



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BLVD., Suite 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713**

May 1, 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: R.E. GINNA NUCLEAR POWER PLANT, LLC – INTEGRATED INSPECTION  
REPORT 05000244/2018001

Dear Mr. Hanson:

On March 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at R.E. Ginna Nuclear Power Plant, LLC (Ginna). On April 16, 2018, the NRC inspectors discussed the results of this inspection with Mr. William Carsky, Site Vice President and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any finding or violation of more than minor significance. 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 Catts, Acting Chief  
Reactor Projects Branch 1  
Division of Reactor Projects

Docket Number: 50-244

License Number: DPR-18

Enclosure:  
Inspection Report 05000244/2018001

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SUBJECT: R.E. GINNA NUCLEAR POWER PLANT, LLC – INTEGRATED INSPECTION REPORT 05000244/2018001 DATED MAY 1, 2018

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

Docket Number: 50-244

License Number: DPR-18

Report Number: 05000244/2018001

Enterprise Identifier: I-2018-001-0045

Licensee: Exelon Generation Company, LLC (Exelon)

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

Location: Ontario, New York

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

Inspectors: N. Perry, Senior Resident Inspector  
J. Schussler, Resident Inspector  
A. Rosebrook, Senior Project Engineer  
H. Anagnostopoulos, Senior Health Physicist  
S. Obadina, Project Engineer

Observer: K. Warner, 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 Ginna 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.

No findings or more-than-minor violations were identified.

## Additional Tracking Items

Type	Issue number	Title	Report Section	Status
LER	05000244/2018001-00	Leakage in Reactor Coolant System Pressure Boundary	N/A	Open
LER	05000244/2017001-01	During Surveillance Testing, Lift Pressure Setpoints on Three Main Steam Safety Valves Found Outside Technical Specification Limits	71153	Open/Closed

## PLANT STATUS

The unit began the inspection period at 100 percent power and operated at full power until March 8, 2018, when the unit was shut down to replace a faulty current transformer on the main generator's output line. The unit was returned to rated power on March 13, following replacement of the current transformer, and it remained at or near 100 percent power for the remainder of the inspection period.

## INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors 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 Exelon's performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards."

## REACTOR SAFETY

### 71111.01 - Adverse Weather Protection

#### Impending Severe Weather (1 Sample)

The inspectors evaluated readiness for impending adverse weather conditions for predicted heavy snow accumulation on March 1, 2018.

### 71111.04 - Equipment Alignment

#### Partial Walkdown (3 Samples)

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

- (1) 'C' standby auxiliary feedwater on January 26, 2018
- (2) Turbine-driven auxiliary feedwater on March 9, 2018
- (3) 'B' safety injection on March 22, 2018

### 71111.05Q - Fire Protection Quarterly

#### Quarterly Inspection (5 Samples)

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

- (1) Compensatory measures during replacement of fire water piping in 'A' emergency diesel generator room on January 17, 2018
- (2) 'B' battery room on February 16, 2018
- (3) Intermediate building controlled side basement on March 22, 2018
- (4) Intermediate building controlled side top floor on March 30, 2018
- (5) Hemyc wrap on March 30, 2018

#### 71111.06 - Flood Protection Measures

##### Cables (1 Sample)

The inspectors evaluated cable submergence protection in:

- (1) Manholes MH1A-01, MH1B-01, MH3-03 West, MH5A-01, 02, and 03 on February 19 and 20, 2018.

#### 71111.11 - Licensed Operator Requalification Program and Licensed Operator Performance

##### Operator Requalification (1 Sample)

The inspectors observed and evaluated a crew of licensed operators in the plant's simulator during licensed operator requalification training, involving a failed steam flow transmitter, trip of a running component cooling water pump, a main steam line leak and a steam generator tube rupture, on February 13, 2018.

##### Operator Performance (1 Sample)

The inspectors observed Control Room operator performance during a lowering water level in the screen house intake on February 13, 2018, power decrease for the turbine-driven auxiliary feedwater run on March 7, 2018, and start up activities on March 10 to March 13, 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) House heating boiler maintenance rule (a)(1) evaluation on March 1, 2018
- (2) Chemical and volume control system (charging) on March 6, 2018

#### 71111.13 - Maintenance Risk Assessments and Emergent Work Control (5 Samples)

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

- (1) Elevated risk for planned under-voltage testing on electrical busses 16 and 17 on February 1, 2018
- (2) Atmospheric relief valve 3411 hand-wheel planned replacement on February 27, 2018

- (3) 'A' residual heat removal planned maintenance on March 15, 2018
- (4) 'C' safety injection pump planned maintenance on March 21 and March 22, 2018
- (5) 'A' component cooling water planned maintenance on March 26, 2018

