02411204
IR3-017-230

Miscellaneous

SP-646, 125 VDC 1E Battery Chargers, Revision 2

Section 1R18: Plant Modifications

Procedures

CC-AA-112, Temporary Configuration Changes, Revision 22
CC-AA-103, Configuration Change Control for Permanent Physical Plant Changes, Revision 26
CC-AA-103-1001, Configuration Change Control Guidance, Revision 5

Condition Reports

CR-2014-006322

Miscellaneous

ECP-14-000734, Fairbanks Morse Diesels Ventilation Modification
CA09980, Diesel Generator Ventilation Accumulator Sizing

Section 1R19: Post-Maintenance Testing

Procedures

CC-AA-107, Configuration Change Acceptance Testing Criteria, Revision 9
CC-AA-107-1001, Post Modification Acceptance Testing, Revision 5
OP-AA-108-106, Equipment Return to Service, Revision 4
STPO-008B-2, Test of 2B EDG 4KV Bus 24 LOCI Sequencer, Revision 29
STPO-065P-1, 12 Saltwater Subsystem Valve Quarterly Operability Test, Revision 8
STPO-065G-1, Component Cooling Valve Quarterly Operability Test, Revision 01001

Work Orders

C92848267
C92448769
C92505527

Section 1R22: Surveillance Testing

Procedures

WC-AA-111, Surveillance Program Requirements, Revision 4
STPO-073D-2, Charging Pump Performance Test, Revision 01401
STPO-027, Reactor Coolant System Leakage Evaluation, Revision 20
STPO-007D-2, Quarterly "B" Train Engineering Safety Features Logic Test, Revision 00003

Section 1EP2: Alert Notification System Evaluation

Calvert Cliffs Nuclear Power Plant Emergency Response Plan, Revision 47
CCNPP Alert and Notification System (ANS) Design Report, Revision 0
CENG Letter to FEMA Region III, re Supplement to Alert and Notification System Design Report, dated 4/29/2013
EP-1-106, Management and Configuration of the Public Alert Notification System Sirens, Revision 1
FEMA Region III Letter to Maryland Emergency Management Agency, re FEMA Review of CCNPP ANS Design Report Supplement, dated 3/28/2014
S-W-4, Siren Test Procedure for the Public Alert Notification System, Revision 9
Work Order C91964713, Perform Annual Inspection/Testing on Emergency Notification Sirens (2013 record)
Work Order C92412722, Perform Annual Inspection/Testing on Emergency Notification Sirens (2014 record)

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Calvert Cliffs Nuclear Power Plant Emergency Response Plan, Revision 47
CCNPP Emergency Response Organization Center Rosters, dated 10/29/2014
CCNPP EP Qualification Matrix for Emergency Offsite Facility Positions
CCNPP EP Qualification Matrix for Shift Positions
CCNPP EP Qualification Matrix for Technical Support Center Positions

CCNPP On-Shift Staffing Analysis Report, effective date 12/13/2012
 CNG-EP-1.01-1015, Emergency Notifications, Revision 00100
 CNG-TR-1.01-1031, Emergency Response Training Program, Revision 00100
 EP-1-107, Emergency Response Organization Expectations and Responsibilities, Revision 00700
 Weekly ERO Notification Test Reports, January 2013 – October 2014

