UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

August 7, 2013

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generating Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: OYSTER CREEK GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000219/2013003

Dear Mr. Pacilio:

On June 30, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Oyster Creek Generating Station. The enclosed inspection report documents the inspection results, which were discussed on July 18, 2013 with Mr. G. Stathes, Site Vice President, 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 NRC-identified findings of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. However, because of the very low safety significance, and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations, consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest any non-cited violations 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 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 Inspector at Oyster Creek. In addition, if you disagree with the cross-cutting aspect assigned to any finding 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 Inspector at Oyster Creek.

In accordance with 10 CFR 2.390 of the NRCs "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 Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Gordon K. Hunegs, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos.: 50-219
License Nos.: DPR-16

Enclosure: Inspection Report 05000219/2013003
w/Attachment: Supplementary Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-219
License No.:	DPR-16
Report No.:	05000219/2013003
Licensee:	Exelon Nuclear
Facility:	Oyster Creek Nuclear Generating Station
Location:	Forked River, New Jersey
Dates:	April 1, 2013 – June 30, 2013
Inspectors:	J. Kulp, Senior Resident Inspector A. Patel, Resident Inspector S. Ibarrola, Hope Creek Resident Inspector B. Bollinger, Project Engineer W. Schmidt, Senior Reactor Analyst B. Dionne, Health Physicist T. O'Hara, Reactor Inspector S. Pindale, Senior Reactor Inspector P. Presby, Senior Operations Engineer C. Newport, Operations Engineer
Approved By:	Gordon K. Hunegs, Chief Reactor Projects Branch 6 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000219/2013003, 04/01/2013 – 06/30/2013; Exelon Energy Company, LLC, Oyster Creek Nuclear Generating Station; Operability Evaluations.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. Inspectors identified two findings of very low safety significance (Green), both of which were NCVs. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, “Significance Determination Process” (SDP). The cross-cutting aspects for the findings were determined using IMC 0310, “Components Within Cross-Cutting Areas.” Findings for which the SDP does not apply may be Green, or be assigned a severity level after NRC management review. The NRC’s program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, “Reactor Oversight Process,” Revision 4, dated December 2006.

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," because Exelon did not promptly identify a condition adverse to quality. Specifically, from December 10, 2012 to April 4, 2013, Exelon did not identify that the fuel bypass sight glass on the #1 emergency diesel generator (EDG) was partially full. A partially full fuel bypass sight glass indicates that the bypass relief valve is degraded, challenging the operability of the emergency diesel generator because fuel could have bypassed the fuel injectors. Exelon entered this issue into the corrective action program for resolution as issue report (IR) 1497683 and subsequently replaced a degraded relief valve in the bypass sight glass.

  This finding is more than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. This issue was also similar to Example 3j of NRC IMC 0612, Appendix E, “Examples of Minor Issues,” because the condition resulted in reasonable doubt of the operability of the #1 emergency diesel generator and additional analysis was necessary to verify operability. The inspectors evaluated the finding using exhibit 2, "Mitigating System Screening Questions" in Appendix A to IMC 0609, "Significance Determination Process." The inspectors determined that this finding was a deficiency affecting the design or qualification of a mitigating SSC, where the SSC maintained its operability or functionality. Therefore, inspectors determined the finding to be of very low safety significance (Green). The finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because Exelon did not identify the issue associated with the degraded emergency diesel generator bypass sight glass in a timely manner. [P.1(a)]. (Section 1R15.1)

- Green. The inspectors identified a Green NCV of technical specification (TS) 6.8.1(a), Procedures and Programs, because Exelon’s alarm response procedure RAP-9XF2d, “BUS C UV,” (125 VDC system) was not adequately established and maintained. Specifically, the alarm response procedure allowed operator action that was not consistent with applicable TS 3.7.D, Station Batteries and Associated Battery Charger,

requirements. Exelon entered this issue into the corrective action program for resolution as IR 1512551 and initiated a procedure change request.

The inspectors determined this finding was more than minor because the finding affected the procedure quality attribute of the Mitigating System cornerstone objective to ensure the reliability and capability of systems that respond to initiating events. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, the inspectors determined that this finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. Therefore, the inspectors determined the finding to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Resources, because Exelon did not ensure that an alarm response procedure was adequate and accurately reflected technical specification requirements. [H.2(c)] (Section 1R15.2)

Other Findings

None.

REPORT DETAILS

Summary of Plant Status

Oyster Creek began the inspection period at 100 percent power. On April 18, 2013, operators reduced power to approximately 90 percent to return the D reactor recirculation loop to service following motor generator set preventive maintenance. Operators returned the unit to 100 percent on the same day. On May 17, 2013, operators reduced power to 75 percent to perform a rod patter adjustment and turbine valve testing and returned the unit to 100 percent the following day. On May 28, 2013, operators performed an unplanned power reduction to 68 percent power in response to repair C main feed regulating valve after it failed in the as-is position. On May 30, 2013, operators returned the unit to 100 percent following repairs. On May 31, 2013, operators performed an unplanned power reduction to 68 percent power in response to repair C main feed regulating valve after it failed in the full open position. On June 2, 2013, operators returned the unit to 100 percent following repairs. 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

The inspectors performed a review of Exelon's readiness for the onset of seasonal high temperatures. The review focused on the C and D 4160V room ventilation systems and the emergency diesel generators. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications, control room logs, and the corrective action program 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 of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors performed a review of plant features and procedures for the operation and continued availability of the offsite and alternate AC power system 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 the responsible system manager, reviewing condition reports and open work orders, and walking down portions Oyster Creek 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 following systems:

- Isolation condenser A while isolation condenser B was out-of-service for surveillance testing on April 11, 2013
- Containment spray system I while containment spray system II was out-of-service for planned maintenance on April 22, 2013
- Standby gas treatment system I while standby gas treatment system II was out-of-service for planned maintenance on May 7, 2013
- Emergency diesel generator #2 while emergency diesel generator #1 was out-of-service for corrective maintenance on May 15, 2013

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, technical specifications, work orders, condition reports, 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 for resolution with the appropriate significance characterization.

