



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

**REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713**

February 5, 2020

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

**SUBJECT: NINE MILE POINT NUCLEAR STATION – INTEGRATED INSPECTION
REPORT 05000220/2019004 AND 05000410/2019004**

Dear Mr. Hanson:

On December 31, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Nine Mile Point Nuclear Station. On January 24, 2020, 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.

One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation documented in this inspection 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; and the NRC Resident Inspector at Nine Mile Point Nuclear Station.

If you disagree with a cross-cutting aspect assignment 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 Nine Mile Point Nuclear Station.

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 at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Erin E. Carfang, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Docket Nos. 05000220 and 05000410
License Nos. DPR-63 and NPF-69

Enclosure:
As stated

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SUBJECT: NINE MILE POINT NUCLEAR STATION – INTEGRATED INSPECTION
 REPORT 05000220/2019004 AND 05000410/2019004 DATED
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**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Numbers: 05000220 and 05000410

License Numbers: DPR-63 and NPF-69

Report Numbers: 05000220/2019004 and 05000410/2019004

Enterprise Identifier: I-2019-004-0035

Licensee: Exelon Generation Company, LLC

Facility: Nine Mile Point Nuclear Station

Location: Oswego, NY

Inspection Dates: October 01, 2019 to December 31, 2019

Inspectors: G. Stock, Senior Resident Inspector
J. Dolecki, Resident Inspector
B. Sienel, Resident Inspector
T. Fish, Senior Operations Engineer
T. Hedigan, Operations Engineer

Approved By: Erin E. Carfang, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Nine Mile Point Nuclear Station, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

Failure to Follow Procedure Resulted in Unplanned Reactor Core Isolation Cooling System Isolation and Unavailability			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000410/2019004-01 Open/Closed	[H.12] - Avoid Complacency	71152
A self-revealed Green finding and associated non-cited violation (NCV) of Title 10 of the <i>Code of Federal Regulations</i> (CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified at Unit 2 when Exelon maintenance personnel failed to follow a reactor water cleanup area temperature instrument calibration procedure. Specifically, an incorrectly performed procedure step to lift a thermocouple lead, on September 24, 2019, caused a partial isolation of the reactor core isolation cooling (RCIC) system, rendering the system inoperable and unavailable.			

Additional Tracking Items

None.

PLANT STATUS

Unit 1 began the inspection period at 100 percent power. On October 12, 2019, operators performed a planned power reduction to approximately 70 percent to remove reactor recirculation pump 12 from service for preventive maintenance. On October 13, 2019, Unit 1 was restored to 100 percent. On October 18, 2019, operators performed a planned power reduction to approximately 85 percent to place reactor recirculation pump 12 in service. Later that day, Unit 1 was restored to 100 percent. On November 15, 2019, operators performed an emergent power reduction to approximately 50 percent to clean 11 and 12 main condenser waterboxes due to macro-fouling, to restore reactor recirculation pump 12 to service, and to remove reactor recirculation pump 11 from service for preventive maintenance. On November 17, 2019, Unit 1 was restored to 100 percent power. On November 21, 2019, operators performed a planned power reduction to approximately 85 percent to restore reactor recirculation pump 11 to service. On November 22, 2019, Unit 1 was restored to 100 percent power. 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 October 4, 2019, operators performed an emergent power reduction to approximately 82 percent to perform maintenance on the 'C' heater drain pump. On October 11, 2019, Unit 2 was restored to 100 percent power. On October 23, 2019, operators performed an emergent power reduction to approximately 40 percent to de-inert primary containment for drywell entry to identify and repair the source of elevated unidentified leakage. Following repairs to the reactor closed loop cooling piping, during power ascension on October 25, 2019, operators performed an emergent power reduction to 85 percent to repair an electro-hydraulic control system leak. On October 27, 2019, Unit 2 was restored to 100 percent power. On November 15, 2019, operators performed an emergent power reduction to approximately 65 percent to remove the 'B' feedwater pump from service due to elevated outboard seal leakage and to place the 'C' feedwater pump in service. On November 15, 2019, Unit 2 was restored to 100 percent power. On December 23, 2019, operators performed an emergent power reduction to approximately 88 percent due to a hydraulic control issue on the 'A' recirculation loop flow control valve. Unit 2 was restored to 100 percent power on December 23, 2019. Unit 2 remained at or near 100 percent power for the remainder of the inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515, Appendix D, "Plant Status," and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold temperatures on December 20, 2019

