



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
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KING OF PRUSSIA, PENNSYLVANIA 19406-2713

August 3, 2021

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

SUBJECT: R.E. GINNA NUCLEAR POWER PLANT, LLC – INTEGRATED INSPECTION
REPORT 05000244/2021002

Dear Mr. Rhoades:

On June 30, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at R.E. Ginna Nuclear Power Plant, LLC. On July 21, 2021, the NRC inspectors discussed the results of this inspection with Mr. Daren Blankenship, Plant Manager 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,

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

Docket No. 05000244
License No. DPR-18

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

SUBJECT: R.E. GINNA NUCLEAR POWER PLANT, LLC – INTEGRATED INSPECTION REPORT 05000244/2021002 DATED AUGUST 3, 2021

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

Docket Number: 05000244

License Number: DPR-18

Report Number: 05000244/2021002

Enterprise Identifier: I-2021-002-0040

Licensee: Exelon Generation Company, LLC

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

Location: Ontario, New York

Inspection Dates: April 01, 2021 to June 30, 2021

Inspectors: J. Schussler, Senior Resident Inspector
S. Monarque, Resident Inspector
S. Shaffer, Senior Health Physicist
S. Veunephachan, Health Physicist

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

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated 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

None.

PLANT STATUS

Ginna began the inspection period at 100 percent power. The unit remained at, or near, 100 percent power for the entire 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 and regional 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, increasing the amount of time on site as local COVID-19 conditions permitted. As part of their onsite activities, resident inspectors 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 a 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

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (6 Samples)

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

- (1) 'A' residual heat removal train during maintenance on 'B' residual heat removal pump and valves on April 7, 2021
- (2) 'B' residual heat removal train following system surveillance testing on April 8, 2021
- (3) Turbine driven auxiliary feedwater train following surveillance testing on May 5, 2021
- (4) 'A' and 'B' component cooling water trains following service water pipe replacement on May 19, 2021
- (5) 'B' safety injection train during maintenance on 'A' safety injection pump on June 24, 2021
- (6) 'B' emergency diesel generator train following system surveillance testing on June 28, 2021

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

- (1) The inspectors evaluated system configurations during a complete walkdown of the 'A' auxiliary feedwater train following maintenance and surveillance testing on June 25, 2021

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) Auxiliary building residual heat removal sub-basement and residual heat removal heat exchanger room on April 6, 2021
- (2) 'B' battery room on June 23, 2021
- (3) Technical support center diesel room on June 23, 2021
- (4) 'A' battery room on June 28, 2021

71111.06 - Flood Protection Measures

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

The inspectors evaluated internal flooding mitigation protections as follows:

- (1) Relay room, emergency diesel generator room, battery room, and main control room doors for susceptibility to flooding on April 26, 2021

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance of the following activities in the control room:
 - Shift turnover on May 10, 2021
 - Instrumentation adjustment following nuclear instrumentation system calibrations on May 24, 2021
 - Core flux map quarterly surveillance on June 8, 2021

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

- (1) The inspectors observed operator performance in the simulator during licensed operator requalification training on May 4, 2021. The training involved a scenario that contained, but was not limited to, a failure of a pressurizer level detector, followed by two separate single dropped rod concurrent events, and reactor coolant leakage.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (1 Sample)

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

- (1) 'B' residual heat removal heat exchanger and pump on June 2, 2021

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (9 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) Elevated risk (green) during planned maintenance of 'B' residual heat removal pump on April 5, 2021
- (2) Elevated risk (action green) during planned maintenance of 'A' motor driven auxiliary feedwater pump on April 22, 2021
- (3) Elevated risk (green) during planned maintenance of service water piping to 'B' component cooling water heat exchanger on May 5, 2021
- (4) Elevated risk (green) during planned maintenance of offsite circuit 767 on May 11, 2021
- (5) Elevated risk (action green) during planned maintenance of 'A' service water pump on May 17, 2021
- (6) Elevated risk (action green) during planned maintenance and replacement of 'A' auxiliary feedwater pump inboard bearing on May 19, 2021
- (7) Elevated risk (action green) during planned maintenance of 'P' motor control center and plant risk impact on 'B' control room emergency air treatment system on June 1, 2021
- (8) Elevated risk (action green) during unplanned maintenance of 'A' service water motor on June 3, 2021
- (9) Elevated risk (action green) during planned maintenance of 'A' residual heat removal heat exchanger air operated valve, return line flow transmitter, and relief valves flow transmitter for redundant residual heat removal flow and discharge check valve on June 8, 2021

