



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

May 9, 2018

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 05000220/2018001 AND 05000410/2018001

Dear Mr. Hanson:

On March 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Nine Mile Point Nuclear Station, LLC (NMPNS), Units 1 and 2. On April 25, 2018, 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.

No NRC-identified or self-revealing findings 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 the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Michelle P. Catts, Acting Chief
Reactor Projects Branch 1
Division of Reactor Projects

Docket Numbers: 50-220 and 50-410
License Numbers: DPR-63 and NPF-69

Enclosure:
Inspection Report 05000220/2018001 and
05000410/2018001

cc w/encl: Distribution via ListServ

SUBJECT: NINE MILE POINT NUCLEAR STATION – INTEGRATED INSPECTION
 REPORT 05000220/2018001 AND 05000410/2018001 DATED MAY 9, 2018

DISTRIBUTION:

DLew, RA (R1ORAMAIL RESOURCE)
 DCollins, DRA (R1ORAMAIL RESOURCE)
 DPelton, DRP (R1DRPMAIL RESOURCE)
 MGray, DRP (R1DRPMAIL RESOURCE)
 JYerokun, DRS (R1DRSMAIL RESOURCE)
 BWellington, DRS (R1DRSMAIL RESOURCE)
 MFerdas, DRP
 MCatts, DRP
 ARosebrook, DRP
 SObadina, DRP
 EMiller, DRP, SRI
 BSienel, DRP, RI
 ATrudell, DRP, AA
 JBowen, RI OEDO
 RidsNrrPMNineMilePoint Resource
 RidsNrrDorlLp1 Resource
 ROP [Reports Resource](#)

DOCUMENT NAME: G:\DRP\BRANCH1\Nine_Mile_Point\Reports\2018 Inspection
 Reports\2018-001\NMP IR 2018-001FINAL.docx.
 ADAMS ACCESSION NUMBER: ML18129A297

| | | | | | |
|--|---------------------|---|--------|---|--|
| <input checked="" type="checkbox"/> SUNSI Review | | <input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive | | <input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available | |
| OFFICE | RI/DRP | RI/DRP | RI/DRP | | |
| NAME | EMiller per telecon | ARosebrook | MCatts | | |
| DATE | 5/4/18 | 5/7/18 | 5/9/18 | | |

OFFICIAL RECORD COPY

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

Docket Numbers: 05000220 and 05000410

License Numbers: DPR-63 and NPF-69

Report Numbers: 05000220/2018001 and 05000410/2018001

Enterprise Identifier: I-2018-001-0046

Licensee: Exelon Generation Company, LLC (Exelon)

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

Location: Oswego, New York

Inspection Dates: January 1, 2018 to March 31, 2018

Inspectors: E. Miller, Senior Resident Inspector
B. Sienel, Resident Inspector
G. Stock, Resident Inspector, James A. FitzPatrick Nuclear Power Plant
R. Rolph, Health Physicist

Approved By: M. Catts, Acting Chief
Reactor Projects Branch 1
Division of Reactor Projects

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring Exelon's performance at NMPNS Units 1 and 2 by conducting the baseline inspections described in this report 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.

Additional Tracking Items

| Type | Issue number | Title | Report Section | Status |
|------|---------------------|--|----------------|--------|
| LER | 05000220/2017-003 | Automatic Reactor Scram due to Reactor Vessel Low Water Level | 71153 | Closed |
| URI | 05000220/2018001-01 | Potential Failure to Submit an 8-Hour Event Notification for a Valid Actuation of HPCI | 71111.20 | Open |
| URI | 05000410/2018001-02 | Potential Inadequate 50.59 Evaluation for TS 3.3.1.1 Bases Change | 71111.18 | Open |

PLANT STATUS

Unit 1 began the inspection period at or near rated thermal power. On March 17, 2018, operators reduced reactor power to 12 percent and inserted a planned manual reactor scram for a planned maintenance outage. On March 19, 2018, operators commenced a reactor startup and raised Unit 1 to rated thermal power. On March 20, 2018, operators reduced reactor power to 70 percent to perform a control rod pattern adjustment. Unit 1 was restored to rated thermal power on March 21, 2018. On March 24, 2018, operators reduced power to 70 percent to perform a rod pattern adjustment. On March 25, 2018, operators restored reactor power to rated thermal power. Unit 1 remained at or near rated thermal for the remainder of the inspection period.

Unit 2 began the inspection period at or near rated thermal power. On February 2, 2018, operators reduced reactor power to 75 percent to perform a rod pattern adjustment. Operators restored power to rated thermal power on February 3, 2018. On February 24, 2018, operators reduced reactor power to 75 percent to perform turbine valve testing and a control rod pattern adjustment. On February 25, 2018, operators restored reactor power to rated thermal power. On March 22, 2018, Unit 2 began coastdown, after reaching the maximum power achievable due to fuel depletion as Unit 2 was at the end of this operating cycle. At the end of the inspection period Unit 2 was at 98 percent power. The maximum power will continue to decrease (coastdown) until the refueling outage, which is planned for the second quarter of 2018.

