

July 28, 2008

Mr. Charles G. Pardee
Chief Nuclear Officer (CNO) and Senior Vice President
Exelon Generation Company, LLC
AmerGen Energy Company, LLC
200 Exelon Way
Kennett Square, PA 19348

SUBJECT: OYSTER CREEK GENERATING STATION - NRC TRIENNIAL FIRE
PROTECTION INSPECTION REPORT 05000219/2008008

Dear Mr. Pardee

On June 26, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Oyster Creek Generating Station. The enclosed inspection report documents the inspection results, which were discussed on June 26, 2008, 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 team reviewed selected procedures and records, observed activities, and interviewed personnel.

The report documents one NRC-identified finding of very low safety significance (Green) that was also determined to be a violation of NRC requirements. However, because of its very low safety significance, and because it was entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a written 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 D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Senior Resident Inspector at the Oyster Creek Generating Station.

In accordance with Title 10 of the Code of Federal Regulations Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS).

Mr. C. Pardee

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(the Public Electronic Reading Room).

Sincerely,

/RA/

John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

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

Enclosure: Inspection Report No. 05000219/2008008
w/Attachment: Supplemental Information

Mr. C. Pardee

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SUNSI Review Complete: JFR (Reviewer's Initials)

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cc w/encl:

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J. Kandasamy, Regulatory Assurance Manager, Oyster Creek
R. DeGregorio, Senior Vice President, Mid-Atlantic Operations
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Mr. C. Pardee

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REGION I

Docket No.: 50-219

License No.: DPR-16

Report No.: 05000219/2008008

Licensee: AmerGen Energy Company, LLC (AmerGen)

Facility: Oyster Creek Generating Station

Location: Forked River, New Jersey

Dates: June 9 – 26, 2008

Inspectors: J. Orr, Senior Reactor Inspector, DRS (Team Leader)
M. Patel, Reactor Inspector, DRS
J. Tifft, Reactor Inspector, DRS

Approved by: John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000219/2008008; 06/09/2008 – 06/26/2008; AmerGen Energy Company, LLC, Oyster Creek Generating Station; Triennial Fire Protection Team Inspection.

The report covered a two-week triennial fire protection team inspection by specialist inspectors. One finding of very low significance was identified. This finding was determined to be a non-cited violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process (SDP) does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The team identified that in July 2002, AmerGen failed to review a change to personnel resources that would increase the time necessary to complete an NRC approved hot shutdown repair after a fire in the A 480V switchgear room. Specifically, AmerGen eliminated the need for onsite electrical or instrument and controls technician staffing at all times. This finding was determined to be of very low safety significance (Green) and a NCV of Oyster Creek Nuclear Generating Station Facility Operating License condition 2.C.(3) Fire Protection. AmerGen's immediate corrective actions for this issue included assessing current call-in processes to verify the hot shutdown repair would be completed by qualified personnel within the safe shutdown analysis time requirement.

The team determined that this finding was more than minor because it was associated with the external factors attribute (fire) of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Specifically, AmerGen did not analyze the reduction in personnel readiness for an adverse impact on implementing a hot shutdown repair to Bus USS 1B2 within the safe shutdown analysis time requirement. This finding was also similar to more than minor example 3.i in NRC Inspection Manual Chapter (IMC) 0612, Power Reactor Inspection Reports, Appendix E, Examples of Minor Issues. The team assessed this finding in accordance with NRC IMC 0609, Appendix F, Fire Protection Significance Determination Process. This finding screened to very low safety significance (Green) in phase 1 of the SDP because it was assigned a low degradation rating. A low degradation rating was assigned because actual emergency response organization call-in and drive-in data demonstrated that the hot shutdown repair would most likely be completed within the safe shutdown analysis time requirement. (Section 1R05.01)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Background

This report presents the results of a triennial fire protection inspection conducted in accordance with NRC Inspection Procedure (IP) 71111.05T, Fire Protection. The objective of the inspection was to assess whether AmerGen Energy Company, LLC (AmerGen) has implemented an adequate fire protection program and that post-fire safe shutdown capabilities have been established and are being properly maintained at the Oyster Creek Generating Station (OCGS). The following fire zones (FZs) were selected for detailed review based on risk insights from the OCGS Individual Plant Examination of External Events (IPEEE) and the Oyster Creek Fire Risk Analysis Update Project, Compartment Fire Scenario Development Report, Rev. 1:

