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

November 8, 2018

Mr. Bryan Hanson
Senior Vice President, Exelon Generation Co., LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION – INTEGRATED INSPECTION REPORT 05000219/2018003

Dear Mr. Hanson:

On September 30, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Oyster Creek Nuclear Generating Station. On October 10, 2018, the NRC inspectors discussed the results of this inspection with Mr. Jeffrey Dostal, Site Decommissioning Director and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any findings or violations of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Matthew R. Young, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Number: 50-219
License Number: DPR-16

Enclosure:
Inspection Report 05000219/2018003

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SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION – INTEGRATED INSPECTION REPORT 05000219/2018003 DATED NOVEMBER 8, 2018

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	50-219
License Number:	DPR-16
Report Number:	05000219/2018003
Enterprise Identifier:	I-2018-002-0078
Licensee:	Exelon Nuclear
Facility:	Oyster Creek Nuclear Generating Station
Location:	Forked River, New Jersey
Inspection Dates:	July 1, 2018 to September 30, 2018
Inspectors:	E. Andrews, Senior Resident Inspector J. Kulp, Senior Reactor Inspector E. Allen, Project Engineer J. Ambrosini, Senior Emergency Preparedness Inspector B. DeBoer, Health Physicist J. DeBoer, Emergency Preparedness Inspector S. Horvitz, Beaver Valley Resident Inspector A. Patel, Senior Reactor Inspector J. Schoppy, Senior Reactor Inspector A. Turlin, Project Engineer K. Warner, Health Physicist
Approved By:	Matthew R. Young, Chief Reactor Projects Branch 6 Division of Reactor Projects

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring Exelon's performance at Oyster Creek Nuclear Generating Station by conducting the baseline inspections described in this report in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information.

No findings or more-than-minor violations were identified.

Additional Tracking Items

Type	Issue number	Title	Inspection Results Section	Status
LER	05000219/2017-004-00/01	Reactor Protection System Channel Disabled during RPS Test Box Use	71153	Closed
LER	05000219/2018-001-00	EMRV Pressure Sensor As-Found Setting Exceeded Limiting Safety System Settings	71153	Closed

PLANT STATUS

Oyster Creek began the inspection period at 98 percent power, coasting down in power as it approached the end of the operating cycle. Operators lowered power to 70 percent on July 29, 2018, to remove the 'B' feedwater string from service due to an internal leak in the high pressure feedwater heater. On September 17, 2018, operators commenced a plant shutdown, took the unit offline, and entered a defueling outage (1D27) where the unit remained for the remainder of the inspection period. On September 25, 2018, Oyster Creek certified that all fuel had been permanently removed from the reactor vessel and placed in the spent fuel pool. As stated in the "Termination of Reactor Oversight Process for Oyster Creek Nuclear Generating Station and Commencement of Decommissioning Inspection Program" letter (ADAMS Accession Number ML18274A221), beginning October 1, 2018, the NRC's oversight of Oyster Creek will no longer be performed in accordance with the operating power reactor inspection program and will instead be conducted in accordance with the decommissioning power reactor inspection program.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515, Appendix D, "Plant Status," and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess Exelon's performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather (1 Sample)

The inspectors evaluated operator response to a high drywell temperature condition caused by seasonal extreme weather on July 24 and July 25, 2018.

71111.04 - Equipment Alignment

Partial Walkdown (3 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

(1) 'B' isolation condenser during 'A' isolation condenser testing on July 9, 2018
(2) 'A' isolation condenser on August 14, 2018
(3) Spent fuel pool cooling system on September 20, 2018

Complete Walkdown (1 Sample)

The inspectors evaluated system configurations during a complete walkdown of core spray system 1 on August 15, 2018.

71111.05A/Q - Fire Protection Annual/Quarterly

Quarterly Inspection (6 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

(1) 'A' 480V switchgear room on July 10, 2018
(2) 'B' 480V switchgear room on July 10, 2018
(3) 'A' and 'B' battery room on July 23, 2018
(4) Lower cable spreading room on July 24, 2018
(5) 'C' and 'D' 4160V emergency switchgear vaults on July 25, 2018
(6) Fresh water fire pump house on July 27, 2018

Annual Inspection (1 Sample)

The inspectors evaluated fire brigade performance on July 12, 2018.

