UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 2, 2012

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

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000219/2012002

Dear Mr. Pacilio:

On March 31, 2012, 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 April 16, 2012 with Mr. M. Massaro 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 one Severity Level IV non-cited violation (NCV) and three NRC-identified finding of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. 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 corrective action program, the NRC is treating these findings as NCVs, consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest any 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 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 Generating Station. 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 Generating Station.

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 05000219/2012002
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-219
License No.:	DPR-16
Report No.:	05000219/2012002
Licensee:	Exelon Nuclear
Facility:	Oyster Creek Generating Station
Location:	Forked River, New Jersey
Dates:	January 1, 2012 – March 31, 2012
Inspectors:	J. Kulp, Senior Resident Inspector J. Ambrosini, Resident Inspector L. Kern, Project Engineer P. Kaufman, Senior Reactor Inspector J. Tomlinson, Operations Engineer
Approved By:	Gordon K. Hunegs, Chief Reactor Projects Branch 6 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000219/2012002, 01/01/2012 – 03/31/2012; Exelon Energy Company, LLC, Oyster Creek Generating Station; Licensed Operator Requalification Program, Maintenance Risk Assessments and Emergent Work, Control, Problem Identification and Resolution.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. Inspectors identified one Severity Level IV non-cited violation (NCV) and three findings of very low safety significance (Green), which were also 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: Initiating Events

- Green. The inspectors identified a Green NCV of Technical Specification (TS) 6.8.1a, "Procedures and Programs," for improperly implementing technical specifications requirements into abnormal operation procedures for the reactor recirculation system. The inspectors determined this procedural inadequacy was a performance deficiency that was within Exelon's ability to foresee and correct. Exelon's revised the abnormal operating procedure for the reactor recirculation system to restore compliance as a corrective action. Exelon entered this issue into the corrective action program for resolution as IR 1323171.

  There were no similar examples in Appendix E to Inspection Manual Chapter (IMC) 0612, but the inspectors determined this finding was more than minor because this performance deficiency could be reasonably viewed as a precursor to a significant event and if left uncorrected, this performance deficiency would have the potential to lead to a more significant safety concern. Specifically, if the recirculation loop was returned to service after being isolated while the reactor was at power, then a significant cold water transient could occur which could result in a reactor trip as described in UFSAR Section 15.4.4. This finding affects the configuration control attribute of the Initiating Events cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors determined that this finding was a transient initiator that did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the inspectors determined the finding to be of very low safety significance (Green).

  The inspectors determined that it was not appropriate to assign a cross-cutting aspect to this finding as the performance deficiency had existed since the original issue of the procedure in 2000 and was not indicative of current performance. (Section 1R11)

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green NCV of 10 CFR 50.65(a)(4), "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," when Exelon did not implement risk management actions to manage the risk associated with the performance of

surveillance activities on containment spray system 1. The inspectors determined that not implementing risk management actions to mitigate an increased overall maintenance risk was a performance deficiency that was within Exelon's ability to foresee and correct. Exelon's immediate corrective actions included resetting the crew clock and briefing the remaining operating crews on the details of this event. Exelon entered this issue into the corrective action program for resolution as IR 1324575.

The inspectors determined that this issue is more than minor because it is similar to example 7.g in Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues" in that key safety functions were significantly degraded without sufficient compensation. The inspectors determined that this finding affected both the Mitigating Systems and Barriers Integrity cornerstones. The inspectors used Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," flowchart 2, Assessment of Risk Management Actions," to analyze the finding. As this finding is a 10 CFR 50.65(a)(4) performance issue associated with risk management actions only and the ICDP is not >1E-6, the inspectors determined that the finding is of very low safety significance (Green).

This finding has a crosscutting aspect in the area of Human Performance, Work Practices, because Exelon's supervisory oversight of work activities did not support nuclear safety. [H.4.(c)] (Section 1R13)

Cornerstone: Barrier Integrity

- Green. The inspectors identified a Green NCV of TS 6.8.1a for not maintaining operating procedures in accordance with NRC and industry standards which required prudent, conservative lowering of reactor power prior to performing evolutions which had the potential to affect reactivity. The inspectors determined this procedural inadequacy was a performance deficiency that was within Exelon's ability to foresee and correct. Exelon has documented no immediate corrective actions but has entered this issue into the corrective action program for resolution as IR 1355895.

  There were no similar examples in Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," but the inspectors determined this finding was more than minor because it affected the configuration control aspect of the Barrier Integrity cornerstone. Specifically, reactivity control and reactor manipulations are used to preserve the integrity of the fuel cladding in order to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors used IMC 0609.04, Attachment 1, "Phase 1 - Initial Screening and Characterization of Findings" and determined the finding to be of very low safety significance (Green) because it did not affect the RCS barrier or the fuel barrier.

  This finding has a cross-cutting aspect in the area of Human Performance, Decision Making, where the licensee uses conservative assumptions in decision making and adopts a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action. [H.1.(b)] (Section 4OA2)

  Severity Level IV. The inspector identified a Severity Level IV non-cited violation of 10 CFR 55.21, "Medical Examination," for two licensed reactor operators failing to have a medical examination by a physician every two years. This violation was identified by an NRC

inspector May 25, 2011 and Exelon entered it into their corrective action program and performed the medical examinations on the two reactor operators.

