



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

July 31, 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 GENERATING STATION - NRC INTEGRATED INSPECTION
REPORT 05000219/2012003**

Dear Mr. Pacilio:

On June 30, 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 July 17, 2012 with Mr. M. Massaro, 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). One of the findings was determined to involve a violation of NRC requirements. However, because of the very low safety significance, and because it was entered into your corrective action program, the NRC is treating this finding as an NCV, 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 Inspectors 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 Inspectors 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

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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 05000219/2012003
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.: 05000219/2012003

Licensee: Exelon Nuclear

Facility: Oyster Creek Generating Station

Location: Forked River, New Jersey

Dates: April 1, 2012 – June 30, 2012

Inspectors: J. Kulp, Senior Resident Inspector
J. Ambrosini, Resident Inspector
S. Barr, Senior Emergency Preparedness Inspector
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C. Newport, Operations Engineer
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D. Spindler, Senior Resident Inspector

Approved By: Gordon Hunegs, Branch Chief
Reactor Projects Branch 6
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000219/2012003, 04/01/2012 – 06/30/2012; Exelon Energy Company, LLC, Oyster Creek Nuclear Generating Station; Operability Determinations and Functionality Assessments.

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), one of which was an NCV. 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 finding when Exelon did not perform an adequate operability determination of Average Power Range Monitor (APRM) 7 prior to restoring it to operation on March 24, 2012, after it was declared inoperable on February 2, 2012. Specifically, Exelon declared APRM 7 operable on March 24, 2102 without a documented technical basis or successful completion of a surveillance test to demonstrate operability, and operated APRM 7 through April 3, 2012, when it failed in the same manner and was again declared inoperable. Exelon entered this issue into their corrective action program as IR 1389340 to track resolution of this issue.

The inspectors determined that the failure to perform an operability evaluation to demonstrate that APRM-7 was operable as directed by OP-AA-108-115, "Operability Determinations," is a performance deficiency that was within Exelon's ability to foresee and correct. The inspectors determined this finding was more than minor because if left uncorrected it could become a more significant safety concern. Specifically, degraded technical specification required and safety related equipment require a full operability screening to ensure Exelon identifies and characterizes the equipment performance issues, develops all needed compensatory measures and does not restore inoperable equipment to operable status. The inspectors determined the finding to be of very low safety significance (Green) because it affected the initiating events cornerstone and does not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions will not be available.

This finding has a cross cutting aspect in the area of Human Performance, Decision Making, where the licensee makes safety-significant or risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained [H.1(a)]. (Section 1R15)

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green NCV of Technical Specification 3.8.D, "Isolation Condenser," when Exelon did not enter the correct technical specification and take the required actions when both isolation condensers were made inoperable in order to perform

corrective maintenance. Specifically, Exelon incorrectly entered general Technical Specification 3.0.A for conditions in excess of those addressed in the technical specifications instead of the more specific technical specification (3.8.D) for when both isolation condensers are inoperable. Entry into the appropriate technical specification would have required the initiation of an immediate shutdown instead of allowing 30 hours to reach cold shutdown. Exelon entered this issue into their corrective action program as IR 1386020 to track resolution of this issue.

The inspectors determined that not entering the correct technical specification and invoking the associated action requirement was a performance deficiency that was reasonably within Exelon's ability to foresee and correct, and should have been prevented. This finding is more than minor because it is similar to example 2.a in IMC 0612, Appendix E. Specifically, by not entering TS 3.8.D, Exelon did not meet the technical specification requirement to start shutting down the plant immediately when both isolation condensers were made inoperable. Additionally, this finding also affects the Mitigating Systems cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined this finding was not a design qualification deficiency resulting in a loss of functionality or operability, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, 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's training of personnel not sufficient to preclude entry into a non-conservative technical specification. [H.2(b)] (Section 1R15)

Other Findings

None.

REPORT DETAILS

Summary of Plant Status

Oyster Creek began the inspection period at 100 percent power. On April 6, 2012, operators reduced power to 90 percent, started the E reactor recirculation pump following motor generator set maintenance and returned to the plant to full power. On April 27, operators reduced power to 80 percent to perform a rod sequence exchange and returned the plant to full power on April 28. On April 29, operators reduced power to 95 percent to perform a control rod pattern adjustment and returned the plant to full power later that day. On May 2, operators reduced power to restart the A reactor recirculation pump following motor generator set maintenance. The restart was unsuccessful and the plant was returned to full power later the same day. On May 3, following repairs to the motor generator set, operators reduced power to 90 percent, successfully started the A reactor recirculation pump and returned the plant to full power. On May 18, operators reduced power to 75 percent to perform quarterly turbine valve testing and returned the plant to full power on May 19. On May 19, operators reduced power to 80 percent to perform a rod pattern adjustment and returned the plant to full power on May 20. On June 23, operators lowered power to 80 percent to perform a rod pattern adjustment and returned the plant to full power on June 24. Oyster Creek 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 – 4 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 emergency service water (ESW) system and the emergency diesel generators (EDGs). 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 of the offsite and AC power systems including the 230 KV switchyard.

b. Findings

No findings were identified.

.3 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

The inspectors completed one impending adverse weather preparation sample. The inspectors reviewed Exelon's preparations for the onset of hot weather on June 20, 2012. The inspectors reviewed the implementation of adverse weather preparation procedures before the onset of and during adverse weather conditions. The inspectors walked down the EDGs and the ESW system to ensure system availability. The inspectors verified that operator actions defined in Exelon's adverse weather procedure maintained the readiness of essential systems. The inspectors discussed readiness and staff availability for adverse weather response with operations and work control personnel.

b. Findings

No findings were identified.

