May 7, 2007

Mr. Christopher M. Crane
President and CEO
AmerGen Energy Company, LLC
200 Exelon Way, KSA 3-E
Kennett Square, PA 19348

SUBJECT: OYSTER CREEK GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000219/2007002

Dear Mr. Crane:

On March 31, 2007, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Oyster Creek Generating Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 5, 2007, with Mr. T. Rausch**,** 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.

The report documents one NRC-identified finding and one self revealing finding of very low safety significance (Green). These findings were determined to involve a violation of NRC requirements. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these two findings as non-cited violations (NCVs) consistent with Section VI.A of the NRC's Enforcement Policy. If you contest these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Oyster Creek.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

We appreciate your cooperation. Please contact me at (610) 337-5200 if you have any questions regarding this letter.

Sincerely,

/RA/

Ronald R. Bellamy, Ph.D., Chief
Projects Branch 6
Division of Reactor Projects

Docket No. 50-219
License No. DPR-16

Enclosure: Inspection Report 05000219/2007002
w/ Attachment: Supplemental Information

cc w/encl:
Chief Operating Officer, AmerGen
Site Vice President, Oyster Creek Nuclear Generating Station, AmerGen
Plant Manager, Oyster Creek Generating Station, AmerGen
Regulatory Assurance Manager, Oyster Creek, AmerGen
Senior Vice President - Nuclear Services, AmerGen
Vice President - Mid-Atlantic Operations, AmerGen
Vice President - Operations Support, AmerGen
Vice President - Licensing and Regulatory Affairs, AmerGen
Director Licensing, AmerGen
Manager Licensing - Oyster Creek, AmerGen
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Correspondence Control Desk, AmerGen
J. Matthews, Esquire, Morgan, Lewis & Bockius LLP
Mayor of Lacey Township
K. Tosch, Chief, Bureau of Nuclear Engineering, NJ Dept of Environmental Protection
R. Shadis, New England Coalition Staff
N. Cohen, Coordinator - Unplug Salem Campaign
W. Costanzo, Technical Advisor - Jersey Shore Nuclear Watch
E. Gbur, Chairwoman - Jersey Shore Nuclear Watch
E. Zobian, Coordinator - Jersey Shore Anti Nuclear Alliance
P. Baldauf, Assistant Director, NJ Radiation Protection Programs

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-219
License No.:	DPR-16
Report No.:	05000219/2007002
Licensee:	AmerGen Energy Company, LLC (AmerGen)
Facility:	Oyster Creek Generating Station
Location:	Forked River, New Jersey
Dates:	January 1, 2007 - March 31, 2007
Inspectors:	M. Ferdas, Senior Resident Inspector R. Treadway, Resident Inspector S. Barr, Senior Emergency Preparedness Inspector R. Nimitz, Senior Health Physicist R. Cureton, Emergency Preparedness Inspector
Approved By:	Ronald R. Bellamy, Ph.D., Chief Projects Branch 6 Division of Reactor Projects

CONTENTS

SUMMARY OF FINDINGS

IR 05000219/2007002; 01/01/07 - 03/31/07; AmerGen Energy Company, LLC (AmerGen), Oyster Creek Generating Station; Fire Protection, Operability Evaluation, and Event Followup.

The report covered a 3-month period of inspection by resident inspectors, and announced inspections by a senior radiation specialist and two emergency preparedness inspectors. Two Green non-cited violations (NCV) and one Green finding were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). 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 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

Green. A self-revealing finding was identified when AmerGen did not properly identify an adverse trend on the 'D' electromatic relief valve (EMRV) pressure switch between May 2006 and December 2006, which resulted in an opening of the 'D' EMRV below its actuation setpoint at full power. This finding was determined to be an NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action." AmerGen's corrective actions for this issue involved replacing the pressure switch, developing an improved trending method for the EMRV pressure switches, and evaluating the need to utilize a different style pressure switch or changing the surveillance procedure.

The finding was more then minor because it was associated with the equipment performance attribute of the initiating events cornerstone and affected the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The inspectors conducted a Phase 1 SDP screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined the finding was of very low safety significance (Green). The finding was of very low safety significance because no initiating event or transient actually occurred and the finding did not contribute to the likelihood that mitigating equipment or functions would be unavailable. The performance deficiency had a cross-cutting aspect in the area of problem identification and resolution because AmerGen did not identify an adverse trend and assess information from the corrective action program and surveillance tests to identify a problem with the 'D' EMRV pressure switch [P.1.(b)]. (Section 4OA3)

Cornerstone: Mitigating Systems

Green. The inspectors identified that AmerGen did not properly implement fire protection plan requirements on January 11 and January 16, 2007. Specifically, AmerGen did not identify that a fire barrier door for the safety-related 'B' 480 volt room was obstructed, preventing the door from closing if a fire was detected in the area. This finding was determined to be an NCV of license condition 2.C(3), "Fire Protection."

AmerGen's corrective actions involved issuing a site wide communication reinforcing the requirements of not blocking open fire doors.

The finding was more than minor because it was associated with the protection against external factors (fires) attribute of the mitigating systems cornerstone and affected the objective to maintain the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process," the inspectors conducted a Phase I SDP screening and determined the finding to be of very low safety significance (Green). The finding was of very low safety significance because although the issue was assigned a degradation rating of moderate, there were no appreciable combustibles or ignition sources in the stairway adjacent to the inoperable fire door. The performance deficiency had a cross-cutting aspect in the area of problem identification and resolution because AmerGen did not identify completely and accurately, and in a timely manner that the fire barrier door was obstructed from closing (inoperable); and therefore did not meet the requirements of the Oyster Creek fire protection plan [P.1.(a)]. (Section 1R05)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

The Oyster Creek Generating Station (Oyster Creek) began the inspection period operating at full power.

On January 24, 2007, operators performed a planned downpower to 65% when maintenance personnel performed a replacement of the outboard brushes on both the exciter and generator for the 'D' and 'E' reactor recirculation pumps motor generator (MG) set. The power reduction was performed in accordance with operating procedures and AmerGen's infrequent plant activity (IPA) program. The plant returned to full power several hours later the same day.

On January 26, operations personnel noted that 'A' reactor recirculation pump '#2' seal pressure had risen from a previous value of 535 psig to 600 psig. The seal pressure returned to normal values approximately one week later and remained stable until March 6.

On March 6, operators performed an unplanned downpower in accordance with abnormal and operating procedures after identifying an increase (535 psig to 790 psig) in #2 seal pressure on the 'A' reactor recirculation pump. During the downpower, operators observed a decrease in #2 seal pressure and stopped the downpower at 75% to allow engineering personnel to evaluate seal performance. Over the next several days, plant power increased to 82% due to normal xenon burnout and due to a feedwater heater being removed from service. Prior to the 'A' reactor recirculation pump seal degrading, Oyster Creek was operating with four reactor recirculation pumps in service. The 'C' reactor recirculation pump had been previously removed from service on November 28, 2006, due to a degraded seal. On March 22, AmerGen determined that Oyster Creek could increase plant power after the #2 seal pressure slowly decreased to 600 psig. On March 22, operations personnel began to increase plant power by a half of a percent per hour, until power was increased by 4%. Power was then held for two days to allow engineering personnel to monitor 'A' reactor recirculation pump performance. Operations personnel raised power in this similar manner until they reached full power on March 30, with the "A" reactor recirculation pump #2 seal pressure remaining stable at 550 psig.

At the end of this inspection period Oyster Creek was operating at full power.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope (1 site sample)

The inspectors reviewed AmerGen's response to one site specific weather-related condition. The inspectors reviewed AmerGen's response to cold weather conditions from February 5 thru February 7. During that period of time, the PJM Interconnection, L.L.C. declared a cold weather alert. The inspectors verified that operators properly monitored important plant equipment that could have been affected by the cold weather conditions. The inspectors ensured that temperatures for equipment and areas in the plant were maintained within procedural limits, and when necessary, compensatory

actions (i.e., additional heating) were properly implemented in accordance with procedures. The inspectors performed a walkdown of areas that could have been impacted by the cold weather conditions, such as the emergency diesel generator building, intake structure, condensate storage tank (CST) level indicators, and the A/B battery rooms.

Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04Q - 3 samples, 71111.04S - 1 sample)

a. Inspection Scope (4 samples)

The inspectors performed three partial and one complete equipment alignment inspections. The partial equipment alignment inspections were completed during conditions when the equipment was of increased safety significance such as would occur when redundant equipment was unavailable during maintenance or adverse conditions; or after equipment was recently returned to service after maintenance. The inspectors performed a partial walkdown of the following systems, and when applicable, the associated electrical distribution components and control room panels, to verify the equipment was aligned to perform its intended safety functions:

- Containment spray/emergency service water (ESW) system #1 on January 16, 2007;
- Service air system on February 23, 2007; and
- Reactor building closed cooling water (RBCCW) system #1on March 12, 2007.

The inspectors performed a complete system alignment inspection on the service water system to determine whether the system was aligned and capable of providing cooling water to various systems in accordance with design basis requirements. The inspectors reviewed operating procedures, the surveillance test procedure, pipe and instrument drawings, and the applicable equipment lineup list, to determine if the equipment was aligned to perform its intended function upon actuation. The inspectors also reviewed corrective action program condition reports documenting service water system deficiencies to verify identified problems were being evaluated and corrected.

Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q)

a. Inspection Scope (9 samples)

The inspectors performed a walkdown of nine plant areas to assess their vulnerability to fire. During plant walkdowns, the inspectors observed combustible material control, fire detection and suppression equipment availability, visible fire barrier configuration, and the adequacy of compensatory measures (when applicable). The inspectors reviewed Oyster Creek's Fire Hazards Analysis Report and Individual Plant Examination for External Events (IPEEE) for risk insights and design features credited in these areas. Additionally, the inspectors reviewed corrective action program condition reports documenting fire protection deficiencies to verify that identified problems were being evaluated and corrected. The following plant areas were inspected:

- 480 volt room corridor on January 16, 2007;
- Spent fuel pool area on February 9, 2007;
- Turbine building closed cooling water (TBCCW) system heat exchangers in the turbine building basement on February 12, 2007;
- Reactor water cleanup room on February 12, 2007;
- '1-3' service air compressor area on February 14, 2007;
- Lower cable spreading room on February 20, 2007;
- RBCCW system heat exchangers in reactor building 51' elevation on February 27, 2007;
- Fire pump house on February 27, 2007; and
- Upper cable spreading room on March 14, 2007.

Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

Introduction. The inspectors identified that AmerGen did not properly implement fire protection plan requirements on January 11 and January 16, 2007. Specifically, AmerGen did not identify that a fire barrier door for the safety-related 'B' 480 volt room was obstructed, preventing the door from closing if a fire was detected in the area. This finding was of very low safety significance (Green) and determined to be a non-cited violation (NCV) of license condition 2.C(3), "Fire Protection."

Description. On January 11, 2007, the inspectors identified that fire barrier door DR-814-015 for the safety-related 'B' 480 volt room was tethered to the wall, making it unable to close as required by the site fire protection program. This door is normally held open by a magnetic mechanism that releases the door to close in the event of a fire to protect the 'B' 480 volt room. The inspectors notified operations personnel of this issue and the door was untethered and free from obstruction. This issue was documented by AmerGen in corrective action program condition report IR 578193.

On January 16, 2007, the inspectors noted for a second time that fire door DR-814-015 was tethered. The inspectors notified operations personnel and the door was immediately untethered. This issue was documented by AmerGen in corrective action program condition report IR 579363. AmerGen investigated these two issues and determined that Oyster Creek personnel had a lack of knowledge regarding the use of the tether for the fire barrier door and the procedures that control configuration of fire barrier equipment. AmerGen distributed a site-wide communication informing Oyster Creek personnel that the normal configuration for this fire door was to be untethered, and if found tethered the control room should be notified immediately.

The inspectors noted that procedure 101.2, "Oyster Creek Site Fire Protection Procedure," states that doors with automatic hold-open release mechanisms are verified once per 24 hours to be free from obstruction. In addition, the fire door contained a sign which stated, "Fire barrier door held open by electro-magnet. Contact shift supervisor prior to blocking open."

Analysis. The performance deficiency associated with this finding involved inadequate problem identification for an inoperable fire barrier door for the safety-related 'B' 480 volt room. AmerGen did not properly implement fire protection plan requirements which required that doors with automatic hold open and release mechanisms be free of obstruction. AmerGen's corrective actions involved issuing a site wide communication reinforcing the requirements of not blocking open fire doors.

The finding was more than minor because it was associated with the protection against external factors (fires) attribute of the mitigating systems cornerstone and affected the objective to maintain the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process (SDP)," the inspectors conducted a Phase I SDP screening utilizing Figure F.1 in Appendix F. Per the Phase I screening criteria, the finding was assigned the category of "Fire Confinement." The inspectors assigned a "Moderate Degradation Rating" to the inoperable fire barrier door in accordance with Attachment 2 of Appendix F, because the blocked open door only opens into an enclosed stairway which contained no appreciable combustibles or ignition sources, and the remaining doors for the fire zone provide one and a half hours of rated separation between the adjacent fire zone and the stairwell. In accordance with Appendix F, step 1.3.2, "Supplemental Screening for Fire Confinement Findings," this finding screened as very low safety significance (Green).

The performance deficiency had a cross-cutting aspect in the area of problem identification and resolution because AmerGen did not identify completely and accurately, and in a timely manner, that the fire barrier door was obstructed from closing (inoperable); and therefore did not meet the requirements of the Oyster Creek fire protection plan [P.1.(a)].

Enforcement. License Condition 2.C(3), "Fire Protection," requires that Oyster Creek implement and maintain in effect all the provisions of the approved fire protection plan. Procedure 101.2, "Oyster Creek Site Fire Protection Program," states, in part, that doors

with automatic hold open and release mechanisms be free of obstruction and verified at least once per 24 hours. Contrary to the above, AmerGen did not implement their fire protection program as required to ensure that fire barrier door DR-814-015 for the safety-related 'B' 480 volt room was free from obstruction on January 11 and January 16, 2007. However, because the finding was of very low safety significance (Green) and has been entered in their corrective action program (IR 578193 and 579363), this violation is being treated as an NCV, consistent with section IV.A of the NRC Enforcement Policy. **(NCV 05000219/2007002-01, Improper Identification of an Inoperable Fire Barrier Door)**

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope (1 Internal, 1 External sample)

The inspectors performed one internal and one external flood protection inspection activity.

The inspectors performed an internal flood protection inspection activity in the 'C' battery room located in the turbine building. The inspectors performed a walkdown of the flood barriers and floor drains in the area. The inspectors evaluated these items to determine if internal flood vulnerabilities existed and assessed the physical condition of the equipment and components in the 'C' battery room. The inspectors reviewed preventive maintenance activities associated with flood protection equipment. The inspectors also reviewed AmerGen's procedures related to flooding of the 'C' battery room.

The inspectors performed an external flood protection inspection of the 'C' and 'D' 4160 volt rooms. The external flood protection design features of the turbine building, such as doors and penetrations were inspected. The maintenance history of flood protection equipment was reviewed to determine whether the equipment was adequately maintained to protect the safety related 4160 volt breakers and related equipment during postulated external flood conditions.

Documents associated with these reviews are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope (1 sample)

The inspectors verified acceptable heat exchanger performance by reviewing the results of one heat exchanger performance test. The inspectors reviewed the containment spray system #2 heat exchanger performance test data collected on January 25, to verify that the heat exchanger met performance requirements. In addition, the

inspectors reviewed the test procedure and results to verify that appropriate test controls were incorporated correctly into the procedure, test acceptance criteria were consistent with technical specification and Updated Final Safety Analysis Report (UFSAR) requirements, and that AmerGen identified any potential heat exchanger deficiencies. Documents reviewed are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11Q)

a. Inspection Scope (1 sample)

The inspectors observed one simulator training scenario on February 28, to assess operator performance and training effectiveness. The scenario involved a loss of vital motor control center (MCC) '1A2', a recirculation pump trip caused by excessive vibrations, and fuel damage. The inspectors assessed whether the simulator adequately reflected the plant's response, operator performance met AmerGen's procedural requirements, and the simulator instructor's critique identified crew performance issues. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q)

a. Inspection Scope (2 samples)

The inspectors performed two maintenance effectiveness inspection activities. The inspectors reviewed AmerGen's performance monitoring of the service air system to determine whether AmerGen was adequately monitoring equipment performance to ensure that maintenance was effective. The inspectors also reviewed a degraded component issue (IR 591570) associated with a #2 traveling screen on February 15, to assess the effectiveness of maintenance.

The inspectors verified that the systems or components were monitored in accordance with AmerGen's maintenance rule program requirements. The inspectors compared documented maintenance preventable functional failure (MPFF) determinations and unavailable hours to evaluate the effectiveness of AmerGen's condition monitoring activities and determine whether performance goals were being met. The inspectors reviewed corrective action program condition reports, maintenance work orders, and procedures to determine if inadequate maintenance contributed to equipment performance issues. The inspectors also reviewed vendor manuals and system health

reports. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope (5 samples)

The inspectors reviewed five on-line risk management evaluations through direct observation and document reviews for the following plant configurations:

- '1-4' ESW pump and '1-1' service air compressor unavailable due to scheduled maintenance on January 18, 2007;
- Core spray system '2' and the '1-3' service air compressor unavailable due to scheduled maintenance on February 12, 2007;
- '1-3' service air compressor and the 'A/B' instrument air dryer unavailable due to scheduled maintenance, and the 'C/D' instrument air dryer unavailable due to unplanned maintenance on February 21, 2007;
- '1-3' service air compressor, 'C/D' instrument air dryer, and '1-2' TBCCW heat exchanger unavailable due to scheduled maintenance on February 26, 2007; and
- '1-3' service air compressor and the '1-2' RBCCW heat exchanger unavailable due to scheduled maintenance, and V-26-11 (torus to drywell vacuum breaker) unavailable due to being found inoperable during testing on March 12, 2007.