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, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Reactor Building (RB-FZ-1F2, -19'6") on April 22, 2013
- Cable Spreading Room (OB-FZ-4, 36') on May 6, 2013
- A 480V Switchgear Room (OB-FZ-6A, 23'6") on May 6, 2013
- B 480V Switchgear Room (OB-FZ-6B, 23'6") on May 6, 2013
- 4160V Emergency Switchgear (1C and 1D) Vaults (TB-FA-3A) on May 6, 2013

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 3 samples)

.1 Internal Flooding Review

a. Inspection Scope

The inspectors reviewed the UFSAR, the site flooding analysis, and plant procedures to assess susceptibilities involving internal flooding. The inspectors also reviewed the corrective action program to determine if Exelon identified and corrected flooding problems and whether operator actions for coping with flooding were adequate. The inspectors focused on switchgear and emergency switchgear areas and the containment spray pump rooms to verify the adequacy of 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.

b. Findings

No findings were identified.

.2 Annual Review of Cables Located in Underground Bunkers/Manholes

a. Inspection Scope

The inspectors conducted an inspection of underground bunkers/manholes subject to flooding that contain cables whose failure could disable risk-significant equipment. The inspectors performed walkdowns of risk-significant areas, including the intake area manhole (MH-731-1), containing 4160V cables from the emergency service water pumps, 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 (71111.11B – 1 sample, 71111.11Q – 2 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training

a. Inspection Scope

The inspectors observed licensed operator simulator training on June 12, 2013, which included an electronic pressure regulator failure, D recirculation pump failure, fuel failure and B isolation condenser tube leak. 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 control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the technical specification 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 operators return D reactor recirculation loop to service following motor generator set maintenance on April 18, 2013. Also, the inspectors observed operator response to securing the C main feed pump due to the main feed regulating valve drifting close on May 28, 2013. The inspectors observed the pre-shift brie to verify that the briefing met the criteria specified in Exelon briefing and human performance procedures. Additionally, the inspectors observed crew performance to verify that procedure use, communications, and coordination of activities met established expectations and standards.

b. Findings

No findings were identified.

.3 Licensed Operator Requalification Biennial Review

a. Inspection Scope

The following inspection activities were performed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1, and Inspection Procedure Attachment 71111.11, “Licensed Operator Requalification Program and Licensed Operator Performance.”

Examination Results

Requalification exam results for year 2013 were reviewed to determine if pass/fail rates were consistent with the guidance of NRC Manual Chapter 0609, Appendix I, “Operator Requalification Human Performance Significance Determination Process (SDP).”

The review verified that:

- The individual pass rate on the dynamic simulator scenarios was greater than 80 percent. (Pass rate was 100 percent.)
- The individual pass rate of on-the-job performance measures (JPM) of the operating exam was greater than 80 percent. (Pass rate was 100 percent.)
- The individual pass rate on the written examination was greater than 80 percent. (Pass rate was 98 percent)
- More than 80 percent of the individuals passed all portions of the requalification exam. (Pass rate was 98 percent.)
- The crew pass rate was greater than 80 percent. (Pass rate was 100 percent.)

Written Examination Quality

The inspectors reviewed a sample of comprehensive written exams that facility staff administered to the operators in May and June of 2013.

Operating Test Quality

The inspectors reviewed operating tests (scenarios and JPMs) associated with two different examination weeks.

Licensee Administration of Operating Tests

The inspectors observed facility training staff administer dynamic simulator exams and JPMs during the week of June 3, 2013. These observations included facility evaluations

of crew and individual operator performance during the simulator exams and individual performance of JPMs.

Exam Security

The inspectors assessed whether facility staff properly safeguarded exam material, and whether test item repetition was excessive.

Remedial Training and Re-examinations

The inspectors reviewed a sample of remedial training package and the associated re-exams for an operator who failed a written exam administered during the two-year training cycle.

Conformance with License Conditions

License reactivation and license proficiency records were reviewed to ensure that Title 10 of the Code of Federal Regulations (10 CFR) 55.53 license conditions and applicable program requirements were met. The inspectors also reviewed a sample of records for requalification training attendance, and a sample of medical examinations for compliance with license conditions and NRC regulations.

Simulator Performance

Simulator performance and fidelity were reviewed for conformance to the reference plant control room. A sample of simulator deficiency reports was also reviewed to ensure facility staff addressed identified modeling problems.

Problem Identification and Resolution

The inspectors reviewed recent operating history documentation found in inspection reports, licensee event reports, the licensee's corrective action program, NRC End of Cycle and Mid-Cycle reports, and the most recent NRC plant issues matrix. The resident staff was also consulted for insights regarding licensed operators' performance. The inspectors focused on events associated with operator errors that may have occurred due to possible training deficiencies.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12 – 2 samples)

a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on SSC performance and reliability. The inspectors reviewed system health reports, corrective action program documents, maintenance work orders, 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 10 CFR 50.65 and verified that the (a)(2) performance criteria established by Exelon staff was 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.