71111.06 - Flood Protection Measures

Internal Flooding (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the northeast corner room on July 3, 2018.

71111.11 - Licensed Operator Requalification Program and Licensed Operator Performance

Operator Performance (1 Sample)

The inspectors observed operator performance during reactor shutdown for the 1D27 defueling outage on September 17, 2018.

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness (1 Sample)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the spent fuel pool cooling and augmented spent fuel cooling systems during the week of July 30, 2018.

71111.13 - Maintenance Risk Assessments and Emergent Work Control (3 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

(1) Protection of the ‘A’, ‘B’, ‘C’, and ‘D’ reactor recirculation motor generator sets and associated breakers following trip of the ‘E’ reactor recirculation pump during the week of July 23, 2018
(2) Emergent unavailability of the 1-1 service air compressor on July 24, 2018
(3) Yellow risk due to high decay heat generation rate during the defueling outage (1D27) on September 17, 2018

71111.15 - Operability Determinations and Functionality Assessments (4 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

(1) Seismic adequacy of the ‘A1’ and ‘A2’ 24V battery racks on July 25, 2018
(2) Degraded condition on station blackout 4160V switchgear breaker on July 31, 2018
(3) Air leak from diaphragm of CV-305-127 on hydraulic control unit 42-11 on July 31, 2018
(4) Torus to drywell vacuum breaker delay relay out of specification on August 22, 2018

71111.18 - Plant Modifications (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

(1) TCC-1805-821, Temporary supplemental feed pump motor cooling
(2) Engineering Change 545008, Permanent USS 1A1 and 1A2 Transformer Nitrogen Keepfill

71111.19 - Post Maintenance Testing (4 Samples)

The inspectors evaluated post maintenance testing for the following maintenance and repair activities:

(1) ‘B’ spent fuel pool pump preventative maintenance on July 16, 2018
(2) 1-1 fire diesel following annual preventive maintenance on July 26, 2018
(3) 1-1 air compressor troubleshooting and Q-6-2 auto blow down valve replacement on August 3, 2018
(4) Average power range monitor power supply replacement on August 7, 2018

71111.20 - Refueling and Other Outage Activities (1 Sample)

The inspectors evaluated the Oyster Creek defueling outage (1D27) activities from September 17, 2018, to September 25, 2018. The inspectors verified the fuel was removed from the core on September 25, 2018.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Containment Isolation Valve (1 Sample)

(1) 678.4.001, Primary containment isolation valve operability and in-service testing, on both Drywell vent valves and both Drywell purge valves July 6, 2018

71114.02 - Alert and Notification System Testing (1 Sample)

The inspectors evaluated the maintenance and testing of the alert and notification system from September 2016 to July 2018.

71114.03 - Emergency Response Organization Staffing and Augmentation System (1 Sample)

The inspectors conducted a review of Exelon's Emergency Response Organization augmentation staffing requirements and the process for notifying and augmenting the Emergency Response Organization.

71114.04 - Emergency Action Level and Emergency Plan Changes (1 Sample)

The inspectors verified that the changes made to the Emergency Plan were done in accordance with 10 CFR 50.54(q)(3), and any change made to the Emergency Action Levels, Emergency Plan, and its lower-tier implementing procedures, had not resulted in any reduction in effectiveness to the plan. This evaluation does not constitute NRC approval.

71114.05 - Maintenance of Emergency Preparedness (1 Sample)

The inspectors reviewed activities to evaluate Exelon's efforts to maintain Oyster Creek's emergency preparedness programs.