- OB-FZ-4
- OB-FZ-6A
- OB-FZ-8C
- RB-FZ-1E

The inspection team evaluated AmerGen's fire protection program (FPP) against applicable requirements which included plant technical specifications, Operating License condition 2.C(3), NRC safety evaluations, 10 CFR 50.48, and 10 CFR 50, Appendix R. The team also reviewed related documents that included the Updated Final Safety Analysis Report (UFSAR), Section 9.5.1, the fire hazards analysis (FHA), and the post-fire safe shutdown analysis.

Specific documents reviewed by the team are listed in the attachment.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R05 Fire Protection (IP 71111.05T)

.01 Post-Fire Safe Shutdown From Outside Main Control Room (Alternative Shutdown) and Normal Shutdown

a. Inspection Scope

Methodology

The team reviewed the safe shutdown analysis, operating procedures, piping and instrumentations drawings (P&IDs), electrical drawings, the UFSAR and other supporting documents to verify that hot and cold shutdown could be achieved and maintained from outside the control room for fires that rely on shutdown from outside the control room. This review included verification that shutdown from outside the control room could be performed both with and without the availability of offsite power. Plant

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walkdowns were also performed to verify that the plant configuration was consistent with that described in the safe shutdown and fire hazards analyses. These inspection activities focused on ensuring the adequacy of systems selected for reactivity control, reactor coolant makeup, reactor decay heat removal, process monitoring instrumentation, and support systems functions. The team verified that the systems and components credited for use during this shutdown method would remain free from fire damage. The team verified that the transfer of control from the control room to the alternative shutdown locations would not be affected by fire-induced circuit faults (e.g., by the provision of separate fuses and power supplies for alternative shutdown control circuits).

Similarly, for fire areas that utilize shutdown from the control room, the team also verified that the shutdown methodology properly identified the components and systems necessary to achieve and maintain safe shutdown conditions.

Operational Implementation

The team verified that the training program for licensed and non-licensed operators included alternative shutdown capability. The team also verified that personnel required for safe shutdown using the normal or alternative shutdown systems and procedures are trained and available onsite at all times, exclusive of those assigned as fire brigade members.

The team reviewed the adequacy of procedures utilized for post-fire shutdown and performed an independent walk through of procedure steps to ensure the implementation and human factors adequacy of the procedures. The team also verified that the operators could be reasonably expected to perform specific actions within the time required to maintain plant parameters within specified limits. Time critical actions which were verified, included restoration of alternating current (AC) electrical power, establishing the remote shutdown and local shutdown panels, establishing reactor coolant makeup, and establishing decay heat removal.

Specific procedures reviewed for alternative shutdown, including shutdown from outside the control room included the following:

- ABN-29, Plant Fires, Rev. 18;
- ABN-30, Control Room Evacuation, Rev. 8; and
- 346, Operation of the Remote and Local Shutdown Panels, Rev. 1.

The team reviewed manual actions to ensure that they had been properly reviewed and approved and that the actions could be implemented in accordance with plant procedures in the time necessary to support the safe shutdown method for each fire area. The team also reviewed the periodic testing of the alternative shutdown transfer capability and instrumentation and control functions to ensure the tests were adequate to ensure the functionality of the alternative shutdown capability.

b. Findings

Introduction. The team identified that in July 2002, AmerGen failed to review a change to personnel resources that would implement an NRC approved hot shutdown repair after a fire in the A 480V switchgear room. This finding was determined to be of very low safety significance (Green) and a NCV of Oyster Creek Nuclear Generating Station Facility Operating License condition 2.C.(3) Fire Protection.