.4 External Flooding

a. Inspection Scope

The inspectors performed an inspection of the external flood protection measures for Oyster Creek Nuclear Generating Station on April 17, 2012. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), Chapter 2.4.8, which depicted the design flood levels and protection areas containing safety-related equipment to identify areas that may be affected by external flooding. The inspectors conducted a general site walkdown of all external areas of the plant, including the turbine building, reactor building, intake and discharge canals, intake structure and the diesel generator building to ensure that Exelon's flood protection measures were in accordance with design specifications. The inspectors also reviewed operating procedures for mitigating external flooding during severe weather to determine if Exelon planned or established adequate measures to protect against external flooding events.

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:

- Containment spray system 2 while system 1 was unavailable for planned maintenance on April 17, 2012
- Core spray system 1 while system 2 was unavailable for planned maintenance and surveillance testing on May 21, 2012
- Control rod drive system while the A pump was unavailable for planned maintenance on May 29, 2012
- Isolation condenser B while isolation condenser A was unavailable for surveillance testing on June 25, 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 Inspectors Quarterly Walkdowns (71111.05Q – 6 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.

- TB-FZ-11A, Turbine building operating floor, 46' elevation on April 17, 2012
- MT-FA-12, Main transformer area, chlorination and condensate transfer building on April 19, 2012
- TB-FZ-11D, Turbine building basement south, 3' 6" elevation on May 3, 2012
- FS-FA-16, Emergency diesel generator fuel storage area on June 1, 2012
- TB-FZ-11B, Turbine building basement/mezzanine (0' 0" elevation), north end (27' 0" elevation) on June 1, 2012
- RB-FZ-1F3, Reactor building (-19' Elevation) control rod drive pump room on June 18, 2012

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 1 sample)

.1 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 manholes containing emergency service water pump power cables and station blackout combustion turbine generator output cables, to verify that the cables were not submerged in water, that cables and/or splices appeared intact, and to observe the condition of cable support structures. The inspectors reviewed the results of the Exelon's cable testing program to verify that the cables are being adequately monitored such that any adverse trends could be identified and addressed prior to a failure. The inspectors reviewed Exelon's actions to minimize water accumulation and submergence of medium voltage cables contained in these areas.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07A – 1 sample)

a. Inspection Scope

The inspectors reviewed the containment spray system 2 heat exchangers to determine their readiness and availability to perform their safety functions. The inspectors reviewed the design basis for the component and verified Exelon's commitments to NRC Generic Letter 89-13. The inspectors reviewed the results of previous inspections of the similar heat exchangers. The inspectors 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.

1R11 Licensed Operator Regualification Program (71111.11 – 2 samples)

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

a. Inspection Scope

The inspectors observed Exelon operators as they lowered power, balanced circulation flow rates between the five reactor recirculation loops, raised power back to full power and restored the plant from surveillance testing on containment spray system 2 on April 26, 2012. Additionally, the inspectors observed the performance of and reviewed the results of monthly turbine valve testing on May 4, 2012. The inspectors observed crew briefings, test performance, and crew critiques to verify that procedure use, crew communications, and coordination of activities in the control room met established expectations and standards.

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 reviewed the (a)(2) performance criteria established by Exelon staff. Additionally, the inspectors ensured that Exelon staff was identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- Electro-magnetic relief valve (EMRV) pressure switch equipment qualification (IR 1363225) on May 10, 2012
- 480 volt breaker failures (IR 1360896) on May 14, 2012

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.

- Isolation condenser 6K12 relay unplanned unavailability on April 5, 2012
- B isolation condenser unavailable for corrective maintenance with standby liquid control unavailable for planned surveillance testing on April 10, 2012
- Containment spray system 1 unavailable for planned maintenance while emergency diesel generator unavailable for planned surveillance testing on April 17, 2012
- Core spray system 1 unavailable for planned surveillance testing, standby gas treatment system 1 unavailable for planned maintenance, and O-1029 230 kV line unavailable for planned maintenance on May 30, 2012
- Standby liquid control system unavailable for surveillance testing with shutdown cooling pump C unavailable for planned maintenance on June 27, 2012

b. Findings

No findings were identified.

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:

- 6K12 relay replacement (IR 1350115) on April 9, 2012
- Average power range meter 6 and 7 on April 23, 2012
- Minimum flow restrictions for rapid power reductions (IR 1361636) on May 3, 2012
- Service water system (IR 1358887) on May 9, 2012
- Emergency diesel generator 1 rotor and stator (IR 1368029) on May 18, 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

1. Introduction. The inspectors identified a Green NCV of technical specification 3.8.D, "Isolation Condenser," when Exelon did not enter the correct technical specification and take the required actions when both isolation condensers were made inoperable in order to perform corrective maintenance. Specifically, Exelon incorrectly entered general technical specification 3.0.A for conditions in excess of those addressed in the technical specifications instead of the more specific technical specification (3.8.D) for when both isolation condensers are made inoperable. Entry into the appropriate technical specification would have required the initiation of an immediate shutdown instead of allowing 30 hours to reach cold shutdown.

Description. At approximately noon on April 4, 2012, Exelon performed surveillance test 609.3.003 "Isolation Condenser Automatic Actuation Sensor Calibration and Test," which tests the four reactor high pressure detectors for proper operation and input into the initiating circuitry for the isolation condensers. Because this surveillance test removes each of the four pressure detectors from service one at a time, Exelon entered technical specification 3.1.1.C.1, which allows each detector to be taken out of service for up to 24 hours during testing and maintenance. At 2:17 p.m. on April 4, 2012, during the test on the fourth detector, the expected response of the initiation circuitry was not received. At 8:10 p.m., following data review, Exelon began troubleshooting using surveillance test 609.3.113, "Isolation Condenser Automatic Actuation Bistable Calibration and Test" to determine if the fault was in the pressure detector or in the initiating circuitry. Troubleshooting was completed at 9:06 p.m. and determined that the fault was in the initiating circuitry, specifically the 6K12 relay was not operating correctly. Exelon began planning the corrective maintenance work order to replace the 6K12 relay.