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

Impending Severe Weather (2 Samples)

- (1) The inspectors evaluated readiness for impending severe weather conditions prior to heavy lake effect snow and high winds on January 4, 2018.
- (2) The inspectors evaluated readiness for impending severe weather conditions prior to heavy lake effect snow and high winds on January 12, 2018.

71111.04 - Equipment Alignment

Partial Walkdown (5 Samples)

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

- (1) Unit 1 11 emergency condenser (EC) on January 25, 2018
- (2) Unit 1 12 liquid poison system following surveillance testing on January 29, 2018
- (3) Unit 2 high pressure core spray (HPCS) during reactor core isolation cooling (RCIC) planned maintenance on February 6, 2018
- (4) Unit 2 'A' standby gas treatment (SBGT) system while 'B' SBGT system out of service for planned maintenance on March 6, 2018
- (5) Unit 1 shutdown cooling on March 17, 2018

71111.05A/Q - Fire Protection Annual/Quarterly

Quarterly Inspection (9 Samples)

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

- (1) Unit 1 reactor building (RB) 261 foot elevation, fire area (FA) 1 on January 11, 2018
- (2) Unit 1 turbine building (TB) 277 foot elevation, hydrogen seal oil skid, FA 5 on January 29, 2018
- (3) Unit 2 RB 175 foot elevation, HPCS pump room, FA 4 on February 6, 2018
- (4) Unit 2 RB 175 foot elevation, low pressure core spray (LPCS) pump room, FA 1 on February 6, 2018
- (5) Unit 2 RB 175 foot elevation, 'B' residual heat removal (RHR) pump room, FA 3 on February 6, 2018
- (6) Unit 2 diesel building (DB) 261 foot elevation, Division I diesel generator, FA 28 on March 27, 2018
- (7) Unit 2 DB 261 foot elevation, Division II diesel generator, fire zone FA 29 on March 27, 2018
- (8) Unit 2 DB 261 foot elevation, HPCS diesel generator, FA 30 on March 27, 2018
- (9) Unit 2 DB 261 foot elevation, Division 1 diesel generator control room, FA 28 on March 27, 2018

Annual Inspection (1 Sample)

The inspectors evaluated Unit 2 fire brigade performance during an actual event that involved a fire at a non-safety related moisture separator reheater pressure control valve on February 1, 2018.

71111.07 - Heat Sink Performance

Heat Sink (1 Sample)

The inspectors evaluated Exelon's monitoring and maintenance of Unit 2 'B' RHR heat exchanger performance on February 8, 2018.

71111.11 - Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (2 Samples)

- (1) The inspectors observed a Unit 1 simulator evaluation that involved the loss of an electrical bus (PB 1671A), the trip of a turbine building closed loop cooling pump with the failure of the standby pump to automatically start, and loss of coolant accident on January 30, 2018
- (2) The inspectors observed a Unit 2 simulator evaluation that involved the loss of an instrument air compressor, the failure of a service water pump, the failure of an electro-hydraulic control system pressure control valve, and a loss of coolant accident on February 6, 2018

Operator Performance (2 Samples)

- (1) The inspectors observed Unit 1 operations personnel during a transfer from the mechanical pressure regulator to the electronic pressure regulator during motor generator (MG) set 167 planned maintenance on February 22, 2018, and during a reactor shutdown for a planned maintenance outage on March 17, 2018
- (2) The inspectors observed Unit 2 operations personnel during a downpower to 75 percent for a control rod pattern adjustment on February 2 and 3, 2018

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness (2 Samples)

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

- (1) Unit 2 instrument air compressors on March 27, 2018
- (2) Unit 2 turbine building sumps week of March 29, 2018

71111.13 - Maintenance Risk Assessments and Emergent Work Control (9 Samples)

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

- (1) Unit 2 planned 'F' service water pump and motor replacement on January 23, 2018
- (2) Unit 2 planned Division 2 unit cooler 2HVY*UC2B thermal performance testing on January 30, 2018
- (3) Unit 2 planned RCIC maintenance on February 6, 2018
- (4) Unit 1 planned 12 emergency condenser surveillance testing on February 15, 2018
- (5) Unit 1 planned 12 liquid poison surveillance testing on March 6, 2018
- (6) Unit 2 planned Division 2 SBGT system maintenance on March 6, 2018
- (7) Unit 2 failure of 2SFC*HV6A, spent fuel pool cooling suction cross connection valve on March 7, 2018
- (8) Unit 1 planned 12 reactor recirculation pump seal flush on March 13, 2018
- (9) Unit 2 planned 'B' reserve station transformer maintenance on March 26, 2018

71111.15 - Operability Determinations and Functionality Assessments (7 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) Unit 1 EDG 103 low governor oil level on January 8, 2017
- (2) Unit 2 RCIC operability during maintenance on an associated room cooler on January 22, 2018
- (3) Unit 2 2CSH*V7, HPCS minimum flow return line discharge check valve based on associated 10 CFR Part 21 Event Notification #53177 on February 7, 2018
- (4) Unit 2 RCIC due to governor valve steam leak on February 8, 2018
- (5) Unit 2 Three element feedwater level control system following unexpected reactor water level transient on February 9, 2018
- (6) Unit 2 HPCS pipe integrity based on operating experience related to the use of Style 'CG' Flexitallic gaskets on February 22, 2018
- (7) Unit 2 step change in reactor recirculation 'B' seal temperatures following a downpower on February 26, 2018

