



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

February 17, 2021

Mr. David P. Rhoades
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: R. E. GINNA NUCLEAR POWER PLANT, LLC – DESIGN BASIS ASSURANCE
INSPECTION (PROGRAMS) INSPECTION REPORT 05000244/2020013

Dear Mr. Rhoades:

On January 15, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at R. E. Ginna Nuclear Power Plant, LLC. On January 22, 2021, the NRC inspectors discussed the results of this inspection with Mr. Paul Swift, 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 No. 05000244
License No. DPR-18

Enclosure:
As stated

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 INSPECTION (PROGRAMS) INSPECTION REPORT 05000244/2020013
 DATED FEBRUARY 17, 2021

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

Docket Number: 05000244

License Number: DPR-18

Report Number: 05000244/2020013

Enterprise Identifier: I-2020-013-0003

Licensee: Exelon Generation Company, LLC

Facility: R. E. Ginna Nuclear Power Plant, LLC

Location: Ontario, New York

Inspection Dates: November 02, 2020 to November 20, 2020

Inspectors: P. Cataldo, Senior Reactor Inspector
D. Kern, Senior Reactor Inspector
E. Miller, 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 (programs) inspection at R. E. Ginna Nuclear Power Plant, LLC, 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
URI	05000244/2020013-01	Procedure Adequacy to Verify Supplemental Indications when Performing Inservice Test (IST) Valve Position Indication Verification (valves 3411, 4269)	71111.21N.02	Open

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.

REACTOR SAFETY

71111.21N.02 - Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements

POV Review (IP Section 03) (10 Samples)

The inspectors:

- a. Determined whether the sampled power operated valves (POVs) are being tested and maintained in accordance with NRC regulations along with the licensee's commitments and/or licensing bases.
 - b. Determined whether the sampled POVs are capable of performing their design-basis functions.
 - c. Determined whether testing of the sampled POVs is adequate to demonstrate the capability of the POVs to perform their safety functions under design-basis conditions.
 - d. Evaluate maintenance activities including a walkdown of the sampled POVs (if accessible).
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- (1) 516, Reactor Coolant Pressurizer - Pressurizer Power Operated Relief Valve (PORV) Block Valve
 - (2) 704B, Residual Heat Removal - RHR Pump B Suction Motor Operated Valve
 - (3) 850A, Residual Heat Removal - RHR Pump Motor Operated Suction from Containment Sump A
 - (4) 857C, Residual Heat Removal - RHR Pump Motor Operated Discharge to Safety Injection Pump Suction
 - (5) 3504A, Main Steam - MOV For Steam Generator B Main Steam Supply to PAF03 (Turbine Driven AFW Pump)
 - (6) 4615, Service Water - Auxiliary Building SW Isolation Valve
 - (7) 431C, Reactor Coolant Pressurizer - Pressurizer Power Operated Relief Valve
 - (8) 3411, Main Steam - Steam Generator B Atmospheric Relief Valve (ARV)
 - (9) 4269, Main Feedwater - Main FW Control Air Operated valve (AOV) To Steam Generator A
 - (10) 4562, Service Water - Air Operated Bypass of Valve 4561 (Containment Fan Coolers SW Outlet Flow Control)