At 2:15 a.m. on April 5, 2012, Exelon began corrective maintenance on the 6K12 relay. To perform this evolution safely, Exelon prevented the condensate return valves from inadvertently operating by opening the circuit breakers for each valve and placing an "information tag" on each circuit breaker as required by system maintenance isolation clearance 12500459. This caused both isolation condensers to become inoperable. Exelon entered technical specification 3.0.A, which is the technical specification used in the event that limiting conditions for operation and/or associated action requirements cannot be satisfied because of circumstances in excess of those addressed in the technical specifications. Entry into technical specification 3.0.A requires that the reactor be placed in cold shutdown within the following 30 hours unless corrective measures are completed that permit operation under the permissible action statements for the specified time interval as measured from initial discovery or until the reactor is placed in a condition in which the specification is not applicable.

The inspectors determined that Exelon should have entered technical specification 3.8 "Isolation Condenser," paragraph D, which addresses the circumstances where both isolation condensers are inoperable, isolation condenser shell water level and water supplies are insufficient to perform a cooldown, or a single isolation condenser which would be inoperable for greater than 7 days. Entry into technical specification 3.8.D requires that "the reactor shall be placed in the cold shutdown condition." Technical specification 1.9 defines "PLACE IN COLD SHUTDOWN CONDITION" as "Proceed with and maintain an uninterrupted normal plant shutdown operation until the COLD

SHUTDOWN CONDITION is met." Thus, this specification would have required the initiation of an immediate shutdown instead of allowing 30 hours to reach cold shutdown.

If Exelon entered technical specification 3.8.D as they were required to do, operators would have been required to immediately start to reduce power until the isolation condensers were restored to operable status.

At 2:42 a.m. on April 5, 2012, Exelon stationed a dedicated operator at each condensate return valve circuit breaker in order to shut the breakers which would allow control room operators to open the condensate return valves if necessary. The replacement of the 6K12 relay commenced at 3:15 a.m. and was completed by 6:00 a.m. Post maintenance testing was completed for the A isolation condenser at 6:55 a.m. Surveillance testing was completed at 3:20 pm, restoring operability to both isolation condensers.

Analysis. The inspectors determined that not entering the correct technical specification and invoking the associated action requirement was a performance deficiency that was reasonably within Exelon's ability to foresee and correct, and should have been prevented. This finding is more than minor because it is similar to example 2.a in IMC 0612, Appendix E. Specifically, by not entering TS 3.8.D, Exelon did not meet the technical specification requirement to start shutting down the plant immediately when both isolation condensers were made inoperable. Additionally, this finding affects the mitigating systems cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences.

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 this finding was not a design qualification deficiency resulting in a loss of functionality or operability, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, 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's training of personnel was not sufficient to preclude entry into a non-conservative technical specification. [H.2(b)] (Section 1R15)

Enforcement. Oyster Creek Nuclear Generating Station Technical Specification 3.8, "Isolation Condenser," specification D, requires, in part, that in the event that both isolation condensers are not operable during power operations, that the reactor shall be placed in the cold shutdown condition. Contrary to the above, from 2:15 a.m. until 6:55 a.m. on April 5, 2012, Exelon entered Technical Specification 3.0, Limiting Conditions for Operation (General), specification A, which states that in the event that limiting conditions for operation and/or associated action requirements cannot be satisfied because of circumstances in excess of those addressed in the specification, the reactor shall be placed in cold shutdown within the following 30 hours unless corrective measures are completed that permit operation under the permissible action statements for the specified time interval as measured from initial discovery or until the reactor is placed in a condition in which the specification is not available. Specifically, the inspectors determined that Exelon should have entered technical specification 3.8.D

and commenced a normal plant shutdown at the time that the circuit breakers for the isolation condenser condensate return valves were opened which made both isolation condensers inoperable. Because this issue is of very low safety significance (Green) and Exelon entered this issue into their corrective action program as IR 1386020, this finding is being treated as an NCV consistent with the NRC Enforcement Policy. **(NCV 05000219/2012003-01, Entry into a non-conservative technical specification with both isolation condensers inoperable during power operation.)**

2. Introduction. The inspectors identified a Green finding when Exelon did not perform an adequate operability determination of Average Power Range Monitor (APRM) 7 prior to restoring it to operation on March 24, 2012, after it was declared inoperable on February 2, 2012. Specifically, Exelon declared APRM 7 operable on March 24, 2102 without a documented technical basis or successful completion of a surveillance test to demonstrate operability, and operated APRM 7 through April 3, 2012, when it failed in the same manner and was again declared inoperable.

Description. On February 2, 2012, control room operators identified that APRM 7 indicated 95% power on the APRM drawer meter while the reactor was at 100% power. All other indications, such as plant process computer data and main control room chart recorder data, indicated 100% power. The output of all these meters should be in agreement with a tolerance of plus or minus 2%. Operators immediately declared the APRM inoperable due to the degraded condition and bypassed APRM 7 in accordance with station procedure 403 "LPRM-APRM System Operations." Exelon entered the issue into the corrective action program as IR 1322172.

Exelon performed troubleshooting activities between February 2 and March 22, 2012. Based upon the results of the troubleshooting activities, Exelon developed a corrective maintenance work order directing the replacement of a module in the APRM drawer, the selector switch, and any other degraded connections that may be identified during the corrective maintenance. The corrective maintenance was scheduled to be conducted in the next outage. APRM 7 remained bypassed and inoperable following the troubleshooting activities.

On March 24, 2012, Exelon declared APRM 7 operable but degraded and placed APRM 7 in service. No repair activities, surveillance testing, or operability evaluations had been completed to reestablish operability. This declaration was recorded in the control room logs, with no documented engineering support as would normally be found in an operability evaluation. On March 26, 2012, the inspectors requested a copy of the operability evaluation from the on-shift operators and found that one was not done. The inspectors were provided access to and reviewed a series of emails that preceded the APRM 7 operability declaration on March 24, 2012, which indicated that Exelon believed that APRM 7 would perform its safety functions satisfactorily and that the degradation was an issue with indication on the APRM drawer meter only. Additionally, the inspectors reviewed troubleshooting documentation which identified specific corrective actions to restore operability but none of them had been implemented by March 24, 2012. OP-AA-108-115, "Operability Determinations," section 4.1.9, states:

"A prompt determination of SSC operability is a follow up to the immediate determination of SSC operability made by Operations Shift Management. This determination is warranted when additional information, such as supporting analysis, is needed to confirm the immediate determination. If there is a reasonable expectation that the SSC is operable, but a more rigorous evaluation is deemed warranted, then request the

appropriate work group to initiate an action tracking item (IR action) to prepare and OpEval using the guidance provided in this procedure.”