71111.04Q - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Unit 2 Division I emergency diesel generator on October 28, 2019
- (2) Unit 2 high pressure core spray system on November 20, 2019
- (3) Unit 2 Division II emergency diesel generator on December 9, 2019

71111.04S - Equipment Alignment

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

- (1) Unit 2 residual heat removal system on November 15, 2019

71111.05A - Fire Protection (Annual)

Annual Inspection (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated fire brigade performance during a fire drill in the Unit 2 control building east cable chase on November 19, 2019

71111.05Q - Fire Protection

Quarterly Inspection (IP Section 03.01) (4 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) Unit 2 south electrical tunnel 214' elevation, fire area 18, on October 14, 2019
- (2) Unit 2 'A' service water pump area, fire area 60, on November 12, 2019
- (3) Unit 2 service water intake and discharge area, fire area 71, on November 19, 2019
- (4) Unit 2 'B' service water pump area, fire area 61, on November 19, 2019

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 02.02a.) (2 Samples)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) Unit 2 south electrical tunnel on October 10, 2019
- (2) Unit 1 turbine building 250' elevation on October 29, 2019

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (2 Samples)

- (1) An in-office inspection of Pass/Fail results for Unit 2 licensed operator requalification examinations (operating test and written exam) was conducted by an NRC region-based inspector on December 16, 2019
- (2) An in-office inspection of Pass/Fail results for Unit 1 licensed operator requalification examinations (operating test only) was conducted by an NRC region-based inspector on December 16, 2019

71111.11B - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Requalification Program (IP Section 03.04) (1 Sample)

(1) Biennial Requalification Written Examinations

The inspectors evaluated the quality of the Unit 2 licensed operator biennial requalification written examinations.

Annual Requalification Operating Tests

The inspectors evaluated the adequacy of the Unit 2 licensed annual requalification operating tests.

Administration of an Annual Requalification Operating Test

The inspectors evaluated the effectiveness of Exelon in administering requalification operating tests required by 10 CFR 55.59(a)(2) and evaluating their licensed operators for mastery of training objectives.

Requalification Examination Security

The inspectors evaluated the ability of Exelon to safeguard examination material, such that the examination is not compromised.

Remedial Training and Re-examinations

The inspectors evaluated the effectiveness of remedial training conducted by Exelon, and reviewed the adequacy of re-examinations for licensed operators who did not pass a required requalification examination.

Operator License Conditions

The inspectors evaluated Exelon's program for ensuring that licensed operators meet the conditions of their licenses.

Control Room Simulator

The inspectors evaluated the adequacy of Exelon's control room simulator in modeling the actual plant, and for meeting the requirements contained in 10 CFR 55.46.

Problem Identification and Resolution

The inspectors evaluated Exelon's ability to identify and resolve problems associated with licensed operator performance.

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (2 Samples)

- (1) The inspectors observed and evaluated Unit 1 operations personnel performance during a planned power reduction, control rod pattern adjustment, and control rod scram time testing on October 13, 2019
- (2) The inspectors observed and evaluated Unit 2 operations personnel performance during a planned downpower to 40 percent for subsequent drywell entry to correct the cause of increasing unidentified drywell leakage on October 23, 2019

Licensed Operator Regualification Training/Examinations (IP Section 03.02) (2 Samples)

- (1) The inspectors observed and evaluated a Unit 1 simulator evaluation which included the failure of a reactor protection system motor-generator set, a seismic event, a low power failure to scram, a failure of turbine bypass valves to open, and a failure of an automatic isolation function leading to elevated reactor building temperature on October 24, 2019
- (2) The inspectors observed and evaluated a Unit 2 simulator exam which included an electrical fault on the Division III switchgear, a control rod drift, an inadvertent reactor core isolation cooling system initiation, and an unisolable coolant leak in the reactor building on November 19, 2019

