



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

November 4, 2014

Mr. Christopher Costanzo
Site Vice President
Nine Mile Point Nuclear Station
Exelon Generation Company, LLC
P.O. Box 63
Lycoming, NY 13093

**SUBJECT: NINE MILE POINT NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT 05000220/2014004 AND 05000410/2014004 AND INDEPENDENT
SPENT FUEL STORAGE INSTALLATION (ISFSI) REPORT 07201036/2014001**

Dear Mr. Costanzo:

On September 30, 2014, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Nine Mile Point Nuclear Station (NMPNS), Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on October 27, 2014, with Mr. Peter Orphanos, Plant Manager, 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 finding of very low safety significance (Green). The finding was determined not to involve a violation of NRC requirements. If you disagree with the cross-cutting aspect assignment or the finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspectors at NMPNS.

C. Costanzo

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Sincerely,

/RA/

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

Docket Nos. 50-220 and 50-410
License Nos. DPR-63 and NPF-69

Enclosure: Inspection Report 05000220/2014004 and 05000410/2014004
and ISFSI Report 07201036/2014001 w/Attachment: Supplementary
Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos. 50-220 and 50-410

License Nos. DPR-63 and NPF-69

Report Nos. 05000220/2014004 and 05000410/2014004

Licensee: Exelon Generation Company, LLC

Facility: Nine Mile Point Nuclear Station
Unit 1 and Unit 2

Location: Oswego, New York

Dates: July 1, 2014, through September 30, 2014

Inspectors: K. Kolaczyk, Senior Resident Inspector
E. Miller, Resident Inspector
G. Stock, Resident Inspector
E. Burket, Emergency Preparedness Inspector
C. Graves, Health Physicist
D. Lawyer, Health Physicist
O. Masnyk-Bailey, Health Physicist

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

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SUMMARY

IR 05000220/2014004, 05000410/2014004; 07/01/2014 – 09/30/2014; Nine Mile Point Nuclear Station (NMPNS), Units 1 and 2; Follow-Up of Events and Notices of Enforcement Discretion.

This report covered a 3-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The inspectors identified one Green finding. 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 19, 2013. All violations of United States 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 finding (FIN) of CNG-PR-1.01-1005, "Control of Technical Procedure Format and Content," Revision 00500, because Exelon Generation Company, LLC (Exelon) provided Unit 2 operators with an inadequate auxiliary boiler system operating procedure. Specifically, N2-OP-48, "Auxiliary Boiler System," Revision 01100.00, did not provide operators adequate detail to properly establish chemistry requirements for water conductivity of the auxiliary boiler system. On March 23, 2014, when Unit 2 experienced a trip of the auxiliary boiler system due to inadequate water conductivity, operators became challenged with system restoration which caused an unplanned loss of secondary containment and entry into Technical Specification (TS) 3.6.4.1, "Secondary Containment." Exelon generated condition report (CR)-2014-002281 regarding this issue. Immediate corrective actions included updating chemistry requirements associated with auxiliary boiler procedures, implementing new preventive maintenance (PM) strategies for significant components associated with the auxiliary boilers, and implementing new performance monitoring plans.

This finding is more than minor because it affected the procedure quality attribute of the Barrier Integrity cornerstone and affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, over the past 2 years, the auxiliary boilers have experienced trips as a result of insufficient procedural guidance. On March 23, 2014, the inadequate procedural guidance resulted in a trip and subsequent loss of reactor building (RB) differential pressure (DP). This caused an unplanned entry into the secondary containment emergency operating procedure and an unplanned entry into TS 3.6.4.1, which presented unnecessary challenges and distractions to operators during a planned down-power. In accordance with IMC 0609.04, "Initial Characterization of Findings," the inspectors used IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," because secondary containment was declared inoperable following a loss of building heating. Using Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," Section C, "Control Room, Auxiliary, Reactor, or Spent Fuel Pool Building," the inspectors determined that this finding is of very low safety significance (Green) because although the performance deficiency resulted in a trip of the auxiliary boiler system and a loss of secondary containment, the RB DP was restored to greater than 0.25 inches of water, within the allowable limiting condition for operation time, and did not result in a failure

of the ability for secondary containment to maintain isolation or impact the ability for standby gas treatment system to maintain secondary containment. This finding has a cross-cutting aspect in the area of Human Performance, Resources, because Exelon did not ensure personnel, equipment, procedures, and other resources were available and adequate to support nuclear safety. Specifically, the inadequate management oversight of the auxiliary boilers resulted in numerous failures of the auxiliary boilers due to inadequate knowledge transfer, inaccurate classifications of maintenance rule functional failures for the system, inadequate procedures for boiler operation, and inadequate procedures for the prompt restoration of secondary containment when the auxiliary boiler system is not available [H.1]. (Section 4OA3)

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at 100 percent power. On September 13, 2014, operators reduced reactor power to 44 percent to perform a condenser tube leak repair, hydraulic control unit (HCU) repairs, control rod scram time testing, turbine stop valve and turbine control valve testing, and a rod pattern adjustment. Operators returned reactor power to 100 percent following maintenance and testing on September 14. On September 20, operators reduced reactor power to 80 percent for reactor recirculation motor generator 13 recovery and rod pattern adjustment. Unit 1 returned to 100 percent reactor power the same day and 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 August 12, 2014, operators reduced reactor power to 98 percent when the turbine bypass control system valves cycled open momentarily because of an intermittent electrical short in the electrohydraulic control system. Reactor power was returned to 100 percent on August 14. On September 6, operators reduced reactor power to 65 percent to perform a feedwater pump exchange, control rod scram time testing, and turbine stop valve and turbine control valve testing. Operators restored reactor power to 100 percent on September 7. On September 21, operators reduced reactor power to 98 percent due to a feedwater heater level control valve failure. Following repair, operators restored reactor power to 100 percent on September 22. Unit 2 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

1R04 Equipment Alignment

a. Inspection Scope

.1 Partial System Walkdowns (71111.04Q – 4 samples)

The inspectors performed partial walkdowns of the following systems:

- Unit 1 emergency condenser system on July 2, 2014
- Unit 2 Division I standby gas treatment system (SGTS) during Division II SGTS maintenance on July 28, 2014
- Unit 1 emergency diesel generator (EDG) raw water during EDG 103 surveillance testing on August 4, 2014
- Unit 2 Division II control room special filter system during Division I SGTS maintenance on August 12, 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 operating procedures, system diagrams, the Updated Final Safety Analysis Review (UFSAR), TSs, work orders (WOs), 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 staff had properly identified equipment issues and entered them into the corrective action program (CAP) for resolution with the appropriate significance characterization. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

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

a. Inspection Scope

During the week of September 29, 2014, the inspectors performed a complete system walkdown of accessible portions of the Unit 1 diesel-driven fire pump and fire main system located in the screen house to verify the existing equipment lineup was correct. The inspectors reviewed operating procedures, drawings, and the UFSAR to verify the system was aligned to perform its required functions. The inspectors performed field walkdowns of accessible portions of the system to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of components and observed operating parameters of equipment to verify that there were no deficiencies. Additionally, the inspectors reviewed a sample of related CRs and WOs to ensure Exelon staff appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

Resident Inspector Quarterly Walkdowns (71111.05Q – 6 samples)

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 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.