71114.06 – Drill Evaluation

Emergency Planning Drill (1 Sample)

The inspectors evaluated the conduct of a routine Exelon decommissioning emergency planning drill on August 15, 2018.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified Exelon's performance indicator submittals listed below.
(10 Samples)

(1) Reactor Coolant System Leak Rate from July 2017 to June 2018
(2) Reactor Coolant System Activity from July 2017 to June 2018
(3) Alert and Notification Reliability from July 2017 to June 2018
(4) Drill and Exercise Performance from July 2017 to June 2018

(5) Emergency Response Organization Drill Participation from July 2017 to June 2018
(6) Emergency Alternating Current Power System from October 2017 to June 2018
(7) High Pressure Injection System – Core Spray from October 2017 to June 2018
(8) Heat Removal – Isolation Condensers from October 2017 to June 2018
(9) Residual Heat Removal – Containment Spray from October 2017 to June 2018
(10) Cooling Water System from October 2017 to June 2018

71152 - Problem Identification and Resolution

Semiannual Trend Review (1 Sample)

The inspectors reviewed Exelon's corrective action program for trends that might be indicative of a more significant safety issue. The inspectors determined that, in most cases, issues were appropriately evaluated by Exelon staff for potential trends and resolved within the scope of the corrective action program. However, the inspectors reviewed Issue Report 4130797, which documented a potential trend for six instances of foreign material found on fuel bundles in April 2018. The inspectors identified four more issue reports regarding instances of foreign material identified on fuel bundles since April 2018. Although the individual issues were addressed through the corrective action program, the inspectors did not see evidence that Exelon collectively evaluated the additional instances of foreign material identified on fuel bundles between April 2018 and August 2018 for a potential adverse trend.

The inspectors continued to monitor trends in issue report generation to ensure the reduction is a result of the transition to decommissioning and not indicative of a lack of worker engagement. Exelon had previously identified and evaluated a decreasing trend in issue report generation. Based on the overall results of the semiannual trend review, the inspectors determined that Exelon was appropriately identifying and entering issues into the corrective action program and adequately evaluating the issues.

Annual Follow-up of Selected Issues (3 Samples)

The inspectors reviewed the Exelon's implementation of its corrective action program related to the following issues:

(1) Issue Report 3989025, PMC: #2 EDG Normally Full Sight Glass Less than Half Full
(2) Issue Report 2421521, SFP Badger Testing Results
(3) Issue Report 4048016, Results from Fermi RPS Test Box OE Review

71153 - Follow-up of Events and Notices of Enforcement Discretion

Licensee Event Reports (2 Samples)

The inspectors evaluated the following licensee event reports (LERs):

(1) LER 2017-004-00 and -01, Reactor Protection System Channel Disabled during RPS Test Box Use (ADAMS Accession Number: ML18046A076)

The circumstances surrounding this LER are documented in Section 71152, Problem Identification and Resolution.

(2) LER 2018-001-00, EMRV Pressure Sensor As-Found Setting Exceeded Limiting Safety System Settings (ADAMS Accession Number: ML18220A877)

The inspectors determined that it was not reasonable to foresee or correct the cause discussed in the LER therefore no performance deficiency was identified. The inspectors also concluded that a violation of NRC requirements occurred, but that the violation is of minor safety significance.

Personnel Performance (2 Samples)

The inspectors evaluated response during the following non-routine evolutions or transients.

(1) Operators entered ABN 35, "Loss of Instrument Air," due to rapidly lowering air pressure on July 25, 2018
(2) 'B' feedwater string removed from service due to tube leak in the 'B' feedwater heater on July 30, 2018

INSPECTION RESULTS

Observations	71152 Follow-up of Selected Issues
The inspectors determined that, in most cases, issues were appropriately evaluated by Exelon staff for potential trends and resolved within the scope of the corrective action program. However, the inspectors reviewed Issue Report 4130797, which documented a potential trend for six instances of foreign material found on fuel bundles in April 2018. The inspectors identified four more issue reports regarding instances of foreign material identified on fuel bundles since April 2018. Although the individual issues were addressed through the corrective action program, the inspectors did not see evidence that Exelon collectively evaluated the additional instances of foreign material identified on fuel bundles between April 2018 and August 2018 for a potential adverse trend. The inspectors continued to monitor trends in issue report generation to ensure the reduction is a result of the transition to decommissioning and not indicative of a lack of worker engagement. Exelon had previously identified and evaluated a decreasing trend in issue report generation. Based on the overall results of the semiannual trend review, the inspectors determined that Exelon was appropriately identifying and entering issues into the corrective action program and adequately evaluating the issues.	