The inspectors reviewed the applicable risk evaluations, work schedules, and control room logs for these configurations to verify the risk was assessed correctly and reassessed for emergent conditions in accordance with AmerGen's procedures. AmerGen's actions to manage risk from maintenance and testing were reviewed during shift turnover meetings, control room tours, and plant walkdowns. The inspectors also used AmerGen's on-line risk monitoring tool (Paragon) to gain insights into the risk associated with these plant configurations. Additionally, the inspectors reviewed corrective action program condition reports documenting problems associated with risk assessments and emergent work evaluations. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (5 samples)

The inspectors reviewed five operability evaluations for degraded or non-conforming conditions associated with:

- Torus hardened vent (V-23-16) slow to close on January 17 (IR 577200);
- Low CST level on January 24 (IR 582931);
- 'B' control rod drive (CRD) pump low oil level on January 30 (IR 579151);
- #2 EDG power and control cables wetted on February 14 (IR591366); and
- #1 standby gas treatment (SBGT) flow trending down on March 6 (IR 606133).

The inspectors reviewed the technical adequacy of the operability evaluations to ensure the conclusions were technically justified. The inspectors also walked down accessible portions of equipment to corroborate the adequacy of AmerGen's operability evaluations. Additionally, the inspectors reviewed other AmerGen identified equipment deficiencies during this report period and assessed the adequacy of their operability conclusions. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (7 samples)

The inspectors observed portions or reviewed the results of seven post-maintenance tests for the following equipment:

- 'B' CRD pump on January 9, 2007 (WO A2144520);
- Containment spray system #1 discharge valve V-21-11 on January 25, 2007 (WO R2091814);
- 'A' isolation condenser steam inlet valve V-14-30 on February 28, 2007 (WO A2161007);
- '1-2' TBCCW heat exchanger on March 1, 2007 (WO A2140700);
- #1 SBGT system roughing filter F-28-8 on March 12, 2007 (WO A2156988);
- '1-2' RBCCW heat exchanger on March 15, 2007 (WO A2140269); and
- '1-3' service air compressor on March 16, 2007 (WO A2140700).

The inspectors verified that the post-maintenance tests conducted were adequate for the scope of the maintenance performed and that they ensured component functional capability. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (3 IST samples, 1 RCS Leakage sample, and 1 routine surveillance)
The inspectors observed portions of and/or reviewed the results of five surveillance tests:

- 'A' standby liquid control (SLC) pump in-service test (IST) on January 8, 2007;
- Containment spray system comprehensive IST on January 24, 2007;
- Unidentified leak rate flow integrator surveillance test on January 30, 2007;
- #2 SBGT system surveillance test on January 31, 2007; and
- Core spray system '1' pump IST on February 21, 2007.

The inspectors reviewed completed test procedures. The inspectors also verified that test data was complete, verified, and met procedural requirements to demonstrate that systems and components were capable of performing their intended function. The inspectors also reviewed corrective action program condition reports that documented deficiencies identified during these surveillance tests. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope (2 samples)

The inspectors reviewed two temporary plant modifications installed by AmerGen at Oyster Creek in 2007. The temporary plant modifications involved installation of a:

- Jumper on torus hardened vent valve V-23-15 control switch (Temporary Modification 2007-50-1); and
- Installation of a heater in 'A/B' battery room (Temporary Modification 2007-331-9).

The inspectors verified the modifications were consistent with the design and licensing bases of the affected system; and the performance capability of the system was not impacted by the temporary modification. The inspectors also verified that the temporary modification was installed and operated in accordance with temporary modification documents, work instructions, and procedures. The inspectors reviewed the modification to verify applicable technical specifications and operability requirements were met during installation. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System Testing (71114.02)

a. Inspection Scope (1 sample)

The inspectors performed an onsite review to assess the maintenance and testing of AmeGen's alert and notification system (ANS). During this inspection, the inspectors interviewed AmerGen emergency preparedness personnel responsible for implementation of the ANS testing and maintenance. The inspectors reviewed corrective action program condition reports pertaining to the ANS to assess AmerGen performance. The inspectors discussed recent upgrades on the ANS siren and communication system with AmerGen personnel. The inspectors reviewed AmerGen's original ANS design report and system procedures to ensure compliance with those commitments for system maintenance and testing. The inspection was conducted in accordance with NRC Inspection Procedure 71114.02, "Alert and Notification System Testing." Planning Standard 10 CFR 50.47(b)(5) and the related requirements of 10 CFR 50 Appendix E, "Emergency Facilities and Equipment," were used as reference criteria. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Staffing Augmentation Testing (71114.03)

a. Inspection Scope (1 sample)

The inspectors performed a review to assess Oyster Creek's emergency response organization (ERO) augmentation staffing requirements and the process for notifying the ERO. This was performed to ensure the readiness of key staff for responding to an event and to ensure timely facility activation. The inspectors reviewed records from call-in drills and one recent mustering drill. The inspectors reviewed procedures and corrective action program condition reports associated with the ERO notification system and drills. The inspectors interviewed AmerGen personnel responsible for testing the ERO augmentation process. The inspectors compared qualification requirements to the training records for a sample of ERO members. The inspectors also verified that the emergency preparedness (EP) personnel were receiving required training as specified in the Emergency Plan (E-Plan). The inspection was conducted in accordance with NRC Inspection Procedure 71114.03, "Emergency Response Organization Staffing Augmentation Testing." Planning Standard 10 CFR 50.47(b)(2) and related requirements of 10 CFR 50 Appendix E, "Emergency Facilities and Equipment," were used as reference criteria. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope (1 sample)

Prior to this inspection, the NRC had received and acknowledged changes made to the Oyster Creek's E-Plan and implementing procedures. AmerGen developed these changes in accordance with 10 CFR 50.54(q), "Conditions of Licenses," and determined that the changes did not result in a decrease in effectiveness to the E-Plan. AmerGen also determined that the Plan continued to meet the requirements of 10 CFR 50.47(b) and 10 CFR 50 Appendix E, "Emergency Facilities and Equipment." During this inspection, the inspectors conducted a sampling review of Oyster Creek's 10 CFR 50.54(q) screenings of changes made to the E-Plan that could potentially result in a decrease in effectiveness. The inspection sample was focused on changes made due to the August 2005 intake structure grassing event. This review did not constitute NRC approval of the changes and, as such, the changes remain subject to future NRC inspection. Also, the NRC reviewed Oyster Creek's emergency action level (EAL) scheme for logic and consistency, and AmerGen's transition to the Nuclear Energy Institute 99-01, Revision 4, EALs. The inspection was conducted in accordance with NRC Inspection Procedure 71114.04, "Emergency Action Level and Emergency Plan Changes." Planning standard 10 CFR 50.47(b)(2) and related requirements of 10 CFR 50 Appendix E, "Emergency Facilities and Equipment," were used as reference criteria. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05)

a. Inspection Scope (1 sample)

The inspectors reviewed quarterly drill reports, self-assessments, and audit reports to assess AmerGen's ability to evaluate EP performance and programs at Oyster Creek. The inspectors reviewed AmerGen's progress in implementing the Oyster Creek EP Improvement Plan. This inspection was conducted in accordance with NRC Inspection Procedure 71114.05, "Correction of Emergency Preparedness Weaknesses." Planning standard 10 CFR 50.47(b)(14) and the related requirements of 10 CFR 50 Appendix E, "Emergency Facilities and Equipment," were used as reference criteria. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope (2 samples)

The inspectors observed one operator requalification training activity and one EP drill.

The operator requalification training activity was included as an input into the NRC's emergency drill and exercise performance indicator. This observation was made in the simulator on February 28, 2007. The inspectors observed AmerGen's critique of the training activity to verify that weaknesses and deficiencies were adequately identified. The inspectors specifically focused on ensuring AmerGen identified operator performance problems with event classification and notification activities.

The inspectors also observed an EP drill from the control room simulator, the emergency operations facility (EOF), and the technical support center (TSC) on March 21, 2007. The inspectors evaluated the conduct of the drill, performance related to developing classifications, and protective action recommendations by AmerGen personnel. The inspectors observed AmerGen's drill critique of the TSC and EOF facilities to ensure AmerGen appropriately identified performance issues.

Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope (5 samples)

The inspectors reviewed activities and associated documentation in the area of radioactive material processing and transportation.

The inspectors as part of their inspection planning and in-office inspection reviewed the solid waste system description in the UFSAR and recent radiological effluent release reports for information on the types and amounts of radioactive waste. The inspectors also reviewed AmerGen's audit program in this area.

The inspectors walked down accessible portions of Oyster Creek's radioactive liquid and solid waste collection, processing, and storage systems to determine if systems and facilities were consistent with descriptions provided in the UFSAR; to evaluate their general material conditions; and to identify changes made to systems. The inspectors performed visual inspections of the new radwaste, old radwaste, and in-plant waste storage areas. The inspectors also reviewed visual inspection records and previous surveys of those areas. The inspectors also discussed operation of the systems with AmerGen personnel. The inspectors reviewed the following items:

- status of non-operational or abandoned radioactive waste process equipment and the adequacy of administrative and physical controls for those systems;
- changes made to radioactive waste processing systems and potential radiological impact including conduct of safety evaluations of the changes, as necessary;
- current processes for transferring radioactive waste resin and sludge to shipping containers; and the mixing and sampling of the waste;
- radioactive waste and material storage and handling practices;
- sources, processing, and handling of radioactive waste at Oyster Creek; and
- the general condition of facilities and equipment.