- Unit 1 battery board room 11 (fire area (FA) 16B) on July 7, 2014
- Unit 1 battery board room 12 (FA 16A) on July 7, 2014
- Unit 1 battery room 11 (FA 17B) on July 7, 2014

- Unit 1 battery room 12 (FA 17A) on July 7, 2014
- Unit 1 uninterruptible power supply (UPS) security battery room (FA 7) on July 10, 2014
- Unit 2 Division III diesel generator room (FA 30) on July 10, 2014

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 1 sample)

Internal Flooding Review

a. Inspection Scope

The inspectors reviewed the UFSAR, flooding calculations, and plant procedures to assess susceptibilities involving internal flooding. The inspectors also reviewed the CAP to determine if Exelon personnel identified and corrected flooding problems and whether operator actions for coping with flooding were adequate. The inspectors focused on the Unit 1 RB track bay extension area, elevation 261, and toured the area on August 18 and 19, 2014, to verify the adequacy of equipment seals, floor and water penetration seals, watertight door seals, common drain lines and sumps, sump pumps, and control circuits.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11Q – 4 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training (2 samples)

a. Inspection Scope

The inspectors observed:

- Unit 2 job performance measure scenario, which involved restoration of suppression pool water level using high-pressure core spray on July 18, 2014
- Unit 1 licensed operator simulator training, which included a failure of the automatic voltage regulator, a fault on power board 16B, and small break loss-of-coolant accident on July 22, 2014

The inspectors evaluated operator performance during the simulated event and verified completion of risk-significant operator actions, including the use of abnormal and emergency operating procedures. 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 classifications 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
(2 samples)

a. Inspection Scope

The inspectors observed:

- Unit 1 control room operations during power maneuver activities to support feedwater booster pump testing and shutdown of motor-driven feedwater pump 12 on July 9, 2014
- Unit 2 control room operations during reactor core isolation cooling (RCIC) surveillance testing on August 7, 2014

The inspectors reviewed CNG-OP-1.01-1000, "Conduct of Operations," Revision 01000, and verified that procedure use, crew communications, and coordination of plant activities among work groups similarly met established expectations and standards. Additionally, the inspectors observed test performance to verify that procedure use, crew communications, and coordination of activities between work groups similarly met established expectations and standards.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 3 samples)

a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structure, system, and component (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 Title 10 of the *Code of Federal Regulations* (10 CFR) 50.65 and verified that the (a)(2) performance criteria established by Exelon staff were 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 staff was identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- Unit 2 main control room and relay room temperature control valves 2HVK*TV21A, 2HVK*TV21B, 2HVK*TV22A, and 2HVK*TV22B on September 17, 2014

- Unit 1 reactor pressure vessel head safety relief valves PSV-01-119A, PSV-01-119B, PSV-01-119C, PSV-01-119D, PSV-01-119F, PSV-01-119G, PSV-01-119H, PSV-01-119J, and PSV-01-119M on September 18, 2014
- Unit 1 shutdown cooling pumps 11, 12, and 13 on September 19, 2014

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 7 samples)

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 from service. 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.

- Unit 1 unplanned maintenance of UPS162A following a blown fuse on July 1, 2014
- Unit 2 electric-driven fire pump 2FPW-P2 during planned maintenance on diesel-driven fire pump 2FPW-P1 on July 16, 2014
- Unit 1 planned maintenance on containment spray system 112 on July 24, 2014
- Unit 1 planned maintenance on instrument air compressor 11 on August 19, 2014
- Unit 1 unplanned isolation of control room emergency ventilation system during diagnostic testing of block valve 210.1-02 on September 10, 2014
- Unit 1 planned maintenance of the main condenser for tube leak repairs, HCU repairs, and scram time testing on September 13, 2014
- Unit 1 failure of a drywell high-pressure instrument calibration due to a calibration unit test box failure and use of alternate test method on September 17, 2014

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 6 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- Unit 2 local power range monitor 56-33C causing average power range monitor #3 upscale high alarms on July 15, 2014
- Unit 1 intermediate range monitor 15 being taken out of bypass on July 16, 2014
- Unit 1 hot bearing on EDG 103 raw water pump on August 15, 2014
- Unit 2 low pressure coolant injection operability during suppression pool cooling operation on September 3, 2014
- Unit 2 Division II EDG elevated governor oil temperature on September 11, 2014
- Unit 1 electromatic relief valve pilot solenoid actuator spring on September 29, 2014

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 TSs 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.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – 3 samples)

Temporary Modifications

a. Inspection Scope

The inspectors reviewed the temporary modifications listed below to determine whether the modifications affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results and conducted field walkdowns of the modifications to verify that the temporary modifications did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- Engineering Change Package (ECP)-14-000677 – temporary modification to disable the Unit 2 electrohydraulic control stop valve load limit logic that renders the turbine bypass valves TS inoperable
- ECP-14-000736 – temporary modification to mitigate air leakage on unit 1 HCU-44-3031 scram valve pilot air header
- ECP-14-000748 – temporary modification to replace unit 2 SGTS pressure control valve 2GTS*PCV80A

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 8 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 the 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.

- Unit 2 instrument air compressor 2IAS-C3A following mechanical PM on August 7, 2014
- Unit 1 planned maintenance on core spray pump 121 circuit breaker on August 25, 2014
- Unit 2 condensing water pump 2SWP*P2B following packing adjustment on August 25, 2014
- Unit 2 containment atmosphere monitoring isolation valves 2CSM*SOV61B and 2CMS*SOV62B following time delay relay replacement on August 26, 2014
- Unit 1 motor-driven fire pump strainer 100-22 following mechanical PM on August 28, 2014
- Unit 2 spent fuel pool filter bypass valve 2SFC*FV113 following replacement on September 10, 2014
- Unit 2 hydrogen recombiner outside isolation valve 2HCS*MOV1B following electrical PM on September 12, 2014
- Unit 2 SGTS pneumatic supply/accumulator leak rate test following pressure control valve 2GTS*PV5A actuator replacement on September 21, 2014

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 7 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 TSs, the UFSAR, and Exelon procedure 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:

- Unit 1, N1-ST-M4A, Emergency Diesel Generator 102 and PB 102 Operability Test on July 21, 2014
- Unit 2, N2-OSP-EGS-M@002, Diesel Generator and Diesel Air Start Valve Operability Test, Division III on July 22, 2014
- Unit 2, N2-OSP-SLS-Q001, Standby Liquid Control Pump, Check Valve, Relief Valve Operability Test and ASME XI Pressure Test on July 31, 2014 (inservice test)
- Unit 1, N1-ST-M1A, Liquid Poison Pump 11 Operability Test on August 11, 2014 (inservice test)
- Unit 1, N1-ST-Q3, HPCI [high pressure coolant injection] Pump and Check Valve Operability Test on August 14, 2014 (inservice test)
- Unit 2, N2-CSP-SLS-@112, Adjustment of SLS Tank Sodium Pentaborate Concentration on August 27, 2014
- Unit 1, N1-EPM-GEN-291, Generator Shaft Voltage Reading and Brush Inspection on September 8, 2014

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

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

a. Inspection Scope

Exelon implemented various changes to NMPNS' emergency action levels (EALs), emergency plan, and implementing procedures. In accordance with 10 CFR 50.54(q)(3), Exelon determined that any changes made to the EALs, emergency plan, and its lower-tier implementing procedures did not result in any reduction in effectiveness of the plan and that the revised plan continued to meet the standards in 10 CFR 50.47(b) and the requirements of 10 CFR 50 Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities."

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 reference criteria.

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 the period of July 21 to 24, 2014, the inspectors reviewed Exelon's 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; TSs; and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors reviewed the 2013 performance indicators (PIs) for the Occupational Radiation Safety cornerstone, radiation protection program audits, and reports of operational occurrences related to occupational radiation safety since the last inspection.

Radiological Hazard Assessment

The inspectors determined there have been no changes to plant operations since the last inspection that may result in a significant new radiological hazard for onsite workers or members of the public.

The inspectors conducted walkdowns and independent radiation measurements including radioactive waste processing, storage, and handling areas to evaluate material and radiological conditions.

Instructions to Workers

The inspectors assessed whether permissible dose for work under each radiation work permit (RWP) reviewed was clearly identified. The inspectors evaluated whether electronic personal dosimeter alarm set points were in conformance with survey material and radiological conditions.

Contamination and Radioactive Material Control

The inspectors observed Unit 1 and Unit 2 access control points where Exelon monitors material leaving the radiologically controlled area and inspected the methods used for control, survey, and release of these materials from the control point. The inspectors observed the performance of personnel surveying and releasing material for unrestricted use and evaluated whether the work was performed in accordance with plant procedures. The inspectors evaluated whether any recent transactions involving nationally tracked sources were reported in accordance with 10 CFR 20 requirements.

Radiological Hazards Control and Work Coverage

The inspectors evaluated radiological conditions and performed independent radiation measurements during walkdowns and assessed whether the conditions were consistent with postings, surveys, RWPs, and worker briefings.

The inspectors evaluated the adequacy of radiological controls, surveys, and radiation protection job coverage, and evaluated Exelon's use of electronic personal dosimeters in high noise areas.

The inspectors reviewed the application of dosimetry to monitor exposure to personnel in high radiation work areas with significant dose rate gradients.

