

January 25, 2006

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 05000219/2005005

Dear Mr. Crane:

On December 31, 2005, 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 January 12, 2006, with Mr. C. N. Swenson 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 of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. Additionally, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. However, because of the very low safety significance and because they 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).

C. Crane

2

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 7  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000219/2005005  
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  
Vice President, General Counsel and Secretary, AmerGen  
T. O'Neill, Associate General Counsel, Exelon Generation Company  
J. Fewell, Assistant General Counsel, Exelon Nuclear  
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, Radiation Protection and Release Prevention, State of  
New Jersey

Distribution w/encl: (VIA E-MAIL)

Region I Docket Room (with concurrences)

S. Collins, RA

M. Dapas, DRA

R. Bellamy, DRP

R. Fuhrmeister, DRP

A. Rosebrook, DRP

M. Ferdas, DRP, Senior Resident Inspector

R. Treadway, DRP, Resident Inspector

J. DeVries, DRP, Resident OA

D. Vito, ORA

R. Urban, OE

D. Holody, OE

S. Figueroa, OE

S. Lee, RI OEDO

R. Laufer, NRR

P. Tam, PM, NRR

T. Colburn, NRR

J. Boska, NRR

ROPreports@nrc.gov **(All Inspection Reports)**

Region I Docket Room (with concurrences)

DOCUMENT NAME: E:\Filenet\ML060260432.wpd

**SISP Review Complete: RRB (Reviewer's Initials)**

After declaring this document "An Official Agency Record" it **will** be released to the Public.

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RI:DRP	RI:DRP	RI:DRP	RI:DRP		
NAME	Ferdas/MSF	Rosebrook/AA R	Fuhrmeister/RL F	Bellamy/RRB		
DATE	1/19/06	1/20/06	1/25/06	1/25 /06		

OFFICIAL RECORD COPY

**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION I**

Docket No.: 50-219

License No.: DPR-16

Report No.: 05000219/2005005

Licensee: AmerGen Energy Company, LLC (AmerGen)

Facility: Oyster Creek Generating Station

Location: Forked River, New Jersey

Dates: October 01, 2005 - December 31, 2005

Inspectors: M. Ferdas, Senior Resident Inspector  
P. Cataldo, Senior Resident Inspector, Beaver Valley  
R. Fuhrmeister, Senior Project Engineer  
R. Nimitz, Senior Health Physicist  
S. Kennedy, Resident Inspector, Millstone  
A. Rosebrook, Project Engineer  
J. Krafty, Reactor Inspector  
A. Patel, Reactor Inspector

Approved By: Ronald R. Bellamy, Ph.D., Chief  
Projects Branch 7  
Division of Reactor Projects

TABLE OF CONTENTS

SUMMARY OF FINDINGS ..... iii

REACTOR SAFETY ..... 1

    1R01 Adverse Weather Protection ..... 1

    1R04 Equipment Alignment ..... 2

    1R05 Fire Protection ..... 2

    1R06 Flood Protection Measures ..... 3

    1R11 Licensed Operator Requalification Program ..... 6

    1R12 Maintenance Effectiveness ..... 6

    1R13 Maintenance Risk Assessments and Emergent Work Control ..... 7

    1R14 Operator Performance During Non-Routine Evolutions and Events ..... 8

    1R15 Operability Evaluations ..... 8

    1R16 Operator Workarounds ..... 9

    1R17 Permanent Plant Modifications ..... 9

    1R19 Post-Maintenance Testing ..... 10

    1R22 Surveillance Testing ..... 10

    1R23 Temporary Plant Modifications ..... 11

RADIATION SAFETY ..... 11

    2OS1 Access Control to Radiologically Significant Areas ..... 11

    2OS2 ALARA Planning and Controls ..... 12

    2OS3 Radiation Monitoring Instrumentation and Protective Equipment ..... 13

    2PS2 Radioactive Material Processing and Transportation ..... 14

OTHER ACTIVITIES ..... 14

    4OA1 Performance Indicator (PI) Verification ..... 14

    4OA2 Identification and Resolution of Problems ..... 15

    4OA3 Event Followup ..... 16

    4OA6 Meetings, Including Exit ..... 18

    4OA7 Licensee-Identified Violations ..... 18

SUPPLEMENTAL INFORMATION ..... A-1

KEY POINTS OF CONTACT ..... A-1

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED ..... A-2

LIST OF DOCUMENTS REVIEWED ..... A-2

LIST OF ACRONYMS ..... A-7

## SUMMARY OF FINDINGS

IR 05000219/2005005; 10/01/05 - 12/31/05; Oyster Creek Generating Station; Flood Protection Measures.

The report covered a 3-month period of inspection by resident inspectors, and an announced inspection by a regional senior radiation specialist. One Green non-cited violation (NCV) was 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: Mitigating Systems**

Green. The inspectors identified that AmerGen did not identify and properly account for one repetitive maintenance preventable function failure (RMPFF) of the reactor building floor and equipment drain system. This resulted in AmerGen not demonstrating the effectiveness of preventive maintenance and the 10 CFR50.65(a)(2), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," demonstration became invalid. This finding was of very low safety significance (Green) and determined to be a violation of 10 CFR 50.65(a)(2), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." AmerGen's corrective actions included performing a maintenance rule (a)(1) determination and creating a preventive maintenance task to replace the isolation valve actuator and solenoid.

The finding was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and affected the objective to maintain the reliability of systems that respond to initiating events to prevent undesirable consequences. In accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," 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 the issue was not a design or qualification deficiency that resulted in a loss of function, did not result in an actual loss of safety function of a single train of equipment for greater than allowed by technical specifications, did not result in an actual loss of safety function of equipment considered risk significant in the maintenance rule program for greater than 24 hours, and was not screened as potentially risk significant from external events. The performance deficiency had a problem identification and resolution cross-cutting aspect. (Section 1R06)

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by AmerGen has been reviewed by the inspectors. Corrective actions taken or planned by AmerGen have been entered into AmerGen's corrective action program. This violation and corrective actions are listed in Section 4OA7 of this report.