- Emergency diesel generator #1 return fuel oil sight-glass abnormal level on April 3, 2013
- C-1 battery charger unavailability on May 1, 2013

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 emergent work activities listed below to verify that Exelon performed the appropriate risk assessments prior to removing equipment for work. 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 technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- A isolation condenser and A main control heating ventilation and air-conditioning unavailable for planned surveillance testing on April 2, 2013
- Containment spray system II out of service for planned maintenance and B battery charger unavailable during post maintenance testing on April 22, 2013
- Isolation condenser B and control rod drive pump B unavailable for planned surveillance testing on April 9, 2013
- Bank 5 startup transformer unavailable for planned maintenance on April 30, 2013
- Standby gas treatment system 2 and service water pump 1-2 unavailable for planned maintenance on May 7, 2013
- Emergency diesel generator #1 out of service for planned maintenance on May 13, 2013

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 6 samples)

a. Inspection Scope

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

- Emergency diesel generator #1 bypass fuel oil sight glass partially filled on April 4, 2013
- Non-seismic jack screws installed near B and D core spray pumps on April 4, 2013
- Standby liquid control pump plunger covers not secured properly on April 26, 2013
- Unexpected alarm 9XF-2-D, Bus C battery undervoltage due to C battery voltage step change (IR 1511816) on May 9, 2013
- Emergency diesel generator #1 return fuel oil sight glass partially empty on May 15, 2013
- Inoperable average power range monitor 6, 7 and 8 during surveillance testing on May 20, 2013

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 technical specification 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 technical specifications 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

.1 Degraded Emergency Diesel Generator Bypass Sight Glass Not Identified In The Corrective Action Program

Introduction. The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," because Exelon did not promptly identify a condition adverse to quality. Specifically, from December 10, 2012 to April 4, 2013, Exelon did not identify that the fuel bypass sight glass on the #1 emergency diesel generator was partially full indicating that the bypass relief valve was degraded.

Description. Oyster Creek's emergency power distribution system design contains two emergency diesel generators, #1 and #2, which serve as standby AC power sources for the two safety related 4160V vital buses in the event of a loss of normal offsite power. Each emergency diesel generator has two fuel oil sight glasses, the fuel return sight glass and the fuel bypass sight glass, which provide visual indication of the status of the emergency diesel generator fuel system operation. During emergency diesel generator operation, the return fuel sight glass should be full of fuel which indicates that an adequate amount of fuel is entering the fuel injectors of the emergency diesel generator.

The fuel oil bypass sight glass contains a relief valve which would open if the fuel oil filters become clogged. The open relief valve would allow the fuel to flow through the fuel oil bypass sight glass, thus bypassing the fuel injectors and subsequently starve the emergency diesel generator of fuel.

On April 4, 2013, the inspectors conducted a walk down of the #1 emergency diesel generator during plant status activities. The inspectors identified that the bypass sight glass on the #1 emergency diesel generator was 80% full of fuel which, by design, should be empty. The inspectors reviewed applicable design documents including the original vendor manual, which stated "if more than a trickle of fuel is visible in the fuel bypass sight glass, engine failure will probably result from lack of fuel to the fuel injectors." Based on this statement the inspectors raised the question of operability of the emergency diesel generator to perform its safety function throughout its mission time. Exelon entered the issue into the corrective action program as IR 1497683.

Exelon completed an operability evaluation which concluded that although the bypass fuel oil sight glass indicated leakage past the bypass relief valve seat and potentially bypassed some fuel around the fuel injectors, further evaluation determined that the emergency diesel generator was operable and could perform its design function throughout its mission time. Specifically, Exelon determined that the mission time of the emergency diesel generator is 24 hours and considered the worst case bypass relief valve leakage to be less than 1 cup per 5 hours of engine operation. The diesel driven fuel oil pump provides considerably more than the calculated leakage therefore reasonable assurance of operability was maintained. Also, observations gathered during surveillance testing indicated that fuel was entering the fuel injectors by continuous flow through the return fuel oil sight glass. As a result of this further evaluation, Exelon operations staff determined the #1 emergency diesel generator was operable but degraded. On May 13, 2013, Exelon replaced the fuel oil bypass relief valve and after successful post maintenance testing, the fuel oil bypass sight glass did not contain fuel oil.

The inspectors determined that Exelon had opportunities to identify the degraded condition of the #1 emergency diesel generator and to enter the issue into the corrective action process. On December 10, 2012, Exelon operators noticed fuel oil in the #1 emergency diesel generator bypass fuel oil sight glass; however, no issue report was submitted in the corrective action program to identify the issue. Instead the operators placed a deficiency tag dealing with a previously known issue regarding fuel in the #2 emergency diesel generator bypass fuel oil sight glass on the #1 emergency diesel generator bypass fuel oil sight glass. Exelon procedure LS-AA-120, "Issue identification and screening process" states, in part, that issues be entered into the corrective action program via computer or a handwritten issue reporting form. No issue report was submitted by station personnel to document the deficiencies noted on December 10, 2012. As a result, evaluation and corrective actions of the degraded condition were not identified and completed for the #1 emergency diesel generator.

Analysis. The inspectors determined that inadequate identification and resolution of the condition adverse to quality is a performance deficiency that was within Exelon's ability to foresee and correct. This finding is more than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the performance

deficiency affected the reliability and capability of an emergency diesel generator to perform its safety function during its mission time. This issue was also similar to example 3j of NRC IMC 0612, Appendix E, “Examples of Minor Issues,” because the condition resulted in reasonable doubt of the operability of the #1 emergency diesel generator and additional analysis was necessary to verify operability.

The inspectors evaluated the finding using exhibit 2, "Mitigating System Screening Questions" in Appendix A to IMC 0609, "Significance Determination Process." The inspectors determined that this finding was a deficiency affecting the design or qualification of a mitigating structure, system or component (SSC), where the SSC maintained its operability or functionality. Therefore, inspectors determined the finding to be of very low safety significance (Green).

The finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because Exelon did not identify the issue associated with the degraded emergency diesel generator bypass sight glass in a timely manner. [P.1(a)]

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action," requires, in part, that “measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.” Contrary to the above, from December 10, 2012 to April 4, 2013, Exelon did not identify a partially full bypass sight glass as a condition adverse to quality. Specifically, Exelon personnel did not identify that the partially full bypass sight glass degraded the emergency diesel generator because fuel could have bypassed the fuel injectors and therefore challenged the operability of the emergency diesel generator. Because this issue is of very low safety significance (Green) and Exelon entered this issue into their corrective action program as IR 1497683, this finding is being treated as an NCV consistent with the NRC Enforcement Policy. **(NCV 05000219/2013003·01, Degraded Emergency Diesel Generator Bypass Sight Glass Not Identified In The Corrective Action Program)**

.2 Alarm Response Procedures Did Not Implement Technical Specification Requirements

Introduction. The inspectors identified a Green NCV of technical specification (TS) 6.8.1(a), Procedures and Programs, because Exelon’s alarm response procedure RAP-9XF2d, “BUS C UV,” (125 VDC system) was not adequately established and maintained. Specifically, the alarm response procedure was not adequate in that it allowed operator action that was not consistent with applicable TS 3.7.D, Station Batteries and Associated Battery Charger, requirements.