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness Inspection (IP Section 02.01) (3 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) Unit 2 stator water cooling system on October 1, 2019
- (2) Unit 2 area radiation monitoring system on November 13, 2019
- (3) Unit 1 main steam pressure regulation on December 17, 2019

Quality Control (IP Section 02.02) (1 Sample)

The inspectors evaluated maintenance and quality control activities associated with the following equipment performance activities:

- (1) Unit 1 commercial grade dedication of globe valves installed in the emergency diesel generator 102 cooling water system on September 25, 2019

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (7 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Unit 1 elevated risk during the removal of recirculation motor generator 12 from service for planned maintenance on October 12, 2019
- (2) Unit 2 emergent work to identify and repair a primary component cooling leak inside the drywell on October 24, 2019
- (3) Unit 2 elevated risk during an emergent downpower to 85 percent to repair an electro-hydraulic control system leak on piping to main turbine stop valve 1, 2MSS-MSV1C, on October 25, 2019
- (4) Unit 1 emergent work associated with emergency condenser 12 loop following failure of the analog trip system and emergency condenser steam supply isolation valve, IV-39-08R, on October 30, 2019
- (5) Unit 2 emergent work associated with a high pressure core spray master trip unit power supply failure on November 1, 2019
- (6) Unit 1 emergent downpower to 75 percent due to service water fouling on November 1, 2019
- (7) Unit 2 elevated risk during reactor core isolation cooling steam trap valve replacement on November 5, 2019

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 02.02) (8 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) Unit 2 service water emergency makeup to spent fuel pool isolation valve, 2SWP*MOV21B, failure to close during surveillance on September 9, 2019
- (2) Unit 1 containment spray raw water pump 112 discharge check valve, CKV-93-59, failure to close on October 20, 2019
- (3) Unit 1 emergency diesel generator 103 fuel oil tank with intermittent signs of water on October 22, 2019
- (4) Unit 2 reactor protection system instrumentation following the identification of a missed channel functional test on October 22, 2019
- (5) Unit 1 mechanical pressure regulator required set point adjustments during testing on October 28, 2019
- (6) Unit 1 emergency condenser steam supply isolation valve, IV-39-08R, following failure to close on October 29, 2019

- (7) Unit 2 reactor core isolation cooling room area cooler, 2HVR*UC412B, exceeded preventive maintenance replacement frequency on November 26, 2019
- (8) Unit 2 reactor core isolation cooling steam discharge pressure below operator rounds guidelines on November 27, 2019

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Temporary Modification: ECP-19-000641, Unit 1 Plugging of SOV-39-05F Due to Air Leakage
- (2) Permanent Modification: N1-STI-016, Surveillance Frequency Change for 125VDC Battery Cell Surveillances

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (6 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) Unit 2 main turbine stop valve, 2MSS-MSV1C, electro-hydraulic control piping leak repair on October 25, 2019
- (2) Unit 1 containment spray 112 heat exchanger preventive maintenance on October 25, 2019
- (3) Unit 1 emergency condenser steam supply isolation valve, IV-39-08R, repair on October 30, 2019
- (4) Unit 1 emergency condenser block valve, BV-05-05, preventive maintenance on November 1, 2019
- (5) Unit 2 high pressure core spray power supply replacement on November 1, 2019
- (6) Unit 2 reactor core isolation cooling steam trap and valve maintenance on November 15, 2019

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (1 Sample)

- (1) 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, on December 5, 2019

RCS Leakage Detection Testing (IP Section 03.01) (1 Sample)

- (1) N2-CTP-GEN-W104, Miscellaneous Reactor Building Chemistry Surveillance, on October 11, 2019

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

- (1) Unit 1 - July 1, 2018 through September 30, 2019
- (2) Unit 2 - July 1, 2018 through September 30, 2019

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

- (1) Unit 1 - July 1, 2018 through September 30, 2019
- (2) Unit 2 - July 1, 2018 through September 30, 2019

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

- (1) Unit 1 - July 1, 2018 through September 30, 2019
- (2) Unit 2 - July 1, 2018 through September 30, 2019

71152 - Problem Identification and Resolution

Semiannual Trend Review (IP Section 02.02) (1 Sample)

- (1) The inspectors evaluated a sample of issues and events that occurred over the course of the third and fourth quarters of 2019 to determine whether issues were appropriately considered as emerging or adverse trends.

