



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

February 11, 2021

Mr. David Rhoades  
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 05000220/2020004 AND 05000410/2020004 AND INDEPENDENT  
SPENT FUEL STORAGE INSTALLATION REPORT 07201036/2020002

Dear Mr. Rhoades:

On December 31, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Nine Mile Point Nuclear Station. On January 26, 2021, the NRC inspectors discussed the results of this inspection with Mr. Pete Orphanos, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

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,

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X /RA/

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Signed by: Eric D. Miller  
Eric D. Miller, Acting Chief  
Projects Branch 1  
Division of Reactor Projects

Docket Nos. 05000220, 05000410 and 07201036  
License Nos. DPR-63 and NPF-69

Enclosure:  
As stated

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SUBJECT: NINE MILE POINT NUCLEAR STATION – INTEGRATED INSPECTION  
 REPORT 05000220/2020004 AND 05000410/2020004 AND INDEPENDENT  
 SPENT FUEL STORAGE INSTALLATION REPORT 07201036/2020002 DATED  
 FEBRUARY 11, 2011

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**U.S. NUCLEAR REGULATORY COMMISSION  
Inspection Report**

Docket Numbers: 05000220, 05000410 and 07201036

License Numbers: DPR-63 and NPF-69

Report Numbers: 05000220/2020004 and 05000410/2020004  
07201036/2020002

Enterprise Identifier: I-2020-004-0020  
I-2020-002-0013

Licensee: Exelon Nuclear

Facility: Nine Mile Point Nuclear Station

Location: Oswego, NY

Inspection Dates: October 1, 2020 to December 31, 2020

Inspectors: G. Stock, Senior Resident Inspector  
J. Dolecki, Resident Inspector  
B. Sienel, Resident Inspector  
T. Fish, Senior Operations Engineer  
T. Hedigan, Operations Engineer  
C. Lally, Acting Branch Chief  
J. Nicholson, Senior Health Physicist  
P. Ott, Operations Engineer  
S. Wilson, Senior Health Physicist

Approved By: Eric D. Miller, Acting Chief  
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

No findings or violations of more than minor significance were identified.

### Additional Tracking Items

| Type | Issue Number         | Title  | Report Section | Status |
|------|----------------------|--|----------------|--------|
| LER  | 05000410/2020-002-00 | LER 2020-002-00 for Nine Mile Point Nuclear Station, Unit 2, Failure to Meet Technical Specification MSIV Stroke Times | 71153          | Closed |
| LER  | 05000410/2020-002-01 | LER 2020-002-01 for Nine Mile Point Nuclear Station, Unit 2, Failure to Meet Technical Specification MSIV Stroke Times | 71153          | Closed |

## PLANT STATUS

Unit 1 began the inspection period at rated thermal power. On October 9, 2020, the unit was downpowered to approximately 70 percent to perform a control rod pattern adjustment. The unit was returned to rated thermal power on October 10, 2020. On November 29, 2020, the unit was downpowered to approximately 72 percent to perform a control rod pattern adjustment and remove the 15 recirculation motor generator set from service for maintenance. The unit was returned to rated thermal power on November 30, 2020. On December 18, 2020, the unit was downpowered to approximately 70 percent to perform a control rod pattern adjustment and restore the 15 recirculation motor generator set to service. The unit was returned to rated thermal power on December 19, 2020 and remained at or near rated thermal power for the remainder of the inspection period.

Unit 2 began the inspection period at rated thermal power. On October 23, 2020, the unit was downpowered to approximately 75 percent to perform a control rod pattern adjustment and control rod scram timing. The unit was returned to rated thermal power on October 24, 2020 and remained at or near rated thermal 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 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.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time the resident inspectors performed periodic site visits each week and during that time conducted plant status activities as described in IMC 2515, Appendix D; observed risk significant activities; and completed on site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or portions of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

## REACTOR SAFETY

### 71111.01 - Adverse Weather Protection

#### Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold temperatures on December 18, 2020.

Impending Severe Weather Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the adequacy of the overall preparations to protect risk-significant systems from impending severe weather associated with high winds on November 2, 2020.