None of the information contained in the emails or the troubleshooting documentation was entered in an operability evaluation as directed by OP-AA-108-115. On April 3, 2012, the APRM-7 drawer meter malfunction reoccurred. Operators immediately declared the APRM inoperable due to the degraded condition and bypassed APRM 7 in accordance with station procedure 403 “LPRM-APRM System Operations.” On April 11, 2012, Exelon completed an operability evaluation which determined the APRM was functional but degraded. APRM 7 was able to perform its safety function of producing APRM trips and rod blocks if required, but the APRM drawer meter could not be used for normal indication and surveillance testing. Exelon developed additional compensatory measures to perform the necessary surveillances and made procedure changes which had not been implemented during the March 24 to April 3, 2012 time period. On April 30, 2012, Exelon completed the surveillance testing as described in the operability evaluation and restored APRM 7 to operable status, with the compensatory measures in place.

Analysis. The failure to perform an operability evaluation to demonstrate that APRM-7 was operable as directed by OP-AA-108-115, “Operability Determinations,” 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 if left uncorrected it could become a more significant safety concern. Specifically, degraded technical specification required and safety related equipment require a full operability screening to ensure Exelon identifies and characterizes the equipment performance issues, develops all needed compensatory measures and does not restore inoperable equipment to operable status. 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 affected the initiating events cornerstone and does not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions will not be available.

This finding has a cross cutting aspect in the area of Human Performance, Decision Making, (H.1(a)) where the licensee makes safety-significant or risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained.

Enforcement. This finding does not involve enforcement action because no regulatory requirement violation was identified. Exelon entered this issue into their corrective action program as IR 1389340. Because this finding does not involve a violation of NRC requirements and has very low safety significance, it is identified as a finding (FIN). **(FIN 05000219/2012003-02, Inadequate operability determination for APRM 7).**

1R18 Plant Modifications (71111.18 – 2 samples)

.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 modifications did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- ECR 12-00138, Relocation and setpoint change for reactor building crane seismic switch on March 3, 2012

b. Findings

No findings were identified.

.2 Permanent Modifications

a. Inspection Scope

The inspectors evaluated a modification (ECR 12-00197) to the ventilation for the C battery room on April 24, 2012. The inspectors verified that the design bases, licensing bases, and performance capability of the affected systems were not degraded by the modification. In addition, the inspectors reviewed modification documents associated with the upgrade and design change, to ensure the permanently open DM-59-9 damper did not negatively affect the normal operation of the C battery, the fire protection for this area, or any emergency response functions.

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.

- Switch replacement for V-11-36 (R2198096) on April 4, 2012
- 6K12 relay replacement (C2027644) on April 5, 2012
- V-21-1 following preventive maintenance (R0808328) on April 24, 2012
- 1-1 diesel fire pump following preventive maintenance (R2196766) on May 9, 2012
- Emergency diesel generator 1 following biannual preventive maintenance period on May 18, 2012

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 7 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:

- Standby gas treatment system charcoal filter leak test, train 1 on June 4, 2012
- Unidentified leak rate surveillance on April 17, 2012
- “B” standby liquid control pump and valve operability and in-service test on April 10, 2012
- Containment spray and emergency service water pump system 1 operability and quarterly inservice test on April 26, 2012
- Core spray valve operability and in-service test on May 21, 2012
- Diesel fire pump 2 operability test on June 23, 2012
- A standby liquid control pump and valve operability and in-service test on June 28, 2012

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 - 1 sample)a. Inspection Scope

The Nuclear Security and Incident Response (NSIR) headquarters staff performed an in-office review of the latest revisions of various Emergency Plan Implementing Procedures (EPIPs) located under the Agencywide Documents Access and Management System (ADAMS) accession number ML12088A343, as listed in the Attachment.

Exelon transmitted the EPIP revisions to the NRC pursuant to the requirements of 10 CFR 50, Appendix E, Section V, “Implementing Procedures.” The U.S. Nuclear Regulatory Commission (NRC) review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection. The specific documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Occupational/Public Radiation Safety (PS)

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01 – 1 sample)

a. Inspection Scope

The inspectors reviewed and assessed Exelon's performance in assessing the radiological hazards in the workplace associated with licensed activities and the implementation of appropriate radiation monitoring and exposure control measures for both individual and collective exposures, in properly identifying and reporting Occupational Radiation Safety Cornerstone performance indicators, and in identifying those performance deficiencies that were reportable as a performance indicator and which may have represented a substantial potential for overexposure of the worker. The inspectors interviewed Exelon employees, performed walkdowns of the radiologically controlled area, reviewed results of internal audits, performed independent dose rate measurements, observed significant radiation work in progress, reviewed radiation surveys and radiation work permits, compared results of radiation surveys to area postings, reviewed corrective action program documentation, observed radiation technician performance during performance of surveys and material release activities, reviewed radiological programs and procedures, reviewed inventory and shipping records, and observed radiation worker performance in the use of personal radiation monitoring devices and adherence to Exelon radiological control policies and procedures. The inspectors used the requirements in 10 CFR Part 20 and guidance in Regulatory Guide (RG) 8.38 "Control of Access to High and Very High Radiation Areas for Nuclear Plants," technical specifications, and Exelon's procedures required by technical specifications as criteria for determining compliance.