Annual Follow-up of Selected Issues (IP Section 02.03) (3 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) Issue Report (IR) 04281645, Unit 2 Corrective Action Associated With Inadvertent Reactor Core Isolation Cooling Isolation Valve Closure
- (2) IR 04159207, Corrective Action Associated With Extent of Condition for Inadequate Maintenance Rule Evaluation
- (3) IR 04156797, Declining Trend Associated with Foreign Material Exclusion

71153 - Followup of Events and Notices of Enforcement Discretion

Personnel Performance (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated Unit 1 normal service water fouling resulting in an emergent downpower to 75 percent on November 1, 2019.

INSPECTION RESULTS

Failure to Follow Procedure Resulted in Unplanned Reactor Core Isolation Cooling System Isolation and Unavailability			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000410/2019004-01 Open/Closed	[H.12] - Avoid Complacency	71152
<p>A self-revealed Green finding and associated non-cited violation (NCV) of Title 10 of the <i>Code of Federal Regulations</i> (CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified at Unit 2 when Exelon maintenance personnel failed to follow a reactor water cleanup area temperature instrument calibration procedure. Specifically, an incorrectly performed procedure step to lift a thermocouple lead, on September 24, 2019, caused a partial isolation of the reactor core isolation cooling (RCIC) system, rendering the system inoperable and unavailable.</p>			
<p><u>Description:</u> The RCIC system operates following a reactor pressure vessel isolation concurrent with a loss of feedwater flow. It is designed to ensure that sufficient reactor water inventory is maintained to permit adequate core cooling.</p> <p>On September 24, 2019, Exelon maintenance personnel lifted an incorrect lead during the performance of continuous use procedure N2-ISP-LDS-R104, "Reactor Water Cleanup Equipment Area Temperature Instrument Channel Calibration." When this lead was lifted, the RCIC outboard turbine steam supply isolation valve and the turbine trip throttle valve closed, resulting in a partial isolation of the system. Operators declared the RCIC system inoperable and unavailable, thereby elevating plant risk to Yellow, and entered 14-day technical specification limiting condition for operation action statement 3.5.3.a, "RCIC System."</p> <p>Exelon's corrective action program evaluation determined that a failure to implement basic human performance tools caused the partial RCIC system isolation. Proper verification, flagging, and procedure use and adherence practices were not performed to ensure the correct lead was lifted. A contributing cause of the event was inadequate supervisory oversight. The technicians had been on the night shift for an extended period with no supervisory oversight to ensure proper use of human performance tools.</p> <p>Corrective Actions: Exelon returned the RCIC steam isolation valves to their normal positions, restoring system operability and availability approximately 6 hours after it was rendered inoperable and unavailable. Other corrective actions included a site human performance stand-down that communicated lessons learned and reinforced the use of human performance tools, suspension of the involved technicians' qualifications pending remediation, and a review of the technician observation program to ensure that periodic supervisory observations are performed.</p> <p>Corrective Action References: IR 04281645</p>			
<p><u>Performance Assessment:</u></p> <p>Performance Deficiency: The failure to properly perform procedure N2-ISP-LDS-R104 Step 7.2.2 to lift field thermocouple lead 16 was a performance deficiency that was reasonably within Exelon's ability to foresee and correct and should have been prevented.</p>			

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with 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, the failure to follow procedure, N2-ISP-LDS-R104, on September 24, 2019, resulted in unplanned RCIC inoperability and unavailability.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The inspectors determined this finding was of very low safety significance (Green) because it did not result in a loss of safety function or RCIC inoperability for greater than its technical specification allowed outage time.

Cross-Cutting Aspect: H.12 - Avoid Complacency: Individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Individuals implement appropriate error reduction tools. The technicians involved with the work did not implement appropriate error reduction tools. Specifically, verification practices were not appropriately implemented to ensure that the correct lead was lifted.