The inspectors examined Exelon's programmatic controls for storage of highly activated or contaminated components.

Radiation Worker Performance

The inspectors observed the performance of radiation workers with respect to radiation protection requirements and assessed whether workers were aware of the radiological conditions in their workplace and the RWP controls/limits in place.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with radiation monitoring and exposure control were being identified by Exelon at an appropriate threshold and were properly addressed for resolution in Exelon's CAP. The inspectors assessed Exelon's process for applying operating experience to their plant.

b. Findings

No findings were identified.

2RS2 Occupational ALARA Planning and Controls (71124.02 – 1 sample)

a. Inspection Scope

During the period of July 21 to 24, 2014, the inspectors assessed performance with respect to maintaining occupational individual and collective radiation exposures as low as reasonably achievable (ALARA). The inspectors used the requirements in 10 CFR 20; RG 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Plants Will Be As Low As Is Reasonably Achievable," Revision 3; RG 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable," Revision 1-R; TSs; and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors reviewed pertinent information regarding Unit 2 collective dose history, current exposure trends, and ongoing or planned activities in order to assess current performance and exposure challenges during the last refueling outage (N2R14).

The inspectors compared the site-specific trends in collective exposures against the industry-average values, exposure values from similar vintage reactors, and the trend in average contact dose rates with recirculation piping measured on April 5, 2014.

The inspectors reviewed site-specific procedures associated with maintaining occupational exposures ALARA, which included a review of processes used to estimate and track exposures from specific work activities.

Radiological Work Planning

The inspectors selected and reviewed the following high-exposure work activities:

- Drywell operations activities
- Drywell valve and piping replacement/repairs
- Under-vessel work control rod drive and local power range monitor replacement
- Reactor disassembly/reassembly and cavity decontamination
- Refuel floor underwater activities

The inspectors reviewed the ALARA work activity evaluations, exposure estimates, exposure reduction requirements, and post-work evaluations. The inspectors reviewed the grouping of radiological work into work activities based on historical precedence and industry standards.

Verification of Dose Estimates and Exposure Tracking Systems

The inspectors reviewed the assumptions and basis for the current annual collective dose estimate for accuracy and reviewed applicable procedures to determine the methodology for estimating exposures from specific work activities and for department and station collective dose goals.

The inspectors evaluated whether Exelon had established measures to track, trend, and reduce occupational doses for ongoing work activities and assessed whether dose threshold criteria were established for work-in-progress reviews. The inspectors evaluated the method used for adjusting exposure estimates or re-planning work when unexpected changes in scope or emergent work were encountered.

Source-Term Reduction and Control

The inspectors reviewed Exelon's records to determine the historical trends and current status of plant source term and assessed whether Exelon had developed contingency plans for expected changes in the source term as the result of changes in plant fuel performance issues or changes in plant primary chemistry.

Radiation Worker Performance

The inspectors observed radiation worker and radiation protection technician performance during work activities being performed in radiation areas, airborne radioactivity areas, and high radiation areas and evaluated whether workers

demonstrated the ALARA philosophy in practice and whether there were any procedural compliance issues.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with ALARA planning and controls were being identified by Exelon at an appropriate threshold and were properly addressed for resolution in Exelon's CAP. The inspectors assessed Exelon's process for applying operating experience to their plant.

b. Findings

No findings were identified.

2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06 – 1 sample)

a. Inspection Scope

During the period of August 11 to 14, 2014, the inspectors verified that gaseous and liquid effluent processing systems were maintained so radiological discharges were properly reduced, monitored, and released. The inspectors also verified the accuracy of the calculations for effluent releases and public doses.

The inspectors used the requirements in 10 CFR 20; 10 CFR 50 Appendix A, "General Design Criteria for Nuclear Power Plants," Criterion 60, "Control of Release of Radioactivity to the Environment," and Criterion 64, "Monitoring Radioactive Releases;" 10 CFR 50 Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operations to Meet the Criterion 'As Low As Is Reasonably Achievable' for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents;" 10 CFR 50.35(a); 10 CFR 50.75(g); Title 40 of the CFR (40 CFR) 141, "Maximum Contaminant Levels for Radionuclides;" 40 CFR 190, "Environmental Radiation Protection Standards for Nuclear Power Operations;" RG 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR 50, Appendix I," Revision 1; RG 1.21, "Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste," Revision 2; RG 4.1, "Radiological Environmental Monitoring for Nuclear Power Plants," Revision 2; RG 4.15, "Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) -- Effluent Streams and the Environment," Revision 2; NUREG-1302, "Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors;" TSs; applicable industry standards; and Exelon procedures required by TSs/offsite dose calculation manual (ODCM) as criteria for determining compliance.

Event Report and Effluent Report Reviews

The inspectors reviewed anomalous results, unexpected trends, abnormal releases, and radioactive effluent monitor operability issues that were identified and determined if these effluent results were evaluated, were entered in the CAP, and were adequately resolved.

ODCM and UFSAR

The inspectors reviewed UFSAR descriptions of the radioactive effluent monitoring systems, treatment systems, and effluent flow paths to identify system design features and required functions. The inspectors reviewed changes to the ODCM made since the last inspection. When differences were identified, the inspectors reviewed the technical basis or evaluations of any changes. The inspectors reviewed documentation to determine if any non-radioactive systems that have become contaminated were disclosed either through an event report or the ODCM.

Groundwater Protection Initiative (GPI) Program

The inspectors reviewed reported groundwater monitoring results and changes to Exelon's written program for identifying and controlling contaminated spills/leaks to groundwater.

Procedures, Special Reports, and Other Documents

The inspectors reviewed licensee event reports (LERs), event reports, and special reports related to the effluent program issued since the previous inspection to identify any additional focus areas for the inspection based on the scope/breadth of problems described in these reports.

The inspectors reviewed effluent program implementing procedures including those associated with effluent sampling, effluent monitor set-point determinations, and dose calculations. The inspectors reviewed copies of self-assessments and third party evaluation reports for the effluent monitoring program since the last inspection.

Walkdowns and Observations

The inspectors walked down Unit 1 and Unit 2 radiation monitors and components of the gaseous and liquid discharge systems to verify that equipment configuration and flow paths aligned with the descriptions in the UFSAR and to assess equipment material condition. The review included potential unmonitored release points, building alterations which could impact airborne or liquid effluent controls, and ventilation system leakage that communicates directly with the environment.

The inspectors reviewed effluent system material condition surveillance records for equipment and areas associated with the systems that were not readily accessible due to radiological conditions. The inspectors walked down filtered ventilation systems to verify there were no degraded conditions associated with high-efficiency particulate air/charcoal banks, improper alignment, or system installation issues that would impact the performance or the effluent monitoring capability of the effluent system.

The inspectors observed portions of the routine processing and discharge of radioactive gaseous effluent systems to verify that appropriate treatment equipment was used and the processing activities aligned with discharge permits.

The inspectors determined that Exelon had not made any changes to their effluent release paths since the last inspection. The inspectors discussed routine processing and discharge of liquid waste. The inspectors verified that appropriate effluent treatment

equipment was used and that radioactive liquid waste was being processed and discharged in accordance with procedures and verified that no liquid discharges had taken place since the last inspection.

Sampling and Analysis

The inspectors selected three gaseous effluent sampling activities from Unit 1 and Unit 2 and assessed the adequacy of controls to ensure representative samples were obtained. The inspectors selected two gaseous effluent discharges made from Unit 2 with inoperable effluent radiation monitors to verify that controls were in place to ensure compensatory sampling was performed as required and that those controls were adequate to prevent the release of unmonitored liquid and gaseous effluents. The inspectors determined whether the facility was routinely relying on the use of compensatory sampling in lieu of adequate system maintenance based on the frequency of compensatory sampling since the last inspection.

The inspectors reviewed the results of the inter-laboratory and intra-laboratory comparison program to verify the quality of the radioactive effluent sample analyses. The inspectors also assessed whether the laboratory comparison program included hard-to-detect isotopes.

Effluent Flow Measuring Instruments

The inspectors reviewed the methodology used to determine the effluent stack and vent flow rates to verify that the flow rates were consistent with TSs, ODCM, and UFSAR values. The inspectors reviewed the differences between assumed and actual stack and vent flow rates to ensure that public dose calculations were not affected.