The inspectors determined that the failure to perform the biennial medical examinations for two licensed reactor operators in accordance with 10 CFR 55.21 was a performance deficiency that was reasonably within Exelon's ability to foresee and correct. Because the issue impacted the regulatory process, in that the medical conditions of two licensed operators were not reviewed and reported to the NRC, thereby delaying the NRC's opportunity to review the matter, the inspectors evaluated this performance deficiency in accordance with the traditional enforcement process. Using example 6.4.d.1 from the NRC Enforcement Policy, the inspector determined that the violation was a SL IV (more than minor concern that resulted in no or relatively inappreciable potential safety or security consequence) violation, because Exelon personnel did not perform the medical examinations required by 10 CFR 55.21. The finding was of very low safety significance because during the time period when the physicals were required to be performed, neither operator had stood watch, and when the physicals were administered on June 2, 2011, all requirements were met. No changes to the conditions on either operator's license were necessary following their physicals. In accordance with Inspection Manual chapter (IMC) 0612, Appendix B, traditional enforcement issues are not assigned cross-cutting aspects. (Section AOA3).

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. This violation and corrective action tracking number are listed in section 4OA7.

REPORT DETAILS

Summary of Plant Status

Oyster Creek began the inspection period at 100 percent power. On January 11, 2012, operators reduced power to approximately 90 percent due to indications of a leaking condenser tube in the 'C' north waterbox. Later that day, operators returned the plant to 100 percent power on following isolation of the waterbox.

On January 20, 2012, operators performed a planned power reduction to 60 percent to identify and repair leaking tubes in the 'C' north waterbox. Operators returned the plant to 100 percent power on January 21, 2012 following repairs.

On January 23, 2012, operators reduced power to 90 percent to perform a rod for flow swap. Operators returned the plant to 100 percent power on January 24, 2012.

On February 3, 2012, operators reduced power to 90 percent to return 'C' reactor recirculation loop to service following completion of maintenance on the motor generator set. Operators returned the plant to 100 percent on February 4, 2012.

On February 13, 2012, operators reduced power to 94 percent to perform surveillance testing on core spray system 2. Operators returned to plant to 100 percent power on February 15, 2012.

On February 21, 2012, operators reduced power to 96 percent to perform surveillance testing on core spray system 1. Operators returned the plant to 100 percent power on February 24, 2012.

On February 25, 2012, operators reduced power to 95 percent to perform a rod pattern adjustment. Operators returned the plant to 100 percent power on February 25, 2012.

On March 21, 2012, operators reduced power to 95 percent to remove the 'B' reactor recirculation pump (RRP) from operation to perform maintenance on the 'B' motor generator set. Operators returned the plant to 100 percent power on March 21, 2012. Later that day, operators reduced power to 90 percent to restart the 'B' RRP. Attempts to start the pump were unsuccessful and operators returned the plant to 100 percent power on March 22, 2012. Later in the day on March 22, 2012, operators reduced power to 90 percent, successfully restarted the 'B' RRP and returned the plant to 100 percent power.

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

1R04 Equipment Alignment

Partial System Walkdowns (71111.04Q – 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- Containment spray system 1 while containment spray system 2 was out for planned maintenance on January 19, 2012
- Emergency diesel generator (EDG) 2 while EDG 1 was out for planned maintenance on February 6, 2012
- Core spray system 1 while core spray system 2 was out for planned maintenance on February 13, 2012

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.

- Feed pump room (0’-6” & 3’-6” Elevations) (TB-FZ-11F) on January 4, 2012
- Reactor building 75’ elevation (RB-FZ-1C) on January 11, 2012
- Southeast corner room (RB-FZ-1F1) on January 18, 2012
- Reactor building 51’ elevation (RB-FZ-1D) on January 22, 2012
- New cable spreading room (OB-FZ-22A) on February 1, 2012

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors observed a fire brigade drill scenario conducted on February 16, 2012, that involved a fire in the A/B battery 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 post-drill 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)

Internal Flooding Review

a. Inspection Scope

The inspectors reviewed the updated final safety analysis report (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 also focused on the switchgear and emergency switchgear areas to verify the adequacy of internal flooding mitigating strategies and barriers.

b. Findings

No findings were identified.

1R07 Heat Sink Performance

.1 Annual Heat Sink Performance (711111.07 – 1 sample)

a. Inspection Scope

The inspectors reviewed the 1-1 reactor building closed cooling water heat exchanger to determine its readiness and availability to perform its safety functions. The inspectors reviewed the design basis for the component and verified Exelon's commitments to NRC Generic Letter 89-13. The inspectors observed the cleaning and inspection of the heat exchanger, discussed the results of the most recent inspection with engineering staff, and reviewed pictures of the as-found and as-left conditions. The inspectors verified that Exelon initiated appropriate corrective actions for identified deficiencies. The inspectors also verified that the number of tubes plugged within the heat exchanger did not exceed the maximum amount allowed.

b. Findings

No findings were identified.

.2 Triennial Heat Sink Performance (711111.07 – 3 samples)

a. Inspection Scope

Based on plant specific risk assessment, previous inspections, operational experience, and performance history, the inspector selected the following heat exchangers and heat sink samples:

- Containment spray system 1 heat exchangers (H-21-1A and H-21-1B)
- Reactor building closed cooling water (RBCCW) heat exchangers (1-1 and 1-2)
- Performance of the ultimate heat sink (UHS), including emergency service water (ESW) and service water (SW) systems piping integrity and intake structure functionality

The inspectors reviewed the SW, ESW, RBCCW, and containment spray system designs in order to select appropriate aspects of these systems for review to ensure the systems and components were being properly inspected, maintained, and operated. Design features identified during this review included:

1. The SW and ESW systems are designed to supply cooling water from the Barnegat Bay circulating water canal to various plant heat loads to ensure a continuous supply of cooling water to systems and components necessary for plant safety during both normal operation and abnormal or accident conditions.
2. The pressure suppression chamber (torus) is used to circulate demineralized water through the shell side of the containment spray heat exchangers to the drywell and/or torus for post loss-of-coolant accident (LOCA) containment cooling.

