



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BLVD.  
KING OF PRUSSIA, PA 19406-2713

August 2, 2017

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 05000244/2017002

Dear Mr. Hanson:

On June 30, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at R.E. Ginna Nuclear Power Plant, LLC (Ginna). On July 12, 2017, the NRC inspectors discussed the results of this inspection with Mr. Paul Swift, Plant General Manager, and other members of the Ginna 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 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,

/RA/

Anthony Dimitriadis, Chief  
Reactor Projects Branch 1  
Division of Reactor Projects

Docket No. 50-244  
License No. DPR-18

Enclosure:  
Inspection Report 05000244/2017002  
w/Attachment: Supplementary Information

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION I**

Docket No. 50-244

License No. DPR-18

Report No. 05000244/2017002

Licensee: Exelon Generation Company, LLC (Exelon)

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

Location: Ontario, New York

Dates: April 1, 2017, through June 30, 2017

Inspectors: N. Perry, Senior Resident Inspector  
J. Schussler, Resident Inspector  
H. Anagnostopoulos, Senior Health Physicist  
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Approved by: Anthony Dimitriadis, Chief  
Reactor Projects Branch 1  
Division of Reactor Projects

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**SUMMARY**

Inspection Report 05000244/2017002; 04/01/2017 – 06/30/2017; Ginna; Routine Integrated Inspection Report.

This report covered a 3-month period of inspection by resident inspectors and announced baseline inspections performed by regional inspectors. No findings were identified during this inspection. The U.S. Nuclear Regulatory Commission's (NRC's) program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

**Cornerstone: Initiating Events/Mitigating Systems/Barrier Integrity**

No NRC-identified or self-revealing findings were identified during this inspection.

## REPORT DETAILS

### Summary of Plant Status

Ginna began the inspection period operating at 100 percent power. On April 23, 2017, operators commenced a shutdown for a planned refueling and maintenance outage (G1R40). The station entered Mode 6 (refueling) on April 27, 2017. Following the completion of refueling and maintenance activities, operators commenced a reactor start-up on May 13, 2017. Operators returned the unit to 100 percent power on May 19, 2017. The unit remained at or near 100 percent power for the remainder of the inspection period.

### 1. REACTOR SAFETY

#### **Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

1R01 Adverse Weather Protection (71111.01 – 2 samples)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

On June 1, 2017, the inspectors reviewed Exelon's readiness for the onset of seasonal high temperatures. The review focused on the intermediate building clean side steam header area, relay room, 'A' and 'B' battery rooms, electrical power substation 13A, and the emergency diesel generators (EDGs). The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications (TSs), control room logs, and the CAP to determine what temperatures or other seasonal weather could challenge these systems, and to ensure Exelon personnel had adequately prepared for these challenges. The inspectors reviewed station procedures, including Exelon's seasonal weather preparation procedure and applicable operating procedures. The inspectors performed walkdowns of the selected systems to ensure station personnel identified issues that could challenge the operability of the systems during hot weather conditions. Documents reviewed for each section in this report are listed in the Attachments.

b. Findings

No findings were identified.

.2 Summer Readiness of Offsite and Alternating Current (AC) Power Systems

a. Inspection Scope

The inspectors reviewed plant features and procedures for the operation and continued availability of the offsite and alternate AC power systems to evaluate readiness of the systems prior to seasonal high grid loading. The inspectors reviewed Exelon's procedures affecting these areas and the communications protocols between the transmission system operator and Exelon. This review focused on changes to the established program and material condition of the offsite and alternate AC power

equipment. The inspectors assessed whether Exelon established and implemented appropriate procedures and protocols to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system. The inspectors evaluated the material condition of the associated equipment by interviewing electricians, reviewing action requests (ARs) and open work orders (WOs), and walking down portions of the offsite and AC power systems, including the station 13A switchyard.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q – 4 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the systems below. The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the UFSAR, TSs, WOs, ARs, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted the system's performance of its intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether Exelon staff had properly identified equipment issues and entered them into the CAP for resolution with the appropriate significance characterization.

- Reactor head lift (O-15.2) on April 27 - 28, 2017
- 'A' safety injection (SI) system (O-30.1) on May 16, 2017
- Turbine-driven auxiliary feedwater (TDAFW) system on June 6, 2017
- 'D' standby auxiliary feedwater (AFW) system on June 29, 2017

b. Findings

No findings were identified.

.2 Full System Walkdown (71111.04S – 1 sample)

a. Inspection Scope

On May 12, 2017, the inspectors performed a complete system walkdown of accessible portions of the component cooling water (CCW) system to verify the existing equipment line-up was correct. The inspectors reviewed operating procedures, surveillance tests (STs), drawings, equipment line-up check-off lists, and the UFSAR to verify the system

was aligned to perform its required safety functions. The inspectors also reviewed electrical power availability, component lubrication and equipment cooling, hanger and support functionality, and operability of support systems. The inspectors performed field walkdowns of accessible portions of the systems to verify as-built system configuration matched plant documentation, and that system components and support equipment remained operable. The inspectors confirmed that systems and components were aligned correctly, free from interference from temporary services or isolation boundaries, environmentally qualified, and protected from external threats. The inspectors also examined the material condition of the components for degradation and observed operating parameters of equipment to verify that there were no deficiencies. Additionally, the inspectors reviewed a sample of related ARs and WOs to ensure Exelon appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 5 samples)

a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that Exelon controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of service (OOS), degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- 'B' EDG room, Fire Zone EDG1B, on April 21, 2017
- Containment basement, Fire Zone RC-1, on May 9, 2017
- Containment intermediate floor, Fire Zone RC-2, on May 9, 2017
- Containment operating floor, Fire Zone RC-3, on May 11, 2017
- Air handling room, Fire Zone AHR, on June 30, 2017

b. Findings

No findings were identified.



1R06 Flood Protection Measures (71111.06 – 1 sample)Internal Flooding Reviewa. Inspection Scope

On May 25, 2017, the inspectors reviewed the UFSAR, the site flooding analysis, and plant procedures to identify potential internal flooding susceptibilities for the site. The inspectors review focused on the auxiliary building. The inspectors verified the adequacy of internal tanks, flood barrier controls, equipment seals located below the flood line, floor and water penetration seals, watertight door seals, common drain lines and sumps, sump pumps, level alarms, control circuits, and temporary or removable flood barriers. The inspectors assessed the adequacy of operation actions that Exelon had identified as necessary to cope with flooding in this area and also reviewed the CAP to determine if Exelon was identifying and correcting problems associated with both flood mitigation features and site procedures for responding to flooding.

b. Findings

No findings were identified.

1R08 Inservice Inspection (71111.08P - 1 sample)a. Inspection Scope

On May 1-5 and 8-12, 2017, the inspectors conducted an inspection and review of the inservice inspection (ISI) program activities in order to assess the effectiveness of Exelon's program for monitoring degradation of the reactor coolant system (RCS) boundary and risk-significant piping system boundaries at Ginna.