2RS2 Occupational As Low As Reasonably Achievable Planning and Controls (71124.02 - 1 sample)

a. Inspection Scope

The inspectors assessed Exelon's performance with respect to maintaining occupational individual and collective radiation exposures as low as reasonably achievable (ALARA). The inspector used the requirements in 10 CFR Part 20, RG 8.8 - Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Plants will be As Low As Reasonably Achievable, RG 8.10 - Operating Philosophy for Maintaining Occupational Radiation Exposure As Low as Reasonably Achievable, the technical specifications, and Exelon's procedures required by technical specifications as criteria for determining compliance. The inspector reviewed Exelon's collective dose history, current exposure trends, three year rolling average collective exposure, site specific exposure trends, ongoing and planned radiological work activities, changes in the radioactive source term, post-job reviews, work planning documents, assumptions and basis for the current annual collective exposure estimate and site specific ALARA procedures and processes. The inspectors observed Exelon in process work activities and work radiation worker and radiation protection technician performance during work

activities being performed in radiation areas, airborne radioactivity areas, and high radiation areas. The inspectors compared the results achieved (dose rate reductions, person-rem used) with the intended dose established in the licensee's ALARA planning for these work activities. The inspectors compared the person-hour estimates provided by maintenance planning and other groups to the radiation protection group actual person-hours for the work activity time requirements, and evaluated the accuracy of these time estimates.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 4 samples)

.1 Unplanned Power Changes, Unplanned Scrams, Unplanned Scrams with Complications, and Safety System Functional Failures

a. Inspection Scope

The inspectors sampled Exelon's submittals for the unplanned power changes (IE03), unplanned scrams per 7000 critical hours (IE01), scrams with complications (IE02) and safety system functional failures (MS05) performance indicator for the period of April 1, 2011 through March 31, 2012. 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, condition reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 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, maintenance rule assessments, and maintenance or corrective action program backlogs. The inspectors also reviewed Exelon's corrective action program database for the first and second quarters of 2012 to assess condition reports written in various subject areas (equipment problems, human performance issues, etc.), as well as individual issues identified during the NRCs daily condition report review (Section 4OA2.1).

b. Findings and Observations

No findings were identified.

The inspectors evaluated a sample of surveillance tests rescheduled lists. This review included a sample of surveillance tests that were scheduled to be completed over the course of the past two quarters to objectively determine whether surveillance tests either were appropriately tested within the required time frame or ruled as emerging or adverse trends. The inspectors also verified the appropriate disposition of surveillance tests reschedule trends and that they were addressed within the scope of the corrective action program and documented in condition reports.

Examples of systems in Exelon's surveillance tests rescheduled lists include Core Spray and Containment Spray systems. The inspectors determined that Exelon appropriately identified surveillances that were rescheduled and appropriately tested those systems before the Technical Specifications required due date. The inspectors concluded that Exelon was implementing appropriate actions to address any adverse trend in rescheduled surveillance tests.

.3 Annual Sample: Inadequate Corrective Actions Associated with Reactivity Management Events

a. Inspection Scope

The inspectors performed a review of the condition reports, related to reactivity management events at Oyster Creek, generated for the past 12 months. The inspectors reviewed the common cause evaluation, root cause evaluation and associated corrective actions, crew staff composition and work hours for the time period surrounding the reactivity management events. The inspectors interviewed members of the Oyster Creek staff regarding the root cause evaluation and associated corrective actions. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

The inspectors determined that Exelon's overall response to the reactivity management events was commensurate with their safety significance, was timely and included appropriate corrective actions. The inspectors noted that following the second reactivity management event, Exelon used external peers to participate in the root cause evaluation. The inspectors noted that significant management attention and support is being given to reactivity management.

.4 Annual Sample: Follow-Up Review of Root Cause Evaluation of Procedure Quality Issues

a. Inspection Scope

The inspectors reviewed Exelon's evaluation and outstanding corrective actions associated with IR 1205903 "Root Cause Evaluation: Procedure Quality Issues that Resulted in Five NRC Findings With the Common Cross-Cutting Aspect of Human Performance – Resource Documentation (H.2(c))." This review was conducted as a follow-up to an initial PI&R sample (NRC IR 05000219/2011005, ML12040A001). The inspectors reviewed the root cause evaluation, associated issue reports, and interviewed personnel related to the issue to ensure that previously identified corrective actions remained appropriately prioritized and effective.

b. Findings and Observations

No findings were identified.

The inspectors determined that the corrective actions associated with the root and contributing causes remained adequate, effective, and commensurate with the significance of the identified issues. The inspectors conducted interviews with Exelon employees and reviewed relevant issues identified since the root cause evaluation actions were completed which indicated that the station remains sensitive to procedure quality issues. Numerous examples were observed of IRs being written to document procedure quality issues at a low threshold. These issues were often identified by line level plant employees and provided a good indication that the actions implemented by the root cause evaluation were effective and appropriately promulgated to all levels of station employees. Additionally, the inspectors noted that, as of the end of the first quarter 2012, Exelon had no additional findings that were assigned a cross cutting aspect of H.2(c). Based on this sample, it appears that the actions Exelon implemented as a result of the trend in the cross-cutting aspect H.2(c) were appropriate and remain effective in preventing recurrence.

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 power to the site emergency building on June 14, 2012

b. Findings

No findings were identified.

4OA5 Other Activities

1. Temporary Instruction (TI) 2515/182, Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks, Phase 1 (2515/182 – 1 Sample)

a. Inspection Scope

Exelon's buried piping and underground piping and tanks program was inspected in accordance with paragraphs 03.01.a through 03.01.c of the TI 2515/182 and was found to meet all applicable aspects of the Nuclear Energy Institute (NEI) document 09-14, Revision 1, as set forth Table 1 of the Temporary Instruction 2515/182.

b. Findings

No findings were identified.