INSPECTION RESULTS

Unresolved Item (Open)	Procedure Adequacy to Verify Supplemental Indications when Performing Inservice Test (IST) Valve Position Indication Verification (valves 3411, 4269) URI 05000244/2020013-01	71111.21 N.02
<p><u>Description:</u> The inspectors identified an unresolved item (URI) while reviewing completed maintenance records to verify the ASME OM-2012 ISTC-3700 Position Verification Testing (VPI) requirements were properly completed for steam generator atmospheric relief valve 3411 and main feedwater control valve 4269. ISTC-3700 states valves with remote position indicators shall be observed locally at least once every 2 years to verify valve operation is accurately indicated. Where practicable, this local observation should be supplemented by other indications such as use of flow meters or other suitable instrumentation to verify obturator position. The observations of local and supplemental plant indications (SPI) need not be concurrent. Title 10 <i>Code of Federal Regulations</i> (CFR) 50.55a(b)(3)(xi) requires that when implementing ASME OM-2012 ISTC-3700, licensees shall (vs "should") verify that valve operation is accurately indicated by supplementing valve position indicating lights with other indications such as flow meters or other suitable instrumentation, to provide assurance of proper obturator (valve disc) position.</p> <p>The inspectors determined Exelon staff at the Ginna plant last completed Procedure STP-O-2.6.1, Main Steam Atmospheric Relief Valve Exercise, Revision 3 on 4/13/20 to meet the biennial ISTC-3700 VPI test requirements for valve 3411. The inspectors also determined Exelon staff last completed Procedure STP-O-R-1.5, Valve Interlock Verification – Feedwater Isolation, Revision 3, on 4/26/20 to meet the same requirements for valve 4269. The inspectors determined Procedures STP-O-2.6.1 and STP-O-R-1.5 required operators to observe the valves locally and verify agreement between local and remote valve position indicators. However, the procedures did not include instructions or acceptance criteria to address observation of supplemental plant indications.</p> <p>The inspectors determined the last performance of IST-3700 test requirements for valves 3411 and 4269, prior to Ginna implementing the ASME OM-2012 code, was on 10/29/18 and 11/05/18 respectively. Therefore, the inspectors concluded the requirement to observe SPI when implementing IST-3700 valve position verification testing, was due on 10/29/20 and 11/05/20 respectively. The inspectors expressed concern that the requirements of 10CFR50.55a(b)(3)(xi) to observe SPI when implementing ISTC-3700 may not be met.</p> <p>Exelon staff stated the requirements to implement SPI during valve position verification tests became effective on 1/1/20, when Ginna plant staff implemented the 6th 10-year IST Plan which also implemented the ASME OM-2012 code. Accordingly, the start date for the 2-year surveillance interval would be 1/1/20. Exelon staff stated they believe the SPI requirements of 10CFR50.55a(b)(3)(xi) were not required to be completed on any of the Ginna IST program valves until 1/1/22. Ginna plant engineers consulted with their Exelon Fleet Motor Operated Valve program owner and confirmed their position was consistent with guidance he previously provided to the other Exelon plants. Engineers informed the inspectors that Exelon had established a plan to implement SPI and test all required valves by 1/1/22.</p> <p>The inspectors discussed the issue with Exelon staff and determined the issue is unresolved, awaiting inspector review of further guidance from the NRC Office of Nuclear Reactor Regulation to determine whether a performance deficiency exists regarding the SPI requirements imposed by 10CFR50.55a(b)(3)(xi). Specifically, the inspectors noted the</p>		

timing of when SPI requirements, imposed by 10CFR50.55a(b)(3)(xi), were to be implemented was a topic discussed in a recent Reactor Oversight Process (ROP) monthly public meeting with stakeholders on December 8, 2021, and was planned to be concluded in future near term monthly public ROP meetings with stakeholders.

Planned Closure Actions: The inspectors plan to request further guidance from the NRC Office of Nuclear Reactor Regulation (NRR) regarding the due date for the Ginna plant to implement SPI requirements to assure proper obturator position when performing ISTC-3700 Position Verification Testing. Following receipt of the requested guidance from NRR, the inspectors plan to determine whether a performance deficiency exists.

Licensee Actions: Engineers reviewed historical SPI data (e.g., steam generator pressure, main steam isolation valve position, feedwater flow, feedwater control valve demand) recorded by the plant process computer during the plant shutdown immediately prior to the most recent refueling outage (4/5/20) and the subsequent plant restart (5/5/20). Engineers determined the data provided evidence that the valve stem and obturator for both the 3411 and 4269 valves were connected when each valve was repositioned to support the plant shutdown and/or startup evolution. Based on review of the SPI data, the inspectors determined the issue did not represent an immediate safety concern.

Corrective Action References: Not applicable.