71111.04 - 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 'B' residual heat removal system on October 13, 2020
- (2) Unit 2 low pressure core spray system on October 20, 2020
- (3) Unit 2 Division I emergency diesel generator on October 29-30, 2020

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

- (1) The inspectors evaluated system configurations during a complete walkdown of the Unit 1 emergency diesel generators on November 18, 2020.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Unit 1 screenhouse, fire area 13, on November 2, 2020
- (2) Unit 1 turbine building 261', diesel generator 103 room, fire area 19, on November 12, 2020
- (3) Unit 1 turbine building 261', diesel generator 102 room, fire area 22, on November 12, 2020
- (4) Unit 1 turbine building 250', cable spreading room, fire area 10, on November 23, 2020

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) Unit 1 torus room

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

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

- (1) The inspectors reviewed and evaluated the Unit 1 licensed operator annual requalification results for the annual operating exam administered October - November 2020.
- (2) The inspectors reviewed and evaluated the Unit 2 licensed operator annual requalification results for the annual operating exam on November 24, 2020.

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 1 licensed operator biennial requalification written examinations administered October - November 2020.

Annual Requalification Operating Tests

The inspectors evaluated the adequacy of Exelon's annual requalification operating test.

Administration of an Annual Requalification Operating Test

The inspectors evaluated the effectiveness of Exelon in administering requalification operating tests required by Title 10 of the *Code of Federal Regulations* (10 CFR) 55.59(a)(2) to ensure that Exelon is effectively 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 Requalification 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 Unit 1 operations personnel during a planned downpower to 75 percent for a control rod sequence exchange on October 9, 2020.
- (2) The inspectors observed Unit 2 operations personnel during a planned downpower to 75 percent for a control rod sequence exchange and scram time testing on October 23, 2020.

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

- (1) The inspectors observed Unit 1 simulator annual requalification examination scenarios that included an unplanned main steam isolation valve closure, a steam leak in the drywell, an emergency condenser tube leak, and a failure to scram, on November 3, 2020.
- (2) The inspectors observed Unit 2 simulator annual requalification operating test scenarios, including (1) a scenario involving trip of a spent fuel pool cooling pump, trip of an air compressor, steam leak in the reactor core isolation cooling room with a failure to auto isolate, a trip of the electro-hydraulic control pumps, a manual reactor scram, and a steam leak in containment leading to the operators performing a reactor pressure vessel blowdown using safety relief valves; and (2) a scenario involving a loss of one line of 115-kilovolt off-site power, a trip of an control rod drive pump, degraded main condenser vacuum, an unisolable steam leak in the reactor core isolation cooling room, a manual reactor scram, and operators performing a reactor pressure vessel blowdown using safety relief valves on November 3, 2020.

## 71111.12 - Maintenance Effectiveness

### Maintenance Effectiveness (IP Section 03.01) (3 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

- (1) Unit 1 core spray system
- (2) Unit 1 intermediate range monitors
- (3) Unit 2 instrument air system



### 71111.13 - Maintenance Risk Assessments and Emergent Work Control

#### Risk Assessment and Management Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

- (1) Unit 2 elevated risk during planned Division I residual heat removal system preventive maintenance on October 13, 2020
- (2) Unit 2 elevated risk during planned high pressure core spray system maintenance on October 20, 2020

### 71111.15 - Operability Determinations and Functionality Assessments

#### Operability Determination or Functionality Assessment (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) Unit 1 high pressure coolant injection due to slow opening stroke times of flow control valves, FCV-29-141 and FCV-29-137, on October 16, 2020
- (2) Unit 1 scram discharge volume due to high volume level reading during surveillance testing on October 16, 2020
- (3) Unit 2 Division III diesel generator following unexpected isolation of service water inlet valve, 2SWP\*MOV95B, on October 27, 2020
- (4) Unit 2 Division III diesel generator service water inlet check valve, 2SWP\*V260, following unsatisfactory reverse flow exercise test on October 29, 2020

### 71111.19 - Post-Maintenance Testing

#### Post-Maintenance Test Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

- (1) Unit 2 Division I residual heat removal pump following motor preventive maintenance on October 13, 2020
- (2) Unit 1 high pressure coolant injection 11 following maintenance on October 15, 2020
- (3) Unit 2 Division II emergency diesel generator following 2-year preventive maintenance on October 30, 2020

## **RADIATION SAFETY**

### 71124.01 - Radiological Hazard Assessment and Exposure Controls

#### Radiological Hazard Assessment (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated how Exelon identifies the magnitude and extent of radiation levels and the concentrations and quantities of radioactive materials, and how Exelon assesses radiological hazards.