## REPORT DETAILS

### Summary of Plant Status

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

On November 18, 2005, operators performed an unplanned power reduction to seventy four (74) percent to minimize the environmental impact due to a loss of power to the dilution pumps. Oyster Creek lost power to the S1A startup transformer and dilution pumps when a phase regulator malfunctioned at the Jersey Central Power and Light Company Oyster Creek substation and resulted in the "B" 34.5 KV bus to de-energize. Oyster Creek entered a seven (7) day technical specification limiting condition for operations (LCO) due to the loss of power to the startup transformer and made a four (4) hour report to the Nuclear Regulatory Commission (NRC) due to informing the State of New Jersey for a discharge permit non-compliance (loss of dilution pumps). Operators restored power to the startup transformer and dilution pumps approximately three hours after loss of power to the "B" 34.5 KV bus. Operators returned Oyster Creek to full power on November 19, 2005.

On December 3, 2005, operators performed a planned power reduction to seventy (70) percent to perform control rod scram time testing and to install a temporary repair clamp on a vent valve on the turbine extraction steam system main flash tank. Operators returned the plant to full power on December 4, 2005.

The plant remained at or close to full power for the remainder of the inspection period.

### **1. REACTOR SAFETY**

#### **Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

#### 1R01 Adverse Weather Protection (71111.01)

##### a. Inspection Scope (1 sample-system)

The inspectors reviewed AmerGen's response to one adverse weather preparation. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

Adverse Weather Preparation. The inspectors completed an adverse weather preparation inspection for seasonal readiness (cold weather conditions). The inspectors reviewed the updated final safety analysis report (UFSAR) for Oyster Creek to identify risk significant systems that require protection from cold weather conditions. The inspectors reviewed the service water and emergency service water (ESW) systems to assess their readiness for seasonal susceptibilities (extreme low temperatures). The inspectors performed a walkdown of the intake structure which contain the service water and ESW systems. The inspectors also reviewed applicable corrective action condition reports to assess the reliability and material condition of the systems and intake structure. AmerGen's cold weather preparation activities were also reviewed to assess

Enclosure



their adequacy, and to verify they were completed in accordance with procedure requirements.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope (2 samples)

The inspectors performed two partial equipment alignment inspections. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

Partial System Walkdown. The inspectors performed two partial equipment alignment inspections. The partial 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. The partial alignment inspections were also completed after equipment was recently returned to service after significant maintenance. The inspectors performed a partial walkdown of the following systems, including associated electrical distribution components and control room panels, to verify the equipment was aligned to perform its intended safety functions:

- “B” and “D” core spray system main and booster pumps on November 14, 2005; and
- “B” control rod drive (CRD) system on December 12, 2005.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope (7 samples)

The inspectors walked down seven 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 conditions reports documenting fire protection deficiencies to verify that identified problems were being evaluated and corrected. Documents reviewed for this inspection activity are listed in

the Supplemental Information attachment to this report. The following plant areas were inspected:

- C "A" and "B" CRD pump area on November 6, 2005;
- C "B" and "D" core spray system main pump area on November 6, 2005;
- C Isolation condenser area on November 7, 2005;
- C "B" and "D" core spray booster pump area on November 8, 2005;
- C #1 emergency diesel generator (EDG) area on November 17, 2005;
- C Service air compressors area on December 2, 2005; and
- C Spent fuel pool area on December 8, 2005.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope (1 sample-internal)

The inspectors performed one internal flood protection inspection activity in the northeast corner room of the reactor building which contains the '1-1' and '1-2' containment spray pumps. The inspectors performed a walkdown of the flood barriers, floor drains, and floor sumps. The inspectors evaluated these items to determine if internal flood vulnerabilities existed and to assess the physical condition of the equipment and components in the northeast corner room. The inspectors also reviewed AmerGen procedures related to flooding of the northeast corner room. Documents associated with these reviews are listed in the Supplemental Information attachment to this report.

b. Findings

Introduction. The inspectors identified that AmerGen did not identify and properly account for one repetitive maintenance preventable function failure (RMPFF) of the reactor building floor and equipment drain system. This resulted in AmerGen not demonstrating the effectiveness of preventative maintenance and the 10 CFR50.65(a)(2), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," demonstration became invalid. This finding was of very low safety significance (Green) and determined to be a violation of 10 CFR 50.65(a)(2), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."

Description. The inspectors reviewed corrective action program condition reports which documented system and component issues on the reactor building floor and equipment drain system over a two year period. Based on that review the inspectors performed a more detailed review of corrective action program condition reports O2004-0387 and 347605 dated February 17, 2004 and June 26, 2005, respectively. Each condition report documented a malfunction of reactor building floor drain sump isolation valve

V-24-37 to close when it was operated. The isolation valve was repaired in February 2004, and again in June 2005, when maintenance personnel lubricated the actuator cylinder and solenoid valve and cycled the valves in the open and closed position several times. The inspectors noted that a preventive maintenance task (work order R2066710) is performed on this valve on a two year frequency which involves a valve inspection and a valve stroke. The preventive maintenance task was last performed on isolation valve V-24-37 on November 17, 2004.

The sump isolation valves are designed to isolate the reactor building floor sumps on high level to prevent excessive leakage from flooding the northeast and southeast corner rooms in the reactor building. Specifically, if the V-24-37 fails to close during a unisolable leak in the torus room or reactor building, the northeast corner room would flood with a potential loss of the '1-1' and '1-2' containment spray pumps.

The inspectors also reviewed corrective action program condition report 360303, which performed a maintenance preventable function failure (MPFF) evaluation on the June 2005 isolation valve malfunction. On August 30, 2005, engineering personnel determined the June 2005 isolation valve malfunction was a MPFF because similar corrective action to repair the isolation valve was taken in February 2004.

The inspectors reviewed AmerGen procedure ER-AA-310, "Implementation of the Maintenance Rule," to identify AmerGen's definition of a RMPFF. AmerGen's procedure stated that a RMPFF is a subsequent MPFF that occurs due to the same maintenance related causes (i.e., corrective actions for the previous failure were ineffective) on the same component within the past two years. The inspectors also reviewed the maintenance rule performance criteria for the reactor building floor and equipment drain system, which stated that there should be no component level RMPFFs.