During the walkdowns, the inspectors evaluated AmerGen's performance against criteria contained in UFSAR, 10 CFR Part 20 ("Standards for Protection Against Radiation), 10 CFR 61 ("Licensing Requirements for Land Disposal of Radioactive Waste"), Oyster Creek Process Control Program (PCP), and applicable AmerGen procedures.

The inspectors reviewed activities and documentation related to waste characterization and classification. Specifically,

- radio-chemical sample analysis results for radioactive waste streams;
- development of scaling factors for difficult to detect and measure radionuclides;
- methods and practices to detect changes in waste streams;
- classification and characterization of waste relative to 10 CFR 61.55 ("Waste Classification) and 10 CFR 61.56 ("Waste Characteristics");
- implementation of applicable NRC Branch Technical Positions (BTPs) on waste classification, concentration averaging, waste stream determination, and sampling frequency;
- current waste streams and their processing relative to descriptions contained in the UFSAR and Oyster Creek PCP;
- current processes for transferring radioactive waste resin and sludge discharges into shipping/disposal containers to determine adequacy of sampling; and
- revisions of the PCP and the UFSAR to reflect changes (as applicable).

The inspectors evaluated AmerGen's performance against criteria contained in UFSAR, 10 CFR Part 20 ("Standards for Protection Against Radiation), 10 CFR 61 ("Licensing Requirements for Land Disposal of Radioactive Waste"), 10 CFR 71 ("Packaging and

Transportation of Radioactive Material), Oyster Creek PCP, AmerGen procedures, and applicable NRC Branch Technical Positions.

The inspectors reviewed activities and documentation related to waste shipment preparation. The inspectors reviewed the training and qualification program for personnel handling, packaging, and shipping radioactive materials. The inspectors selected two completed radioactive material shipments (OC-4005-06 and OC-3001-06) and confirmed that personnel had received proper training. The inspectors also reviewed the station's training program and verified the establishment and implementation of a training program based on job task reviews. The inspectors evaluated AmerGen's performance against criteria contained in NRC Bulletin 79-19 ("Packaging of Low Level Radioactive Waste for Transport and Burial") and 49 CFR 172 Subpart H ("Training").

The inspectors reviewed the shipment records and documentation associated with six non-excepted shipments of radioactive material made since the previous NRC inspection (shipment numbers: OC-0238-06, OC-0246-06, OC-1002-06, OC-3001-06, OC-1005-06, OC-4005-06). The inspectors reviewed the following aspects associated with the above referenced shipments:

- implementation of applicable shipping requirements including completion of waste manifests;
- implementation of the specifications in applicable Certificates of Compliance, for the approved shipping casks including limits on package contents;
- classification and characterization of waste relative to 10 CFR 61.55 ("Waste Classification) and 10 CFR 61.56 ("Waste Characteristics");
- implementation of recent NRC and Department of Transportation shipping requirement rule changes;
- implementation of 10 CFR 20 Appendix G ("Control of Exposure From External Sources in Restricted Areas");
- implementation of specific radioactive material shipping requirements;
- packaging of shipments;
- labeling of shipping containers;
- placarding of transport vehicles;
- conduct of vehicle checks;
- provision of driver emergency instructions;
- completion of shipping paper/disposal manifest;
- evaluation of package performance standards (as appropriate);
- conformance with AmerGen procedures for cask loading, closure and use requirements including consistency with cask vendor approved procedures; and use of latest revision documents.

The inspectors evaluated AmerGen's performance against criteria contained in 10 CFR 61 ("Licensing Requirements for Land Disposal of Radioactive Waste"), 10 CFR 71 ("Packaging and Transportation of Radioactive Material); applicable Department of Transportation requirements (as contained in 49 CFR 170-189); AmerGen procedures; applicable disposal facility licenses; and applicable Certificates

of Compliance or vendor procedures for various shipping casks.

The inspectors reviewed Oyster Creek's "2005 Annual Radioactive Effluent Release Report," to gain an understanding of the relative types and quantities of radioactive waste shipped offsite and to assess changes to the Oyster Creek PCP.

The inspectors reviewed audits and assessments associated with radioactive waste handling, processing, storage, and shipping programs including the Oyster Creek PCP. The inspector also reviewed corrective action program condition reports since the last inspection which involved potential radioactive material processing or transportation issues.

Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (71152)

.1 Review of Items Entered Into the Corrective Action Program

The inspectors performed a daily screening of items entered into AmerGen's corrective action program to identify repetitive equipment failures or specific human performance issues for follow-up. This was accomplished by reviewing hard copies of each condition report, attending daily screening meetings, or accessing AmerGen's computerized database.

.2 Annual Sample Review (1 sample)

a. Inspection Scope

The inspectors performed one annual sample review on the following issue:

Operator Procedure Use and Adherence. In June 2006, the NRC completed a supplemental inspection, pursuant to inspection procedure (IP) 95002 (NRC Inspection Report 05000219/2006010, dated July 25, 2006). The IP 95002 inspection examined corrective actions associated with two White findings in the EP cornerstone. The supplemental inspection concluded that AmerGen's corrective actions for one finding regarding operator procedure use and adherence, were not sufficient to warrant its closure, and the NRC determined that this White finding would remain open until another follow-up inspection per IP 95001 could be performed.

To address the NRC's findings, AmerGen had initiated two corrective action program condition reports (IRs) and had performed three Focus Area Self-Assessments (FASAs) related to operator procedure use. AmerGen's March 2006 FASA determined the operator-related causes for the NRC findings were too narrowly focused and recommended that the operations department perform an assessment in the area of procedure use and adherence. After the NRC 95002 inspection, AmerGen opened corrective action program condition report IR 499162, to broaden the scope of the corrective actions to improve operator performance in this area. A December 2006 FASA concluded that operations and site management had not applied the appropriate rigor in resolving the known procedure use issues and that consistent procedure use behaviors had not been observed. That FASA recommended a number of improvements, most involving increased management oversight and operating crew accountability in the area of procedure use and adherence. The March 2007 FASA concluded that Oyster Creek had fully evaluated the issue and that corrective actions had been appropriately identified, assigned, tracked, and completed; the corrective actions were verified to be effective in improving the use of procedures throughout the operations department.

Inspectors conducted an inspection to assess AmerGen's evaluations related to the scope of operator procedure use and adherence problems, and the process AmerGen had used to determine their readiness for the 95001 inspection. The inspectors did not assess adequacy or implementation of any related corrective actions; that assessment will be performed as part of that 95001 inspection. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings and Observations

No findings of significance were identified.

The inspectors concluded that AmerGen's initial effort to determine the "true" root cause of the operator performance issues during the August 2005 grassing event was insufficient. Subsequent FASAs and root cause efforts eventually properly identified the scope and depth of problems with operator procedure use and adherence. It was not until the December 2006 FASA that the true depth of the issue was revealed and an appropriate plant-wide management approach was developed.

The inspectors determined that the additional corrective actions developed by the December 2006 FASA provided the opportunity for Oyster Creek to correct the underlying causes of procedure use behaviors at Oyster Creek. The NRC will assess the implementation and effectiveness of those corrective actions and review the March 2007 FASA and its corrective actions in a future IP 95001 inspection.

4OA3 Event Followup (71153) (4 samples)

.1 'D' and 'E' Recirculation Pump MG Set Brush Replacement

a. Inspection Scope

On January 24, 2007, operators performed a power reduction to 65% to allow maintenance personnel to perform a replacement of the outboard brushes on both the exciter and generator sides of the 'D' and 'E' reactor recirculation pumps MG set. The plant returned to full power several hours later the same day.

The power reduction was performed in accordance with operating procedures and AmerGen's IPA process. AmerGen performed the power reduction prior to the brush replacement to minimize the environmental impacts associated with a sudden power reduction if a reactor recirculation pump MG set tripped during the maintenance activity.

The IPA process was utilized to control the maintenance activity because it created a potential reactivity and environmental concern. The inspectors observed the IPA from the control room and in the reactor recirculation pump MG set room to assess operator and maintenance personnel performance.

Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

.2 Low Intake Structure Water Level

a. Inspection Scope

Operators experienced reduced intake structure water levels during low tide and strong westerly wind conditions from February 5 through February 7, 2007. Operators responded to this condition by implementing ABN-32, "Abnormal Intake Level."

The inspectors observed control room activities and reviewed control room logs to assess operator performance to determine whether operator response was consistent with applicable procedures and training. The inspectors also reviewed intake structure water level data to ensure applicable emergency plan entry conditions were considered. The inspectors performed walkdowns of the intake structure to ensure equipment was operating as designed and was not being impacted by the low intake structure water level.

Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

b. Findings

No findings of significance were identified.

.3 'A' Reactor Recirculation Pump #1 Seal Degraded

a. Inspection Scope

On January 26, 2007, operations personnel noted that 'A' reactor recirculation pump #2 seal pressure had risen from a previous value of 535 psig to 600 psig. The seal pressure returned to normal values approximately one week later and remained stable until March 6.