Non-destructive Examination and Welding Activities (Section 02.01)

The inspectors reviewed the nondestructive evaluation (NDE) of American Society for Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section III, Class 1 Welds Reactor Pressure Vessel Support Pads N1A and N2B by record review. The inspectors evaluated the examination against the requirements of ASME B&PV Code, Section XI. The inspectors reviewed the NDE of ASME B&PV Code, Section III, Class 1 Upper Head-to-Upper Shell Circumferential Weld C1 and Upper Shell Vertical Weld (Longitudinal) V-1. The inspectors compared the NDE against the applicable Exelon procedure ER-AA-335-049, "Ultrasonic Examination in Accordance with ASME Section V, Article 4."

For each evaluation, the inspectors verified that NDE activities were performed in accordance with the 2004 edition, without addenda, of the ASME B&PV Code requirements. When required by the code, the inspectors verified the nondestructive test met the requirements contained in ASME B&PV Code, Section XI, Mandatory Appendix VIII, Article VIII-2000, and the examination personnel were qualified in accordance with ASME Code, Section XI, Mandatory Appendix VII. No relevant indications were evaluated for acceptance or repair by Exelon staff. However, the

inspectors verified that indications and defects, if present, would have been dispositioned in accordance with the ASME Code and verified that relevant indications would have been compared to previous examinations to determine if any changes had occurred.

The inspectors verified risk-significant welds in the ISI program were chosen, by Exelon staff, based on Electric Power Research Institute (EPRI) TR-112657, "Revised Risk-Informed ISI Evaluation Procedure," Revision B-A (ADAMs No. ML013470102) with Code Case N-578-1, or Code Case N-716-1.

#### Welding on Pressure Boundary Systems

No pressure boundary risk significant welding activity was undertaken during this outage.

#### Vessel Upper Head Penetration Inspection Activities (Section 02.02)

The inspectors reviewed the examination procedure ER-AP-335-001, "Bare Metal Visual Examination for Nickel Alloy Steels," and reviewed the post-examination records. The inspectors reviewed Exelon's criteria for confirming visual examination quality and instructions for resolving interference or masking issues to confirm they were consistent with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(6)(ii)(D).

The inspectors reviewed the records concerning the extent of inspection for each penetration nozzle, including documents which resolved interference or masking issues to confirm that the extent of examination met 10 CFR 50.55a(g)(6)(ii)(D). The inspectors reviewed the records for vessel penetrations 1, 6, and 10:

- To confirm the coverage had been achieved and that limitations in coverage were properly recorded
- To verify that the activities were performed in accordance with the requirements of 10 CFR 50.55a(g)(6)(ii)(D)
- And to verify that indications and defects, if detected, were dispositioned in accordance with 10 CFR 50.55a(g)(6)(ii)(D)

The inspectors reviewed the examination records, and associated evaluations, and determined no penetrations were accepted for continued service with relevant indications. The inspectors verified that Exelon's acceptance standard for continued service was in accordance with 10 CFR 50.55a(g)(6)(ii)(D).

#### Boric Acid Corrosion Control Inspection Activities (Section 02.03)

The inspectors reviewed the following evaluations performed for boric acid found on RCS components valve 892B, valve 721, and valve 431A. The inspectors reviewed Exelon procedure ER-AP-331-1002, "Boric Acid Corrosion Control Program Identification, Screening and Evaluation," to determine if Exelon staff properly applied applicable corrosion rates to the affected components and properly assessed the effects of corrosion induced wastage on structural or pressure boundary integrity.

The inspectors reviewed the corrective actions for resolving boric acid leaks described in ARs 04003217, 04003249, and 04003192. The inspectors confirmed that these corrective actions were consistent with requirements of the ASME B&PV Code and 10 CFR Part 50, Appendix B, Criterion XVI.

#### Steam Generator Tube Inspection Activities (Section 02.04)

##### Pressure Testing

The inspectors did not review the in-situ screening criteria, used by Exelon staff, because no in-situ pressure testing was performed during this outage.

##### Degradation Management

The inspectors compared the number of tubes affected by loose parts and support wear, and limiting flaw sizes, with that predicted by the operational assessment, Technical Evaluation 0192-AST-101038, "R.E. Ginna Unit 1, End of Cycle 39, Steam Generator Degradation Assessment," dated April 18, 2017, to evaluate Exelon staff's relative accuracy in predicting degradation. The inspectors reviewed the results of the current examinations to determine how well Exelon staff were able to predict future tube performance by comparing the current results with the values predicted in the previous outage operational assessment. The inspectors then evaluated the scope of eddy current testing to determine if areas of potential degradation were inspected, noting if areas known to represent eddy current challenges were included. Lastly, the inspectors compared the steam generator tube eddy current examination scope and expansion criteria with TS requirements to determine if Exelon was in compliance with these requirements.

Exelon staff did not identify a new degradation mechanism during this inspection sequence.

The inspectors reviewed the level of tube degradation attributable to secondary side structures, such as foreign object abrasion. The inspectors reviewed secondary side examinations and compared the actions taken with the guidance contained in the Steam Generator Management Program: Steam Generator Integrity Assessment Guidelines, Part 10 (ML100480242). The inspectors reviewed Exelon staff's corrective action taken in response to any observed degradation.

##### Tube Repairs

The inspectors confirmed that Exelon has depth sizing techniques that provide reasonable estimates of the depth of degradation such that the typical TS repair limit of 40 percent through-wall can be implemented without a loss of tube integrity for the period of time between inspections.

##### Eddy Current Technique Qualification

The inspectors reviewed Exelon's vendor EPRI Pressurized Water Reactor Steam Generator Examination Guidelines Appendices H and I, "Examination Technique Specification Sheets," ETSS1\_EOC39\_B0B\_R0, ETSS2\_EOC39\_R0,

ETSS3\_EOC39\_1C\_R0, ETSS4\_EOC39\_2X16XP\_R0, and ETSS5\_EOC39\_RESP\_ROT0 to determine if the eddy current test probes and equipment are qualified for detection or sizing of the expected types of tube degradation. In particular, the inspectors focused the review on the site specific factors potentially affecting the qualification of one or more techniques (e.g., equipment, data quality/noise issues, and degradation mode). The inspectors reviewed the equipment and probes used for the examinations. The inspectors verified the appropriate eddy current probe (e.g., bobbin, pancake, or multi-coil type) was used to detect the type of flaw that might be expected. The inspectors verified the equipment was calibrated in accordance with the eddy current procedure and the ASME Code. The inspectors observed the resolution of buff indications on tubes R63C45, R66C38, and the resolution of a distorted support signal on R91C51.

### Secondary Side Degradation

The inspectors reviewed Exelon's corrective actions for loose parts or foreign material, in the secondary side of the steam generators. The inspectors verified that Exelon planned repairs or had performed an engineering evaluation of affected steam generator tubes. The inspectors observed the inspection of the secondary side of the steam generators and the process to remove foreign objects. For foreign objects that were inaccessible, and not removed, the inspectors determined that Exelon staff performed an evaluation that considered the potential effects of object migration and tube fretting damage.