The inspectors noted that corrective action condition report 360303 was identified as MPFF, and not as a RMPFF. A RMPFF would indicate that AmerGen has not demonstrated the effectiveness of preventive maintenance on isolation valve V-24-37. The inspectors also noted that the reactor building floor and equipment drain system maintenance rule performance criteria had been exceeded; and a maintenance rule (a)(1) determination evaluation was required to be performed in accordance with AmerGen procedure ER-AA-310, "Implementation of the Maintenance Rule" and industry guidance contained in NEI 93-01, Revision 2, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The inspectors discussed this observation with engineering personnel.

AmerGen investigated this issue and determined the June 2005 component failure was not appropriately identified nor counted as a RMPFF in corrective action program condition report 360303. AmerGen determined that when this RMPFF was considered, the system exceeded its performance criteria in June 2005 and the 10 CFR 50.65(a)(2) conclusion became invalid. Additionally, AmerGen confirmed that a maintenance rule (a)(1) determination needed to be completed per AmerGen procedures and industry guidance. Corrective action program condition report 436134 was initiated by AmerGen,

which directed engineering personal to perform a maintenance rule (a)(1) determination on the reactor building floor and equipment drain system.

On January 19, 2006, AmerGen's Maintenance Rule Expert Panel classified the reactor building floor and equipment drain system as (a)(1) where performance of the system would be monitored against established goals because system performance indicated that the reactor building floor and equipment drain system was not being controlled through appropriate preventive maintenance.

Analysis. The performance deficiency involved a failure to properly identify and account for a RMPFF which caused AmerGen's 10 CFR 50.65(a)(2) demonstration to become invalid. AmerGen did not demonstrate the effectiveness of preventive maintenance and did not place the affected component in maintenance rule (a)(1) monitoring when degraded component performance was identified in June 2005. The reactor building floor and equipment drain system did not demonstrate reliable operations when an isolation valve designed to prevent flooding of the northeast corner room malfunctioned twice due to similar maintenance related causes between February 2004 and June 2005. AmerGen determined the RMPFF was attributed to ineffective preventive maintenance. The performance deficiency had a problem identification and resolution cross-cutting aspect because it involved an inadequate evaluation of the component failure. AmerGen's corrective actions included performing a maintenance rule (a)(1) determination and creating a preventive maintenance task to replace the isolation valve actuator and solenoid.

The finding was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and affected the objective to maintain the reliability of systems that respond to initiating events to prevent undesirable consequences. In accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," 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 the issue was not a design or qualification deficiency that resulted in a loss of function, did not result in an actual loss of safety function of a single train of equipment for greater than allowed by technical specifications, did not result in an actual loss of safety function of equipment considered risk significant in the maintenance rule program for greater than 24 hours, and was not screened as potentially risk significant from external events.

Enforcement. 10 CFR 50.65 (a)(1), requires, in part, that holders of an operating license shall monitor the performance or condition of structures, systems, or components (SSCs) within the scope of the rule as defined by 10 CFR 50.65 (b), against licensee-established goals, in a manner sufficient to provide reasonable assurance that such structures, systems, and components, are capable of fulfilling their intended functions.

10 CFR 50.65 (a)(2) states, in part, that monitoring as specified in 10 CFR 50.65 (a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended function.

Enclosure

Contrary to the above, on August 30, 2005, when AmerGen completed its maintenance rule evaluation of the June 2005 reactor building floor and equipment drain system isolation valve V-24-37 failure, AmerGen did not demonstrate that the performance or condition of the reactor building floor and equipment drain system had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee-established goals. Specifically, AmerGen did not identify and properly account for a RMPFF which demonstrated that performance or condition of SSCs in the reactor building floor drain system was not being effectively controlled through appropriate preventive maintenance and, as a result, goal setting and monitoring was required. However, because the finding was of very low safety significance and has been entered into the corrective action program in condition report 436134, this violation is being treated as a NCV, consistent with section VI.A of the NRC Enforcement Policy. **(NCV 05000219/2005005-01, Maintenance Rule Reactor Building Floor Drain System (a)(2) Demonstration Invalidated)**

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope (1 sample)

The inspectors observed one simulator training scenario on November 10, 2005, to assess operator performance and training effectiveness. The scenario involved a spurious actuation of an electromagnetic relief valve, a feedwater heater trip, a failure of both CRD pumps, and an anticipated transient without scram (ATWS). The inspectors assessed whether the simulator adequately reflected the plant response, operator performance met AmerGen procedural requirements, and the simulator instructor's critique identified crew performance problems. 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 (71111.12)

a. Inspection Scope (2 samples)

The inspectors performed two maintenance effectiveness inspection activities. The inspectors reviewed AmerGen's performance monitoring of the core spray system to determine whether AmerGen was adequately monitoring equipment performance to ensure that maintenance was effective. The inspectors also reviewed a degraded component issue associated with a failure of the "D" ESW pump to start on December 19, 2005.

The inspectors verified that the systems or components were monitored in accordance with AmerGen's maintenance rule program requirements. The inspectors compared documented functional failure determinations and unavailable hours to those being

tracked by AmerGen to evaluate the effectiveness of AmerGen's condition monitoring activities and determine whether performance goals were being met. The inspectors reviewed completed maintenance work orders and procedures to determine if inadequate maintenance contributed to equipment performance issues. The inspectors reviewed applicable work orders, corrective action program condition reports, preventative maintenance tasks, 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. An unresolved item (URI) was identified to review AmerGen's corrective action program evaluation (condition report 435168) regarding the failure of the "D" ESW pump to start on December 19, 2005. The inspectors plan to review this evaluation after it is completed, which had not occurred by the end of the inspection period. **(URI 05000219/2005005-02, 'D' ESW Pump Start Failure)**

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

a. Inspection Scope (4 samples)

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

- "B" isolation condenser unavailable due to scheduled valve testing on October 7, 2005;
- Maintenance on the bank 5 transformer bushing on October 17, 2005;
- Low pressure screen wash system unavailable due to scheduled maintenance on October 26, 2005; and
- Combustion turbine #2 and service water traveling screen #1 unavailable due to scheduled maintenance on November 1, 2005.

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 procedure guidance. 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 monitor (Sentinal) to gain insights into the risk associated with these plant configurations. Finally, the inspectors reviewed corrective action 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.