#### 71111.15 - Operability Determinations and Functionality Assessments (4 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) 'A' emergency diesel generator due to a ground on a lube oil heater on January 12, 2018
- (2) 'B' battery room vault water intrusion on January 31, 2018
- (3) Fire suppression system S-15 alarm inputs on February 13, 2018
- (4) Main steam safety valve 3512 seat leakage on February 28, 2018

#### 71111.19 - Post Maintenance Testing (7 Samples)

The inspectors evaluated post maintenance testing for the following maintenance/repair activities:

- (1) Excess letdown divert valve AOV-312 gag installation on February 12, 2018
- (2) 'A' spent fuel pool pump check valve, CV-8655 maintenance, on February 13, 2018
- (3) 'A' spent fuel pool pump maintenance and diode replacement on February 16, 2018
- (4) 'A' flex diesel air compressor preventive maintenance on February 22, 2018
- (5) 'D' service water pump/motor replacement and maintenance on March 3, 2018
- (6) 'A' residual heat removal pump/motor alignment on March 15, 2018
- (7) Technical support center ventilation fan maintenance on March 22, 2018

#### 71111.20 - Refueling and Other Outage Activities (1 Sample)

The inspectors evaluated forced outage activities from March 7 to March 10, 2018.

#### 71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

##### Routine (3 Samples)

- (1) STP-O-16QA, 'A' motor driven auxiliary feedwater pump surveillance test on January 10, 2018
- (2) STP-O-40.5, national fire protection association emergency diesel generator surveillance test on February 9, 2018
- (3) STP-O-12.1, 'A' emergency diesel generator surveillance test on February 12, 2018

##### Inservice (1 Sample)

- (1) STP-O-3QB, containment spray pump 'B' quarterly test on March 20, 2018

## **RADIATION SAFETY**

### 71124.02 - Occupational As Low As Reasonably Achievable (ALARA) Planning and Controls

#### Radiological Work Planning (1 Sample)

The inspectors evaluated Exelon's radiological work planning by reviewing the following activities:

- (1) ALARA Plan 2017-1009
- (2) ALARA Plan 2017-1018
- (3) ALARA Plan 2017-1036

#### Verification of Dose Estimates and Exposure Tracking Systems (1 Sample)

The inspectors evaluated dose estimates and exposure tracking.

#### Implementation of ALARA and Radiological Work Controls (1 Sample)

The inspectors reviewed ALARA practices and radiological work controls by reviewing the following activities:

- (1) ALARA Plan 2017-1009
- (2) ALARA Plan 2017-1018
- (3) ALARA Plan 2017-1036

## **OTHER ACTIVITIES – BASELINE**

### 71151 - Performance Indicator Verification

The inspectors verified Exelon's performance indicator submittals listed below. (3 Samples)

- (1) Unplanned Scrams on March 16, 2018
- (2) Unplanned Scrams with Complications on March 16, 2018
- (3) Unplanned Power Changes Per 7000 Critical Hours on March 16, 2018

### 71152 - Problem Identification and Resolution

#### Annual Follow-up of Selected Issues (1 Sample)

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

- (1) Maintenance Rule availability performance criteria and reliability performance criteria selection in accordance with Exelon procedure ER-AA-310-1003 Revision 5, on March 30, 2018. Action Request (AR) 04126470 and 02658070.



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

### Events (2 Samples)

The inspectors evaluated response to the following events.

- (1) Reactor coolant system leak January 23 through January 27, 2018
- (2) Forced outage March 7 to March 10, 2018

### Licensee Event Reports (1 Sample)

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

- (1) Licensee Event Report (LER) 05000244/2017-001-01, During surveillance testing, lift pressure set points on three main stream safety valves found outside Technical Specifications limits on March 23, 2018. Revision 0 of this LER was previously closed in Inspection Report 05000244/2017004. Revision 1 updates the LER with the results of the cause evaluation. No additional findings were identified. This LER is closed.

### Personnel Performance (1 Sample)

- (1) Unplanned plant shutdown March 8 to 9, 2018, due to a current transformer failure on the main generator outgoing power line.

## **INSPECTION RESULTS**

Minor Violation	71152 Follow-up of Selected Issues
<p>Minor Violation: Title 10 of the <i>Code of Federal Regulations</i> (10 CFR) 50.65 (a)(2) allows safety system structure and components to not be monitored under 10 CFR 50 (a)(1), if an adequate demonstration that system performance is being maintained through effective maintenance is provided. In order to demonstrate this, Maintenance Rule availability performance criteria and reliability performance criteria are established and selected in accordance with Exelon procedure ER-AA-310-1003, "Maintenance Rule – Performance Criteria Selection." Section 4.4, "Selecting Reliability Performance Criteria," Attachment 3, "Process for Selecting Reliability Performance Criteria," contains a process to be used in which a criteria greater than or equal to two is acceptable with documentation of past performance. Contrary to the above, two maintenance rule systems contained criteria greater than or equal to two without documentation of past performance in the "Basis and Justification for Criteria Values" section of the maintenance rule basis document. Thus, an adequate technical basis was not documented for a required 10 CFR 50.65 (a)(2) performance criteria in accordance with Exelon's procedures.</p> <p>Screening: The inspectors independently evaluated the deficiency for significance in accordance with the guidance in IMC 0612, Appendix B, "Issue Screening," issued December 31, 2017, and Appendix E, "Examples of Minor Issues," issued August 11, 2009. The inspectors determined that not documenting the past performance, which was used to determine the reliability criteria, was a deficiency of minor significance since the criteria</p>	

selected did not require a maintenance rule a(1) evaluation. As a result it is not subject to enforcement action in accordance with the NRC's enforcement policy. This issue was captured in Exelon's Corrective Action Program as AR 04126470 and 02658070.

