UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

May 12, 2015

EA-15-072

Mr. Joseph E. Pacher
Site Vice President
R.E. Ginna Nuclear Power Plant, LLC
Exelon Generation Company, LLC
1503 Lake Road
Ontario, NY 14519

SUBJECT: R.E. GINNA NUCLEAR POWER PLANT, LLC - NRC INTEGRATED INSPECTION REPORT 05000244/2015001

Dear Mr. Pacher:

On March 31, 2015, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your R.E. Ginna Nuclear Power Plant, LLC (Ginna). The enclosed inspection report documents the inspection results, which were discussed on April 22, 2015, with Mr. Thomas Paglia and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents two violations of NRC requirements, both of which were of very low safety significance (Green). Additionally, a licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. However, because of the very low safety significance, and because they are entered into your correction action program, the NRC is treating these findings as non-cited violations (NCVs), consistent with Section 2.3.2.a of the NRC Enforcement Policy. If you contest the NCVs in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspectors at Ginna. In addition, if you disagree with the cross-cutting aspect assigned to any finding, or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspectors at Ginna.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Daniel L. Schroeder, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000244/2015001
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.	50-244
License No.	DPR-18
Report No.	05000244/2015001
Licensee:	Exelon Generation Company, LLC
Facility:	R.E. Ginna Nuclear Power Plant, LLC
Location:	Ontario, New York
Dates:	January 1, 2015, through March 31, 2015
Inspectors:	N. Perry, Senior Resident Inspector D. Dodson, Resident Inspector S. Horvitz, Acting Resident Inspector H. Anagnostopoulos, Health Physicist E. Burket, Emergency Preparedness Inspector T. Fish, Senior Operations Engineer A. Siwy, Project Engineer
Approved by:	Daniel L. Schroeder, Chief Reactor Projects Branch 1 Division of Reactor Projects

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SUMMARY

IR 05000244/2015001; 01/01/2015 – 03/31/2015; R.E. Ginna Nuclear Power Plant, LLC (Ginna); Maintenance Effectiveness, Emergency Action Level and Emergency Plan Changes.

This report covered a 3-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The inspectors identified two Green non-cited violations (NCVs), which were of very low safety significance (Green). A finding's significance is indicated by a color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," issued December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated February 4, 2015. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

Cornerstone: Mitigating Systems

- Green. A self-revealing Green NCV of Title 10 of the *Code of Federal Regulations* (10 CFR), Appendix B, Criterion XVI, "Corrective Action," was identified for failure to establish measures to assure that a condition adverse to quality associated with the availability of the bus 18 solid state switchboard card (SS1) was promptly identified and corrected. Specifically, Ginna did not adequately complete previous corrective actions to ensure carbon resistors in risk significant components were identified and replaced in a timely manner prior to the occurrence of age-related failures, which resulted in the failure of a safety-related bus undervoltage solid state switchboard card and indication of an undervoltage condition.

  The inspectors determined that the failure to implement corrective actions to identify and correct a condition adverse to quality was a performance deficiency within Exelon Generation Company's, LLC (Exelon's) ability to foresee and correct and should have been prevented. Specifically, Exelon failed to adequately execute corrective actions to identify and replace carbon resistors in risk significant components, which resulted in a failure of the bus 18 undervoltage solid state switchboard card. The inspectors determined that the failure to implement corrective actions was more than minor, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, technical specifications (TSs) require each safeguard bus to have two operable channels of loss of power diesel generator start instrumentation. However, this failure caused one channel to be declared inoperable and resulted in operators entering the TS action statement. Additionally, the bus 18 undervoltage solid state switchboard card failed while in service, incurred unnecessary unavailability hours, provided false indication of an undervoltage condition, and resulted in a maintenance preventable functional failure.

  The inspectors evaluated the finding using IMC 0609.04, "Initial Characterization of Findings." The attachment instructs the inspectors to utilize IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The inspectors determined the self-revealing performance deficiency was not a deficiency affecting the design or qualification of a mitigating structure, system, and component; did not represent a loss of system and/or function; and did not represent an actual loss of function of at least a

single train. Therefore, the inspectors determined this finding to be of very low safety significance (Green).

In accordance with IMC 0612, the finding does not have a cross-cutting aspect, because the performance deficiency occurred more than 3 years ago, would not likely occur today under similar circumstances, and is not reflective of present plant performance. In June 2011, when the performance deficiency occurred, the work planning process did not require the use of formal documentation, and briefings were not required for risk-significant work. However, today documentation and briefings are both required for risk-significant work done in the plant. Additionally, Exelon technicians replaced the failed card, completed an extent of condition review and entered the issue into the CAP. (Section 1R12)

Cornerstone: Emergency Preparedness

- Green. A self-revealing Green NCV of 10 CFR 50.54(q)(2), 10 CFR 50.47(b)(10), and 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," Section IV.B.1, was identified for Exelon inadequately maintaining the effectiveness of its Emergency Plan. Specifically, 10 CFR 50.54(q)(2) requires reactor licensees to follow and maintain the effectiveness of an emergency plan that meets the requirements in 10 CFR 50, Appendix E and the planning standards of 50.47(b), and Exelon did not adequately maintain the effectiveness of its Emergency Plan when Exelon implemented changes to the protective action recommendation (PAR) flowchart that would have resulted in Exelon inappropriately recommending evacuation of downwind areas and many more emergency response planning areas (ERPAs) than intended.

  The inspectors determined that Exelon did not adequately maintain the effectiveness of its Emergency Plan in accordance with 10 CFR 50.54(q)(2), 10 CFR 50.47(b), and 10 CFR 50, Appendix E, when Exelon implemented changes to the PAR flowchart. Specifically, Exelon implemented Figure 5.3, "Scheme for Protective Action Recommendations," of the Nuclear Emergency Response Plan (NERP), and Attachment 3, "Ginna PAR Determination Instructions," of CNG-EP-1.01-1013, "Emergency Classification and PAR," Revision 00100, and the flowchart for "Initial Protective Action Recommendation ONLY," with an unintentional error. Incorrectly revising and incorporating an inaccurate value in the implementing procedures for the NERP is considered a performance deficiency that was within Exelon's ability to foresee and prevent. The inspectors determined that the inadequate maintenance of the Emergency Plan was more than minor because it was associated with the procedure quality attribute of the Emergency Preparedness cornerstone and affected the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, Exelon's PAR implementation procedure was revised and contained containment radiation level set points that would potentially result in an inappropriate recommendation to evacuate downwind areas and many more ERPAs than intended when fewer or no evacuations should have been recommended. The inspectors evaluated the finding using IMC 0609.04, "Initial Characterization of Findings." The attachment instructs the inspectors to utilize IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," when the finding impacts the licensee's Emergency Preparedness cornerstone.