2. Independent Spent Fuel Storage Installation (60855.1 - 1 Sample)

a. Inspection Scope

The inspectors selectively reviewed routine operational surveillance data, including radiological surveillance and ventilation exhaust temperatures for the Horizontal Storage Module (HSM), for the Independent Spent Fuel Storage Installation (ISFSI) facility. The inspectors toured the facility and made independent radiation measurements at the facility. The inspectors reviewed monitoring data from the thermoluminescent dosimeters on the ISFSI Pad Fence, dose rates from radiation surveys and temperature readings on the exhaust vents at the HSM. The data was evaluated against 10 CFR Part 20, ISFSI Technical Specifications and applicable Exelon procedures.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On July 17, 2012, the inspectors presented the inspection results to Mr. M. Massaro, Site Vice President, and other members of the Oyster Creek Nuclear Generating Station staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

4OA7 Licensee-Identified Violations

None

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, Manager, Radiation Protection
 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
 C. Taylor, Engineering Program Manager
 M. Caldeira, Oyster Creek Buried Piping Program Manager
 J. Chrisley, Regulatory Assurance Specialist
 D. Moore, Regulatory Assurance Specialist
 J. Kerr, Regulatory Assurance Specialist

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATEDOpened/Closed

05000219/2012003-01	NCV	Entry into a non-conservative technical specification with both isolation condensers inoperable during power operation. (Section 1R15)
05000219/2012003-02	FIN	Inadequate operability determination for APRM 7. (Section 1R15)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

OP-OC-108-109-1001, Severe Weather Preparation T&RM for Oyster Creek, Revision 9
 ABN-60, Grid Emergency, Revision 10
 WC-AA-107, Seasonal Readiness, Revision 10
 MA-AA-716-230-1003, Thermography Program Guide, Revision 4
 OP-AA-108-107-1001, Station Response to Grid Capacity Conditions, Revision 4
 OP-AA-106-101, Significant Event Reporting, Revision 14
 OP-AA-102-102, General Area Checks and Operator Field Rounds, Revision 10

Condition Reports

1265084	1334589	1356543	1359656	1364217	1333357
1366799	1367292	1367843	1372047	1311334	1370802
1370796	1370802	1372004	1313911	1329950	1327039

Work Orders

A2303778

Miscellaneous

Oyster Creek Nuclear Generating Station UFSAR Section 2.4.8, Flooding Protection Requirements, Revision 16
 Oyster Creek Nuclear Generating Station Summer Morning Plant Status Report, dated 6/15/2012
 Maintenance Rule Expert Panel Meeting Minutes, dated January 26, 2012

Section 1R04: Equipment Alignment

Procedures

310, Containment Spray System Operation, Revision 103
 308, Emergency Core Cooling System Operation, Revision 90
 302.1, Control Rod Drive System, Revision 111
 617.4.001, CRD Pump Operability Test, Revision 44
 307, Isolation Condenser System, Revision 117

Condition Reports

1336850	1042447	1217635
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Maintenance Orders/Work Orders

C2026729	A2243513
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Miscellaneous

Technical Specification 3.4.C, Containment Spray System and Emergency Service Water System

Drawings

GE 148F740, Sheet 1, Containment Spray System Flow Diagram, Revision 43
 GE 885D781, Sheet 1, Core Spray System Flow Diagram, Revision 71
 GE 237E487, Sheet 1, CRD System Flow Diagram, Revision 68
 GE197E871, CRD Hydraulic System and Nitrogen Charging System Flow Diagram, Revision 29

Section 1R05: Fire Protection

Procedures

ABN-29, Plant Fires, Revision 26

101.2, Oyster Creek Site Fire Protection Program, Revision 68

CC-AA-211, Fire Protection Program, Revision 4

333, Plant Fire Protection System, Revision 110

Miscellaneous

TB-FZ-11A, Oyster Creek Nuclear Generating Station Pre-Fire Plan: Turbine Operating Floor, 46' Elevation, Revision 0

MT-FA-12, Oyster Creek Nuclear Generating Station Pre-Fire Plan: Chlorination and Condensate Transfer Building, Revision 1

MT-FA-12, Oyster Creek Nuclear Generating Station Pre-Fire Plan: Main Transformer Area, Revision 1

TB-FZ-11D, Oyster Creek Nuclear Generating Station Pre-Fire Plan: Turbine Building Basement South, 3' 6" Elevation, Revision 2

TB-FZ-11B, Oyster Creek Nuclear Generating Station Pre-Fire Plan: Turbine Building Basement/Mezzanine (0' 0" Elevation), North End (27' 0" Elevation), Revision 3

FS-FA-16, Oyster Creek Nuclear Generating Station Pre-Fire Plan: Emergency Diesel Generator Fuel Storage Area, Revision 0

RB-FZ-1F3, Oyster Creek Nuclear Generating Station Pre-Fire Plan: Reactor Building (-19' Elevation) CRD Pump Room, Revision 0

Section 1R06: Flood Protection Measures

Procedures

ER-AA-110, Implementing and Managing Engineering Programs, Revision 9

ER-AA-3003, Cable Condition Monitoring Program, Revision 3

MA-OC-773-001, Testing/Condition Monitoring of Inaccessible Medium Voltage Cables Not Subject to 10CFR50.49 Environmental Qualification, Revision 3

Condition Reports/IR

1179636	1056715	1329950	1329962	1324815	1329936
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Work Order

R2196753

Miscellaneous

Medium and Low Voltage Power Cable Risk Ranking, dated February 24, 2011

Cable Program Test Results, dated May 1, 2012

Section 1R07: Heat Sink Performance

Procedures

322, Service Water System, Revision 80

326, Chlorination System, Revision 87

ER-AA-340, GL 89-13 Program Implementing Procedure, Revision 6

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-340-1002, Service Water Heat Exchanger Inspection Guide, Revision 5

Condition Reports/IR

1208455 1281326

Maintenance Orders/Work Orders

R2156856 R2166846 C2022950

Miscellaneous

System Design Basis Document OC-241, Containment Spray System, Revision 5
 C-1302-241-E120-078, Containment Spray Heat Exchanger Performance Evaluation,
 Revision 1

Drawings:

BR 2005, Emergency Service Water System, Sh. 4, Revision 83
 GE 148F740, Containment Spray System, Revision 43

Section 1R11: Licensed Operator Regualification ProgramProcedures

202.1, Power Operation, Revision 127
 301.2, Reactor Recirculation System, Revision 76
 625.4.002, Main Turbine Surveillances, Revision 85
 OP-AA-300, Reactivity Management, Revision 6
 AD-AA-101, Processing of Procedures and T&RMs, Revision 23
 OP-AA-300-1540, Reactivity Management Administration, Revision 8
 OP-AB-300-1003, BWR Reactivity Maneuver Guidance, Revision 8
 OP-AA-3, Reactivity Management, Revision 1

Condition Reports/IR

1376557

Maintenance Orders/Work Orders

R2175050 R2199840 R2175050

Miscellaneous

Regulatory Guide 1.33, Quality Assurance Program Requirements, Revision 2
 C-1302-223-5310-030, Maximum Recirculation Pump Flow, Revision 1
 C-1302-223-5360-026, O.C. Recirc. Pumps System Head Curves & Operating Pressure
 Requirements, Revision 0

Section 1R12: Maintenance EffectivenessProcedures

ER-AA-310, Implementation of Maintenance Rule, Revision 8
 ER-AA-310-1005, Maintenance Rule - Disposition Between (a)(1) and (a)(2), Revision 6
 LS- AA-125-1003, Apparent Cause Evaluation Manual, Revision 10
 ER-AA-310-1001, Maintenance Rule – Scoping, Revision 4

Condition Reports

1181831	644913	645841	645846	1363225	567038
1366209	1366051	1303744	1311350	1006704	1181054
844917	1020804	1139413	1258075	1006688	1141730

1208472	779752	1139419	348539	996695	1084314
531458	1139423	1208460	855629	1120145	720384
1035060	1208448				

Work Orders

A2173600 A2244884

Miscellaneous

Maintenance Rule Scoping Document, Revision 28

Section 1R13: Maintenance Risk Assessments and Emergent Work ControlProcedures

WC-OC-101-1001, Online Risk Management and Assessment, Revision 9

OP-AA-108-117, Protected Equipment Program, Revision 2

ER-AA-600-1042, On-Line Risk Management, Revision 7

612.4.001, Standby Liquid Control Pump and Valve Operability and In-Service Test, Revision 40

612.4.001, Standby Liquid Control Pump and Valve Operability and In-Service Test, Revision 21

2000-ADM-3022.01, Work Management and On-line Risk Management & Assessment,
Revision 9Condition Reports

1377178 1350115

Work Orders

R2200296 A2303778 C2027644 A2301201 R2180585

Miscellaneous

OC-PSA-005.16, Standby Liquid Control (SLC) System, Revision 1

NRC Region I Operational Safety Team Inspection No. 50-219/93-81

GPU Nuclear Letter "Recommendations to Resolve Entries into LCOs while Performing
Surveillance Tests", dated June 3, 1994**Section 1R15: Operability Determinations and Functionality Assessments**Procedures

202.1, Power Operation, Revision 124

LS-AA-120, Issue Identification and Screening Process, Revision 10

OP-AA-108-115, Operability Determinations (CM-1), Revision 10

DEP 0040-27, Megger and Bridge Testing and Acceptance Criteria, Revision 3

OP-OC-108-104-1001, Guidance for Limiting and Administrative Conditions for Operations,
Revision 1Condition Reports/IR

1361636	1362222	1358887	1370406	1368035	1368023
1368029	1367996	1368099	1368081	1368093	1377178
1350115	1389340				

Work Orders

R2164288 A2252923 R2164288

Miscellaneous

Oyster Creek Nuclear Generating Station Updated Final Safety Analysis Report Section 7.2, Reactor Trip System, Revision 16
Oyster Creek Nuclear Generating Station Updated Final Safety Analysis Report Section 7.5.1.8.7, Average Power Range Monitor (APRM) System, Revision 15
12-011, Standing Order: Minimum Recirc Flow Limitations for Rapid Power Reductions, dated April 30, 2012
Cycle 23 Core Operating Limits Report (COLR) Oyster Creek, Revision 6
Oyster Creek Nuclear Generating Station Technical Specification 3.10, Core Limits
NRC Inspection Manual Part 9900: Technical Guidance, dated April 16, 2008
IEEE Recommended Practice for Testing Insulation Resistance of Rotating Machinery, IEEE Std-43-2000(R2006)
OCNGS Technical Specification 3.12, Alternate Shutdown Monitoring Instrumentation
OC-2012-OE-0005, Operability Evaluation: Service Water System - System #531
Oyster Creek Clearance 12500459
Oyster Creek Nuclear Generating Station UFSAR Chapter 6.3, "Emergency Core Cooling System", Revision 16
Oyster Creek Nuclear Generating Station UFSAR Chapter 7.3, "Engineered Safety Features Systems", Revision 16
TYCO Electronics, Agastat Nuclear Time Delay Relays - Series E7000, dated April 24, 2002
Oyster Creek Nuclear Generating Station Technical Specification 3.0, Limiting Conditions for Operation (General), Amendment 241
Oyster Creek Nuclear Generating Station Technical Specification 3.1, Protective Instrumentation, Amendment 237
Oyster Creek Nuclear Generating Station Technical Specification 3.8, Isolation Condenser, Amendment 241
Oyster Creek Nuclear Generating Station Technical Specification 1.9, Place in the Cold Shutdown Condition, Amendment 196
Oyster Creek Nuclear Generating Station Operating Logs, dated April 4 and 5, 2012
OC-2007-IC-01, Risk Assessment for Replacement of Isolation Condenser Relay 6K12, dated June 13, 2007