71111.18 - Plant Modifications (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Procedure Change Request (PCR)-17-03717, Unit 2 Procedure Change to N2-OSP-RPS-Q001, RPS Turbine Stop Valve (TSV) Closure Logic, Control Valve Fast Closure Scram Functional Tests and Turbine Valve Cycling on February 12, 2018 (Permanent Modification)
- (2) Action Request (AR) 04044602-02, Unit 2 TS 3.3.1.1 Bases Change for Turbine Stop Valve and main steam isolation valve (MSIV) Testing on February 28, 2018 (Permanent Modification)

71111.19 - Post Maintenance Testing (6 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) Unit 1 11 shutdown cooling pump breaker preventive maintenance on January 11, 2018
- (2) Unit 2 emergency core cooling system flood penetration breach for modification on January 22, 2018
- (3) Unit 2 RCIC valve breaker preventive maintenance on February 6, 2018
- (4) Unit 2 spent fuel pool cooling pump suction cross connect valve, SFC*HV6A, corrective maintenance on March 13, 2018
- (5) Unit 1 11 feedwater low flow control valve on March 17, 2018
- (6) Unit 1 MSIV 01-01 following packing replacement on March 18, 2018

71111.20 - Refueling and Other Outage Activities (1 Sample)

- (1) The inspectors evaluated Unit 2 N2R16 pre-outage activities during the first quarter of 2018 (Partial sample)
- (2) The inspectors evaluated Unit 1 planned maintenance outage activities from March 17, 2018 through March 20, 2018

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (5 Samples)

- (1) N1-ST-M4B, Emergency Diesel Generator 103 and PB 103 Operability Test, on February 5, 2018
- (2) N1-ST-M1B, Liquid Poison Pump 12 Operability Test, on March 6, 2018
- (3) N1-ST-Q1D, CS 122 Pump and Valve Operability Test, on March 12, 2018
- (4) N1-ST-V3, Rod Worth Minimizer Operability Test Average Power Range Monitor/Intermediate Range Monitor Overlap Verification on March 19, 2018
- (5) N1-PM-V7, Turbine Trip Tests, on March 20, 2018

Inservice (2 Samples)

- (1) N2-OSP-ICS-Q@002, RCIC Pump and Valve Operability Test and System Integrity Test and American Society of Mechanical Engineers XI Functional Test and Analysis, on February 8, 2018
- (2) N2-OSP-EGS-M@002, Diesel Generator and Diesel Start Valve Operability Test, Division III, on February 28, 2018

Reactor Coolant System Leak Detection (1 Sample)

- (1) CY-NM-170-341, Primary Containment Sampling and Analysis, Unit 1, on January 25, 2018

71114.06 - Drill EvaluationTraining Evolution (2 Samples)

- (1) The inspectors observed a Unit 1 simulator evaluation that involved the loss of an electrical bus (PB 1671A), the trip of a turbine building closed loop cooling pump with the failure of the standby pump to automatically start, and a loss of coolant accident on January 30, 2018
- (2) The inspectors observed a Unit 2 simulator evaluation that involved the loss of an instrument air compressor, the failure of a service water pump, the failure of an electro-hydraulic control system pressure control valve, and a loss of coolant accident on February 6, 2018

RADIATION SAFETY71124.06 - Radioactive Gaseous and Liquid Effluent TreatmentWalkdowns and Observations (1 Sample)

The inspectors walked down the gaseous and liquid radioactive effluent monitoring and filtered ventilation systems to assess the material condition and verify proper alignment according to plant design.

Calibration and Testing Program (Process and Effluent Monitors) (1 Sample)

The inspectors evaluated Exelon's gaseous and liquid effluent monitor instrument calibration and testing.

Sampling and Analyses (1 Sample)

The inspectors evaluated radioactive effluent sampling and analysis activities.

Instrumentation and Equipment (1 Sample)

The inspectors reviewed radioactive effluent discharge system surveillance test results and reviewed the methodology used to determine the radioactive effluent stack and vent flow rates based on Technical Specifications/Off Site Dose Calculation Manual (TS/ODCM) acceptance criteria.

Dose Calculations (1 Sample)

The inspectors reviewed several liquid and gaseous discharge permits to evaluate public dose calculations (monthly, quarterly, and annual) and the annual radiological effluent release reports for 2015 and 2016.

OTHER ACTIVITIES – BASELINE71151 - Performance Indicator Verification (5 Samples)

The inspectors verified Exelon's performance indicator submittals listed below:

- (1) Units 1 and 2, Reactor Coolant System Leakage, from January 1, 2017 through December 31, 2017
- (2) Units 1 and 2, Reactor Coolant System Specific Activity from January 1, 2017 through December 31, 2017
- (3) Site Radiological Effluent TS/ODCM Radiological Effluent Occurrences from October 1, 2016 through December 31, 2017

71152 - Problem Identification and ResolutionAnnual Follow-up of Selected Issues (1 Sample)

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

- (1) Issue Report (IR) 04049445, Unit 1 - September 6, 2017 scram due to lowering reactor water level when the feedwater level control system experienced a failure of a feedwater flow/steam flow error signal input.