The inspectors reviewed Exelon's methods (inspection, cleaning, maintenance, and monitoring) used to ensure heat removal capabilities of the containment spray and RBCCW heat exchangers and compared them to Exelon's commitments made in

response to Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment." The inspectors reviewed inspection work orders to verify that the as-found and as-left condition of the heat exchangers was bounded by assumptions in the engineering analyses and provided reasonable assurance of continued operability. The inspectors reviewed engineering analyses to verify that the minimum calculated ESW and SW system flow rates, in conjunction with the heat transfer capability of the containment spray and RBCCW heat exchangers, supported the minimum heat transfer rates assumed during normal, accident, and transient conditions. The inspectors compared surveillance data to the established acceptance criteria to verify that the results were acceptable to the design basis requirements for flow rate and developed differential pressure and that operation was consistent with applicable portions of the UFSAR and technical specifications.

The inspectors reviewed Exelon's procedures for ESW, SW and intake structure operation, abnormal ESW and SW operations, adverse weather conditions, and leak isolation. The inspectors verified that Exelon maintained these procedures consistent with their design and licensing basis and that plant operators could reasonably implement the procedures as written. The inspectors independently verified that the ESW and SW instrumentation that operators rely on for decision making was available and functional.

The inspectors reviewed Exelon's ESW and SW pipe inspection and monitoring program, including the chlorination system, to assess the condition and structural integrity of the piping. The inspectors reviewed a sample of pipe inspection records, intake structure inspections, maintenance history, system health reports, and associated engineering evaluations to ensure that Exelon appropriately identified, monitored, and dispositioned any piping or intake structure degradation. The effectiveness of corrective actions to improve the chlorination system reliability and availability was also reviewed.

The inspectors performed walkdowns of the intake area (including the trash racks, SW and ESW pumps, six traveling water screens, and structural supports), instrument panels, accessible areas of the reactor building containing the containment spray and RBCCW systems pumps and piping, SW and ESW piping, and reviewed the underwater video recordings and inspection reports of the intake structure to look for indications of degradation and/or piping leakage.

The inspectors also reviewed a sample of condition reports for the past three years related to the ESW, SW, containment spray, and RBCCW systems to ensure that Exelon appropriately identified, characterized, and corrected integrity problems related to heat exchanger performance and ultimate heat sink performance. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11 – 2 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training

a. Inspection Scope

The inspectors observed licensed operator simulator training on February 15, 2012, during Exelon's routine emergency drill. 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

On February 1, 2012, the inspectors observed the control room operators idle the 'C' reactor recirculation loop to set conditions for maintenance on the 'C' reactor recirculation pump motor generator set. The inspectors observed the pre-evolution brief and reviewed the post-evolution critique to ensure that the crew was ready to perform the evolution and were self-critical in their appraisal of their performance. Additionally, the inspectors observed the crew during the evolution to verify that procedure use, crew communications, and coordination of activities in the control room met established expectations and standards.

b. Findings

Introduction. The inspectors identified a Green non-cited (NCV) of TS 6.8.1a, "Procedures and Programs," for improperly implementing technical specifications requirements into abnormal operation procedures for the reactor recirculation system. Specifically, abnormal procedure (ABN) 2, "Recirculation System Failures," directs operators to manipulate loop isolation valves during power operation in a manner that violates TS 3.3.F.2.a.3, which requires the reactor to be in the cold shutdown condition in order to perform the same valve manipulations.

Description. The BWR-2 model reactor has five recirculation loops, which allows for removing a recirculation loop from service to perform maintenance on associated equipment. Each recirculation loop contains a discharge valve, a discharge bypass valve, a pump, and a suction valve. There are three modes of operation for each loop:

- Operating – all valves open, pump on.
- Idle – discharge valve shut, discharge bypass and suction valves open and pump off. The open discharge bypass valve allows a flow path through the loop to

keep the loop near normal operating temperatures. TS 1.46, “Idle Loop,” contains the definition of an idled loop.

- Isolated – suction and discharge valves shut, discharge bypass valve open, pump off. Oyster Creek TS 1.47 “Isolated Loop,” also recognizes a “fully isolated loop” where all the valves are shut with the pump off. There is no bypass valve in parallel with the suction valve. Whenever the suction valve is shut in a loop, there is no flow path to allow water to keep the loop warm.

TS 3.3, “Reactor Coolant,” contains the license conditions for returning idle and isolated loops to service. In summary, an idle loop may be returned to service during power operation if the idle loop temperature is within 50 degrees of reactor coolant temperature (TS 3.3.C.2) whereas an isolated loop can only be returned to service when the reactor is in the cold shutdown condition where reactor coolant is less than 212 degrees (TS 3.3.F.2.a.3).

On February 1, 2012, the inspectors were observing control room operators as they idled the ‘C’ reactor recirculation loop to set conditions for preventive and corrective maintenance on the ‘C’ reactor recirculation pump motor generator set. In general, the idling procedure is to lower pump speed, ensure the discharge bypass valve is open, shut the discharge valve and stop the pump. During the pre-evolution brief in the control room, the unit supervisor briefed the actions to take in the event that the pump discharge valve failed to fully shut when idling the loop. These actions are contained in ABN-2. In general, the abnormal procedure directs the operators to shut the suction valve, have electrical maintenance close the discharge valve, then reopen the suction valve to place the loop in an idle condition. Following the brief, the inspectors engaged the shift manager and unit supervisor concerning the apparent conflict between the actions contained in ABN-2 and TS 3.3. Specifically, ABN-2 directs shutting the suction valve, which interrupts flow through the loop. ABN-2 then allows returning the loop with no flow to an idle status during reactor operation while TS 3.3.F.2.a.3 requires the reactor to be in the cold shutdown condition to return an isolated loop to service. The operators indicated that an analysis existed which allowed Oyster Creek one hour to return an isolated loop to an idled status. The inspectors requested the analysis and continued to monitor the control room as operators successfully idled the ‘C’ reactor recirculation loop without having to enter ABN-2. Exelon entered this issue into the corrective action program for resolution as IR 1323171.