Description. On May 8, 2013, the inspectors noted log entries and an issue report (IR 1511816) documenting an unexpected alarm (9XF-2-d, Bus C UV) for an under-voltage condition on the C battery. The inspectors reviewed the plant process computer data for battery voltage and noted that it had lowered to 129.64 VDC. The undervoltage condition existed for approximately 30 seconds prior to returning to the initial voltage of 132.6 VDC without operator action. Operators left the C1 battery charger in service.

The alarm response procedure states, in part, “If Bus C voltage cannot be maintained above 130.2 VDC or a battery charger is not connected to Bus C, then declare the

125VDC distribution center C inoperable and enter Technical Specification limiting condition for operation 3.7.D.1."

Technical specification 3.7.D.1 states, in part, "With one required station battery B or C charger inoperable: (a) Restore associated Station Battery terminal voltage to greater than or equal to the minimum established float voltage within 2 hours, (b) Verify affected station battery float current <= 2 amps once per 12 hours, and (c) Restore station battery charger to OPERABLE status within 7 days."

Because the voltage returned to within specifications within a short period, station operators did not declare the distribution center inoperable or enter the technical specification 3.7.D.1 action statement. The issue report further documented that this was the fifth time in 2013 that the C battery undervoltage alarm had occurred.

The inspectors reviewed plant process computer data for the five occurrences of C battery undervoltage noted in the issue report. The inspectors noted that the C1 battery charger was in service for each occurrence and that the undervoltage conditions existed from 30 seconds to as long as 12 minutes. Technical specification 3.7.D.1 action statements were not entered by operators in any of the cases as voltage returned to within specifications without operator action and the C1 battery charger was left in service.

The inspectors noted that technical specification surveillance 4.7.C.1.a states, in part, "Weekly surveillance will be performed to verify the following - The overall battery voltage is greater than or equal to the minimum established float voltage." The minimum design float voltage is 130.2 VDC and technical specification surveillance 4.7.C.1.a would not be met if voltage dropped below 130.2 VDC. As a result, the inspectors determined the technical specification 3.7.D.1 action statement should have been entered. The inspectors compared the alarm response procedure, RAP-9XF2d, "BUS C UV" to the technical specification 3.7.D.1 requirements and determined that the alarm response procedure did not accurately implement the TS requirements and was non-conservative. Specifically, the alarm response procedure requires the battery charger to be declared inoperable and technical specification 3.7.D.1 to be entered if voltage "cannot be maintained" above 130.2 VDC. The alarm response procedure would allow voltage to fluctuate below 130.2 VDC for an unspecified period of time as long as the battery charger can return voltage to greater than 130.2 VDC. Technical specifications require the battery voltage to be greater than or equal to the minimum float voltage of 130.2 VDC and does not include any allowance for voltage fluctuations below 130.2 VDC. In this instance, using the guidance in the alarm response procedure, the operators did not declare the battery charger inoperable when voltage dropped below 130.2 VDC because voltage eventually returned above the required value.

The inspectors discussed this issue with Exelon operations staff and they initiated IR 1512551 to document the concern. Exelon initiated a procedure change request to the alarm response procedure to accurately reflect requirements in technical specification 3.7.D.1. On May 11, 2013, following another C battery voltage transient, Exelon declared the C1 battery charger inoperable, entered technical specification 3.7.D.1, removed C1 battery charger from service and placed C2 battery charger in service. Exelon repaired the C1 battery charger and placed it in service on June 20, 2013 following post-maintenance testing.

Analysis. The inspectors determined that the inadequate alarm response procedure for the 125 VDC system is a performance deficiency that was within Exelon's ability to foresee and correct. The inspectors determined this finding was more than minor because the finding affected the procedure quality attribute of the Mitigating System cornerstone objective to ensure the reliability and capability of systems that respond to initiating events. Specifically, the alarm response procedure allowed C1 battery charger allowed battery terminal voltage to go below the required float voltage without a required technical specification entry which affected the reliability and capability of the charger to perform its safety function.

In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the inspectors determined that this finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. Therefore, the inspectors determined the finding to be of very low safety significance (Green).

This finding has a cross-cutting aspect in the area of Human Performance, Resources, because Exelon did not ensure that the alarm response procedure was adequate and accurately reflected technical specification requirements. [H.2(c)]

Enforcement. Technical specification 6.8.1a, Procedures and Programs, states, in part, that written procedures shall be established, implemented, and maintained as recommended in Regulatory Guide 1.33. Regulatory Guide 1.33 discusses procedures for abnormal, off-normal and alarm conditions. Contrary to the above, prior to May 11, 2013, Exelon did not properly establish and maintain alarm response procedure RAP-9XF2d, "BUS C UV" (125 VDC system) to be consistent with TS 3.7.D, Station Battery and Associated Battery Chargers, requirements. Because this violation was of very low safety significance and it was entered into Exelon's corrective action program as IR 1512551 this violation is being treated as an NCV, consistent with the Enforcement Policy. **(NCV 05000219/2012-03-02, Alarm Response Procedure Did Not Implement Technical Specification Requirements).**

1R18 Plant Modifications (71111.18 – 1 sample)

.1 Temporary Modifications

a. Inspection Scope

The inspectors reviewed the temporary modification listed below to determine whether the modification affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results, and conducted field walkdowns of the modification to verify that the temporary modification did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- Temporary shielding supports installed near B and D core spray pumps

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 procedures to verify that the procedures adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedures was consistent with the information in the applicable licensing basis and/or design basis documents, and that the procedures 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.