71153 - Follow-up of Events and Notices of Enforcement Discretion

Events (1 Sample)

The inspectors evaluated response to the following event:

- (1) Unit 2 - Notice of Unusual Event declaration for a fire in the turbine building on February 1, 2018

Licensee Event Reports (1 Sample)

The inspectors evaluated the following licensee event reports which can be accessed at <https://lersearch.inl.gov/LERSearchCriteria.aspx>:

- (1) Licensee Event Report (LER) 05000220/2017-003, Automatic Reactor Scram due to Reactor Vessel Low Water Level, on September 6, 2017. See Section 71152 for additional details.

INSPECTION RESULTS

| | | |
|--|---|---|
| <p><u>Unresolved Item (URI)</u> 05000220/ 2018001-01 (Open)</p> | <p>Potential Failure to Submit an 8-Hour Event Notification for a Valid Actuation of HPCI</p> | <p>71111.20 Refueling and Other Outage Activities</p> |
| <p><u>Description:</u> On March 18, 2018, at 1:18 a.m., during the Unit 1 maintenance outage while the unit was in cold shutdown, operators received multiple low level alarms on the GEMAC 11 and 12 level indications. Operators responded by adjusting reactor water cleanup reject flow and the feedwater minimum flow control valve to raise reactor water level. Upon the operators making the adjustment to reactor water level, the feedwater low flow control valve was slow to respond, but eventually opened more rapidly, and the increased flow from feedwater resulted in a rapid rise in reactor water level. At 1:28 a.m., indicated reactor water level rose to the 95-inch trip setpoint for the 11 and 12 Yarway level indication instruments, resulting in a turbine trip and HPCI initiation signal. The HPCI pumps were tagged out and thus did not inject, and the turbine was offline for the shutdown.</p> <p>The 11 and 12 Yarway level indication instruments provide reactor protection system logic inputs for reactor vessel water level; however, the Yarway level indication instruments are not density compensated. Therefore, under cold shutdown conditions, actual reactor vessel water level was lower than indicated water level on the 11 and 12 Yarways. During cold shutdown conditions, the GEMAC level instruments, which are calibrated to cold shutdown conditions, provide an accurate indication of actual reactor vessel water level. The GEMAC instruments both indicated well below the trip setpoint of 95 inches (indicated ~72 inches) when the turbine trip and HPCI initiation signal were received. Exelon determined that this event was not reportable under 10 CFR 50.72.</p> <p>Title 10 CFR 50.72(b)(3)(iv)(A) states, "Any event or condition that results in valid actuation of any of the systems listed in paragraph (b)(3)(iv)(B) of this section, except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation.</p> <p>(B) The systems to which the requirements of paragraph (b)(3)(iv)(A) of this section apply are:</p> | | |

(5) BWR reactor core isolation cooling system; isolation condenser system; and feedwater coolant injection system.”

Planned Closure Action(s): The inspectors requested the 10 CFR 50.72 subject matter experts at the Office of Nuclear Reactor Regulation (NRR) and Office of General Council (OGC) to review whether this was a valid actuation and thus reportable. The inspectors are opening an unresolved item (URI) to determine if a performance deficiency exists.

Licensee Action(s): Licensee entered the concern into their corrective action program, and communicated with NRC Region I and NRR Staff. Exelon’s position is that the event was not reportable.

Corrective Action Reference: IR 04116336

NRC Tracking Number: 05000220/2018001-01

| | | |
|---|--|---|
| <p style="text-align: center;"><u>URI</u> 05000410/ 2018001-02 (Open)</p> | <p>Potential Inadequate 50.59 Evaluation for TS 3.3.1.1 Bases Change</p> | <p>71111.18 Plant Modifications</p> |
| <p><u>Description:</u> On February 23, 2018, Exelon personnel performed a 50.59 Screening for a change to Unit 2 TS Bases 3.3.1.1, Reactor Protection System (RPS) Instrumentation, for MSIV and TSV surveillance testing. Exelon personnel performed this activity to address operating experience associated with the use of a test box that prevents a scram signal during RPS surveillance testing for TS 3.3.1.1 Function 5 MSIV – Closure and Function 8 TSV – Closure.</p> <p>TS Bases B 3.3.1.1, C.1, Revision 1 was revised to state, in part, “For Function 5 (MSIV – Closure), this would require both trip systems to have at least one channel associated with the MSIVs for each main steam line in one Trip Logic Channel (not necessarily the same main steam lines for both trip systems), Operable or in trip (or the associated trip system in trip). For Function 8 (Turbine Stop Valve – Closure), this would require both trip systems to have the channels for one Trip Logic Channel, Operable or in trip (or the associated trip system in trip).”</p> <p>The inspectors questioned whether the change to TS Bases B 3.3.1.1 resulted in a change to the implementation of TS 3.3.1.1. A licensee is permitted to make changes to their Technical Specification Bases documents without NRC review and approval. However, in certain cases, such as a change to the Technical Specification Bases that would change how the associated Technical Specification is applied, NRC review and approval would be required.</p> <p>Planned Closure Action(s): The inspectors sent written questions to request assistance from NRR to determine whether this change to the TS Bases reasonably would have required NRC review and approval. The inspectors are opening a URI to determine if this is violation of 10 CFR 50.59 and if it is more than minor.</p> | | |

Licensee Action: Documented NRC's concern as AR 04055602. Exelon's position is the change would not affect how TS 3.3.1.1, or its note, is applied and therefore NRC review was not required.