### Contamination and Radioactive Material Control (IP Section 03.03) (2 Samples)

The inspectors evaluated licensee processes for monitoring and controlling contamination and radioactive material.

- (1) The inspectors observed radiation protection technicians survey potentially contaminated material leaving the radiation control area.
- (2) The inspectors observed workers exiting the radiation control area at Unit 1 and Unit 2 control points.

### Radiological Hazards Control and Work Coverage (IP Section 03.04) (3 Samples)

The inspectors evaluated in-plant radiological conditions during facility walkdowns and observation of radiological work activities.

- (1) The inspectors observed radiation workers conducting repair of contaminated parts in the hot machine shop and decontamination area.
- (2) The inspectors observed pre-job meetings and radiation protection technicians performing locked high radiation area controls for personnel entries into the Unit 1 condenser bay.
- (3) The inspectors observed pre-job meetings and radiation protection technicians performing locked high radiation area controls for personnel entries into the Unit 1 steam isolation valve room.

### Radiation Worker Performance and Radiation Protection Technician Proficiency (IP Section 03.06) (1 Sample)

- (1) The inspectors evaluated radiation worker and radiation protection technician performance as it pertains to radiation protection requirements. Observations included radiation protection technician-controlled entries into the Unit 1 steam isolation valve room (posted locked high radiation area); a radiation protection technician surveying a solid waste high integrity container in a high radiation area; and a radiation worker performance during repair of contaminated equipment in the hot machine shop.

### 71124.05 - Radiation Monitoring Instrumentation

#### Walkdowns and Observations (IP Section 03.01) (9 Samples)

The inspectors evaluated the following radiation detection instrumentation during plant walkdowns:

- (1) ThermoFisher-Scientific Model AMS-4 continuous air monitor at Unit 1 Turbine Building 300' Reheater area (SN1748/1745)
- (2) ThermoFisher-Scientific Model AMS-4 continuous air monitor at Unit 2 Reactor Building 353' elevation (SN1745/1746-9)
- (3) Portable ion chambers stored 'ready for use' at Unit 2 control point access Eberline RO2A SN2995
- (4) Eberline RO2A SN6443-05
- (5) Eberline RO2A SN3007
- (6) Eberline RO20 SN 078042

- (7) Eberline RO2 SN6054
- (8) Portable Geiger–Müller tube instruments at Unit 2 control point access  
Merlin Gerin Telepole SN079827
- (9) Merlin Gerin Telepole SN025992

Calibration and Testing Program (IP Section 03.02) (13 Samples)

The inspectors evaluated the calibration and testing of the following radiation detection instruments:

- (1) Eberline RO2A, SN3007
- (2) Eberline RO2A, SN6443-05
- (3) Eberline RO2A, SN2995
- (4) Eberline RO20 SN4428
- (5) Ludlum Model 3, SN12093
- (6) Merlin Gerin Telepole SN6610-057
- (7) Merlin Gerin Telepole SN079827
- (8) Eberline SAC 4, SN1037 (2019)
- (9) Bicron BC4, SN745
- (10) RadEye, SN0022641
- (11) Canberra 5AB, SN1012-317, at Unit 2 RCA exit
- (12) ThermoFisher Small Article Monitor 11, SN544
- (13) Eberline SAC 4, SN1037 (2020)

Effluent Monitoring Calibration and Testing Program Sample (IP Sample 03.03) (2 Samples)

The inspectors evaluated the calibration and maintenance of the following radioactive effluent monitoring and measurement instrumentation:

- (1) Unit 1 Stack Gas Process Radiation Monitor RAM RN10A Channel Calibration records dated June 21, 2017
- (2) Unit 1 Stack Gas Process Radiation Monitor RAM RN10A Channel Calibration records dated March 24, 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 October 1, 2019 through September 30, 2020
- (2) Unit 2 October 1, 2019 through September 30, 2020

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

- (1) Unit 1 October 1, 2019 through September 30, 2020
- (2) Unit 2 October 1, 2019 through September 30, 2020

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

- (1) Unit 1 October 1, 2019 through September 30, 2020
- (2) Unit 2 October 1, 2019 through September 30, 2020

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual  
Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample  
(IP Section 02.16) (1 Sample)

- (1) Units 1 and 2, July 1, 2019 through September 30, 2020

71152 – Problem Identification and Resolution

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

- (1) The inspectors reviewed Exelon's corrective action program for trends that might be indicative of a more significant safety issue.

Annual Follow-up of Selected Issues (IP Section 02.03) (1 Sample)

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

- (1) IRs 03993689 and 04292465 – Review of Corrective Actions for Direct-Current Motor-Operated Valve Copper-Clad Steel Brush Holders

71153 - Followup of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

- (1) LER 05000410/2020-002-00 & -01, Failure to Meet Technical Specification MSIV [Main Steam Isolation Valve] Stroke Times, ADAMS Accession Nos. ML20129J906 and ML20255A078. The inspectors determined that it was not reasonable to foresee or correct the cause discussed in the LER therefore no performance deficiency was identified. The inspectors did not identify a violation of NRC requirements. The inspectors reviewed the original and updated LER submittals. These LERs are closed.

Personnel Performance (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated the licensee's response to a Unit 2 unplanned power change following the 'A' reactor recirculation flow control valve drifting open on December 10, 2020.

## OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

### 60854.1 - Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants

#### Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants (1 Sample)

- (1) The inspectors evaluated Exelon's performance during NRC-observed pre-operational dry run activities that were performed in order to fulfill requirements in the Certificate of Compliance (CoC) No. 1032, Amendment 3. The inspectors observed dry run activities on August 3-5, 2020. Specifically, the inspectors observed or reviewed the following activities:
- Hydrostatic testing of the closure weld
  - Blowdown and vacuum drying of the canister
  - Simulated radiological field surveys and radiation protection coverage of canister processing activities
  - Helium backfilling of the canister

### 92709 - Licensee Strike Contingency Plans

#### Licensee Strike Contingency Plans (1 Sample)

- (1) On October 30, 2020, the contract between Exelon and IBEW Local 97 was set to expire. In preparation for a potential strike, the NRC inspectors evaluated the adequacy of Exelon's contingency plan. The inspectors assessed the adequacy of the plan's post-strike staffing levels, staff qualifications, safety conscious working environment, and site access in meeting operational and security requirements. The contract was ratified October 20, 2020.

## INSPECTION RESULTS

|  |       |
|--|-------|
| Observation: Review of Corrective Actions on Direct Current Motor-Operated Valve Copper-Clad Steel Brush Holders   | 71152 |
| The inspectors reviewed Exelon's evaluation and corrective actions following the identification of an issue with the copper-clad steel brush holders in the motors of direct current (DC) motor-operated valves (MOVs). In April 2017, a safety-related isolation MOV in the Unit 1 emergency condenser system, IV-39-08R, failed in mid-position during a surveillance test. Exelon generated issue report (IR) 03993689 to document the failure. The station conducted a causal evaluation and concluded that corrosion buildup from the DC MOV steel brush holder led to inadequate electrical contact between the brushes and commutator. Corrosion from the brush holders can prevent the brushes from sliding freely to maintain contact with the commutator. Issue Report 03993689 stated that a new DC motor was installed in April 2015 and the brush holder had corroded in only two years of normal service life. Exelon identified a list of safety-related MOVs susceptible to the same condition. Additionally, in October 2019, DC MOV IV-39-08R failed in its mid-position due to a different issue. Exelon generated IR 04292465 to address the issue and included corrective actions to address the deficient copper-clad steel brush holders. |       |