### Identification and Resolution of Problems (Section 02.05)

The inspectors verified that Exelon staff were identifying ISI and steam generator problems at an appropriate threshold and had entered them in the CAP. The inspectors selected a sample of problems associated with ISI and steam generator inspections documented by Exelon staff and verified the appropriateness of the corrective actions. The inspectors used the guidance in NRC Inspection Procedure (IP) 71152, "Identification and Resolution of Problems," to evaluate the corrective actions. The inspectors also verified Exelon personnel were assessing the applicability of operating experience to the plant.

#### b. Findings

No findings were identified.

#### 1R11 Licensed Operator Regualification Program and Licensed Operator Performance (71111.11Q – 2 samples)

##### .1 Quarterly Review of Licensed Operator Regualification Testing and Training

#### a. Inspection Scope

On June 20, 2017, the inspectors observed licensed operator simulator training, which included a containment recirculation fan high vibration condition, a pressurizer pressure transmitter failing high, a non-regenerative heat exchanger tube leak, a loss of one offsite power circuit, a feedwater regulating valve controller failure, a main turbine high vibration condition, a failure of the motor-driven AFW pumps with the TDAFW pump

OOS, and a failure of one stop valve and both main steam isolation valves to close. The inspectors evaluated operator performance during the simulated event and verified completion of risk-significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the unit supervisor. The inspectors verified the accuracy and timeliness of the emergency classifications made by the shift manager and the TS action statements entered by the unit supervisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room

a. Inspection Scope

On May 13 and 14, 2017, the inspectors observed and reviewed reactor start-up and main generator grid synchronization in the main control room. The inspectors observed pre-shift briefings and reactivity control briefings to verify that the briefings met the criteria specified in procedures HU-AA-1211, "Pre-Job Briefings." Additionally, the inspectors observed the start-up activities to verify that procedure use, crew communications, and coordination of activities between work groups similarly met established expectations and standards.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 2 samples)

a. Inspection Scope

The inspector reviewed the samples listed below to assess the effectiveness of maintenance activities on structure, system, and component (SSC) performance and reliability. The inspectors reviewed system health reports, CAP documents, maintenance WOs, and maintenance rule (MR) basis documents to ensure that Exelon was identifying and properly evaluating performance problems within the scope of the MR. For each sample selected, the inspectors verified that the SSC was properly scoped into the MR in accordance with 10 CFR 50.65 and verified that the (a)(2) performance criteria established by Exelon staff were reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2).

Additionally, the inspectors ensured that Exelon staff was identifying and addressing common cause failures that occurred within and across MR system boundaries.

- Boric acid system on June 14, 2017
- Shroud fans on June 26, 2017

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 6 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and risk activities listed below to verify that Exelon performed the appropriate risk assessments prior to removing equipment from service. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable, the inspectors evaluated each activity to determine if Exelon personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and if the assessments were accurate and complete. When Exelon performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Planned maintenance on the 'B' EDG on April 5, 2017
- Planned maintenance on both the 'A' motor driven AFW pump and a reactor make-up valve on April 18, 2017
- Outage Protection Phase 1 & 2 on April 27, 2017
- Spent fuel pool cooling on May 1, 2017
- Reduced reactor vessel level inventory, May 8, 2017
- 'B' SI functional testing on May 10, 2017

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 4 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the degraded or non-conforming conditions listed below based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether TS operability was properly justified and the subject

component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and UFSAR to Exelon's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors assessed whether the measures in place would function as intended and were properly controlled by Exelon.

- 'A' shroud fan OOS on April 13, 2017
- Nuclear Instrument, Power Range Detector N-43 voltage drift high on June 2, 2017
- Intermediate building high area temperatures on June 12, 2017
- 'B' main feedwater pump motor elevated vibrations on June 19, 2017

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – 2 samples)

.1 Permanent Modifications

a. Inspection Scope

The inspectors evaluated the modifications listed below to verify that the design bases, licensing bases, and performance capability of the affected systems were not degraded by the modification. In addition, the inspectors reviewed modification documents associated with the design change, including piping configuration and flow path, pipe stress analysis, support design analysis, code applicability, and work planning instructions.

- Engineering Change Package (ECP)-17-000071, "Install Redundant Relief Valve on SI Accumulators," for the 'B' SI accumulator
- ECP-13-000522, "Nuclear Instrumentation System Source / Intermediate Range Drawer Replacement," for source range detector N-32

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 7 samples)

a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure were consistent with the information in the applicable licensing basis and/or design basis documents, that the test results were properly reviewed and accepted, and that problems were appropriately documented. The inspectors also

performed a walk-down of the affected job site, observed the pre-job brief and post-job critique where possible. Additionally, the inspectors confirmed that work site cleanliness was maintained, witnessed the test or reviewed test data to verify quality control hold points were performed and checked, and ensured that results adequately demonstrated restoration of the affected safety functions.

- 'B' EDG planned maintenance on April 5, 2017
- TDAFW lube oil planned maintenance on May 12, 2017
- Equipment hatch, personal access inner door seal planned maintenance and fitting replacement and on May 18, 2017, local leak rate test (LLRT)
- Technical support center diesel generator planned maintenance on June 9, 2017
- 'A' control room emergency air treatment system planned maintenance on June 13, 2017
- 'A' EDG and service water flow indicator, planned maintenance and repairs to the flow transmitter on June 14, 2017
- TDAFW planned maintenance on June 20, 2017

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20 – 1 sample)

a. Inspection Scope

The inspectors reviewed the station's work schedule and outage risk plan for the maintenance and refueling outage (G1R40) conducted April 24 through May 14, 2017. The inspectors reviewed Exelon's development and implementation of outage plans and schedules to verify that risk, industry experience, previous site-specific problems, and defense-in-depth were considered. During the outage, the inspectors observed portions of the shutdown and cooldown processes and monitored controls associated with the following outage activities:

- Configuration management, including maintenance of defense-in-depth, commensurate with the outage plan for the key safety functions and compliance with the applicable TSs when taking equipment OOS
- Implementation of clearance activities and confirmation that tags were properly hung and that equipment was appropriately configured to safely support the associated work or testing
- Installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication and instrument error accounting
- Status and configuration of electrical systems and switchyard activities to ensure that TSs were met
- Monitoring of decay heat removal operations
- Impact of outage work on the ability of the operators to operate the spent fuel pool cooling system



- Reactor water inventory controls, including flow paths, configurations, alternative means for inventory additions, and controls to prevent inventory loss
- Activities that could affect reactivity
- Maintenance of containment as required by TSs
- Refueling activities, including fuel handling and fuel receipt inspections
- Fatigue management
- Tracking of startup prerequisites, walkdown of the containment building to verify that debris had not been left which could block the emergency core cooling system suction strainers, and startup and ascension to full power operation
- Identification and resolution of problems related to G1R40 activities

b. Findings

No findings were identified

1R22 Surveillance Testing (71111.22 – 5 samples)

a. Inspection Scope

The inspectors observed performance of STs and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TSs, the UFSAR, and Exelon procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following STs:

- CH-PRI-SAMP-ROOM, Sampling in the Nuclear Sample Room on June 2, 2017
- STP-O-R-10.3, Preparation For and Performance of Main Steam Safety Valve (MSSV) Test Using Setpoint Verification Device on April 21, 2017
- STP-O-R-2.1-TR-B, SI Functional Test on May 10, 2017
- STP-O-23.3, LLRT of Makeup Water to PRT PEN 121A on May 3, 2017 (LLRT)
- STP-O-23.42, LLRT of Containment Air Isolation Pen 313 on May 11, 2017 (LLRT)

b. Findings

No findings were identified.