Corrective Action Reference: AR 04055602

NRC Tracking Number: 05000410/2018001-02

| Observations and Minor Violations | 71152 A Problem Identification and Resolution |
|--|--|
| <p>The inspectors performed a review of IR 04049445 to review Exelon's cause evaluation associated with a Unit 1 reactor scram on low reactor water level on September 6, 2017. The inspectors also reviewed Exelon's Post Transient Review, operating procedures, drawings, Control Room Logs, sequence of events recorder data, plant computer data, and conducted interviews with Exelon staff.</p> <p>The inspectors identified two performance deficiencies that were determined to be minor in accordance with IMC 0612, Appendix B, Issue Screening, associated with Exelon's Post Transient Review. The purpose of a Post Transient Review is to make a prompt determination if plant equipment responded as designed and that plant operators responded appropriately to the transient or event and any potential non-conforming conditions identified.</p> <p>(1) OP-AA-108-114, Post Transient Review, Revision 13, Section E "Safety Assessment," Criteria 10 states "High level isolation(s)" with a check box for either "Yes" or "No." During the inspectors review, it was identified through review of plant computer data and drawings that Nine Mile Point Unit 1 received an expected signal for a feedwater pump trip on high reactor water level at 95 inches. The inspectors found that operators performing the Post Transient Review in accordance with OP-AA-108-114 made a determination that the feedwater pump trip on high reactor water level was not considered an isolation. The inspectors determined that the procedure lacked clarity in providing operators a means to determine if the plant responded in accordance with its design basis. The inspectors determined that although operators did not accurately check the box "Yes" that the feedwater pump high reactor water level trip occurred, it did not result in any consequence to the plants operation following the Post Transient Review; and it was determined that the trip did function as expected, therefore this performance deficiency for an inadequate procedure is minor.</p> <p>(2) The inspectors also reviewed IR 04050697, which documented a question from the inspectors following the reactor scram on September 6, 2017, concerning feedwater computer points becoming erratic just prior to the Unit 1 reactor scram. Exelon subsequently performed additional evaluation, and was able to show that the failure of the computer points were unrelated to the cause of the scram, which was the failure of the feedwater flow/steam flow mismatch card. Exelon determined the computer point failures to be related to maintenance being performed on a power supply that failed in the turbine performance calculation cabinet under work order C93638038. The inspectors agreed with this conclusion.</p> <p>The inspectors determined that Exelon failed to establish documentation to support or refute a potential cause in accordance with Procedure MA-AA-716-004, Conduct of Troubleshooting, Revision 15, as part of Section 4.5 for "Simple Troubleshooting." The result was a failure to provide the cause evaluation team enough information to assess the issue for a potential</p> | |

cause. Specifically, Procedure PI-AA-125-1003, Corrective Action Program Evaluation Manual Section 4.3.5 states that “investigators should gather information and data relating to the event.” The inspectors found that this potential failure was not explored under the Simple Troubleshooting process for establishing a “failure mode/cause table,” and subsequently resulted in the inspectors questioning if this should have been evaluated by the cause evaluation team. This showed that the depth of investigation was inadequate to ensure all potential causes associated with a potential scram were explored. The inspectors determined the performance deficiency for failure to follow Procedures MA-AA-716-004 and PI-AA-125-1003 is minor because following the inspectors’ questions, Exelon was able to provide additional information to refute relationship to the cause of the scram.

| | |
|---|---|
| Observations and LER Closure | 71153 Follow-up of Events and Notices of Enforcement Discretion |
| LER 05000220/2017-003, Automatic Reactor Scram due to Reactor Vessel Low Water Level, on September 6, 2017. Exelon determined the root cause of the Unit 1 event was an equipment failure associated with a power supply within the proportional amplifier PAM-ID23E, which is part of the three element feedwater control system. This failure was not within Exelon’s ability to foresee and prevent; therefore, there was no performance deficiency associated with the instrument failure. The inspectors did not identify any findings associated with this event. This LER is closed. | |

EXIT MEETINGS AND DEBRIEFS

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

- On April 25, 2018, the inspectors presented the quarterly resident inspection results to Mr. Peter Orphanos, Site Vice President, and other members of the Exelon staff.

