



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

November 24, 2020

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 – DESIGN BASIS ASSURANCE
INSPECTION (TEAMS) INSPECTION REPORT 05000220/2020010 AND
05000410/2020010

Dear Mr. Hanson:

On November 5, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Nine Mile Point Nuclear Station and 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 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,

X /RA/

Signed by: Melvin K. Gray

Mel Gray, Chief
Engineering Branch 1
Division of Reactor Safety

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 – DESIGN BASIS ASSURANCE
INSPECTION (TEAMS) INSPECTION REPORT 05000220/2020010 AND
05000410/2020010 DATED NOVEMBER 24, 2020

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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: 05000220/2020010 and 05000410/2020010

Enterprise Identifier: I-2020-010-0027

Licensee: Exelon Generation Company, LLC

Facility: Nine Mile Point Nuclear Station, Units 1 and 2

Location: Oswego, NY

Inspection Dates: October 19, 2020 to November 5, 2020

Inspectors: E. Andrews, Health Physicist
J. Brand, Reactor Inspector
L. Dumont, Reactor Inspector
J. Lilliendahl, Senior Emergency Response Coordinator
B. Pinson, Reactor Inspector
J. Schoppy, Senior Reactor Inspector
J. Schussler, Senior Resident Inspector

Approved By: Mel Gray, Chief
Engineering Branch 1
Division of Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a design basis assurance inspection (teams) inspection at Nine Mile Point Nuclear Station, Units 1 and 2, 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

None.

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), inspectors were directed to begin telework. In addition, regional baseline inspections were evaluated to determine if all or portion 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

71111.21M - Design Bases Assurance Inspection (Teams)

The inspectors evaluated the following components and listed applicable attributes, permanent modifications, and operating experience:

Design Review - Risk-Significant/Low Design Margin Components (IP Section 02.02) (5 Samples)

- (1) Unit 2 Reactor Core Isolation Cooling Pump and Turbine (2ICS*P1)
 - Material condition and installed configuration (e.g., visual inspection/walkdown)
 - Normal, abnormal, and emergency operating procedures
 - Consistency among design and licensing bases and other documents/procedures
 - System health report, maintenance effectiveness and records, and corrective action history
 - Equipment/environmental controls and qualification
 - Operator actions
 - Design calculations
 - Surveillance testing and recent test results
 - System and component level performance monitoring
 - Equipment protection from fire, flood, and water intrusion or spray
 - Heat removal cooling water and ventilation

The team used Appendix B guidance for *Valves, Pumps, Instrumentation, and As-Built System*.

(2) Unit 2 4 KV Division I Emergency Bus (2ENS*SWG101)

- Material condition and installed configuration (e.g., visual inspection/walkdown)
- Normal, abnormal, and emergency operating procedures
- Consistency among design and licensing bases and other documents/procedures
- System health report, maintenance effectiveness and records, and corrective action history
- Control logic
- Protective relaying and coordination
- Design calculations
- Surveillance testing and recent test results
- Environmental conditions
- Contactor and fuse ratings; component adequacy for minimum voltage
- Equipment protection from fire, flood, and water intrusion or spray
- Heat removal cooling water and ventilation

The team used Appendix B guidance for *Instrumentation, Circuit Breakers and Fuses, Cables, Electric Loads, and Motor Control Centers (MCCs)*.

(3) Unit 1 Battery Board 11 (PB-BB11)

- Material condition and installed configuration (e.g., visual inspection/walkdown)
- Normal, abnormal, and emergency operating procedures
- Consistency among design and licensing bases and other documents/procedures
- System health report, maintenance effectiveness and records, and corrective action history
- Control logic
- Design calculations
- Surveillance testing and recent test results
- Environmental conditions
- Contactor and fuse ratings; component adequacy for minimum voltage
- Protection coordination; load in-rush and full load current
- Range, accuracy, and setpoint of installed instrumentation
- Equipment protection from fire, flood, and water intrusion or spray

The team used Appendix B guidance for *Instrumentation, Circuit Breakers and Fuses, Cables, Electric Loads, and Motor Control Centers (MCCs)*.