- A emergency service water pump after pump breaker replacement (A2328330) on April 18, 2013
- D emergency service water pump after V-3-7 expansion joint replacement (C2029748) on April 22, 2013
- Bank 5 Startup transformer voltage regulator cable replacement (C2027301) on April 30, 2013
- Standby gas treatment system 2 after confirmation of duct wall thickness (R2203062) on May 7, 2013
- Emergency diesel generator #1 after bypass fuel oil sight glass relief valve replacement (C2030120) on May 13, 2013 Core spray system II parallel isolation valve after valve stem lubrication and repacking (R2183636) on May 22, 2013
- C1 battery charger following corrective maintenance (R2183027) on June 20, 2013

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 6 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 technical specifications, the UFSAR, and Exelon's testing 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:

- 617.4.001, B control rod drive pump operability test on April 9, 2013

- 636.4.003, Emergency diesel generator #1 operability test on April 15, 2013
- 607.4.016, Containment spray system I and emergency service water system I operability test on April 19, 2013
- 651.4.003, Standby gas treatment system II operability test on April 28, 2013
- Increase in unidentified leak rate on May 13, 2013
- 610.4.003, Core spray valve containment isolation valve operability test on May 21, 2013

b. Findings

No findings were identified.

Cornerstone: Radiation Safety

2RS7 Radiological Environmental Monitoring Program (71124.07)
Inspection Scope

During June 10-14, 2013, the inspectors verified that the radiological environmental monitoring program quantifies the impact of radioactive effluent releases to the environment and sufficiently validates the integrity of the radioactive gaseous and liquid effluent release program.

The inspectors used the requirements in 10 CFR Part 20; 10 CFR Part 50 Appendix A, Criterion 60 - Control of Release of Radioactivity to the Environment; 10 CFR 50 Appendix I Numerical Guides for Design Objectives and Limiting Conditions for Operations to Meet the Criterion "As Low as is Reasonably Achievable" (ALARA) for Radioactive Material in Light-Water- Cooled Nuclear Power Reactor Effluents; 40 CFR Part 190 Environmental Radiation Protection Standards for Nuclear Power Operations; 40 CFR Part 141 Maximum Contaminant Levels for Radionuclides; the guidance in RGs 1.23 Meteorological Measurements Program for Nuclear Power Plants, RG 4.1 Radiological Environmental Monitoring Programs for Nuclear Power Plants; RG 4.15 Quality Assurance for Radiological Monitoring Programs; NUREG 1302 Offsite Dose Calculation Manual (ODCM) Guidance: Standard Radiological Effluent Controls; applicable industry standards; and licensee procedures as criteria for determining compliance.

The inspectors reviewed the Oyster Creek Annual Radiological Environmental Operating Reports for 2011and 2012, and the results of any licensee assessments since the last inspection to verify that the radiological environmental monitoring program was implemented and reported in accordance with requirements.. This review included changes to the offsite dose calculation manual, sampling locations, monitoring and measurement frequencies, land use census, inter-laboratory comparison program, and analysis of data.

The inspectors reviewed the Oyster Creek offsite dose calculation manual and updated final safety analysis report with respect to the environmental monitoring program. The inspectors reviewed quality assurance audits and technical evaluations performed on the vendor analytical laboratory program.

Site/Environmental Inspection

The inspectors walked down five air sampling stations and five environmental dosimeter stations.

For the air samplers and environmental dosimeter stations selected, the inspectors reviewed the calibration and maintenance. Additionally, the review included the calibration and maintenance records for one composite water sampler.

The inspectors performed a review of compensatory actions taken upon loss of a required sampling station.

The inspectors observed the collection and preparation of environmental samples from surface water and vegetation media to verify that environmental sampling is representative of the release pathways as specified in the offsite dose calculation manual and in accordance with procedures.

Based on direct observation and review of records, the inspectors assessed whether the meteorological instruments were operable, calibrated, and maintained. The inspectors assessed whether the meteorological instruments were operable and that the data readout values at the meteorological tower were reading the same values as in the control room.

The inspectors evaluated whether missed environmental samples were identified and reported in the Annual Radiological Environmental Operating Reports. The inspectors selected five missed sample or inoperable sampler events to verify that Exelon identified the cause and implemented corrective actions. The inspectors reviewed any positive sample results detected above the lower limits of detection and reviewed Exelon's evaluation of associated radioactive effluent release data that was the source of the released material. The 2011 Annual Radiological Environmental Operating Reports noted the detection of iodine from the Fukushima Daiichi accident during March and April 2011.

The inspectors selected five structures, systems, or components that for which there is a credible mechanism for radioactive material to reach ground water. These included:

- Control rod drive minimum flow line
- Condensate transfer 6" & 8" lines
- 12" condensate line between the reactor and turbine buildings
- Off gas piping from stack to augmented off gas building
- 5 lines near condensate transfer building

The inspectors assessed whether Exelon has implemented a sampling, inspection and monitoring program sufficient to provide early detection of leakage from these structures, systems, or components to ground water.

The inspectors evaluated whether decommissioning records of leaks, spills, and environmental remediation since the previous inspection are retained in the 10 CFR

50.75(g) decommissioning file. One record was added to the decommissioning file in 2012. The new decommissioning record was associated with the July 23, 2012 isolation condenser actuation and associated steam release.

The inspectors reviewed any significant changes made by Exelon to the offsite dose calculation manual as the result of changes to the land census, long-term meteorological conditions, or modifications to the sampler stations since the last inspection. The inspectors reviewed technical justifications for any changed sampling.