  The performance deficiency is associated with the emergency protective actions planning standard and is considered a risk-significant planning standard function. The inspectors were directed by the SDP to compare the performance deficiency with the examples in

Section 5.10, “10 CFR 50.47(b)(10), Emergency Protective Actions,” to evaluate the significance of this performance deficiency. However, the examples in Table 5.10-1, “Significance Examples §50.47(b)(10),” address failure to make a PAR, but the examples do not specifically address unnecessary evacuations of ERPAs. Therefore, in accordance with the guidance in Section 5.0.3 of IMC 0609, Appendix B, the issue was evaluated using the Attachment 2 flowchart and informed by the examples provided in other sections of the Emergency Preparedness SDP as described below.

In the subject scenario, the licensee will have already accurately made a General Emergency declaration prior to determining an initial PAR. At the General Emergency level, there is at least a loss of two fission product barriers and a potential or full loss of a third, and a release is either in progress or imminent at levels that are likely to exceed Environmental Protection Agency protective action guidelines (PAGs) at and beyond the site boundary. As such, there is potentially a dose avoidance benefit for the public even when a PAG has not been reached due to a General Emergency condition actually existing. Therefore, an inadequate PAR resulting in evacuations of ERPAs when no evacuations are otherwise called for is less significant than an emergency action level overclassification resulting in an unnecessary PAR, because there is a potential dose avoidance benefit to the public at the General Emergency level. In this instance, a PAR is made, which is sufficient to ensure public health and safety, although some additional risk will be incurred. The (b)(10) risk-significant planning standard functions are still met, although Exelon did fail to comply with the planning standard. Therefore, the inspectors determined the finding was of very low safety significance (Green). Exelon corrective actions included issuing NERP, Revision 04000, and CNG-EP-1.01-1013, Revision 00200, which corrected the PAR flowchart text ensuring all emergency directors were adequately trained and aware of the NERP and CNG-EP-1.01-1013 revisions.

The finding has a cross-cutting aspect in the area of Human Performance, Change Management, because Exelon did not use a systematic process for evaluating and implementing change so that nuclear safety remained the overriding priority. Specifically, changes to the NERP were made, and the inadequate change and the importance of the changes were not recognized by Exelon corporate, the department review, or the plant operations review committee review. Managers did not ensure individuals understood the importance of, and their role in, the change management process, and managers did not maintain a clear focus on nuclear safety when implementing the change management process to ensure that significant unintended consequences were avoided [H.3]. (Section 1EP4)

Other Findings

A violation of very low safety significance that was identified by Exelon was reviewed by the inspectors. Corrective actions taken or planned by Exelon have been entered into Exelon’s corrective action program (CAP). This violation and corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

R.E. Ginna Nuclear Power Plant (Ginna) began the inspection period operating at 100 percent power. Ginna 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 – 1 sample)

Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

The inspectors reviewed Exelon's readiness for the onset of seasonal cold temperatures on February 13 and 20, 2015. The inspectors reviewed the implementation of adverse weather preparation procedures before the onset of and during this adverse weather condition. The inspectors walked down the emergency diesel generator rooms, the screen house, the auxiliary building, the standby auxiliary building and its annex, the turbine building, the intermediate building, and the battery rooms. The inspectors verified that operator actions defined in Exelon's adverse weather procedures maintained the readiness of essential systems. The inspectors discussed readiness and staff availability for adverse weather response with operations and work control personnel. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q – 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- 'D' standby auxiliary feedwater on January 29 and 30, 2015
- 'B' safety injection (SI) with 'A' SI out of service (OOS) on March 9, 2015
- 'A' component cooling water (CCW) with 'B' CCW OOS on March 19, 2015

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 Updated Final Safety Analysis Report (UFSAR), technical specifications (TSs), an action request (AR), and the impact

of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their 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 corrective action program (CAP) for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

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

a. Inspection Scope

On January 8 and 9, 2015, the inspectors performed a complete system walkdown of accessible portions of the service water system to verify the existing equipment lineup was correct. The inspectors reviewed drawings, equipment lineup 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 system to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 3 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 OOS, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Screen house operating level on January 28 and 29, 2015
- Secondary hydrogen bottle house on February 12, 2015

- Intermediate building elevation 298' 4" (non-radiological controlled side) on March 10, 2015

b. Findings

No findings were identified.

.2 Fire Protection – Drill Observation (71111.05A – 1 sample)

The inspectors observed a fire brigade drill scenario conducted on January 13, 2015, that involved a fire in the air handling room. The inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that Exelon personnel identified deficiencies, openly discussed them in a self-critical manner at the debrief, and took appropriate corrective actions as required. The inspectors evaluated specific attributes as follows:

- Proper wearing of turnout gear and self-contained breathing apparatus
- Proper use and layout of fire hoses
- Employment of appropriate fire-fighting techniques
- Sufficient fire-fighting equipment brought to the scene
- Effectiveness of command and control
- Search for victims and propagation of the fire into other plant areas
- Smoke removal operations
- Utilization of pre-planned strategies
- Adherence to the pre-planned drill scenario
- Drill objectives met

The inspectors also evaluated the fire brigade's actions to determine whether these actions were in accordance with Exelon's fire-fighting strategies.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 1 sample)

Annual Review of Cables Located in Underground Bunkers/Manholes

a. Inspection Scope

On March 12 and 13, 2015, the inspectors conducted an inspection of underground bunkers/manholes subject to flooding that contain cables whose failure could affect risk-significant equipment. The inspectors performed walkdowns of risk-significant areas, including manhole 1 in the transformer yard and two other manholes (1B and 2) containing offsite power cables, to verify that the cables were not submerged in water, that cables and/or splices appeared intact, and to observe the condition of cable support structures. When applicable, the inspectors verified proper sump pump operation, and verified level alarm circuits were set in accordance with station procedures and

calculations to ensure that the cables will not be submerged. The inspectors also ensured that drainage was provided and functioning properly in areas where dewatering devices were not installed.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11Q – 2 samples; 71111.11B – 1 sample)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training

a. Inspection Scope

The inspectors observed licensed operator simulator training on March 3, 2015, which included a load reduction following the trip of a condensate booster pump with a failure to start the standby pump, a 30 gallon per minute reactor coolant system leak, a 90,000 lbm/hour pressurizer steam space break followed by a manual SI, and a loss of safety-related Bus 16. 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 classification made by the shift manager and the TS action statements entered by the shift technical advisor. 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

The inspectors observed and reviewed control room personnel responding to a decreasing intake level due to low lake temperatures on January 27, 2015. The inspectors observed shift briefings to verify that the briefings met the criteria specified in procedure HU-AA-1211, “Pre-Job Briefings,” Revision 009. Additionally, the inspectors observed performance of cycling of the recirculation gate in accordance with ER-SC.3, “Low Screen House Water Level,” Revision 02305, to verify that procedure use, crew communications, and coordination of activities between operators similarly met established expectations and standards.

b. Findings

No findings were identified.

