



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
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August 4, 2017

Mr. Bryan C. Hanson
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

**SUBJECT: NINE MILE POINT NUCLEAR STATION – INTEGRATED INSPECTION
REPORT 05000220/2017002 AND 05000410/2017002 AND INDEPENDENT
SPENT FUEL STORAGE INSTALLATION REPORT 07201036/2017002**

Dear Mr. Hanson:

On June 30, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Nine Mile Point Nuclear Station, LLC (NMPNS), Units 1 and 2. On July 26, 2017, the NRC inspectors discussed the results of this inspection with Mr. Peter Orphanos, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

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

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Resident Inspector at NMPNS. In addition, if you disagree with the cross-cutting aspect assignment or a 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 U. S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC, 20555-0001; with copies to the Regional Administrator, Region I, and the NRC Resident Inspector at NMPNS.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Anthony Dimitriadis, 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 05000220/2017002 and
05000410/2017002
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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 AUGUST 4, 2017

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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. 05000220/2017002 and 05000410/2017002

Licensee: Exelon Generation Company, LLC (Exelon)

Facility: Nine Mile Point Nuclear Station, LLC (NMPNS)
Units 1 and 2

Location: Oswego, New York

Dates: April 1, 2017, through June 30, 2017

Inspectors: E. Miller, Senior Resident Inspector
K. Kolaczyk, Senior Resident Inspector
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Approved by: Anthony Dimitriadis, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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SUMMARY

Inspection Report 05000220/2017002 and 05000410/2017002; 04/01/2017 – 06/30/2017; NMPNS, Units 1 and 2; Maintenance Risk Assessments and Emergent Work Control.

This report covered a 3-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The report documents two Green findings, one NRC identified the other licensee identified, both of which were non-cited violations (NCVs). 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 November 1, 2016. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green non-cited violation (NCV) of Title 10 of the *Code of Federal Regulation* (10 CFR) 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," when Exelon did not assess and manage the increase in risk for online maintenance activities. Specifically, on May 24, 2017, the inspectors identified a planned surveillance activity which caused unavailability of the 'A' residual heat removal (RHR) system minimum flow valve that was not recognized by the Exelon staff as a, Yellow, elevated risk activity in accordance with their EOOS (Equipment Out of Service) probabilistic risk assessment (PRA) model. Exelon staff generated issue report (IR) 04015294 to address the failure to recognize the Yellow, elevated risk activity and failure to review adequate extent of condition. Corrective actions include evaluating PRA to assess if risk can be reduced to Green with compensatory actions and providing training to operations to enhance PRA modeling of system availability. Following review of the PRA model, Exelon plans to evaluate all surveillance procedures as part of extent of condition that could impact availability of the 'A' RHR minimum flow valves.

This performance deficiency is more than minor because it affected the human performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, on May 24, 2017, the inspectors identified a planned activity that resulted in an unplanned Yellow risk activity during planned maintenance that resulted in unavailability of a component used to support the 'A' RHR system. Additionally, this issue is similar to Example 7.f of IMC 0612, Appendix E, "Examples of Minor Issues," issued August 11, 2009, because the overall elevated plant risk placed the plant into a higher licensee-established risk category. The inspectors determined that this finding is of very low safety significance (Green). Because the incremental core damage probability deficit was less than 1E-6 and the incremental large early release probability was less than 1E-7, this finding was determined to be of very low safety significance (Green). The cause of the finding has a cross-cutting aspect in the area of Human Performance, Teamwork, because Exelon staff did not effectively communicate internally to ensure that corrective actions were being addressed to resolve concerns with risk associated with 'A' RHR minimum flow valve availability. Specifically, Exelon staff incorrectly believed that integrated risk management guidance corresponded to PRA availability. Thus, it was assumed risk would remain Green during surveillance and maintenance activities that

resulted in the 'A' RHR minimum flow valve being unavailable; and a failure to recognize future maintenance activities that resulted in risk being Yellow. [H.4] (Section 1R13)

Other Findings

A violation of very low safety significance that was identified by NMPNS was reviewed by the inspectors. Corrective actions taken or planned by NMPNS have been entered into their 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 offline due to a planned refueling and maintenance outage. On April 5, 2017, operators began power ascension and synchronized to the electrical grid the same day. On April 7, 2017, reactor power reached 100 percent. On the same day, power was reduced to 90 percent to perform a rod pattern adjustment. Power was restored to 100 percent the same day. On April 8, 2017, operators reduced power to 82 percent to perform a rod pattern adjustment. Operators restored power to 100 percent the same day. On May 4, 2017, operators reduced reactor power to 92 percent to perform planned maintenance on three hydraulic control units. Reactor power was restored to 100 percent the same day. On May 5, 2017, operators reduced reactor power to 90 percent to remove reactor recirculation motor generator set (RRMG) 14 from service for planned maintenance. Operators restored reactor power to 100 percent on May 6, 2017. On May 26, 2017 operators reduced reactor power to 90 percent to perform turbine valve testing. Power was restored to 100 percent the next 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 20, 2017, operators reduced power to 80 percent to perform control rod scram time testing, turbine valve surveillance testing, and a control rod pattern adjustment. Unit 2 returned to 100 percent power on May 21, 2017. Unit 2 remained at or near 100 percent for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (711111.01 – 2 samples)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors performed a review of Exelon's readiness for the onset of seasonal high temperatures for Unit 1 and Unit 2. The review focused on preparations and response to hot weather environmental conditions. The inspectors performed walkdowns of the Unit 2 Division I and II emergency diesel generator (EDG) rooms. 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.