Exelon was unable to locate the analysis which would allow an isolated loop to be returned to an idled status within one hour of being isolated but did note that TS 1.47 recognized the fully isolated loop as all valves being shut. As the procedure in ABN-2 didn’t shut the discharge bypass valve, the licensee’s contention was that since the loop wasn’t “fully isolated,” that it was acceptable to reopen the suction valve therefore returning the loop to an idled status. The inspectors reviewed the TS bases which imply that the lack of flow in an isolated loop would cause the loop to cool and could cause a cold water addition transient, as the reason why an isolated loop cannot be returned to service unless the reactor is in the cold shutdown condition. Oyster Creek UFSAR Chapter 15.4.4, “Startup of an Inactive Loop at an Incorrect Temperature,” provides an analysis of a cold water addition transient with the result being a scram.

The inspectors consulted with the Technical Specification Branch in the Office of Nuclear Reactor Regulation to review this issue and provide an interpretation of TS 3.3.F.2.a.3 regarding whether the valve configuration which results from ABN-2 (discharge and

suction valves shut, discharge bypass valve open) meets the definition of an isolated loop. The Technical Specification Branch provided the interpretation that since the suction valve is shut and interrupts flow through the loop, the loop cannot be considered idle or operating and is considered isolated for TS 3.3.F.2.a.3.

Exelon resolved IR 1323171 by changing the ABN-2 procedure to consider the loop isolated once the suction valve is shut.

Analysis. The inspectors determined that improperly implementing technical specification requirements into abnormal operation procedures for the reactor recirculation system is a performance deficiency that was within Exelon's ability to foresee and correct. There were no similar examples in Appendix E to Inspection Manual Chapter (IMC) 0612. The inspectors determined this finding was more than minor because this performance deficiency could be reasonably viewed as a precursor to a significant event and if left uncorrected, this performance deficiency would have the potential to lead to a more significant safety concern. Specifically, if the recirculation loop was returned to service after being isolated while the reactor was at power then a significant cold water transient could occur which could result in a reactor trip as described in UFSAR Section 15.4.4. This finding affects the configuration control attribute of the Initiating Events cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations.

The inspectors evaluated the finding using "Phase 1 - Initial Screening and Characterization of Findings" worksheet in Attachment 4 to IMC 0609, "Significance Determination Process." The inspectors determined that this finding was a transient initiator that did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the inspectors determined the finding to be of very low safety significance (Green).

The inspectors determined that it was not appropriate to assign a cross-cutting aspect to this finding as the performance deficiency had existed since the original issue of the procedure in 2000 and was not indicative of current performance.

Enforcement. TS 6.8.1a, "Procedures and Programs," requires, in part, that written procedures shall be established, implemented, and maintained as recommended in Regulatory Guide 1.33. Contrary to the above, from December 12, 2003 until discovery, Exelon did not properly implement technical specification requirements into abnormal procedures for the reactor recirculation system. Exelon revised ABN-2 on March 12, 2012 to restore compliance. No actual safety consequences occurred as this portion of the procedure never had to be implemented. Because this violation was of very low safety significance and it was entered into Exelon's corrective action program as IR 1323171, this violation is being treated as an NCV, consistent with the Enforcement Policy. **(NCV 05000219/2012002-01, Abnormal operating procedure conflicts with technical specification requirements).**

1R12 Maintenance Effectiveness (71111.12 – 3 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. 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.

- V-28-18 had no closed indication (IR 1309429)
- Intake staff tide level gauge (IR 1313817)
- Multiple oscillations in generator output (IR 1339099)

b. Findings

No findings were identified

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 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.

- 'B' isolation condenser, station blackout transformer, and standby liquid control out for planned maintenance on January 3, 2012
- Unplanned maintenance on standby gas treatment system 2 during planned maintenance for containment spray system 1 on January 23, 2012
- Standby gas treatment system 2 unavailable for planned maintenance on January 30, 2012
- EDG 1 and 'A' control rod drive pump unavailable for planned maintenance on February 6, 2012

- Containment spray system 1 unavailable for surveillance testing with turbine building closed cooling water pump 2 and 1-1 diesel fire pump unavailable for planned maintenance on February 8, 2012

b. Findings

Introduction. The inspectors identified a Green NCV of 10 CFR 50.65(a)(4), "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," when Exelon did not implement risk management actions (RMA) to manage the risk associated with performance of surveillance activities on containment spray system 1. Specifically, Exelon did not clearly identify in the field, that containment spray system 2 was a protected system as required by Exelon procedure OP-AA-108-117, "Protected Equipment Program."

Description. On February 8, 2012, Exelon commenced surveillance test 607.4.004, "Containment Spray and Emergency Service Water Pump System 1 Operability and Comprehensive/Preservice/Post-Maintenance Inservice Test." Exelon performed a risk assessment for one train of containment spray being unavailable prior to the surveillance test and transitioned to yellow risk. During performance of the surveillance, the inspectors walked down the redundant safety system, containment spray system 2, and noted that it was not protected nor posted as expected.

Exelon procedure OP-AA-108-117, "Protected Equipment Program," Section 4.2, "When to Protect Equipment" states in part:

"4.2.1. When SSCs (structures, systems or components) are planned to or become unavailable then PROTECT redundant equipment if plant configuration is such that redundant equipment unavailability or manipulation would cause:

1. An overall online or outage risk assessment change to red risk,
2. A loss of generation capability of >20 MWe, or
3. An entry into Tech Spec 3.0.3 or a shutdown Tech Spec LCO of 12 hours or less (i.e., be in hot shutdown in 12 hrs or less)."