.3 Biennial Review

a. Inspection Scope

On March 13, 2015, a region-based inspector conducted an in-office review of results of the Exelon-administered biennial written exams for Ginna operators. (The annual operator tests were previously administered in November and December 2014, and those test results were documented in NRC Integrated Inspection Report 2014005.) The inspection assessed whether pass rates were consistent with the guidance of IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process," issued December 6, 2011. The review verified that the failure rate did not exceed 20 percent; the individual requalification examination failure rate was 0.00 percent.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 3 samples)

a. Inspection Scope

The inspectors 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 work orders (WOs), and maintenance rule basis documents to ensure that Exelon was identifying and properly evaluating performance problems within the scope of the maintenance rule. For each sample selected, the inspectors verified that the SSC was properly scoped into the maintenance rule in accordance with Title 10 of the *Code of Federal Regulations* (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 maintenance rule system boundaries.

- Bus 18 undervoltage solid state switchboard card deficiencies on December 13, 2014
- Containment spray on January 12, 2015
- Bus 14 monitoring, 4160 volt electrical system 61, and 480 volt electrical system 62 following the failure of the bus 14 transformer cooling fans on February 7, 2015

b. Findings

Introduction. A self-revealing Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified for failure to establish measures to assure that a condition adverse to quality associated with the availability of the bus 18 solid state switchboard card (SS1) was promptly identified and corrected. Specifically, Ginna did not adequately complete previous corrective actions to ensure carbon resistors in risk significant components were identified and replaced in a timely

manner prior to the occurrence of age-related failures, which resulted in the failure of a safety-related bus undervoltage solid state switchboard card and indication of an undervoltage condition.

Description. On December 13, 2014, with the plant operating at full power, an undervoltage alarm was received on the bus 18 undervoltage cabinet. Following investigation, it was discovered that the bus 18 undervoltage solid state switchboard card (SS1) failed due to a failed carbon resistor (R130). This was a previously identified failure in an apparent cause evaluation conducted as the result of a similar failure that occurred on the bus 16 undervoltage solid state switchboard card (SS1) carbon resistor (R130) in March 2011 (condition report (CR)-2011-001667). This carbon resistor is continuously energized and, as such, is exposed to heat, which shortens the life of the resistor. An identified replacement for this resistor is a wire wound resistor capable of handling the heat. With respect to the carbon resistors, a corrective action (CA-2011-001404) was generated in June 2011 for personnel to inspect and upgrade all solid state switchboards in undervoltage relay cabinets. However, there was inadequate documentation regarding which boards were inspected and which document revisions were used during the performance of this corrective action because there was not a formal WO created to inspect and replace, if necessary, the solid state switchboards for each safety-related bus. The action was closed indicating the inspections were complete; however, the inspection failed to identify the carbon resistor on the solid state switchboard cards (SS1 and SS2) for bus 18. Therefore, the corrective action was ineffective and ultimately resulted in the failure of the bus 18 undervoltage solid state switchboard card (SS1) and the inoperability of one channel of loss of power diesel generator start instrumentation. This issue was entered into the CAP as AR 02424722.

Analysis. The inspectors determined that the failure to implement corrective actions to identify and correct a condition adverse to quality was a performance deficiency within Exelon's ability to foresee and correct and should have been prevented. Specifically, Exelon failed to adequately execute corrective actions to identify and replace carbon resistors in risk significant components, which resulted in a failure of the bus 18 undervoltage solid state switchboard card (SS1). The inspectors determined that this performance deficiency was more than minor, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, TSs require each safeguard bus to have two operable channels of loss of power diesel generator start instrumentation. However, this failure caused one channel to be declared inoperable and resulted in operators entering the TS action statement. Additionally, the bus 18 undervoltage solid state switchboard card (SS1) failed while in service, incurred unnecessary unavailability hours, provided false indication of an undervoltage condition, and resulted in a maintenance preventable functional failure.

In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012, the inspectors determined that the finding was of very low safety significance (Green), because the finding was not a deficiency affecting the design or qualification of a mitigating SSC; did not represent a loss of system and/or function; and did not represent an actual loss of function of at least a single train.

In accordance with IMC 0612, the finding does not have a cross-cutting aspect, because the performance deficiency occurred more than 3 years ago; would not likely occur today under similar circumstances; and is not reflective of present plant performance. In June 2011, when the performance deficiency occurred, the work planning process did not require the use of formal documentation, and briefings were not required for risk-significant work. However, today documentation and briefings are both required for risk-significant work done in the plant.

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. Contrary to this, from June 22, 2011, until December 13, 2014, Ginna failed to promptly identify and correct a condition adverse to quality. Specifically, Ginna did not identify and correct the carbon resistor on the bus 18 solid state switchboard cards (SS1 and SS2) due to inadequate implementation of a corrective action (CA-2011-001404) to inspect and upgrade all solid state switchboards in undervoltage relay cabinets. Consequently, on December 13, 2014, failure of the bus 18 solid state switchboard card (SS1) was caused by a failed carbon resistor (R130) that should have been identified and replaced with a wire wound resistor in 2011. Exelon technicians replaced the failed card, completed an extent of condition review, and entered the issue into the CAP. Because this violation was of very low safety significance (Green), and Exelon has entered this performance deficiency into the CAP as AR 02424722, the NRC is treating this as an NCV in accordance with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000244/2015001-01, Inadequate Corrective Actions Result in Failure of Bus 18 Undervoltage Solid State Switchboard Card)**

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 5 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work 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 for each activity, the inspectors verified that Exelon personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that 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 spent fuel pool (SFP) cooling system on January 19, 2015
- Planned maintenance on the 'A' SFP cooling system, hydrogen recombiner, and bus 14 and bus 18 undervoltage testing on February 9, 2015

- Planned maintenance on the 'D' service water pump, emergency bus undervoltage testing, and entry into the procedure for low screen house water level on February 24, 2015
- Planned maintenance on radiation monitor R-14A(9) and 'A' SI pump on March 9, 2015
- Planned maintenance on the 'A' control room emergency air treatment system (CREATS), the diesel fire pump and auxiliary building fire suppression systems S01, S02, S03, and S04 OOS on March 25, 2015

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 3 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- Service air compressor oil leak on January 6, 2015
- Station service transformer 14 degraded on February 7, 2015
- 'B' motor-driven auxiliary feedwater pump gland follower thread engagement issues on March 10, 2015

The inspectors selected these issues 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 determined whether the measures in place would function as intended and were properly controlled by Exelon. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

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 ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure 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, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- 'C' service water pump planned maintenance on January 7 and 8, 2015
- 'A' SFP pump planned maintenance on February 9 and 10, 2015
- 'A' SI planned maintenance on March 9, 2015
- 'A' residual heat removal planned maintenance on March 11, 2015
- 'B' CCW pump planned maintenance on March 19, 2015
- 'A' CREATS planned maintenance on March 26, 2015
- 'C' SI pump planned maintenance on March 31, 2015

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 8 samples)

a. Inspection Scope

The inspectors observed performance of surveillance tests 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 surveillance tests:

- STP-I-9.1.14, Undervoltage Protection – 480 Volt Safeguard Bus 14 on January 9, 2015
- STP-O-16QA, Auxiliary Feedwater Pump 'A' – Quarterly on January 14, 2015 (inservice test)
- STP-O-13.4.33, Station Halon Systems Bottle Weighing and S08 (Relay Room and Computer Room) Air Flow Test on February 2, 2015
- STP-E-11.4, Technical Support Center 60 Cell Battery Bank on February 18, 2015
- STP-E-12.5, Technical Support Center Diesel Test on February 18, 2015
- CPI-TRIP-TEST-5.50, Trip Test for Turbine Auto Stop Pressure Switches, Relays, Turbine Emergency Trip SOV and Turbine Auxiliary Governor SOVs on March 13, 2015
- STP-O-16QT, Auxiliary Feedwater Turbine Pump – Quarterly on March 13, 2015 (inservice test)
- S-12.4, Reactor Coolant System Leakage Surveillance Record Instructions on March 24, 2015 (RCS)

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 – 1 sample)

a. Inspection Scope

Exelon implemented various changes to Ginna's emergency action levels (EALs), Emergency Plan, and implementing procedures. Exelon had determined that, in accordance with 10 CFR 50.54(q)(3), any change made to the EALs, Emergency Plan, and its lower-tier implementing procedures, had not resulted in any reduction in effectiveness of the Plan, and that the revised Plan continued to meet the standards in 50.47(b) and the requirements of 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities."

The inspectors performed an in-office review of all EAL and Emergency Plan changes submitted by Exelon as required by 10 CFR 50.54(q)(5), including the changes to lower-tier emergency plan implementing procedures, to evaluate for any potential reductions in effectiveness of the Emergency Plan. This review by the inspectors was not documented in an NRC safety evaluation report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety. The requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

Introduction. A self-revealing Green NCV of 10 CFR 50.54(q)(2), 10 CFR 50.47(b)(10), and 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," Section IV.B.1, was identified for Exelon inadequately maintaining the effectiveness of its Emergency Plan. Specifically, 10 CFR 50.54(q)(2) requires reactor licensees to follow and maintain the effectiveness of an emergency plan that meets the requirements in 10 CFR 50, Appendix E and the planning standards of 50.47(b), and Exelon did not adequately maintain the effectiveness of its Emergency Plan when Exelon implemented changes to the protective action recommendation (PAR) flowchart that would have resulted in Exelon inappropriately recommending evacuation of downwind areas and many more emergency response planning areas (ERPAs) than intended. ERPAs are subdivisions of the 10-mile emergency planning zone.

Description. In December 2014, Exelon revised "Ginna Station Nuclear Emergency Response Plan," Revision 03900, and implementing procedure CNG-EP-1.01-1013, "Emergency Classification and PAR," Revision 00100 (both effective December 19, 2014). These revisions incorporated significant changes to the PAR flowchart. The PAR flowchart provides instructions to determine appropriate PARs to provide to offsite authorities. Figure 5.3, "Scheme for Protective Action Recommendations," of the Nuclear Emergency Response Plan (NERP) and Attachment 3, "Ginna PAR Determination Instructions," of CNG-EP-1.01-1013 includes a flowchart for "Initial PAR ONLY." Once the initial General Emergency classification is made at Ginna in accordance with the station's EAL scheme, the emergency director enters this flowchart to determine appropriate PARs.

A review of a Ginna emergency preparedness exercise by an external agency questioned the adequacy of the PAR regarding the number of ERPAs to be evacuated.

In response to these questions Exelon conducted a review of the Ginna PAR flowchart. On February 9, 2015, Exelon initiated AR 02449963 documenting that the PAR flowchart in Revision 03900 of the NERP and the corresponding flowchart in Attachment 3 of CNG-EP-1.01-1013, Revision 00100, had an inaccurate threshold for considering an event to be a rapidly progressing severe accident. Specifically, when there is a loss of the primary containment per the EALs and the containment radiation monitors are greater than or equal to 100 Rads per hour (R/hour), the emergency director would recommend evacuating downwind areas; the PAR flowchart should have read, "Are the containment radiation monitors greater than or equal to 1,000 R/hour?" For General Emergency initial PARs with containment radiation monitor conditions between 100 R/hour and 1,000 R/hour, Exelon would have inappropriately determined that the event constituted a rapidly progressing severe accident warranting evacuation of downwind areas and many more ERPAs than intended (an inadequate PAR).

On February 12, 2015, Exelon issued NERP, Revision 04000, and CNG-EP-1.01-1013, Revision 00200, which corrected the PAR flowchart text and eliminated the described issue. Additionally, action was taken to ensure that all emergency directors were adequately trained and aware of the NERP and CNG-EP-1.01-1013 revisions correcting the flowchart deficiency.

The inspectors conducted interviews with several emergency directors, reviewed the EAL scheme, and reviewed emergency director training materials to determine whether the organization might have reasonably identified that evacuation of downwind areas was not warranted for General Emergency initial PARs with containment radiation monitor conditions between 100 R/hour and 1,000 R/hour. The inspectors concluded the organization would not have reasonably identified this deficiency during an emergency situation based on the consistency of the emergency directors' interview responses, and the PAR flowchart revision training materials included the incorrect threshold for containment radiation monitor conditions, which provided negative training to the emergency response organization.

Analysis. The inspectors determined that Exelon did not adequately maintain the effectiveness of its Emergency Plan in accordance with 10 CFR 50.54(q)(2), 10 CFR 50.47(b), and 10 CFR 50, Appendix E, when Exelon implemented changes to the PAR flowchart. Specifically, Exelon implemented Figure 5.3, "Scheme for Protective Action Recommendations," of the NERP, and Attachment 3, "Ginna PAR Determination Instructions," of CNG-EP-1.01-1013, and the flowchart for "Initial Protective Action Recommendation ONLY," with an unintentional error. Incorrectly revising and incorporating an inaccurate value in the implementing procedures for the NERP is considered a performance deficiency that was within Exelon's ability to foresee and prevent. The inspectors determined that the inadequate maintenance of the Emergency Plan was more than minor because it was associated with the procedure quality attribute of the Emergency Preparedness cornerstone and affected the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, Exelon's PAR implementation procedure was revised and contained containment radiation level set points that would potentially result in an inappropriate recommendation to evacuate downwind areas and many more ERPAs than intended when fewer or no evacuations should have been recommended. The inspectors evaluated the finding using IMC 0609.04, "Initial Characterization of Findings," issued June 19, 2012. The attachment instructs the inspectors to utilize IMC 0609, Appendix B,

"Emergency Preparedness Significance Determination Process," issued September 26, 2014, when the finding impacts the licensee's Emergency Preparedness cornerstone. The performance deficiency is associated with the emergency protective actions planning standard and is considered a risk-significant planning standard function. The inspectors were directed by the SDP to compare the performance deficiency with the examples in Section 5.10, "10 CFR 50.47(b)(10), Emergency Protective Actions," to evaluate the significance of this performance deficiency. However, the examples in Table 5.10-1, "Significance Examples §50.47(b)(10)," address failure to make a PAR, but the examples do not specifically address unnecessary evacuations of ERPAs. Therefore, in accordance with the guidance in Section 5.0.3 of IMC 0609, Appendix B, the issue was evaluated using the Attachment 2 flowchart and informed by the examples provided in other sections of the Emergency Preparedness SDP, as described below.