(4) Unit 2 125 Vdc Battery 2A (2BYS*BAT2A)

- Material condition and installed configuration (e.g., visual inspection/walkdown)
- Normal, abnormal, and emergency operating procedures
- Consistency among design and licensing bases and other documents/procedures
- System health report, maintenance effectiveness and records, and corrective action history
- Control logic
- Design calculations
- Surveillance testing and recent test results
- Equipment protection (sealing of cable and conduits)

- Environmental conditions
- Contactor and fuse ratings; component adequacy for minimum voltage
- Protection coordination; load in-rush and full load current
- Range, accuracy, and setpoint of installed instrumentation
- Equipment protection from fire, flood, and water intrusion or spray

The team used Appendix B guidance for *Instrumentation, Circuit Breakers and Fuses, Cables, Electric Loads, and As-Built System*.

(5) Unit 2 Reactor Core Isolation Cooling Injection Valve (2ICS*MOV126)

- Material condition and installed configuration (e.g., visual inspection/walkdown)
- Normal, abnormal, and emergency operating procedures
- Consistency among design and licensing bases and other documents/procedures
- System health report, maintenance effectiveness and records, and corrective action history
- Equipment/environmental controls and qualification
- Operator actions
- Design calculations
- Surveillance testing and recent test results
- Equipment protection (sealing of cable and conduits)
- Equipment protection from fire, flood, and water intrusion or spray

The team used Appendix B guidance for *Valves, Instrumentation, and As-Built System*.

Design Review - Large Early Release Frequency (LERFs) (IP Section 02.02) (1 Sample)

(1) Unit 1 Suppression Chamber

- Material condition and installed configuration (e.g., visual inspection/walkdown)
- Normal, abnormal, and emergency operating procedures
- Consistency among design and licensing bases and other documents/procedures
- System health report, maintenance effectiveness and records, and corrective action history
- Heat removal
- Operator actions
- Design calculations
- Surveillance testing and recent test results
- Process medium (water level and temperature)
- Component degradation

The team used Appendix B guidance for *Instrumentation and As-Built System*.

Modification Review - Permanent Mods (IP Section 02.03) (6 Samples)

- (1) 00251528, Emergency Diesel Generators, Mobilgard™ 410NC Lubricating Oil
- (2) ECP-16-000514, Replace the Unit 2 Div. I & II Emergency Diesel Generator Starting Air System Air Dryers with New Membrane Air Dryers
- (3) ECP-16-000799, Removal of Excessive Engine Vibration Trip Circuitry (2EGS-WEV113 & 2EGS-WEV213) for 2EGS*EG1 and 2EGS*EG3 and Associated Annunciators
- (4) ECP-18-000187, Harden SFC Function by Removing Remote Manual Function of 2SFC*HV6A, HV6B, HV37A, HV37B
- (5) ECP-18-000259, Remove Division 1 and Division 2 Synchronous Motor Pull-Out Relay
- (6) ECP-19-000522, U1 EDG 102/103 Fuel Oil Storage Level Indicating System and Oil Spill Prevention System Upgrade

Review of Operating Experience Issues (IP Section 02.06) (3 Samples)

- (1) NRC Information Notice 2018-07: Pump/Turbine Bearing Oil Sight Glass Problems
- (2) Engine Systems Inc. Part 21 Reports: EMD Fuel Injector - Cracked Spray Tip, P/N 5229250 and EMD Fuel Injectors - Seized Plunger and Bushing
- (3) GE Hitachi Report made in accordance with 10CFR Part 21 – Nameplate Discrepancy in IAC Time Overcurrent Relays