The inspectors assessed whether the detection sensitivities for environmental samples were met as specified in the offsite dose calculation manual. The inspectors reviewed quality control charts for laboratory radiation measurement instrument and actions taken for degrading detector performance. The inspectors also reviewed the results of the vendor's quality control program, including the inter-laboratory comparison.

The inspectors reviewed the results of the inter-laboratory and intra-laboratory comparison program to verify the adequacy of environmental sample analyses performed by the Teledyne Brown Engineering, LLC and Environmental, Inc. The inspectors assessed whether the results included the media/radionuclide mix that was appropriate for the facility.

Identification and Resolution of Problems

The inspectors assessed whether problems associated with the radiological environmental monitoring program and meteorological monitoring programs are being identified by Exelon at an appropriate threshold and appropriate corrective actions are assigned for resolution in the licensee's corrective action program.

a. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures (MS05) (1 sample)

a. Inspection Scope

The inspectors sampled Exelon's submittals for the Safety System Functional Failure performance indicator for the period April 1, 2012 through March 31, 2013. To determine the accuracy of the performance indicator data reported during those periods, inspectors used definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, 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, maintenance rule records, maintenance work orders, condition reports, event reports and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.2 Unplanned Power Changes (IE03) (1 sample)

a. Inspection Scope

The inspectors reviewed Exelon's submittal for the Unplanned Power Changes performance indicator for the period April 1, 2012 through March 31, 2013. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed control room logs, NRC integrated inspection reports and plant process computer data, and compared that information to the data reported by Exelon to validate the accuracy of the submittal.

b. Findings

Introduction. The inspectors identified that Exelon's performance indicator submittal (3rd Quarter 2012) for Unplanned Power Changes per 7000 Critical Hours performance indicator excluded an unplanned downpower which the inspectors determined should have been reported based on the inspectors' interpretation of the guidance in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," revision 6. NEI 99-02, Chapter 1, General Reporting Guidance, states that if the NRC staff and the licensee cannot resolve an issue of interpretation or implementation of the guidance contained in NEI 99-02, that the issue should be escalated to appropriate industry and NRC management using the frequently asked question (FAQ) process. As a result, the NRC has opened an unresolved item (URI) to allow the issue to be addressed through the FAQ process and to determine whether a performance deficiency exists in Exelon's reporting of the performance indicator data for Unplanned Power Changes per 7000 Critical Hours.

Discussion. Exelon planned a downpower to 70% power for end of cycle control rod conditioning starting at 2300 on September 28, 2012 with a target completion time of 0700, September 29, 2012. At 1855 on September 28, 2012, operators lowered power to 85% in order to remove the A-north condenser from service to allow maintenance workers to repair a pre-existing patch on the A-north condenser circulating water discharge piping which had exhibited an increased leakage rate earlier in the day. At 2305 on September 28, 2012, operators lowered power to 70% to perform the planned control rod conditioning evolution. At 0033, on September 29, 2012, operators commenced raising power to full power following completion of the control rod conditioning. At 0115 on September 29, 2012, Exelon decided to stop the power ascension and hold power at 80% to assess repair options for the A-north circulating water piping. At 0302 on September 29, 2012, operators lowered power to 70% to set conditions for maintenance workers to perform repairs. Repairs to the A-north circulating water piping were completed by station personnel at 1539 and operators returned the plant to full power at 1843 on September 29, 2012.

NEI 99-02 "Regulatory Assessment Performance Indicator Guideline," Revision 6 defines an unplanned power change as follows:

> "Unplanned changes in reactor power are changes in reactor power that are initiated less than 72 hours following the discovery of an off-normal condition,

and that result in, or require a change in power level of greater than 20% of full power to resolve. Unplanned changes in reactor power also include uncontrolled excursions of greater than 20% of full power that occur in response to changes in reactor or plant conditions and are not an expected part of a planned evolution or test."

The inspectors determined that this downpower should count towards the unplanned power changes performance indicator for the following reasons:

- Power was initially lowered in response to an off-normal condition, an increase in leakage from a patch on the A-north condenser circulating water discharge piping.
- Power was lowered 4 hours earlier than the planned control rod conditioning starting time and repairs required an additional 8 hours to complete beyond the planned completion time for the control rod conditioning.
- Power was lowered to 70% to resolve the off-normal condition.
- Power ascension following the control rod conditioning was interrupted and a second downpower evolution was conducted to perform the repairs on the circulating water piping.

Exelon determined that this downpower should not count towards the unplanned power changes performance indicator for the following reasons:

- The initial unplanned downpower was 15% and would not be subject to the performance indicator criteria of 20%.
- The downpower to 70% for the control rod conditioning was planned and was extended to conduct repairs to the A-north circulating water piping.

The inspectors and Exelon could not resolve the differences in the interpretation of the NEI guidance and the issue will be submitted into the frequently asked question process for resolution. **(URI 05000219/2013003-03, Difference In Interpretation Of Guidance Contained NEI 99-02 Submitted Into The Frequently Asked Question Process.)**

.3 Scrams with Complications (IE02) (1 sample)

a. Inspection Scope

The inspectors reviewed Exelon's submittal for the Scrams with complications performance indicator for the period April 1, 2012 through March 31, 2013. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed control room logs, NRC integrated inspection reports and plant process computer data, and compared that information to the data reported by Exelon to validate the accuracy of the submittal.

b. Findings

No findings were identified.

.4 Unplanned Scrams per 7000 Critical Hours (IE01) (1 sample)

a. Inspection Scope

The inspectors reviewed Exelon's submittal for the Unplanned Scrams per 7000 Critical Hours performance indicator for the period April 1, 2012 through March 31, 2013. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed control room logs, NRC integrated inspection reports and plant process computer data, and compared that information to the data reported by Exelon to validate the accuracy of the submittal.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 3 samples)

.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 corrective action program 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 corrective action program and periodically attended condition report screening meetings.

b. Findings

No findings were identified.