On March 6, operators performed an unplanned downpower in accordance with abnormal and operating procedures after identifying an increase (535 psig to 790 psig) in #2 seal pressure on the 'A' reactor recirculation pump. Oyster Creek ABN-2, "Recirculation System Failure," states that if the #2 seal pressure rises to 800 psig, the pump should be removed from service because the #1 seal is considered degraded. Based on evaluations by engineering and operations personnel it was determined that #2 seal pressure would reach 800 psig and therefore the pump should be removed from service. In accordance with ABN-2 and operating procedures, operators commenced a downpower to remove the 'A' reactor recirculation pump from service. Prior to the 'A' reactor recirculation pump seal degrading, Oyster Creek was operating with four reactor recirculation pumps in service. The 'C' reactor recirculation pump was removed from service due to a degraded seal on November 28, 2006. Please refer to NRC inspection report 05000219/2006005, dated January 18, 2007 for additional details concerning the 'C' reactor recirculation pump.

During the downpower, operators observed a decrease in #2 seal pressure and stopped the downpower at 75% to allow engineering personnel to evaluate seal performance. Over the next several days plant power increased to 82% due to normal xenon "burnout" and due to a feedwater heater being removed from service. On March 22, AmerGen determined through their operational and technical decision making process that Oyster Creek could increase plant power after the #2 seal pressure slowly decreased to 600 psig. On March 22, operations personnel began to increase plant power by a half of a percent per hour, until power was increased by 4%. Power was then held for two days to allow engineering personnel to monitor the 'A' reactor recirculation pump performance. Operations personnel raised power in this similar manner until they reached full power on March 30, with the "A" reactor recirculation pump #2 seal pressure remaining stable at 550 psig.

The inspectors observed the response of AmerGen personnel, including operator action in the control room on March 6. The inspectors monitored reactor recirculation pump seal performance during the downpower. The inspectors verified that operators

responded in accordance with procedures and equipment responded as intended. The inspectors also monitored portions of the power ascension from the control room on March 22 through March 30. The inspectors reviewed 'A' reactor recirculation pump parameters (seal pressure, temperature, and leakage values) and observed operations personnel.

The pressure increase in the #2 seal of the 'A' reactor recirculation pump is described and evaluated in corrective action program condition report IR 599736.

b. Findings

No findings of significance were identified.

.4 (Closed) License Event Report (LER) 05000219/2006-004-00, Operation Exceeding Maximum Power Level

This LER described the performance of an inadvertent lift of an electromatic relief valve (EMRV) during power operation. On December 8, 2006, Oyster Creek was operating at full power when the 'D' EMRV inadvertently opened for about 57 seconds and reclosed without operator action. EMRV actuation was confirmed by the valves' acoustic monitor, EMRV solenoid actuated indication in the control room, decrease in reactor pressure and various control room alarms. An unplanned power increase to 102.46% of rated thermal power occurred during the closing of the EMRV for approximately nine seconds. The cause of the EMRV lift was due to a malfunction of the 'D' EMRV pressure switch. Additional information on this issue is contained in NRC inspection report 05000219/2006005. The inspectors reviewed this LER and identified one finding that is discussed in Section 4OA5.5. This LER is closed.

.5 (Closed) URI 05000219/2006005-04, Inadvertent Actuation of 'D' EMRV

a. Inspection Scope

The inspectors completed their review of AmerGen's evaluation (IR 567038) associated with the inadvertent actuation and opening of the 'D' EMRV at full power on December 8, 2006. This issue was identified as URI 05000219/2006005-04 in NRC Inspection Report 05000219/2006005, dated January 18, 2007. The inspectors reviewed AmerGen's evaluation, the vendor manual for the Barksdale pressure switches, process plant computer data for various reactor parameters during the event, and statements from the operators in the control room during the event.

b. Findings

This URI is closed and the following performance deficiency was identified.

Introduction. A self-revealing finding was identified when AmerGen did not properly identify an adverse trend on the 'D' EMRV pressure switch between May 2006 and December 2006, which resulted in an opening of the 'D' EMRV below its actuation setpoint at full power. This finding was of very low safety significance (Green) and determined to be a NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action."

Description. On December 8, 2006, Oyster Creek was operating at full power when the 'D' EMRV opened for approximately one minute and reclosed without operator action. The actuation of the 'D' EMRV was confirmed by acoustic monitors, EMRV solenoid actuated light lit, a decrease in reactor power, and various alarms in the control room. Operators in the control room implemented ABN-40, "Stuck Open EMRV," and annunciator response procedure (RAP) B-3-g, "EMRV Open." Reactor power decreased initially, then increased to 102.46% during the closing of the EMRV, as expected. Due to this event, the instantaneous power exceeded the technical specification allowable limit of 102%, and LER 2006-004-00, "Operation exceeding maximum power level," was submitted on February 2, 2007. Maintenance personnel replaced the 'D' EMRV pressure switch on December 10, 2006. Additional information on the LER is contained in section 4OA3 of this report.

AmerGen's evaluation (IR 567038) into the cause of this event identified that the pressure switch failure was attributed to age and degradation. The failure was not prevented due to inadequate performance monitoring of the EMRV pressure switches. The evaluation also identified that engineering had developed a plan to replace all the EMRV pressure switches in 2002, however it had not been implemented at the time of the event. Additionally, in August 2005, maintenance personnel determined that the 'D' EMRV pressure switch required excessive adjustment during testing and recommended replacement because of the erratic and random drifting observed during testing.

In May and June 2006, the pressure switch was tested by maintenance personnel and the as-found condition was greater than that allowed by the surveillance test procedure. At the time of this surveillance test, engineering personnel did not have an established trending method to alert them to a degraded condition or that the pressure switch needed to be replaced. AmerGen reviewed performance of the other four EMRV pressure switches and did not identify degradation that would require immediate actions to replace.

Analysis. The performance deficiency associated with this self-revealing equipment problem involved not properly identifying an adverse trend with the 'D' EMRV pressure switch. AmerGen's corrective actions for this issue involved replacing the pressure switch, developing an improved trending method for the EMRV pressure switches, and evaluating the need to utilize a different style pressure switch or changing the surveillance procedure.

The finding was more then minor because it was associated with the equipment performance attribute of the initiating events cornerstone and affected the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors conducted a Phase 1 SDP screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined the finding was of very low safety significance (Green). The finding was of very low safety significance because no initiating event or transient actually occurred and the finding did not contribute to the likelihood that mitigation equipment or functions would be unavailable. The regional senior reactor analyst (SRA) performed a confirmatory analysis to assess the risk of the EMRV failing to reclose using the site-specific Oyster Creek Standardized Plant Analysis Risk (SPAR) Model, Revision 3.31. Using the probability of a safety relief valve failing to close post-actuation to adjust the frequency of the inadvertent opening of a relief valve initiating event (IE-IORV), the SRA determined that the event would result in a very low increase in core damage (delta CDF).

The performance deficiency had a cross-cutting aspect in the area of problem identification and resolution because AmerGen did not identify an adverse trend and assess information from the corrective action program and surveillance tests to identify a problem with the 'D' EMRV pressure switch [P.1.(b)].

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action", requires that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance are promptly identified and corrected. Contrary to the above, AmerGen did not properly identify and correct a condition adverse to quality for a degraded condition with the 'D' EMRV pressure switch between May 2006 and December 2006. However, because the finding was of very low safety significance (Green) and has been entered in to the corrective action program in condition report IR 567038, this violation is being treated as an NCV, consistent with section IV.A of the NRC Enforcement Policy. **(NCV 05000219/2007002-02, 'D' EMRV Adverse Trend Not Properly Identified)**

4OA5 Other Activities

.1 (Closed) Unresolved Item (URI) 05000219/2004009-01, Inconsistencies in Table B-1 Staffing

a. Inspection Scope

This URI was opened because the Oyster Creek E-Plan staffing requirements did not appear to meet NUREG-0654, Table B-1, "Emergency Response Organization," minimum staffing criteria. Oyster Creek's E-Plan had committed to five on-shift radiation protection (RP) technicians/personnel and two on-shift repair and corrective action personnel, with no reference to the dedicated number of the required nine (9) 60-minute responders delineated in NUREG-0654 Table B-1. This constituted a potential

inadequacy in meeting Planning Standard 10 CFR 50.47(b)(2) concerning augmentation staff to respond to emergencies. As part of the EP program inspection documented in Section 1EP3 of this report, the inspectors reviewed Oyster Creek's E-Plan and ERO activation procedures. The inspectors determined that the Oyster Creek EP implementing procedures were enhanced to include RP personnel in the activation at an Alert or higher event: for an event where ERO response to on-site facilities is required, the Oyster Creek procedure scenario 901 requires an additional six RP personnel, above the on-shift manning, to respond to the site. The inspectors also reviewed the past two-years' quarterly drill reports to assure that ERO augmentation with respect to RP personnel response had been satisfactory. Based on the results of this inspection, the inspectors concluded that the Oyster Creek E-Plan ERO augmentation satisfied the NUREG-0654 criteria for RP personnel.

b. Findings

No findings of significance were identified. This URI is closed.