**Cornerstone: Emergency Preparedness**1EP6 Drill Evaluation (71114.06 – 2 samples).1 Emergency Preparedness Drill Observationsa. Inspection Scope

On June 27, 2017, the inspectors evaluated the conduct of a routine Exelon emergency drill to identify any potential weaknesses and deficiencies in the classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator and emergency operations facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the station drill critique to compare inspector observations with those identified by Exelon staff in order to evaluate Exelon's critique and to determine whether Exelon was properly identifying weaknesses and entering them into the CAP.

b. Findings

No findings were identified.

.2 Training Observationsa. Inspection Scope

On June 20, 2017, the inspectors observed a simulator training evolution for Exelon licensed operators which required Emergency Plan implementation by an operations crew. Exelon planned for this evolution to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that Exelon evaluators noted the same issues and entered them in the CAP.

b. Findings

No findings were identified.

## 2. RADIATION SAFETY

### Cornerstone: Occupational and Public Radiation Safety

#### 2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01 – 7 samples)

##### a. Inspection Scope

The inspectors reviewed Exelon's performance in assessing and controlling radiological hazards in the workplace. The inspectors used the requirements contained in 10 CFR Part 20, "Standards For Protection Against Radiation," TSs, Regulatory Guide (RG) 8.38, "Control of Access to High and Very High Radiation Areas of Nuclear Plants," and the procedures required by TSs as criteria for determining compliance.

##### Inspection Planning

The inspectors reviewed the performance indicators (PIs) for the occupational exposure cornerstone, radiation protection program audits, and reports of operational occurrences in occupational radiation safety since the last inspection.

##### Radiological Hazard Assessment (1 sample)

The inspectors conducted independent radiation measurements during walk-downs of the facility and reviewed the radiological survey program, air sampling and analysis, continuous air monitor use, recent plant radiation surveys for radiological work activities, and any changes to plant operations since the last inspection to verify survey adequacy of any new radiological hazards for onsite workers or members of the public.

##### Instructions to Workers (1 sample)

The inspectors reviewed high radiation area (HRA) work permit controls and use, observed containers of radioactive materials and assessed whether the containers were labeled and controlled in accordance with requirements.

The inspectors reviewed several occurrences where a worker's electronic personal dosimeter alarmed. The inspectors reviewed Exelon's evaluation of the incidents, documentation in the CAP, and whether compensatory dose evaluations were conducted when appropriate. The inspectors verified follow-up investigations of actual radiological conditions for unexpected radiological hazards were performed.

##### Contamination and Radioactive Material Control (1 sample)

The inspectors observed the monitoring of potentially contaminated material leaving the radiological controlled area and inspected the methods and radiation monitoring instrumentation used for control, survey, and release of that material. The inspectors selected several sealed sources from inventory records and assessed whether the sources were accounted for and were tested for loose surface contamination. The inspectors evaluated whether any recent transactions involving nationally tracked sources were reported in accordance with requirements.

### Radiological Hazards Control and Work Coverage (1 sample)

The inspectors evaluated in-plant radiological conditions and performed independent radiation measurements during facility walk-downs and observation of radiological work activities. The inspectors assessed whether posted surveys; radiation work permits (RWPs); worker radiological briefings and radiation protection job coverage; the use of continuous air monitoring, air sampling and engineering controls; and dosimetry monitoring were consistent with the present conditions. The inspectors examined the control of highly activated or contaminated materials stored within the spent fuel pool and the posting and physical controls for selected HRAs, locked high radiation areas (LHRAs) and very high radiation areas (VHRAs) to verify conformance with the occupational PI.

### Risk-Significant HRA and VHRA Controls (1 sample)

The inspectors reviewed the procedures and controls for HRAs, VHRAs, and radiological transient areas in the plant.

### Radiation Worker Performance and Radiation Protection Technician Proficiency (1 sample)

The inspectors evaluated radiation worker performance with respect to radiation protection work requirements. The inspectors evaluated radiation protection technicians in performance of radiation surveys and in providing radiological job coverage.

### Problem Identification and Resolution (1 sample)

The inspectors evaluated whether problems associated with radiation monitoring and exposure control (including operating experience) were identified at an appropriate threshold and properly addressed in the CAP.

#### b. Findings

No findings were identified.

### 2RS2 Occupational As Low As Is Reasonably Achievable Planning and Controls (71124.02 – 2 samples)

#### a. Inspection Scope

The inspectors assessed Exelon's performance with respect to maintaining occupational individual and collective radiation exposures as low as is reasonably achievable (ALARA). The inspectors used the requirements contained in 10 CFR Part 20, RGs 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be ALARA," and 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures ALARA," TSs, and procedures required by TSs as criteria for determining compliance.

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

The inspectors reviewed the current plant radiological source term and historical trend, plans for plant source term reduction, and contingency plans for changes in the source term as the result of changes in plant fuel performance or changes in plant primary chemistry.

The inspectors observed radiological work activities and evaluated the in-plant use of shielding and other engineering work controls based on the radiological controls and ALARA plans for those activities.

### Radiation Worker Performance (1 sample)

The inspectors observed radiation worker and radiation protection technician performance during radiological work to evaluate worker ALARA performance according to specified work controls and procedures. Workers were interviewed to assess their knowledge and awareness of planned and/or implemented radiological and ALARA work controls.

#### b. Findings

No findings were identified.

### **Cornerstone: Public Radiation Safety (PS)**

#### 2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06 – 6 samples)

##### a. Inspection Scope

The inspectors reviewed the treatment, monitoring, and control of radioactive gaseous and liquid effluents. The inspectors used the requirements in 10 CFR Part 20, 10 CFR Part 50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation To Meet the Criterion "ALARA" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents," TS, Offsite Dose Calculation Manual (ODCM), applicable industry standards, and procedures required by TSs as criteria for determining compliance.

##### Inspection Planning

The inspectors conducted in-office reviews of the Ginna 2015 and 2016 Annual Radioactive Effluent and Environmental Reports, radioactive effluent program documents, UFSAR, ODCM, and applicable event reports.

##### Walkdowns 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. The inspectors also observed potential unmonitored release

points and reviewed radiation monitoring system surveillance records and the routine processing and discharge of gaseous and liquid radioactive wastes.

Calibration and Testing Program (1 sample)

The inspectors reviewed gaseous and liquid effluent monitor instrument calibration, functional test results, and alarm set-points based on National Institute of Standards and Technology calibration traceability and ODCM specifications.