Description. NRC letter and enclosures dated June 25, 1990, granted an exemption from the requirement of 10 CFR 50 Appendix R, Section III.G.2. This requirement specified at least one safe shutdown path to maintain hot shutdown is free of fire damage without any repair. The exemption was requested to allow minor repairs outside of fire zone OB-FZ-6A to provide for the required hot shutdown capability. Specifically, a cable bus tie between both trains of vital 480V ac busses (Bus USS 1A2 and Bus USS 1B2) must be disconnected by first deenergizing Bus USS 1B2, tripping a feeder breaker to Bus USS 1A2 at its associated 4kV switchgear, physically cutting and insulating cable bus tie conductors, and then reenergizing Bus USS 1B2. Bus USS 1B2 is outside fire zone OB-FZ-6A and is necessary to maintain hot shutdown because it powers a control rod drive (CRD) pump and vital ventilation equipment. The ventilation equipment was considered limiting, and was conservatively estimated within C-1302-911-E120-002, Fire Area / Zone OB-FZ-6A Fire Safe Shutdown Analysis, Rev. 0G4, to not be needed for at least 3 hours after the scram. The minor repair as described by documented telephone conversations with the licensee in the NRC safety evaluation was estimated to require 20 minutes to complete and would be performed immediately after a fire in fire zone OB-FZ-6A.

At the time of the NRC review, Oyster Creek plant staffing maintained a minimum of two qualified electricians onsite at all times. From 2000 to 2002, AmerGen maintained two qualified electricians or instrument and control (I&C) technicians available to perform the hot shutdown repair. The plant staffing change was reviewed in AmerGen's corrective action program in CAP O2000-0621. In 2002, AmerGen again changed plant staffing such that there were times when neither electrical nor I&C personnel would be onsite to perform the hot shutdown repair. Those times were typically the evening and night shifts, weekends, and holidays. AmerGen evaluated this plant staffing change within the corrective action program in CAP O2002-0985. The CAP documented that electrical maintenance personnel were available by call-in and could be directed to the plant in time to perform repairs within 3 hours after a scram. CAP O2002-0985 also implemented corrective actions to stage the repair kit within the plant to reduce the time necessary to perform the repair.

The team discussed with engineering, maintenance, and emergency preparedness personnel the administrative processes that would ensure qualified individuals onsite and fit-for-duty in sufficient time to perform the repair within 3 hours. The team identified that AmerGen had not ensured through any administrative processes, such as emergency response requirements or duty team expectations, that qualified electricians or I&C personnel would respond in sufficient time to complete the hot shutdown repair within 3 hours.

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The team also identified that AmerGen failed to complete a fire protection program change review for the hot shutdown repair in accordance with 101.2, Oyster Creek Site Fire Protection Program, Rev. 47. The hot shutdown repair staffing was only reviewed within the corrective action program and lacked a complete review for adverse impact on the ability to achieve and maintain safe shutdown in the event of a fire.

AmerGen documented this issue in corrective action program condition report IR 00790457. AmerGen's immediate corrective actions for this issue included assessing current call-in processes to verify the hot shutdown repair would be completed by qualified personnel within the safe shutdown analysis time requirement. The performance deficiency associated with this finding involved AmerGen not adequately evaluating plant staffing changes for adverse impact on the fire protection program and specifically the ability to complete a hot shutdown repair within the 3 hour time limit as established in the safe shutdown analysis.

Analysis. The team determined that this finding was more than minor because it was associated with the external factors attribute (fire) of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Specifically, AmerGen did not analyze a reduction in personnel readiness for adverse impact on effecting a hot shutdown repair to Bus USS 1B2 within the safe shutdown analysis time requirement. This finding was also similar to more than minor example 3.i in NRC Inspection Manual Chapter (IMC) 0612, Power Reactor Inspection Reports, Appendix E, Examples of Minor Issues.

The team assessed this finding in accordance with NRC IMC 0609, Appendix F, Fire Protection Significance Determination Process. This finding affected post-fire safe shutdown systems. This finding screened to very low safety significance (Green) in phase 1 of the SDP because it was assigned a low degradation rating. A low degradation rating was assigned because actual emergency response organization call-in and drive-in data (data reviewed by the team was between March 2006 and June 2008) demonstrated that the hot shutdown repair would most likely be completed in about 2 hours by competent personnel. The safe shutdown analysis requirement of 3 hours was also conservative in that it considered ventilation necessary to a room where the majority of electrical loads would be deenergized because USS 1B2 would not yet be powered. The safe shutdown analysis also assumed the reactor was being cooled down without a CRD pump to provide makeup, which would be contrary to established operating procedures and training. For those reasons, a low degradation rating was assigned because the hot shutdown repair was feasible within a conservative safe shutdown analysis required time.