Air Cleaning Systems

The inspectors assessed surveillance test results for TS-required ventilation effluent discharge systems using TS acceptance criteria.

Dose Calculations

The inspectors reviewed all significant changes in reported dose values compared to the previous radioactive effluent release report to evaluate the factors which resulted in the change.

The inspectors reviewed three radioactive liquid and gaseous waste discharge permits to verify that the projected doses to members of the public were accurate and based on representative samples of the discharge path.

The inspectors evaluated the methods used to ensure that all radionuclides in the effluent stream were included within detectability limitations. The review included the current waste stream analyses to ensure hard-to-detect radionuclides were included in the effluent releases.

The inspectors reviewed changes in methodology for offsite dose calculations since the last inspection to verify the changes were consistent with requirements. The inspectors reviewed meteorological dispersion and deposition factors used in the ODCM and

effluent dose calculations to ensure appropriate dispersion/deposition factors were being used for public dose calculations.

The inspectors reviewed the latest land-use census to verify changes that affect public dose pathways had been factored into the dose calculations and environmental sampling and analysis program.

The inspectors evaluated whether the calculated doses were within the 10 CFR 50 Appendix I and TS dose criteria.

The inspectors reviewed records of any abnormal gaseous or liquid tank discharges to ensure the abnormal discharge were monitored by the discharge point effluent monitor. Discharges made with inoperable effluent radiation monitors or unmonitored leakages were reviewed to ensure that an evaluation was made of the discharge to account for the effluent release and were included in the calculated doses to the public.

GPI Implementation

The inspectors reviewed monitoring results of the voluntary Nuclear Energy Institute (NEI) GPI to determine if Exelon had implemented the GPI as intended.

The inspectors reviewed identified leakage or spill events and entries made into Exelon's decommissioning files. The inspectors reviewed evaluations of leaks or spills, and reviewed the effectiveness of any remediation actions. The inspectors reviewed onsite contamination events involving contaminated groundwater and assessed whether the source of the leak or spill was identified and isolated/terminated.

For unmonitored spills, leaks, or unexpected liquid or gaseous discharges, the inspectors assessed whether an evaluation was performed to determine the type and amount of radioactive material discharged by assessing whether sufficient radiological surveys were performed to evaluate the extent of the contamination and by assessing whether a survey/evaluation had been performed and determining whether Exelon completed offsite notifications as provided in its GPI implementing procedures.

Problem Identification and Resolution

The inspectors assessed whether problems associated with the effluent monitoring and control program were being identified by Exelon at an appropriate threshold and were properly addressed for resolution in the CAP. In addition, the inspectors evaluated the appropriateness of the corrective actions for a selected sample of problems documented.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151- 13 samples)

.1 Safety System Functional Failures (2 samples)

a. Inspection Scope

The inspectors sampled Exelon's submittals for the safety system functional failures (MS05) PI for Unit 1 and Unit 2 for the period of July 1, 2013, through June 30, 2014. To determine the accuracy of the PI data reported during those periods, inspectors used definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, and NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73," Revision 3. The inspectors reviewed Exelon's operator narrative logs, operability assessments, maintenance rule records, CRs, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index (10 samples)

a. Inspection Scope

The inspectors reviewed Exelon's submittal of the mitigating systems performance index for the following systems for the period of July 1, 2013, through June 30, 2014:

Unit 1 and Unit 2

- Emergency Alternating Current Power System (MS06)
- High-Pressure Injection System (MS07)
- Heat Removal System (MS08)
- Residual Heat Removal System (MS09)
- Cooling Water System (MS10)

To determine the accuracy of the PI data reported during those periods, inspectors used definitions and guidance contained in NEI 99-02, Revision 7. The inspectors reviewed Exelon's operator narrative logs, CRs, mitigating systems performance index basis document, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.3 Radiological Effluent TS/ODCM Radiological Effluent Occurrences (1 sample)

a. Inspection Scope

During the period of August 11 to 14, 2014, the inspectors sampled Exelon's submittals for the radiological effluent TS/ODCM radiological effluent occurrences (PR01) PI for the period of January 1, 2013, through June 30, 2014. The inspectors used PI definitions and guidance contained in NEI 99-02, Revision 7, to determine if the PI data was reported properly during this period.

The inspectors reviewed Exelon's corrective action report database and selected individual reports generated to identify any potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose. The inspectors reviewed gaseous and liquid effluent summary data and the results of associated offsite dose calculations for the selected dates to determine if indicator results were accurately reported. The inspectors also reviewed Exelon staff's methods for quantifying gaseous and liquid effluents and determining effluent dose.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 1 sample)

.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 and periodically attended CR screening meetings.

b. Findings

No findings were identified.

.2 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 procedure OP-AA-102-103, "Operator Work-Around Program," Revision 004.

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.

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

.1 Plant Events

a. Inspection Scope

For the plant event listed below, the inspectors reviewed and/or observed plant parameters, reviewed personnel performance, and evaluated performance of mitigating systems. The inspectors communicated the plant event to appropriate regional personnel, and compared the event details with criteria contained in IMC 0309, "Reactive Inspection Decision Basis for Reactors," issued October 28, 2011, for consideration of potential reactive inspection activities. As applicable, the inspectors verified that Exelon made appropriate emergency classification assessments and properly reported the event in accordance with 10 CFR Parts 50.72 and 50.73. The inspectors reviewed Exelon's follow-up actions related to the event to assure that Exelon implemented appropriate corrective actions commensurate with their safety significance.

- Unit 2 rapid power reduction to 98 percent when the turbine bypass control system valves cycled open momentarily because of an intermittent electrical short in the electrohydraulic control system on August 12, 2014.

b. Findings

No findings were identified.

.2 LER 05000410/2014-006-00: Secondary Containment Inoperability Following Auxiliary Boiler Trip

On March 24, 2014, during a power reduction to support the start of a refueling and maintenance outage, Unit 2 experienced reduced DP between the RB (i.e. secondary containment) and the outside atmosphere. The reduced DP was caused by a loss of RB

heating when the auxiliary boiler system tripped. The reduced DP also caused an unplanned entry into TS 3.6.4.1, "Secondary Containment," which requires RB DP to be greater than or equal to 0.25 inches of vacuum water gauge. The RB DP also went positive, which resulted in entry into emergency operating procedure, N2-EOP-SC, "Secondary Containment Control – Flowchart," Revision 01100.00. Operators were able to restore RB DP within 3 minutes of the start of the event. Exelon entered this issue into their CAP as CR-2014-002281 and performed an apparent cause evaluation. Exelon attributed the cause of the loss of RB DP to inadequate oversight of the Unit 2 auxiliary boiler system and that less than adequate maintenance resulted in poor system reliability. Corrective actions associated with this issue included implementing new PM strategies on the auxiliary boilers, implementing new performance monitoring plans for the auxiliary boilers, and enhancing operating procedures to include more specific chemistry requirements. The enforcement aspects regarding Unit 2 auxiliary boiler performance and the loss of secondary containment are discussed below. This LER is closed.

b. Findings

Introduction. The inspectors identified a Green FIN of CNG-PR-1.01-1005, "Control of Technical Procedure Format and Content," Revision 00500, because Exelon provided Unit 2 operators with an inadequate auxiliary boiler system operating procedure. Specifically, N2-OP-48, "Auxiliary Boiler System," Revision 01100.00, did not provide operators adequate detail to properly establish chemistry requirements for water conductivity of the auxiliary boiler system. As a result, on March 23, 2014, when Unit 2 experienced a trip of the auxiliary boiler system due to inadequate water conductivity, operators were unable to restart the boiler, which caused an unplanned loss of secondary containment and entry into TS 3.6.4.1, "Secondary Containment."

Description. The auxiliary boiler system at Unit 2 produces low-pressure steam for support system operation when normal steam sources (main steam or extraction steam) are not available to support plant operation. The clean steam produced by the boilers provides heating to the RB. The auxiliary boiler consists of two high-voltage electrode-type boilers, which generate steam by resistance heating of the boiler water. Boiler function depends on flow rate of water to the electrodes and water conductivity.

