



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

August 5, 2015

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

SUBJECT: NINE MILE POINT NUCLEAR STATION - INTEGRATED INSPECTION
REPORT 05000220/2015002 AND 05000410/2015002

Dear Mr. Orphanos:

On June 30, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Nine Mile Point Nuclear Station, LLC (NMPNS), Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on July 29, 2015, with you and other members of your staff.

NRC inspectors 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.

The inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. Additionally, NRC inspectors documented a licensee-identified violation which was determined to be Severity Level IV in this report. The NRC is treating this violation as a non-cited violation consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the non-cited violation 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 U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspectors at NMPNS. In addition, if you disagree with the cross-cutting aspect assigned, 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.

P. Orphanos

-2-

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRCs "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's Public Document Room or from the Publicly Available Records component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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 05000220/2015002 and 05000410/2015002
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

P. Orphanos

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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. 05000220/2015002 and 05000410/2015002

Licensee: Exelon Generation Company, LLC

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

Location: Oswego, New York

Dates: April 1, 2015, through June 30, 2015

Inspectors: K. Kolaczyk, Senior Resident Inspector
E. Miller, Resident Inspector
G. Stock, Resident Inspector
C. Graves, Health Physicist

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

Enclosure

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SUMMARY

Inspection Report 05000220/2015002 and 05000410/2015002; 04/01/2015 – 06/30/2015; Nine Mile Point Nuclear Station, LLC (NMPNS), Units 1 and 2; Radiological Hazard Assessment and Exposure Controls.

This report covered a 3-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The inspectors identified one self-revealing 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 April 29, 2015. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated February 4, 2015. 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: Occupational Radiation Safety

Green. The inspectors identified a self-revealing NCV of Unit 1 Technical Specification (TS) 6.4.1, "Procedures," for failure to follow the planned scaffold erection work scope that resulted in two personnel receiving unplanned internal exposures. Specifically, on January 6, 2015, workers erecting scaffolding changed the work scope that specified the use of new equipment and used unsurveyed highly contaminated scaffold parts instead, without notifying radiation protection staff of the change in work scope that resulted in two workers receiving unplanned, unintended internal radiation exposures.

The failure to follow the planned work scope is a performance deficiency. The performance deficiency constitutes a finding that is more than minor because the performance deficiency was associated with the Occupational Radiation Safety attribute of program and process and adversely affected the cornerstone objective in the protection of workers from exposure to radioactive material. Specifically, failure to follow the planned work scope resulted in two personnel receiving unplanned internal exposures. The finding is not subject to traditional enforcement because it did not affect the regulatory process or result in actual safety consequences. Using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was of very low safety significance (Green) because it did not involve: (1) as low as reasonably achievable (ALARA) occupational collective exposure planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. The cause of the finding is related to the cross-cutting area of Human Performance, Challenge the Unknown, because when workers discovered potentially contaminated scaffold materials in the work area, they did not question whether or not it was appropriate to use the material in their job and did not raise the question to their supervisors or Exelon Generation Company, LLC (Exelon) radiation protection technicians prior to deviating from the planned and briefed work scope. As a result, the radiological risks were not evaluated before proceeding to utilize the unsurveyed highly contaminated components, which resulted in unintended internal radiation exposures to the workers. [H.11] (Section 2RS1)

Other Findings

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

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period in a planned refueling outage (RFO). On April 9, 2015, operators took the reactor critical. The generator was synchronized to the grid on April 11. Operators restored Unit 1 to 100 percent power on April 14. On April 23, operators reduced reactor power to 90 percent to place the electronic pressure regulator in service. Operators restored full reactor power later that day. On May 30, operators reduced reactor power to 85 percent to place reactor recirculation pump 14 into service. However, the pump failed to start and operators restored full reactor power later the same day. On June 13, operators reduced reactor power to 83 percent to place reactor recirculation pump 14 into service. The pump successfully started, and operators restored full reactor power later the same day. Unit 1 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 May 23, 2015, operators reduced reactor power to 65 percent power to perform scheduled surveillance testing on the main turbine stop and control valves and remove feedwater pump 'A' from service. Operators restored reactor power to 100 percent later the same day. 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

1R01 Adverse Weather Protection (71111.01 – 4 samples)

.1 Summer Readiness of Offsite and Alternate Alternating Current (AC) Power Systems (1 sample)

a. Inspection Scope

The inspectors reviewed Unit 1 and Unit 2 plant features and procedures for the operation and continued availability of the offsite and alternate AC power systems to evaluate readiness of the systems prior to seasonal high grid loading on May 4 and 5, 2015. The inspectors reviewed Exelon's procedures affecting these areas and the communications protocols between the transmission system operator and Exelon implemented since the previous sample in 2014. This review focused on changes to the established program and material condition of the offsite and alternate AC power equipment. The inspectors assessed whether Exelon established and implemented appropriate procedures and protocols to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system. The inspectors evaluated the material condition of the associated equipment by reviewing issue reports (IRs), condition reports (CRs), and walking down portions of the offsite and AC power systems including the 345 kilovolt and 115 kilovolt switchyards. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

.2 Readiness for Seasonal Extreme Weather Conditions (2 samples)

a. Inspection Scope

The inspectors performed a review of Exelon's readiness for the onset of seasonal high temperatures. The review focused on the Unit 1 local fire panels, reactor building (RB) closed loop cooling, and turbine building closed loop cooling as well as the Unit 2 control room and control building heating, ventilation, and air conditioning systems. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), TSs, control room logs, and the CAP to determine what temperatures or other seasonal weather could challenge these systems 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 systems to ensure station personnel identified issues that could challenge the operability of the systems during hot weather conditions.

b. Findings

No findings were identified.

.3 External Flooding (1 sample)

a. Inspection Scope

On May 5, 2015, the inspectors performed an inspection of the external flood protection measures for both Unit 1 and Unit 2. The inspectors reviewed TSs, procedures, design documents, and Chapter 3.4 of the Unit 2 UFSAR, which depicted the design flood levels and protection areas containing safety-related equipment to identify areas that may be affected by external flooding. The inspectors conducted a general site walkdown of all external areas of the plant, including the flood berm and 10,000-year culvert to ensure that Exelon erected flood protection measures in accordance with design specifications. The inspectors also reviewed operating procedures for mitigating external flooding during severe weather to determine if Exelon had established adequate measures to protect against external flooding events.

b. Findings

No findings were identified.

1R04 Equipment Alignment

Partial System Walkdown (71111.04Q – 4 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- Unit 1 emergency diesel generator (EDG) 102 before EDG 103 was removed from service for surveillance testing on April 14, 2015

- Unit 1 containment spray system 122 while system 121 was unavailable on May 6, 2015
- Unit 1 standby liquid control system 11 following completion of a planned surveillance test on May 11, 2015
- Unit 2, Division I, standby gas treatment system (SGTS) following pressure control valve replacement on May 15, 2015

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 UFSAR, TSs, IRs, 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 CAP for resolution with the appropriate significance characterization.

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 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 (OOS), degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Unit 1 remote shutdown panel 11 (Fire Area (FA) T2B) on April 8, 2015
- Unit 1 remote shutdown panel 12 (FA T4A) on April 8, 2015
- Unit 1 condensate pump room (FA T1) on April 8, 2015
- Unit 1 cable spreading room (FA C1) on April 8, 2015
- Unit 2 diesel fire pump room (FA 62) on April 24, 2015
- Unit 2 electric fire pump room (FA 63) on April 24, 2015

b. Findings

No findings were identified.