.2 Summer Readiness of Offsite and Alternate Alternating Current Power Systems

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 alternating current (AC) power systems to evaluate readiness of the systems prior to seasonal high grid loading during the week of May 29, 2017. The inspectors reviewed Exelon's procedures affecting these areas and the communications protocols between the transmission system operator and Exelon that were implemented since the previous sample in 2016. 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 IRs and walking down portions of the offsite and AC power systems including the 345 kilovolt (kV) and 115 kV switchyards.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04 – 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the systems listed below. 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, work orders (WOs), IRs, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted the system's performance of its 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.

- Unit 1 EDG 102, during a monthly surveillance test of EDG 103, on April 10, 2017
- Unit 1 liquid poison (LP) system 11, following completion of a planned monthly surveillance test on LP system 12, on April 13, 2017
- Unit 1 core spray (CS) systems 121 and 122, during CS system 111 planned maintenance, on May 23, 2017

b. Findings

No findings were identified.

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

a. Inspection Scope

On June 15, 2017, the inspectors performed a complete system walkdown of accessible portions of the Unit 2 reactor core isolation cooling (RCIC) system to verify the existing equipment lineup was correct. The inspectors reviewed operating procedures, drawings, equipment lineup check-off lists, and the UFSAR to verify the system was aligned to perform its required safety functions. The inspectors also reviewed electrical power availability, component lubrication and equipment cooling, hanger and support functionality, and operability of support systems. The inspectors performed field walkdowns of accessible portions of the systems to verify as-built system configuration matched plant documentation, and that system components and support equipment remained operable. The inspectors confirmed that systems and components were aligned correctly, free from interference from temporary services or isolation boundaries, environmentally qualified, and protected from external threats. The inspectors also examined the material condition of the components for degradation and observed operating parameters of equipment to verify that there were no deficiencies.

Additionally, the inspectors reviewed a sample of related action requests (ARs) to ensure Exelon appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

1. Resident Inspector Quarterly Walkdowns (71111.05Q – 5 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 turbine condenser/heater bay area, fire area T1 elevation 250' on March 22, 2017
- Unit 2 turbine building 277' fire area 50 on April 27, 2017
- Unit 2 turbine building 306' fire area 50 on April 27, 2017
- Unit 2 lube oil storage room 277' fire area 82 on April 27, 2017
- Unit 2 Division II cable routing area 237' fire area 19 on May 19, 2017

b. Findings

No findings were identified.

2. Resident Inspector Quarterly Walkdowns (71111.05A – 1 sample)

a. Inspection Scope

Inspectors observed a fire brigade drill scenario conducted on May 24, 2017, that involved a Unit 2 scheduled fire drill in the control building 288' level instrumentation and controls room. The inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that Exelon personnel identified deficiencies, openly discussed them in a self-critical manner at the debriefing, and took appropriate corrective actions as required. The inspectors evaluated the following specific attributes of the drill:

- Proper wearing of turnout gear and self-contained breathing apparatus
- Proper use and layout of fire hoses
- Employment of appropriate firefighting techniques
- Sufficient firefighting equipment brought to the scene
- Effectiveness of command and control
- Search for victims and propagation of the fire into other plant areas
- Smoke removal operations
- Utilization of pre-planned strategies
- Adherence to the pre-planned drill scenario
- Drill objectives met

The inspectors also evaluated the fire brigade's actions to determine whether these actions were in accordance with Exelon's firefighting strategies.

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 evaluated operator performance during the simulated event and verified completion of risk-significant operator actions, including the use of abnormal and emergency operating procedures (EOPs). The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the unit supervisor. The inspectors verified the accuracy and timeliness of the emergency classifications made by the shift manager and the TS action statements by the unit supervisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems. The inspectors observed the simulator training scenarios listed below.

- Unit 1 licensed operator training scenario that involved a loss of safety-related 600VAC powerboard 17B, reactor recirculation pump seal leakage in primary containment, a control rod drift, and a loss of coolant accident in primary containment on April 18, 2017
- Unit 2 licensed operator training scenario that involved a stuck open relief valve, a service water pipe rupture inside secondary containment, reactor scram, and plant cooldown on April 20, 2017

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 the activities in the main control room listed below. The inspectors reviewed HU-AA-101, "Human Performance Tools and Verification Practices," Revision 009, and observed test performance to verify that procedure use, crew communications, and coordination of plant activities among work groups similarly met established expectations and standards.

- Unit 1 reactor startup and heatup on April 6, 2017
- Unit 2 main control room during feedwater level control troubleshooting and control room air conditioning system surveillance testing on May 18, 2017, and during a reactor power reduction, a rod pattern adjustment, and turbine valve surveillance testing on May 20 and 21, 2017

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 1 sample)

a. Inspection Scope

The inspectors reviewed the sample listed below to assess the effectiveness of maintenance activities on structure, system, and component 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 the sample selected, the inspectors verified that the structure, system, or component was properly scoped into the maintenance rule in accordance with 10 CFR 50.65 and verified that the (a)(2) performance criteria established by Exelon staff was reasonable. As applicable, for structures, systems, and components classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these structures, systems, and components to (a)(2). Additionally, the inspectors ensured that Exelon staff were identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- Unit 1 structural monitoring assessment of turbine building roof on April 3, 2017

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 determine if 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 evaluated if Exelon personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and if the assessments were accurate and complete. When Exelon performed emergent work, the inspectors assessed if 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 determine if 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 evaluate if risk analysis assumptions were valid and if applicable requirements were met.

- Unit 2 Division I and Division III EDGs during Division II EDG planned maintenance on May 2, 2017
- Unit 1 Offsite Power Line 4 and EDG 103 during Offsite Power Line 1 planned maintenance on May 16, 2017
- Unit 2 RHR 'A' during planned testing of the discharge flow switch on May 17, 2017
- Unit 2 2RCS-VY6800A scaler circuit card replacement for 'A' reactor recirculation pump flow control valve on June 22, 2017
- Unit 2 risk mitigation actions during 'C' service water pump maintenance window on June 19, 2017
- Unit 2 standby liquid control system (SLCS) tank level calibration on June 22, 2017

b. Findings

Introduction. The inspectors identified a Green NCV of 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," when Exelon did not assess and manage the increase in risk for online maintenance activities. Specifically, on May 24, 2017, the inspectors identified a planned surveillance activity which caused unavailability of the 'A' RHR minimum flow valve that was not recognized by the Exelon staff as a Yellow, elevated risk activity, in accordance with their EIOS PRA model.