The inspectors used Paragon, Exelon's on-line risk management software and confirmed that with both trains of containment spray unavailable, that on-line risk would be red. Oyster Creek TS 3.4.C.7 states that if neither containment spray system is operable, "the reactor shall be placed in the cold shutdown condition." Oyster Creek TS 1.9 defines "place in the cold shutdown condition" as "Proceed with and maintain an uninterrupted normal plant shutdown operation until the cold shutdown condition is met." As conditions 1 and 3 of OP-AA-108-117 section 4.2.1 were met, the inspectors concluded that containment spray system 2 should have been protected as a risk management action.

OP-AA-108-117, Section 4.3, "Posting of Protected Equipment Signs and Robust Barriers" states, in part:

> "4.3.1. Protected equipment and systems are to be clearly identified in the field to prevent inadvertent work on or near the protected equipment. Physical barriers are to be used whenever possible, particularly in cases where bumping into a component may cause an inadvertent trip or system transient."

Containment spray system 2 was not identified as a protected system in the field. The inspectors brought this issue to the attention of the shift manager who entered it into the corrective action program as IR 1324575.

Analysis. The inspectors determined that not implementing risk management actions to mitigate an increased overall maintenance risk as required by 10CFR 50.65(a)(4) and Exelon procedure OP-AA-108-117, is a performance deficiency that was within Exelon's ability to foresee and correct. The inspectors consulted with the regional maintenance rule expert and determined that this issue is more than minor because it is similar to example 7.g in Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues" in that key safety functions were significantly degraded without sufficient compensation.

The inspectors evaluated the finding using Phase 1, "Initial Screening and Characterization" worksheet in Attachment 4 to IMC 0609, "Significance Determination Process." The inspectors determined that this finding affected both the mitigation systems and barriers cornerstones. For findings within the Mitigating Systems and Barrier Integrity cornerstones, attachment 4, table 3b, paragraph 5, directs that if the finding affects the licensee's assessment and management of risk associated with performing maintenance activities under all plant operating or shutdown conditions in accordance with Baseline Inspection Procedure (IP) 71111.13, "Maintenance Risk Assessment and Emergent Work Control," the inspectors shall use IMC 0609, Appendix K to determine the significance of the finding. The regional senior reactor analyst calculated incremental core damage probability (IDCP) to be approximately 1E-11 for the surveillance period. The inspectors used Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," flowchart 2, Assessment of Risk Management Actions," to analyze the finding. As this finding is a 10 CFR 50.65(a)(4) performance issue associated with risk management actions only and the ICDP is not >1E-6, the inspectors determined that the finding is of very low safety significance (Green).

This finding has a crosscutting aspect in the area of Human Performance, Work Practices, because the Exelon's supervisory oversight of work activities did not support nuclear safety. (H.4.(c))

Enforcement. 10 CFR 50.65, "Requirement for monitoring the effectiveness of maintenance at nuclear power plants," paragraph (a)(4) requires, in part, that "Before performing maintenance activities (including but not limited to surveillance, post-maintenance testing , and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities." Contrary to the above, on February 8, 2012, Exelon did not implement risk management actions as described in OP-AA-108-117, "Protected Equipment Program" in order to manage risk associated with the conduct of a surveillance test on containment spray system 1. Exelon's immediate corrective actions included performing a crew clock reset and briefing the remaining operating crews on the details of this event. No actual safety consequences occurred because plant conditions did not require the initiation of the containment spray system and there was no maintenance performed on containment spray system 2 during the conduct of containment spray system 1 surveillance testing. Because this finding is of very low safety significance

(Green) and Exelon entered this issue into their corrective action program as IR 1324575, this finding is being treated as an NCV consistent with the NRC Enforcement Policy. **(NCV 05000219/2012002-02), Risk management actions not implemented to manage increased online risk during a surveillance test).**

1R15 Operability Determinations and Functionality Assessments (71111.15 – 5 samples)

a. Inspection Scope

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

- 'B' core spray pump motor (IR 1314970) on January 24, 2012
- Standby gas treatment system 2 (IR 2173479) on January 31, 2012
- 'C' emergency service water pump discharge piping (IR 1318090) on February 13, 2012
- Offsite power fault monitoring capability (IR 1325599) on February 23, 2012
- EDG 1 engine analysis results (IR 1333192) on February 28, 2012

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

No findings were identified.

1R18 Plant Modifications (71111.18 – 1 sample)

Temporary Modifications

a. Inspection Scope

The inspectors reviewed the temporary modifications listed below to determine whether the modifications 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 modifications to verify that the temporary modifications did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- TCC-0312-665, Reactor building 75' elevation fire protection modification

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 5 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 was 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' battery room hydrogen monitor (M2293772) on January 4, 2012
- Core spray system booster pump 'A' and 'C' motor general inspection and oil change (R2112830) on February 23, 2011
- Standby gas treatment system 2 exhaust fan (C2027064) on January 24, 2012
- EDG 1 engine analysis (R2160925) on February 7, 2012
- Semi-annual B.5.b pump testing and maintenance (R2186266) on February 27, 2012

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 4 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 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:

- 'B' isolation condenser shell water level instrument calibration on January 4, 2012
- Unidentified leak rate surveillance on January 17, 2012
- Containment spray and emergency service water system 1 operability and comprehensive / preservice / post-maintenance inservice test on January 24, 2012
- Core spray system 2 instrument channel and level bistable calibration and test and system operability on February 14, 2012

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 – 1 sample)

Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine Exelon emergency drill on February 15, 2012 to identify any weaknesses and deficiencies in the classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator, technical support center, operations support center and emergency operations facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the station drill critique to compare inspector observations with those identified by Exelon staff in order to evaluate Exelon's critique and to verify whether the Exelon staff was properly identifying weaknesses and entering them into the corrective action program.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

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.

b. Findings

No findings were identified.