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

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

a. Inspection Scope

The inspectors observed:

- Unit 1 licensed operator simulator training scenario which included a control rod failure, electrical fault on power board 101, emergency condenser tube leak, and service water pump failure on May 5, 2015
- Unit 2 licensed operator simulator training scenario which involved a turbine pressure control system failure, partial loss of feedwater, recirculation system leak, reactor core isolation cooling, and high-pressure coolant injection systems failure on May 5, 2015

The inspectors evaluated operator performance during the simulated events 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 classification made by the shift manager and the TS action statements entered by the control room supervisor. 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 observations during plant startup following the completion of refueling activities on April 9, 2015
- Unit 2 control room observation during scheduled surveillance testing on the residual heat removal systems and containment radiation monitors on April 15, 2015

The inspectors reviewed HU-AA-101, "Human Performance Tools and Verification Practices," Revision 009, 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 – 1 sample)

a. Inspection Scope

The inspectors reviewed Unit 2 service water pump discharge check valve 2SWP*P1E 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 work orders (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 the 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 this SSC 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.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 6 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 2 reactor core isolation cooling system while the high-pressure core spray pump and Division III EDG were OOS for planned maintenance and surveillance activities during the week of April 20, 2015
- Unit 1 elevated plant trip risk during transfer from the mechanical pressure regulator to the electronic pressure regulator following troubleshooting on April 23, 2015

- Unit 2 planned maintenance on the Division II control room air conditioning chilled water system during the week of May 4, 2015
- Unit 2 unplanned maintenance on the Division II control room air conditioning compressor on May 11, 2015
- Unit 1 planned reactor protection system channel 12 loop flow calibrations on May 18, 2015
- Unit 1 planned maintenance on reactor protection system power supply 172 on June 3, 2015

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 8 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions based on the risk significance of the associated components and systems:

- Unit 1 emergency condenser condensate return valve 39-06 following local leak rate test on April 6, 2015
- Unit 1 unexpected response of the high-pressure coolant injection controller 11 when testing flow control valve 29-141 on April 13, 2015
- Unit 2 particulate channel 2CMS-CAB10A with low reactor coolant system activity on May 5, 2015
- Unit 1 leakage past core spray vent IV 40-32 on April 25, 2015
- Unit 2 limiting condition for operation entry verification on Division II control room air conditioning chiller on May 20, 2015
- Unit 1 EDGs fuel oil storage tanks on May 26, 2015
- Unit 1 Review of the Operator Workaround Program completed June 30, 2015
- Unit 2 Review of the Operator Workaround Program completed June 30, 2015

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. The inspectors confirmed, where appropriate, compliance with bounding limitations associated with the evaluations. 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.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.19 – 1 sample)Temporary Modificationa. Inspection Scope

The inspectors reviewed the temporary modification listed below to determine whether the modification 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-15-000257-102-01-01 – Temporary caps installed on 2MSS*FT11A and 2MSS*FT11B drain valves

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 7 samples)a. Inspection Scope

The inspectors reviewed the post-maintenance tests (PMTs) for the maintenance activities listed below to verify that procedures and test activities 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 test results were properly reviewed and accepted and problems were appropriately documented. The inspectors also walked down the affected job site and witnessed the test or reviewed test data to verify quality control hold point were performed and checked, and that results demonstrated restoration of the affected safety functions.

- Unit 1 core spray 111 and shutdown cooling water seal check valve operability test following core spray 111 pump maintenance window on May 21, 2015
- Unit 2 uninterruptible power supply 3B following cleaning and inspection on June 2, 2015
- Unit 2 standby gas treatment room tornado damper preventive maintenance review conducted during the week of June 8, 2015
- Unit 1 EDG 103 fuel oil day tank level switch replacement on June 9, 2015
- Unit 2 control building chiller 2HVK*CHL1B test following replacement of electronic temperature control module on June 11, 2015
- Unit 1 EDG 103 test following replacement of potential transformer fuses and generator insulation test on June 12, 2015
- Unit 2 Division 1 EDG PMT following replacement of automatic voltage regulator components on June 17, 2015

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20 – 1 sample)

a. Inspection Scope

The inspectors reviewed the station's work schedule and outage risk plan for the Unit 1 maintenance and RFO which was conducted from March 16 through April 11, 2015. The inspectors reviewed Exelon's development and implementation of outage plans and schedules to verify that risk, industry experience, previous site-specific problems, and defense-in-depth were considered. During the outage, the inspectors observed the startup process and monitored controls associated with the following outage activities:

- Configuration management, including maintenance of defense-in-depth, commensurate with the outage plan for the key safety functions and compliance with the applicable TSs when taking equipment OOS
- Implementation of clearance activities and confirmation that tags were properly hung and that equipment was appropriately configured to safely support the associated work or testing
- Installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication and instrument error accounting
- Status and configuration of electrical systems and switchyard activities to ensure that TSs were met
- Monitoring of decay heat removal operations
- Impact of outage work on the ability of the operators to operate the spent fuel pool cooling system
- Reactor water inventory controls, including flow paths, configurations, alternative means for inventory additions, and controls to prevent inventory loss
- Activities that could affect reactivity
- Maintenance of secondary containment as required by TSs
- Tracking of startup prerequisites and startup and ascension to full power
- Identification and resolution of problems related to RFO activities

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 9 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-Q5, Primary Containment Isolation Valves Operability Test on April 29, 2015 (inservice test)
- Unit 1, N1-ST-Q13, Emergency Service Water Pump and Check Valve Operability Test on May 5, 2015 (inservice test)
- Unit 1, N1-ISP-036-006, Emergency Cooling System – High Steam Flow Instrument Trip Channel Test/Calibration on May 6, 2015
- Unit 2, N2-OSP-EGS-R08, Operating Cycle Generator Simulated Loss of Offsite Power with an ECCS Division III Actuation on May 18, 2015
- Unit 1, N1-FST-FPP-C003, Fire Damper Operation and Inspection on May 27, 2015
- Unit 1, N1-ST-Q26, Feedwater and Main Steam Line Power Operated Isolation Valves Partial Exercise Test and Associated Functional Testing of Reactor Protection System Trip Logic on May 28, 2015 (inservice test)
- Unit 2, N2-CSP-RCS-W102, Dose Equivalent Iodine-131 on June 2, 2015 (reactor coolant system (RCS) leakage)
- Unit 2, N2-ISP-GTS-R@001, Standby Gas Treatment System Pneumatic Supply/Accumulator Leak Rate Test on June 8, 2015
- Unit 1, N1-ST-M1A, Liquid Poison Pump 11 Operability Test on June 15, 2015

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)

a. Inspection Scope

The inspectors reviewed Exelon's performance in assessing and controlling radiological hazards in the workplace. The inspectors used the requirements contained in 10 CFR 20, "Standards for Protection Against Radiation;" Regulatory Guide (RG) 8.38, "Control of Access to High and Very High Radiation of Nuclear Plants;" TSs; and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors reviewed the performance indicators (PIs) for the occupational exposure cornerstone, radiation protection program audits, and reports of operational occurrences in occupational radiation safety since the last inspection.

Radiological Hazard Assessment

The inspectors reviewed recent plant radiation surveys and any changes to plant operations since the last inspection to identify any new radiological hazards for onsite workers or members of the public.

Instructions to Workers

The inspectors observed several containers of radioactive materials and assessed whether the containers were labeled and controlled in accordance with requirements.

The inspectors reviewed several occurrences where a worker's electronic personal dosimeter alarmed. The inspectors reviewed Exelon's evaluation of the incidents, documentation in the CAP, and whether compensatory dose evaluations were conducted when appropriate.

Radiological Hazards Control and Work Coverage

The inspectors evaluated in-plant radiological conditions and performed independent radiation measurements during facility walkdowns and observations of radiological work activities. The inspectors assessed whether posted surveys, radiation work permits (RWPs), worker radiological briefings, the use of continuous air monitoring, and dosimetry monitoring were consistent with the present conditions. The inspectors examined the control of highly activated or contaminated materials stored within the spent fuel pools and the posting and physical controls for selected high radiation areas, locked high radiation areas, and very high radiation areas to verify conformance with the occupational PI.