Between 2012 and 2014, on several occasions, operators have not properly operated the auxiliary boiler system. For example, on April 5, 2012, operators did not have proper guidance to ensure successful operation of the 'A' auxiliary boiler system resulting in a trip of auxiliary boiler. This issue was captured in CR-2012-002694. On September 12, 2012, operators experienced issues with the immersion heater supply breaker causing unavailability of the 'B' auxiliary boiler. This issue was captured in CR-2012-008467. On November 12, 2012, improper operating procedures associated with water chemistry control of the 'B' auxiliary boiler led to a trip of boiler. This issue was captured in CR-2012-010349. On November 19, 2012, the 'A' auxiliary boiler also tripped due to improper water chemistry. This issue was captured in CR-2012-010572. On March 9, 2014, the 'B' auxiliary boiler tripped due to high-ground current as a result of improper chemistry controls. This issue was captured in CR-2014-001923. Each of these events illustrated operational challenges associated with the auxiliary boiler system.

On March 23, 2014, Unit 2 performed a down-power to begin a refueling outage. As part of the Unit 2 shutdown, operators were performing a primary containment purge to

remove nitrogen and prepare the drywell atmosphere for personnel access to conduct maintenance and inspection activities. At 11:06 p.m., auxiliary boiler 'B' tripped due to the load control valve failing to maintain auxiliary boiler pressure automatically. Operators started auxiliary boiler 'A' at 11:03 p.m. due to the issues being experienced with auxiliary boiler 'B'. At 11:29 p.m., auxiliary boiler 'A' tripped on high-ground current due to improper boiler water conductivity. Operators were unable to restore the auxiliary boilers due to chemistry requirements for water conductivity not being met. Without the auxiliary boilers, RB DP began to decrease due to the loss of building heating. At 12:01 a.m., operators began to stop the drywell purge which was using SGTS 'B' at the time. At 12:29 a.m., operators isolated the RB as DP reached the TS limit of 0.25 inches of vacuum water gauge. Operator actions were not timely enough to ensure RB DP was maintained, and subsequently, at 12:31 a.m., RB DP became less than 0.25 inches of water resulting in an unplanned entry into the limiting condition for operation (LCO) for TS 3.6.4.1, "Secondary Containment," that requires RB DP to be greater than or equal to 0.25 inches of vacuum water gauge within 4 hours. It also resulted in an unplanned emergency operating procedure entry for positive DP in secondary containment. At 12:34 a.m., operators restored secondary containment using SGTS and exited TS 3.6.4.1.

Exelon's apparent cause evaluation (CR-2014-002281) identified a number of issues associated with the auxiliary boiler system and operator performance. Exelon determined the apparent cause to be management and oversight of the auxiliary boiler operation and maintenance to be less than adequate resulting in poor reliability due to hardware deficiencies and inadvertent ground fault trips. Differences identified between the chemistry and operations procedures emphasized the challenges being given to operators. The operations procedure did not contain the level of detail that the chemistry procedure provided for maintaining boiler water conductivity. Exelon also discovered that although the load control valves were classified as significant per NMPNS' AP-913, "Equipment Reliability Program," there were no active PM activities being performed. Immediate corrective actions included implementing new PM strategies for significant components associated with the auxiliary boilers, implementing new performance monitoring plans, and updating chemistry requirements associated with auxiliary boiler procedures.

While reviewing historical boiler performance, the inspectors also discovered three different failures in CR-2012-002694, CR-2012-008467, and CR-2012-010349 of the auxiliary boiler system within the past 2 years that were not properly classified as maintenance rule functional failures. Exelon generated CR-2014-005295 to document the inspectors' concerns and performed a maintenance rule re-evaluation of the auxiliary boiler failures as part of corrective actions. Inspectors also determined that operators did not take timely actions to restore RB DP following a loss of the auxiliary boilers on March 23, 2014. Exelon generated CR-2014-006973 to document this issue and developed a corrective action to enhance procedure N2-OP-52, "Reactor Building Ventilation," Revision 01100.00, with an off-normal section that will start SGTS in an accelerated manner when RB DP is inadequate.

Analysis. The inspectors determined Exelon's failure to provide an adequate procedure to operate the auxiliary boiler system as required by CNG-PR-1.01-1005, "Control of Technical Procedure Format and Content," was a performance deficiency that was reasonably within their ability to foresee and correct and should have been prevented. This finding is more than minor because it affected the procedure quality attribute of the

Barrier Integrity cornerstone and affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, over the past 2 years, the auxiliary boilers have experienced trips as a result of poor procedural guidance. On March 23, 2014, the poor procedural guidance of the auxiliary boilers resulted in a trip and subsequent loss of RB DP. This caused an unplanned entry into the secondary containment emergency operating procedure and an unplanned entry into the LCO for TS 3.6.4.1 which presented unnecessary challenges and distractions to operators during a planned down-power.

In accordance with IMC 0609.04, "Initial Characterization of Findings," issued June 19, 2012, the inspectors used IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012, because secondary containment was declared inoperable following a loss of building heating. Using Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," Section C, "Control Room, Auxiliary, Reactor, or Spent Fuel Pool Building," the inspectors determined that this finding is of very low safety significance (Green) because the finding only represents a degradation of the radiological barrier function provided for the control room, or auxiliary building, spent fuel pool, or SBT system (boiling water reactor).

This finding has a cross-cutting aspect in the area of Human Performance, Resources, because Exelon did not ensure personnel, equipment, procedures, and other resources were available and adequate to support nuclear safety. Specifically, the inadequate management oversight of the auxiliary boilers resulted in numerous failures of the auxiliary boilers due to inadequate knowledge transfer, inaccurate classifications of maintenance rule functional failures for the system, inadequate procedures for boiler operation, and inadequate procedures for the prompt restoration of secondary containment when the auxiliary boiler system is not available [H.1].

Enforcement. This finding does not involve enforcement action because no violation of a regulatory requirement was identified. The inspectors determined that the finding did not represent a non-compliance issue because CNG-PR-1.01-1005, "Control of Technical Procedure Format and Content," Revision 00500, is not a procedure recommended by USNRC Regulatory Guide 1.33, "Quality Assurance Program Requirements," Appendix A, "Typical procedures for Pressurized Water Reactors and Boiling Water Reactors," or Nine Mile Point Unit 2 TS 5.4.1. Because this finding does not involve a violation and it is of very low safety significance (Green), it is identified as a FIN. **(FIN 5000410/2014004-01, Loss of Secondary Containment due to Loss of Auxiliary Boiler System)**

4OA5 Other Activities

Operation of an Independent Spent Fuel Storage Installation (ISFSI) at Operating Plants (60855 and 60855.1)

a. Inspection Scope

During the period of August 4 to 7, 2014, the inspectors observed and evaluated Exelon's loading of a dry shielded canister (DSC) associated with Exelon's current ISFSI dry cask campaign at Unit 1. The inspectors also reviewed Exelon's activities related to long-term operation and monitoring of the ISFSI. The inspectors verified compliance

with the certificate of compliance, TSs, regulations, and Exelon's procedures.

The inspectors observed and evaluated Exelon's loading of the third 61BTH canister associated with Exelon's current ISFSI dry cask loading campaign. The inspectors observed cask processing operations including moving the transfer cask (with the DSC inside) from the pool to the cask preparation area, surveying for contamination and dose rates, blow-down, vacuum drying, helium backfilling, welding operations, visual tests, dye penetrant tests, and helium leak tests. The inspectors also observed the transfer cask/DSC alignment with the horizontal storage module and insertion of the DSC into the horizontal storage module. During performance of these activities, the inspectors evaluated Exelon's familiarity with procedures, supervisory oversight and communication, and coordination between the personnel involved. The inspectors attended station briefings to assess Exelon's ability to identify critical steps of the evolution, potential failure scenarios, and human performance tools to prevent errors. The inspectors also reviewed loading and monitoring procedures and evaluated Exelon's adherence to these procedures.

The inspectors reviewed Exelon's program associated with fuel characterization and selection for storage. The inspectors reviewed cask fuel selection packages to verify that Exelon was loading fuel in accordance with the certificate of compliance and TS. In addition, the inspectors independently verified the cask loading via review of the digital recording.

The inspectors reviewed radiation protection procedures and RWPs associated with the ISFSI loading campaign. The inspectors also reviewed the ALARA goal for the cask loading to determine the adequacy of Exelon's radiological controls and to ensure that radiation worker doses were ALARA and that project dose goals could be achieved. The inspectors reviewed radiological survey records from the current loading campaign to confirm that dose rate levels measured on the cask were consistent with values specified in the UFSAR.