As actions within IR 04282465, Exelon generated a list of 17 DC MOVs and associated work orders to inspect the brush holders using S-EPM-GEN-067, "Limitorque MOV Actuator P.M.," Revision 01100, "within two years or next outage" (Unit 2 refueling outage in 2022 was the latest date, due to replacement part lead time). As stated in the IR, "brass brush holders and spare DC motors shall be available to replace the current steel brush holders and motors (as a contingency)." In accordance with S-EPM-GEN-067, if operators identify signs of cracking, pitting, or corrosion in the brush holder area, the brush holders or motor is to be replaced with solid brass brush holders.

The inspectors reviewed Exelon's corrective actions at Unit 1 and Unit 2 associated with deficient steel brush holders contained within IRs 03993689 and 04292465. The inspectors reviewed the extent of condition list of DC MOVs to ensure all potentially affected MOVs had been identified, and reviewed the status of Exelon's actions, including a review of work order status. The inspectors also reviewed Exelon's readiness with replacement parts, or the ability to procure them, if they are needed.

As a result of the inspectors' review, Exelon generated IR 04388354 to document improvements that can be made to scheduling work activities and to revise the Unit 1 refuel outage work schedule.

|                                       |       |
|---------------------------------------|-------|
| Observation: Semi-Annual Trend Review | 71152 |
|---------------------------------------|-------|

The inspectors identified a trend associated with degraded conditions which have existed for a long period of time and impact plant operations. Following the identification of the individual issues, Exelon generated IRs in their corrective actions program to address the issues and define corrective actions. However, the inspectors identified that multiple issues that require additional actions by operators have existed for an extended period of time due to delayed corrective actions.

Specifically, the inspectors identified outstanding issues on a number of systems, the most significant of which are the Unit 1 mechanical hydraulic control (MHC) system identified in IRs 02485219 and 04244521; the Unit 1 fire protection system identified in IRs 04347881 and 04385984; and the Unit 2 service water system identified in IRs 02535772 and 04277608. The issue on the MHC system is discussed in the Inspection Results Section of Inspection Report 05000220/2019010 and 05000410/2019010. The issue on the fire protection system was reviewed during this inspection period, as documented in section 71111.15. The issue on the service water system is discussed in the Inspection Results Section of Inspection Report 05000220/2020003 and 05000410/2020003.

In each of the above referenced issues, additional actions are/were required by operators to operate the plant or respond to events. The corrective actions for these conditions have been extended for various reasons. Specifically, the Unit 1 MHC system issue (power instability region due to inadequate lead-lag testing) was initially scheduled with a due date of November 8, 2019 and is now delayed to the Spring 2021 refueling outage. The Unit 2 service water issue (valve 2SWP\*MOV21B failed in mid-position) has existed since September 9, 2020 and has been extended to the Spring 2022 refueling outage. The Unit 1 local fire panel issues (e.g. fire damper failed to open, leading to trouble alarms on a local fire panel) have existed since at least May 28, 2020.

As a result of these outstanding degraded conditions, Unit 1 has an Operator Burden to address pressure oscillations due to the MHC issue, Unit 1 has had nuisance alarms affecting operators' ability to interface with the local fire panels due to the fire protection system issues,

and Unit 2 has revised an Abnormal Operating Procedure to include opening an additional valve due to the service water valve issue.

The examples above demonstrate a trend. The inspectors determined the trend is not an additional performance deficiency.

## **EXIT MEETINGS AND DEBRIEFS**

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

- On January 26, 2021, the inspectors presented the integrated inspection results to Mr. Pete Orphanos, Site Vice President, and other members of the licensee staff.
- On December 16, 2020, the inspectors presented the independent spent fuel storage installation inspection results to Mr. Joseph Dougherty, Senior Program Manager, Dry Cask Storage, and other members of the licensee staff.
- On December 17, 2020, the inspectors presented the radiation protection inspection results to Mr. Michael Gray, Radiation Protection Manager, and other members of the licensee staff.