Risk-Significant High Radiation Areas and Very High Radiation Area Controls

The inspectors reviewed the controls and procedures and radiological transient areas in the plant.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with radiation monitoring and exposure control were identified at an appropriate threshold and properly addressed in the CAP.

b. Findings

Introduction. A Green self-revealing NCV of TS 6.4.1, "Procedures," was identified for failure to follow the planned work scope in erecting new scaffolding in a contaminated area. Specifically, personnel deviated from the work plan and utilized previously unsurveyed highly contaminated components, which resulted in two personnel receiving unplanned internal exposures.

Description. On January 6, 2015, a pre-job briefing was held between radiation protection staff and workers to erect scaffold in a contaminated area in the 229 feet elevation of the Unit 1 old radioactive waste building under RWP 2015-1-00309. The work plan discussion portion of the pre-job briefing specified that the workers were to use new scaffold parts to erect the scaffolding for the job. Based on this work plan discussion, radiation protection staff established the radiological requirements for this work activity. After the work began, while bringing new scaffold parts into the contaminated area, the workers noticed some scaffold parts already inside the contaminated area and decided to use that material instead of utilizing all new scaffold parts as agreed upon in the pre-job brief discussion with radiation protection staff. The workers did not consult with their supervisor or radiation protection staff of this change in the work plan to allow radiation surveys to be

conducted on the potentially contaminated scaffold parts prior to their use. The scaffold workers, believing that utilizing scaffold material already located inside the area was appropriate since it would save time and effort, erected the scaffold with both new and potentially contaminated scaffold material. However, this represented a change in the radiological work scope since potential contaminated material was not intended to be used.

When the workers attempted to exit the radiological control area, both individuals alarmed the personnel contamination monitors. Radiation protection staff subsequently took appropriate steps to monitor the personnel and evaluate the situation. Radiation protection staff surveyed the scaffold and determined that some parts had high contamination levels of approximately 24 millirad/100cm². Both the individuals were monitored for internal exposure for several days and determined that each had received unintended internal exposure; one received approximately 13 millirem committed effective dose equivalent and the other received a dose of approximately 9 millirem committed effective dose equivalent.

Analysis. The failure to follow the planned work scope by the scaffold workers and not discussing work scope changes with radiation protection staff is a performance deficiency. The performance deficiency constitutes a finding that is more than minor because it was associated with the Occupational Radiation Safety attribute of program and process and adversely affected the cornerstone objective in the protection of worker safety from exposure to radioactive material. Specifically, the worker's decision to change the work scope without informing radiation protection staff and using unsurveyed contaminated scaffold material resulted in unplanned and unintended internal exposures of personnel. The finding is not subject to traditional enforcement because it did not affect the regulatory process or result in actual safety consequences. Using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was of very low safety significance (Green) because it did not involve ALARA occupational collective exposure planning and controls, an overexposure, a substantial potential for overexposure, or an impaired ability to assess dose.

The cause of the finding is related to the cross-cutting area of Human Performance, challenge the unknown, because when workers discovered potentially contaminated scaffold materials in the work area, they did not question whether or not it was appropriate to use the material in their job and did not raise the question to their supervisors or Exelon radiation protection technicians prior to deviating from the planned and briefed work scope. As a result, the radiological risks were not evaluated before proceeding to utilize the unsurveyed highly contaminated components, which resulted in unintended internal radiation exposures to the workers. [H.11]

Enforcement. Unit 1 TS 6.4.1 requires, in part, that the applicable procedures recommended in Appendix A to RG 1.33, "Quality Assurance Program Requirements (Operation)," November 3, 1972, be established and implemented. RG 1.33 Appendix A recommends procedures for controlling personnel monitoring and special work permits. Implementing procedure RP-AA-1008, "Unescorted Access to and Conduct in Radiologically Controlled Areas," states, in part, that workers read, understand, and comply with the RWP. Attachment 2 to RWP 2015-1-00309 states, in part, that the work crew shall notify ALARA staff of any changes in work scope. Exelon entered the issue into their CAP as AR 02437193, and conducted a dose investigation.

Contrary to this requirement, on January 6, 2015, Exelon's scaffold crew working under RWP 2015-1-00309, did not notify ALARA staff when the workers changed the work scope to utilize unsurveyed highly contaminated equipment in their work. Because this finding was determined to be of very low safety significance (Green) and was entered into the CAP (AR 02437193), this violation is being treated as an NCV consistent with Section VI.A of the NRC Enforcement Policy. **(NCV 05000220/2015002-01, Failure to Notify Changes to Work Scope)**

2RS2 Occupational ALARA Planning and Controls (71124.02)

a. Inspection Scope

The inspectors assessed Exelon's performance with respect to maintaining occupational individual and collective radiation exposures ALARA. The inspectors used the requirements contained in 10 CFR 20, "Standards for Protection Against Radiation;" RG 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Plants Will Be As Low As Is Reasonably Achievable;" RG 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable;" TSs; and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors conducted a review of Exelon's collective dose history and trends, ongoing and planned radiological work activities, radiological source term history and trends, and ALARA dose estimating and tracking procedures.

Radiological Work Planning

The inspectors selected the following radiological work activities based on exposure significance for review:

- NM-1-15-00901, Fuel Floor Reactor Disassembly/Reassembly
- NM-1-15-00906, Cavity Decontamination Activities
- NM-1-15-00601, RB Reactor Water Clean-Up System Maintenance
- NM-1-15-00512, Drywell Control Rod Drive Activities

For each of these activities, the inspectors reviewed ALARA work activity evaluations, exposure estimates, and exposure reduction requirements.

Verification of Dose Estimates and Exposure Tracking Systems

The inspectors reviewed the current annual collective dose estimate, basis methodology, and measures to track, trend, and reduce occupational doses for ongoing work activities.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with ALARA planning and controls were identified at an appropriate threshold and properly addressed in the CAP.

b. Findings

No findings were identified.

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

a. Inspection Scope

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," RG 8.25, "Air Sampling in the Workplace," NUREG/CR-0041, "Manual of Respiratory Protection Against Airborne Radioactive Material," TS; and procedures required by TS as criteria for determining compliance.

Inspection Planning

The inspectors reviewed the UFSAR to identify ventilation and radiation monitoring systems associated with airborne radioactivity controls and respiratory protection equipment staged for emergency use. The inspectors also reviewed respiratory protection program procedures and current PIs for unintended internal exposure incidents.

Engineering Controls

The inspectors reviewed operability and use of both permanent and temporary ventilation systems, and the adequacy of airborne radioactivity radiation monitoring in the plant based on location, sensitivity, and alarm set-points.

Use of Respiratory Protection Devices

The inspectors reviewed the adequacy of Exelon's use of respiratory protection devices in the plant to include applicable ALARA evaluations, respiratory protection device certification, respiratory equipment storage, air quality testing records, and individual qualification records.

Problem Identification and Resolution

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

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

a. Inspection Scope

The inspectors reviewed the monitoring, assessment, and reporting of occupational dose. The inspectors used the requirements in 10 CFR 20, "Standards for Protection Against

Radiation;" RG 8.13, "Instruction Concerning Prenatal Radiation Exposures;" RG 8.36, "Radiation Dose to the Embryo/Fetus;" RG 8.40, "Methods for Measuring Effective Dose Equivalent from External Exposure;" TSs; and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors reviewed radiation protection program audits, National Voluntary Laboratory Accreditation Program (NVLAP) dosimetry testing reports, and procedures associated with dosimetry operations.