1R14 Operator Performance During Non-Routine Evolutions and Events (71111.14)

a. Inspection Scope (2 samples)

The inspectors evaluated AmerGen's performance and response during two non-routine evolutions to determine whether operator response was consistent with applicable procedures, training, and AmerGen's expectations. The inspectors observed control room activities and/or reviewed control room logs and applicable operating procedures to assess operator performance. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report.

High Intake Structure Water Level. On October 25, 2005, operators experienced elevated intake structure water levels during adverse weather conditions. The inspectors responded to the control room when they became aware of the condition and verified operators appropriately implemented abnormal operating procedure ABN-32, "Abnormal Intake Level." The inspectors also reviewed intake structure data to ensure applicable emergency plan entry conditions were considered.

Low Intake Structure Water Level. On November 1, 2005, operators experienced reduced intake structure water levels during elevated grassing conditions. The inspectors responded to the control room when they became aware of the condition and verified operators appropriately implemented abnormal operating procedure ABN-32, "Abnormal Intake Level." The inspectors also reviewed intake structure data to ensure applicable emergency plan entry conditions were considered.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (4 samples)

The inspectors reviewed four operability determinations for degraded or non-conforming conditions associated with:

- C ESW keep-fill line through-wall leak on October 14, 2005 (IR 386323);
- C Low oil level and high temperature condition noted by operators on the 'A' CRD pump outboard bearing on November 9, 2005 (IR 396982);
- #1 EDG pinion abutment during fast start testing on November 20, 2005 (IR 394689) ; and
- Recirculation pump system trip relay 6K11AA drift on December 8, 2005 (OC-2005-OE-011).

The inspectors reviewed the technical adequacy of the operability determinations to ensure the conclusions were technically justified. The inspectors also walked down accessible equipment to corroborate the adequacy of AmerGen's operability determinations. 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.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope (3 specific samples)

The inspectors reviewed three specific operator workaround conditions identified by AmerGen to determine if the functional capability of mitigating equipment would be affected and that compensating manual actions, if applicable, could be accomplished during both normal and postulated accident conditions. Documents reviewed for this inspection activity are listed in the Supplemental Information attachment to this report. The operator workaround conditions reviewed were:

- Water Intrusion into instrument air (OC-40);
- Hydraulic Control Units Require Frequent Charging (OC-50); and
- SF-1-20 (Battery Ventilation Damper) requires manual operator adjustments when system is placed in service (OC-53).

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope (2 samples)

The inspectors reviewed two permanent design changes installed by AmerGen at Oyster Creek in 2005. The inspectors reviewed the technical adequacy for the following design changes installed in the plant:

- Repair of mecatiss (fire wrap) on conduit 14-28 (OC 04-00769 001); and
- Bypass of #1 EDG starting resistors with FSR relay (OC 05-00020 000).

The inspection included a review of the following design parameters: energy needs, materials, control signals, operating procedures, fire protection, and 10 CFR 50.59, "Changes, Tests, and Experiments," requirements. The inspectors also verified the



adequacy of post maintenance testing. Documents reviewed 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 (4 samples)

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

- '1-1' intake traveling screen on November 11, 2005;
- "C" core spray main pump on November 15, 2005;
- Reactor building ventilation system 119 foot elevation secondary containment isolation valve V-28-2 on November 29, 2005; and
- "D" core spray main pump on November 29, 2005.

The inspectors verified that the post maintenance tests were adequate for the scope of the maintenance performed and the testing 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 (4 samples)

The inspectors observed portions of and/or reviewed the results of four surveillance tests:

- Remote shutdown panel functional test for control power transfer and isolation condenser valves on October 7, 2005;
- Containment spray pump in-service test on October 19, 2005;
- Reactor coolant system (RCS) unidentified leakage surveillance test on December 1, 2005; and
- Main station battery surveillance test on December 6, 2005.

The inspectors evaluated the test procedures to verify that applicable system requirements for operability were adequately incorporated into the procedures and that test acceptance criteria were consistent with Oyster Creek technical specification requirements and the UFSAR. 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 safety function. The inspectors also reviewed corrective action program condition reports documenting 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 (1 sample)

The inspectors reviewed the following temporary plant modification installed by AmerGen at Oyster Creek in 2005:

- Scram Air Header Piping Modification (ECR 05-0034)

The inspectors verified the modification was consistent with the design and licensing bases of the affected system, and the performance capability of the system was not degraded by the modification. 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.

**2. RADIATION SAFETY**

**Cornerstone: Occupational Radiation Safety**

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope (10 samples)

The inspectors reviewed activities, and associated documentation, in the area of access control to radiologically significant areas. The inspectors evaluated AmerGen's performance against criteria contained within 10 CFR 20 ("Standards for Protection Against Radiation"), applicable technical specifications, and AmerGen procedures.

The inspectors reviewed performance indicators (PIs) for the occupational exposure cornerstone. The inspectors toured Oyster Creek, reviewed radiological controls, and performed independent radiation surveys during the tours. The inspectors reviewed

housekeeping, material condition, radiological postings, barricading, and access controls to determine if controls were acceptable. The inspectors selectively verified access controls for high radiation areas and selectively reviewed high radiation area access key control and inventory. The inspectors selectively reviewed personnel occupational exposures to identify internal exposures greater than 50 millirem committed effective dose equivalent (CEDE). The inspectors also evaluated source terms relative to potential impact on internal dose determinations.

The inspectors reviewed access controls to the traversing in-core probe room. The inspectors discussed the procedural controls and coverage for this entry. The inspectors also discussed changes since the last inspection with the radiation protection manager.

The inspectors reviewed self-assessments and audits performed by AmerGen since the previous inspection to determine if problems were being entered into the corrective action program for resolution. The inspectors evaluated the database for repetitive deficiencies or significant individual deficiencies to determine if self-assessment activities were identifying and addressing identified issues. The inspectors also reviewed corrective action program condition reports to evaluate AmerGen's threshold for identifying, evaluating, and resolving problems in the area of access control to radiologically significant areas. Documents reviewed for this inspection activity are listed in the Supplemental Information attached to this report.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02)

a. Inspection Scope (2 samples)

The inspectors selectively reviewed current station performance in the areas of collective exposure history, current exposure trends, and 3-year rolling average exposure. The inspectors reviewed performance relative to the 2005 occupational exposure goals, discussed 2006 occupational exposure goals and bases, and discussed the 2003 - 2005 Exposure Reduction Plan with AmerGen personnel.