.2 Annual Sample: Unplanned Power Excursion During Monthly Turbine Valve Testing (TVT)

a. Inspection Scope

The inspectors performed an in-depth review of Exelon's apparent cause analysis and corrective actions associated with condition report 1286024, "TVT Caused Greater than Expected FW Level Change." Specifically, the plant experienced a rapid, unplanned rise in reactor power during monthly turbine valve testing which required operators to take action to reduce power by lowering recirculation flow.

The inspectors assessed Exelon's problem identification threshold, cause analyses, extent of condition reviews, compensatory actions, and the prioritization and timeliness of Exelon's corrective actions to determine whether Exelon was appropriately identifying, characterizing, and correcting problems associated with this issue and whether the planned or completed corrective actions were appropriate. The inspectors compared the actions taken to the requirements of Exelon's corrective action program and 10 CFR 50, Appendix B. In addition, the inspectors performed field walkdowns and interviewed operations personnel to assess the effectiveness of the implemented corrective actions.

b. Findings and Observations

Introduction. The inspectors identified a Green NCV of TS 6.8.1a for not maintaining operating procedures in accordance with NRC and industry standards which required prudent, conservative lowering of reactor power prior to performing evolutions which had the potential to affect reactivity. Specifically, Exelon's procedure 202.1, "Power Operation," states that plant evolutions that can cause flow or level transients are acceptable and expected and shall be controlled through monitoring and taking action to reduce power after the licensed value of core thermal power (1930 megawatts thermal (MWth)) has been exceeded by at least 10 MWth, which conflicts with accepted NRC and industry guidance which requires a reduction in power prior to any planned evolution which has the potential to impact reactor power.

Description. On November 4, 2011, Oyster Creek operators were performing monthly turbine valve testing when the plant experienced a rapid rise in power. When power reached 1940 MWth, operators took action by lowering recirculation flow to lower power below the licensed power value (1930 MWth). Exelon documented this issue in IR 1286024 and performed an apparent cause evaluation (ACE) which determined the cause of the event was that operators were not closely monitoring all important plant parameter trends on the plant process computer. The inspectors reviewed this ACE and noted it did not take into account existing NRC and industry guidance on the adherence to licensed power limits.

NRC Regulatory Issue Summary (RIS) 2007-21, Rev. 1, endorses the Nuclear Energy Institute (NEI) position statement, "Guidance to Licensees on Complying with the Licensed Power Limit," as a method for ensuring adherence to the licensed maximum thermal power limit. In this NEI position statement, section 4.3, "Pre-planned Evolutions," discusses activities that could affect primary or secondary temperatures, pressures, or flows and states that prudent action based on prior performance or evaluations should be taken to reduce power prior to performing the evolution.

Oyster Creek Procedure 202.1, "Power Operation," directly contradicts this industry guidance and states that evolutions that can cause flow or level transients are acceptable and expected and shall be controlled through monitoring and taking action to

reduce power after the licensed value of core thermal power (1930 MWth) has been exceeded by at least 10 MWth.

In accordance with 202.1, the operators did not reduce power prior to performing an evolution that had the potential to affect reactor power. The inspectors reviewed data from previous monthly turbine valve testing and found several other instances where instantaneous power exceeded 1930 MWth during testing. From January 2011, to January 2012, instantaneous power exceeded 1930 MWth during 10 out of the 13 turbine valve tests that were conducted.

Analysis. Not maintaining procedures in accordance with industry standards, as required by TS 6.8.1a, is a performance deficiency that was within Exelon's ability to foresee and correct. There were no similar examples in Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues." The inspectors determined this finding was more than minor because it affected the configuration control aspect of the Barrier Integrity cornerstone. Specifically, reactivity control and reactor manipulations are used to preserve the integrity of the fuel cladding in order to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding using IMC 0609.04, Attachment 1, "Phase 1 - Initial Screening and Characterization of Findings." The inspectors determined this finding did not affect the RCS barrier or the fuel barrier. 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, Decision Making, where the licensee uses conservative assumptions in decision making and adopts a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action. (H.1(b)).

Enforcement. TS 6.8.1a states, in part, that written procedures such as Exelon's 202.1 "Power Operation" shall be established, implemented, and maintained as recommended in Regulatory Guide 1.33. Contrary to the above, from October 8, 2008 to the present, Exelon did not maintain procedure 202.1, "Power Operation," to reflect NRC and industry guidance concerning adherence to the licensed thermal power limit. No actual safety consequences were identified but potential safety consequences include challenging the fuel cladding fission product barrier due to exceeding the licensed power limit. No immediate corrective actions were documented by Exelon with the exception of entering the issue into the corrective action program. Because this violation was of very low safety significance and it was entered into Exelon's corrective action program as IR 1355895, this violation is being treated as an NCV, consistent with the Enforcement Policy. **(NCV 05000219/2012002-03, Reactivity management procedures not maintained in accordance with industry standards).**

.3 Annual Sample: Operator Medical and Physical issues

a. Inspection Scope

The inspectors reviewed ARs 01288468, 01288162 and 01220428, and their associated corrective actions. The medical records of all operators listed on the licensee's inactive license list as well as a sampling of 13 other licensed operators medical records were

reviewed to determine completeness and to ensure that restrictions listed on the licenses matched the information contained in the physical examinations and that the physical examinations were given biennially.

b. Findings and Observations

Introduction: The inspectors identified a Severity Level IV non-cited violation (NCV) of 10 CFR 55.21 for two reactor operators (ROs) failing to have a medical examination by a physician every two years. This requirement is implemented in Exelon procedure HR-AA-07-101, "NRC Licensed Operator Medical Examination," Revision 11.