Enforcement:

Violation: Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, "Activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures ..." Exelon established procedure N2-ISP-LDS-R104, "Reactor Water Cleanup Equipment Area Temperature Instrument Channel Calibration," Revision 006T1, as the implementing procedure for performing technical specification-required surveillances on reactor water cleanup area temperature instrumentation. Procedure N2-ISP-LDS-R104, Step 7.2.2, stated, "At ...TB-1, LIFT the following field thermocouple lead: 16, Blue (+)."

Contrary to the above, on September 24, 2019, Exelon personnel failed to lift TB-1 lead 16, as instructed in Step 7.2.2, and instead lifted TB-1 lead 1. This error resulted in the unintended closure of two RCIC system isolation valves and approximately 6 hours of unplanned RCIC inoperability and unavailability.

Enforcement Action: This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy.

Observation: Extent of Condition for Inadequate Maintenance Rule Evaluation	71152
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The inspectors reviewed Exelon's response to a July 2018 NRC question regarding the adequacy of a maintenance rule functional failure determination for the Unit 2 standby gas treatment system, as documented in IR 04159207.

Exelon reviewed the original issue and determined the failure should have been screened as a maintenance rule functional failure. The failure was then appropriately re-evaluated in accordance with the maintenance rule. Exelon performed a work group evaluation for the issue and determined that the incorrect screening occurred because the responsible engineer failed to recognize that failures for the affected, high safety significant, function should be monitored at the train level. Instead, the failure was evaluated at the system level. The clarity of the maintenance rule basis document was determined to be a contributing cause of

the error.

Corrective actions included an extent of condition review of all other maintenance rule screenings performed by the involved engineer over the previous year. No other issues were identified. In addition, maintenance rule training was provided, subsequent to the original determination, which stressed the fact that high safety significant functions are monitored at the train, not system, level.

The inspectors reviewed the revised standby gas maintenance rule basis document, portions of training given to system engineers, and selected maintenance rule failure evaluations performed by the system engineer and did not identify any further issues.

The inspectors determined Exelon's response to the issue was thorough, timely, and included appropriate corrective actions. The inspectors independently evaluated the deficiency 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 this issue was of minor significance and is therefore not subject to enforcement action in accordance with the NRC's Enforcement Policy.

Observation: Potential Trend Associated with Unit 2 Foreign Material Exclusion	71152
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The inspectors reviewed Exelon's evaluation and corrective actions associated with a potential adverse trend observed in foreign material exclusion (FME) prior to and through the March 2018 Unit 2 refueling outage, as documented in IR 04156797.

Exelon's work group evaluation determined there was not a significant adverse trend based on the issues identified. However, Exelon concluded the most probable cause for the declining trend in FME performance was a lack of proficient and intrusive oversight of the program during the outage.

Corrective actions included completion of a focused self-assessment of the FME program by a team of industry FME experts, designation of a trained backup FME coordinator, and performance of enhanced FME-focused field observations.

The inspectors reviewed the evaluation, self-assessment, related procedures, and relevant IRs and interviewed the current and previous FME coordinators. Based on the documents reviewed and discussions with personnel, the inspectors determined Exelon's evaluation of the issue was adequate and included appropriate corrective actions.

The inspectors determined Exelon's response to the issue was thorough, timely, and included appropriate corrective actions. The inspectors independently evaluated the issue 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 this issue was of minor significance and is therefore not subject to enforcement action in accordance with the NRC's Enforcement Policy.

Observation: Semi-Annual Trend Review	71152
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The inspectors evaluated a sample of issues and events that occurred from July to December 2019 to determine whether issues were appropriately considered as emerging or adverse trends. The inspectors verified that these issues were appropriately evaluated by Exelon staff for potential trends and addressed within the scope of the corrective actions program and

through department review.

During the trend review, inspectors identified 13 IRs associated with issues requiring immediate operability determinations or functionality assessments where the evaluations were not completed within 24 hours of IR initiation as required by Exelon procedure, OP-AA-108-115, "Operability Determinations." The failure to complete required operability determinations in the 24 hours established in OP-AA-108-115 is a performance deficiency. However, in the IRs identified during the review, the late evaluations did not delay the timely declaration of inoperability of the applicable technical specification systems or components. Exelon acknowledged the issue and entered it into the corrective action program as IR 04305465, and reviewed the relevant IRs. Corrective actions include adding an item to senior reactor operator cycle training to reinforce the requirements of OP-AA-108-115 and management's expectations for the timeliness of evaluations.