External Dosimetry

The inspectors reviewed dosimetry NVLAP accreditation, onsite storage of dosimeters, the use of correction factors to align electronic personal dosimeter results with NVLAP dosimetry results, dosimetry occurrence reports, and CAP documents for adverse trends related to external dosimetry.

Internal Dosimetry

The inspectors reviewed internal dosimetry procedures, whole body counter measurement sensitivity and use, adequacy of the program for whole body count monitoring of plant radionuclides, adequacy of the program for dose assessments based on air sample monitoring and the use of respiratory protection, and internal dose assessments for any actual internal exposure greater than 10 millirem.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with occupational dose assessment were identified at an appropriate threshold and properly addressed in the CAP.

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (71124.07)

a. Inspection Scope

The inspectors reviewed the radiological environmental monitoring program (REMP) to validate the effectiveness of the radioactive gaseous and liquid effluent release program. The inspectors used the requirements in 10 CFR 20, "Standards for Protection Against Radiation;" 40 CFR 190, "Environmental Radiation Protection Standards for Nuclear Power Operations;" 10 CFR 50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operations to Meet the Criterion 'As Low As Is Reasonable Achievable' for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents;" TSs; offsite dose calculation manual (ODCM); and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors reviewed Exelon's 2013 and 2014 annual radiological environmental and effluent monitoring reports, REMP program audits, ODCM changes, land-use census, and inter-laboratory comparison program results.

Onsite Inspection

The inspectors reviewed and/or observed the following items:

- Sample collection, monitoring, and dose measurement stations (e.g., air monitoring thermoluminescence dosimeter, vegetation, milk)
- Calibration and maintenance records for air sample and dosimetry measurement equipment
- Environmental sampling of the effluent release pathways specified in the ODCM
- Meteorological tower and meteorological data readouts
- Meteorological instrument operability status and calibration results
- Missed and/or anomalous environmental samples identified, resolved, and reported in the annual radioactive environmental monitoring report
- Positive environmental sample assessment results
- The groundwater monitoring program as it applies to selected potential leaking SSCs
- 10 CFR 50.75(g) records of leaks, spills, and remediation since the previous inspection
- Changes to the ODCM due to changes to the land-use census, long-term meteorological conditions, and/or modifications to the environmental sample stations
- Environmental sample laboratory analysis results and measurement detection sensitivities
- Results of the laboratory quality control program audit and the inter- and intra-laboratory comparison results

Identification and Resolution of Problems

The inspectors evaluated whether problems associated with the REMP were identified at an appropriate threshold and properly addressed in the CAP.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 5 samples)

.1 Reactor Coolant System (RCS) Specific Activity and RCS Leak Rate (4 samples)

a. Inspection Scope

The inspectors reviewed Exelon's submittal for the RCS specific activity (BI01) and RCS leak rate (BI02) PIs for both Unit 1 and Unit 2 for the period of January 1 through December 31, 2014. To determine the accuracy of the PI data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy

Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7. The inspectors also reviewed RCS sample analysis and control room logs of daily measurements of RCS leakage, and compared that information to the data reported by the PI. Additionally, the inspectors observed surveillance activities to verify that the chemistry personnel taking and analyzing the RCS samples followed procedures and processes.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed Exelon's submittals for the radiological effluent TS/ODCM radiological effluent occurrences (PR01) PI for the period of July 1, 2014, through March 31, 2015. The inspectors used PI definitions and guidance contained in NEI Document 99-02, Revision 7, to determine if the PI data was reported properly. The inspectors reviewed the public dose assessments for the PI for public radiation safety to determine if related data was accurately calculated and reported.

The inspectors reviewed the CAP database 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 to determine if indicator results were accurately reported.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 2 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 and periodically attended screening meetings.

b. Findings

No findings were identified.

.2 Semi-Annual Trend Review (1 sample)

a. Inspection Scope

The inspectors performed a semi-annual review of site issues to identify trends that might indicate the existence of more significant safety issues. As part of this review, the inspectors included repetitive or closely related issues documented by Exelon in trend reports, PIs, 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 first and second quarters of 2015 to assess IRs written in various subject areas (equipment problems, human performance issues, etc.), as well as individual issues identified during the NRC's daily IR review (Section 4OA2.1). The inspectors reviewed Exelon's monthly oversight reports for June to December 2014 conducted under NO-AA-104-1007, "Nuclear Oversight Management Updates," Revision 3, 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 identified one trend concerning the functionality of secondary containment doors that was not documented in Exelon's CAP. The specifics regarding the events are documented in Section 4OA2.3 of this report. Exelon documented their failure to detect this trend in IR 02532071.

.3 Annual Sample: Review Secondary Containment Airlock Doors (1 sample)

a. Inspection Scope

The inspectors performed a review of events associated with the operation of secondary containment doors at Units 1 and 2 which have resulted in multiple event reports to the NRC. On the following dates, both secondary containment airlock doors were opened simultaneously:

- Unit 2 on April 2, 2014, as documented in condition report (CR)-2014-2881 and reported in NRC event notification (EN) 49985
- Unit 1 on August 13, 2014, as documented in CR-2014-7802 and reported in EN 50363
- Unit 1 on October 16, 2014, as documented in IR 2396495 and reported in EN 50542
- Unit 1 on October 20, 2014, as documented in IR 2398224 and reported in EN 50553
- Unit 1 on February 11, 2015, as documented in IR 2451218 and reported in EN 50813
- Unit 1 on March 3, 2015, as documented in IR 2462596 and reported in EN 50860

The inspectors previously reviewed each issue independently through follow-up of event notifications. No previous enforcement issues had been identified during review of these events in NRC Integrated Inspection Reports 05000220/2014003, 05000410/2014003, 05000220/2014005, 05000410/2014005, and Section 4OA3 of this report. The inspectors

performed an in-depth review of the causal evaluations associated with each event and assessed corrective actions along with their effectiveness. The inspectors also evaluated each event for potential trends and common causes.

b. Findings and Observations

No findings were identified.

The apparent cause associated with the April 2, 2014, event at Unit 2 determined workers did not use their human performance verification tools to adequately perform a self-check and/or peer check to ensure the opposing outer door of the airlock was closed prior to opening the inner door. Corrective actions included communicating to personnel the proper method for operating the airlock doors and the importance of maintaining secondary containment integrity by keeping one door closed at all times. Clarifying signs that described the proper use of the doors were also placed at the airlock doors.

The apparent cause associated with the August 13, 2014, event at Unit 1 determined there was less than adequate physical barriers to prevent causal operation of the bypass pushbuttons associated with the magnetic door lock system which bypasses the door interlock system. Corrective actions included the installation of breakable tie wraps on all Unit 1 and Unit 2 magnetic door lock bypass pushbutton lockable covers, and the addition of labels indicating pushbuttons are for security use only to prevent unintentional operation.

An apparent cause was performed for both the October 16 and October 20, 2014, events, at Unit 1, which determined that the magnetic interlock system had an unanticipated 0.5-second delay which could not have prevented breaching both doors simultaneously. Corrective actions included the installation of a camera monitoring system for all secondary containment doors.

The apparent cause associated with the February 11, 2015, event at Unit 1 indicated a member of the security organization did not use human performance verification tools prior to opening the airlock doors. Corrective actions included establishing and implementing training to emphasize the significance of the doors as they relate to personnel safety, nuclear safety, and regulatory compliance, along with restating site expectations for proper door usage.

The apparent cause associated with the March 3, 2015, event at Unit 1 concluded that the clear and well-advertised barriers for passage through the airlock door were not followed. Corrective actions included disciplinary action for the individuals involved as a result of not correctly following the site policies and administrative controls regarding airlock door use.