EXIT MEETINGS AND DEBRIEFS

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

- On January 22, 2021, the inspectors presented the design basis assurance inspection (programs) inspection results to Mr. Paul Swift, Site Vice President and other members of the licensee staff.
- On November 20, 2020, the inspectors presented the Interim Status of NRC 2020 R. E. Ginna Design Basis Assurance Inspection (Power Operated Valve Programs) inspection results to Mr. Paul Swift, Site Vice President and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21N.02	Calculations	CALC-2011-0017	Design Analysis of the Main Steam Atmospheric Relief Valve 3410 & 3411 Replacement (ECP-11-000562, ECP-11-000564)	Revision 0
		DA-ME-2003-037	Valve 3411 AOV Program Basis Review Calculation	Revision 0
	Corrective Action Documents	04340259		
		CR-2008-003928		
	Corrective Action Documents Resulting from Inspection	04381935	Oil Streak on 4269 Actuator	
		04382005	Oil Leak on 3504A Actuator	
		04382430	857C Packing Leakoff Line Conditions	
		04382562	Flange for 1817 Condition	
		04382734	IR Not initiated for Grade 3 Grease - MOV 850A	
		04382785	MOV-704B Documented Gasket Compression Below Accept	
		04385385	Missed Peer Check	
		04385400	MOV-4615 Post Diagnostic Data Review Not Completed	
		04385488	Evaluate Potential Trend in Maintenance Procedure Use & Adherence	
		04385624	IST Program Plan Deficiencies	
	04391510	MOV-3504A Differential Pressure Dynamic Test Delayed from 2011 to 2012		
	04396703	Test Method for AOV 4562 is Inadequate		
	Engineering Changes	109682-ME-339	Main Feedwater Regulating Valve Replacement - PCR 2004-0060	Revision 0
	Engineering Evaluations	ECP-17-000240	Anchor/Darling Double Disc Gate Valve Wedge Pin Evaluation	Revision 2
		EEQ- Package 01D	Main Feedwater Isolation Solenoid Operated Valves Environmental Qualification Package	Revision 8
	Miscellaneous		R. E. Ginna Inservice Testing (IST) Program Plan, Sixth 10-Year Interval (1/1/2020 - 12/31/2029)	Revision 0
			R. E. Ginna Nuclear Power Plant Technical Specifications	Revision 95
		ASME OM-2012	Operation and Maintenance of Nuclear Power Plants	Revision 0
		NRC Memo	Integrated Plan Safety Assessment Report (IPSAR)	04/21/1983

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Section 4.14, Pipe Break Outside Containment R.E. Ginna Nuclear Power Plant	
		RS-17-172	Commitments for Resolution of Anchor Darling Double Disc Gate Valve Part 21 Issues	12/19/2017
	Procedures	AR-C-10	Containment Recirculation Coolers Water Outlet Low Flow 1050 gpm	Revision 1
		ER-AA-302-1001	MOV Rising Stem Motor Operated Valve Thrust and Torque Sizing and Set-Up Window Determination Methodology	Revision 11
		ER-AA-321	Administrative Requirements for Inservice Testing	Revision 13
		ER-AA-321-1006	Inservice Testing of Motor Operated Valves	Revision 4
		IP-IIT-2	Inservice Testing Program for Pumps and Valves	Revision 16
		MA-AA-723-301	Periodic Inspection of Limitorque Model SMB/SB/SBD-000 Through 5 Motor Operated Valves, Revision 12	
		MA-GI-723-300	Diagnostic Testing of Motor Operated Valves	Revision 0
		OP-6.13	Daily Surveillance Log	05/01/2020
		STP-O-2.3	Safeguard Power Operated Valve Operation	Revision 7
		STP-O-2.5.5	Air Operated Valves and Manual Valve Quarterly Surveillance - Clean Intermediate Building	Revision 12
		STP-O-2.6.5	RCS Overpressure Protection System PORV Operability Verification	Revision 4
	Work Orders	C19221494	1993 - 4615 Stem Machining	
		C19601967	MOV-857C Lantern Leak Off Line Weld Repair	11/12/2011
		C93264433	March 2017 Maintenance on 850A	
		C93302641	Limitorque Operator/Valve 4615 - Diagnostic Testing Perform Static Testing per M-64.1.2	05/01/2020
		C93624508	Calibrate Pressurizer Power Operated Relief Valve (PORV) 431C	10/18/2018
		C93625530	October 2018 Maintenance on 850A	
		C93687589	PMOT-431C	04/17/2020
		C93690088	431C Diagnostic	04/17/2020
		C93690691	Main Steam Atmospheric Relief Valve Exercise	04/13/2020
	C93690798	STP-O-R-1.5, Feedwater Isolation - Valve 4269 PMOT	04/26/2020	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		C93695313	516 PORV Block Valve Diagnostic Testing	
		C93696207	MOV-857C Exercise Test	