.2 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a semi-annual review of site issues, as required by Inspection Procedure 71152, "Problem Identification and Resolution," to identify trends that might indicate the existence of more significant safety issues. In this review, the inspectors included repetitive or closely-related issues that may have been documented by Exelon outside of the corrective action program, such as trend reports, performance indicators, major equipment problem lists, system health reports, and maintenance or corrective action program backlogs. The inspectors reviewed Exelon's corrective action program database to assess condition reports written in various subject areas (equipment problems, maintenance, human performance issues, etc.), as well as individual issues

identified during the NRCs daily condition report review (Section 4OA2.1). The inspectors also reviewed Exelon's quarterly trend reports for the third and fourth quarters of 2012, to verify that Exelon was 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 departments that were required to evaluate input into the quarterly trend reports, which included the operations and maintenance departments. This review included a sample of issues and events that occurred over the course of the past two quarters to objectively determine whether issues were appropriately considered as emerging or adverse trends. The inspectors verified that these issues were addressed within the scope of the corrective action program, or through department review and documentation in the quarterly trend report for overall assessment. In particular, the inspectors evaluated the operations and maintenance department responses to the top three event codes from the quarterly trend reports, which were degraded equipment, poor work practices and inadequate procedures. The inspectors noted the department responses were appropriate and for those adverse trends that were confirmed, the report identified that the issue and the associated ongoing responses were already captured in Exelon's Performance Improvement Integrated Matrix.

The inspectors also noted that there had been some instances where issue reports were not generated in a timely manner. The resident inspectors had previously discussed this concern with Exelon staff. In response to this potential adverse trend, Exelon generated IR 01519558 to further evaluate the observation and to implement associated corrective actions.

.3 Annual Sample: Oyster Creek Fall 2012 In-Service Inspection Cause Determination Reviews

a. Inspection Scope

A problem identification and resolution sample inspection was conducted during the period of May 6-7, 2013. The inspectors performed an in-depth review of Exelon's cause determination evaluations and the corrective actions associated with issue reports (IR) 1465637 (Nozzle N1A), IR 1444414 (Nozzle N7B) and IR 1442118 (Nozzle N9 indications). These reports were initiated to assess nonconforming conditions which occurred, and were repaired per the ASME Code, during refueling outage 1R24 in November and December 2012.

The inspectors assessed Exelon's problem identification threshold, prioritization and timeliness of corrective actions to determine if Exelon had appropriately identified, characterized, and corrected problems associated with these issues. The inspectors also verified that planned and completed corrective actions were appropriate. The inspectors performed documentation reviews and interviewed engineering and licensing personnel to assess the effectiveness of any implemented corrective actions. The inspectors compared the actions taken to the requirements of Exelon's corrective action

program, 10 CFR 50, Appendix B, and the requirements of the American Society of Mechanical Engineers Boiler and Pressure Code.

b. Findings and Observations

No findings were identified.

The inspectors determined that Exelon's cause determinations were completed in a timely manner, were technically sound based on the known facts of each reported condition and reached reasonable conclusions about the cause of each situation. The inspectors concluded that Exelon's response to each of these issues was appropriate.

.4 Annual Sample: Review of Root Cause Analysis and Licensee Event Report Associated with for the Loss of Offsite Power while Shutdown during Hurricane Sandy

a. Inspection Scope

The inspectors reviewed the OC root cause analysis (RCA) which included equipment design and licensing basis performance analyzes conducted following the loss of offsite power (LOOP), while OC was shutdown in a refueling outage, on October 29, 2013, during Hurricane Sandy and the associated Licensee Event Report (LER) 2012-002-00, dated December 27, 2012. Specifically the inspectors reviewed: the plant data presented in the initial RCA, attended the Management Review Committee (MRC) meeting where the initial RCA was approved. The inspectors then reviewed the LER supplement 2012-002-01, dated June 26, 2013.

b. Findings and Observations

No findings were identified.

The inspectors determined that the initial RCA did not document sufficient evidence to determine that both offsite power sources were lost when a switchyard block wall, separating the two offsite sources, fell over due to high winds. Based on a review of plant computer data, the inspectors questioned if the LOOP could have been caused when, as noted in the analysis, one of the offsite power circuit breakers in the OC switchyard failed to open in response to the fault caused on one offsite power supply when the block wall fell. The inspectors discussed these issues with the OC electrical engineering and licensing personnel; Exelon committed to update the equipment performance review section of the root cause analysis and present the results in LER 2012-002-01.

The inspectors reviewed LER 2012-002-01 finding that Exelon determined that the switchyard circuit breaker, owned and maintained by Jersey Central Power and Light, failed to open as designed resulting in the LOOP. The inspectors determined Exelon took appropriate action to install a circuit protection modification that would automatically isolate the two normally cross-tied sources of offsite power in the event of a fault on one of the sources. The LER and its supplement are closed in section 4OA3 below.

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

.1 Plant Events

a. Inspection Scope

For the plant events listed below, the inspectors reviewed and/or observed plant parameters, reviewed personnel performance, and evaluated performance of mitigating systems. The inspectors communicated the plant events to appropriate regional personnel, and compared the event details with criteria contained in IMC 0309, "Reactive Inspection Decision Basis for Reactors," 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 Parts 50.72 and 50.73. The inspectors reviewed Exelon's follow-up actions related to the events to assure that Exelon implemented appropriate corrective actions commensurate with their safety significance.

- Loss of J69361 distribution line (IR 1507777) on April 29, 2013.

b. Findings

No findings were identified.

.2 (Closed) Licensee Event Report (LER) 05000219/2012-003-00/01: Indications Identified in the Control Rod Drive Return Nozzle (N9)

On November 7, 2012, Exelon discovered indications in the adjacent base material area of the safe end to pipe weld of the reactor pressure vessel control rod drive return nozzle (N9) during normally scheduled inservice inspection activities. Exelon performed a permanent repair of the indications in accordance with the ASME code during the 1R24 refueling outage prior to startup on November 29, 2012. The inspectors reviewed Exelon's analysis and root cause evaluation for this issue, which is documented in section 4OA2 of this report. The inspectors did not identify any new issues during the review of the LER. This LER is closed.