The inspectors reviewed CAP procedures to ensure appropriate causes and corrective actions were established for these events in accordance with procedures. The inspectors noted that PI-AA-125-1003, "Apparent Cause Evaluation Manual," Revision 2, Section 4.4.1.1 states to "analyze the event to determine the causal factor using appropriate methods. Techniques that may be used to identify causal factors and to analyze causal factors are contained in PI-AA-125-1006." PI-AA-125-1006, "Investigation Techniques Manual," Revision 1, Attachment 3, provides an investigation techniques usage guide which specifically lists "Analysis of Common Issues" and provides guidance to utilize the method "when analyzing multiple events to identify underlying common causes or

contributing elements.” PI-AA-125-1006 also provides Attachment 15 for “Analysis of Common Issues” for use in determining underlying common causes of events that are similar in nature.

The inspectors determined that Exelon staff did not utilize these techniques when conducting follow-up to these events. However, the Inspectors determined that this issue was minor because although Exelon staff did not evaluate the events for common causes in accordance with the CAP, the pertinent aspects were reviewed in other corrective action documents including IR 2462596 and IR 2447610.

While reviewing these events, the inspectors identified that Exelon had not ensured that existing mechanical door interlocks were properly working, and had not revised the door testing procedure as recommended in the CAP. Specifically, the inspectors identified that WOs to repair certain airlock door interlock systems have existed since 2012 due to previous events. For example:

- Planned maintenance associated with Unit 2 airlock door 262-2 under WO C91856157 remains in initiation status and has not been performed since 2012. Thus, the magnetic interlock associated with this door has not functioned since 2012 and continues to not function
- WO C92671987 to repair a magnetic pickup associated with a corrective action from the April 2014 event was moved to November 2015, which creates a missed opportunity to perform this corrective action sooner and reduce the risk of subsequent events
- WO C92938212, which was issued as a corrective action to IR 2451218 to install magnetic interlocks on Unit 1 airlock doors located on the refuel floor has not been completed although it is listed as being in progress since May 8, 2015
- Unit 2 door 261-1 has a pending WO from December 2014 to troubleshoot and repair the door under WO C92929931
- Corrective action from IR 1700957, to implement a method for verifying magnetic door lock system functionality, did not provide detailed instructions in maintenance procedure S-MMP-SDM-001, “Site Doors Maintenance,” Revision 00601, to ensure the system is functional. Specifically, step 7.3.13 of S-MMP-SDM-001 states “for secondary containment airlock doors with magnetic door interlocks installed, perform a functional test of the locks to verify operability.” The step does not provide guidance on how to perform the test or ensure that both doors do not get opened simultaneously during testing

These issues associated with the magnetic interlock door system and testing procedure have been determined to be minor because although these corrective actions could reduce the risk of a simultaneous door opening of the secondary containment airlock doors, they alone could not eliminate the potential for these events to occur. Exelon staff generated IR 02532071 to document the issues associated with the magnetic interlock system. The inspectors will continue to follow corrective action progress associated with the Unit 1 and Unit 2 secondary containment airlock doors through site daily review of the CAP.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 6 samples)

.1 Plant Event

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 events to assure that Exelon implemented appropriate corrective actions commensurate with their safety significance.

- Unit 2 instrument air compressor control panel fire following PMT on June 8, 2015

b. Findings

No findings were identified.

.2 (Closed) Licensee Event Report (LER) 05000220/2015-001-00; (Closed) LER 05000220/2015-002-00: Secondary Containment Inoperable due to Simultaneous Opening of Airlock Doors (2 samples)

LER 05000220/2015-001-00 and LER 05000220/2015-002-00 reported that on February 11 and March 3, 2015, respectively, Unit 1 operators declared secondary containment inoperable when both inner and outer airlock doors on RB 340 foot elevation were opened simultaneously similar to what was reported in LERs 05000220/2014-004-00, 05000220/2014-005-00, and 05000220/2014-006-00. In both instances, the doors were both open for a period of about 5 seconds. In these events, the operators entered and promptly exited TS 3.4.3 when the inner door was verified closed. Initial corrective actions from prior LERs for similar occurrences included clear, well-advertised barriers and postings for passage through the airlock doors. The cause of these events was a failure to use human performance tools as well as follow the instructions provided at each airlock door.

Corrective action for the events included updating the training program as well as disciplinary action. In addition to these corrective actions, the long-term corrective actions from the previous LERs for this condition have since been completed. All Unit 1 airlock doors that provide access to secondary containment now have permanent monitors displaying the opposite airlock door as well as the inside of the airlock. These events were entered into Exelon's CAP as IR 02451218 and IR 02462596.

For the two instances stated above, inspectors' review of the RB differential pressure as recorded by the plant process computer for the times that both doors were open indicated that the actual differential pressure remained negative and was unaffected by the brief

simultaneous opening of the airlock doors. Secondary containment structural integrity, the ability to automatically isolate the non-safety-related RB ventilation system, and the RB emergency ventilation system availability were not impacted by these events.

The inspectors reviewed the LERs for accuracy, the adequacy of proposed and completed corrective actions, and the appropriateness of the extent-of-condition review. No findings or violations of NRC requirements were identified. These LERs are closed.

.3 (Closed) LER 05000410/2014-008-00: Secondary Containment Inoperable due to Reactor Building Exhaust Fan Trip (1 sample)

On June 10, 2014, Unit 2 declared secondary containment inoperable from 2032 to 2036 due to secondary containment vacuum decreasing below the TS limit. The change in secondary containment vacuum occurred when RB exhaust fan 2HVR-FN5A tripped following planned PMT. This event was reportable in accordance with 10 CFR 50.73(a)(2)(v)(C) as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

An apparent cause evaluation conducted by Exelon identified a faulty flow switch, 2HVR-FS12A, as the most likely cause for the exhaust fan trip. The flow switch failed in a manner that indicated a low-flow condition had occurred in the ventilation system resulting in a protective trip of exhaust fan 2HVR-FN5A. Exelon corrective actions included replacing the defective flow switch and revising the preventive maintenance strategy for 2HVR-FS12A and similar flow switches to require replacement on a 10-year periodicity. Prior to the event, these flow switches were required to be replaced every 12 years. The switch that failed, 2HVR-FS12A, had been in service 11 years prior to the event. This event was entered into Exelon's CAP as CR-2014-005610.

The inspectors reviewed this LER for accuracy, the adequacy of proposed and completed corrective actions, and the appropriateness of the extent-of-condition review. No findings or violations of NRC requirements were identified. This LER is closed.

.4 (Closed) LER 05000410/2015-001-00: Secondary Containment Inoperable due to Sustained High Winds (1 sample)

On January 12, 2015, at 7:39 p.m., Unit 2 secondary containment was declared inoperable when secondary containment vacuum fell below the TS limit of 0.25 inches of vacuum water gauge. This condition is reportable under 10 CFR 50.72(b)(3)(v)(C) and 10 CFR 50.73(a)(2)(v)(C) as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material. The cause for the change in vacuum in secondary containment vacuum was sustained high winds. At 7:50 p.m., the 'A' train of the SGTS was manually started and at 7:56 p.m., secondary containment vacuum was restored to greater than 0.25 inches of vacuum. In accordance with Exelon's procedure, when secondary containment vacuum begins to approach 0.25 inches of vacuum, operators shall place SGTS in service and/or isolate the RB to maintain vacuum. In this case, it was determined that the initiation of one train of SGTS without isolating the RB was sufficient to reestablish secondary containment vacuum above the TS value.

TS Surveillance Requirement 3.6.4.1.4 requires that one train of the SGTS be able to establish 0.25 inches of vacuum water gauge within 66.7 seconds. On January 12, it took approximately 6 minutes. However, the safety-related function of SGTS is credited during a design basis event, which would automatically isolate the RB. Had the RB been isolated during this event, air in-leakage would have been within the capacity of the SGTS as demonstrated in the most recent secondary containment drawdown test performed in April 2014.