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (3 Samples)

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

- (1) 'A' motor driven auxiliary feedwater pump due to lube oil heat exchanger service water leakage past solenoid operated valve 4325 on June 2, 2021
- (2) Control rod drive mechanism spectral loading analysis, OpEVAL-21-002, on June 28, 2021

- (3) Fuel pump cover 1L not secured prior to and during emergency diesel generator surveillance testing on June 30, 2021

71111.18 - Plant Modifications

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

The inspectors evaluated the following temporary or permanent modifications:

- (1) ECP-21-000008, Replace half-inch service water pipe to 'A' motor driven auxiliary feedwater pump lube oil cooler with one-inch pipe on April 21, 2021
- (2) ECP-18-000085, Installation of steel beams (gussets) to 'B' residual heat removal pump foundation on May 13, 2021

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (7 Samples)

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

- (1) Operational testing of the 'B' residual heat removal pump following planned maintenance of the pump foundation on April 8, 2021
- (2) Operational testing of the 'B' residual heat removal exchanger head flange joints following installation of injection washers and wire gauge on April 9, 2021
- (3) Operational testing of the diesel driven air compressor following planned filter replacement and inspections of the engine, compressor and air hose on April 12, 2021
- (4) Operational testing of the 'A' auxiliary feedwater pump following planned maintenance of the service water piping to the 'A' auxiliary feedwater pump oil cooler on April 22, 2021
- (5) Operational testing of the 'A' service water comprehensive pump following planned maintenance of the 'A' service water pump and discharge check valve on May 19, 2021
- (6) Operational testing of the service water solenoid operated valve 4325 following unplanned maintenance to replace the valve which provides cooling water to the 'A' motor driven auxiliary feedwater pump lube oil cooler on May 21, 2021
- (7) Operational testing of the 'A' auxiliary feedwater pump following planned maintenance and replacement of the inboard bearing on the 'A' motor driven auxiliary feedwater pump on May 21, 2021

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (5 Samples)

- (1) STP-O-40.4, "SAFW Diesel Generator (KDG08) Run Test" on May 27, 2021
- (2) STP-O-27.2, "Tendon Surveillance Program" on June 2, 2021
- (3) STP-O-16QT, "Auxiliary Feedwater Turbine Pump - Quarterly" on June 9, 2021

- (4) STP-O-2.1QA, "Safety Injection Pump 'A' Quarterly Test" on June 17, 2021
- (5) CH-120, "Primary System Analysis Schedule and Limits" on June 29, 2021

Inservice Testing (IP Section 03.01) (1 Sample)

- (1) STP-O-16QB, "Auxiliary Feedwater Train 'B' - Quarterly" on June 3, 2021

FLEX Testing (IP Section 03.02) (1 Sample)

- (1) STP-O-40.0, "Diesel Driven Flex Air Compressor 'A' (CBD01A) Periodic Test" (OpESS 2020/01) on May 24, 2021

71114.06 - Drill Evaluation

Drill/Training Evolution Observation (IP Section 03.02) (2 Samples)

- (1) The inspectors evaluated emergency drills in the simulator control room, technical support center and emergency offsite facility of the following: Alert, Site Area Emergency and General Emergency declaration due to a scenario which contained, but was not limited to, a reactor coolant system loss of coolant accident followed by an unisolable leak from containment to auxiliary building through penetration 102 alternate charging on April 13, 2021
- (2) The inspectors evaluated emergency drills in the simulator control room, technical support center and emergency offsite facility of the following: Notification of Unusual Event, Alert, Site Area Emergency and General Emergency declaration due to a scenario which contained, but was not limited to, a reactor coolant system loss of coolant accident from loop 'A' followed by an unisolable leak from containment through the equipment hatch on May 25, 2021

RADIATION SAFETY

71124.02 - Occupational ALARA Planning and Controls

Radiological Work Planning (IP Section 03.01) (4 Samples)

The inspectors evaluated the integration of as low as is reasonably achievable planning into the following work activities:

- (1) ALARA Plan AP-20-00510, Valves
- (2) ALARA Plan AP-20-00510, Reactor Head Disassembly/Reassembly
- (3) ALARA Plan AP-20-01103, RP/RW Outage Activities
- (4) ALARA Plan AP-20-00614, Reactor Head/Upper and Lower Internals

Verification of Dose Estimates and Exposure Tracking Systems (IP Section 03.02) (4 Samples)

The inspectors evaluated dose estimates and exposure tracking.