## DOCUMENTS REVIEWED

| Inspection Procedure | Type                        | Designation                              | Description or Title  | Revision or Date  |
|----------------------|-----------------------------|--|---|-------------------|
| 60854.1              | Miscellaneous               | Certificate of Compliance (CoC) No. 1032 | HI-STORM Flood/Wind (FW) Multipurpose Canister (MPC) Storage System                         | Amendment 3       |
|                      |                             | RRTI No. 2847-006-R2                     | Response to Request for Technical Information, Holtec International, Holtec Project No.2847 | November 24, 2020 |
|                      | Procedures                  | HPP-2847-300                             | MPC Sealing, Drying, and Backfilling  |                   |
|                      | Work Orders                 | WO C93736388                             | ISFSI Campaign Dry Run Phases 1 and 2 Cask Sealing, Drying, and Backfilling                 |                   |
| 71111.01             | Procedures                  | N1-OP-64                                 | Meteorological Monitoring   | 01900             |
|                      |                             | N1-OP-64                                 | Meteorological Monitoring   | 02000             |
|                      |                             | N1-SOP-64                                | High Winds  | 00300             |
|                      |                             | N2-OP-102                                | Meteorological Monitoring   | 02700             |
|                      |                             | N2-OP-102                                | Meteorological Monitoring   | 02500             |
|                      |                             | N2-SOP-90                                | Natural Events  | 01000             |
|                      |                             | N2-SOP-90                                | Natural Events  | 00800             |
|                      |                             | WC-AA-107                                | Seasonal Readiness  | 22                |
| 71111.04             | Corrective Action Documents | 04380768                                 |   |                   |
|                      |                             | 04380799                                 |   |                   |
|                      | Drawings                    | C-18026-C Sheet 1                        | Emergency Diesel Generator 102 Starting Air, Cooling Water, Lube Oil and Fuel P&I Diagram   | 28                |
|                      |                             | C-18026-C Sheet 2                        | Emergency Diesel Generator 103 Starting Air, Cooling Water, Lube Oil and Fuel P&I Diagram   | 32                |
|                      | Procedures                  | N1-OP-45                                 | Emergency Diesel Generators   | 04900             |
|                      |                             | N2-OP-31-LINEUPS                         | Residual Heat Removal System - Lineups  | 00300             |
|                      |                             | N2-OP-32                                 | Low Pressure Core Spray   | 01200             |
|                      |                             | N2-OP-32-LINEUPS                         | Low Pressure Core Spray - LINEUPS   | 0                 |
| 71111.05             | Fire Plans                  | N1-PFP-0101                              | Pre-Fire Plans  | 00500             |
|                      |                             | N1-PFP-0101                              | Pre-Fire Plans  | 00600             |
| 71111.06             | Corrective Action           | CR-2011-003058                           |   |                   |



| Inspection Procedure | Type                        | Designation                               | Description or Title                           | Revision or Date |
|----------------------|-----------------------------|---|--|------------------|
|                      | Documents                   | CR-2012-007568                            |  |                  |
|                      | Drawings                    | C-18012-C                                 | Reactor Containment Spray System P&I Diagram   | 47               |
|                      |                             | C-22300-C                                 | Interconnection Diagram 600 Volt Powerboard    | 27               |
|                      | Miscellaneous               | SDBD-202                                  | Containment System Design Basis Document       | 07               |
| 71111.11Q            | Miscellaneous               | Reactivity<br>Maneuver Plan<br>NM2C18-3-1 | NMP2 October 2020 Load Drop                    | 0                |
|                      | Procedures                  | N2-OSP-RMC-<br>@001                       | Control Rod Drive Scram Insertion Time Testing | 02600            |
|                      |                             | Reactivity<br>Maneuver Plan<br>NM1C24-7   | NMP1 October 2020 Load Drop                    | 0                |
| 71111.12             | Corrective Action Documents | 02011075                                  |  |                  |
|                      |                             | 02017465                                  |  |                  |
|                      |                             | 02612418                                  |  |                  |
|                      |                             | 04060921                                  |  |                  |
|                      |                             | 04143434                                  |  |                  |
|                      |                             | 04250466                                  |  |                  |
|                      |                             | 04262272                                  |  |                  |
|                      |                             | 04264399                                  |  |                  |
|                      |                             | 04265111                                  |  |                  |
|                      |                             | 04276737                                  |  |                  |
|                      |                             | 04282912                                  |  |                  |
|                      |                             | 04284118                                  |  |                  |
|                      |                             | 04291484                                  |  |                  |
|                      |                             | 04299670                                  |  |                  |
|                      |                             | 04319061                                  |  |                  |
|                      |                             | 04351428                                  |  |                  |
|                      |                             | 04355901                                  |  |                  |
| 04356128             |                             |   |  |                  |
| 04365602             |                             |   |  |                  |
| 04368972             |                             |   |  |                  |
| 04387314             |                             |   |  |                  |