.3 (Closed) Licensee Event Report (LER) 05000219/2012-001-00/01: Reactor Scram Following a Trip of the 230KV Line

The LER and its supplements discuss the automatic reactor scram cause by a generator load reject following the unexpected isolation of all 230 KV power feeds from OC on July 23, 2012. The original LER and the first revision were reviewed in IR 05000219/2013002. Exelon submitted Revision 2 to the LER, dated April 8, 2013, which adequately revised the description of the plant and offsite power system response. The inspectors did not identify any new issues during the review of the licensee event report. This licensee event report is closed.

.4 (Closed) Licensee Event Report (LER) 05000219/2012-002-00/01: Loss of Offsite Power during Hurricane Sandy

The LER and its supplement discuss the loss of offsite power that occurred during Hurricane Sandy while the unit was in a refueling outage. This LER was discussed in section 4OA2 above. Revision 1, dated June 26, 2013 adequately revised the description of the offsite power system response. The inspectors did not identify any new issues during the review of the licensee event report. This licensee event report is closed.

.5 (Closed) Licensee Event Report (LER) 05000219/2012-005-00: Flange Leakage Found During NSSS Leak Test

On November 26, 2012, Exelon discovered a pinhole leak in the base material of the reactor head cooling piping flange during the nuclear steam supply system leak test, which is performed during every refueling outage prior to reactor startup. Exelon performed a weld repair of the flange and completed a leak test prior to reactor startup on November 29, 2012. The inspectors reviewed Exelon's analysis and apparent cause evaluation for this issue, which is documented in section 4OA2 of this report. The inspectors did not identify any new issues during the review of the LER. This LER is closed.

4OA6 Meetings, Including Exit

On July 18, 2013, the inspectors presented the inspection results to Mr. G. Stathes, Site Vice President and other members of the Oyster Creek staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

G. Stathes, Site Vice-President
R. Peak, Plant Manager
M. Ford, Director, Operations
G. Malone, Director, Engineering
J. Dostal, Director, Maintenance
C. Symonds, Director, Training
D. DiCello, Director, Work Management
M. McKenna, Manager, Regulatory Assurance
T. Farenga, Radiation Protection Manager
J. Renda, Manager, Environmental/Chemistry
T. Keenan, Manager, Site Security
W. Trombley, Senior Manager, Plant Engineering
H. Ray, Senior Manager, Design Engineering
E. Swain, Shift Operations Superintendent
J. Chrisley, Regulatory Assurance Specialist
D. Moore, Regulatory Assurance Specialist
K. Paez, Regulatory Assurance Specialist
J. Vincent, System Engineer
C. Calley, Discipline Planner/Supervisor
S. Foxhill, Work Week Manager
R. Swift, Senior Tag Out Planner
L. Cheng, Simulator Software Support
J. Clark, Shift Manager
G. Flesher, Senior Manager, Operations Support and Services
G. Freeman, Operations Training Manager
T. Genna, Operations Instructor
J. Gessner, Operations Instructor (Exam Developer)
M. Rossi, Operations Instructor (Licensed Operator Requalification Training Lead)
M. Strawser, Simulator Coordinator
G. Young, Operations Instructor (Exam Developer)

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed

05000219/2013003-01	NCV	Degraded Emergency Diesel Generator Bypass Sight Glass not identified in the Corrective Action Program (Section 1R15.1)
05000219/2013003-02	NCV	Alarm Response Procedures did not implement Technical Specification Requirements (Section 1R15.2)

Opened

05000219/2013003-03	URI	Difference In Interpretation Of Guidance Contained NEI 99-02 Submitted Into The Frequently Asked Question Process (Section 4OA1)

Closed

05000219/2012-001-00/01	LER	Reactor Scram Following a Trip of the 230KV Line (Section 4OA3)
05000219/2012-002-00/01	LER	Loss of Offsite Power During Hurricane Sandy (Section 4OA3)
05000219/2012-003-00/01	LER	Indications Identified in the Control Rod Drive Return Nozzle (N9) (Section 4OA3)
05000219/2012-005-00	LER	Flange Leakage Found During NSSS Leak Test (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
ABN-60, Grid Emergency, Revision 12
328, Turbine Building Heating and Ventilation System, Revision 60
328.1, Battery Room C HVAC, Revision 21
WC-AA-107, Seasonal Readiness, Revision 11
OP-OC-108-109-1001, Severe Weather Preparation T&RM for Oyster Creek, Revision 21

Condition Reports
1521162 1513751 1509983 1508920 1508919 1507084
1506635 1493859 1421153

Miscellaneous
2013 Certification of Oyster Creek Generating Station Summer Readiness, dated May 15, 2013

Section 1R04: Equipment Alignment

Procedures
310, Containment Spray System Operation, Revision 104
307, Isolation Condenser System, Revision 121
341, Emergency Diesel Generation Operation, Revision 101

Condition Reports
1513542 1513898 1514716

Drawings
GE 148F262, Sheet 1, Emergency Condenser Flow Diagram, Revision 54
GE 148F740, Sheet 1, Containment Spray System Flow Diagram, Revision 43
3E-532-A1-001, Sheet 1, Emergency Service Water System ISI Boundary Drawing, Revision 29

Miscellaneous
PRO-1304-001-WW 1315, Protected Equipment List for A Isolation Condenser
Oyster Creek Nuclear Generating Station UFSAR Section 6.2.2, Containment Heat Removal Systems, Revision 16

Section 1R05: Fire Protection

Procedures
OP-OC-201-008, Oyster Creek Pre-Fire Plans, Revision 13
OP-AA-201-009, Control of Transient Combustible Material, Revision 11
OP-OC-201-008-1009, Reactor Building Southwest Corner, Revision 0
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