The team determined that this finding did not have a cross cutting aspect because the performance deficiency occurred several years ago and is not indicative of current AmerGen performance.

Enforcement. Oyster Creek Nuclear Generating Station Facility Operating License condition 2.C.(3) requires that "AmerGen Energy Company, LLC shall implement and maintain all provisions of the approved fire protection program as described in the

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Updated Final Safety Analysis Report for the facility.” The UFSAR section 9.5.1 considered OCGS procedure 101.2, Fire Protection Program, included in the fire protection program. 101.2, Rev. 47, section 4.12.1 required changes to the fire protection program controlled in accordance with 2000-ADM-1291.01, Oyster Creek 50.59 Review Process, or EP-013, Fire Protection Evaluation. Contrary to this, a 10 CFR 50.59 review or fire protection evaluation was not performed in July 2002 when personnel resources that would effect a hot shutdown repair were changed from always available onsite to offsite via a call-in process. Because this finding was of very low safety significance (Green) and has been entered into AmerGen’s corrective action program (IR 00790457), this violation is being treated as a NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. **NCV 05000219/2008008-01, Failure to Review the Impact of Site Staffing Changes to the Fire Protection Program.**

.02 Protection of Safe Shutdown Capabilities

a. Inspection Scope

The team reviewed the FHA, safe shutdown analyses and supporting drawings and documentation to verify that safe shutdown capabilities were properly protected. The team ensured that separation requirements of Section III.G of 10 CFR 50, Appendix R were maintained for the credited safe shutdown equipment and their supporting power, control and instrumentation cables. This review included an assessment of the adequacy of the selected systems for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and associated support system functions.

The team reviewed AmerGen’s procedures and programs for the control of ignition sources and transient combustibles to assess their effectiveness in preventing fires and in controlling combustible loading within limits established in the FHA. A sample of hot work and transient combustible control permits were also reviewed. The team performed plant walkdowns to verify that protective features were being properly maintained and administrative controls were being implemented.

The team also reviewed AmerGen’s design control procedures to ensure that the process included appropriate reviews and controls to assess plant changes for any potential adverse impact on the fire protection program and/or post-fire safe shutdown analysis and procedures.

b. Findings

No findings of significance were identified.

.03 Passive Fire Protection

a. Inspection Scope

The team walked down accessible portions of the selected fire areas to observe material condition and the adequacy of design of fire area boundaries (including walls, fire doors

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and fire dampers), and electrical raceway fire barriers to ensure they were appropriate for the fire hazards in the area.

The team reviewed installation/repair and qualification records for a sample of penetration seals to ensure the fill material was of the appropriate fire rating and that the installation met the engineering design. The team also reviewed similar records for the fire protection wraps to ensure the material was of an appropriate fire rating and that the installation met the engineering design.

b. Findings

No findings of significance were identified.

.04 Active Fire Protection

a. Inspection Scope

The team reviewed the design, maintenance, testing, and operation of the fire detection and suppression systems in the selected plant fire areas. This included verification that the manual and automatic detection and suppression systems were installed, tested, and maintained in accordance with the National Fire Protection Association (NFPA) code of record, or as NRC approved exemptions, and that each suppression system would control and/or extinguish fires associated with the hazards in the selected areas. A review of the design capability of the suppression agent delivery systems were verified to meet the code requirements for the hazards involved. The team also performed a walkdown of accessible portions of the detection and suppression systems in the selected areas as well as a walkdown of major system support equipment in other areas (e.g. fire pumps and Halon storage tanks and supply system) to assess the material condition of the systems and components.

The team reviewed electric and diesel fire pump flow and pressure tests to ensure that the pumps were meeting their design requirements. The team also reviewed the fire main loop flow tests to ensure that the flow distribution circuits were able to meet the design requirements.

The team assessed the fire brigade capabilities by reviewing training, qualification, and drill critique records. The team also reviewed pre-fire plans and smoke removal plans for the selected fire areas to determine if appropriate information was provided to fire brigade members and plant operators to identify safe shutdown equipment and instrumentation, and to facilitate suppression of a fire that could impact post-fire safe shutdown capability. In addition, the team inspected the fire brigade equipment (including smoke removal equipment) to determine operational readiness for fire fighting.

b. Findings

No findings of significance were identified.