Observations	71152 Follow-up of Selected Issues
The inspectors reviewed the work group evaluation, the proposed and implemented corrective actions, and the past operability regarding the deficiencies on the No. 2 emergency diesel generator return fuel oil sight glass. The inspectors concluded that the work group evaluation was thorough, the extent of condition was reasonable, and the corrective actions were timely and adequate.	

Observations	71152 Follow-up of Selected Issues

On April 7, 2016, the NRC issued Generic Letter 2016-01, "Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools," to address degradation of neutron-absorbing materials in wet storage systems for reactor fuel at power and non-power reactors. In response to Generic Letter 2016-01, Exelon submitted information to demonstrate that credited neutron-absorbing materials in the spent fuel pool were in compliance with the licensing and design basis and with applicable regulatory requirements; and that there were measures in place to maintain this compliance. The inspectors reviewed Exelon's operability determination, technical evaluation, the proposed and implemented corrective actions, and the past operability regarding the neutron-absorbing materials in the spent fuel pool. The inspectors concluded that the operability determination was thorough, the extent of condition was reasonable, and the corrective actions were timely and adequate.

Minor Violation	71152 Follow-up of Selected Issues

This violation of minor significance was identified by the licensee and has been entered into the licensee's corrective action program and is being treated as a minor violation, consistent with the NRC enforcement Policy

Minor Violation. On August 31, 2017, Exelon Generation Company, LLC (the licensee) performed a review of industry operating experience from Fermi, Unit 2 (LER 2017-001-00 under ADAMS Accession Number ML17065A226). During their review, Exelon determined that the prior use of a reactor protection system test box at Oyster Creek during periodic surveillance testing (associated with the turbine trip reactor protection system trip function) resulted in bypassing multiple contacts in parallel circuits. The use of the reactor protection system test box rendered two of four instrument channels for the turbine trip function inoperable.

In 2013, the licensee revised their surveillance procedures for reactor protection system logic testing to implement the use of a reactor protection system test box in order to minimize unwanted scrams that may occur. However, the licensee did not recognize that use of the reactor protection system test box during testing of the turbine trip function would not satisfy the requirements of the technical specification limiting condition for operation. Specifically, Table 3.1.1, Function 11, turbine trip scram, in the licensee's technical specifications, specifies that the minimum number of instrument channels needed to remain operable (four channels), and with fewer than that number, various technical specification actions statements are applicable. With the reactor protection system test box installed, two of the four required turbine trip scram inputs were bypassed. Technical Specifications Table 3.1.1, note (nn) requires the licensee to verify within one hour that the remaining channels were operable. The action to verify sufficient channels remained operable was not completed within one hour, and therefore, a violation of technical specifications occurred. The ability to initiate a full scram due to turbine stop valve closures among valve combinations (turbine stop valve closures in 3 of 4 different steam lines) when the reactor protection system test box is installed was not inhibited since the other trip system within the reactor protection system protection logic was unaffected.

The inspectors reviewed the apparent cause analysis, the corrective actions taken, and the past operability regarding the deficiencies discovered on reactor protection system testing issues. The inspectors concluded that the cause analysis was thorough, the extent of condition was reasonable, and the corrective actions were timely.

Screening. This issue is similar to example 1.c of IMC 0612, Appendix E, "Examples of Minor Issues," in that, subsequent testing of reactor protection system did verify the remaining channels were operable and therefore this issue is minor.

Enforcement. This failure to comply with Technical Specification Table 3.1.1, note (nn) constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

Minor Violation	71153

Minor Violation. During the performance of Procedure 602.3.004, "Electromatic Relief Valve Pressure Sensor Test and Calibration," on June 5, 2018, the as-found set point for the 'A' electromatic relief valve (EMRV) was found to be 1095 psig. Technical Specification 2.3.D, "Limiting Safety System Settings, Reactor High Pressure, Relief Valve Initiation," states that the maximum allowable set point for the 'A' EMRV is 1085 psig, 1094.15 psig when corrected for height. Exelon calibrated the 'A' EMRV pressure sensor and retested it satisfactorily on the same day. Exelon entered the issue into the corrective action program as Issue Report 4144437.