Description: Two Reactor Operators had satisfactory physical examinations on March 10, 2009. The two Reactor Operators were removed from watch and placed in a Senior Reactor Operator license class. The two Reactor Operators were also placed on the site's inactive operator list. On May 25, 2011, during a biennial requalification inspection, an NRC inspector identified that the two Reactor Operators did not complete their biennial physicals since March 10, 2009. Oyster Creek medical staff administered physical examinations to the two Reactor Operators on June 2, 2011. No changes were required to either Reactor Operators' license as a result of the physical examinations.

The biennial physical examination requirements of 10 CFR 55.21, "Medical Examination," are administratively controlled at the station by Exelon procedures HR-AA-07-101, "NRC Licensed Operator Medical Examination" and OP-AA-106-101, "Administrative Process for NRC License and Medical Requirements." The procedures require that the "License Coordinator shall ensure each Licensee's medical examination is scheduled with Occupational Health Services no later than 30 days prior to the medical examination expiration date."

The performance deficiency involved the administration of the physical examinations for two Reactor Operators past the examination expiration date. The physicals were administered two months late. The physicals were administered only after an NRC inspector identified the deficiency.

Analysis: The inspectors determined that Exelon's failure to ensure that licensed operators met the license conditions associated with medical testing was a performance deficiency that was within Exelon's ability to foresee and correct and should have been prevented. The inspector determined that Traditional Enforcement applies, as the issue had the potential to impact the NRC's ability to perform its regulatory function because the NRC relies upon the accurate certification by the licensee's medical examiner to ensure all licensed operators meet the medical conditions of their licenses. Specifically, the two reactor operators were overdue on their biennial medical examinations but maintained their active licenses. Using example 6.4.d.1 from the NRC Enforcement Policy, the inspector determined that the violation was a SL IV (more than minor concern that resulted in no or relatively inappreciable potential safety or security consequence) violation, because Exelon personnel did not perform the medical examinations required by 10 CFR 55.21. The finding was of very low safety significance because during the time period when the physicals were required to be performed, neither operator stood watch, and when the physicals were administered on June 2, 2011, all requirements were met. No changes to the conditions on either operator's license were necessary following their physicals. The performance deficiency was screened against the Reactor Oversight Process (ROP) per the guidance of Inspection manual Chapter (IMC) 0612,

Appendix B, "Issue Screening." No associated ROP finding was identified and no cross-cutting aspect was assigned.

Enforcement: 10 CFR 55.21 requires, in part, that "A licensee shall have a medical examination by a physician every two years." Contrary to this requirement, between March 10, 2011, and June 2, 2011, two Reactor Operators did not have their biennial physical examinations. This Severity Level IV violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy. When recognized, Oyster Creek staff took prompt action to have the physical examinations administered and the issue was entered into the corrective action program. (AR 01220428) **(NCV 05000219/2012002-04, failure to ensure licensed operators met license conditions for medical examinations).**

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

.1 (Closed) Licensee Event Report (LER) 05000219/2011-001-00: MAPLHGR

On May 4, 2011, based on the information provided by General Electric Hitachi (GEH), Exelon determined that changes in the model used to calculate peak cladding temperature (PCT) in accident analyses resulted in a cumulative increase in analyzed PCT that exceeded the 10 CFR 50.46 PCT acceptance criterion. Additionally, the identified model changes resulted in an increase in the calculated maximum local oxidation (MLO) above the 10 CFR 50.46 acceptance criteria. Exelon made an 8-hour notification report to the NRC, as required under 10 CFR 50.72(b)(3)(ii)(B), and provided a 30-day notification letter to the NRC on May 27, 2011, as required by 10 CFR 50.46(a)(3)(ii). Exelon calculated and implemented revised maximum average planar linear heat generation rate (MAPLHGR) values such that the maximum PCT and MLO values for both the GE11 and GNF2 fuel designs returned to their original values of 2150F and 16.5% respectively, as documented in vendor 50.46 notifications. This reanalysis meets the requirements of 10 CFR 50.46. The inspectors identified no new issues or violations of NRC requirements during the review of the LER. This LER is closed.

4OA6 Meetings, Including Exit

On April 16, 2012, the inspectors presented the inspection results to Mr. M. Massaro, 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.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (SL IV) 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 50.74, "Notification of Change in Operator or Senior Operator Status" requires that the licensee shall notify the appropriate Regional Administrator within 30 days of the following in regard to licensed operator or senior operator: permanent disability or illness, as described in 10 CFR 55.25. Contrary to the above, Exelon failed to notify the Region I Regional Administrator of medical conditions associated with two Reactor

Operators within 30 days of the conditions being identified by medical personnel. Specifically, one reactor operator had a change in diagnosis and medication March 9, 2011; however, he did not report the change to the Exelon medical staff until October 12, 2011, during his biennial medical examination. Exelon staff notified the NRC of the change November 9, 2011. Another Reactor Operator notified Exelon medical staff of a change to his medication on March 22, 2011; however, Exelon medical staff did not report the change to the NRC until January, 2012. The inspector determined that Exelon's failure to ensure that licensed operators met the license conditions associated with medical testing was a performance deficiency that was within Exelon's ability to foresee and correct. The inspector determined that Traditional Enforcement applies, as the issue impacted the NRC's ability to perform its regulatory function because the NRC relies upon accurate certification by the licensee's medical examiner to ensure all licensed operators meet the medical conditions of their license. Specifically, it impacted the NRC's ability to perform its regulatory function since the NRC would have placed no solo restrictions on the reactor operators' licenses 7 months and 10 months earlier. The inspector determined this finding to be of very low safety significance (SL IV) due to the following mitigating factors: at no time did either reactor operator stand watch unsupervised, no errors were made by either reactor operator during the time period when the license restrictions should have been implemented and both operators took all medication as prescribed. The performance deficiency was screened against the Reactor Oversight Process (ROP) per the guidance of Inspection manual chapter (IMC) 0612, appendix B, "Issue Screening." No associated ROP finding was identified and no cross-cutting aspect was assigned.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