Enforcement: This failure to comply with procedure ER-AA-310-1003, Revision 5, constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

## **EXIT MEETINGS AND DEBRIEFS**

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

- On March 22, 2018, the inspectors presented the inspection results related to IP 71124.02 to Mr. William Carsky, Site Vice President, and other members of the Ginna staff.
- On April 16, 2018, the inspectors presented the integrated quarterly resident inspector report inspection results to Mr. William Carsky, Site Vice President and other members of the Ginna staff.

**DOCUMENTS REVIEWED****71111.01 - Adverse Weather Protection**Procedures

ER-SC.1, Adverse Weather Plan, Revision 024

**71111.05 - Fire Protection**Procedures

A-54.7, Fire Protection Tour, Revision 37

A-601.13, Fire Protection Compensatory Actions, Revision 8

FPS-3, Fire Barrier Inspection Program, Revision 3

**71111.06 - Flood Protection Measures**Condition Reports

04106112      04106114      04106123

Drawings

33013-0014, 34.5KV Duct & Control Duct Plan & Profile, Revision L

Maintenance Orders/Work Orders

WO C93597827

**71111.11 - Licensed Operator Regualification Program**Procedures

HU-AA-1211, Pre-Job Briefings, Revision 11

OP-AA-101-113-1006, 4.0 Crew Critique Guidelines, Revision 9

TQ-GI-150-F31 (LORT), Ginna Site Specific License Operator Regualification Training Program,  
Revision 4

**71111.12 - Maintenance Effectiveness**Procedures

ER-AA-310, Implementation of the Maintenance Rule, Revision 11

ER-AA-310-1001, Maintenance Rule – Scoping, Revision 4

ER-AA-310-1002, Maintenance Rule Functions – Safety Significance Classification, Revision 3

ER-AA-310-1003, Maintenance Rule – Performance Criteria Selection, Revision 5

ER-AA-310-1004, Maintenance Rule – Performance Monitoring, Revision 14

ER-AA-310-1005, Maintenance Rule – Dispositioning Between (A)(1) and (A)(2), Revision 7

Condition Reports

04068393      04083945

**71111.13 - Maintenance Risk Assessments and Emergent Work Control**Procedures

OP-AA-102-102, General Area Checks and Operator Field Rounds, Revision 15  
 OP-AA-108-117, Protected Equipment Program, Revision 5  
 OPG-PROTECTED-EQUIPMENT, Operations Protected Equipment Program, Revision 18  
 WC-AA-101, On-Line Work Control Process, Revision 27  
 WC-AA-101-1006, On-Line Risk Management and Assessment, Revision 2  
 WC-AA-104, Integrated Risk Management, Revision 25

Condition Reports

04099860

**71111.15 - Operability Determinations and Functionality Assessments**Procedures

A-3.3, Containment Integrity Program, Revision 27  
 OP-AA-108-115, Operability Determinations, Revision 19

Condition Reports

02534565    04091493    04096584    04099235    04101267    04108798\*

Miscellaneous

ECP-17-000051, Technical Evaluation of Lube Oil Heaters, Revision 0  
 OPEVAL-15-008, 64 – 125 VDC Electrical System SR, 65 – Diesel Generator Emergency Power System, Revision 1  
 OPEVAL-18-001, S/G 'B' Main Steam Safety Valve 3512, Revision 1

**71152 - Problem Identification and Resolution**Procedures

ER-AA-310, Implementation of the Maintenance Rule, Revision 11  
 ER-AA-310-1003, Maintenance Rule – Performance Criteria Selection, Revision 5  
 ER-AA-310-1004, Maintenance Rule – Performance Monitoring, Revision 14  
 ER-AA-310-1005, Maintenance Rule – Dispositioning Between (a)(1) and (a)(2), Revision 7  
 PI-AA-120, Issue Identification and Screening Process, Revision 7  
 PI-AA-125, Corrective Action Program (CAP) Procedure, Revision 4

Condition Reports (\*initiated in response to inspection)

AR 02658070 AR 04126470\*

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

A-80, Startup Readiness Control, Revision 019  
 AP-TURB.5, Rapid Load Reduction, Revision 018

Condition Reports

04096294    04097619

Maintenance Orders/Work Orders

WO C93654311