The inspectors performed tours of the heavy haul path and ISFSI pad to assess the material condition of the path, pad, and the loaded horizontal storage modules and verified that Exelon appropriately performed surveillances in accordance with TS requirements. The inspectors verified that transient combustibles were not being stored on the ISFSI pad or in the vicinity of the loaded casks. Environmental reports were reviewed to verify that areas around the ISFSI site boundary were within the limits specified in 10 CFR 20 and 10 CFR 72.104. The inspectors confirmed that vehicle entry onto the ISFSI pad was controlled in accordance with Exelon's procedures.

The inspectors reviewed Exelon's 10 CFR 72.48 screenings to verify that Exelon had appropriately considered the conditions under which they may make changes without prior NRC approval. The inspectors reviewed revisions to the 10 CFR 72.212 report. The inspectors also reviewed corrective action reports, audit reports, and self-assessments that were generated since Exelon's last loading campaign to ensure that issues were being properly identified, prioritized, and evaluated commensurate with their safety significance.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On October 27, 2014, the inspectors presented the inspection results to Mr. Peter Orphanos, Plant Manager, and other members of the NMPNS staff. The inspectors verified that no propriety information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION**KEY POINTS OF CONTACT**Licensee Personnel

C. Costanzo, Site Vice President
 P. Orphanos, Plant Manager
 M. Busch, Assistant Operations Director of Operations
 K. Clark, Director of Security
 J. Dean, Supervisor, Manager, Nuclear Oversight
 S. Eckhard, Manager, Engineering
 M. Khan, Senior Manager, Engineering
 M. Kunzwiler, Manager, Site Security Operations
 D. Moore, Director of Regulatory Assurance
 T. Tanguay, Unit 2 Shift Operations Superintendent
 W. Trafton, Director of Operations
 J. Thompson, General Supervisor, Mechanical Maintenance
 J. Tsardakas, Unit 1 Shift Operations Superintendent
 B. Scaglione, Manager, Engineering
 M. Shanbhag, Licensing Engineer
 A. Sterio, Director of Site Maintenance
 P. Swift, Director of Engineering
 E. Zumwalt, Senior Engineer, Engineering
 T. Syrell, Director of Regulatory Assurance

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATEDOpened/Closed

05000410/2014004-01	FIN	Loss of Secondary Containment due to Loss of Auxiliary Boiler System (Section 4OA3.2)
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Closed

05000410/2014-006-00	LER	Secondary Containment Inoperability Following Auxiliary Boiler Trip (Section 4OA3.2)
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LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures

N1-OP-21A, Fire Protection System – Water, Revision 01700.00

N2-OP-61B, Standby Gas Treatment System, Revision 01000.00

Drawings

C-18026-C, Emergency Diesel Generator #103 Starting Air, Cooling Water, Lube Oil, and Fuel, Revision 29

C-18030-C, Fire Protection Water System Piping and Instrumentation Diagram (P&ID), Revision 41

C-27180-C, Diesel Generator Cooling Water, System No. 79, Revision 0

PID-61B, P&ID Primary Containment Purge and Standby Gas Treatment, Revision 22

Condition Reports

CR-2012-005559

CR-2013-000154

CR-2012-008407

CR-2013-009365

CR-2013-000044

CR-2014-004574

CR-2013-000045

Work Order

WO C91964698

WO C92739330

WO C81497500

Section 1R05: Fire Protection

Procedure

N1-PFP-0101, Unit 1 Pre-Fire Plans, Revision 00303

Miscellaneous

Unit 1 UFSAR, Revision 23

Section 1R06: Flood Protection Measures

Condition Report

CR-2013-004527

Drawings

C-18503-C, Reactor Building Floor Drain Piping, Revision 9

C-26745-C, Reactor Building Track Bay Extension Architectural Floor Plan, Revision 7

C-26751-C, Reactor Building Track Bay Extension Miscellaneous Details, Revision 1

C-26761-C, Reactor Building Track Bay Extension Floor Drains, Revision 3

Miscellaneous

UFSAR, Revision 23

Section 1R11: Licensed Operator Regualification Program and Licensed Operator Performance

Procedures

CNG-OP-1.01-1000, Conduct of Operations, Revision 01000
 N2-OSP-ICS-Q@002, RCIC Pump and Valve Operability Test and System Integrity Test and ASME XI Functional Test, Revision 01000.00

Work Order

WO C92378480

Miscellaneous

2100-SIMOPJ011A, Fill Suppression Pool Using High-Pressure Core Spray Pump (Alternate Path, Pump Trip), Revision 0.0

Section 1R12: Maintenance Effectiveness

Procedures

N2-OP-53A, Control Building Ventilation System, Revision 01200.00
 N2-OSP-HVK-Q001, Control Building Chilled Water Loop 'A' and 'B' Pump and Valve Operability Test, Revision 00901.00, performed on February 17, March 10, May 27, June 17, August 17, August 31, November 16, and December 12, 2012
 N2-OSP-HVK-Q001, Control Building Chilled Water Loop 'A' and 'B' Pump and Valve Operability Test, Revision 00901.00, performed on February 15, March 9, May 17, June 6, June 10, June 21, August 16, August 29, November 15, November 26, and December 14, 2013
 N2-OSP-HVK-Q001, Control Building Chilled Water Loop 'A' and 'B' Pump and Valve Operability Test, Revision 00901.00, performed on March 3, March 9, May 25, and June 6, 2014

Condition Reports

CR-2011-008563	CR-2012-009916	CR-2013-001858	CR-2014-001923
CR-2012-000129	CR-2012-009966	CR-2013-002204	CR-2014-002281
CR-2012-002694	CR-2012-010349	CR-2013-003634	CR-2014-006973
CR-2012-005214	CR-2012-010568	CR-2013-008716	
CR-2012-006819	CR-2012-010572	CR-2013-009535	
CR-2012-008467	CR-2013-001512	CR-2014-000677	

Work Orders

WO C90707000
 WO C91475628

Miscellaneous

DBD-Appendix R, Appendix R Safe Shutdown System, Revision 10
 ECP-13-000028, 2HVK*TV22A Failed Open, Revision 0
 ECP-14-000205, 2HVK*TV22B Failed Open, Revision 0
 NMPNS-IST-001, Pump and Valve Inservice Testing Program, Revision 06
 Unit 1 System Health Report, Shutdown Cooling, July 1 through September 30, 2014

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

N1-ISP-201-476, Hi Drywell Pressure Instrument Trip Channel Test/Calibration,
Revision 00402.00

N1-ISP-201-477, Hi Drywell Pressure Instrument Trip Channel Calibration, Revision 00303.00

N1-OP-49, Control Room Ventilation System, Revision 02900.00

MA-AA-716-004, Conduct of Troubleshooting, Revision 012

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C-18047-C, Control Room Heating Ventilating and Air Conditioning System P&ID, Revision 45

Issue Reports

IR-2175874

IR-2381357

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WO C92760363

WO C92761364

WO C92720373

WO C92761364

Section 1R15: Operability Determinations and Functionality Assessments

Procedures

CNG-MN-4.01-1008, Pre-/Post-Maintenance Testing, Revision 00100

N2-ISP-092-204, Intermediate Range Monitor Instrument Calibration, Revision 00605

N2-OP-32, Low-Pressure Core Spray, Revision 00903.00

N2-OP-33, High-Pressure Core Spray System, Revision 01202.00

N2-OSP-CSH-Q@002, HPCS Pump and Valve Operability and System Integrity Test,
Revision 00600.00

N2-OSP-CSL-Q@002, LPCS Pump and Valve Operability and System Integrity Test,
Revision 01000.00

N2-OSP-EGS-M@001, Diesel Generator and Diesel Air Start Valve Operability Test – Divisions I
and II, Revision 00900.00, performed on August 26, 2014

N2-OSP-RHS-Q@006, RHR System Loop 'C' Pump and Valve Operability Test and System
Integrity Test, Revision 00300.00