M. Massaro, Site Vice-President
R. Peak, Plant Manager
M. McKenna, Director, Operations
G. Malone, Director, Engineering
J. Dostal, Director, Maintenance
C. Symonds, Director, Training
D. DiCello, Director, Work Management
J. Barstow, Manager, Regulatory Assurance
T. Farenga, Radiation Protection Manager
M. Ford, Manager, Environmental/Chemistry
T. Keenan, Manager, Site Security
W. Trombley, Senior Manager, Plant Engineering
H. Ray, Senior Manager, Design Engineering
G. Flesher, Shift Operations Superintendent
J. Chrisley, Regulatory Assurance Specialist
D. Moore, Regulatory Assurance Specialist
J. Kerr, Regulatory Assurance Specialist

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed

05000219/2012002-01	NCV	Abnormal operating procedure conflicts with technical specification requirement (Section 1R11)
05000219/2012002-02	NCV	Risk management actions not implemented to manage increased online risk during a surveillance test (Section 1R13)
05000219/2012002-03	NCV	Reactivity management procedures not maintained in accordance with industry standards (Section 4OA2)
05000219/2012002-04	SLIV	Failure to ensure licensed operators met license conditions for medical examinations (Section 4OA2)

Closed

05000219/2011-001-00	LER	Changes and Errors in the Methodology Used by General Electric-Hitachi to Demonstrate Compliance with 10 CFR 50.46 Acceptance Criteria (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures
310, Containment Spray System Operation, Revision 103
341, EDG Operations, Revision 95
636.4.003, Diesel Generator #1 Load Test, Revision 89
OP-OC-108-101-1002, Maintaining Equipment Alignment Attachments, Revision 3
117.1 Emergency Diesel Generator Reliability Program, Revision 2
308, Emergency Core Cooling System Operation, Revision 90

Drawings
GE 148F740, Containment Spray System Flow Diagram, Revision 41
GE 885D781, Sheet 1, Core Spray System Flow Diagram, Revision 72

Section 1R05: Fire Protection

Procedures
ABN-29, Plant Fires, Revision 26
101.2, Oyster Creek Site Fire Protection Program, Revision 67
CC-AA-211, Fire Protection Program, Revision 4
333, Plant Fire Protection System, Revision 106
OP-AA-201-005, Fire Brigade Qualifications, Revision 7
OP-AA-201-003, Fire Drill Performance, Revision 12

Miscellaneous
Oyster Creek Nuclear Generating Station Pre-Fire Plan: RB-FZ-1C, 75’ Elevation
Oyster Creek Nuclear Generating Station Pre-Fire Plan: RB-FZ-1F1, SE Corner Room
Oyster Creek Nuclear Generating Station Pre-Fire Plan: OB-FZ-22A, New Cable Spreading Room
Oyster Creek Nuclear Generating Station Pre-Fire Plan: TB-FZ-11F, Feed Pump Room (0’-6” & 3’-6” Elevations)
Oyster Creek Nuclear Generating Station Pre-Fire Plan: RB-FZ-1D, Reactor Building (51’ Elevation)
Oyster Creek Nuclear Generating Station Pre-Fire Plan: OB-FZ-8C, A and B Battery Room, Electric Tray Room, Revision 1

Section 1R06: Flood Protection Measures

Procedures
ABN-18, Service Water Failure
ABN-20, TBCCW Failure Response

Miscellaneous
Internal Flood Evaluation Summary and Notebook: Oyster Creek Nuclear Generating Station, April 17, 2008
White Paper 28063-005, Design and Licensing Bases for Flooding at OCGS, August 29, 2007
Oyster Creek Nuclear Generating Station Pre-Fire Plan: TB-FZ-11C, 3A, 3B, Switchgear and Emergency Switchgear Areas
Information Notice 2005-30, Safe Shutdown Potentially Challenged by Unanalyzed Internal Flooding Events and Inadequate Design
C-1302-822-E610-076, Flooding Due to HELB Outside Containment

Section 1R07: Heat Sink Performance

Procedures
309.2, Reactor Building Closed Cooling Water System, Revision 79
322, Service Water System, Revision 80
326, Chlorination System, Revision 87
607.4.016, CS/ESW System I Pump Operability & Quarterly In-service Test, Revision 15
ABN-18, Service Water Failure Response, Revision 5
ABN-19, RBCCW Failure Response, Revision 8
ABN-31, High Winds, Revision 16
ABN-32, Abnormal Intake Level, Revision 17
CY-AA-120-410, Circulating/Service Water Chemistry, Revision 1
ER-AA-340, GL 89-13 Program Implementing Procedure, Revision 6
ER-AA-340-1002, SW Heat Exchanger and Component Inspection Guide, Revision 5
ER-AA-340-1001, GL 89-13 Program Implementation Instructional Guide, Revision 8
ER-OC-340-1001, Oyster Creek Generic Letter 89-13 Program Basis Document, Revision 1
ER-AA-340-2000, Balance-of-Plant Heat Exchanger Inspection, Testing and Maintenance Guide, Revision 5
LS-AA-125, Corrective Action Program Procedure, Revision 16

Drawings:
BR 2005, Emergency Service Water System, Sh. 4, Revision 83
BR 2006, Reactor Building Closed Cooling Water System, Revision 76
GE 148F740, Containment Spray System, Revision 43
3E-168-02-001, General Arrangement Intake Structure, Revision 10

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936634	1041833	1166848	953874	1043380	1169851
956031	1073245	1193928	956355	1105316	1208455
967712	1105322	1230381	974294	1124809	1262932
976456	1128625	1268453	983355	1133229	1303248
985629	1143215	1315209	1343875		

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1140331	1308627	1145086	1275347	1275963	1283028
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