Exelon documented a number of trends over the inspection time frame. Exelon documented a rising trend in the number of corrective action products being returned from the management review committee (MRC) in IR 04274444. The MRC is the final approval step for evaluations in Exelon's corrective action process. With an increasing number of corrective action products being returned following MRC review, the likelihood of inadequate evaluations being approved rises. Exelon has taken a number of actions to resolve the issue and implemented appropriate corrective actions to improve corrective action program product quality. The inspectors noted these corrective actions were adequate and commensurate with the safety significance of the issue. In the IRs reviewed, the inspectors did not identify any approved corrective action products that should have been returned.

The inspectors independently evaluated these deficiencies for significance in accordance with the guidance in IMC 0612, Appendix B, "Issue Screening," and Appendix E, "Examples of Minor Issues." The inspectors determined that these conditions were deficiencies of minor significance and, therefore, are not subject to enforcement action in accordance with the NRC's Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On January 24, 2020, the inspectors presented the integrated inspection results to Mr. Peter Orphanos, Site Vice President, and other members of the licensee staff.

THIRD PARTY REVIEWS

Inspectors reviewed Institute of Nuclear Power Operations reports that were issued during the inspection period.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Corrective Action Documents	04287025		
		04304681		
	Work Orders	C93124993		
		C93669076		
		C93669077		
	C93717057			
71111.04Q	Corrective Action Documents	04284375		
		04291960		
	Drawings	PID 033-A	Piping and Instrumentation Diagram High Pressure Core Spray System	19
		PID 033-B	Piping and Instrumentation Diagram High Pressure Core Spray System	15
		PID 104E	Piping and Instrumentation Diagram Lube Oil Standby Diesel Generator System	8
		PID-104A	Piping and Instrumentation Diagram Standby Diesel Generator System	31
		PID-104C	Piping and Instrumentation Diagram Standby Diesel Generator System	9
		PID-104D	Piping and Instrumentation Diagram Jacket Water Standby Diesel Generator System	7
		PID-104F	Piping and Instrumentation Diagram Fuel Oil Standby Diesel Generator System	5
	Procedures	N2-OP-100A	Standby Diesel Generators	02800
		N2-OP-33	High Pressure Core Spray System	01700
		N2-OP-33-LINEUPS	High Pressure Core Spray System - LINEUPS	00100
	Work Orders	C93724712		
71111.04S	Corrective Action Documents Resulting from Inspection	04299507		
	Drawings	PID-31A	Piping and Instrumentation Diagram Residual Heat Removal	26

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			System	
		PID-31B	Piping and Instrumentation Diagram Residual Heat Removal System	23
		PID-31C	Piping and Instrumentation Diagram Residual Heat Removal System	16
		PID-31D	Piping and Instrumentation Diagram Residual Heat Removal System	21
		PID-31E	Piping and Instrumentation Diagram Residual Heat Removal System	21
		PID-31F	Piping and Instrumentation Diagram Residual Heat Removal System	16
		PID-31G	Piping and Instrumentation Diagram Residual Heat Removal System	15
	Procedures	N2-ISP-RHS-Q022	Quarterly Functional Test of the RHS Pump Discharge Flow Instrument Channels	00900
		N2-OP-31	Residual Heat Removal System	03600
	Work Orders	C93681775		
	C93682516			
71111.05A	Miscellaneous		Nine Mile Point Fire Drill Scenario in Unit 2 Control Building 288' East Cable Chase	November 19, 2019
	Procedures	OP-AA-201-003	Fire Drill Performance	17
71111.05Q	Corrective Action Documents Resulting from Inspection	04289692		
	Drawings	EB-022A	Fire Protection Arrangement Unit 2 Station Buildings Plan El. 175'-0", 196'-0" and 198'-0"	15
		EB-022AB	Fire Protection Arrangement Unit 2 Station Buildings Plan El. 214'-0" and 215'-0"	3
	Fire Plans	N2-FPI-PFP-0201	Unit 2 Pre-Fire Plans	05
71111.06	Corrective Action Documents	04087085		
		CR-2011-003454		
	Drawings	C-18496-C	Reactor Building Floor Drainage Piping Plan at Elev. 340'-0"	7
		C-18510-C	Turbine Building Auxiliary Equipment Area Floor &	17