Sampling and Analyses (1 sample)

The inspectors reviewed radioactive effluent sampling activities, representative sampling requirements, compensatory measures taken during effluent discharges with inoperable effluent radiation monitoring instrumentation, the use of compensatory radioactive effluent sampling, and the results of the inter-laboratory and intra-laboratory comparison program including scaling of hard-to-detect isotopes.

Instrumentation and Equipment (1 sample)

The inspectors reviewed the methodology used to determine the radioactive effluent stack and vent flow rates to verify that the flow rates were consistent with TS/ODCM and UFSAR values. The inspectors reviewed radioactive effluent discharge system surveillance test results based on TS acceptance criteria. The inspectors verified that high-range effluent monitors used in emergency operating procedures were calibrated and operable and have post-accident effluent sampling capability.

Dose Calculations (1 sample)

The inspectors reviewed changes in reported dose values from the previous annual radioactive effluent release reports, several liquid and gaseous radioactive waste discharge permits, the scaling method for hard-to-detect radionuclides, ODCM changes, land use census changes, public dose calculations (monthly, quarterly, annual), and records of abnormal gaseous or liquid radioactive releases.

Problem Identification and Resolution (1 sample)

The inspectors evaluated whether problems associated with the radioactive effluent monitoring and control program were identified at an appropriate threshold and properly addressed in Exelon's CAP.

b. Findings

No findings were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification (71151 – 3 samples)

##### .1 Safety System Functional Failure (1 sample)

###### a. Inspection Scope

The inspectors sampled Exelon's submittals for the safety system functional failures (MS05) PI for the period of April 1, 2016 through March 31, 2017. To determine the accuracy of the PI data reported during those periods, inspectors used definitions and guidance contained in Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment PI Guideline," Revision 7, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 10 CFR 50.73." The inspectors reviewed Exelon's operator narrative logs, operability assessments, MR records, maintenance WOs, ARs, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

###### b. Findings

No findings were identified.

##### .2 RCS Specific Activity and RCS Leak Rate (2 samples)

###### a. Inspection Scope

The inspectors reviewed Exelon's submittal for the RCS specific activity (BI01) and RCS leak rate (BI02) PIs for the period April 1, 2016 through March 31, 2017. To determine the accuracy of the PI data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment PI Guideline," Revision 7. The inspectors also reviewed RCS sample analysis and control room logs of daily measurements of RCS leakage, and compared that information to the data reported by the PI. Additionally, the inspectors observed surveillance activities that determined the RCS identified leakage rate, and chemistry personnel taking and analyzing an RCS sample.

###### b. Findings

No findings were identified.

#### 4OA2 Problem Identification and Resolution (71152 – 2 samples)

##### .1 Routine Review of Problem Identification and Resolution Activities

###### a. Inspection Scope

As required by IP 71152, “Problem Identification and Resolution,” the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that Exelon entered issues into its CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the CAP and periodically attended AR screening meetings. The inspectors also confirmed, on a sampling basis, that, as applicable, for identified defects and non-conformances, Exelon performed an evaluation in accordance with 10 CFR Part 21, “Reporting of Defects and Noncompliance.”

###### b. Findings

No findings were identified.

##### .2 Annual Sample: Failures of Nuclear Instrumentation Drawers (1 sample)

###### a. Inspection Scope

The inspectors performed an in-depth review of Exelon’s evaluation and corrective actions to address performance problems with replacement of the Ginna nuclear instrumentation drawers. The inspectors reviewed condition reports that documented the identification, evaluation, and corrective actions taken to address the performance issues. In addition to the review of these documents, the inspectors interviewed the responsible system engineer to determine whether the scope of the corrective actions addressed all identified deficiencies. Specifically, the inspectors reviewed actions completed by Exelon staff to address erroneous indications, out of tolerance values, and component failures.

The inspectors assessed Exelon’s evaluation, extent of condition review, completed and proposed corrective actions, and the prioritization and timeliness of actions to evaluate whether the actions taken by Exelon were appropriate. Inspectors evaluated whether the corrective actions which included potentiometer replacement, recalibration, rewiring, and resoldering addressed the identified issues. The inspectors also evaluated whether the nuclear instruments were being tested in accordance with TSs and approved procedures. The inspectors reviewed communications between Exelon and vendors which evaluated deficiencies and assessed the need for reporting in accordance with 10 CFR Part 21, “Reporting of Defects and Noncompliance.” The inspectors reviewed the assessments of failures, including apparent cause evaluations, work group evaluations, and MR functional failure evaluations to determine if Exelon was using the available processes at the correct thresholds.



b. Findings and Observations

No findings were identified.

The inspectors determined that Exelon's evaluations and extent-of-condition reviews were thorough and the causes were appropriately identified. The inspectors also determined that the corrective actions were reasonable and addressed the deficiencies and corrected the identified issues.

However, the inspectors' review did identify several examples of poor documentation for the bases of decisions. AR 2961059 identified loose cable connections. Based upon a conversation with the vendor, a procedure change request (PCR) was made to address the potential for future loose connections; but based upon an undocumented conversation with an instrumentation and controls supervisor, the final procedure change did not match the AR corrective action or the PCR. Secondly, AR 4002607 documented the inability of a source range power supply to be adjusted within the calibration procedure acceptance range. The acceptance range for the power supply voltage was then expanded based upon an undocumented conversation with the vendor. Finally, AR 2673435 identified an instrument drawer in service with an inadequate solder joint. One assignment for this AR was to "evaluate the receipt inspection process and determine if any improvements can be made to better ensure workmanship criteria [are] met." The assignment was closed with a description of the receipt inspection process, but without any evaluation of the process or determination if improvements were possible. These examples were determined to be of minor significance in accordance with IMC 0612 because, although not documented, the evaluations were appropriate.

.3 Semi-Annual Trend Review (1 sample)

a. Inspection Scope

The inspectors performed a semi-annual review of site issues to identify trends that might indicate the existence of more significant safety concerns. As part of this review, the inspectors included repetitive or closely related issues documented by Exelon in trend reports, major equipment problem lists, operator work around and challenge lists, system health reports, MR assessments, and maintenance or CAP backlogs. The inspectors also reviewed Exelon's cap database for the first and second quarters of 2017 to assess ARs written in various subject areas (equipment problems, human performance issues, etc.), as well as individual issues identified during the NRC's daily AR review (Section 40A2.1). The inspectors reviewed Exelon's quarterly trend reports for the first and second quarters of 2017 to verify that Exelon personnel were appropriately evaluating and trending adverse conditions in accordance with applicable procedures.

b. Findings and Observations

No findings were identified.

The inspectors evaluated a sample of issues and events that occurred over the course of the first and second quarters of 2017 to determine whether issues were appropriately considered as emerging or adverse trends. The inspectors verified that these issues were addressed within the scope of the CAP or through department review.

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 CAP for resolution and had appropriately prioritized investigation reviews. The inspectors noted minor adverse trends identified by Exelon staff in the areas of nuclear instrumentation, steam leaks, B5B portable diesel DC generator, intersystem relationships specific to 480V grounds coincident with nuclear instrument spikes, component greasing preventive maintenance, and clearance and tagging.