DOCUMENTS REVIEWED**71111.01**Procedures

N1-OP-64, Meteorological Monitoring, Revision 01700

N2-OP-102, Meteorological Monitoring, Revision 02200

71111.04Procedures

C-18018-C, Reactor Shutdown Cooling Piping & Instrumentation Diagram, Revision 32

N1-OP-4, Shutdown Cooling System, Revision 04600

N1-OP-13, Emergency Cooling System, Revision 04100

N1-PM-Q9, Lubrication of Plant Equipment, Revision 01600

N1-ST-Q8B, Liquid Poison Pump 12 and Check Valve Operability Test, Revision 01200

N2-OP-33, High Pressure Core Spray System, Revision 01500

N2-OP-33, Lineups, High Pressure Core Spray System, Revision 00100

N2-OP-61B, Standby Gas Treatment System, Revision 01500

N2-OP-61B, Lineups, Standby Gas Treatment System - Lineups, Revision 00100

Issue Reports

02016743

02051624

02052658

02700451

DrawingC-18017-C, Sheet 1, Emergency Cooling System Piping & Instrumentation Diagram,
Revision 56**71111.05**Procedures

N1-PFP-0101, Unit 1 Pre-Fire Plans, Revision 00500

N2-FPI-PFP-0201, Unit 2 Pre-Fire Plans, Revision 5

N2-FPM-FPE-A001, Maintenance and Inspection, Portable Fire Extinguishers, Revision 01500

N2-PFP-DG261-2, Division I Diesel Generator-261' Elevation, Revision 01

N2-PFP-DG261-3, Division II Diesel Generator-261' Elevation, Revision 01

N2-PFP-DG261-4, HPCS Diesel Generator-261' Elevation, Revision 01

OP-AA-201-009, Control of Transient Combustibles, Revision 20

OP-NM-201-005, Firefighting, Revision 00200

Issue Reports

04099955

04099960

Miscellaneous

DCD-805, Nine Mile Point Unit 1 NFPA 805 Design Criteria, Revision 1

Unit 2 UFSAR Section 9, Revision 22

71111.07AProcedureN2-TTP-RHS-4Y002, Residual Heat Removal System Heat Exchanger (2RHS*E1B)
Performance Monitoring (Suppression Pool Cooling Mode), Revision 00300Work Order

C90813331

71111.11Procedures

N1-OP-31, Tandem Compound Reheat Turbine, Revision 04700
 N1-OP-43C, Plant Shutdown, Revision 02400
 N2-OP-101D, Power Changes, Revision 02500

Miscellaneous

2100-SIMEVLS03B, EVL-3 DMS-RL3 Evaluated Scenario 2, January 12, 2018
 Reactivity Maneuver Plan NM2C16-15, Control Rod Pattern Change, approved
 January 30, 2018

71111.12Procedures

Maintenance Rule a(1) Action Plan for NMP 2-IAS-F01(A) [IR 02697332], Revisions 0, 1, and 2
 Maintenance Rule a(1) Determination for 2-IAS-F01(A) [IR 02697332], dated August 4, 2016
 Maintenance Rule System Basis Document for NMP 2 Instrument Air (IAS) on March 3, 2018

Maintenance Rule Functional Failure Evaluations for IRs

| | | | | |
|----------|----------|----------|----------|----------|
| 02509894 | 02638306 | 02639296 | 02673914 | 02693332 |
| 03965289 | 04038793 | 04042841 | 04044296 | 04051369 |
| 04052532 | 04096304 | 04105106 | 04116231 | |

71111.13Procedures

N1-OP-1, Nuclear Steam Supply System, Revision 07300
 N1-SOP-21.1, Fire In Plant, Revision 01401
 N2-OP-38, Spent Fuel Pool Cooling and Cleanup System, Revision 02400
 N2-OP-58, Screenwell Building and Fire Pump Rooms Ventilation Systems, Revision 00402
 N2-PRA-006, Nine Mile Point Unit 2 Probabilistic Risk Assessment Dependency Matrix
 Notebook, Revision 1
 OP-AA-108-117, Protected Equipment Program, Revision 005
 OP-NM-102-106, Operator Response Time Program at Nine Mile Point, Revision 7
 OP-NM-108-117, Protected Equipment Program at Nine Mile Point, Revision 05000

Issue Report

04112080

Miscellaneous

Maintenance Rule Basis Document for NMPNS 2 Screenwell Building Ventilation, viewed
 February 26, 2018

71111.15Procedures

N2-EOP-HC, EOP Hard Cards Procedure, Revision 00800
 N2-OP-29, Reactor Recirculation System, Revision 02700
 N2-OP-52, Reactor Building Ventilation, Revision 01800
 N2-SOP-01, Station Blackout/Extended Loss of AC Power, Revision 01500
 N2-SOP-02, Station Blackout/Extended Loss of AC Power Support Procedure, Revision 001100
 N2-SOP-29.1, Reactor Recirculation Pump Seal Failure, Revision 00500
 NMP-2-2018-0055, Risk Assessment ODM for ½-inch Reactor Level Step [Increase], Revision 0

Issue Reports

| | | | |
|----------|----------|----------|----------|
| 02040819 | 04056662 | 04092089 | 04092221 |
| 04095919 | 04102652 | 04102837 | |

Drawings

0005321052005H, 2.5-inch through 4-inch Swing Check Valve Bolted Bonnet Forged,
Revision H.00

PID-33A, Piping & Instrumentation Diagram High Pressure Core Spray System, Revision 18
 PID-33B, Piping & Instrumentation Diagram High Pressure Core Spray System, Revision 15
 PID-35A, Piping & Instrumentation Diagram Reactor Core Isolation Cooling, Revision 17
 PID-35B, Piping & Instrumentation Diagram Reactor Core Isolation Cooling, Revision 15
 PID-35C, Piping & Instrumentation Diagram Reactor Core Isolation Cooling, Revision 29