Section 1EP5: Maintenance of Emergency Preparedness

Calvert Cliffs Nuclear Power Plant Emergency Response Plan, Revision 47
 CCNPP Drill Reports for drills on: 1/10/2014, 1/23/2014, 4/9/2014, 6/13/2014, 8/14/2014, and 10/30/2014
 CCNPP EP-related Condition Reports, January 2013 – October 2014
 CNG-EP-1.01-1001, EP Program Responsibilities and Oversight, Revision 00001
 CNG-EP-1.01-1002, Control of EP Program Activities, Emergency Response Facility Surveillance, Revision 00100
 CNG-EP-1.01-1004, 10 CFR 50.54(Q) Effectiveness Review, Revision 00300
 CNG-FES-007, Preparation of Design Inputs and Change Impact Screens, Revision 00019
 EP Audit Report EPP-13-01-C, EP Program
 EP Audit Report EPP-14-01-C, Calvert Cliffs Nuclear Plant
 EP Audit Report EPP-14-02-C, Calvert Cliffs Nuclear Plant
 EP-1-109, Equipment Important to Emergency Response, Revision 00400
 EP-AA-125, EP Self Evaluation Process, Revision 9
 KLD TR-531, CCNPP Development of Evacuation Time Estimates, Final Report, Revision 1
 KLD TR-577, CCNPP 2013 Population Update Analysis
 KLD TR-687, CCNPP 2014 Population Update Analysis
 Letters of Agreement, Appendix A of CCNPP Emergency Response Plan, Revision 47
 LS-AA-104, Exelon 50.59 Review Process, Revision 9
 NOSCPA-CC-14-08, Calvert Cliffs EP Performance Report
 QPA Assessment Reports: 2013-005, -011, -017, -031, -043, and -051
 SA-2014-000009, EP Preventative Maintenance Program
 SA-2014-000010, EP Unit Records Management
 Self-Assessment AR 02400279, EP Program NRC Inspection Preparations

Section 2RS1: Radiological Hazard Assessment & Exposure Controls

Procedures

RP-AA-203-1001, Personnel Exposure Investigations, Revision 7
 RP-AA-300-1005, Removing Items From The Spent Fuel Pool, Reactor Cavity, and Equipment Pit, Revision 1
 RP-AA-376, Radiological Postings, Labeling, and Markings, Revision 8
 RP-AA-460, Controls for High and Locked Radiation Areas, Revision 26
 RP-AA-503, Unconditional Release Survey Method, Revision 8

Documents

Apparent Cause Evaluation for CR-2013-001019		
CR02382785	CR02400176	CR02410800
CR02383480	CR02401831	CR-2012-010160
CR02386303	CR02401927	CR-2012-011044
CR02395129	CR02404233	CR-2013-000185
CR02399361	CR02405684	CR-2013-000842

CR-2013-001019	CR-2013-004074	CR-2013-007263
CR-2013-001333	CR-2013-004654	CR-2013-007554
CR-2013-001852	CR-2013-004862	CR-2013-007759
CR-2013-001898	CR-2013-004955	CR-2013-008476
CR-2013-002007	CR-2013-005489	CR-2013-008980
CR-2013-002598	CR-2013-005853	CR-2014-002461
CR-2013-002602	CR-2013-005854	CR-2014-002537
CR-2013-003267	CR-2013-005855	CR-2014-004838

Job Coverage Record for RWP 1016-1 (follow-up to scaffolding dose rate alarm), dated 3/7/2014

Lesson plan, MSA Airhawk SCBA

Prompt investigation for CR-2013-001019

QPA Assessment Report 2013-002

QPA Assessment Report 2013-012

QPA Assessment Report 2013-019

QPA Assessment Report 2013-023

QPA Assessment Report 2013-038

QPA Assessment Report 2013-053

QPA Audit RPP-13-01-C

Radiation Protection Report NOSCPA-CC-14-17 (AR-1696368-53)

RP-2-103, Attachment 6, Sealed Source Inventory Form for Emergency Planning, dated 9/4/2014

RP-2-103, Attachment 6, Sealed Source Inventory Form, for sources S-17, 81CS-560 #7013, and 84CS-141

RP-2-103, Attachment 8, Sealed Source Transfer Record dated 11/1/2012

RWP 100, Revision 01 (Spent Fuel Pool Work), dated 2/16/2010

RWP 1003, Revision 3 (GSI-191 Project Excluding Cavity Work), dated 2/10/2014

RWP 1010, Revision 3 (Minor Maintenance Activities Performed During a Unit One Refueling Outage), dated 2/4/2014

RWP 1016, Revision 2 (Scaffold Activities), dated 2/7/2014

RWP 102, Revision 6 (Inspection and Minor Maintenance in CTMT at Power), dated 7/22/2014