Description. On February 12, 2016, the inspectors identified a Green NCV of 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," when Exelon did not assess and manage the increase in risk for an online maintenance activity associated with planned surveillance testing of the Unit 2 'A' RHR heat exchanger. The inspectors identified that the Unit 2 'A' RHR minimum flow valve, 2RHS*MOV4A, was unavailable during heat exchanger testing. However, the

unavailability of this valve was not considered as part of the maintenance period, which resulted in the failure to recognize an increase in plant risk from Green to Yellow during that maintenance period. Exelon wrote IR 02673672 to address the NCV, and conducted an evaluation of the risk associated with unavailability of the 'A' RHR minimum flow valve.

On May 24, 2017, Exelon staff planned to perform a functional test of the 'A' RHR pump discharge flow instrument channel. Procedure N2-ISP-RHS-Q022, "Quarterly Functional Test of the RHS Pump Discharge Flow Instrument Channels" Section 6.1.1, identifies in the Plant Impact that "if 2RHS*P1A is not running and 2RHS*MOV4A is open, 2RHS*MOV4A will close." It also states that "if 2RHS*P1A is running: 2RHS*MOV4A, minimum flow valve, will be marked-up to prevent cycling resulting in loss of minimum flow protection for 2RHS*P1A." Based on the impact on availability of the minimum flow valve, 2RHS*MOV4A, the inspectors reviewed the stations PRA, performed interviews and reviewed IR 02673672 to determine that status of corrective actions from NCV 05000410/2016001-02.

Upon review the inspectors determined that although a review was conducted of the PRA model, it was determined by Exelon engineering staff that risk was Yellow when the 'A' RHR minimum flow valve was unavailable. Discussions with Exelon operations staff revealed that they believed risk was resolved to be Green. Based on the inspectors' question, risk was reviewed, and it was then determined that risk was Yellow during unavailability of the 'A' RHR minimum flow valve. Review of IR 02673672 also revealed that extent of condition evaluated the 'B' RHR minimum flow valve, and did not consider other procedures that would cause the minimum flow valve to become unavailable.

The inspectors determined that Exelon staff failed to conduct an adequate extent of condition review in accordance with PI-AA-125, Section 4.3.5, which states to "Perform Class D Work Group Evaluation to determine...the following requirements: ...3. In the Extent of Condition section, evaluate and document any immediate extent of condition concerns in accordance with PI-AA-125-1006, Investigation Techniques Manual." The extent of condition is defined in PI-AA-125-1006 as "the extent to which an identified condition has the potential to impact other plant equipment, organizations, or processes in the same manner identified in the Condition Report." In this case, Exelon did not assess the condition of similar procedures having a maintenance activity that could potentially result in a higher risk condition associated with the 'A' RHR minimum flow valve unavailability. As a result, on May 24, 2017, a maintenance activity was performed that resulted in an unrecognized Yellow risk condition and a violation of 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," when Exelon did not assess and manage the increase in risk for online maintenance activities. Additionally, WC-AA-101-1006, "On-Line Risk Management and Assessment," Revision 001, Section 4.1.3, states to consider "work activities that cause equipment to be unavailable (e.g., valve strokes)" for assessment of risk under the requirements of 50.65(a)(4). It also states that "all activities entered into PARAGON/EOOS planning domain, either automatically or manually, shall reflect the scheduled start and stop times in the schedule."

Upon identification, Exelon staff generated IR 04015294 to address the failure to recognize the Yellow, elevated risk activity and failure to review adequate extent of condition. Exelon staff determined that Exelon operations staff incorrectly believed that integrated risk management guidance corresponded to PRA availability. Thus it was assumed risk would remain Green during maintenance activities involving 'A' RHR

minimum flow valve unavailability. It was determined that there was no issue with the PRA model, and that risk was Yellow during minimum flow valve unavailability. Corrective actions included evaluating PRA to assess if risk could be reduced to Green with compensatory actions and providing training to operations to enhance PRA modeling of system availability. Following review of the PRA model, Exelon plans to evaluate all surveillance procedures as part of extent of condition that could impact availability of the 'A' RHR minimum flow valves.

Analysis. The inspectors determined that Exelon's failure to assess and manage risk in accordance with 50.65(a)(4) associated with the unavailability of the 'A' RHR minimum flow valve during surveillance testing on May 24, 2017, was a performance deficiency that was reasonably within Exelon's ability to foresee and correct and should have been prevented. The performance deficiency is more than minor because it adversely affected the human performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, on May 24, 2017, the inspectors identified a planned activity that resulted in an unplanned Yellow risk activity during planned maintenance that resulted in unavailability of a component used to support the 'A' RHR system. Additionally, this issue is similar to Example 7.f of IMC 0612, Appendix E, "Examples of Minor Issues," issued August 11, 2009, because the overall elevated plant risk placed the plant into a higher licensee-established risk category.

The inspectors evaluated the finding using Phase 1, "Initial Screening and Characterization" worksheet in Attachment 4 to IMC 0609, "Significance Determination Process." For findings within the Initiating Events, Mitigating Systems, and Barrier Integrity cornerstones, Attachment 4, Table 3, Paragraph 5.C, directs that if the finding affects the licensee's assessment and management of risk associated with performing maintenance activities under all plant operating or shutdown conditions in accordance with Baseline Inspection Procedure 71111.13, "Maintenance Risk Assessment and Emergent Work Control," the inspectors shall use IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," to determine the significance of the finding. The inspectors used Flowchart 1, "Assessment of Risk Deficit," to analyze the finding and calculated incremental core damage probability using EOOS, Exelon's risk assessment tool. The inspectors determined that had this condition existed for the full duration of the TS LCO, the incremental conditional core damage probability would have been $3E-9$. Because the incremental core damage probability deficit was less than $1E-6$ and the incremental large early release probability was less than $1E-7$, this finding was determined to be of very low safety significance (Green).