.2 (Closed) URI 05000219/2004009-03, FEMA Approval of Siren Testing Change

a. Inspection Scope

This URI was opened because in June 2003, AmerGen increased the frequency of their ANS testing. Specifically, growl tests went from quarterly to monthly; and silent tests went from biweekly to weekly. The changes were made to align the testing frequency with other AmerGen and Exelon plants (Peach Bottom, Limerick, and Three Mile Island). The inspectors reviewed performance indicator data and noted the Oyster Creek ANS was operating within the 97% to 98% green response band and no negative operability trends were noted prompting the change. However, this change in testing methodology was not submitted to the Federal Emergency Management Agency (FEMA) for approval prior to implementation. The inspectors reviewed the "Oyster Creek Upgraded Public Alert and Notification System Report" which was submitted to FEMA in March 2005, and the "FEMA Consolidated Technical Review of Exelon East Updated Reports," dated August 15, 2005. FEMA approved the new testing frequency for the Oyster Creek ANS, and the inspectors concluded that the increased frequency of the ANS testing provided for a better assessment of ANS reliability.

b. Findings

No findings of significance were identified. This URI is closed.

.3 (Discussed) URI 05000219/2006005-05, Identification of Cesium-137 on AmerGen's Owner Controlled Property

a. Inspection Scope

On December 6, 2006, AmerGen received analytical results on environmental samples (soil and tree leaf) which were collected in August and September 2006 on portions of

the owner controlled property that indicated detectable levels of Cesium (Cs)-137. The gamma spectroscopy analysis did not identify other radionuclides in the samples that would indicate a plant related origin. The samples were supplemental samples taken in support of the Radiological Environmental Monitoring Program (REMP). The initial analyses indicated Cs-137 levels above that normally seen due to fallout from previous weapons tests. AmerGen initiated an immediate review of the data and performed additional sampling of the area. On December 7, 2006, the inspectors performed a walk-down of the area which exhibited elevated activity, and performed independent radiation level measurements. On December 13, 2006, the inspectors collected split samples with personnel from AmerGen and the State of New Jersey's Bureau of Nuclear Engineering. The NRC's initial sample results confirmed AmerGen's results and their statistical adequacy. AmerGen's initial review concluded that there was no significant credible public or occupational doses associated with the identification of detectable levels of Cs-137 within the owner controlled area, projected public doses were below 10 CFR 50 Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operations to Meet the Criteria 'As Low As Reasonably Achievable (ALARA)' for Radioactive Materials in Light water-Cooled Nuclear Power Reactor Effluents" and Offsite Dose Calculation Manual (ODCM) ALARA dose guidelines assuming continuous occupancy. AmerGen also determined that no immediate reporting requirements were reached. This issue was initially reviewed by the inspectors and discussed in NRC Inspection Report 05000219/2006005, dated January 18, 2007.

AmerGen implemented its investigation plan and collected additional samples during the first quarter of 2007. The investigation plan included evaluation of sample results, review of historical effluent releases, review of historical environmental sampling and analysis results, release deposition studies, consideration and evaluation of all possible sources, and a literature review. AmerGen also obtained technical support from contractors to aid in this investigation. Based on the information collected, AmerGen performed an evaluation to determine the probable causes for the presence of Cs-137 on the owner controlled property.

The inspectors reviewed AmerGen's evaluation on the presence of elevated Cs-137 activity and the potential causes. The inspectors also reviewed the results of samples collected by AmerGen and compared them to the samples taken by the NRC.

b. Findings

No findings of significance were identified. URI 05000219/2006005-05 will remain open pending further review by the inspectors.

At the conclusion of this inspection period, the inspectors were evaluating the sample results including statistical analyses and minimum detection capabilities; radionuclides identified; and inter-comparison of elevated sample analysis results with up-wind control station sample analysis results.

4OA6 Meetings, Including Exit

On April 5, 2007, the inspectors presented their overall findings to members of AmerGen's management led by Mr. T. Rausch, Site Vice President, and other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information reviewed during the inspection period was returned to AmerGen.

4OA7 Licensee-Identified Violations

None

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel
K. Barnes, Senior Regulatory Assurance Engineer
M. Button, Director Work Management
J. Dostal, Shift Operations, Superintendent
M. Godknecht, Programs Engineer
S. Hutchins, Senior Manager Design Engineering
J. Karkoska, Exelon Manager Emergency Preparedness
D. Kemper, Oyster Creek Operations Support Manager
T. Keenan, Manager Security
D. Kettering, Director Engineering
J. Kandasamy, Manager, Regulatory Assurance
J. Magee, Director, Maintenance
J. Makar, Senior Manager System Engineering
D. Peiffer, Manager Nuclear Oversight
K. Poletti, Oyster Creek Manager Emergency Preparedness
J. Randich, Plant Manager
J. Renda, Manager Radiation Protection
T. Rausch, Site Vice President
T. Schuster, Manager Environmental/Chemistry Manager
S. Schwartz, System Engineer
T. Sexsmith, Manager Corrective Action Program
J. Vaccaro, Director Training
G. Waldrep, Oyster Creek Operations Services Manager
R. Zacholski, Director Operations

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened/Closed		
05000219/2007002-01	NCV	Improper Identification of an Inoperable Fire Barrier Door (Section 1R05)
05000219/2007002-02	NCV	'D' EMRV Adverse Trend Not Properly Identified (Section 4OA3)
05000219/2006-004-00	LER	Operation Exceeding Maximum Power Level (Section 4OA3)

Closed		
05000219/2004009-01	URI	Inconsistencies in Table B-1 Staffing (Section 4OA5)
05000219/2004009-03	URI	FEMA Approval of Siren Testing Change (Section 4OA5)
05000219/2006005-04	URI	Inadvertent Actuation of 'D' EMRV (Section 4OA3)
Discussed		
05000219/2006005-05	URI	Identification of Cesium-137 on AmerGen's Owner Controlled Property (Section 4OA5)

LIST OF DOCUMENTS REVIEWED

In addition to the documents identified in the body of this report, the inspectors reviewed the following documents and records:

Section 1R01: Adverse Weather Protection

Procedures
OP-OC-108-109-1001, "Preparation for Severe Weather T&RM for Oyster Creek"
OP-AA-108-111,1001, "Severe Weather and Natural Disaster Guidelines"
OP-OC-108-109-1002, "Cold Weather Freeze Inspections"

Condition Report (IR)
58152

Section 1R04: Equipment Alignment

Procedures
607.4.0117, "Containment Spray and Emergency Service Water Pump System 2 Operability and Quarterly Inservice Test"
641.4.001, "Service Water Pump In-Service Test"

Drawings
GE 237E901, "Containment Spray Elementary Diagram"
BR 2013, "Service Air System"
BR 2013, "Instrument (Control) Air System"
BR 2005, "Reactor and Turbine Building Service Water System"
BR 2006, "Reactor Building Closed Cooling Water System"

Condition Reports (IR)
582996, 552184, 543045, 481402, 590584, 588805, 556706, 560917, 481783, 536491, 536916, 534709, 468726, 452065, 435817, 589174, 546550, 535221, 471574, 468426

Work Orders (AR)
A2152091, R2093139, R2096446, A2157309, A2151444, A2141279, A2140269, R2085232, A2154802, A2151094, R2079376, A2135515, A2161058

Other Documents
OP-OC-100-1003, "Redundant System Operability Verification Checksheet" dated 1/17/07 for Containment Spray system '1' and Emergency Service Water system '1'
OE23278, "Lack of Service Water Pump Preventative Maintenance Results in Coupling Failure"
Maintenance Rule Performance and Functional Failure definitions for system 531, "Service Water"
Technical Specification 3.4, "Emergency Cooling"
Clearance order # 07500218

Section 1R05: Fire Protection

Procedures
ABN-29, "Plant Fires"
101.2, "Oyster Creek Site Fire Protection Program"
CC-AA-211, "Fire Protection Program"
333, "Plant Fire Protection System"
120.7, "Appendix R Emergency Preparedness"

Drawings
GU 3D-151-02-001, "General Arrangement- Turbine Building Plan Floor Elevation 0' 0" & 3' 6""
GU 3E-153-02-003, "General Arrangement- Reactor Building Plan Floor Elevation 51" 3""

Condition Reports (IR)
579363, 591366, 591053, 604433

Other Documents
OC Fire Risk Analysis-Compartment Fire Scenario Development Report (R0467050033.04)
Oyster Creek Nuclear Generating Station Fire Hazard Analysis Report (990-1746)
Oyster Creek Fire Plans (OP-OC-210-008)
LS-AA-125-1003, "Quick Human Performance Investigation for tether found on Fire Door DR-814-15"

Section 1R06: Flood Protection Measures

Drawings
JC 147434, "Sumps and Waste Collection System"
3D-151-07-001, "General Arrangement Floor and Equipment Drains"

Condition Reports (IR)
585375, 581724, 593168, 590993

Work Order (AR)
A2159969

Other Documents

White paper for internal Flood analysis of 'C' battery room
TDR 77, "Evaluation of Possible Internal Flooding of OC Nuclear Generating Station Power Plant Buildings"
Oyster Creek PRA Section 10 Internal Flooding Analysis
FPE-OC-000814-004, "1C & 1D 4160 Volt Switchgear Repair Engineering Change Request"
NUREG-0822, "Integrated Plant Safety Evaluation"