- (1) ALARA Plan AP-20-00510, Valves
- (2) ALARA Plan AP-20-00510, Reactor Head Disassembly/Reassembly
- (3) ALARA Plan AP-20-01103, RP/RW Outage Activities
- (4) ALARA Plan AP-20-00614, Reactor Head/Upper and Lower Internals

Implementation of ALARA and Radiological Work Controls (IP Section 03.03) (3 Samples)

The inspectors evaluated the licensee's communication of as low as is reasonably achievable ALARA and radiological work controls for the following work activities:

- (1) ALARA Plan 20-00204, ISFSI Activities
- (2) ALARA Plan AP-20-00614, Reactor Head/Upper and Lower Internals
- (3) Auxiliary Ventilation Filter Efficiency Testing under RWP-20-00103

Radiation Worker Performance (IP Section 03.04) (1 Sample)

The inspectors evaluated radiation worker and radiation protection technician performance during:

- (1) The inspectors evaluated the implementation of as low as is reasonably achievable techniques for work activities during auxiliary ventilation filter testing

71124.05 - Radiation Monitoring Instrumentation

Walkdowns and Observations (IP Section 03.01) (8 Samples)

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

- (1) Remball at the radiologically controlled area (RCA) checkpoint
- (2) SAMs at the RCA checkpoint
- (3) Telepoles stored at the RCA checkpoint
- (4) RO-20AAs available for checkout
- (5) R-6, Nuclear sample room radiation monitor
- (6) R-19, Steam blowdown isolation radiation monitor
- (7) Auxiliary building particulate, iodine, and noble gas (PING) radiation monitor
- (8) RM-14SA, Frisker in the auxiliary building

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

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

- (1) MicroRem, SN C093E, 03/19/21
- (2) RE-2, Containment Area Radiation Monitor, 04/06/20
- (3) RE-13, Plant Vent Particulate Radiation Detector, 11/23/20
- (4) RE-18, Liquid Waste Disposal Detector, 8/28/20
- (5) RE-29, Containment High Range Area Detector, 04/06/20
- (6) R-32, Steam Generator B Steam Line Monitor, 12/11/21
- (7) RDS-30, SN 370190, 06/29/20
- (8) RDS-31ITX, SN 720465, 11/09/21
- (9) Remball, SN 173/NRD 2, 09/30/20
- (10) RM14SA, SN 438, 09/27/20
- (11) RM25, SN 646, 10/02/20
- (12) RO-20, SN 2643, 04/18/21
- (13) Telepole, EN 079387, 04/05/21

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) Plant vent continuous air monitor, RM-10B/13/14
- (2) Steam blowdown radiation monitor, R-19

71124.07 - Radiological Environmental Monitoring Program

Environmental Monitoring Equipment and Sampling (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated environmental monitoring equipment and observed a collection of environmental samples

Radiological Environmental Monitoring Program (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the implementation of the licensee's radiological environmental monitoring program

GPI Implementation (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated the licensee's implementation of the Groundwater Protection Initiative program to identify incomplete or discontinued program elements. The inspectors did not identify any discontinued or incomplete program elements

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS05: Safety System Functional Failures (SSFFs) Sample (IP Section 03.04) (1 Sample)

- (1) Submitted data from April 1, 2020 through March 31, 2021

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 03.10) (1 Sample)

- (1) Submitted data from April 1, 2020 through March 31, 2021

BI02: RCS Leak Rate Sample (IP Section 03.11) (1 Sample)

- (1) Submitted data from April 1, 2020 through March 31, 2021

71152 - Problem Identification and Resolution

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

- (1) The inspectors reviewed Exelon's corrective action program for potential adverse trends that might be indicative of a more significant safety issue on June 30, 2021