The cause of the finding has a cross-cutting aspect in the area of Human Performance, Teamwork, because Exelon staff did not effectively communicate internally to ensure that corrective actions were being addressed to resolve concerns with risk associated with 'A' RHR minimum flow valve availability. Specifically, Exelon staff incorrectly believed that Integrated Risk Management guidance corresponded to PRA availability. Thus, it was assumed risk would remain Green during surveillance and maintenance activities that resulted in the 'A' RHR minimum flow valve bring unavailable; and a failure to recognize future maintenance activities that resulted in risk being Yellow. [H.4]

Enforcement. Title 10 CFR 50.65(a)(4), states, in part: "...the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities." Exelon procedure WC-AA-101-1006, "Online Risk Management and Assessment," Revision 001, Section 4.1.3, states in part: "work activities that cause equipment to be unavailable (e.g., valve strokes) for assessment of risk under the requirements of 50.65(a)(4)." It also states that "all activities entered into PARAGON/EOOS planning domain, either automatically or manually, shall reflect the scheduled start and stop times in the schedule." Contrary to the above, on May 24, 2017, Exelon did not adequately assess the increase in risk ahead of the scheduled surveillance test. Specifically, the inspectors identified a planned surveillance activity which caused unavailability of the 'A' RHR minimum flow valve that was not recognized by the Exelon staff as a, Yellow, elevated risk activity in accordance with their EOOS PRA model. Because this finding is of very low safety significance and has been entered into Exelon's CAP as IR 4015294, this violation is being treated as an NCV, consistent with Section 2.3.2. of the NRC Enforcement Policy. **(NCV 05000410/2017002-01, Inadequate Extent of Condition results in Unplanned Yellow Risk Condition)**

1R15 Operability Determinations and Functionality Assessments (71111.15 – 4 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the degraded or non-conforming conditions listed below 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. 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.

- Unit 1 secondary containment due to outer track bay door D-198 showing visible light on May 5, 2017
- Unit 1 EDG 103 with turbo oil pump out of service during planned motor replacement on June 21, 2017
- Unit 1 leakage associated with CS keepfill system drain valve 40-24 on June 29, 2017
- Unit 1 scaffold interference for 11 high pressure coolant injection valve FCV-29-141 on June 30, 2017

b. Findings

No findings were identified

1R18 Plant Modifications (71111.18 – 1 sample)Temporary Modificationsa. 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 modification to verify that the temporary modification did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- Unit 1, 50.59-2017-162, WO to correct safety relief valve indication instruments, on April 4, 2017

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 3 samples)a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities 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 reviewed test data to verify quality control hold points were performed and checked, and that results adequately demonstrated restoration of the affected safety functions.

- Unit 1 RRMG 13 following planned maintenance on May 3, 2017
- Unit 1 CS 112 system following planned maintenance on June 15, 2017
- Unit 2 Division I SLCS following MOV-1A mechanical maintenance on June 20, 2017

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 refueling outage 24 (RFO24), conducted March 20 through April 5, 2017. 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 portions of the shutdown and cooldown processes and monitored controls associated with the following outage activities:

- Reactor water inventory controls, including flow paths, configurations, alternative means for inventory additions, and controls to prevent inventory loss
- Fatigue management
- Tagging application observation
- Core verification
- Tracking of startup prerequisites, walkdown of the drywell (primary containment) to verify that debris had not been left which could block the emergency core cooling system suction strainers, and startup and ascension to full power operation
- Reactor startup/heatup

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 6 samples)

a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant structure, system and components 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-R2B, loss-of-coolant accident (LOCA) and EDG 103 simulated auto initiation test on April 2, 2017
- Unit 1 N1-ST-R12, initiation of emergency cooling system from remote shutdown panel 11 and 12 operability test on April 4, 2017
- Unit 1 N1-ST-C3, high pressure coolant injection automatic initiation test on April 5, 2017
- Unit 1 N1-ST-C5, secondary containment and reactor building emergency ventilation system operability test on May 4, 2017
- Unit 2 diesel generator and diesel air start valve operability test, Division I and II on May 17, 2017
- Unit 2 quarterly channel functional test of low-pressure core spray/low-pressure coolant injection pumps 'A', 'B', and 'C' (normal and emergency power) auto start time delay relays on May 18, 2017

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Occupational and Public Radiation Safety

2RS7 Radiological Environmental Monitoring Program (71124.01 – 3 samples)

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 and implementation of the groundwater protection initiative (GPI). The inspectors used the requirements in 10 CFR Part 20, "Standards For Protection Against Radiation;" 40 CFR Part 190 "Environmental Radiation Protection Standards for Nuclear Power Operations;" 10 CFR Part 50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation To Meet the Criterion "As Low As Is Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents;" the site's TSs; offsite dose calculation manual (ODCM); Nuclear Energy Institute (NEI) 07- 07, "Groundwater Protection Initiative;" and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors reviewed NMPNS's 2015 and 2016 annual radiological environmental and effluent monitoring reports, REMP program audits, ODCM changes, land use census, UFSAR, and inter-laboratory comparison program results.