| Inspection Procedure | Type  | Designation                            | Description or Title   | Revision or Date |
|----------------------|---|--|--|------------------|
|                      | Corrective Action Documents Resulting from Inspection | 04390645                               |  |                  |
|                      | Miscellaneous   | Maintenance Rule                       | a(1) Action Plan for Unit 1 IRM 15   | August 16, 2019  |
|                      |   | Maintenance Rule System Basis Document | Neutron Monitoring, Unit 1   |                  |
|                      | Procedures  | ER-AA-310-1002                         | Maintenance Rule Functions - Safety Significance Classifications                             | 3                |
|                      |   | ER-AA-310-1008                         | Exelon Maintenance Rule Process Map  | 0                |
|                      |   | ER-AA-320                              | Maintenance Rule Implementation Per NEI 18-10  | 00               |
|                      |   | ER-AA-320-1004                         | Maintenance Rule 18-10 - Performance Monitoring and Dispositioning Between (a)(1) and (a)(2) | 01               |
|                      |   | N1-OP-2                                | Core Spray System  | 03900            |
|                      |   | N1-OP-38B                              | Intermediate Range Monitor   | 01200            |
|                      |   | N2-MPM-IAS-V606                        | Instrument Air Compressor P.M. 2IAS-C3A, 2IAS-C3B and 2IAS-C3C                               | 01700            |
|                      |   | N2-OP-19                               | Instrument and Service Air System  | 02800            |
|                      | Work Orders   | C93614049                              |  |                  |
|                      |   | C93671046                              |  |                  |
|                      |   | C93681838                              |  |                  |
|                      |   | C93702322                              |  |                  |
|                      |   | C93714256                              |  |                  |
|                      |   | C93715345                              |  |                  |
| C93727465            |   |  |  |                  |
| 71111.13             | Procedures  | OP-NM-108-117                          | Protected Equipment Program at Nine Mile Point   | 006              |
|                      |   | WC-AA-101                              | On-Line Work Control Process   | 030              |
| 71111.15             | Corrective Action Documents                           | 04001797                               |  |                  |
|                      |   | 04178959                               |  |                  |
|                      |   | 04184175                               |  |                  |
|                      |   | 04197695                               |  |                  |