Drawings

BR2005 Sheet 2, Reactor Turbine Building Service Water System, Sheet 2, Revision 80
BR2005 Sheet 4, Emergency Service Water System Flow Diagram, Revision 68
BR3029 Sheet 2, Emergency Condenser System Electrical Elementary Diagram Emergency Cond. Isolation Control NE01-A & Recirc Pump Trip Drive Relays, Revision 22
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BR E1102, Emergency Condenser Ssy Electrical Elementary Diagram MCC DC02 Unit A02 Emerg Cndsr Isol Outlet Vlv V-14-35 From NE02-B, Revision 15

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Procedures

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2400-SMM-3891.04, Operating of the Reactor Building Overhead Crane, Revision 16
FSP-TB26, Fire Support Procedure for C Battery Room, Revision 2
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Condition Reports/IR

1293061	1328031	1269983	1349902	1286178	1348013
1264484	1354567	1257893	1258966	1329285	1351176
1075912					

Maintenance Orders/Work Orders

A2287496-01	A2301342	R2194837	C2027633	C2027693	A2301921
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Section 1R19: Post-Maintenance TestingProcedures

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Condition Reports/IR

1350258	1364517	1368211	1366327	1368175
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R2164288					

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Drawings

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BR 2004, Sheet 2, Condensate Transfer System Flow Diagram, Revision 19

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AD-OC-101-1002, Oyster Creek Procedure Writers Standard, Revision 7

612.4.001, Standby Liquid Control Pump and Valve Operability and In-Service Test, Revision 38

312.9, Primary Containment Control, Revision 53

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607.4.017, Containment Spray and Emergency Service Water Pump System 2 Operability and Quarterly Inservice Test, Revision 28

610.4.003, Core Spray Valve Operability and In-Service Test, Revision 41

651.3.003, SGTS Charcoal Filter In-Place Leak Test, Revision 25

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Condition Reports/IR

1352596	1352606	1352614	924629	1373412
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1368211	1366327	1368175		
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Maintenance Orders/Work Orders

R2196192	R2191272	R2200284	R2179917	A2274536
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Drawings

GE 885D781, Sheet 1, Core Spray System Flow Diagram, Revision 71

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Section 2RS8: Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation**Procedures**

RP-AA-605, 10CFR61 Program, Revision 4

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Condition Reports

1070521	1081220	1115821	1130432	1166639	1218083
1221515	1341459	1046562	1116262	1086033	1086357
1086605					

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RP-AA-203, Exposure Control and Authorization, Revision 003

RP-AA-210, Dosimetry Issue, Usage and Control, Revision 022

RP-AA-224, CEDE Dose Tracking Using Lapel Air Samplers, Revision 000

RP-AA-300, Radiological Survey Program, Revision 009

RP-AA-301, Radiological Air Sampling Program, Revision 004

RP-AA-302, Determination of Alpha Levels and Monitoring, Revision 004

RP-AA-376, Radiological Postings, Labeling and Markings, Revision 006

RP-AA-460, Controls for High and Locked High Radiation Areas, Revision 023

RP-AA-460-001, Controls for Very High Radiation Areas, Revision 004

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RP-AA-503-F-01, Unconditional Release Instructions Using SAM for Personnel Items used in
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RP-AA-601, Surveying Radioactive Material Shipments, Revision 013

RP-AA-800, Control, Inventory, and Leak Testing of Radioactive Sources, Revision 006

RP-AB-460, TIP Area Access Controls, Revision 001

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RP-JS-4, Shutdown Checklist, Revision 001
 RP-JS-15, Radiological Protection Controlled Keys, Revision 0
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1250898	1359080	1356328	1364762	1328678	1279755
1279470					

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 dated February 21, 2012
 Locked High Radiation Ares Key List, dated June 4, 2012
 OCNGS Exempt Quantity Sources
 RP-AA-800 Attachment 2 Source Leak Test Record, dated January 30, 2012
 OCGS Procedure No. 116 Surveillance Testing Program Attachment 116-1 Surveillance Test
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Section 2RSO2: Occupational ALARA Planning and Controls

Procedures

CY-AB-120-120, BWR Startup Chemistry, Revision 8
CY-AB-120-130, BWR Shutdown Chemistry, Revision 9
CY-AB-120-1000, BWR Strategic Water Chemistry Plan, Revision 11
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RP-AA-16, ALARA Program Description, Revision 0
RP-AA-400, ALARA Program, Revision 009
RP-AA-401, Operational ALARA Planning and Control, Revision 14
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RP-AA-552, Guidelines for Installation and Control of Spot Shielding, Revision 000
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RP-AA-870-1002, Use of Vacuum Cleaners in Radiologically Controlled Areas, Revision 003
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RP-AB-460-1002-F-05, Oyster Creek Actions Following a Unit Startup, Revision 000
RP-JS-2, Special Instruction, Revision 000
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W.O. C2027796 HEPA/Vacuum Action Plan, dated May 14, 2012
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RP-AA-401, Attachment 5 ALARA Post-Job Review for Turbine Building West Roof: Removal of Old Roof and Installation of New Roof, dated January 23, 2012

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NUREG-1022, Event Reporting Guidelines 10 CFR 50.71 and 50.73, Revision 2
NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 6
Oyster Creek Nuclear Generating Station Operating Logs Database, Various dates

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302.2, Control Rod Drive Manual Control System, Revision 49
 LS-AA-120, Issue Identification and Screening Process, Revision 14
 LS-AA-125-1001, Root Cause Investigation Report Content and Format, Revision 9
 OP-AA-300, Reactivity Management, Revision 6
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1022511	1053577	1164020	1175089	1205823	1205903
1260868	1260916	1261018	1261657	1261681	1262324
1262379	1372916	1325788	1256585	1279797	

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 Crew Compliments per OP-AA-101-111-1001, March 14, 2012
 ESOMs Work Hours Report for August 22, 2011 through August 30, 2011

Section 4OA3: Follow-up of Events and Notices of Enforcement DiscretionCondition Reports

1377041	1377933	1377773	1378159	1377944	1377739
1378878	1378869	1378857	1377219		

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ER-AA-5400-1001, Raw Water Corrosion Program, Revision 5
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1361489	1361494
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