The inspectors reviewed design basis documentation, the Final Safety Analysis Report, historical calibration data for the 'A' EMRV pressure switch, Oyster Creek accident analysis, and corrective action program documentation. The inspectors determined that the automatic depressurization system and manual operation functions were not affected by this issue. Following a review of the historical calibration test data from the 'A' EMRV pressure switch, the inspectors did not identify a trend in set point measurements that would have indicated that Exelon should have taken any corrective actions to adjust the pressure switch prior to the June 5, 2018, calibration and determined that a performance deficiency did not exist. The inspectors determined that the observed actuation value did not challenge the integrity of the reactor coolant pressure boundary because overpressure protection is provided by the nine installed safety valves and did not rely on the EMRVs. The inspectors determined that the observed value for the 'A' EMRV pressure switch actuation did not challenge the integrity of the fuel cladding as it did not affect the results of the most limiting abnormal operating transient analysis where the EMRVs are relied upon to operate. The inspectors determined that the observed value for the 'A' EMRV pressure switch actuation did not challenge the integrity of primary containment as the analysis of record for the mark one containment bounded the observed test result.

The inspectors determined that the as-found set point for the 'A' EMRV exceeded the maximum set point set forth in Technical Specification 2.3.D and is a violation of the Oyster Creek Technical Specifications.

Screening. The inspectors concluded that the observed result of the 'A' EMRV pressure switch calibration did not pose a significant safety or regulatory impact and was not indicative of a programmatic issue. The inspectors considered that risk impact from the high set point was minor, and that the violation was similar to examples of minor violations of licensee administrative requirements described in the NRC Enforcement Manual, Appendix E, "Examples of Minor Issues." Therefore, the violation is characterized as minor.

Enforcement.

Violation: Oyster Creek Technical Specification 2.3.D states, in part, that the limiting safety system setting for the 'A' EMRV is less than or equal to 1085 psig, 1094.15 psig when corrected for height.

Contrary to the above, on June 5, 2018, the limiting safety system setting for the 'A' EMRV was not less than or equal to 1085 psig, 1094.15 psig when corrected for height. Specifically, during calibration and testing of the 'A' EMRV, Exelon determined that the opening set point was 1095 psig.

Exelon entered the issue into the corrective action program as Issue Report 4144437. Exelon's corrective actions included calibrating the 'A' EMRV pressure sensor, performed a post maintenance test, and placed the pressure sensor in service on June 5, 2018, to restore compliance with Technical Specification 2.3.D. Although the issue was corrected, it constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section 2 of the Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On October 10, 2018, the inspectors presented the resident inspector quarterly inspection results to Mr. Jeffrey Dostal, Site Decommissioning Director, and other members of the Oyster Creek staff.

DOCUMENTS REVIEWED

71111.01: Adverse Weather Protection

Procedures
202.1, Power Operation, Revision 157

71111.04: Equipment Alignment

Condition Reports
2456609 2724119

Procedures
307, Isolation Condenser System, Revision 127
308, Emergency Core Cooling System Operation, Revision 99
311, Fuel Pool Cooling System, Revision 125
OP-OC-108-1003, Oyster Creek Locked Equipment and Key Control, Revision 33
OP-OC-108-103, Locked Equipment Program, Revision 2

Drawings
GE148F262, Emergency Condenser Flow Diagram, Sheet 1, Revision 56
GE237E756, Spent Fuel Pool Cooling Flow Diagram, Sheet 1, Revision 60
GE885D781, Core Spray System Flow Diagram, Sheet 1, Revision 76
GU3C-735-11-001, 125V Station DC System Panel Schedule DC-D, Sheets 1 and 2, Revision 3
GU3C-735-11-003, 125V Station DC System Panel Schedule DC-F, Revision 6

71111.05: Fire Protection

Condition Reports
4015425 4159522

Procedures
101.2, Oyster Creek Site Fire Protection Program, Revision 73
ABN 29, Plant Fires, Revision 32
ER-AA-600-1069, High Risk Fire Area Identification, Revision 4
OP-OC-201-008, Oyster Creek Pre-fire Plans, Revision 27
OP-OC-201-008-1041, Hazardous Materials Storage Area, Revision 2
OP-OC-201-012-1001, On-line Fire Risk Management, Revision 4