.05 Protection From Damage From Fire Suppression Activities

a. Inspection Scope

The team performed document reviews and plant walkdowns to verify that redundant trains of systems required for hot shutdown are not subject to damage from fire suppression activities or from the rupture of inadvertent operation of fire suppression systems. Specifically, the team verified that:

- A fire in one of the selected fire areas would not directly, through production of smoke, heat or hot gases, cause activation of suppression systems that could potentially damage all redundant safe shutdown trains;
- A fire in one of the selected fire areas (or the inadvertent actuation or rupture of a fire suppression system) would not directly cause damage to all redundant trains (e.g. sprinkler caused flooding of other than the locally affected train); and,
- Adequate drainage is provided in areas protected by water suppression systems.

b. Findings

No findings of significance were identified.

.06 Alternative Shutdown Capability

a. Inspection Scope

Alternative shutdown capability for the areas selected for inspection utilizes shutdown from outside the control room and is discussed in section 1R05.01 of this report.

b. Findings

No findings of significance were identified.

.07 Circuit Analysis

a. Inspection Scope

The team verified that AmerGen performed a post-fire safe shutdown analysis for the selected fire areas and the analysis appropriately identified the structures, systems, and components important to achieving and maintaining safe shutdown. Additionally, the team verified that AmerGen's analysis ensured that necessary electrical circuits were properly protected and that circuits that could adversely impact safe shutdown due to hot shorts, shorts to ground, or other failures were identified, evaluated, and dispositioned to ensure spurious actuations would not prevent safe shutdown.

The team's review considered fire and cable attributes, potential undesirable consequences and common power supply/bus concerns. Specific items included the

credibility of the fire threat, cable insulation attributes, cable failure modes, and actuations resulting in flow diversion or loss of coolant events.

The team also reviewed cable raceway drawings for a sample of components required for post-fire safe shutdown to verify that cables were routed as described in the cable routing matrices.

Cable failure modes were reviewed for the following components:

- P-11-2, Condensate Transfer Pump 1-2;
- P-17-2, Shutdown Cooling Pump B;
- V-11-34, Isolation Condenser B Makeup Valve;
- V-17-19 & V-17-54, Shutdown Cooling Inlet & Outlet Isolation Valves; and,
- PI-622-1026 (ALT) & PI-622-1027 (ALT), Reactor Pressure Instruments.

The team reviewed circuit breaker coordination studies to ensure equipment needed to conduct post-fire safe shutdown activities would not be impacted due to a lack of coordination. The team confirmed that coordination studies had addressed multiple faults due to fire. Additionally, the team reviewed a sample of circuit breaker maintenance records to verify that circuit breakers for components required for post-fire safe shutdown were properly maintained in accordance with procedural requirements.

b. Findings

No findings of significance were identified.

.08 Communications

a. Inspection Scope

The team reviewed safe shutdown procedures, the safe shutdown analysis, and associated documents to verify an adequate method of communications would be available to plant operators following a fire. During this review the team considered the effects of ambient noise levels, clarity of reception, reliability, and coverage patterns. The team also inspected the designated emergency storage lockers to verify the availability of portable radios for the fire brigade and for plant operators. The team also verified that communications equipment such as repeaters and transmitters would not be affected by a fire.

b. Findings

No findings of significance were identified.

.09 Emergency Lighting

a. Inspection Scope

The team observed the placement and coverage area of eight-hour emergency lights throughout the selected fire areas to evaluate their adequacy for illuminating access and egress pathways and any equipment requiring local operation and/or instrumentation monitoring for post-fire safe shutdown. The team also verified that the battery power supplies were rated for at least an eight-hour capacity. Preventive maintenance procedures, the vendor manual, completed surveillance tests, and battery replacement practices were also reviewed to verify that the emergency lighting was being maintained in a manner that would ensure reliable operation.

b. Findings

No findings of significance were identified.

.10 Cold Shutdown Repairs

a. Inspection Scope

The team verified that AmerGen had dedicated repair procedures, equipment, and materials to accomplish repairs of components required for cold shutdown which might be damaged by the fire to ensure cold shutdown could be achieved within the time frames specified in their design and licensing bases. The team verified that the repair equipment, components, tools, and materials (e.g. pre-cut cables with prepared attachment lugs) were available and accessible on site.

b. Findings

No findings of significance were identified.