Site Inspection (1 sample)

The inspectors walked down various thermoluminescent dosimeter and air and water sampling locations and reviewed associated calibration and maintenance records. The inspectors observed the sampling of various environmental media as specified in the ODCM and reviewed any anomalous environmental sampling events including assessment of any positive radioactivity results. The inspectors reviewed any changes to the ODCM. The inspectors verified the operability and calibration of the meteorological tower instruments and meteorological data readouts. The inspectors reviewed environmental sample laboratory analysis results, laboratory instrument measurement detection sensitivities and results of the laboratory quality control program audit, and the inter- and intra-laboratory comparison program results. The inspectors reviewed the groundwater monitoring program as it applies to selected potential leaking structures, systems, and components, and 10 CFR 50.75(g) records of leaks, spills, and remediation since the previous inspection.

Groundwater Protection Initiative Implementation (1 sample)

The inspectors reviewed groundwater monitoring results, changes to the GPI program since the last inspection, anomalous results or missed groundwater samples, leakage or spill events including entries made into the decommissioning files (10 CFR 50.75(g)), evaluations of surface water discharges, and Exelon's evaluation of any positive groundwater sample results including appropriate stakeholder notifications and effluent reporting requirements.

Problem Identification and Resolution (1 sample)

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

4. OTHER ACTIVITIES

40A1 Performance Indicator Verification (71151)

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

a. Inspection Scope

The inspectors reviewed Exelon's submittal for the reactor coolant system (RCS) specific activity (BI01) performance indicators (PIs) for both Unit 1 and Unit 2 for the period of January 1, 2016, through December 31, 2016, and the RCS leak rate (BI02) PIs for both Unit 1 and Unit 2 for the period of January 1, 2016 through December 31, 2016, to determine the accuracy of the PI data reported during those periods, the inspectors used definitions and guidance contained in NEI 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 that determined the RCS identified leakage rate, and chemistry personnel taking and analyzing a RCS sample.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed licensee submittals for the radiological effluent TS/ODCM radiological effluent occurrences PI for the first quarter 2016 through first quarter 2017. The inspectors used PI definitions and guidance contained in NEI 99-02, Revision 7, to determine if the PI data were 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 determine if 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 corrective action program and periodically attended condition report (CR) screening meetings. The inspectors also confirmed, on a sampling basis, that, as applicable, for identified defects and non-conformances, Exelon performed an evaluation in accordance with 10 CFR Part 21.

b. Findings

No findings were identified.

.2 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a semi-annual review of site issues to identify trends that might indicate the existence of more significant safety issues. As part of this review, the inspectors included as appropriate, repetitive or closely related issues documented by Exelon in trend reports, site performance indicators, major equipment problem lists, system health reports, maintenance rule assessments, and maintenance or CAP backlogs. The inspectors also reviewed Exelon’s CAP database for the first and second quarters of 2017 to assess CRs written in various subject areas (equipment problems, human performance issues, etc.), as well as individual issues identified during the NRC’s daily CR review (Section 4OA2.1). The inspectors reviewed Exelon’s quarterly trend report for the first and second quarters of 2017, conducted under PI-AA-125-1005, “Coding and Analysis Manual,” Revision 0, and PI-AA-101-1001, “Performance Monitoring and Analysis Manual,” Revision 0, to verify Exelon personnel were appropriately evaluating and trending adverse conditions in accordance with applicable procedures.

b. Findings and Observations

No findings were identified.

The inspectors evaluated a sample of issues and events that occurred over the course of the first and second quarters of 2017 to determine whether issues were appropriately considered as emerging or adverse trends. The inspectors verified that these issues were addressed within the scope of the CAP or through department review.

The evaluation did not reveal any new trends that could indicate a more significant safety issue. The inspectors determined that Exelon personnel were identifying trend issues at a low threshold and entering them into the CAP for resolution and were appropriately prioritizing investigation reviews. The inspectors noted minor adverse trends identified by Exelon staff in the areas of air leaks on valves (AR 03971546), lost and delinquent test equipment (AR 03974249 and 04005756), nuclear instrumentation issues (AR 03987630, 03997175, and 03997575), and reactor building roof leaks (AR 04000272).

There were no adverse safety consequences as a result of these low-level trend issues. Based on the overall results of the semi-annual trend review, the inspectors determined that Exelon was properly identifying adverse trends at Nine Mile Point before they became more significant safety problems. The inspectors independently evaluated the deficiencies noted above for significance in accordance with the guidance in IMC 0612, Appendix B, "Issue Screening," and Appendix E, "Examples of Minor Issues." The inspectors determined these conditions were deficiencies of minor significance and, therefore, are not subject to enforcement action in accordance with the NRC's Enforcement Policy.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 1 samples)

.1 (Closed) Licensee Event Report (LER) 05000220/2017-002-00: Manual Reactor Scram Due to Pressure Oscillations

On March 20, 2017, Unit 1 control room operators manually scrambled the unit from approximately 4 percent reactor power when reactor pressure oscillations exceeded the procedurally required limit. At the time of the event, the unit was not connected to the electrical grid and operators were in the process of shutting down the plant to begin the spring 2017 refuel outage after completing turbine trip testing. Exelon was not able to identify a definitive root cause for the pressure oscillations observed prior to the plant shutdown. However, several apparent causes were identified when the mechanical pressure regulator (MPR) system, which was in service at the time of the event, was examined. These apparent causes included the discovery of a partially blocked MPR sensing line, and a malfunctioning bypass relay. None of the causes identified in Exelon's cause analysis were reasonably within its ability to foresee and prevent, therefore no performance deficiency exists.

Corrective actions for this event include revising procedures to flush and fill the MPR sensing lines every 2 years as part of a preventive maintenance activity, and revising the turbine trip test procedure to require turbine testing to be completed above 21 percent power to minimize the possibility of pressure oscillations as a result of the overspeed test. No findings or violations of NRC requirements were identified.