The apparent cause evaluation identified inadequate system balancing and failure to adjust the inlet damper after filter bag removal for seasonal readiness which allowed a volume increase that was beyond the control capability of the pressure control dampers during high wind events. Corrective actions taken include adjusting RB intake dampers to lower supply fan flow to bring recirculation motor operated dampers into their control range and to adjust other system lineups until the dampers begin to modulate.

The inspectors reviewed this LER for accuracy, the adequacy of proposed and completed corrective actions, and the appropriateness of the extent-of-condition review. No findings or violations of NRC requirements were identified. This LER is closed.

.5 (Closed) LER 05000410/2015-002-00: Manual Reactor Scram due to Unexpected Reactor Water Level Change (1 sample)

On February 18, 2015, Unit 2 inserted a manual reactor scram due to rapidly rising reactor water level. The increasing water level was due to the lifting of leads to a level recorder which was in the process of being replaced. It was later determined that lifting the leads interrupted a voltage daisy chain which caused a false low level signal to the feedwater level control system. This resulted in the feedwater flow control valves to open, rapidly increasing reactor level. The root cause was that the fix-it-now planning process failed to recognize the signal daisy chain which occurred due to a bias toward a level recorder not impacting a control circuit. Corrective actions taken included replacing the failed recorder and establishing a compensatory action to require fix-it-now team work packages staged to be reviewed by a same disciplined technician. The enforcement aspects of this issue are discussed in NRC Integrated Inspection Report 05000410/2015001, Section 4OA3. The inspectors did not identify any new issues during the review of the LER. This LER is closed.

4OA5 Other Activities

.1 World Association of Nuclear Plant Operators (WANO) Report Review

a. Inspection Scope

The inspectors reviewed the final December 18, 2014, WANO plant assessment of NMPNS for the period of January 2013 to December 2014. The report primarily relied on observations made by WANO representatives during the weeks of October 13 and October 20, 2014.

The inspectors evaluated the report to ensure that NRC perspectives of NMPNS' performance were consistent with any issues identified during the assessment. The inspectors also reviewed the report to determine whether WANO identified any significant safety issues that required further NRC follow-up.

b. Findings

No findings were identified.

.2 Untimely American Society of Mechanical Engineers (ASME) Relief Request

Unit 2 developed a relief request dated October 16, 2000, which stated "In instances where a location may be found at the time of the examination that does not meet >90 percent coverage, the process outlined in the Electric Power Research Institute (EPRI) Technical Report (TR) will be followed." EPRI TR- 112657, Section 6.4, Item 4, states, "A new relief request will be generated for any RI-ISI piping element selection for which greater than 90 percent examination coverage is not achieved." EPRI TR-112657, Section 6.4, states, "consistent with NRC approved ASME Code Case N-460, an examination will be considered limited if less than or equal to 90 percent coverage is obtained." This relief request addresses piping element selections for the second inservice inspection (ISI) interval where less than 90 percent of the examination volume was obtained. However, this relief request was never submitted to the NRC. Exelon discovered this during an internal review and brought this to the NRC's attention.

By letter dated February 16, 2015, (Agencywide Documents Access and Management System Accession No. ML15054A008), Exelon submitted a request to the NRC for relief from certain ASME Boiler and Pressure Vessel (B&PV) Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," requirements at NMPNS, Unit 2. Specifically, pursuant to 10 CFR 50.55a(g)(5)(iii), Exelon requested relief to use alternative requirements for ISI items on the basis that the code requirement is impractical. This relief request applies to the second 10-year ISI interval, which began on April 5, 1998, and ended on April 4, 2008. This relief request was subsequently withdrawn.

The regulation 10 CFR 50.55a(g)(5)(iii) states that "Requests for relief made in accordance with this section must be submitted to the NRC no later than 12 months after the expiration of the initial or subsequent 120-month inspection interval for which relief is sought." Exelon's request was submitted approximately 7 years after the end of the interval. Since Exelon did not submit the relief request within the time interval specified in the regulation and since there is no provision in the regulation, absent a request for exemption from the regulation for the review of the relief request outside of the specified time interval, the NRC staff could not have reviewed this request in the context of existing relief pursuant to 10 CFR 50.55a(g).

It was determined that if the relief request had been submitted in a timely fashion, it would have likely been approved since the alternate method used was acceptable, so there are no safety consequences. However, the request was untimely and cannot be approved; and, therefore, a traditional enforcement violation of 10 CFR 50.55a(g)(4)(ii) occurred. The enforcement aspects of this issue are discussed in Section 4OA7.

4OA6 Meetings, Including Exit

On July 29, 2015, the inspectors presented the inspection results to Mr. Peter Orphanos, Site Vice President, and other members of the NMPNS staff. The inspectors verified that no propriety information was retained by the inspectors or documented in this report.

On August 4, 2015, the inspectors presented the results of management's review of the inspection results which changed the cross-cutting aspect of the finding previously presented and the addition of a licensee-identified NCV. The results were presented to Mr. Dennis Moore, Manager, Regulatory Assurance, and other members of the NMPNS staff.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Severity Level IV) was identified by Exelon and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as a NCV.

- 10 CFR 50.55a(g)(4)(ii) states, in part, inservice examination of components and system pressure tests conducted during successive 120-month inspection intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (a) of this section 12 months before the start of the 120-month inspection interval. The second 10-year ISI interval program was based on the ASME B&PV Code, Section XI, 1989 Edition with no addenda and was applicable from April 5, 1998, thru April 4, 2008. ASME B&PV Code Section XI, 1989 states, in part, "In instances where a location may be found at the time of the examination that does not meet >90 percent coverage, the process outlined in the EPRI TR will be followed." EPRI TR-112657, Section 6.4, Item 4 states "A new relief request will be generated for any RI-ISI piping element selection for which greater than 90 percent examination coverage is not achieved." EPRI TR-112657, Section 6.4, also goes on to state "Consistent with the requirements of Code Case N-460, an examination will be considered limited if less than or equal to 90 percent coverage is obtained." This relief request addresses piping element selections for the second ISI interval where less than 90 percent of the examination volume was obtained. Contrary to the above, from April 4, 2009, until February 16, 2015, Exelon failed to submit a relief request to the NRC for instances found at the time of the examination that did not meet greater than 90 percent coverage as required. This violation impacts the regulatory process; therefore, traditional enforcement applies. This violation is similar to Example 6.9.d.1 of the NRC Enforcement Policy dated February 4, 2015. This is an example of a Severity Level IV finding. Exelon identified the issue during a self-assessment and entered the issue into their CAP as IR 01991177 and IR 02450858.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

P. Orphanos, Site Vice President
W. Trafton, Plant Manager
M. Busch, Operations Director
K. Clark, Manager, Site Security
C. Kronich, Manager, Nuclear Oversight
M. Khan, Senior Manager, Engineering
M. Kunzwiler, Manager, Site Security Operations
S. Howe, Manager, Chemistry
M. Gray, Radiological Engineering Manager
B. Scaglione, Manager, Engineering
K. Kristensen, Regulatory Principle Engineer
A. Sterio, Director, Site Engineering
A. Moisan, Dosimetry Supervisor
D. Moore, Manager, Regulatory Assurance
J. Robideau, Regulatory Specialist
T. Tanguay, Shift Operations Superintendent (Unit 2)
J. Thompson, Director, Site Maintenance
J. Tsardakas, Shift Operations Superintendent (Unit 1)
D. Tulowiecki, Radiation Protection Manager
J. Westermann, Manager, Emergency Preparedness

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

| | | |
|---------------------|-----|--|
| 05000220/2015002-01 | NCV | Failure to Notify of Changes to Work Scope (Section 2RS1) |
|---------------------|-----|--|