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

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

- On November 5, 2020, the inspectors presented the design basis assurance inspection (teams) inspection results to Mr. Peter Orphanos, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
71111.21M	Calculations	125VDCDISTSYS	125VDC Distribution System Analysis	Revision 0	
		125VDCSYSTEMELAP	Battery 11 and 12 Load Shed Coping Time for ELAP Event	Revision 0	
		A10.1-AD-008	Back-Calculation of Valve Factor from EPRI PPM Calculated Required Thrust	Revision 0	
		A10.1-H-060	RCIC Pump Performance Test Acceptance Criteria-Lube Oil Cooler Max. Flow Increase	Revision 0	
		A10.1H4	RCIC Suction Line Size & NPSHa Verification (Suction from Suppression Pool)	Revision 0	
		EC-032	Diesel Generator Loading	Revision 12	
		EC-042	Verification of Adequacy of Division 1 Battery 2BYS*BAT2A and Battery Chargers 2BYS*BAT2A1 & 2A2	Revision 11	
		EC-129	Plant Emergency Battery Capability for Station Blackout	Revision 4	
		EC-151	Auxiliary System Performance Using ETAP PowerStation	Revision 8	
		EC-154	Starting Voltage Verification for Class 1E MOVs	Revision 5	
	S0-TORUS-M009	NMP-1 Torus Pool Heat Up Analysis	Revision 3		
	Corrective Action Documents	1990689			
		1996953			
		2461835			
		2608707			
		2666149			
		3955525			
		4128779			
	Corrective Action Documents Resulting from Inspection	4377774			
4378021					
4378032					
4378134					
4378366					

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		4378464 4378465 4378662 4378721 4378750 4378753 4378765 4378901 4378961 4378982 4379033 4379045 4379054 4379583 4379603 4379618 4379848 4380166 4380168 4380193 4380244 4381637 4381737 4382002 4382012 4382415 4382432 4382519		
	Drawings	1.040-209-065A	System Schematic Division I & II Diesel Generator Voltage Regulator	Revision 3
		C-19839-C Sh.1	125V DC Control Bus	Revision 17
	Engineering Changes	EC20090078	Alternate Model for Overcurrent Trip Relay UPS172	Revision 0
		ECP-16-000514	Replace the Unit 2 DIV I & II Emergency Diesel Generator Starting Air System Air Dryers with New Membrane Air	Revision 0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Dryers	
		ECP-16-000799	Removal of Excessive Engine Vibration Trip Circuitry (2EGS-WEV113 & 2EGS-WEV213) for 2EGS*EG1 and 2EGS*EG3 and Associated Annunciators	Revision 0
		ECP-19-000522	NMP1 EDG 102/103 Fuel Oil Storage Level Indicating System and Oil Spill Prevention System Upgrade	Revision 0
	Engineering Evaluations	2EQDP-MOV0003	Motor on Motor Operated Valve Environmental Qualification Document Package	Revision 1
		90831	Item Equivalency Evaluation for Mobilguard 410 NC	Revision 3
		ES-139	RCIC Pump-Turbine Room EQ Envelopes	Revision 2
		MPR Report 1866	Evaluation of Stem Thrust Requirements for 2ICS*MOV126 at Nine Mile Point Unit 2 Using the EPRI MOV Solid and Flexible Wedge Gate Valve Performance Prediction Methodology	dated 11/21/97
		NER-1S-016	Nine Mile Point Unit 1 Torus External Structure Walkdown Results Documentation	Revision 11 and 12
	Miscellaneous	N1C17320BATTERY004	Standby Battery Vented Cell Installation & Operating Instructions	Revision 5
		N2-ESP-BYS-R685	Div I/II/III Battery Modified Profile Test	performed 12/4/13, 4/18/16, & 3/13/20
		N2-OSP-ICS-Q@002	RCIC Pump and Valve Operability Test and System Integrity Test and ASME XI Functional Test and Analysis	performed 2/22/19
		N2-OSP-SFC-2Y001	SFC Valve Position Indicator Verification	performed 9/11/19
	Procedures	MA-AA-734-400	Constant Level Oiler and Sight-Glass Maintenance	Revision 2
		N2-PM-W001	Lubrication of Plant Equipment	Revision 22
	Work Orders	C90651623 C92292614 C92396607 C92562700 C92562702 C93626073		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		C93672565 C93678286 C93698335 C93721801		