4OA5 Other Activities

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

a. Inspection Scope

On June 19-23, 2017, the inspectors observed and evaluated NMPNS's loading of the third dry shielded canister (DSC) associated with its 2017 five-cask ISFSI dry cask loading campaign. The inspectors also reviewed Exelon's planned activities related to long-term operation and monitoring of the ISFSI. The inspectors verified compliance with the Certificate of Compliance (CoC), TS, regulations, and station procedures.

The inspectors observed fuel assemblies being loaded into the DSC. The inspectors observed the movement of the transfer cask (TC) and loaded DSC from the spent fuel pool into the seismic restraint. The inspectors also observed DSC processing operations including: welding, non-destructive weld examinations, helium leak testing, draining, vacuum drying, pressure testing, helium backfill, decontamination, and surveying. The inspectors observed the down-ending of the TC/DSC, and removal of the horizontal storage module (HSM) door. During performance of these activities, the inspectors verified that procedure use, communication, and coordination of ISFSI activities met established NMPNS standards and requirements.

The inspectors reviewed NMPNS's program associated with fuel characterization and selection for storage. The inspectors reviewed the third cask fuel selection package to verify that the licensee was loading fuel in accordance with the CoC, TSs, and procedures. Inspectors reviewed a recording made of the fuel assemblies loaded into the third DSC to ensure the loading was in accordance with NMPNS's loading plan.

The inspectors observed radiation protection technicians as they performed surveys and provided job coverage for the cask loading workers. The inspectors reviewed survey data maps and radiological records from the third DSC loading to confirm that radiation survey levels measured were within limits specified by the TS and consistent with values specified in the final safety analysis review.

The inspectors performed a walkdown of the heavy haul path and toured the ISFSI pad to assess the material condition of the pad and the HSMs. The inspectors also verified that transient combustibles were not being stored on the ISFSI pad or in the vicinity of the HSMs.

The inspectors reviewed corrective action reports and the associated follow-up actions that were generated to ensure that issues were entered into the CAP, prioritized, and evaluated commensurate with their safety significance.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On July 26, 2017, 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.

4OA7 Licensee-Identified Violations

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

Technical Specification 6.4 Procedures, Section 6.4.1, states, in part, that, "written procedures and administrative policies shall be established, implemented and maintained ... that cover the following activities: a. The applicable procedures recommended in Regulatory Guide (RG) 1.33, Appendix A, November 3, 1972." Appendix A of RG 1.33 lists typical safety-related activities which should be covered by written procedures. Section I.1 of RG 1.33 includes procedures for performing maintenance which can affect the performance of safety-related equipment and should be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances. Section 4.3.4 of MA-AA-796-024, Scaffold Installation, Inspection, and Removal, Revision 11 states to ensure an adequate inspection is performed upon completion of scaffold erection for planned maintenance. Contrary to the above, on June 29, 2017 it was identified by Exelon staff that a scaffold surrounding the 11 feedwater flow control valve, FCV-29-141, would have prevented manual operation as required in accordance with EOP-1, NMP1 EOP Support Procedure, Revision 01601 Attachment 26, Reactor Pressure Valve Level Control Through Feedwater Pumps 11 and 12 flow control valves, and other special operating procedures during the previous 45 days.

The inspectors evaluated the finding using IMC 0609.04, Initial Characterization of Findings, and Exhibit 2 of IMC 0609 Appendix A, The Significance Determination Process for Findings At-Power, issued June 19, 2012. The inspectors determined that the finding was of very low safety significance (Green), because the finding was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. Because this violation was determined to be of very low safety significance and entered into the CAP as IR 4027382, it is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy.

ATTACHMENT: SUPPLEMENTARY INFORMATION

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

P. Orphanos, Site Vice President
 R. Kreider, Plant Manager
 R. Bugelholl, Director Site Work Management
 M. Busch, Director Site Maintenance
 B. Geiss, Unit 1 Shift Operations Superintendent
 M. Gray, Manager Site Radiation Protection
 M. Khan, Director Site Engineering
 K. Kristensen, Regulatory Principle Engineer
 M. Kunzwiler, Manager Site Security
 D. Moore, Manager Regulatory Assurance
 R. Pritchard, Regulatory Assurance
 J. Sawyer, Unit 2 Shift Operations Superintendent
 B. Shultz, Senior Manager Operations Support and Services
 T. Tanguay, Manager Site Chemistry, Environment and Radwaste
 J. Thompson, Director Site Operations
 N. Tryt, Senior Manager Engineering
 J. Tsardakas, Director Site Training
 D. Tulowiecki, Manager Site Maintenance

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

05000410/2017002-01	NCV	Inadequate Extent of Condition Results in Unplanned Yellow Risk Condition (Section 1R13)
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Closed

05000220/2017-002-00	LER	Manual Reactor Scram Due to Pressure Oscillations (Section 4OA3)
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LIST OF DOCUMENTS REVIEWED**Section 1R01: Adverse Weather Protection**Procedures

LS-AA-129, NERC Reliability Standard Compliance Program, Revision 6
 N2-OP-70, Station Electric Feed and 115kv Switchyard, Revision 01800
 OP-NM-108-107-1002, Offsite Power Operations and Interface Revision 003
 WC-AA-107, Seasonal Readiness, Revision 18
 WC-NM-8003-1012, NMPNS Units 1 and 2 Nuclear Plant Interface Requirements, Revision 1

Issue Report

02716505

Section 1R04: Equipment AlignmentProcedures

N1-OP-2, Core Spray System, Revision 03600
 N2-OP-35-LINEUPS, Reactor Core Isolation Cooling – Lineups, Revision 00100
 OP-AA-108-117, Protected Equipment Program, Revision 4
 OP-NM-108-117, Protected Equipment Program at NMPNS, Revision 00200

Drawings

C-18019-C, Reactor Liquid Poison System, Revision 36
 PID-35A, P&ID (piping and instrument diagram) Reactor Core Isolation Cooling, Revision 17
 PID-35B, P&ID Reactor Core Isolation Cooling, Revision 15
 PID-35C, P&ID Reactor Core Isolation Cooling, Revision 29
 PID-35D, P&ID Reactor Core Isolation Cooling, Revision 12