In the subject scenario, the licensee will have already accurately made a General Emergency declaration prior to determining an initial PAR. At the General Emergency level, there is at least a loss of two fission product barriers and a potential or full loss of a third, and a release is either in progress or imminent at levels that are likely to exceed Environmental Protection Agency protective action guidelines (PAGs) at and beyond the site boundary. As such, there is potentially a dose avoidance benefit for the public even when a PAG has not been reached due to a General Emergency condition actually existing. Therefore, an inadequate PAR resulting in evacuations of ERPAs when no evacuations are otherwise called for is less significant than an EAL overclassification resulting in an unnecessary PAR, because there is a potential dose avoidance benefit to the public at the General Emergency level. In this instance a PAR is made, which is sufficient to ensure public health and safety, although some additional risk will be incurred. The (b)(10) risk-significant planning standard functions are still met, although Exelon did fail to comply with the planning standard. Therefore, the inspectors determined the finding was of very low safety significance (Green).

The finding has a cross-cutting aspect in the area of Human Performance, Change Management, because Exelon did not use a systematic process for evaluating and implementing change so that nuclear safety remained the overriding priority. Specifically, changes to the NERP were made, and the inadequate change and the importance of the changes were not recognized by Exelon corporate, the department review, or the plant operations review committee review. Managers did not ensure individuals understood the importance of, and their role in, the change management process, and managers did not maintain a clear focus on nuclear safety when implementing the change management process to ensure that significant unintended consequences were avoided [H.3].

Enforcement. 10 CFR 50.54(q)(2), requires that a holder of a nuclear power reactor operating license under this part, shall follow and maintain the effectiveness of an emergency plan that meets the requirements in Appendix E of this part and the standards in 10 CFR 50.47(b). 10 CFR 50.47(b)(10), requires, in part, that a range of protective actions has been developed for the plume exposure pathway emergency planning zone for emergency workers and the public, and guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway emergency planning zone appropriate to the locale have been developed. Section IV.B.1 of 10 CFR 50, Appendix E, requires, in part, that the means to be used for determining the magnitude of, and for continually assessing the impact of, the release of

radioactive materials shall be described, including EALs that are to be used as criteria for determining the need for notification and participation of State and local agencies, the Commission, and other Federal agencies, and the EALs that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. Contrary to the above, from December 19, 2014, through February 12, 2015, Exelon failed to maintain in effect at Ginna an Emergency Plan that met the standards in 10 CFR 50.47(b). Specifically, Exelon implemented Figure 5.3, "Scheme for Protective Action Recommendations," of the NERP, and Attachment 3, "Ginna PAR Determination Instructions," of CNG-EP-1.01-1013, and the flowchart for "Initial PAR ONLY," with an unintentional error. The value for containment radiation levels was 100 R/hour vice 1,000 R/hour. Due to the error, during certain events, Exelon would have inappropriately determined that the event constituted a rapidly progressing severe accident warranting evacuation of downwind areas and many more ERPAs than intended; this is not consistent with Federal guidance for the choice of protective actions during an emergency. Exelon's immediate corrective actions included entering the issue into its CAP and correcting the flowchart error. Because this violation is of very low safety significance and has been entered into Exelon's CAP as AR 02449963, this finding is being treated as an NCV consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000244/2015001-02, Inadequate Protective Action Recommendation Flowchart)**

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety and Occupational Radiation Safety

2RS4 Occupational Dose Assessment (71124.04 – 1 sample)

a. Inspection Scope

The inspectors reviewed the monitoring, assessment, and reporting of occupational dose. The inspectors used the requirements in 10 CFR 20, "Standards for Protection Against Radiation," regulatory guides, TSs, and procedures required by TSs as criteria for determining compliance.

Inspection Planning

The inspectors reviewed radiation protection program audits, National Voluntary Laboratory Accreditation Program (NVLAP) dosimetry testing reports, and procedures associated with dosimetry operations.

External Dosimetry

The inspectors reviewed dosimetry NVLAP accreditation, onsite storage of dosimeters, the use of "correction factors" to align electronic personal dosimeter results with NVLAP dosimetry results, dosimetry occurrence reports, and CAP documents for adverse trends related to external dosimetry.

Internal Dosimetry

The inspectors reviewed internal dosimetry procedures, whole body counter measurement sensitivity and use, adequacy of the program for whole body count

monitoring of plant radionuclides, adequacy of the program for dose assessments based on air sample monitoring and the use of respiratory protection, and internal dose assessments for any actual internal exposures.

Special Dosimetry Situations

The inspectors reviewed Exelon's worker notification of the risks of radiation exposure to the embryo/fetus, the dosimetry monitoring program for declared pregnant workers, external dose monitoring of workers in large dose rate gradient environments, and dose assessments performed since the last inspection that used multi-badging, skin dose, or neutron dose assessments.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with occupational dose assessment were identified at an appropriate threshold and properly addressed in the CAP.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 3 samples)

Unplanned Scrams, Unplanned Power Changes, and Unplanned Scrams with Complications

a. Inspection Scope

The inspectors reviewed Exelon's submittals for the following Initiating Events cornerstone performance indicators for the period of January 1 through December 31, 2014:

- Unplanned Scrams (IE01)
- Unplanned Power Changes (IE03)
- Unplanned Scrams with Complications (IE04)

To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7. The inspectors also reviewed Exelon's operator narrative logs, maintenance planning schedules, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 1 sample)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 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 the 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.

b. Findings

No findings were identified.

.2 Annual Sample: Radiation Monitor RM-14A Compensatory Measures

a. Inspection Scope

The inspectors performed an in-depth review of Exelon's evaluation and corrective actions associated with the compensatory measures that are implemented when radiation monitor RM-14A is unavailable. RM-14A is the plant-vent high-range effluent monitor, which monitors particulate, iodine-131, and noble gas in the ventilation air exhausted from the auxiliary and intermediate buildings. Procedure IP-EPP-10, "Control of Emergency Response Facilities and Equipment," Revision 00501, Attachment 6, describes compensatory measures attributes for emergency preparedness equipment. Radiation monitor RM-14A is used for emergency preparedness classifications (Alert, Site Area Emergency, General Emergency) during an emergency. IP-EPP-10 lists the compensatory action for all RM-14A channels unavailable as the on-shift radiation protection technician obtains dose rates, using an ion chamber, downwind of the plant vent at the protected area fence; the survey results are used to make the appropriate classification. The inspectors were concerned that the dose rates measured at the protected area fence would not necessarily be indicative of the dose rates due to a release going out the plant vent because a release out the vent would be elevated and the measurement would be taken at ground level.

b. Findings and Observations

No findings were identified.