There were no adverse safety consequences as a result of these low-level trend issues. Based on the overall results of the semi-annual 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 these conditions were deficiencies of minor significance and, therefore, are not subject to enforcement action in accordance with the NRC's Enforcement Policy.

#### 4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 1 sample)

##### Plant Events

##### a. Inspection Scope

For the plant event listed below, the inspectors reviewed and/or observed plant parameters, reviewed personnel performance, and evaluated performance of mitigating systems. The inspectors communicated the plant event to appropriate regional personnel, and compared the event details with criteria contained in IMC 0309, "Reactive Inspection Decision Basis for Reactors," issued October 28, 2011, for consideration of potential reactive inspection activities. As applicable, the inspectors verified that Exelon made appropriate emergency classification assessments and properly reported the event in accordance with 10 CFR 50.72 and 50.73. The inspectors reviewed Exelon's follow-up actions related to the event to assure that Exelon implemented appropriate corrective actions commensurate with their safety significance.

- Three MSSVs lift pressures greater than TS limits on April 23, 2017. Licensee Event Report (LER) 05000244/2017-001-00, "During Surveillance Testing, Lift Pressure Setpoints on Three MSSVs Found Outside TSs Limits Due to Stiction," was subsequently issued on June 16, 2017. This LER will be closed via a separate inspection activity in a future inspection report.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On July 12, 2017, the inspectors presented the inspection results to Mr. Paul Swift, Plant General Manager, and other members of the Ginna staff. The inspectors verified that no propriety information was retained by the inspectors or documented in this report.

**ATTACHMENT: SUPPLEMENTARY INFORMATION**

**SUPPLEMENTARY INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

W. Carsky, Site Vice President  
P. Swift, Plant General Manager  
D. Blankenship, Director, Site Operations  
T. Edwards, Manager, Site Chemistry  
D. Wilson, Director, Site Engineering  
K. Garnish, Senior Manager, Operations Support and Services  
K. Gould, Manager, Radiation Protection  
T. Harding, Manager, Site Regulatory Assurance  
F. Kelpacki, ISI Program Manager  
M. Shields, Steam Generator Program Manager  
J. Stanger, System Engineer  
S. Wihlen, Director, Site Maintenance

**LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED**

Open

05000244/2017-001-00	LER	During Surveillance Testing, Lift Pressure Setpoints on Three MSSVs Found Outside TSs Limits Due to Stiction
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**LIST OF DOCUMENTS REVIEWED**

**Section 1R01: Adverse Weather Protection**

Procedures

O-23, Hot Weather Seasonal Readiness Walkdown, Revision 015  
O-6.9, Operating Limits for Station 13A Transmission  
WC-AA-107, Seasonal Readiness, Revision 17

ARs

03963978      04012196      04021032

WOs

C93452095

Miscellaneous

Preventive Maintenance PS010337, Monthly Thermography on Plant Yard Equipment Station 13 and Station 13A

**Section 1R04: Equipment Alignment**

Procedures

O-15.2, Valve Alignment for Reactor Head Lift, Core Component Movement, and Periodic Status Checks, Revision 041  
S-8A, CCW System Startup and Normal Operation Valve Alignment, Revision 05603  
STP-O-30.1, SI System Valve and Breaker Position Verification, Revision 00105  
STP-O-30.4, AFW System Valve and Breaker Position Verification, Revision 00402  
STP-O-30.9, CCW Flow Path Verification, Revision 00003  
STP-O-30.5, Standby AFW Pumps Valves and Breakers, Revision 00400

Drawings

33012-1231, Main Steam (Safety-Related) Piping and Instrumentation Drawing (P&ID), Revision 0  
33013-1237, AFW P&ID, Revision 73  
33013-1238, Standby AFW, P&ID, Revision 41  
33013-1245, Auxiliary Coolant CCW (AC) P&ID, Revision 35  
33013-1246, Auxiliary Coolant CCW (AC) P&ID, Sheet 2, Revision 14  
33013-1246, Auxiliary Coolant CCW (AC) Sheet 1, Revision 17  
33013-1250, Station Service Cooling Water Safety-Related (SW) P&ID, Revision 52  
33013-1250, Station Service Cooling Water Safety-Related (SW) P&ID, Sheet 2 of 3, Revision 52

**Section 1R05: Fire Protection**

Procedures

FPS-15, Fire Door Identification, Inspection and Maintenance, Revision 35  
FRP-1.0, Containment Basement, Revision 008  
FRP-2.0, Containment Intermediate Floor, Revision 009  
FRP-3.0, Containment Operating Floor, Revision 009  
FRP-25.0, Diesel Generator Room B and Vault, Revision 12  
FRP-16.0, Air Handling Room, Revision 10

Drawings

21488-111, Fire Barrier General Arrangement Sheet, Diesel Generator Room 'B' Floor Plan Penetration Locations Floor Elevation – 253'6", Sheet 1, Revision 4  
33013-2542, Fire Response Plan Containment Structure & Intermediate Building Plan – Basement Floor Elevation 235'8", Revision 5  
33013-2544, Fire Response Plan Turbine Building Plan Basement Floor Elevation 253'6", Revision 15  
33013-2545, Fire Response Plan Containment Structure & Intermediate Building Plan – Intermediate Floor Elevation 253'3", Revision 9  
33013-2551, Fire Response Plan Containment Structure & Intermediate Building Plan – Operating Floor Elevation 278'4", Revision 8  
33013-2559, Fire Response Plan, Control Building, Plan Views, Revision 14

ARs

03993358      03998682      03999932      04000752

Miscellaneous

DA-ME-98-004, Combustible Loading Analysis, Revision 15

**Section 1R06: Flood Protection Measures**Procedures

EP-2-P-0169, Structural Assessment and Monitoring Program, Revision 01701  
 IP-CON-9, Plant Barrier Control Program Implementation, Revision 00301  
 UFSAR, Chapter 3, Design of Structures, Components, Equipment, and Systems, Section 3.4,  
 Revision 26

ARs

03999932      04000752      04016353

**Section 1R08: In-service Inspection**NDE Reports

Component Summary 1003610, N1A Support Pad, 5/5/2017  
 Component Summary 1003640, N2B Support Pad, 5/5/2017  
 Control Rod Drive Mechanism Visual Examination Record 2017-04-28 20\_03\_23\_3746  
 Control Rod Drive Mechanism Visual Examination Record 2017-04-29 11\_24\_32\_9190  
 Control Rod Drive Mechanism Visual Examination Record 2017-04-29 14\_33\_49\_5355  
 Liquid Penetrant Examination Report BOP-PT-17-016, CV3519 ¾" Pipe Weld 2  
 Liquid Penetrant Examination Report BOP-PT-17-028, CV 3519 ¾ Pipe to Bonnet Weld  
 NDE Report 17GV096  
 NDE Report 17GV095  
 UT Vessel Examination, Upper Head-to-Upper Shell Circ. Weld, C-1 08GU075, 4/29/2017  
 UT Vessel Examination, Upper Head-to-Upper Shell Circ. Weld, C-1 17GU031, 5/8/2017  
 UT Vessel Examination, Upper Shell Vertical Weld (Longitudinal), V-1, 17GU032, 5/8/2017  
 Visual Examination of Pipe Hanger, Support or Restraint (VT-3) Report 17GV095, RPV Nozzle  
 Support Pad N1A  
 Visual Examination of Pipe Hanger, Support or Restraint (VT-3) Report 17GV096, RPV Nozzle  
 Support Pad N2B