| Inspection Procedure | Type                        | Designation     | Description or Title  | Revision or Date |
|----------------------|-----------------------------|-----------------|---|------------------|
|                      |                             | 04199197        |   |                  |
|                      |                             | 04372692        |   |                  |
|                      |                             | 04377059        |   |                  |
|                      |                             | 04377164        |   |                  |
|                      |                             | 04378182        |   |                  |
|                      |                             | 04379990        |   |                  |
|                      |                             | 04385984        |   |                  |
|                      | Procedures                  | N1-IPM-029-010  | Calibration of Feedwater FCV-29-134, FCV-29-137, and FCV-29-141                   | 01300            |
|                      |                             | N1-IPM-029-010  | Calibration of Feedwater FCV-29-134, FCV-29-137, and FCV-29-141                   | 013T1            |
|                      |                             | N1-ISP-044-005  | High Water Level Scram Discharge Volume Instrument Channel Functional Calibration | 00700            |
|                      |                             | N2-OSP-SWP-Q005 | Division 3 Service Water Operability Test   | 00400            |
|                      | Work Orders                 | C93028113       |   |                  |
|                      |                             | C93625581       |   |                  |
|                      |                             | C93682976       |   |                  |
|                      |                             | C93684062       |   |                  |
| C93694459            |                             |                 |   |                  |
| C93711827            |                             |                 |   |                  |
| C93769658            |                             |                 |   |                  |
| 71111.19             | Corrective Action Documents | 04376757        |   |                  |
|                      | Procedures                  | N1-ST-Q3        | High Pressure Coolant Injection Pump and Check Valve Operability Test             | 01900            |
|                      |                             | N2-PM-@026      | Diesel Generator Start Following Maintenance - Division I and II                  | 00400            |
|                      |                             | S-EPM-GEN-081   | Site 13.8 & 16KV Motor inspection P.M.  | 00200            |
|                      |                             | S-EPM-GEN-V080  | Site AC Motor Predictive Maintenance Testing                                      | 01000            |
|                      | Work Orders                 | C93648661       |   |                  |
|                      |                             | C93685011       |   |                  |

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|                      |                             | C93722157                         |  |                  |
|                      |                             | C93723883                         |  |                  |
| 71151                | Miscellaneous               | NEI 99-02                         | Regulatory Assessment Performance Indicator Guideline    | 7                |
| 71152                | Corrective Action Documents | 02485219                          |  |                  |
|                      |                             | 02535772                          |  |                  |
|                      |                             | 03993689                          |  |                  |
|                      |                             | 04244521                          |  |                  |
|                      |                             | 04277608                          |  |                  |
|                      |                             | 04292465                          |  |                  |
|                      |                             | 04301820                          |  |                  |
|                      |                             | 04347881                          |  |                  |
|                      |                             | 04385984                          |  |                  |
|                      | Miscellaneous               | Regulatory Issue Summary 2001-015 | Performance of DC-Powered Motor-Operated Valve Actuators | August 1, 2001   |
|                      | Procedures                  | ER-AA-302                         | Motor-Operated Valve Program Engineering Procedure       | 7                |
|                      |                             | S-EPM-GEN-063                     | MOV Diagnostic Testing                                   | 01200            |
|                      |                             | S-EPM-GEN-067                     | Limitorque MOV Actuator P.M.                             | 01100            |
|                      |                             | S-EPM-GEN-067                     | Limitorque MOV Actuator P.M.                             | 00900            |
|                      | Work Orders                 | C90647604                         |  |                  |
|                      |                             | C92393291                         |  |                  |
|                      |                             | C93617215                         |  |                  |
|                      |                             | C93736601                         |  |                  |
|                      |                             | C93736602                         |  |                  |
|                      |                             | C93736603                         |  |                  |
|                      |                             | C93736604                         |  |                  |
|                      |                             | C93736605                         |  |                  |
|                      |                             | C93736606                         |  |                  |
| C93736607            |                             |                                   |  |                  |
| C93736608            |                             |                                   |  |                  |
| C93736609            |                             |                                   |  |                  |
| C93736610            |                             |                                   |  |                  |
| C93736611            |                             |                                   |  |                  |

| Inspection Procedure | Type                        | Designation      | Description or Title                               | Revision or Date |
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|                      |                             | C93736612        |  |                  |
|                      |                             | C93736613        |  |                  |
|                      |                             | C93736614        |  |                  |
|                      |                             | C93736615        |  |                  |
|                      |                             | C93736616        |  |                  |
|                      |                             | C93736617        |  |                  |
| 71153                | Corrective Action Documents | 04127385         |  |                  |
|                      |                             | 04324557         |  |                  |
|                      |                             | 04324692         |  |                  |
|                      |                             | 04388983         |  |                  |
|                      | Procedures                  | N2-IPM-SOV-R003  | Replacement of Main Steam Solenoid Operated Valves | 00500            |
|                      |                             | N2-OSP-MSS-CS001 | Main Steam Isolation Valve Operability Test        | 00800            |
|                      |                             | N2-SOP-8         | Unplanned Power Change                             | 01500            |