In response to the NRC concern, Exelon reviewed the compensatory measures associated with RM-14A and concluded that the guidance in IP-EPP-10 was less than adequate and needed improvement. However, other actions were identified that were in place in addition to the IP-EPP-10 compensatory measure. The plant vent noble gas monitor (R-14) measures low levels of radiation in the plant vent and is used to classify events at the Unusual Event level only. When R-14 alarms, alarm response procedure AR-RMS-14, "R14 Vent Gas," Revision 008, directs operators to refer to ER-RMS.1,

"Determining the Location of High Activity within the Plant Utilizing the Plant Vent," Revision 00600. ER-RMS.1 directs plant personnel to sample the plant vent. Additionally, CH-RETS-RMS-INOP, "Actions for RMS Monitor Alarm or Inoperability," Revision 02100, requires an analysis for an alarming R-14 monitor in accordance with CH-345, "Sampling and Analysis of Plant Vent Iodine, Particulate and Noble Gases at R-10B, R-13, R-14 Skids or SPING RM-14A," Revision 00006, and grab samples taken at least once per 8 hours (administratively controlled at 4 hours) when R-14 and RM-14A are inoperable. CH-345, Attachment 4, provides the directions for sampling the plant event.

Ginna management indicated that the frequency of sampling the plant vent with a release in progress could be increased, as necessary, for timely classifications by control room personnel or the emergency director. Ginna management also estimated that the time for the sampling and analysis would be approximately 20 minutes, but not more than 30 minutes. Therefore, the control room personnel and/or the emergency director would get sampling results needed for event classifications in a timely manner.

In reviewing the compensatory actions associated with RM-14A, Exelon concluded that the actions that would be taken, in addition to the actions prescribed in IP-EPP-10, were adequate; however, Exelon concluded that IP-EPP-10 needed enhancement to properly and thoroughly describe all of the compensatory actions that would be taken and to provide other options for actions that could be taken. Exelon did not identify any instances where an emergency classification would not have been declared, in a timely manner, based on the actions that would be taken during an emergency and the procedural guidance provided.

The inspectors discussed with emergency preparedness and chemistry personnel the actions that would be taken during an emergency with RM-14A OOS, and reviewed the procedures that would be implemented. The inspectors concluded that the inadequacy with IP-EPP-10 constitutes a minor violation that is not subject to enforcement action, in accordance with the NRC's Enforcement Policy, since no instances were identified where an EAL classification would not have been made in a timely manner. The inspectors concluded that after the issue was identified to Exelon, the corrective actions taken to revise IP-EPP-10 were reasonable to provide additional guidance and options to the control room personnel and emergency director.

4OA6 Meetings, Including Exit

On April 22, 2015, the inspectors presented the inspection results to Mr. Thomas Paglia, Director, Site Operations, and other members of the Ginna staff. The inspectors verified that no propriety information was retained by the inspectors or documented in this report.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by Exelon and is a violation of NRC requirements, which meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

- 10 CFR 50, Appendix B, Criterion XI, "Test Control," requires, in part, that a test program be established to assure that all testing required to demonstrate that SSCs will perform satisfactorily in service is performed in accordance with written test

procedures. Contrary to the above, prior to October 2014, Exelon did not perform adequate periodic and independent testing to demonstrate that the relays that provide permissives for emergency diesel generator breaker closing to the emergency buses would perform satisfactorily in the event of a postulated single failure during a design basis event. Exelon entered the issue into their CAP as AR 02344861, and tested and replaced the relays in question. The inspectors determined the finding was of very low safety significance (Green) in accordance with IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating System Screening Questions," issued June 19, 2012, since the finding was not a deficiency affecting the design or qualification of a mitigating SSC, did not represent a loss of system and/or function, and did not represent an actual loss of function of at least a single train.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Pacher, Site Vice President
W. Carsky, Plant Manager
J. Bowers, Radiation Protection General Supervisor
S. Doty, Director, Site Maintenance
K. Garnish, Sr. Manager, Operations Support & Services
M. Geckle, Manager, Site Transition
T. Harding, Manager, Site Regulatory Assurance
D. Markowski, Sr. Engineering Manager
T. Mogren, Director, Site Engineering
T. Paglia, Director, Site Operations
S. Reed, Operator Requalification Program Lead
J. Scalzo, Manager, Site Security
J. Sperr, Manager, System Engineering
S. Wihlen, Director, Work Management

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed

05000244/2015001-01	NCV	Inadequate Corrective Actions Result in Failure of Bus 18 Undervoltage Solid State Switchboard Card (Section 1R12)
05000244/2015001-02	NCV	Inadequate Protective Action Recommendation Flowchart (Section 1EP4)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
ER-SC.1, Adverse Weather Plan, Revision 01903
O-6.1, Equipment Operator Rounds and Log Sheets, Revision 05500
O-22, Cold Weather Walkdown Procedure, Revision 01102

Section 1R04: Equipment Alignment

Procedures
STP-O-30.1, Safety Injection System Valve and Breaker Position Verification, Revision 00102

STP-O-30.5, Standby Auxiliary Feedwater Pumps Valves and Breakers, Revision 00200
STP-O-30.8, Service Water System Valve Position Verification, Revision 00102
STP-O-30.9, Component Cooling Water Flow Path Verification, Revision 00002

Drawings
33013-1238, Standby Auxiliary Feedwater, Revision 32
33013-1245, Auxiliary Coolant Component Cooling Water, Revision 34
33013-1246, Auxiliary Coolant Component Cooling Water, Revision 17, Sheet 1
33013-1246, Auxiliary Coolant Component Cooling Water, Revision 13, Sheet 2
33013-1250, Station Service Cooling Water Safety-Related Piping and Instrumentation Drawing (P&ID), Revision 66, Sheet 1
33013-1250, Station Service Cooling Water Safety-Related P&ID, Revision 49, Sheet 2
33013-1250, Station Service Cooling Water Safety-Related P&ID, Revision 38, Sheet 3
33013-1262, Safety Injection and Accumulators P&ID, Revision 33, Sheet 1
33013-1262, Safety Injection and Accumulators P&ID, Revision 7, Sheet 2

Action Request
AR 02465659

Section 1R05: Fire Protection

Procedures
A-54.7, Fire Protection Tour, Revision 03500
A-103.9, Fire Brigade Training, Revision 03004
FRP-16.0, Air Handling Room, Revision 00801
FRP-27.0, Secondary Hydrogen Bottle House, Revision 00601
FRP-31.0, Screen House Operating Floor, Revision 00801
OP-AA-201-009, Control of Transient Combustible Material, Revision 16
SC-3.1.1, Fire Alarm Response (Fire Brigade Activation), Revision 017
SC-3.4.1, Fire Brigade Captain and Control Room Personnel Responsibilities, Revision 04000