Procedures

ER-AA-335-016, VT-3 Visual Examination of Component Supports, Attachments, and Interiors of  
 Reactor Vessels, Revision 10  
 ER-AA-335-049, Ultrasonic Examination in Accordance with ASME Section V, Article 4,  
 Revision 0  
 ER-AP-331-1001, Boric Acid Corrosion Control Inspection Locations, Implementation and  
 Inspection Guidelines, Revision 9  
 ER-AP-331-1002, Boric Acid Corrosion Control Program Identification, Screening and Evaluation,  
 Revision 9  
 ER-AP-335-001, Bare Metal Visual Examination for Nickel Alloy Materials, Revision 5  
 Procedure ER-AA-335-016, VT-3 Visual Examination of Component Supports, Attachments and  
 Interiors of Reactor Vessels, Revision 10  
 R.E. Ginna EOC39 Steam Generator Eddy Current Guidelines, 0192-WKI-101059, Revision 000  
 R.E. Ginna Nuclear Power Plant Station Administrative Procedure, IP-IIT-10, "Alloy 600 Program  
 Plan," Revision 00300

Technical Evaluations

Technical Evaluation 0192-AST-101038, R.E. Ginna Unit 1 End of Cycle 39, Steam Generator Degradation Assessment, Revision 000

ARs

04003192    04003217    04003249    04003256    04003639    04005427    04005432

**Section 1R11: Licensed Operator Requalification Program**

Procedures

HU-AA-1211, Pre-Job Briefings, Revision 011

OP-AA-101-113-1006, 4.0 Crew Critique Guidelines, Revision 007

TG-GI-150-F31 (LORT), License Operator Requalification Training Program, Revision 003

**Section 1R12: Maintenance Effectiveness**

Procedures

AR-L-8, 480V Ground, Revision 86

ER-AA-310, Implementation of the MR, Revision 009

ER-AA-310-1001, MR – Scoping, Revision 004

ER-AA-310-1002, MR Functions – Safety Significance Classification, Revision 003

ER-AA-310-1003, MR – Performance Criteria Selection, Revision 005

ER-AA-310-1004, MR – Performance Monitoring, Revision 013

ER-AA-310-1005, MR – Dispositioning Between (A)(1) and (A)(2), Revision 007

ARs

03970499    03997116    03998061

Miscellaneous

MR Expert Panel Meeting 17-02

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

Procedures

OP-AA-108-117, Protected Equipment Program, Revision 004

OP-AA-201-009, Control of Combustible Material, Revision 019

OPG-Protected-Equipment, Operations Protected Equipment Program, Revision 018

WC-AA-104, Integrated Risk Management, Revision 024

Drawings

33013-1265, Auxiliary Building CVCS P&ID, Sheet 2 of 2, Revision 27

33013-1266, Auxiliary Building Chemical Control System Boric Acid (CVCS) P&ID, Revision 35

ARs

03975396

Miscellaneous

eSOMs Clearance

G1R40 Shutdown Safety Plan

**Section 1R15: Operability Determinations and Functionality Assessments**Procedures

CPI-AXIAL-N43, Calibration of Nuclear Instrumentation System Power Range N43 Axial Offset, Revision 039  
 O-6.13, Daily Surveillance Log, Revision 192  
 OP-AA-108-111, Adverse Condition Monitoring and Contingency Plan, Revision 10  
 WC-AA-104, Integrated Risk Management, Revision 24

ARs

02703057	03997116	04017530
04018068	04020543	04020544
04021032		

Miscellaneous

ECP-17-000268, Rev 000  
 Operability Evaluation, OPEVAL-16-005, Revision 0  
 Risk Assessment GIN-1-2017-0178, Revision 0  
 Risk Assessment GIN-1-2017-0180, Revision 0

**Section 1R18: Plant Modifications**Procedures

ECP-13-000522, NIS Source / Intermediate Range Drawer Replacement, Revision 0000  
 ECP-17-000071, Revision 0000, 50.59 Review Coversheet Form, Revision 1  
 ECP-17-000071, Revision 0000, 50.59 Screening Form, Revision 0  
 ECP-17-000071, Revision 0000, Design Consideration Summary, Form 103-DCS, Revision 0  
 ECP-17-000071, Revision 0000, Work Planning Instructions, Form 103-C, Revision 1  
 ECP-17-000071, Revision 0000, Design Attribute Review (DAR), Form 102-01, Revision 0

Drawings

ECP-17-000071-CN-002, 33013-1262, 2-008, ECP P&ID Change Notice Final Turnover, Revision 0

WOs

C92746759	C93600059	C93608553
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**Section 1R19: Post-Maintenance Testing**Procedures

STP-E-12.5, Technical Support Center Diesel Test, Revision 00501  
 STP-O-12.1, Emergency Diesel Generator A, Revision 022  
 STP-O-16QT, AFW Turbine Pump – Quarterly, Revision 01100  
 STP-O-16QT, AFW Turbine Pump – Quarterly, Revision 012  
 STP-O-22.1, LLRT of Equipment Hatch Door Seal, Revision 00202  
 T-35I, Functional Alignment of the Control Room Normal Air Handling Unit and CREATS Filtration System, Revision 01802

ARs

04011231	04019848	04022234
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WOs

C93622602 C93591032 C93279363 C93334189 C93377032  
 C93334189 C93416253

**Section 1R20: Refueling and Other Outage Activities**Procedures

A-3.1 Containment Storage and Closeout Inspection, Revision 05000  
 IP-OUT-2, Ginna Site-Specific Outage Risk Management, Revision 02300  
 MA-AA-716-025, Scaffold Installation, Modification, and Removal Request Process, Revision 12  
 O-1.1, Plant Heat-Up from Cold Shutdown to Hot Shutdown, Revision 120  
 O-1.1B, Establishing Containment Integrity, Revision 06801  
 O-1.1D, Plant Requirement Check List for Heat-Up Greater than 350 Degrees Fahrenheit,  
 Revision 06400  
 O-1.2, Plant Startup from Hot Shutdown to Full Load, Revision 207  
 O-2.1, Normal Shutdown to Hot Shutdown, Revision 142  
 O-2.2, Plant Shutdown from Hot Shutdown to Cold Conditions, Revision 158  
 O-2.3, Draining the RCS to Lowered Inventory <84" but >64", Revision 051  
 O-2.3.1, Draining and Operation at Reduced Inventory of the RCS, Revision 088  
 O-2.3.1A, Containment Closure Capability within Two Hours during RCS Reduced Inventory  
 Operation, Revision 02602  
 O-15.2, Valve Alignment for Reactor Head Lift, Core Component Movement, and Periodic Status  
 Checks, Revision 041  
 OP-AA-112-101, Shift Turnover and Relief, Revision 012  
 PT-34.1 Initial Criticality and Low Power Physics Testing with DRWM, Revision 35  
 RE-100, Preparation, Review, and Approval of Fuel Movement Sequence Sheets and Document  
 Closeout, Revision 017  
 STP-O-14, Circulating Water Pumps – High Water Trip Logic, Revision 00000  
 SY-AA-102, Exelon Generation Fitness for Duty Program, Revision 020  
 T-18C, Turbine Overspeed Trip Test, Revision 025