The inspectors also reviewed corrective action program condition reports to evaluate AmerGen's threshold for identifying, evaluating, and resolving problems in the area of as low as is reasonably achievable (ALARA) planning and controls. Documents reviewed for this inspection activity are listed in the Supplemental Information attached to this report.

b. Findings

No findings of significance were identified.

## 2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

### a. Inspection Scope (5 samples)

The inspectors reviewed activities, and associated documentation, in the area of radiation monitoring instrumentation and protective equipment. The inspectors evaluated AmerGen's performance against criteria contained in 10 CFR 20 ("Standards for Protection Against Radiation"), applicable technical specifications, and AmerGen procedures.

The inspectors reviewed the calibrations for the containment high range radiation monitors (RE -790, 791), and reactor building high range radiation monitors (B-9, C-9, A-1, A-2). The inspector also reviewed the calibration of the following risk significant area radiation monitors (ARMs): R014C2, R014B10, R014C5, and R014C10.

The inspectors reviewed the calibration records for personnel and material contamination monitors PCM1b-700538, PM-7 702450, and SAM - 702318. The inspectors reviewed the calibration records for personnel electronic dosimeters EPD - 27752, EPD - 80555, and EPD - 28043. The inspectors reviewed the calibration records for neutron meters ASP-1 710283 and ASP-1 700118; and sample counting instruments Ludlum 700505, Ludlum 700509, Ludlum 700486, Ludlum 700488, RM-14 74013, RM- 4 73437, and Ge-Li -3. The inspectors also reviewed the calibration records for airborne radioactivity sampling/measurement instruments AMS-3 and AMS-700029.

The inspector discussed qualifications of personnel servicing self-contained breathing apparatus (SCBAs) and discussed capabilities for filling SCBA air tanks.

The inspectors reviewed AmerGen's audits and self-assessments in the area of radiation monitoring equipment and protective equipment to determine if identified issues in this area were entered into the corrective action program. The inspectors also reviewed corrective action condition reports to evaluate AmerGen's threshold for identifying, evaluating, and resolving problems in the area of radiation monitoring and protective equipment. Documents reviewed for this inspection activity are listed in the Supplemental Information attached to this report.

### b. Findings

No findings of significance were identified.

**Cornerstone: Public Radiation Safety**

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope (1 sample)

The inspectors walked down accessible portions of Oyster Creek's radioactive liquid and solid waste collection, processing, and storage systems and locations to evaluate their general material condition; and to identify changes made to the systems. The inspectors discussed radwaste facility material condition improvement efforts and reviewed recent radiological survey data for radioactive waste processing areas. The inspectors toured outdoor yard areas within and outside the radiological controlled area. The inspectors also reviewed corrective action program condition reports to evaluate AmerGen's threshold for identifying, evaluating, and resolving problems in the area of radioactive material processing and transportation

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope (2 samples)

The inspectors reviewed AmerGen's program to gather, evaluate, and report information on two performance indicators (PIs). The inspectors used the guidance provided in Nuclear Energy Institute (NEI) 99-02, Revision 3, "Regulatory Assessment Performance Indicator Guideline" to assess the accuracy of AmerGen's collection and reporting of PI data.

Radiation Safety Cornerstone. The inspectors verified the accuracy and completeness of the reported data for the "Occupational Exposure Control Effectiveness" PI. The inspectors reviewed corrective action program records for occurrences involving High Radiation Areas, Very High Radiation Areas, and unplanned personnel radiation exposures since the last inspection in this area.

The inspectors verified the accuracy and completeness of the reported data for the "RETS/ODCM Radiological Effluent Occurrences" PI. The inspectors reviewed corrective action program records and projected monthly and quarterly dose assessment results due to radioactive liquid and gaseous effluent releases for the period of October 2005 through December 2005. The inspectors also evaluated the potential for unmonitored releases and selectively reviewed the 2004 and 2005 Annual Effluent Release Reports.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Review of Items Entered Into the Corrective Action Program

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

.2 Semi-Annual Review to Identify Trends

Inspection Scope (1 sample)

The inspectors performed a review of AmerGen's corrective action program documents to identify trends that could indicate the existence of a more significant safety issue. The review was focused on repetitive equipment problems, human performance issues, and program implementation issues. The results of the trend review by the inspectors were compared with the results of normal baseline inspections. The review included issues documented outside the normal corrective action system, such as in system health reports, nuclear oversight reports, and Oyster Creek monthly management reports. The review considered the six-month period June through December 2005.

b. Findings

No findings of significance were identified.

.3 Annual Sample Review

a. Inspection Scope (2 samples)

The inspectors reviewed AmerGen's evaluation and corrective actions associated with the following two issues:

Inoperable Safety-Related Equipment Due to Indicating Bulb Failures. The inspectors reviewed AmerGen's actions to correct problems with indicating bulb failures causing safety-related equipment to become inoperable. The review focused on two recent issues involving trips of the "1D" 4160V breaker and "B" 125V DC battery charger. These issues were documented in AmerGen's corrective action program in condition report 366492 and 356571, respectively. The inspectors reviewed AmerGen's evaluation to determine operability and reportability of the affected systems, the adequacy of extent of condition, common cause, identification of root cause, and appropriateness of corrective actions. The inspection included a walk down of plant

equipment and reviews of corrective action reports, drawings, and a temporary modification. Documents reviewed for this inspection activity are listed in the Supplemental Information attached to this report.

Fire Pump Issues. The inspectors reviewed corrective action program condition reports generated in the past two years on the fire pumps to determine if problems identified were being resolved in a timely manner. Ten (10) corrective action condition program condition reports were selected and the corrective actions associated with each issue were reviewed in detail. The inspectors reviewed the corrective actions to determine their appropriateness and to verify they were completed in a timely manner. The inspectors interviewed engineering personnel to verify they were aware of the issues impacting the fire pumps and the status of their corrective actions. Documents reviewed for this inspection activity are listed in the Supplemental Information attached to this report.

b. Findings and Observations

No findings of significance were identified.