Section 1R07: Heat Sink Performance

Procedures

607.4.004, "Containment Spray and Emergency Service Water System I Pump Operability and Comprehensive/Preservice/Post Maintenance Inservice Test"

Drawings

GE 148F740, "Containment Spray System Flow Diagram"
BR 2005, "Emergency Service Water System Flow Diagram"

Condition Report (IR)

588200

Work Orders (AR)

R2082873, R2063089

Other Documents

Containment Spray System 2 Heat Exchanger Performance Test Data 2004, 2005, 2006 and 2007.
C-1302-241-E120-085, "Containment Spray System Heat Exchanger Performance Evaluation"
Engineering Evaluation 0004-98, "ESW/CS Heat Exchanger Cleanliness testing Data Acquisition System Directions"
EPRI NP-7552, "Heat Exchanger Performance Monitoring Guidelines"
EPRI TR-107397, "Service Water Heat Exchanger Testing Guidelines"

Section 1R11: Licensed Operator Requalification Program

Procedures

312.1, "Secondary Containment Control"
ABN-1, "Reactor Scram"
ABN-2, "Recirculation System Failures"
ABN-17, "Feedwater System Abnormal Condition"
ABN-50, "Loss of VMCC 1A2"
RAP-RB1A, "Drywell Equipment Drain Tank High Level"
RAP-10F4K, "High range Rad Monitor Abnormal"
EMG 3200.01A, "RPV Control - No ATWS"
EMG 3200.01B, "RPV Control - With ATWS"
EMG 3200.02, "Primary Containment Control"
EMG 3200.04A, "Emergency Depressurization - No ATWS"
EP-OC-1010, "Radiological Emergency Plan for Oyster Creek"
Support Procedure- 4, "Operation of Core Spray System"
Support Procedure-12, "Alternate Pressure Control Systems EMRV's"

Support Procedure-17, “Termination and Prevention of Injection”
Support Procedure-19, “Feedwater/Condensate and CRD Operation”
Support Procedure-27, “Maximizing Drywell Cooling”

Other Documents
EOP User’s Guide (2000-BAS-3200.02)

Section 1R12: Maintenance Implementation
Procedures
ER-AA-310, “Implementation of Maintenance Rule”
ER-AA-310-1005, “Maintenance Rule - Disposition Between (a)(1) and (a)(2)”

Condition Reports (IR)
591337, 590598, 445153, 592331, 599483, 509761, 530245, 564663, 530425, 591570 589948, 496329, 599927

Other Documents
NEI 93-01, “Industry Guideline for monitoring the Effectiveness of Maintenance at Nuclear Power Plants”

Section 1R13: Maintenance Risk Assessments and Emergent Work Control
Procedures
ABN-35, “Loss of Instrument Air”
ER-AA-600-1042, “On-line Risk Management”
ER-AA-600-1021, “Risk Management Application Methodologies”
ER-AA-600-1014, “Risk Management Configuration Control”
ER-AA-600-1011, “Risk Management Program”
WC-OC-101-1001, “On-line Risk Management and Assessment”

Work Orders (AR)
A2095847, A2148241, R2090595, R2056676

Other Documents
Technical Specification 3.5, “Containment”
Technical Specification 3.4, “Emergency Cooling”

Section 1R15: Operability Evaluations
Procedures
OP-AA-108-115, “Operability Determination”
Support Procedure 35, “Venting the Torus Via the Torus Hardened Vent”
678.4.001, “Primary Containment Isolation Valve Operability and IST”
316, “Condensate System”
RAP-K6c, “Storage Tank Level HI-LO”
ABN-29, “Plant Fires”
OP-AA-108-111, “Adverse Condition Monitoring and Contingency Planning”

Drawings
GE 237E726, “Drywell and Suppression System”

Condition Reports (IR)
O2001-1718, O2005-0815, 577200, 579151, 584378, 376481, 342481, 583391, 582931, 591366, 606133

Work Orders (AR)
A2159223, A2159095, A2159460, A2146956

Other Documents
NRC Inspection Manual - Part 9900 Technical Guidance, “Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety”
OC-2007-OE-0001, “Operability Evaluation of Torus Hardened Vent”
OC-2007-OE-0002, “Operability Evaluation ‘B’ Control Rod Drive Pump Motor”
OC-2007-OE-0003, “Operability Evaluation Diesel Generator #2 Power and Control Cable”
Oyster Creek Operation’s Standing Order #129, “Hardened Vent System Compensatory Restoration Plan”
Oyster Creek Intake NLO Turnover Sheet, dated January 25, 2007
Oyster Creek Operations Narrative Logs, dated January 25, 2007
Technical Specification 3.4, ”Containment”
ECR OC 04-00258-001, “Revising the CST Low Level Alarm Setpoint From 25' to 28'”
NRC Generic Letter 2007-01, “Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients”
NRC Information Notice 2002-12, “Submerged Safety-Related Electrical Cables”
Licensee Event Report (LER) 050000219/01-01, “Reactor Shutdown Completion Required by Technical Specifications”
Licensee Event Report (LER) 05000219/96-09, “Actuation of Engineered Safety Features Caused by Loss of Power Due to Cable Fault”
Condition Assessment of Cable Circuits at Oyster Creek - July 17 through August 4, 2004
Condition Assessment of Cable Circuits at Oyster Creek - June 19 through July 22, 2006
Operability Evaluation OC-2007-OE-0004, “Standby Gas Treatment System #1"
Adverse Condition Monitoring Plan - Reactor Building Temperature Impact on SBGT #1 Flow, dated August 18, 2006 (revised March 26, 2007)

Section 1R19: Post-Maintenance Testing

Procedures
MA-AA-716-012, “Post Maintenance Testing
OP-MA-109-101, “Clearance and Tagging”
309.2, “Reactor building closed cooling water system”
617.4.001, “CRD Pump Operability Test”
607.4.004, “Containment Spray and Emergency Service Water System 1 Pump Operability and Comprehensive/Pre-Service/Post Maintenance Inservice Test”
609.4.001, “Isolation Condenser Valve Operability and In Service test”
651.4.001, “Standby Gas Treatment System Test”

Drawings
BR 2006, “Reactor building closed cooling water system”

Condition Reports (IR)
576715, 599694, 599744

Work Orders (AR)
R2096570, R2091814, A2157357, A2158812, A2144520, A2161007, A2140269, R2085232, A2095487, A2148241, R2090595, R2056676

Other Documents
PPC data for CRD charging Water pressure on 1/9/07
Operator Logs on 1/9/07
Clearance # 07500218

Section 1R22: Surveillance Testing
Procedures
SA-AA-129, “Electrical Safety”
MA-AA-1000, “Conduct of Maintenance”
612.4.001, “Standby Liquid Control Pump and Valve Operability and In-Service Test”
676.3.003, “DW Sump Flow Integrator-Channel Calibration”
607.4.004, “Containment Spray and Emergency Service Water System I Pump Operability and Comprehensive IST”
651.3.003, “SGTS Charcoal Filter In-Place Leak Test”
651.1.006, “SGTS Charcoal Filter Radioactive Methyl Iodine Removal Efficiency Test”
610.4.003, “Core Spray Valve Operability & IST”
610.4.013, “Core Spray System 2 Comprehensive/Preservice Pump In-Service Test”
Drawings
GE 148F723, “Liquid Poison System”
GE 148F740, “Containment Spray System”

Condition Reports (IR)
578188, 554342, 593366, 591150, 591150

Work Orders (AR)
R2092042, A2150441, R2065483, A2109923, R2077554, A2128950, A2137345, A2061184

Other Documents
Info Notice 97-78, “Crediting of Operating Actions in place of automatic actions and modifications of operator actions, including response times”
Part 9900 Guidance, “Operable/Operability: Ensuring the Functional Capability of a system or component”
Technical Specification 3.4, “Emergency Cooling”
‘B’ Core Spray Booster Pump Performance Trend Data June 2001 - December 2006

Section 1R23: Temporary Plant Modifications

Procedures

678.4.001, “Primary Containment Isolation Valve Operability and IST”
Support Procedure 35, “Venting the Torus Via the Hardened Vent”
331, “Office Building Heating, Ventilation and Air Conditioning System”
119.5, “Loose Equipment Storage”
610.4.003, “Core Spray Valve Operability and In-Service Test”

Condition Reports (IR)

577200

Work Orders (AR)

A2159223, A2106948, A2061184, A2158965

Other Documents

Oyster Creek Operation’s Standing Order #129, “Hardened Vent System Compensatory Restoration Plan”
OC-07-0050-001, “Add in-line connector for V-23-15 circuitry in 12XR panel”
OC-2007-S-0013, “50.59 review for V-23-15 temporary modification”
Temporary Modification 2007-331-9, “A/B Battery Room”

Section 1EP2: Alert and Notification System Evaluation

Procedures

EP-MA-121-1002, “Exelon East Alert Notification System Program”
EP-MA-121-1004, “Exelon East ANS Corrective Maintenance”
EP-MA-121-1005, “Exelon East ANS Preventative Maintenance Program”
EP-MA-121-1006, “Exelon East ANS Siren Monitoring, Troubleshooting and Testing”