Miscellaneous

NRC Inspection Report 05000397/2017008, "Columbia Generating Station – NRC Special
Inspection Report"

71111.18Procedure

N2-OSP-RPS-Q001, RPS Turbine Stop Valve Closure Logic, Control Valve Fast Closure Scram
Functional Tests and Turbine Valve Cycling, Revision 00700

Drawings

0007.225-001-007, Elementary Diagram Reactor Protection System, Revision 8
 0007.225-001-008, Elementary Diagram Reactor Protection System, Revision 8
 0007.225-001-009, Elementary Diagram Reactor Protection System, Revision 9
 0007.225-001-010, Elementary Diagram Reactor Protection System, Revision 9
 0007.225-001-011, Elementary Diagram Reactor Protection System, Revision 8
 0007.225-001-013, Elementary Diagram Reactor Protection System, Revision 3

Miscellaneous

04044602-02/Revision to Unit 2 Bases B3.3.1.1, Unit 2
 PCR-17-03717, Eliminated Two TSV Stroking, Need to Bypass RCS EOC-RPT Channels and
Low Power TT Bypass of All Four Channels At The Same Time, Revision 1

71111.19Procedures

CC-AA-201, Plant Barrier Control Program, Revision 011
 CC-NM-201-1001, Plant Barrier Control Program Implementation, Revision 0
 N1-OP-4, Shutdown Cooling System, Revision 04600
 N2-OSP-ICS-Q001, RCIC Valve Operability Test, Revision 00600
 N2-OSP-SFC-Q001, Spent Fuel Pool Cooling Cleanup Pump and Valve Operability Test,
Revision 00700
 S-EPM-GEN-063, MOV Diagnostic Testing, Revision 01000

Issue Reports

| | | |
|----------|----------|----------|
| 04082313 | 04082686 | 04112080 |
|----------|----------|----------|

Work Orders

| | | | |
|-----------|-----------|----------|-----------|
| C92753269 | C93013263 | C3098917 | C93607398 |
| C93658702 | C93659934 | | |

Miscellaneous

N2-CRM-008, Technical Specification 3.0.9 Evaluation of Residual Heat Removal Division I and II Pump Room Barrier Penetrations to Support Maintenance, Revision 0

71111.20Procedures

ER-AA-370-1002, Review of Reactor Pressure Vessel Pressure-Temperature Limit Curves, Revision 0

MA-AA-796-024, Scaffold Installation, Inspection, and Removal, Revision 11

N1-OP-4, Shutdown Cooling System, Revision 04600

N1-OP-43A, Plant Startup, Revision 04700

N1-OP-43C, Plant Shutdown, Revision 02400

N2-FHP-014, Movement of New Fuel and Control Rod Blades into the Spent Fuel Pool, Revision 01200

N2-FHP-026, Moving Fuel and Blade Guides within the Spent Fuel Pool, Revision 00500

S-MMP-FHP-100, Receiving, Inspection, and Storage of New Fuel, Revision 01300

Drawings

C-23093-C, Sheet 3, Interconnection Diagram Auxiliary Control Cabinet IS60, Revision 16

C-23091-C, Sheet 3, Interconnection Diagram Auxiliary Control Cabinet IS59, Revision 23

Miscellaneous

Adverse Condition Monitoring and Contingency Plan (ACMP) for Unit 1 Unidentified Leak Rate (IR 04058998), Revision 5

ACMP for Unit 1 12 Recirculation Pump Seal Pressures (IR 04085756), Revision 0

Reactivity Maneuver Plan NM1C23-SU-1, approved March 6, 2018

71111.22Procedures

CY-NM-170-341, Primary Containment Sampling and Analysis, Unit 1, Revision 3

ER-AB-331-1006, BWR Reactor Coolant System Leakage Monitoring and Action Plan, Revision 2

N1-PM-V7, Turbine Trip Tests, Revision 00800

N1-ST-M1B, Liquid Poison Pump 12 Operability Test, Revision 01100

N1-ST-M4B, Emergency Diesel Generator 103 and PB 103 Operability Test, Revision 01900

N1-ST-Q1D, CS 122 Pump and Valve Operability Test, Revision 01800

N1-ST-V3, Rod Worth Minimizer Operability Test APRM/IRM Overlap Verification, Revision 01301

N2-OSP-EGS-M@002, Diesel Generator and Diesel Start Valve Operability Test – Division III, Revision 02001

N2-OSP-ICS-Q@002, RCIC Pump and Valve Operability Test and System Integrity Test and ASME XI Functional Test and Analysis, Revision 01400

Issue Reports

| | | | | |
|----------|----------|----------|----------|----------|
| 04109552 | 04111549 | 04111560 | 04111970 | 04114129 |
| 04114298 | 04114374 | | | |

Work Orders

| | | | |
|-----------|-----------|-----------|-----------|
| C93588959 | C93595862 | C93597294 | C93599399 |
| C93607235 | C93625379 | | |