Drawings
21488-0108, Fire Barrier General Arrangement Sheet – Hydrogen Storage Room South Wall Elevation – Penetration Locations Floor Elevation 256 feet 6 inches, Revision 6
21488-0109, Fire Barrier General Arrangement Sheet – Oil Storage Room East, West, and South Wall Elevations – Penetration Locations Floor Elevation 253 feet 6 inches, Revision 6
21488-0118, Fire Barrier General Arrangement Sheet – Screen House Floor Plan Penetration Locations Floor Elevation – 253 feet 6 inches, Revision 9, Sheet 4
21488-0118, Fire Barrier General Arrangement Sheet – Screen House Floor Plan Penetration Locations Floor Elevation – 253 feet 6 inches, Revision 9, Sheet 5
33013-2121, Plant Arrangement Intermediate Building Plans – Elevation 293 feet 0 inches, Elevation 298 feet 4 inches, Elevation 315 feet 4 inches, Revision 2
33013-2540, Fire Response Plan – General Plant, Drawing Index and Symbol Legend, Revision 9
33013-2544, Fire Response Plan – Turbine Building, Plan – Basement Floor Elevation 253 feet 6 inches, Revision 13
33013-2557, Fire Response Plan – Intermediate Building Plans – Elevation 293 feet 0 inches, Elevation 298 feet 4 inches, and Elevation 315 feet 4 inches, Revision 4
33013-2571, Fire Response Plan Screen House Plan – Above Elevation 253 feet 6 inches, Revision 6

Action Request
AR 02466793

Miscellaneous
DA-ME-98-004, Combustible Loading Analysis, Revision 12

Section 1R06: Flood Protection Measures

Action Requests
AR 02470327
AR 02470390
AR 02470900

Work Order
WO C92544350

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedures
EP-AA-1012 Addendum 3, R.E. Ginna Nuclear Power Plant Emergency Action Levels, Revision 0
ER-SC.3, Low Screen House Water Level, Revision 02305
HU-AA-1211, Pre-Job Briefings, Revision 009

Miscellaneous
Simulator Evaluation, Examination Material, March 3, 2015

Section 1R12: Maintenance Effectiveness

Procedures
CNG-AM-1.01-1023, Maintenance Rule Program, Revision 00201
CNG-CA-1.01 (superseded), Performance Improvement Program, Revision 00200
CNG-CA-1.01-1000 (superseded), Corrective Action Program, Revision 00400
ER-AA-310-1002, Maintenance Rule Functions – Safety Significance Classification, Revision 003
ER-AA-600-1012, Risk Management Documentation, Revision 011
OP-AA-108-117, Protected Equipment Program, Revision 004
OPG-AUTO-SOFTWARE, Control Room Software Operation, Revision 03100
PI-AA-120, Issue Identification and Screening Process, Revision 001
PI-AA-125, Corrective Action Program (CAP) Procedure, Revision 001
WC-AA-101-1006, On-Line Risk Management and Assessment, Revision 001
WC-AA-2000, Emergent Issue Response, Revision 005

Drawings
33013-0652, 480 Volt One Line Wiring Diagram, Revision 29
33013-1452, UV Control Cabinet Bus 18 (ARA2CC18) – Control Logic #1 Control Schematic, Revision 5

Action Requests/Condition Report
AR 02424722
AR 02449131
AR 02461920
CR-2011-001667

Work Orders
WO C20800654
WO C91164854
WO C92738158
WO C92738169
WO C92920832
WO C92921784
WO C92921785
WO C92923156
WO C92925824
WO C92925829

Miscellaneous
AI-2012-000071-023
CA-2011-001404
Maintenance Rule Manager Database
Maintenance Rule System Basis Document, System 61, March 2, 2015
Maintenance Rule System Basis Document, System 62, February 25, 2015
System Health Report (62 – 480 VAC Electrical System LAC)

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
ER-AA-600-1012, Risk Management Documentation, Revision 11
OP-AA-108-117, Protected Equipment Program, Revision 004
OP-AA-201-009, Control of Transient Combustible Material, Revision 16
OPG-PROTECTED-EQUIPMENT, Protected Equipment Postings for Major Equipment, Revision 01000
WC-AA-101-1006, On-Line Risk Management and Assessment, Revision 001
WC-AA-2000, Emergent Issue Response, Revision 005

Action Request
AR 02473340

Section 1R15: Operability Determinations and Functionality Assessments

Action Requests
AR 02433266
AR 02449131
AR 02466508

Work Orders
WO C92497732
WO C92939171

Miscellaneous
Operability Evaluation (OPEVAL-15-004), Revision 001
Operability Evaluation (OPEVAL-15-005), Revision 000

Section 1R19: Post-Maintenance Testing

Procedures
SEG-2.3, Control Room Envelope Habitability Program Guide, Revision 003
STP-E-37.3A, Control Room Emergency Air Treatment System Mass Air Flow Check for Train 'A' and Train 'B', Revision 00101
STP-E-47.3A, Control Room Emergency Air Treatment System Train 'A' Filter Inspection and Efficiency Testing, Revision 00103
STP-O-2.1-COMP-C, Safety Injection Pump 'C' Comprehensive Test, Revision 00202
STP-O-2.1QA, Safety Injection Pump 'A' Quarterly Test, Revision 0900
STP-O-2.1QC, Safety Injection Pump 'C' Quarterly Test, Revision 00603
STP-O-2.1QC, Safety Injection Pump 'C' Quarterly Test, Revision 00604
STP-O-2.2-COMP-A, Residual Heat Removal Pump 'A' Comprehensive Test, Revision 00401
STP-O-2.7.1-COMP-B, Loop 'B' Service Water Comprehensive Pump Test, Revision 00703
STP-O-2.8Q, Component Cooling Water Pump Quarterly Test, Revision 00603
STP-O-17.7AM, CREATS Filtration Train 'A' Monthly Surveillance, Revision 00201
STP-O-33A, Spent Fuel Pool Pump 'A,' Revision 00502
STP-O-39, Leakage Evaluation of Primary Coolant Sources Outside Containment, Revision 00104

Drawings
33013-1867, Control Room Emergency Zone and Control Room Emergency Air Treatment System P&ID, Revision 4, Sheet 1
33013-1867, Control Building HVAC Systems Control Room Normal HVAC System P&ID, Revision 1, Sheet 3

Action Requests
AR 02471439
AR 02477433
AR 02477504
AR 02477750
AR 02477986

Work Orders
WO C90914539
WO C92131003
WO C92678929
WO C92710337

Miscellaneous
CR-HABITABILITY-PLAN, Control Room Envelope Habitability Plan, Revision 0

Section 1R22: Surveillance Testing

Procedures
CPI-TRIP-TEST-5.50, Trip Test for Turbine Auto Stop Pressure Switches, Relays, Turbine Emergency Trip SOV and Turbine Auxiliary Governor SOVs, Revision 01602
ER-AP-331-1003, RCS Leakage Monitoring and Action Plan, Revision 007
S-12.2, Operator Action in the Event of Indication of Significant Increase in Leakage, Revision 04700
S-12.4, RCS Leakage Surveillance Record Instructions, Revision 05800

STP-E-11.4, Technical Support Center 60 Cell Battery Bank, Revision 00201
STP-E-12.5, Technical Support Center Diesel Test, Revision 00401
STP-I-9.1.14, Undervoltage Protection – 480 Volt Safeguard Bus 14, Revision 00901
STP-O-13.4.33, Station Halon Systems Bottle Weighing and S08 (Relay Room and Computer Room) Air Flow Test, Revision 00200
STP-O-16QA, Auxiliary Feedwater Pump 'A' – Quarterly, Revision 00901
STP-O-16QT, Auxiliary Feedwater Turbine Pump – Quarterly, Revision 00901