RWP 1020, Revision 1 (Elevated Dose Rate Activities in Greater Than 1 REM/HR Areas), dated 3/10/2014

RWP 107, Revision 01 (Activities by RP Personnel), dated 2/16/2010

RWP 1307, Revision 2 (Remove and Install Unit One Reactor Vessel Head), dated 2/10/2014

RWP 1314, Revision 2 (Decontamination of the Refueling Pool 44' and Lower Cavities During a Unit 1 Refueling Outage), dated 2/10/2014

RWP 138, Revision 2 (Leak Identification and Repair in CTMT While at Power), dated 7/23/2014

RWP 140, Revision 1 (Unit 1 Containment Entry to Isolate a Leak), dated 7/24/2014

Sealed Source Custody Record for 20140602-00005 SSD

Sealed Source Inventory Database Printout

Sealed Source Leak Test Records for Sources S-17, 81CS-560 #7013, and 84CS-141, dated 7/22/2014

Survey Map(s), Materials Processing Facility Areas (Semi-annual), dated 10/22/2014

Survey Map(s), Materials Processing Facility Areas (Semi-annual), dated 4/16/2014

Survey Map, 27' Auxiliary Building, West Hallway (Annual), dated 4/20/2013

Survey Map, 27' Auxiliary Building, West Hallway (Annual), dated 5/1/2013

Survey Map, Lake Davies Radioactive Material Area, dated 10/22/2014

Survey Map, Old S/G Storage Facility Perimeter, dated 10/28/2014

Survey Map, Pre-Assembly Facility Building RCA, dated 10/22/2014
Work Order C91896762 (Materials Processing Facility Filters and Belts) dated 2/3/2014
Work Order C92093755 (Materials Processing Facility Filters and Belts) dated 6/2/2014
Work Order C92094540 (Hydrovac Filters), dated 12/2/2014

Section 2RS3: In-Plant Airborne Radioactivity Control and Mitigation

Procedures

ERPIP-B.1, Equipment Checklist, Revision 03500
GEN-9, Removal and Replacement of Nuclear Air Filters for Plant Ventilation Exhaust Systems, Revision 8
OI-36, Containment Purge System, Revision 29
RP-AA-13, Respiratory Protection Program Description, Revision 0
RP-AA-440, Respiratory Protection Program, Revision 10
RP-AA-441, Evaluation and Selection Process for Radiological Respirator Use, Revision 5
RP-AA-443, Quantitative Respirator Fit Testing, Revision 12
RSP 1-117, Issuance and Wearing of Respiratory Protection Devices used to Protect Against Airborne Radioactivity, Revision 01302
RSP 1-131, Operation of the AMS-4, Revision 00600
RSP 2-301, Respiratory Protection Device Maintenance, Revision 01404
RSP 2-304, Operation of the Bauer breathing Air Compressor, Revision 00100

Documents

Air test results, Bauer UNII25E3 (Well Water House) for 2013
Air test results, Bauer UNII25E3 (Well Water House) for 2014
Basis for Eberline AMS-4, Technical Position Paper, CCNP II 41-3201-01-002, Revision 0
Certification Record, MSA MMR Certified CARE Technicians, Mr. Myron Thompson, dated 8/21/2013
Database Printout, Calvert Cliffs Respiratory Status Report, dated 11/18/2014
Database Printout, Inventory Records for MSA 4500# SCBA Inspections
Qualification Record, Respirator Maintenance and Testing, Mr. Myron Thompson, dated 12/11/2007