.11 Compensatory Measures

a. Inspection Scope

The team verified that compensatory measures were in place for out-of-service, degraded or inoperable fire protection and post-fire safe shutdown equipment, systems, or features (e.g. detection and suppression systems and equipment, passive fire barriers, or pumps, valves or electrical devices providing safe shutdown functions or capabilities). The team also verified that the short term compensatory measures compensated for the degraded function or feature until appropriate corrective action could be taken and that AmerGen was effective in returning the equipment to service in a reasonable period of time.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]**4OA2 Identification and Resolution of Problems****.01 Corrective Actions for Fire Protection Deficiencies****a. Inspection Scope**

The team verified that AmerGen was identifying fire protection and post-fire safe shutdown issues at an appropriate threshold and entering them into the corrective action program. The team also reviewed a sample of selected issues to verify that AmerGen had taken or planned appropriate corrective actions.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit**Exit Meeting Summary**

The team presented their preliminary inspection results to Mr. T. Rausch, Site Vice President, and other members of the site staff at an exit meeting on June 26, 2008. No proprietary information was included in this inspection report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

ATTACHMENT
SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

M. Carlson, Fire Protection Program Engineer
S. Dupont, Regulatory Assurance Specialist
B. Eagan, Reactor Operator
M. Godknecht, Response Team Lead
A. Hertz, Fire Protection Program Engineer
J. Kandasamy, Manager, Regulatory Assurance
D. Kemper, Emergency Preparedness Manager
D. Kettering, Director, Engineering
R. Milos, Regulatory Assurance Supervisor
N. Onuorah, System Engineer
C. Pragman, Corporate Fire Protection Program Manager
T. Prosser, Fire Marshal
S. Quick, Licensed Operator Training Manager
J. Randich, Plant Manager
T. Rausch, Site Vice President
B. Renton, Electrical Supervisor
J. Sisak, Unit Supervisor
T. Trettel, System Engineer
H. Tritt III, Shift Manager

NRC

J. Rogge, Chief, Engineering Branch 3, Division of Reactor Safety
W. Schmidt, Senior Reactor Analyst, Division of Reactor Safety
M. Ferdas, Senior Resident Inspector, OCGS
J. Kulp, Resident Inspector, OCGS

Others

R. Zak, State of New Jersey, Bureau of Nuclear Engineering

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Opened and Closed

05000219/2008008-01	NCV	Failure to Review the Impact of Site Staffing Changes to the Fire Protection Program
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Closed

None.

Discussed

None.

LIST OF DOCUMENTS REVIEWED

Fire Protection Licensing Documents

990-1746, Oyster Creek Fire Hazards Analysis Report, Rev. 14
Updated Final Safety Analysis Report, Section 9.5.1 – Fire Protection Program, Revs. 7 & 15
SER, Fire Protection, March 3, 1978
SER, Fire Protection, Supplement No. 2, November 13, 1979
SER, Fire Protection, Supplement No. 3, August 25, 1980
Letter Dated March 24, 1986, Exemptions from Requirements of Appendix R to 10 CFR Part 50, Section III.G.2 and the Post Fire Safe Shutdown Capability
Letter Dated June 1990, Exemption from Certain Technical Requirements Contained in Section III.G of Appendix R to 10 CFR Part 50

Engineering Changes

ECD C400013, Thermo-Lag Raceway Cable Upgrade Modifications, 10/14/00
ECR-01-00682, Evaluate Pen Seals 128 & 129, Rev. 0
ECR-01-01152, Perform Evaluation of Pen Seal 199, Rev. 0
ECR-01-01153, Perform Evaluation of Pen Seals 625 and 626, Rev. 0
ECR-01-01154, Perform Evaluation of Pen Seals 675 and 676, Rev. 0
ECR-07-00396, Replace Outdoor ELUs, Rev. 0

Calculations/Engineering Evaluation Reports

776443-02
783160-02
A2046137-52
C-1302-813-E120-001, Halon 1301 Fire Protection Systems for Main Control Room Systems A, B, and C, and AB Battery Room System, Rev. 0
SE 328348, Evaluation of Reactor Building Thermolag Stairwell, Rev. 1
C-1302-911-E120-001, Fire Area / Zone OB-FA-05 Fire Safe Shutdown Analysis, Rev. 0G3
C-1302-911-E120-002, Fire Area / Zone OB-FZ-6A Fire Safe Shutdown Analysis, Rev. 0G4