Drawings
33013-1237, Auxiliary Feedwater P&ID, Revision 69
33013-1353, Turbine Trip Signals Logic Diagram, Revision 10, Sheet 3
33013-2249, Electro-Hydraulic System P&ID, Revision 15, Sheet 1

Action Requests
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AR 02461479
AR 02461926
AR 02468107
AR 02468200

Section 1EP04: Emergency Action Level and Emergency Plan Changes

Procedures
CNG-EP-1.01-1013, Emergency Classification and PAR, Revision 00001
CNG-EP-1.01-1013, Emergency Classification and PAR, Revision 00100
CNG-EP-1.01-1013, Emergency Classification and PAR, Revision 00200
EP-AA-1012, Radiological Emergency Plan Annex for Ginna Station, Revision 000
NERP, Ginna Station Nuclear Emergency Response Plan, Revision 03900
NERP, Ginna Station Nuclear Emergency Response Plan, Revision 04000
SACRG-2, Severe Accident Control Room Guideline for Transients after TSC is Functional, Revision 00300
SAG-6, Control Containment Conditions Severe Accident Management Guideline, Revision 00300
SAG-7, Reduce Containment Hydrogen, Revision 00200
SCG-2, Depressurize Containment, Revision 00300

Action Request
AR 02449963

Miscellaneous
PORC Presentation Form, February 11, 2015

Section 2RS4: Occupational Dose Assessment

Procedures
RP-2717, Calibration and Maintenance of the MGPI DMC 2000S/GN Electronic, Dosimeter, Revision 00101
RP-AA-201-1001, Radiological Instruction Sheet for Escorted Visitors, Revision 002
RP-AA-203, Exposure Control and Authorization, Revision 003
RP-AA-203-1001, Personnel Exposure Investigations, Revision 007
RP-AA-210, Dosimetry Issue, Usage, and Control, Revision 024

RP-AA-210-1001, Dosimetry Logs and Forms, Revision 009
RP-AA-211, Personnel Dosimetry Performance Verification, Revision 010
RP-AA-214, Area TLD Surveillance, Revision 003
RP-AA-220, Bioassay Program, Revision 010
RP-AA-220-1001, Collection and Handling of In Vitro Bioassay Samples, Revision 001
RP-AA-221, Review, Correction, and Analysis of Whole Body Count Data, Revision 002
RP-AA-222, Methods for Estimating Internal Exposure from In Vivo and In Vitro Bioassay Data, Revision 005
RP-AA-224, CEDE Dose Tracking using Lapel Air Samplers, Revision 001
RP-AA-270, Prenatal Radiation Exposure, Revision 006
RP-AA-301, Radiological Air Sampling Program Revision 008
RP-WBC-EVAL, Whole Body Count Evaluation, Revision 02200
RPG-66, RP-Guideline for ISFSI-Campaign, Revision 00100

Action Requests

AR 02162592
AR 02381165
AR 02409579
AR 02415481
AR 02416314
AR 02417733
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Miscellaneous

Care for Your Dosimetry
CNG-RP-1.01-3002, Attachment 2, 10 CFR 61 Analysis Verification Data Sheet, Revision 00000
CNG-RP-1.01-2002, Attachment 1, EDE and NRC Form 5 Calculations, Revision 00000, March 19, 2015
Dosimetry Facts, Questions, and Answers
NVLAP Accreditation Report, Landauer Dosimeter Codes A7, A9, and C2, through December 31, 2014
NVLAP Personnel Dosimetry Performance Testing, Landauer Badge Code Z, TLD U-Ring, April 2, 2014
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Radiological Surveys, Map #1B, Survey 2015-00315, March 5, 2015
RP-AA-214, Attachment 2, Area TLD Worksheet, October 1 to December 31, 2014, Revision 003
RP-AA-210-1001, Attachment 6, Neutron Dose Tracking Log, RWP GN-1-15-00305, Task 2, Revision 009
RP-AA-220, Attachment 3, Annual Review of the Bioassay Program Year 2014, Revision 010
RP-TECH-SUPPORT-2013-0004, ED Angular Dependency, Revision 0
RP-TECH-SUPPORT-2013-0005, Dose Assessment for SFP PCIs, Revision 0, April 18, 2013
RP-TECH-SUPPORT-2013-0006, Revised Internal Dose Evaluation – Air Sample 30037, Revision 0
RP-TECH-SUPPORT-2013-0007, Electronic Dosimetry Correction Factor Basis, Revision 0
RP-TECH-SUPPORT-2013-0010, Portal Monitor Sensitivity, Revision 0
RP-TECH-SUPPORT-2014-0002, Summary of Testing of Neutron Dosimetry, Revision 0
SA-2013-000019, ARGOS and GEM Alarm Set Points, July 10, 2013
SA-2013-000299, ED TO OSL Bias Comparison, January 3, 2014
Standard Background Subtraction for the Landauer OSL, February 5, 2009

Technical Support Document No. 10-047, ISFSI Environmental Baseline Radiation and Containment Neutron Survey
Technical Support Document No. 13-060, ISFSI Neutron Dosimetry Evaluation
Whole Body Count Logs (2014 and 2015 to date)
Whole Body Count Reports (selected for 2014)

Section 4OA1: Performance Indicator Verification

Miscellaneous
Nuclear Energy Institute 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7

Section 4OA2: Problem Identification and Resolution

Procedures
AR-RMS-14, R14 Vent Gas, Revision 008
CH-345, Sampling and Analysis of Plant Vent Iodine, Particulate, and Noble Gases at R-10B, R-13, R-14 Skids or SPING RM-14A, Revision 00006
CH-RETS-RMS-INOP, Actions for RMS Monitor Alarm or Inoperability, Revision 02100
ER-RMS.1, Determining the Location of High Activity within the Plant Utilizing the Plant Vent, Revision 00600
IP-EPP-10, Control of Emergency Response Facilities and Equipment, Revision 00501

Section 4OA7: Licensee-Identified Violations

Action Request
AR 02344861

LIST OF ACRONYMS

10 CFR	Title 10 of the *Code of Federal Regulations*
AR	action request
CAP	corrective action program
CCW	component cooling water
CR	condition report
CREATS	control room emergency air treatment system
EAL	emergency action level
EP	emergency preparedness
EPZ	emergency planning zone
ERPA	emergency response planning area
Exelon	Exelon Generation Company, LLC
Ginna	R.E. Ginna Nuclear Power Plant
IMC	Inspection Manual Chapter
NCV	non-cited violation
NERP	Nuclear Emergency Response Plan
NRC	Nuclear Regulatory Commission, U.S.
NVLAP	National Voluntary Laboratory Accreditation Program
OOS	out of service
P&ID	piping and instrumentation drawing
PAG	protective action guideline
PAR	protective action recommendation
R/hour	Rads per hour
SDP	significance determination process
SFP	spent fuel pool
SI	safety injection
SSC	structure, system, and component
TS	technical specification
UFSAR	Updated Final Safety Analysis Report
WO	work order