71111.06: Flood Protection Measures

Miscellaneous
OP-PSA-012, Internal Flood Evaluation Summary Notebook, dated May 2014
OC-PSA-022, Internal Flood Walkdown Notebook, dated May 2014

71111.11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedures
203, Plant Shutdown, Revision 90
203.4, Plant Cooldown Following Reactor Scram, Revision 58
312.9, Primary Containment Control, Revision 66
ABN 1, Reactor Scram, Revision 18

71111.12: Maintenance Effectiveness

Completed Surveillance and Functional Tests
614.4.001, Fuel Pool Cooling Pump Test, performed March 17, 2016, September 8, 2016, April 1, 2017, and September 28, 2017
614.4.002, Augmented Fuel Pool Cooling Pumps Functional Test, performed August 6, 2014 and August 5, 2016

Condition Reports

1549751	1559056	1609824	1699097	1716809	2384275
2391141	2421897	2450559	2464619	2528787	2551655
2553374	2666910	2687755	2706652	2708891	2711124
2718850	2719288	2719539	2720569	3970146	3992422
3992425	4111933	4115252	4133576	4133917	4147536
4158080	4159422	4159553	4159554	4160354	

Engineering Evaluations
3970146-06, Excessive Reactor Cavity Leakage After Flood-up for 1R26 Work Group Evaluation, Revision 0

Maintenance Orders/Work Orders
4581721

Procedures
311, Fuel Pool Cooling System, Revision 124
ABN 16, Loss of Fuel Pool Cooling, Revision 6
ER-AA-310, Implementation of the Maintenance Rule, Revision 11
ER-AA-310-1004, Maintenance Rule – Performance Monitoring, Revision 14

71111.13: Maintenance Risk Assessments and Emergent Work Controls

Condition Reports

4153483	4158227	4158460	4160883	4160887

Miscellaneous
OYS-0-2018-0253, ODM: ‘E’ Reactor Recirc Pump, dated July 11, 2018

Procedures
301.2, Reactor Recirculation System, Revision 95

71111.15: Operability Evaluations

Calculations
C-1302-243-E170-087, Wetwell to Drywell Vacuum Breaker Sizing, Revision 4

Condition Reports

0751551	2559925	2680591	2680993	2741850	4160551
4161224	4161227	4161229	4161249	4162333	

Engineering Evaluations
751551-03, 24VDC Battery banks DC-A1 and DC-A2 Seismic Technical Evaluation, dated March 24, 2008
SQ-OC-DC-A1, DC-A1 / 24V DC Batteries for Power Panel DC-A, Revision 1

Maintenance Orders/Work Orders
4787751

Miscellaneous
Technical Specification 3.2.B.2.(b), Control Rod System, Amendment 178

Procedures
ABN 36, Loss of Offsite Power & Station Blackout (Plant Control), Revision 34
ABN 37, Combustion Turbine Operation, Revision 33

71111.18: Plant Modifications

Condition Reports

1248105	3787918	4113200	4123383	4133520	4135987
4140026	4159993	4161601	4162650		

Drawings
BR 3002, 480V System One Line Diagram 460V Unit Substation 1A2 & 1B2, Sheet 2, Revision 14

Engineering Evaluations
A2063866-01, Supplemental Feed Pump Cooling Design Attributes Review Technical Evaluation, dated June 13, 2003
A2063866-04, Technical Evaluation for Installation of Additional Feed Pump Cooling, dated June 7, 2007
EC 545008, Permanent USS 1A1 and 1A2 Transformer Nitrogen Keepfill, Revision 2
OC-700-03-013, Feed Pump Temporary Cooling Electrical Loading Analysis, Revision 1
OC-2003-S-0250, Temporary Configuration Change for Supplemental Feed Pump Motor Cooling 50.59 Screening, dated June 12, 2003

Procedures
328, Turbine Building Heating and Ventilation System, Revision 68
338, 480 Volt Electrical System, Revision 63
RAP J-8-F, COND/FD PMP BRG TEMP HI, Revision 10