With regard to the inoperable safety-related equipment due to indicating bulb failures, the inspectors concluded that AmerGen's operability and reportability determinations were correct. AmerGen correctly identified the root cause; and the extent of condition review identified a similar deficiency in the #2 EDG breaker circuitry. The corrective actions completed and planned were adequate to correct the problem of indicator bulb failures causing equipment to become inoperable. With regard to the fire pump issues, the inspectors concluded that, overall, AmerGen's corrective actions were appropriate and were completed in a timely manner.

The corrective actions for eight of the ten corrective action program condition reports were complete. One of the corrective action program condition reports whose corrective actions had not been completed, required a plant modification. Since adequate temporary corrective actions had been implemented, the inspectors determined that completion of the modification was not urgent and it was acceptable for the modification to be completed at a later date. The other corrective action program condition report with corrective action not complete required corrective maintenance that had not been scheduled, but was considered a low priority. The inspectors determined that it was also acceptable to complete this work at a later date as well.

4OA3 Event Followup (71153) (4 samples)

- .1 (Closed) LER 05000219/2004-003-01, Supplement to Actuation of Reactor Protection System due to Spurious HI-HI Trip Signals on Intermediate Range Monitors Caused by Electromagnetic Interference.

This license event report (LER) was a supplement to LER 2004-003-00 which provided additional information on the long term corrective actions planned by AmerGen. LER 2004-003-00 described an event that occurred on May 27, 2004 involving an automatic

Enclosure



reactor scram due to a spurious actuation of nuclear instrument intermediate range monitor channels 13, 14, and 18. The spurious actuation was caused by electromagnetic interference (EMI). The inspectors previously evaluated a finding associated with this LER in NRC inspection report 05000219/2004004, dated November 10, 2004. The inspectors reviewed this LER and no new issues were identified. This LER is closed.

.2 (Closed) LER 05000219/2005-003-00, Technical Specification Violation due to Missing Test Cap.

This LER described a violation of technical specification 3.5.A.3, "Primary Containment," that occurred on July 12, 2005 due to a missing test cap between the inboard and outboard isolation valves on a nitrogen makeup line to the drywell. The inspectors previously evaluated a finding associated with this LER in NRC inspection report 05000219/2005004, dated November 7, 2005. The inspectors reviewed this LER and no new issues were identified. This LER is closed.

.3 (Closed) LER 05000219/2005-004-00, Actuation of an Emergency Diesel Generator Due to Unexpected Breaker Opening

This LER described a start of an EDG with a de-energized vital bus. On August 24, 2005, the "1D" 4160 VAC breaker opened and de-energized the "D" bus. #2 EDG started and re-powered the "D" bus. A failed light bulb in the "D" bus breaker closed indication light caused a short circuit and allowed sufficient current in the circuit to energize the trip coil for the "1D" breaker. Troubleshooting by AmerGen personnel identified that there was no current limiting resistor in the circuit. The current limiting resistor was inadvertently removed in 1986 by a modification to relocate control circuits. AmerGen's corrective actions included an extent of condition review of the 4160 VAC breaker indicating circuits which identified that the #2 EDG indicating circuit was also without a current limiting resistor. AmerGen removed the closed indication light bulb from both circuits as a temporary measure until a modification could be implemented to install current limiting resistors in both the "D" bus and #2 EDG breaker closed indication circuits. The inspectors reviewed this LER and no findings were identified. The licensee documented this event in their corrective action program under condition reports 366492 and 2371203, and work order A2122180. Additional information on this issue is contained in section 4OA2.3 of this report. This LER is closed.

.4 (Closed) LER 05000219/2005-005-00, Technical Specification Violation due to Main Steam Safety Valves Setpoint Discovered Out of Tolerance.

This LER described a violation of technical specification 2.3F, "Reactor High Pressure Safety Valve Initiation." On October 13, 2005, AmerGen determined that the as-found lift setpoint for three of nine main steam safety valves (SV) exceeded the setpoint tolerance required by technical specification. Technical specification 2.3F, "Reactor High Pressure Safety Valve Initiation," provides an allowable pressure band of +/- one percent of design pressure (1250psig) for an individual SV. All three of the SVs exceeded the required pressure band, -2.5% (-30psig), -1.4% (-17 psig), and 1.9%



(-23psig) respectively. AmerGen determined that the apparent cause for the three SVs being outside of their allowable as-found setpoint was due to setpoint drift. However, all three SVs were within the American Society Mechanical Engineers (ASME) code as found allowable tolerance of +/- three percent. ASME code recognizes setpoint drift by requiring the as-left setpoint to be +/- one percent and allowing as-found setpoint to be +/- three percent. All nine SVs were replaced with refurbished SVs that met technical specification 4.3, "Reactor Coolant," and ASME code requirement of as-left setpoint tolerance of +/- one percent. This licensee-identified finding involved a violation of technical specification 2.3F, "Reactor High Reactor Pressure Safety Initiation." The enforcement of licensee identified violations is discussed in Section 4OA7 of this report. This LER is closed.

#### 4OA6 Meetings, Including Exit

Resident Inspector Exit Meeting. On January 12, 2006, the inspectors presented their overall findings to members of AmerGen's management led by Mr. C.N. Swenson and other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

#### 4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by AmerGen and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a NCV.

- Technical specification 2.3F, "Reactor High Pressure Safety Initiation," requires that nine SVs open within a lift setpoint of +/- one percent of the specified code safety valve function lift setting. Contrary to this requirement, on October 13, 2005, AmerGen identified that three of nine SVs experienced setpoint drift outside of the technical specification limit. AmerGen entered this issue into their corrective action program in condition report 385678 and replaced the nine SVs with refurbished SVs which met the technical specification 4.3E, "Reactor Coolant" requirement of as-left setpoint tolerance of +/- one percent.