Condition Reports/Issue Report

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CR-2014-005735

CR-2014-007210

CR-2014-004528

CR-2014-006544

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CR-2014-005327

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CR-2014-008385

CR-2014-005694

CR-2014-006879

IR-1701203

CR-2014-005695

CR-2014-007014

Work Orders

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WO C92535383

Miscellaneous

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MPR-1615, NMP-2 Emergency Diesel Generator Governor Actuator Malfunction Root Cause Investigation, Revision 0

Section 1R18: Plant Modifications

Procedures

HU-NM-104-101, Nine Mile Point Partial Use (Step Delete) Process, Revision 00000.00
N2-OP-61B, Standby Gas Treatment System, Revision 01000.00

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98Z525-001, Pressure Regulating Valve Assembly 1-Inch SW, Revision B

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IR-2387905

Work Order

WO C92832851

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ECP-14-000677, Temporary Modification to Disable the EHC Stop Valve Load Limit Switch Logic to Mitigate NMP2 Power Transient (CR-2014-007770), Revision 000.00
ECP-14-000748, Temporary Change to replace Pressure Control Valve, 2GTS*PCV80A, Revision 0
ECP-14-000763, ECP to Mitigate Air Leakage on HCU Scram Valve Pilot Air Header, Revision 0

Section 1R19: Post-Maintenance Testing

Procedures

HU-AA-101, Human Performance Tools and Verification Practices, Revision 008
N1-EPM-GEN-150, 4.16 kV Breaker Inspection PM, Revision 01401.00
N1-PM-M9, Monthly Operation of Fire Pumps, Revision 00800.00
N2-ISP-GTS-R@001, Standby Gas Treatment System Pneumatic Supply/Accumulator Leak Rate Test, Revision 00203.00
N2-OP-38, Spent Fuel Pool Cooling and Cleanup System, Revision 01901.00
N2-OSP-CMS-Q001, Containment Monitoring System Valve Operability Test, Revision 00402.00
S-EPM-GEN-064, Acquisition Analysis and Trending of MC2 Data, Revision 00501.00

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PID-38D-12, P&ID Fuel Pool Cooling and Cleanup, Revision 12

Condition Report

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CR 2014-008001
CR-2014-008033

Work Orders

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WO C91297591	WO C92406915
WO C91432960	WO C92410900
WO C91834633	WO C92808214
WO C91903472	

Section 1R22: Surveillance Testing

Procedures

N1-EPM-GEN-291, Generator Shaft Voltage Reading and Brush Inspection, Revision 01000.00
N1-ST-M1A, Liquid Poison Pump 11 Operability Test, Revision 00700.00
N1-ST-M4A, Emergency Diesel Generator 102 and PB 102 Operability Test, Revision 01000.00
N1-ST-Q3, High-Pressure Coolant Injection Pump and Check Valve Operability Test,
Revision 01500.00
N2-CSP-SLS-@112, Adjustment of SLS Tank Sodium Pentaborate Concentration,
Revision 00800.00
N2-OSP-EGS-M@002, Diesel Generator and Diesel Air Start Valve Operability Test, Division III,
Revision 01100.00
N2-OSP-SLS-Q001, Standby Liquid Control Pump, Check Valve, Relief Valve Operability Test,
and ASME XI Pressure Test, Revision 01400.00

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PID-36A, P&ID Standby Liquid Control, Revision 25

Work Order

WO C92796880

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Procedures

EPMP-EPP-0101, Unit 1 Emergency Classification Technical Basis, Revision 01801.00
EPMP-EPP-0102, Unit 2 Emergency Classification Technical Basis, Revision 02001.00

Section 2RS1: Radiological Hazard Assessment and Exposure Controls

Procedures

GAP-RPP-01, Radiation Protection Program, Revision 01900
GAP-RPP-02, Radiation Work Permit, Revision 14.00
S-RAP-RPP-0103, Posting & Barricading Radiological Areas, Revision 02900
S-RAP-RPP-0110, Radiation Protection Conduct of Operations, Revision 00600
S-RAP-RPP-0801, High, Locked High, and Very High Radiation Area Monitoring and Control,
Revision 03100
S-RPIP-3.0, Radiological Surveys, Revision 01900

Condition Reports

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CR-2014-003988

Miscellaneous

2RB-25958, RB 175 Feet RCIC Room Survey, March 28, 2014

2RB-25985, RB 306 Feet Waste Compaction Station Heat Exchanger Room Survey, April 1, 2014

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Section 2RS2: Occupational ALARA Planning and Controls

Procedures

CNG-RP-1.01-2003, Operational ALARA Planning and Controls, Revision 00000

GAP-RPP-02, Radiation Work Permit, Revision 14.00

S-RAP-ALA-0102, ALARA Reviews, Revision 15.00

S-RAP-RPP-0201, Radiation Work Permit Initiation Preparation Control and Use, Revision 23.00

Condition Reports

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CR-2014-002112

CR-2014-002162

Miscellaneous

2014 Collective Dose Goals and Actuals by Department

RWP 214802, Under-Vessel Activities

RWP 214804, Drywell Operations Activities

RWP 214815, Drywell Valve and Piping Replacement/Repairs

RWP 214890A/F, Vessel Disassembly/Reassembly and Cavity Decontamination

RWP 217890B, Underwater Work in the Reactor Cavity, SFP, and Equipment Storage Pit

Unit 2 Recirculation System Radiation Buildup Survey, April 5, 2014

Unit 2 Refueling Outage Report, Spring 2014

Section 2RS6: Radioactive Gaseous and Liquid Effluent Treatment

Procedures

N1-CSP-D300, OGESMS Sensor Checks and Elevated Release Daily Surveillance,
Revision 01.00

N1-CSP-M204, Liquid Release Dose Calculations, Revision 00500.00

N1-CSP-M301, Noble Gas Sampling and Analysis, Revision 00400.00

N1-CSP-M307, Particulate Filter Preparation for Strontium and Iron Analysis, Revision 00300.00

N1-CSP-M322, OGESMS and Auxiliary Tritium Sampling and Analysis, Revision 03.00

N1-CSP-Q208, Service Water System Effluent – Sampling and Analysis, Revision 00400.00

N1-CSP-V201, Radioactive Liquid Release Analysis, Revision 00900.00

N1-CSP-V208, Emergency Condenser Vent Liquid Discharge Evaluation, Revision 00400.00

N1-CSP-V311, Off-Gas Sampling and Flow Adjustment, Revision 04.00

N1-CSP-W310, Particulate Filter/Charcoal Cartridge Change and Analysis, Revision 05.00

Condition Reports

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CR-2013-000434
CR-2013-001410

Surveillances

2GTS-FLT1A, Unit 2 Gas Treatment Ventilation Filter/Charcoal Testing, March 2, 2012
2GTS-FLT1B, Unit 2 Gas Treatment Ventilation Filter/Charcoal Testing, September 12, 2012
2HVC-FLT2A, Unit 2 Control Room Ventilation Filter/Charcoal Testing, August 14, 2012
2HVC-FLT2B, Unit 2 Control Room Ventilation Filter/Charcoal Testing, November 27, 2012
RX11, Unit 1 RB Ventilation Filter/Charcoal Testing, February 11, 2014
RX11, Unit 1 RB Ventilation Filter/Charcoal Testing, May 21, 2014

Release Permits

N1-CSP-M350 0913
N1-CSP-M350 1013
N1-CSP-M350 1113
N2-CSP-RMS-M350 0613
N2-CSP-RMS-M350 0713
N2-CSP-RMS-M350 0813

Miscellaneous

SA-2013-000368, Chemistry Rad Effluents Program dated May 22, 2014
Unit 1 Radioactive Effluent Release Report, 2012
Unit 1 Radioactive Effluent Release Report, 2013
Unit 1 UFSAR
Unit 2 Radioactive Effluent Release Report, 2012
Unit 2 Radioactive Effluent Release Report, 2013
Unit 2 UFSAR

Section 40A1: Performance Indicator Verification

Procedures

CNG-AM-1.01-1022, Mitigating Systems Performance Index, Revision 00001
CNG-NL-1.01-1010, NRC and INPO Performance Indicator Reporting, Revision 00600