71111.19: Post Maintenance Testing

Condition Reports
4156090 4158227 4158460 4158875 4159507 4160552

Maintenance Orders/Work Orders
4384791 4682635 4755283 4810711 4812742

71114.02: Alert and Notification System Evaluation

Condition Reports
2731947 3971345 4018930

Procedures
EP-AA-1010, Exelon Nuclear Radiological Emergency Plan Annex for Oyster Creek Station, Revision 11
EP-MA-121-1002, Alert and Notification System (ANS) Program, Revision 13
EP-MA-121-1003, Alert and Notification System (ANS) Monitoring, Troubleshooting, and Testing Program, Revision 8
EP-MA-121-1004, Alert and Notification System (ANS) Maintenance Program, Revision 11

71114.03: Emergency Response Organization Staffing and Augmentation System

Miscellaneous
10CFR50.54(q) Evaluation 17-131
EP-AA-1010, Table OCGS 2-1, Minimum Staffing Requirements

Procedures
EP-AA-122, Drills and Exercise Program, Revision 19
EP-AA-122-100, Drill and Exercise Planning and Scheduling, Revision 8
TQ-AA-113, ERO Training and Qualification, Revision 33

71114.04: Emergency Action Level and Emergency Plan Changes

Procedures
EP-AA-110-200, Dose Assessment, Revision 11
TQ-OC-113, Training and Qualification for Decommissioning Oyster Creek ERO, Revision 0

71114.05: Maintaining Emergency Preparedness

Condition Reports
3974714 4003001 4008476 4018636 4112969

Maintenance Orders/Work Orders
R2187212

Miscellaneous
2017-2018 Drill Reports
ERO Memorandum 2018-01, Oyster Creek Nuclear Generating Station, January 6, 2018 Notice. of Unusual Event, dated February 5, 2018
KLD TR-924, Oyster Creek Generating Station, 2017 Population Update Analysis, dated September 9, 2017
KLD TR-1010, Oyster Creek Generating Station, 2018 Population Update Analysis, dated September 8, 2018
NOSA-CAL-17-03, 2017 Emergency Preparedness Audit Report
NOSA-CAL-18-03, 2018 Emergency Preparedness Audit Report

Procedures
621.3.005, High Radiation Monitor (RX. Building Isolation Calibration), Revision 59
EP-AA-121-F-10, Oyster Creek Equipment Matrix, Revision 1

71151: Performance Indicator Verification

Condition Reports
3958850 4017602 4030606 4056733 4060631 4094634
4112416 4127990

Miscellaneous
Increase in Unidentified Leakage Adverse Condition Monitoring Plan, Revisions 5 and 6
OYS-0-2017-0015, UILR Post 1R26, Revision 3
Various Operations Logs from July 1, 2017 to June 30, 2018

Procedures
EP-AA_125-1001, EP Performance Indicator Guidance, Revision 10
ER-AA-600-1047, Mitigating Systems Performance Index Basis Document, Revision 11
ER-AB-331-1006, BWR Reactor Coolant System Leakage Monitoring and Action Plan, Revision 2
LS-AA-2200, Mitigating System Performance Index Data Acquisition & Reporting, Revision 6

71152: Problem Identification and Resolution

Condition Reports
0651716 0986129 1296791 1353678 1513542 2421521
2516275 2537533 2624595 2632135 2658614 2665499
2713415 2714215 2723641 3971336 3986629 3989025
3989621 3989985 3990330 4029965 4048016 4071396
4096785 4094768 4111910 4128124 4128205 4130122
4130797 4131121 4133650 4140383 4157254 4158080
4166605

Maintenance Orders/Work Orders
4572692 4600295 4615010 4725780 4743398 4756912
4778790