Other Documents

FEMA Technical Review of Exelon East Updated Design Reports for TMI, Peach Bottom, Limerick, and Oyster Creek, dated August 15, 2005
Preventative Maintenance Field Work Instructions for ANS Control Points Repeaters, and Sirens
Corrective Maintenance Field Work Instructions for ANS Control Points Repeaters, and Sirens
Oyster Creek Upgraded ANS Design Report, dated March 2005

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Procedures

EP-OC-1010, “Radiological Emergency Plan for Oyster Creek”
EP-OC-112-100, “Control Room Operations
EP-OC-113, “Personnel Protective Actions”
EP-OC-122, “Drills and Exercises”
EP-OC-122-1001, “Drill Development, Conduct and Evaluation”
EP-OC-122-1002, “Exercise Development, Conduct and Evaluation”
EP-OC-122-1003, “Scheduling of Drills and Exercises”
EP-OC-133, “Assembly and Site Evacuation”
TQ-OC-133, “ERO Training and Qualification”

Other Documents
Oyster Creek Emergency Response Plan, Section 3, Organization
Oyster Creek ERO Member Roster
Emergency Response Team Position Descriptions
Emergency Response Members Training Due Report, dated 1/22/07
Call/Drive-In Drill Assessments

Section 1EP4: Emergency Action Level and Emergency Plan Changes
Procedures
EP-OC-1010, "Radiological Emergency Plan for Oyster Creek," dated 1/22/07
EP-OC-1010, "Radiological Emergency Plan for Oyster Creek," dated 5/15/06
EP-OC-1010, "Radiological Emergency Plan for Oyster Creek," dated 5/15/06
EP-OC-1010, "Radiological Emergency Plan for Oyster Creek," dated 1/13/06
EP-OC-1010, "Radiological Emergency Plan for Oyster Creek," dated 5/31/05
EP-OC-1010, "Radiological Emergency Plan for Oyster Creek," dated 4/5/05

Other Documents
All 10 CFR 50.54(q) screenings and evaluations performed January 2006 - December 2006

Section 1EP5: Correction of Emergency Preparedness Weaknesses
Procedures
LS-AA-125, "Corrective Action Program Procedure"

Other Documents
All EP-related Assignment Reports generated July 2005 - December 2006
Oyster Creek EP Program Assessment Report, dated June 2006
Assignment Report 379825, Emergency Excellence Plan
NOSA-OYS-05-04, Emergency Preparedness 50.54(t) Audit Report, dated April 2005
NOSA-OYS-06-03, Emergency Preparedness 50.54(t) Audit Report, dated April 2006
All 2006 Nuclear Oversight Quarterly Reports
All 2006 Quarterly EP Drill Reports

Section 2PS2: Radioactive Material Processing and Transportation
Procedures
RW-AA-10, "Radwaste Process Description"
RW-AA-1001,"Water Balance Guideline"
RP-AA-605,"10 CFR 61 Program"
RP-OC-605-1001, "Oyster Creek 10 CFR 61 Program"
RW-AA-100, "Process Control Program for Radioactive Waste"
CY-OC-170-301,"Offsite Dose Calculation Manual"
RW-AA-1, "Radwaste Policy"
RW-AA-10,"Radwaste Process Description"
TQ-AA-133, "Environmental Training"
TQ-AA-126, "Radioactive Material Shipper"

Condition Reports (IR)
451322, 472381, 474234, 493187, 555233, 560944, 607128, 607119, 567276L

Other
Chemistry, Radwaste, and Process Control Audit, (NOS-A-OYS-06-04),dated April 5, 2006
Self-Assessment, 86-20, May 12, 2006;
NOS Field Observations, April 16, 2006, September 8, 2006

Section 4OA2:Identification and Resolution of Problems
Condition Report (IR)
360630, 499162

Other
Root Cause Evaluation Report -Grassing Event August 6, 2005, dated September 16, 2005 (IR 360630)
Focus Area Self-Assessment Report (IR 449126), OC NRC Inspection (95002) Degraded Cornerstone - EP, dated March 4, 2006
Focus Area Self-Assessment (IR 564389), Operations Procedure Use and Adherence, dated December 22, 2006
Focus Area Self-Assessment Report (IR 543262), Self Assessment in Preparation for NRC Supplemental Inspection on WHITE Finding for Procedure Use and Adherence in Operations, dated March 12, 2007

Section 4OA3: Event Followup
Procedures
HU-AA-1211, “Briefings-Pre-Job, Heighten Level of Awareness, Infrequent Plant Activity and Post-Job Briefings”
ABN-32, “Abnormal Intake Level”
202.1, “Power Operation”
301.2, “Reactor Recirculation System”
602.3.004, “Electromatic Relief Valve Pressure Sensor test and Calibration”
VM-OC-0025, “Barksdale Pressure Switches”
EP-OC-1010, ”Radiological Emergency Plan for Oyster Creek”
ABN-2, Recirculation System Failures”

Drawings
GE 729E182, “Auto Depressurization System Electrical Elementary Drawing”

Condition Reports (IR)
O2002-1254, 358250, 585337, 587849, 587791, 594847, 510364, 599759, 599736

Work Orders (AR)
C2014318, C2014319, C2014204, A2025034, R2060669, A2162755

Other Documents
NUREG-1022, “Event Reporting Guidelines 10 CFR 50.72 and 50.73"
NEI 99-02, Rev 4, “Regulatory Assessment Performance Indicator Guideline”
LER 2006-004-00, “Operation Exceeding Maximum Power Level”
OC Root Cause Report for Inadvertent Actuation of the ‘D’ EMRV”
Process Plant Computer data for reactor temperature, pressure and power on 12/8/06
Process Plant Computer SAR alarm messages for 12/8/06
Exelon PowerLabs report OYS-31707, “Failure Analysis of ‘D’ EMRV Equipment for Oyster Creek Station”
Oyster Creek operator logs for 12/8/2006
Issue Resolution Documentation Form for ‘A’ Reactor Recirculation Pump
OC1C21-04.0, “Reactivity Maneuver Approval form for Emergent 3-Loop Operation”
ACMP for degradation of the ‘A’ Reactor Recirculation Pump

Section 4OA5: Other

Procedures
HU-AA-1211, “Briefings-Pre-Job, Heighten Level of Awareness, Infrequent Plant Activity and Post-Job Briefings”
602.3.004, “Electromatic Relief Valve Pressure Sensor test and Calibration”
VM-OC-0025, “Barksdale Pressure Switches”

Drawings
GE 729E182, “Auto Depressurization System Electrical Elementary Drawing”

Condition Reports (IR)
O2002-1254, 358250, 585337, 587849, 587791, 594847, 567276

Work Orders (AR)
C2014318, C2014319, C2014204, A2025034, R2060669

Other Documents
NUREG-1022, “Event Reporting Guidelines 10 CFR 50.72 and 50.73"
NEI 99-02, Rev 4, “Regulatory Assessment Performance Indicator Guideline”
LER 2006-004-00, “Operation Exceeding Maximum Power Level”
OC Root Cause Report for inadvertent Actuation of the ‘D’ EMRV”
Process Plant Computer data for reactor temperature, pressure and power on 12/8/06
Process Plant Computer SAR alarm messages for 12/8/06
Exelon PowerLabs report OYS-31707, “Failure Analysis of ‘D’ EMRV Equipment for Oyster Creek Station”
Oyster Creek operator logs for 12/8/2006
Cesium Background Report, March 11, 2007
Evaluation of Cesium-137 In Environmental Samples, January 24, 2007

LIST OF ACRONYMS

ABN	Abnormal Operating Procedure
ADAMS	Agency-wide Documents Access and Management System
ALARA	As Low As Reasonably Achievable
AmerGen	AmerGen Energy Company, LLC
ANS	Alert and Notification System
AR	Work Order
CAP	Corrective Action Program
CDF	Core Damage Frequency
CFR	Code of Federal Regulations
CRD	Control Rod Drive
CST	Condensate Storage Tank
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EMRV	Electromatic Relief Valve
EP	Emergency Preparedness
E-Plan	Emergency Plan
ERO	Emergency Response Organization
ESW	Emergency Service Water
FASA	Focus Area Self Assessment
FIN	Finding
IP	Inspection Procedure
IR	Condition Report
IST	Inservice Test
IMC	Inspection Manual Chapter
IPA	Infrequent Plant Activity
IPEEE	Individual Plant Examination for External Events
LER	License Event Report
MPFF	Maintenance Preventable Functional Failure
MCC	Motor Control Center
MG	Motor Generator
NCV	Non-cited Violation
NRC	Nuclear Regulatory Commission
OA	Other Activities
ODCM	Offsite Dose Calculation Manual
Oyster Creek	Oyster Creek Generating Station
PARS	Publicly Available Records
PCP	Process Control Program
RAP	Annunciator Response Procedure
RBCCW	Reactor Building Closed Cooling Water
REMP	Radiological Environmental Monitoring Program
RP	Radiation Protection
RSPS	Risk Significant Planning Standard
SBGT	Standby Gas Treatment
SDP	Significance Determination Process
SLC	Standby Liquid Control
SPAR	Standardized Plant Analysis Risk
SRA	Senior Risk Analyst
TBCCW	Turbine Building Closed Cooling Water
TS	Technical Specification
TSC	Technical Support Center

UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item