Action Requests

03960450	03960503	03960822	03974518
04015879	04021160		

Work Order

C92765240

Section 1R05: Fire ProtectionProcedures

OP-AA-201-003, Fire Drill Performance, Revision 16
 N1-PFP-0101, Unit 1 Pre-Fire Plans, Revision 00500
 N2-FPI-PFP-0201, Unit 2 Pre-Fire Plans, Revision 5

Issue Report

03972443

Work Order

C93608193

Miscellaneous

DCD-805, NMPNS Unit 1 NFPA Design Criteria, Revision 1

Section 1R11: Licensed Operator Requalification Program and Licensed Operator PerformanceProcedures

N1-OP-43A, Plant Startup, Revision 04300
 N2-OSP-RPS-Q001, RPS Turbine Stop Valve Closure Logic, Control Valve Fast Closure Scram Functional Tests and Turbine Valve Cycling, Revision 00600
 N2-OSP-SWP-Q@003, Control Building Chiller Condensing Water Pump Operability Test, Revision 00500
 N2-SOP-11, Loss or Degraded Service Water System, Revision 00700
 N2-SOP-101C, Reactor Scram, Revision 01200
 N2-SOP-101D, Rapid Power Reduction, Revision 00900

Issue Report
04000976

Miscellaneous
TRA-19, DMS-SC2 Simulator Training Scenario, Revision 0.1

Section 1R12: Maintenance Effectiveness

Procedures
OP-AA-108-101, Control of Equipment and System Status, Revision 12
S-MRM-REL-0102, Structural Monitoring Program, Revision 00900

Issue Report
03969004

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
N2-IPM-RRC-R005, Standby Liquid Control Tank Level Instrument Calibration, Revision 00900
N2-OP-29, Reactor Recirculation System, Revision 02500
OP-AA-108-117, Protected Equipment Program, Revision 004
OP-NM-108-117, Protected Equipment Program at Nine Mile Point, Revision 00200
OP-NM-108-117, Protected Equipment Program at Nine Mile Point, Revision 00500
WC-AA-101-1006, On-Line Risk Management and Assessment, Revision 2
WC-AA-101, On-Line Work Control Process, Revision 26
WC-AA-104, Integrated Risk Management, Revision 24

Issue Report
02673672

Work Orders
C93417227
C93625795

Section 1R15: Operability Determinations and Functionality Assessments

Procedures
MA-AA-796-024, Scaffold Installation, Inspection, and Removal, Revision 11
N1-EOP-1, NMP1 EOP Support Procedure, Revision 01601
N1-OP-45, Emergency Diesel Generators, Revision 04100
N1-OP-52, Reactor Building Track Bay Doors, Revision 01000
N1-ST-V10A, Core Spray System Loop 11 and Shutdown Cooling Water Seal PIV Test, Revision 00501

Drawing
C-18007-C Sheet 1, Reactor Core Spray P&ID, Revision 62

Issue Reports (*indicates that issue report was generated as a result of this inspection)
04001477 04007143 04023166 04026953*
04027210* 04027382

Work Orders

C92121340	C92264297	C93026820	C93384066
C93619016			

Miscellaneous

N1E14700GENERA004, Stationary Power Operating Manual, Revision 2

Section 1R18: Plant Modifications

Procedure

EOP-7, RPV Flooding, Revision 01200

Work Order

C93049639

Miscellaneous

5059-2017-162, Work Order to Correct Safety Relief Valve Indication Instruments, Revision 0
 ECP-2009-0063-000, Downgrade SRV Acoustic Monitor Requirements
 NMPNS Unit 1 License Amendment Regarding Removal of Position Indication for Relief Valves
 and Safety Valves from Technical Specifications (ML091950415)

Section 1R19: Post-Maintenance Testing

Procedures

N1-OP-1, Nuclear Steam Supply System, Revision 07100
 N1-ST-Q1C, CS 112 Pump and Valve Operability Test, Revision 01500
 N2-OSP-SLS-Q002, Standby Liquid Control Valve Operability Test, Revision 00401
 S-EPM-GEN-064, Acquisition Analysis and Trending of MC2 Data, Revision 00502
 S-EPM-GEN-066, MOV Gear Case Lube Inspection and Stem Lubrication, Revision 00600

Issue Reports

04000728	04021888	04022032
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Work Orders

C92822500	C93462458	C93466109	C93476700
C93619917			

Section 1R20: Refueling and Other Outage Activities

Procedures

N1-OP-43A, Plant Startup, Revision 04300
 N1-PM-34, Reactor Cavity Floodup and Draindown
 OP-CE-109-101, Clearance and Tagging
 SY-AA-11, Fitness for Duty

Section 1R22: Surveillance TestingProcedures

N1-ST-C3, High Pressure Coolant Injection Automatic Initiation Test, Revision 01200
 N1-ST-C5, Secondary Containment and Reactor Building Emergency Ventilation System Operability Test, Revision 01900
 N1-ST-R2B, LOCA and EDG 103 Simulated Auto Initiation, Revision 00100
 N1-ST-R12, Initiation of Emergency Cooling System from Remote Shutdown Panel 11 and 12 Operability Test, Revision 00901
 N2-ESP-ENS-Q731, Quarterly Channel Functional Test of LPCS/LPCI Pumps A, B, and C (Normal and Emergency Power) Auto Start Time Delay Relays, Revision 00700
 N2-OSP-EGS-M@001, Diesel Generator and Diesel Air Start Valve Operability Test, Division I and II, Revision 01400