Miscellaneous
Bubble in EDG-2 Normally Full Sight Glass Adverse Condition Monitoring Plan, Revision 5
EC 399975, Oyster Creek 2014 RACKLIFE Update Engineering Evaluation, Revision 0
EC 400120, Oyster Creek Boraflex Degradation Limits, Revision 2
EC 405644, Boraflex Degradation Limits by Fuel Type, Revision 1
EC 618059, RACKLIFE Model Update and Projection for Oyster Creek Boraflex Spent Fuel Pool Racks – January 2017, Revision 0
EC 619348, Emergency Diesel Generator Priming Acceptability Technical Evaluation, Revision 1
EC 620515, EDG-1 Fuel System Pump Mod, Revision 0
EC 620516, EDG-2 Fuel System Priming Pump Mod, Revision 2
NET-356-03, Criticality Analysis of the Oyster Creek Boraflex Spent Fuel Racks, Revision 2
NET-28097-000-01, 2017 BADGER Test Campaign at Oyster Creek, Revision 2
NRC Information Notice 2018-08: Failure to Enter the Required Technical Specifications Action Statement for Operation during Recent Surveillance Testing While Using a Reactor Protection System Test Box
OC-2014-OE-0005, Degraded Boraflex Fuel Rack Operability Evaluation, Revision 4
OYS-0-2017-0286, Simple Risk Issue Assessment, Revision 0
OYS-0-2016-0171, Emergency Diesel Generator System Reliability Issues, Revision 2
Various Operations Logs from March 26, 2017 to July 12, 2018

Procedures
341, Emergency Diesel Generator Operation, Revision 117
619.4.002, Anticipatory Scram Turbine Stop Valve Closure Test (>45% load), Revision 29
620.4.002, APRM Surveillance Test Front Panel Check – RPS System 1, Revision 36
620.4.003, APRM Surveillance Test Front Panel Check – RPS System 2, Revision 15
1002.6, Oyster Creek Spent Fuel Rack In-Service Surveillance and Management Program for Boraflex Racks, Revision 16
ER-AA-2003, System Performance Monitoring and Analysis, Revision 14
NF-AA-610-1000, Creation of RACKLIFE Input Files and Statepoints, Revision 6
NF-OC-310-2000, Special Nuclear Material and Core Component Movement, Revision 16
OP-AA-108-108, Unit Restart Review, Revision 19
OP-AA-108-115, Operability Determinations, Revision 21
PI-AA-101-1001, Performance Monitoring and Analysis Manual, Revision 1
PI-AA-125, Corrective Action Program Procedure, Revision 6

71153: Follow-up of Events and Notices of Enforcement Discretion

Condition Reports

4158875	4158919	4158934	4159175	4159208	4159223
4159808	4159609	4159673	4159853	4159677	4159760
4159807	4159811	4159853	4144437	4059763	2534463
2631107	3962818	3962822	3998369		

Maintenance Orders/Work Orders

4755262	R2270139	R2265252

Procedures
318, Main Steam System and Reheat Steam, Revision 77
ABN 35, Loss of Instrument Air, Revision 14
602.3.004, Electromatic Relief Valve Pressure Sensor Test and Calibration, Revision 59

Miscellaneous

LER 2018-001-00, EMRV Pressure Sensor As-Found Setting Exceeded Limiting Safety System Settings, dated July 31, 2018

SE-210-001, Evaluation of EQ Master List Inclusion of IA83 Pressure Switches and ID13 Level Transmitters, Revision 0

EGS-DP-E23-01, Generic Dedication/Seismic Procedure for Pressure Switches, dated September 9, 1999

C-1302-622-E510-060, PS-IA-0083 EMRV High Pressure Relief Calibration and Instrument Loop Error, Revision 0

SE 315-403-027, Technical Specification Amendment 165, Revision 0

C-1302-212-E610-104, Impact to Peak Clad Temperature with Reduced EMRV flow Rate, Revision 1

SE-212-029-029, EMRV Set Point and Tolerance, Revision 0

MPR-1434, Oyster Creek Nuclear Generating Station Evaluation of Proposed Increase in Technical Specification Limits for EMRV Setpoint Pressure on Mark 1 Containment Long–Term Program Analyses, Revision 0

SE 315403-028, Technical Specification Change for EMRV Setpoints, Revision 0

002N6964, Oyster Creek Unit 1 Cycle 26 Reload Licensing Reports – Supplemental Reload Licensing Report (SRLR), Revision 0