Closed

| | | |
|----------------------|-----|--|
| 05000220/2015-001-00 | LER | Secondary Containment Inoperable due to Simultaneous Opening of Airlock Doors (Section 4OA3) |
| 05000220/2015-002-00 | LER | Secondary Containment Inoperable due to Simultaneous Opening of Airlock Doors (Section 4OA3) |
| 05000410/2014-008-00 | LER | Secondary Containment Inoperable due to Reactor Building Exhaust Fan Trip (Section 4OA3) |
| 05000410/2015-001-00 | LER | Secondary Containment Inoperable due to Sustained High Winds (Section 4OA3) |
| 05000410/2015-002-00 | LER | Manual Reactor Scram due to Unexpected Reactor Water Level Change (Section 4OA3) |

LIST OF DOCUMENTS REVIEWED**Section 1R01: Adverse Weather Protection**Procedures

N1-OP-64, Meteorological Monitoring, Revision 01100
 N2-MPM-GEN-A106, Probable Maximum Precipitation Flood Berm and 10,000 Year Culvert
 Inspection, Revision 00301
 N2-MSP-GEN-V001, Revetment Ditch Structure Inspection, Revision 00501
 N2-OP-102, Meteorological Monitoring, Revision 01400
 OP-NM-108-107-1002, Off-Site Power Operations and Interface, Revision 0000
 WC-AA-107, Seasonal Readiness, Revision 015

Condition Reports/Issue Reports

| | | |
|----------------|----------------|----------------|
| CR-2011-005375 | CR-2012-007163 | CR-2012-010892 |
| CR-2013-001952 | IR 02493266 | IR 02508261 |
| IR 02508263 | IR 02490575 | IR 02493266 |
| IR 02493391 | IR 02493575 | |

Miscellaneous

Unit 1 UFSAR, Revision 22
 Unit 2 UFSAR, Revision 20

Section 1R04: Equipment Alignment

Drawings

C-18012-C, Reactor Containment Spray Piping and Instrumentation Diagram (P&ID), Revision 47
PIC-061C, Standby Gas P&ID, Revision 8
PID-061B, Primary Containment Purge and Standby Gas Treatment P&ID, Revision 22

Issue Report

IR 02499853

Section 1R05: Fire Protection

Procedure

N1-PFP-0101, Unit 1 Pre-Fire Plans, Revision 00304

Miscellaneous

Unit 1 UFSAR, Revision 22

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

Procedure

HU-AA-101, Human Performance Tools and Verification Practices, Revision 9

Section 1R12: Maintenance Effectiveness

Condition Reports/Issue Reports

CR-2009-007562

IR 02500981

Work Order

C91033502

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

N1-ESP-RPS-331, Reactor Protection System Motor Generator Set/UPS Instrument Channel
Test Excluding Output Contactors, Revision 00702
WC-AA-104, Integrated Risk Management, Revision 023.01

Work Order

C92688433

Miscellaneous

System Engineer Service Water System IQ Data Base 2014-2015

Section 1R15: Operability Determinations and Functionality Assessments

Procedures

N1-ISP-LRT-TYC, Type 'C' Containment Isolation Valve Leak Rate Test, Revision 01001
N1-CSP-Q504, Quarterly Diesel Fuel Oil Sampling and Analysis, Revision 00701

N2-CSP-RCS-W102, Dose Equivalent Iodine-131, Revision 00400
 OP-AA-102-103, Operator Work-Around Program, Revision 4

Issue Reports

| | | |
|-------------|-------------|-------------|
| IR 02470032 | IR 02448807 | IR 02490946 |
| IR 02495615 | IR 02498441 | IR 02500309 |
| IR 02501333 | | |

Work Order

C92393017

Miscellaneous

Information Notice 2005-24, Non-Conservatism in Leakage Detection Sensitivity
 RG 1.45, Reactor Coolant Pressure Boundary Leakage Detection Systems, Revision 1
 Unit 1 UFSAR, Revision 22
 Unit 2 UFSAR, Revision 20

Section 1R18: Plant Modifications

Issue Report

IR 02487937

Miscellaneous

ECP-15-000257-102-01-01, Temporary Caps Installed on 2MSS*FT11A and 2MSS*FT11B Drain Valves

Section 1R19: Post-Maintenance Testing

Procedures

N1-EPM-DGE-251, Temporary Power Supply for Fuel Oil Transfer Pumps MOT-40 and MOT-82-41, Revision 00201
 N1-IPM-082-003, Diesel Generator 103 Day Tank Level Alarms, Revision 00201
 N1-OP-2, Core Spray System, Revision 03501
 N1-ST-M4B, Emergency Diesel Generator 103 and Power Board 103 Operability Test, Revision 01400
 N1-ST-Q1A, Core Spray 111 and Shutdown Cooling Water Seal Check Valve Operability Test, Revision 01400
 N2-EPM-GEN-635, Operational Checks, Cleaning, and Inspecting Unit 2 UPS's, Revision 00600
 N2-MPM-Gen-V560, Various Station Ventilation Supply and Exhaust Fans PM, Revision 01100
 N2-SOP-03, Loss of AC Power, Revision 01400
 N2-SOP-11, Loss or Degraded Service Water System, Revision 00601

Issue Report

IR 02010457

Work Orders

| | | |
|-----------|-----------|-----------|
| C91744880 | C91744882 | C92444925 |
| C92764791 | C93098874 | C93099386 |
| C93102226 | C93107136 | |

Miscellaneous

10 CFR Part 21 Chicago Telephone Supply Company Voltage Adjust Potentiometer,
February 27, 1996

Section 1R20: Refueling and Other Outage Activities

Procedures

N1-OP-43A, Plant Startup, Revision 03800
OU-NM-4001, Refueling Operations, Revision 00000
WC-AA-104, Integrated Risk Management, Revision 22

Section 1R22: Surveillance Testing

Procedures

CY-AA-130-3010, Dose Equivalent Iodine Determination, Revision 4
CY-AA-130-3010-F-03, Dose Equivalent Iodine Determination, Revision 3
N1-FST-FPP-C003, Fire Damper Operation and Inspection, Revision 0800
N1-ISP-036-006, Emergency Cooling System – High Steam Flow Instrument Trip Channel
Test/Calibration, Revision 01000
N1-ST-M1A, Liquid Poison Pump 11 Operability Test, Revision 00700
N1-ST-Q5, Primary Containment Isolation Valves Operability Test, Revision 03000
N1-ST-Q13, Emergency Service Water Pump and Check Valve Operability Test, Revision 01600
N1-ST-Q26, Feedwater and Main Steam Line Power Operated Isolation Valves Partial Exercise
Test and Associated Functional Testing of Reactor Protection System Trip Logic,
Revision 01100
N2-CSP-RCS-W102, Dose Equivalent Iodine-131, Revision 00400
N2-IPM-LRT-@001, Leak Rate Monitor Flow and Electrical Integrity Check, Revision 00300
N2-ISP-GTS-R@001, Standby Gas Treatment System Pneumatic Supply/Accumulator Leak Rate
Test, Revision 00203
N2-OP-100B, HPCS Diesel Generator – Lineups, Revision 00000
N2-OSP-EGS-R008, Operating Cycle Diesel Generator Simulated Loss of Offsite Power with and
ECCS Division III Actuation, Revision 00801
S-SAD-FPP-0105, Compensatory Measure for Inoperable Fire Protection Systems and
Components, Revision 02000

Drawings

C-18017-C, Emergency Cooling System P&ID, Revision 1
LR-18016-C, Reactor Vessel water Level Reference Leg Backfill License Renewal AMR Drawing,
Revision 6
LR-18017-C, Emergency Cooling System License Renewal AMR Drawing, Revision 0