The violation was of very low safety significance (Green) because the lift pressures for all SVs were below the Overpressure Protection Analysis (1375 psig); therefore, the as-found test results identified that the SVs would not have challenged the maximum analyzed pressure value, and there was no loss of safety function.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee personnel

R. Artz, Chemistry Supervisor  
B. Barbieri, System Engineering  
P. Bloss, BOP Systems Manager  
J. Booty, System Engineering  
M. Browne, Environmental Specialist  
M. Button, Director, Engineering  
J. Camire, SW System Engineer  
C. Connelly, Chemistry/Environmental Manager  
J. Derby, Radiological Engineer  
K. Drieher, Security Manager  
D. Fawcett, Licensing Engineer  
M. Filippone, System Engineering  
J. Dostal, Shift Operations, Superintendent  
R. Gayley, Programs Engineer  
M. Godknecht, Maintenance Rule Coordinator  
S. Hutchins, Electrical Systems Manager  
E. Johnson, System Engineer  
A. Judson, Radiological Engineer  
J. Kandasamy, Manager, Regulatory Assurance  
R. Larzo, Engineering  
J. Magee, Director, Maintenance  
B. Mussel, System Engineering  
J. O'Rourke, Assistant Engineering Director  
T. Powell, Engineering Programs Manager  
J. Randich, Plant Manager  
J. Renda, Radiation Protection Manager  
S. Schwartz, System Manager for ESW and IC  
G. Seals, Radiological Engineer  
H. Shoap, Normandeau Associates  
C. Swenson, Site Vice President  
J. Vaccaro, Director, Training  
M. Wagner, CAP Coordinator  
R. Zacholski, Director, Operations

**LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**Opened

05000219/2005005-02	URI	“D” ESW Pump Start Failure (Section 1R12)
---------------------	-----	---

Opened/Closed

05000219/2005005-01	NCV	Maintenance Rule Reactor Building Floor Drain System (a)(2) Demonstration Invalidated (Section 1R06)
05000219/2004-003-01	LER	Supplement to Actuation of Reactor Protection System due to Spurious HI-HI Trip Signals on Intermediate Range Monitors Caused by Electromagnetic Interference (Section 4OA3)
05000219/2005-003-00	LER	Technical Specification Violation due to Missing Test Cap (Section 4OA3)
05000219/2005-004-00	LER	Actuation of Emergency Diesel Generator Due to Unexpected Breaker Opening (Section 4OA3)
05000219/2005-005-00,	LER	Technical Specification Violation due to Main Steam Safety Valves Setpoint Discovered Out of Tolerance. (Section 4OA3)

**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-AA-108-111-1001, “Severe Weather and Natural Disaster Guidelines”

WC-AA-107, “Seasonal Readiness”

OP-OC-108-1001, “Preparation for Severe Weather T&RN for Oyster Creek”

OP-OC-108-109-1002, “Cold Weather Freeze Inspection”

OP-OC-108-109-1003, “Winter Readiness”

Condition Reports (IR)

426941, 429178, 427071, 431167, 428085, 427639, 427640, 429206, 428621, 428075

**Section 1R04: Equipment Alignment**

Procedures

308, "Emergency Core Cooling System Operation"  
2000-OPS-3024.07, "Core Spray System - Diagnostic and Restoration Actions"  
302.1, "Control Rod Drive System, B Pump"  
617.4.001, "CRD Pump Operability Test"

Condition Reports (IR)

430697, O2004-3273, and O2005-1719

Work Orders (AR)

A2100005

**Section 1R05: Fire Protection**

Condition Reports (IR)

437394, 437400, 437403, 427444

Other Documents

OC Fire Risk Analysis-Compartment Fire Scenario Development Report (R0467050033.04)  
Oyster Creek Nuclear Generating Station Fire Hazard Analysis Report (990-1746)

**Section 1R06: Flood Protection**

Procedures

EMG-3200.11, "Secondary Containment Control"  
ER-AA-310, "Implementation of the Maintenance Rule"  
ER-AA-310-1005, "Maintenance Rule - Disposition Between (a)(1) and (a)(2)"

Drawings

RW 219203, "Unit Ass'Y 8" BA-2231-W w/ Contromatics 350 SRV"  
JC 147434, "Sumps and Waste Collection System"  
Dwg 2184, "Floor & Equipment Drains Plans & Details Reactor Building"

Condition Report (IR)

O2004-4106, O2004-0387367560, 385640, 360303, 360303, 347605, 436134,

Work Order (AR)

A2131788, A2118304, A2115132, M2082881, A2111895, R2066710

Other Documents

FSAR 9.3.3.2.2, "Reactor Building Floor and Equipment Drains"  
TDR 779, "Evaluation of Possible Internal Flooding of OC Nuclear Generating Station Power Plant Buildings"  
C-1302-822-E610-076, "Flooding Due to HELBS Outside Containment"  
EQIS-315403-003, "Flooding Due to HELBS Outside Containment "  
NRC Information Notice 2005-11, "Internal Flooding/Spray-Down of Safety-Related Equipment Due to Unsealed Equipment Hatch Floor Plugs and/or Blocked Floor Drains"

NRC Information Notice 83-44, "Potential Damage to Redundant Safety Equipment as a Result of Backflow Through the Equipment and Floor Drain System"  
Vendor Manual VM-0C-0199, "Contromatics Pneumatic Actuators & Contromatics Top Entry Ball Valves"

**Section 1R11: Licensed Operator Regualification Program**

Procedures

EOP-RPV, "Control with ATWS"  
602.4.003, "Electromatic Relief Valve Operability Test"  
ABN-17, "Feedwater System Abnormal Condition"  
ABN-1, "Reactor Scram"

Other Documents

Radiological Emergency Plan for Oyster Creek Generating Station (EP-OC-1010)  
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)

373706, 372547, 373699

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**

Condition Report (IR)

427591

Procedures

ER-AA-600-1042, "On-line Risk Management"  
WC-OC-101-1001, "On-line Risk Management and Assessment"

**Section 1R14: Operator Performance During Non-routine Evolutions and Events**

Procedures

EP-OC-1010, "Radiological Emergency Plan For Oyster Creek Generating Station"  
ABN-32, "Abnormal Intake Level"

**Section 1R15: Operability Evaluations**

Procedures

LS-AA-105, "Operability Determination"