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Equipment Drain Piping Plan at Elev. 243'-0" and 250'-0"	
		C-26650-C	Turbine Building Common Mode Failure Barrier Walls	0
		EB-406B	Air & Water Tightness Design Requirements Plan EI 214'-0" & 215'-0"	5
		EE-37AJ	Plans, Sections and Details Electrical Sleeves Reactor Building and Auxiliary Bays	9
	Procedures	N2-FSP-FPP-R001	Fire Rated Assemblies and Watertight Penetration Visual Inspection	00500
	Work Orders	C93469624 C93650682		
71111.11Q	Procedures	N1-OP-43B	Normal Power Operations	02500
		N1-ST-R1	Control Rod Scram Insertion Time Test	02600
	Work Orders	C93675993		
71111.12	Corrective Action Documents	04218955		
		04225619		
		04232520		
		04233592		
		04234833		
		04244521		
		04254658		
		04281527		
		04293628		
		04293890		
		04295264		
		04295996		
	04297932			
	Drawings	C-18026-C, Sheet 1	Emergency Diesel Generator #102 Starting Air, Cooling Water, Lube Oil & Fuel	28
	Miscellaneous		Procurement Test & Inspection Report 02-0122	
		Purchase Order 02-38357		
		Procurement Requirements Evaluation Form 2204		
NMP-2-2019-0257		Operational Decision Making - Stator Water Follow Degrading Flow	0	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
		SDBD-804	Emergency Diesel Generator System Design Basis Document	11	
	Procedures	ER-AA-320	Maintenance Rule Implementation per NEI 18-10	00	
		MA-AA-716-008	Foreign Material Exclusion Program	14	
		N1-IPM-302-001	Electronic Pressure Regulator (EPR)	02000	
		N1-PM-Q7	Quarterly Main Turbine Testing and Generator Core Monitor Testing	00500	
		N2-OP-26	Generator Stator and Exciter Rectifier Cooling System	01300	
	Work Orders	C93654284			
		C93703755			
		C93704042			
		C93723903			
	71111.13	Corrective Action Documents	04247964		
			04290993		
			04291138		
			04292465		
04292467					
04293482					
04293643					
04293916					
04293934					
04293947					
04294223					
Drawings		PID-23B	Piping and Instrumentation Diagram Turbine Hydraulic Oil System	10	
		PID-35C	Piping and Instrumentation Diagram Reactor Core Isolation Cooling	29	
Procedures		N1-OP-1	Nuclear Steam Supply System (NSSS)	075T1	
	N1-OP-64	Meteorological Monitoring	01900		
	N1-SOP-1.1	Emergency Power Reduction	00600		
	N1-SOP-18.1	Service Water Failure/Low Intake Level	00600		
	N2-OP-23A	Hydraulic Isolation and Restoration of Turbine Stop or Turbine Control or Combined Intercept Valves or Bypass	00000		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Valves	
		N2-OP-33	High Pressure Core Spray System	01700
		N2-OP-35	Reactor Core Isolation Cooling	01500
	Work Orders	C93635522		
		C93667389		
		C93708670		
		C93727149		
71111.15	Corrective Action Documents	02535772		
		03993689		
		04276238		
		04277608		
		04285351		
		04289904		
		04290602		
		04292465		
		04292868		
		04298756		
		04298811		
	04301820			
	Corrective Action Documents Resulting from Inspection	04298898		
	Engineering Changes	ECP-19-000628	RCIC Room Area Cooler Replacement Delayed Due to Scheduling Error	0000
	Miscellaneous	PCR-19-04859		
	Procedures	N1-OP-45	Emergency Diesel Generators	04900
		N1-PM-Q7	Quarterly Main Turbine Testing and Generator Core Monitor Testing	00500
		N1-SOP-31.2	Pressure Regulator Malfunction	00600
		N2-ISP-NMS-R001	LPRM/APRM Channel 1 Calibration	022T1