Issue Reports

| | | |
|-------------|-------------|-------------|
| IR 02492964 | IR 02494374 | IR 02506158 |
| IR 02507807 | | |

Work Orders

| | | |
|-----------|-----------|-----------|
| C92179444 | C92202831 | C92771725 |
| C92776233 | | |

Miscellaneous

ASME OM Code-2004, Code for Operation and Maintenance of Nuclear Power Plants

Section 2RS1: Access Control to Radiological Significant Areas

Procedures

RP-AA-19, High Radiation Area Program Description, Revision 2
RP-AA-100, Conduct of Radiation Protection Operations, Revision 0
RP-AA-460, Controls for High and Locked High Radiation Areas, Revision 26
RP-AA-460-002, Additional High Radiation Exposure Control, Revision 2
RP-AA-1008, Unescorted Access to and Conduct in Radiological Controlled Areas, Revision 4

Miscellaneous

Survey 1DW-6148, DW 243 feet Under Vessel, March 18, 2015, 1600 hour
Survey 1RB-25484, RB 240 feet Refuel Floor, March 29, 2015, 1630 hour
Survey 1RB-25484, RB 353 feet Refuel Floor-Water Survey, March 29, 2015, 1000 hour
Survey 1RB-35034, Turbine Building 300 feet Turbine Operating Floor, March 23, 2015, 0130 hour
Survey 1RB-35034, Turbine Building 300 feet Turbine Operating Floor, March 23, 2015, 1800 hour
Survey 1WB-9758, ORW 229 feet, January 6, 2015, 1000 hour
Survey 1WB-9758, ORW 229 feet, January 17, 2015, 0800 hour

Section 2RS2: Occupational ALARA Planning and Controls

Procedure

RP-AA-403, Administration of the Radiation Work Permit Program, Revision 6

Radiation Work Permits

RWP NM-1-15-00309, RSSB Scaffolding Activities
RWP NM-1-15-00511, DW Main Steam Safety Relief Valve Activities
RWP NM-1-15-00512, Drywell Control Rod Drive Activities
RWP NM-1-15-00601, RB RWCU System Maintenance
RWP NM-1-15-00901, Fuel Floor Reactor Disassembly/Reassembly
RWP NM-1-15-00906, Cavity Decon Activities

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

Procedure

RP-AA-301, Radiological Air Sampling Program, Revision 8

Miscellaneous

Air Sample 1TB-35029, U1 TB 300 feet Deck LP 'A' Hood, March 18, 2015, 1845 hour
Air Sample 1DW-6158, U1 DW 259 feet 39-04 Decon, March 28, 2015, 2110 hour
Air Sample 1DW-6158, U1 DW 243 feet Under Vessel, March 28, 2015, 0620 hour
Air Sample 1RB-25484, U1 North Refuel Floor G/A, March 29, 2015, 1920 hour

Section 2RS4: Occupational Dose Assessment

Procedures

RP-AA-203-1001, Personnel Exposure Investigation, Revision 7
RP-AA-270, Prenatal Radiation Exposure, Revision 6

Miscellaneous

Internal investigation from January 6, 2015

Section 2RS7: Radiological Environmental Monitoring ProgramProcedures

CY-AA-170-000, Radioactive Effluent and Environmental Monitoring Programs, Revision 6
 CY-AA-170-100, Radiological Environmental Monitoring Program, Revision 2
 CY-AA-170-300, Offsite Dose Calculation Manual Administration, Revision 2
 S-ENVSP-3, Radiological Sample Collection, Processing and Shipment, Land-Use Census, and Quality Control (Vendor Procedure), Revision 06
 S-ENVSP-3.1, Milk Animal Census and Milk Sample Collection, Revision 01
 S-ENVSP-3.2, Garden/Irrigation Census and Food Product Sample Collection, Revision 00300
 S-ENVSP-3.3, Nearest Meat Animal Census and Meat, Poultry, and Egg Sample Collection, Revision 01
 S-ENVSP-3.4, Soil Sample Collection, Revision 00200
 S-ENVSP-3.5, Fish Sample Collection, Revision 01
 S-ENVSP-3.6, Shoreline Sediment and Cladophora Sample Collection, Revision 01
 S-ENVSP-3.7, Nearest Residence Census, Revision 00
 S-ENVSP-4.1, TLD/OSLD Preparation, Collection, and Analysis, Revision 01400
 S-ENVSP-4.2, Environmental Air Monitoring Sample Collection, Revision 01100
 S-ENVSP-4.3, Environmental Air Monitoring Station Inspection and Maintenance, Revision 00601
 S-ENVSP-15, Sampling and Analysis for Unmonitored Pathways, Revision 01400
 S-MET-ENV-01, Maintenance of Meteorological Monitoring Program, Revision 00100

Miscellaneous

2013 Exelon Assessment of EA Engineering Environmental Contractor
 JQA-14-097, Gel Laboratories NUPIC Audit, May 29, 2014
 NUPIC Audit 23484, Teledyne Brown Engineering, March 10, 2014
 Part 61 Waste Stream Characterizations, September 2014 to May 2015
 SR-2012-30, Exelon Nuclear Audit of Murray and Trettel, Inc.
 SBK 14-019, Next Era Nuclear Oversight Vendor Audit of Stanford Dosimetry, LLC, September 24, 2014
 Unit 1 ODCM, Revision 34
 Unit 2 ODCM, Revision 35

Section 4OA2: Problem Identification and ResolutionProcedure

NO-AA-104-1007, Nuclear Oversight Management Updates, Revision 3
 PI-AA-125-1003, Apparent Cause Evaluation Manual, Revision 2
 PI-AA-125-1006, Investigation Techniques Manual, Revision 1
 S-MMP-SDM-001, Site Doors Maintenance, Revision 00601

Condition Reports/Issue Reports

| | | |
|--------------|--------------|------------|
| CR-2014-2881 | CR-2014-7802 | IR 1700957 |
| IR 2396495 | IR 2398224 | IR 2447610 |
| IR 2451218 | IR 2451218 | IR 2462596 |
| IR 2514179 | IR 2517253 | |

Work Orders

C91856157

C92671987

C92938212

C92929931

Section 40A5: Other Activities

Miscellaneous

-Letter from Exelon Generation Company, LLC to the NRC, submitting a request to the NRC for relief from ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," requirements at Nine Mile Point Nuclear Station, Unit 2 dated February 16, 2015

-WANO Report, December 18, 2014

LIST OF ACRONYMS

| | |
|--------|---|
| 10 CFR | Title 10 of the <i>Code of Federal Regulations</i> |
| AC | alternating current |
| ALARA | as low as reasonably achievable |
| ASME | American Society of Mechanical Engineers |
| B&PV | boiler and pressure vessel |
| CAP | corrective action program |
| CR | condition report |
| EDG | emergency diesel generator |
| EN | event notification |
| EPRI | Electric Power Research Institute |
| FA | fire area |
| IMC | Inspection Manual Chapter |
| IR | issue report |
| ISI | inservice inspection |
| LER | licensee event report |
| NCV | non-cited violation |
| NEI | Nuclear Energy Institute |
| NMPNS | Nine Mile Point Nuclear Station, LLC |
| NRC | Nuclear Regulatory Commission, U.S. |
| NVLAP | National Voluntary Laboratory Accreditation Program |
| ODCM | offsite dose calculation manual |
| OOS | out of service |
| PI | performance indicator |
| PMT | post-maintenance testing |
| RB | reactor building |
| RCS | reactor coolant system |
| REMP | radiological environmental monitoring program |
| RFO | refueling outage |
| RG | regulatory guide |
| RWP | radiation work permit |
| SGTS | standby gas treatment system |
| SSC | structure, system, and component |
| TR | technical report |
| TS | technical specification |
| UFSAR | Updated Final Safety Analysis Report |
| WANO | World Association of Nuclear Plant Operators |
| WO | work order |