Condition Reports (IR)  
386323, 387715, 436662, 435816

Other Documents  
Operability Evaluation OC-2005-OE-0009, rev. 0  
Operability Evaluation OC-2005-OE-0009, rev. 1

**Section 1R16: Operator Workarounds**

Procedures  
OP-AA-102-103, "Operator Work-Around Program"

Condition Reports (IR)  
O2004-0693, O2005-1665, 341703

Work Orders (AR)  
A2065167, A2091595, A2116858

Other Documents  
Operator Work-Arounds/Challenges Update Dated 11/7/05  
Operator Burden Review-Based on Operator Work-Arounds and operator Challenges- 3<sup>rd</sup>  
Quarter 2005 Dated 11/9/05  
Operability Evaluation Status Dated 12/8/05  
Equipment in Degraded Status List Dated 11/17/05  
List of Compensatory Action in Unit Reactor Operator Log for 11/16/05

**Section 1R17: Permanent Plant Modifications**

Procedures  
636.4.015, "Diesel Generator #1 Fast Start Test"

Drawings  
EM 8393039, Emergency Diesel Generator #1 Electrical Elementary Wiring Diagram, Sheet 3

Work Orders (AR)  
A2073824

Other Documents  
Design Change Package OC 03-00880 001, "Replace Mecatiss on Conduit 14-25"  
Design Change Package OC 04-00769 001, "Repair of Mecatiss on Conduit 14-28"  
Design Change Package OC 05-00020 000, "Bypass EDG-1 Starting Resistors with FSR  
Relay"  
Diesel Generator #1 Fast Start, Diesel Generator #2 Fast Start 50.59 Screening Form (OC-  
2003-S-0258)  
Bypass EDG Starting Resistors With FSR Relay 50.59 Screening Form (OC-2005-S-0012)  
Simulator Work Request for the EDG1 Starting Logic Mod (SWR 7709)

**Section 1R19: Post-Maintenance Testing**

Procedures

MA-AA-716-012, Post Maintenance Testing

610.4.012, "Core Spray System 1 Pump Comprehensive/Preservice In-Service Test"

Condition Report (IR)

428377, 437215

Work Order (AR)

A0705856, A0705610, A2119027

**Section 1R22: Surveillance Testing**

Procedures

680.4.009, Remote Shutdown Panel Functional Test for Control Power Transfer and Isolation  
Condensers.

681.4.004, "Technical Specification Log Sheet "

312.9, "Primary Containment Control"

681.4.004, "Technical Specification Log Sheet, (RCS Leak Rate)"

634.2.002, "Main Station Battery Weekly Surveillance"

634.2.016, "24VDC Battery Monthly Surveillance"

Condition Reports (IR)

381279

**Section 1R23: Temporary Plant Modifications**

Condition Reports (IR)

O2003-2490, 356651, 361586, 372653, 375529, 388784

Work Order (AR)

C2006915

Other Documents

NRC IE Bulletin No. 80-14, "Degradation of BWR Scram Discharge Volume Capability"

-ECR package OC 05-00034

**Section 2OS1: Access Control to Radiologically Significant Areas**

Condition Report (IR)

354345, 380437, 380497

**2OS2: ALARA Planning and Controls**

Condition Report (IR)

380428, 383716, 383719

**2OS3 Radiation Monitoring Instrumentation and Protective Equipment**

Condition Report (IR)

384363, 385306, 385619, 385637, 387996

**2PS2 Radioactive Material Processing and Transportation**

Condition Report (IR)

426277, 393810

**Section 40A2: Identification and Resolution of Problems**

Procedures

645.4.018, "Fire Pump Monitoring Test"

645.4.019, "Redundant Fire Protection Water Supply Pump Operability Test"

645.6.012, "Fire Pump Functional Test"

645.6.020, "Redundant Fire Protection Water Supply Pump Functional Test"

Drawings

GE 223R01734160V, "Swgr 1D. P.T.UNDV. Heater D.C. Supply & DG 2 Tie", Sheet. 21

GE 223R01734160V, "Swgr D Unit D!-Main Breaker 1D", Sheet. 22

Condition Report (IR)

O2004-3912, O2005-0204, O2005-0581, O2000-0877, O2004-1727, O2004-1739, O2004-1755, O2004-4076, O2005-0204, O2005-0581, O2005-1070, O2005-1735, 356571, 366492, 371203, 378018 362525, 378018, 386089, 385678

Work Order (AR)

A2106629, A2121443, A2106629, R2074292, R2075765

Other Documents

Temp Modification OC 05-00688 000, "Replace Indicating Bulb"

Fire Protection System Health Report, 3<sup>rd</sup> Quarter 2005

NOSPA-OC-05-2Q, "Nuclear Oversight Quarterly Report April 1 - June 30, 2005"

NOSPA-OC-05-3Q, "Nuclear Oversight Quarterly Report July 1 - September 30, 2005"

Monthly Issues from Oyster Creek Nuclear Oversight Organization - Period Covering October 1, 2005 - October 31, 2005.

**Section 40A3: Event Followup**

Other Documents

NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73"

NEI 99-02, Rev 3, "Regulatory Assessment Performance Indicator Guideline"

**LIST OF ACRONYMS**

ADAMS	Agency-wide Documents Access and Management System
ALARA	As Low As Is Reasonably Achievable
AmerGen	AmerGen Energy Company, LLC
ARM	Area Radiation Monitor
ASME	American Society Mechanical Engineers
ATWS	Anticipated Transient Without Scram
CEDE	Committed Effective Dose Equivalent
CFR	Code of Federal Regulations



CRD	Control Rod Drive
EDG	Emergency Diesel Generator
EMI	Electromagnetic Interference
ESW	Emergency Service Water
IMC	Inspection Manual Chapter
IPEEE	Individual Plant Examination for External Events
LCO	Limiting Conditions for Operation
LER	License Event Report
MPFF	Maintenance Preventable Function Failure
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PI	Performance Indicator
RCS	Reactor Coolant System
RMPFF	Repetitive Maintenance Preventable Function Failure
SCBA	Self Contained Breathing Apparatus
SDP	Significance Determination Process
SSC	Structures, Systems, or Components
SV	Safety Valve
UFSAR	Updated Final Safety Analysis Report