Drawings

33013-1247, Auxiliary Coolant Residual Heat Removal, Revision 47

ARs

04000321	04000813	04000880	04001424	04001474	04002200
04004043	04004446	04005272	04006557	04006765	04006907
04007374	04007429	04007476	04007979	04008410	04008645
04009229	04009331	04009360	04009745	04009767	04009869
04009870	04009990	04010037	04010181	04010328	04010364
04010534	04010772	04011509	04011603	04011653	04011980
04012356	04021943				

Miscellaneous

eSOMS Clearance for V-712B  
 Ginna Station Inservice Testing Program, Revision 5

**Section 1R22: Surveillance Testing**

Procedures

CH-PRI-SAMP-ROOM, Sampling in the Nuclear Sample Room, Revision 01701  
STP-O-R-10.3, Preparation for and Performance of MSSV Test Using Setpoint Verification Device, Revision 00500  
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**Section 1EP6: Drill Evaluation**

Procedures

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**Section 2RS1: Access Control to Radiologically Significant Areas**

Procedures

OP-AA-104-101, Communications, Revision 3  
RP-AA-203-1001, Personnel Exposure Investigations, Revision 009  
RP-AA-300, Radiological Survey Program, Revision 015  
RP-AA-300-1001, Discrete Radioactive Particle Controls, Revision 005  
RP-AA-300-1005, Removing Items from the Spent Fuel Pool, Reactor Cavity, and Equipment Pit, Revision 1  
RP-AA-302, Determination of Alpha Levels and Monitoring, Revision 008  
RP-AA-350, Personnel Contamination Monitoring, Decontamination and Reporting, Revision 018  
RP-AA-350-1001, Response to Guardhouse Portal Monitor Alarms, Revision 002  
RP-AA-460, Controls for High and LHR Areas, Revision 29  
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RP-AA-460-002, Additional High Radiation Exposure Control, Revision 3  
RP-AA-503, Unconditional Release Survey Method, Revision 014  
RP-AA-870-1001, Set-Up and Operation of Portable Air Filtration Equipment, Revision 007  
RP-AA-870-1002, Use of Vacuum Cleaners in Radiologically Controlled Areas, Revision 008  
SA-AA-114, Confined Space Entry, Revision 19

Documents

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Airborne Radioactivity Calculation Sheet, Air Sample 32760  
Airborne Radioactivity Calculation Sheet, Air Sample 33719  
Airborne Radioactivity Calculation Sheet, Air Sample 33879  
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 00013, 00014  
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### **Section 2RS2: Occupational ALARA Planning and Controls**

See 2RS1

### **Section 2RS6: Radioactive Gaseous and Liquid Effluent Treatment**

#### Procedures

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 CH-261, Collection and Analysis of Groundwater Samples, Revision 00800  
 CH-360, Primary to Secondary Leakage Sampling and Measurement, Revision 00002  
 CH-RETS-RMS-INOP, Actions for RMS Monitor Alarm or Inoperability, Revision 02200  
 CH-RETS-SAMP-CV-ALT, Alternate Sample Point for Containment Atmosphere Sampling and  
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 CY-AA-170-1000, Radiological Environmental Monitoring Program and Meteorological Program  
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 CY-AA-170-2000, Annual Radioactive Effluent Release Report, Revision 8  
 CY-AA-170-2300, Determination of Carbon-14 in Gaseous Effluents, Revision 0  
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EN-AA-407, Response to Inadvertent Releases of Licensed Materials to Groundwater, Surface Water, Soil or Engineered Structures, Revision 8  
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 Census, Land Use, CH-ENV-LAND-USE, dated 9/23/2015  
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 Certificate, Sealed Radioactive Source, S/N P1-059  
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 Data, Groundwater Radioanalytical Results (spreadsheet), July 2014 to Present  
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 Technical Requirements Manual for the R.E. Ginna Nuclear Power Plant, Revision 65  
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02385054	03997299	04012219
02477439	04005762	04012225
02555033	04005787	04012229
02558553	04006305	04012238
02559559	04006425	04014069
02561707	04012204	

WOs

92252135	92948816	93167543
92459752	92995308	93191108
92511716	93032026	93198271
92573845	93032049	93218282
92654880	93032238	93338779
92820264	93052720	93370504
92827253	93097971	93597102
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**Section 4OA1: Performance Indicator Verification**Procedures:

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**Section 4OA2: Problem Identification and Resolution**Procedures

PI-AA-101-1001, Performance Monitoring and Analysis Manual, Revision 0  
PI-AA-125, CAP Procedure, Revision 5  
PI-AA-127, Passport Action Tracking Management Procedure, Revision 2.01

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4004281	4006439	4009866	4010929	4012162	4018068
4018975	4022165	04020814	4023224	4024703	

WOs

C92334791	C93054742	C93318209	C93473912	C93591097	C93621925
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**Section 40A7: Licensee-Identified Violations**

Procedures

RE-100, Preparation, Review, and Approval of Fuel Movement Sequence Sheets and Document  
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Technical Requirements Manual, TR-3.9.1-Fuel Storage in Spent Fuel Pool, Revision 43

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04004043      04009990

## LIST OF ACRONYMS

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
AC	alternating current
AFW	auxiliary feedwater
ALARA	as low as is reasonably achievable
AR	action request
ASME	American Society for Mechanical Engineers
B&PV	boiler and pressure vessel
CAP	corrective action program
CCW	component cooling water
CFR	Code of Federal Regulations
ECP	engineering change package
EDG	emergency diesel generator
EPRI	Electric Power Research Institute
HRA	high radiation area
IMC	Inspection Manual Chapter
IP	inspection procedure
ISI	inservice inspection
LER	licensee event report
LHRA	locked high radiation area
LLRT	local leak rate test
MR	maintenance rule
MSSV	main steam safety valve
NCV	non-cited violation
NDE	nondestructive evaluation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
ODCM	offsite dose calculation manual
OOS	out of service
PCR	procedure change request
P&ID	pipng and instrumentation drawing
PI	performance indicator
RCS	reactor coolant system
RFO	Refueling Outage
RG	regulatory guide
RWP	radiation work permit
SDP	significance determination process
SI	safety injection
SSC	structure, system, and component
ST	surveillance tests
TDAFW	turbine-driven auxiliary feedwater
TS	technical specification
UFSAR	Updated Final Safety Analysis Report
VHRA	very high radiation area
WO	work order