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		N2-ISP-NMS-R002	LPRM/APRM Channel 2 Calibration	021T1
		N2-ISP-NMS-R003	LPRM/APRM Channel 3 Calibration	022T2
		N2-ISP-NMS-R004	LPRM/APRM Channel 4 Calibration	024T2
		N2-ISP-NMS-SA002	2-out-of-4 Logic Module Channel Functional Test	00600
		N2-STI-018	Risk Evaluation of Surveillance Interval Extension for LPRM/APRM Logic Module Channel Functional Test	0
		N2-SURV-004	Missed Surveillance Risk Assessment for N2-ISP-NMS-SA002	0
		S-EPM-GEN-067	Limitorque MOV Actuator P.M.	00900
	Work Orders	C91449250		
		C93149512		
		C93616240		
		C93617215		
		C93656433		
		C93705843		
		C93722343		
71111.18	Engineering Changes	ECP-19-000641	Air is Porting From SOV-39-05F and Requires SOV Plugging With Unit On-Line	0000
	Miscellaneous	N1-STI-016	Surveillance Test Interval Evaluation Form for 125VDC Battery Cell Surveillances	00
		N1-STI-031	Risk Evaluation of Surveillance Interval Extension for the 125 VDC Battery Test	0
	Procedures	ER-AA-425	Implementation of the Technical Specification Surveillance Frequency Control Program	2
		ER-AA-425-1001	Surveillance Test Interval Evaluation Form	1
71111.19	Corrective Action Documents	04292467		
	Miscellaneous	PCR-19-03669		
	Procedures	ER-AA-340-1002	HX Inspection Report	8
		GAP-HSC-02	System Aging Inspection and Cleaning Controls	02000

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		N1-MPM-080-410	Containment Spray Heat Exchangers PM (HTX-80-13, HTX-80-14, HTX-80-33, HTX-80-34)	01200
		N1-ST-Q4	Reactor Coolant System Isolation Valves Operability Test	02700
		N2-OP-23A	Hydraulic Isolation and Restoration of Turbine Stop or Turbine Control or Combined Intercept Valves or Bypass Valves	00000
		N2-OSP-ICS-M001	RCIC Gas Accumulation Monitoring and Valve Lineup Verification	01200
		N2-OSP-ICS-Q@002	RCIC Pump and Valve Operability Test and System Integrity Test and ASME XI Functional Test and Analysis	01500
		S-EPM-GEN-067	Limitorque MOV Actuator P.M.	00800
	Work Orders	C93656433		
		C93667389		
		C93703618		
		C93727149		
		C93727983		
71111.22	Procedures	ER-AB-331-1006	BWR Reactor Coolant System Leakage Monitoring and Action Plan	2
		N2-CSP-CMS-@344	Primary Containment Sampling	00201
		N2-CTP-GEN-W104	Miscellaneous Reactor Building Chemistry Surveillance	00401
		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	00800
71151	Corrective Action Documents	04281645		
	Miscellaneous	NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7
	Procedures	LS-AA-2200	Mitigating System Performance Index Data Acquisition and Reporting	6
		N1-MSPI-001	Nine Mile Point Unit 1 MSPI Basis Document	11
		N1-OP-13	Emergency Cooling System	04300
N2-MSPI-001	Nine Mile Point Unit 2 MSPI Basis Document	15		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152	Corrective Action Documents	04061195		
		04133018		
		04133018		
		04156797		
		04159207		
		04162477		
		04265913		
		04266278		
		04280067		
		04285351		
		04290736		
		04291216		
		04291360		
		04292027		
		04292465		
		04292467		
		04293524		
		04295757		
	04297146			
	04297736			
	04303785			
		04272272		
		04281645		
	Corrective Action Documents Resulting from Inspection	04305465		
	Procedures	MA-AA-716-008-1000	Definitions and Measurements of FME Events	6
		N2-ISP-LDS-R104	Reactor Water Cleanup Equipment Area Temperature Instrument Channel Calibration	006T1