Condition Reports

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CR-2013-008747	CR-2014-002281
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LER 05000220/2012-003-01, Loss of Isolation Function on Shutdown Cooling System Suction Line due to an Operating Procedure Deficiency
LER 05000220/2013-001-00, Emergency Condenser 11 High Steam Flow Isolation Instrumentation Loss during Plant Startup
LER 05000220/2013-002-00, Unanalyzed Condition Caused by Unfused Control Room DC Ammeters
LER 05000220/2014-001-00, Reportable Conditions Not Reported during the Previous 3 Years

Involving Average Power Range Monitors Inoperability
LER 05000220/2014-002-00, Unanalyzed Condition due to Unfused Motor-Operated Valve Control Circuit
LER 05000410/2013-001-00, Reactor Core Isolation Cooling System Isolation due to a Temperature Switch Unit Failure
LER 05000410/2013-002-00, Failure of High-Pressure Core Spray System Pressure Pump due to Motor Winding Failure
LER 05000410/2013-003-00, Unanalyzed Condition Caused by Unfused Control Room DC Ammeters
LER 05000410/2013-004-00, Manual Reactor Protection System Actuation Due to Loss of Reactor Recirculation Flow
LER 05000410/2013-005-00, Secondary Containment Inoperabilities due to Differential Pressure Not Meeting Technical Specification Surveillance Requirement 3.6.4.1.1
LER 05000410/2014-002-00, High-Pressure Core Spray System Inoperability due to Inoperable High-Pressure Core Spray Diesel Generator
LER 05000410/2014-003-00, Uninterruptible Power Supply Failure and Subsequent Manual Scram
LER 05000410/2014-004-00, Actuation of the Alternate Rod Insertion System and Subsequent Reactor Scram
LER 05000410/2014-005-00, Secondary Containment Inoperable due to Sustained High Winds
LER 05000410/2014-006-00, Secondary Containment Inoperability Following Auxiliary Boiler Trip
LER 05000410/2014-007-00, Secondary Containment Inoperable due to Simultaneous Opening of Airlock Doors
LER 05000410/2014-008-00, Secondary Containment Inoperable due to Reactor Building Exhaust Fan Trip
NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7
Unit 1 Mitigating System Performance Index Basis Document, Revision 9
Unit 2 Mitigating System Performance Index Basis Document, Revision 12

Section 4OA2: Problem Identification and Resolution

Procedures

OP-AA-102-103, Operator Work-Around Program, Revision 004
OP-AA-102-103-1001, Operator Burden and Plant Significant Decisions Impact Assessment Program (CM-1), Revision 005

Condition Reports

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CR-2013-010461
CR-2014-006003
CR-2014-006005

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Safety Evaluation Regarding Endorsement of NEI Guidance for Adhering to the Licensed Thermal Power Limit dated October 8, 2008

Section 4OA3: Follow-up of Events and Notices of Enforcement DiscretionProcedure

CNG-PR-1.01-1005, Control of Technical Procedure Format and Content, Revision 00500
 N2-EOP-SC, Secondary Containment Control – Flowchart, Revision 01100.00
 N2-OP-48, Auxiliary Boiler System, Revision 01100.00
 N2-OP-52, Reactor Building Ventilation, Revision 01100.00

Condition Report

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Section 4OA5: Other ActivitiesProcedures

CNG-HU-1.01-1002, Pre-Job Briefing and Post-Job Critiques, Revision 00700.00
 CNG-MN-1.01-1003, Load Handling, Attachment 2, Risk Assessment Worksheet
 Revision 00700.00
 CNG-MN-1.01-1003, Load Handling, Attachment 8, Wire Brush/Wheel FME Plan,
 Revision 00601.00
 CNG-OP-1.01-1000, Conduct of Maintenance, Revision 00200.00
 CNG-RP-1.01-2003, Operational ALARA Planning and Controls, Revision 00000.00
 GAP-RPP-01, Radiation Protection Program, Revision 01901.00
 N1-FHP-24, Moving Fuel and Blade Guides within the Spent Fuel Pool, Revision 01200.00
 N1-OP-34A, Refuel Bridge Operations, Revision 00400.00
 NUHOMS LT, Helium Leak Testing Procedure, Revision 00100.00
 NUHOMS PT, Liquid Penetrant Examination Procedure, Revision 00200.00
 OU-AA-630, Dry Cask Storage Program Implementation, Revision 004
 S-MMP-ISFSI-001, ISFSI Equipment Preparation, Revision 00401.00
 S-MMP-ISFSI-003, DSC Loading Operations, Revision 00201.00
 S-MMP-ISFSI-004, DSC Sealing Operations, Revision 00400.00
 S-MMP-ISFSI-004, DSC Sealing Operations, Revision 00601.00
 S-MMP-ISFSI-005, DSC Site Cask Transportation, Revision 00200.00
 S-MMP-ISFSI-006, HSM Operations, Revision 00002.00
 S-REP-9, Fuel Selection for NUHOMS-61BTH Type 1 with Type A MMC Poison Basket,
 Revision 0000.00
 SPM 9.1 General Welding Procedure, Revision 00200.00
 SPM 9.2, NUHOMS 61BTH Type 1 or Type 2 DSC Closure Procedure, Revision 00000
 TN P8-P8-GT1, TN Welding Procedure Specification - (GTAW-Machine), Revision 00100
 TN P8-P8-GT2, TN Welding Procedure Specification - (GTAW-Manual), Revision 00100

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CR-2012-008465	CR-2013-002267	CR-2013-007486	CR-2014-007448
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Certificate of Compliance 1004, Amendment 10

CNG-NL-1.01-1011, Attachment 3, 10 CFR 50.59/10 CFR 72.48 Screening Form,
Revision 00301.00

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July 17, 2014

UFSAR for Horizontal Storage Module Model 102 and DSC Model 61BTH Type 1, Revision 11

Completed Surveillance and Functional Testing

CNG-MN-101-1003, Attachment 5, Rigger's Checklist, Revision 00700.00, completed
August 4, 2014

CNG-RP-1.01-2003, Attachment 2, ALARA Review, Revision 00000.00, dated July 9, 2014

Form SPM 9.2.1, NUHOMS Closure Weld Traveler, Revision 0

Form SPM 9.2.2, NUHOMS Weld Repair Traveler, Revision 0

Form SPM 9.2.3, Personnel Signature Log, Revision 3

Form SPM 9.2.5, Welder Continuity Record, Revision 3

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NUHOMS, AREVA Automated Welding System Operations and Maintenance Manual

OM-NUH-07-134, OMNO Operations and Maintenance Manual

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RWP 114014M, RB 340 Feet Refuel Floor ISFSI Project - Optimize Unit 1 Spent Fuel

Pool and CDPS, Install and Load CRB Racks in Unit 1 Spent Fuel Pool and Associated
Work, Revision 01

S-REP-9, Attachment 3, SNF Characteristics Verification for Loading of DSC-17, DSC-18,
DSC-19, and DSC-20

S-REP-9, Attachment 4, DSC Loading Pattern, Sequence 2

Technical Support Document No. 12-080, Neutron Dosimetry Evaluation at Nine Mile Point
Nuclear Plant dated January 2, 2013

TN Project 31206, Weld Closure Documentation Package

TN Users Welders Best Practices and Lessons Learned

Unit 1 Radiation Protection Plan

LIST OF ACRONYMS

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
40 CFR	Title 40 of the <i>Code of Federal Regulations</i>
ALARA	as low as reasonably achievable
CAP	corrective action program
CR	condition report
DP	differential pressure
DSC	dry shielded canister
EAL	emergency action level
ECP	engineering change package
EDG	emergency diesel generator
Exelon	Exelon Generation Company, LLC
FA	fire area
FIN	finding
GPI	groundwater protection initiative
HCU	hydraulic control unit
IMC	Inspection Manual Chapter
ISFSI	independent spent fuel storage installation
LCO	limiting condition for operation
LER	licensee event report
NEI	Nuclear Energy Institute
NMPNS	Nine Mile Point Nuclear Station, LLC
NRC	Nuclear Regulatory Commission, U.S.
ODCM	offsite dose calculation manual
P&ID	pipng and instrumentation diagram
PI	performance indicator
PM	preventive maintenance
RB	reactor building
RCIC	reactor core isolation cooling
RG	regulatory guide
RWP	radiation work permit
SGTS	standby gas treatment system
SSC	structure, system, and component
TS	technical specification
UFSAR	Updated Final Safety Analysis Report
UPS	uninterrupted power supply
WO	work order