71124.06Procedures

CY-AA-110-200, Sampling, Revision 13

CY-NM-170-370, Emergency Condenser Shell Sampling and Analysis, Revision 1

CY-NM-210-331, Offgas Sampling (Unit 2), Revision 1

N1-CSP-M204, Liquid Release Dose Calculations, Revision 00502

N1-CSP-M350, Noble Gas Dose Calculations, Revision 00602

N1-CSP-M351, Particulate, Iodine, and Tritium Dose Calculations, Revision 00402

N1-RSP-11A, Calibration of the Service Water Discharge Monitor, Revision 01000

N1-RSP-13, Stack Radiation Monitor Calibration Check and Channel Test, Revision 00200

N2-CSP-LWS-M203, Monthly Liquid Dose Calculations, Revision 00101

N2-CSP-RMS-M350, Noble Gas Dose Rate and Dose Calculations, Revision 00401

N2-CSP-RMS-M351, Particulate, Iodine, and Tritium Dose Calculations, Revision 00500

N2-RSP-RMS-R113, Channel Calibration Test of the Service Water Effluent Line Process Radiation Monitors 2SWP*CAB146A and 2SWP*CAB146B, Revision 00800

N2-RSP-RMS-R103, Channel Calibration Test of the Standby Gas Treatment System Exhaust Process Radiation Monitors, Revision 06

N2-RSP-RMS-R100, Operating Cycle Channel Calibration of the Flow System on the DRMS Gaseous and Gaseous/Particulate Process Radiation Monitors, Revisions 00400 and 00301

Issue Reports

| | | | | |
|----------|----------|----------|----------|----------|
| 03954212 | 03954220 | 03966022 | 04020451 | 04055754 |
| 04073565 | 04079813 | 04087090 | 04088525 | 04089912 |
| 04091186 | 04091505 | 04093367 | 04093715 | |

Effluent Monitor Calibrations

| | | | | | |
|--------------|--------------|-----------|------------|-----------|------------|
| Unit 1 Stack | 112-07 | C93501578 | 05/17/2016 | C93592938 | 01/22/2018 |
| | 112-08 | C93396860 | 10/19/2016 | C93563705 | 09/21/2017 |
| | 112-11 | C92112402 | 04/16/2015 | C93250934 | 06/21/2017 |
| | 112-12 | C93503983 | 07/19/2017 | C93593700 | 01/22/2018 |
| Unit 1 SW | RAM-72-406 | C92835534 | 06/25/2015 | C93479647 | 07/11/2017 |
| Unit 2 SW | 2SWP*CAB146A | C92801632 | 02/17/2016 | C93502206 | 08/17/2017 |
| | 2SWP*CAB146B | C92753095 | 04/01/2016 | C93491426 | 01/05/2018 |
| Unit 2 SBGT | GTS-CAB105 | C91448928 | 06/14/2013 | C92326679 | 12/17/2015 |
| Unit 2 SBGT | GTS-CAB105 | C92049982 | 07/11/2014 | C92763391 | 10/14/2016 |

Miscellaneous

NMPNS 2015 Annual Radioactive Effluent Release Report, May 13, 2016

NMPNS 2016 Annual Radioactive Effluent Release Report, April 28, 2017

NMPNS Errata/Correction to the 2015 Annual Radioactive Effluent Release Report, April 28, 2017

71151Procedures

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

71152

Procedures:

OP-AA-108-114, Post Transient Review, Revision 13
N1-EOP-2, RPV Control – Flowchart Revision 01600
N1-SOP-1, Reactor Scram, Revision 02500
N1-SOP-16.1, Feedwater System Failures, Revision 01000
N1-ARP-A2, Control Room Panel A2, Revision 01100

Drawings:

C-19859-C, Sheet 1, Trip Diagram Reactor Protection System, Revision 21
C-18015-C, Reactor Vessel Instrumentation P&I Diagram, Revision 42
C-23223-C, Sheet 2, Connection Diagram Transducer Cabinet #11, Revision 10
C-18005-C, Sheet 1, Feedwater Flow High Pressure P&I Diagram, Revision 51
C-23077-C, Sheet 2, Elementary Wiring Diagram Feedwater Control System, Revision 25
F-45399-C, Sheet 3, Connection Schedule Plant Process Computer Cabinet PNL-IU45,
Revision 2

Issue Reports:

04049445 04050697

Work Orders:

C93638038

71153:

Procedures:

OP-AA-108-114, Post Transient Review, Revision 13
N1-EOP-2, RPV Control – Flowchart Revision 01600
N1-SOP-1, Reactor Scram, Revision 02500
N1-SOP-16.1, Feedwater System Failures, Revision 01000
N1-ARP-A2, Control Room Panel A2, Revision 01100

Drawings:

C-19859-C, Sheet 1, Trip Diagram Reactor Protection System, Revision 21
C-18015-C, Reactor Vessel Instrumentation P&I Diagram, Revision 42
C-23223-C, Sheet 2, Connection Diagram Transducer Cabinet #11, Revision 10
C-18005-C, Sheet 1, Feedwater Flow High Pressure P&I Diagram, Revision 51
C-23077-C, Sheet 2, Elementary Wiring Diagram Feedwater Control System, Revision 25
F-45399-C, Sheet 3, Connection Schedule Plant Process Computer Cabinet PNL-IU45,
Revision 2

Issue Reports:

04049445 04050697

Work Orders:

C93638038