Issue Reports

04007143
 04012352*

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-170-1000, Radiological Environmental Monitoring Program and Meteorological Program Implementation, Revision 8
 CY-AA-170-1100, Quality Assurance for Radiological Monitoring Programs, Revision 3
 CY-AA-170-300, Offsite Dose Calculation Manual Administration, Revision 2
 CY-AA-170-3100, Offsite Dose Calculation Manual Revisions, Revision 6
 CY-NM-170-100, TLD Preparation, Collection and Analysis, Revision 1
 CY-NM-170-101, Environmental Air Monitoring Sample Collection, Revision 0
 EN-AA-408, Radiological Groundwater Protection Program, Revision 0
 EN-AA-408-4000, Radiological Groundwater Protection Program Implementation, Revision 8
 EN-AA-408-4160, RGPP Reference Material for NMPNS, Revision 2
 S-ENVSP-16, Sampling and Analysis of Monitoring Wells, Revision 00600
 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 (Vegetation and Irrigation Crop) 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-4.3, Environmental Air Monitoring Station Inspection and Maintenance, Revision 00601
 S-ENVSP-4.4, Environmental Surface Water Sample Collection and Compositing, Revision 09
 S-MET-ENV-01, Maintenance of Meteorological Monitoring Program, Revision 00100
 S-MET-ENV-002, Meteorological Data Verification and Edit, Revision 00600
 S-MET-ENV-003, Meteorological Monitoring Program Quality Assurance/Quality Control, Revision 00600

Issue Reports

02447555	02449662	02449760	02466299
02484059	02634222	02645530	02647640
02679324	02736655	02707029	

Miscellaneous

EA Project No. 62683.01, Quality Assurance Audit of the NMPNS and James A. FitzPatrick Nuclear Power Plants, April 24, 2015

EA Project No. 62683.04, Quality Assurance Audit of the NMPNS and James A. FitzPatrick Nuclear Power Plants, January 31, 2017

NUPIC Audit 24191, Teledyne Brown Eng. Environmental Services, Knoxville, TN, June 6– 10, 2016

Annual 2016 Quality Assurance Report, Teledyne Brown Engineering, April 17, 2017

Section 4OA1: Performance Indicator VerificationProcedures

LS-AA-2090, Monthly Data Elements for NRC Reactor Coolant System Specific Activity, Revision 004

LS-AA-2100, Monthly Data Elements for NRC Reactor Coolant System Leakage, Revision 005

Miscellaneous

NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7

Section 4OA2: Problem Identification and ResolutionProcedures

PI-AA-101-1001, Performance Monitoring and analysis Manual, Revision 0

PI-AA-125-1005, Coding and Analysis Manual, Revision 0

Issue Reports

03968479	03970813	03971546	03974249
03980516	03987630	03997175	03997575
04000272	04005756		

Section 4OA5: Other ActivitiesProcedures

ER-AA-450, Structures Monitoring, Revision 6

HTPT-DSL-AREVA, High Temperature Liquid Penetrant (PT) Examination Using the Color Contrast Solvent Removable Method, Revision 000000

MA-AA-716-008, Revision 13, Foreign Material Exclusion Program

MA-AA-716-021, Revision 28, Rigging and Lifting Program

MA-AA-716-022, Revision 13, Control of Heavy Loads Program

MA-AA-716-027, Revision 2, Industrial General Material Handling and Storage

MSLT-DSC-AREVA, Helium Mass Spectrometer Leak Test Procedure Dry Fuel Storage Container, Revision 000100

N1-ST-D1, ISFSI Daily Checks, Revision 00200

N1-ST-DO, Daily Checks, Revision 04300

N2-MMP-GEN-923, Revision 00801, Lifting of Miscellaneous and Specific Heavy Loads in Designated Areas

NAI-MAI-21, Revision 00200, NMP Lifting and Rigging Instruction
 NF-AA-622, Fuel Selection and Documentation for Dry Cask Loading, Revision 3
 NO-AA-210-1006, Nuclear Oversight of Major Projects, Revision 001
 RP-AA-300, Revision 15, Radiological Survey Program
 S-MMP, GEN-805, Revision 00, Sling Inspection
 S-MMP-ISFSI-003, DSC Loading Operations, Revision 00400
 S-MMP-ISFSI-004A, DSC Sealing Operation Using Vendor Equipment

Issue Reports

01629879	01587994	02552991	02564964	02590412	02627324
92630814	02649424	02684193	02689533	02695918	02704496
02717992	02734032	02736590	02737002	02737058	02742557
03966039	03971753	03972079	04000074	04007026	04008019
04008585	04008599	04008606	04010140	04011565	04011844
04023688					

50.59 Screening Forms

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LIST OF ACRONYMS

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADAMS	Agencywide Documents Access and Management System
AC	alternating current
ASME	American Society of Mechanical Engineers
ALARA	as low as reasonably achievable
AR	action request
CAP	corrective action program
CoC	certificate of compliance
CR	condition report
CS	core spray
DNMS	Division of Nuclear Materials Safety
DSC	dry shielded canister
EDG	emergency diesel generator
EOOS	equipment out of service
GPI	groundwater protection initiative
HSM	horizontal storage module
ISFSI	independent spent fuel storage installation
IR	issue report
IMC	Inspection Manual Chapter
kV	kilovolt
LCO	limited condition for operation
LER	licensee event report
LOCA	loss-of-coolant accident
LP	liquid poison
MPR	mechanical pressure regulator
NEI	Nuclear Energy Institute
NCV	non-cited violation
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
PMT	post-maintenance testing
PRA	probabilistic risk assessment
RCIC	reactor core isolation cooling
RCS	reactor coolant system
REMP	radiological environmental monitoring program
RFO24	refueling outage 24
RG	Regulatory Guide
RHR	residual heat removal
RP	radiation protection
RPS	reactor protection system
RRMG	reactor recirculation motor generator
SLCS	standby liquid control system
TC	transfer cask
TS	technical specification
UFSAR	Updated Final Safety Analysis Report
WO	work order