Attachment

C-1302-911-E120-003, Fire Area / Zone OB-FZ-8C Fire Safe Shutdown Analysis, Rev. 0G4
C-1302-911-E120-006, Fire Area / Zone RB-FZ-1E and RB-FZ-1G Fire Safe Shutdown Analysis, Rev. 0G3
C-1302-911-E120-008, Fire Area / Zones TB-FZ-11C & TB-FA-26 – Fire Safe Shutdown Analysis, Rev. 0G2
C-1302-225-5360-033, Capacity of CRD Return Line, Rev. 0
ETR-P1787-001, Appendix R Evaluation of Electrical Protective Device Coordination, Rev. 0
OCMM-402728-007, Installation Specification for Appendix R Deviations – EMRV Disable Control Switches and Reactor Cleanup System Isolation Valves, Rev. 1
SDD-OC-642A, System Design Description for Appendix R Modifications to Electromatic Relief Valves, Rev. 4
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ABN-3, Loss of Shutdown Cooling, Rev. 1
ABN-29, Plant Fires, Rev. 18
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FSP-OB6A, Fire Support Procedure for A 480V Switchgear Room, Rev. 0
FSP-OB8C, Fire Support Procedure for A/B Battery Room, Rev. 0
FSP-RB1E, Fire Support Procedure for RB 23' Elevation, Rev. 0
FSP-TB11C, Fire Support Procedure for 4160V Swgr Rm A and B, Rev. 0
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GE 157B6350, Battery and MG Set Room Ventilation Electrical Elementary Diagram, Sheet 77A, Rev 1; Sheet 83B, Rev. 2

JC19479, Fire Protection Water System Flow Diagram, Sheet 1, Rev. 38; Sheet 2, Rev. 36; Sheet 3, Rev. 66; Sheet 4, Rev. 30

JC19629, Fire Protection Halon Flow Diagram, Sheet 2, Rev. 8

M0361, Fire Zone Penetration Sealing Reactor Building El. 23' 6", Sheet 1, Rev. 2

M0401, Penetration PV-38 Fire Damper Detail, Sheet 1, Rev. 1

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E1104, Elementary Diagram, Remote Shutdown Panel Transfer Scheme, Rev. 3
E1106, Elementary Diagram, Remote Shutdown Panel Transfer Scheme, Rev. 2
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OB-FZ-8C, A and B Battery Room, Electric Tray Room, Rev. 4/08
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A 480 V Room, 8/23/07
AB Battery Room, 1/03/08, 6/23/07, 3/30/06
AB Battery Room and Electric Tray Room, 1/20/07
EDG2 Room, 06/04/08
Lower Cable Spreading Room, 5/16/08, 8/16/07, 8/10/06
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00382246	00610597	00620759	00730440	00764845
00394035	00620759	00623961	00732999	00776450
00398861	00621491	00631838	00738581	00780575
00464665	00623961	00631844	00738588	00785266
00527339	00646890	00673565	00738596	00785687
00533622	00648804	00694153	00739277	00785820
00551248	00650484	00695151	00741653	00785829
00577227	00654586	00703714	00755550	00785865
00578193	00658171	00705029	00756133	00789723
00604433	00659078	00709833	00761475	00790457
00605561	00606781	00722486	00761653	

Work Orders

R2116575	A2188610	C0542685
00549813	A2189641	C0549813

LIST OF ACRONYMS

AC	Alternating Current
ADAMS	Agency-wide Documents Access and Management System
AmerGen	AmerGen Energy Company, LLC
CFR	Code of Federal Regulations
CRD	Control Rod Drive
DRS	Division of Reactor Safety
FA	Fire Area
FHA	Fire Hazards Analysis
FPP	Fire Protection Program
FZ	Fire Zone
I&C	Instrument and Controls
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
NCV	Non-cited Violation
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
OCGS	Oyster Creek Generating Station
PAR	Publicly Available Records
P&ID	Piping and Instrumentation Drawing
QA	Quality Assurance
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SER	Safety Evaluation Report
UFSAR	Updated Final Safety Analysis Report
USS	Unit Substation