INSPECTION RESULTS

Observation: Semiannual Trend Review	71152
<p>The inspectors reviewed Exelon's corrective action program and issues which have been documented outside the normal corrective action program for trends that might be indicative of a more significant safety issue on June 30, 2021. The inspectors evaluated a sample of issues and events that occurred over the course of the first and second quarters of 2021 to determine whether issues were appropriately considered as potential, emerging, or adverse trends. The inspectors verified that these issues were addressed within the scope of the corrective action program or through department review.</p> <p>The evaluation did not reveal any new trends that could indicate a more significant safety issue. The inspectors determined that Exelon personnel were identifying trend issues at a low threshold, entered them into the corrective action program for resolution and had appropriately prioritized investigation reviews. The inspectors noted low level or precursor trends identified by Exelon staff in the areas of communication, housekeeping, dry boric acid leaks, FLEX equipment issues and nuclear instrumentation system card bistables. The inspectors noted a minor adverse trend in the fire protection system S-15 regarding associated equipment and alarms. Exelon entered this potential trend into their corrective action program as AR 04432542.</p> <p>There were no adverse safety consequences as a result of these low-level trend issues. Based on the overall results of the semiannual trend review, the inspectors determined that Exelon had properly identified adverse trends at Ginna before they became more significant safety problems. The inspectors independently evaluated the deficiencies noted above for significance in accordance with the guidance in IMC 0612, Appendix B, "Issue Screening," and Appendix E, "Examples of Minor Issues." The inspectors determined that none of the conditions were deficiencies of greater than minor significance and, therefore, are not subject to enforcement action in accordance with the NRC's Enforcement Policy.</p>	

EXIT MEETINGS AND DEBRIEFS

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

- On July 21, 2021, the inspectors presented the integrated inspection results to Mr. Daren Blankenship, Plant Manager and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Corrective Action Documents	AR04419697	LG-6511 and TDAFW inboard bubbler found askew	04/28/2021
	Procedures	STP-O-30.1	Safety Injection System Valve and Breaker Position Verification	Revision 005
		STP-O-30.2	Residual Heat Removal Valve and Breaker Position Verification	Revision 001
71111.06	Work Orders	C93742936	Perform Visual Inspection and Replacement - Door Neoprene Gaskets ('A' Train)	04/21/2021
71111.15	Corrective Action Documents	AR04416346	Non-Conservative Values in CRDM Analysis	Revision 0
	Engineering Changes	ECP-21-000205	Perform modal analysis of the Ginna Control rod drive mechanism	Revision 000
	Operability Evaluations	OPEVAL-21-002	Control Rod Drive Mechanism	Revision 000
71111.18	Corrective Action Documents Resulting from Inspection	AR04417825	Cavity in Foam Penetration I-70-P	04/20/2021
71111.19	Corrective Action Documents	AR04417687	A AFW Pump PIV point found in Alert Range	04/20/2021
		AR04417688	Speed (P) Outboard Axial SOA Nearing Alert Range	04/20/2021
		AR04424440	PSW01A differential pressure outside acceptable range due to maintenance	05/19/2021
		AR04424442	A Service Water Rebaseline unable to reach lower value	05/19/2021
		AR04424622	FME- Locator pin not found in expected location	05/19/2021
		AR04424662	Leakby Identified during STP-O-16QA during SOV-4325 CHECK	05/21/2021
	Corrective Action Documents Resulting from Inspection	AR04415115	C2P- Valve Label 1810B Found on Ground	04/08/2021
	Procedures	STP-O-16QA	Auxiliary Feedwater Pump A - Quarterly	Revision 026
STP-O-2.2QB		Residual Heat Removal Pump B Inservice Test	Revision 024	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		STP-O-2.7.1-COMP-A	A Service Water Comprehensive Pump Test	Revision 027
	Work Orders	C93728574	Service Water Pump A	Revision 0
		C93767427	Replace Strainer Bypass Solenoid 4325, for the 'A' MDAFW Pump	Revision 0
		C93783289	Auxiliary Feedwater Pump A	Revision 0
		C93783989	Residual Heat Removal Heat Exchanger	03/15/2021
71111.22	Corrective Action Documents	AR04422247	TSP ISI IWL inspection: Bearing Plate Corrosion Indications	05/07/2021
	Procedures	STP-O-27.2	Tendon Surveillance Program	Revision 006
		STP-O-40.4	SAFW Diesel Generator (KDG08) Run test	Revision 013
		STP-O-40.6	SAFW and NFPA Diesel Generators (KDG08/KDG09) Pre-Startup Alignment	Revision 003
	Work Orders	C93721958	Reactor Containment Tendon	