Section 4OA1: Performance Indicators Verification

ANS Reliability Performance Indicator Data, October 2013 – September 2014
Daily Individual Dose Report (records of exit transactions > 100 mrem) for 2014
Drill and Exercise Performance Indicator Data, October 2013 – September 2014
EP-AA-125-1001, EP Performance Indicator Guidance, Revision 8
EP-AA-125-1002, ERO Performance – Performance Indicators Guidance, Revision 10
EP-AA-125-1003, ERO Readiness - Performance Indicators Guidance, Revision 9
ERO Drill Participation Performance Indicator Data, October 2013 – September 2014
PI Verification Records, Monthly Data Elements for NRC Occupational Exposure Control Effectiveness, for 2014
LS-AA-2001, Collecting and Reporting of NRC Performance Indicator Data, Revision 14
LS-AA-2010, Monthly Data Elements for NRC/WANO Unit/Shutdown Occurrences, Revision 5
LS-AA-2030, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, Revision 5

Section 4OA2: Problem Identification and ResolutionProcedures

PI-AA-125, Corrective Action Program (CAP) Procedure, Revision 1
 PI-AA-125-1005, Coding and Analysis Manual, Revision 0
 CNG-AM-1.01-1029, Cable Aging Management Program, Revision 2
 ER-AA-300-150, Cable Condition Monitoring Program, Revision 0
 CNG-CA-1.01-1000, Constellation Energy Nuclear Group Fleet Administrative Procedure, Revision 01100
 Pump-03B, Modified Saltwater Pump Overhaul, Revision 1
 OI-29-1, Saltwater System, Revision 69, Completed 7/20/2013
 STP-O-73A-1, Saltwater Pump and Check Valve Quarterly Operability Test, Revision 23, Completed 6/29/2013
 CNG-OP-1.01-2010, Operator Workaround/Challenge Control, Revision 0
 OP-AA-102-103, Operator Work-Around Program, Revision 3
 OP-AA-102-103-1001, Operator Burden and Plant Significant Decisions Impact Assessment Program (CM-1), Revision 5

Condition Reports

02399473*	CR-2011-011310
02400030*	CR-2012-003796
CR-2011-004179	CR-2012-003797
CR-2011-010518	CR-2013-005710
CR-2014-006520	CR-2013-007182

(*) denotes NRC identified during this inspection

Drawings:

12315-0002SH0001, 24" Angle Flow Pump Fairbanks Morse Co. Fig. 5712 Assembly

Work Orders:

C91090224
 C91270200
 C91452988
 C91843338
 C91907683
 C92313004

Miscellaneous Documents:

Apparent Cause Evaluation for CR-2013-005710
 Engineering Change Package (ECP) -13-001042, Installation of a Grease Fitting on Lower Thrust Bearing Housing
 RECO for #11 Saltwater Pump, Completed 7/19/2013
 Thrust Bearing Temperature Trend Data, April 2013 to July 2013
 Calvert Cliffs UFSAR, Table 9-17A, Single Failure Analysis, Revision 34
 PMCR P-CAL-032404

Operability Evaluation

OD 11-02, Revision 7

Section 4OA3: Event Followup

Procedures

CNG-HU-1.01-1000, "Human Performance," Revision 800

Condition Reports

2014-003320

2014-002887

LIST OF ACRONYMS

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ACE	apparent cause evaluation
ANS	alert and notification system
AR	action report
CAP	corrective action program
CCNPP	Calvert Cliffs Nuclear Power Plant
CR	condition report
EAL	emergency action level
ECCS	emergency core cooling system
EDG	emergency diesel generator
EOP	emergency operating procedure
EP	emergency preparedness
ERF	emergency response facility
ERO	emergency response organization
Exelon	Exelon Generation Company, LLC
HRA	high radiation area
IMC	Inspection Manual Chapter
IR	incident report
LCO	limiting condition for operation
LER	licensee event report
LOCI	loss of coolant incident
MRFF	maintenance rule functional failure
MVCP	medium voltage cable program
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
RCS	reactor coolant system
RG	Regulatory Guide
RP	radiation protection
RWP	radiation work permit
SCBA	self-contained breathing apparatus
SFPCHC	spent fuel pool cask handling crane
SIAS	safety injection actuation signal
SSC	structure, system, and component
SW	saltwater
TS	technical specifications
UFSAR	Updated Final Safety Analysis Report
VDC	volts direct current
VHRA	very high radiation area
WO	work order