December 5, 2005

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

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION - NRC TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000219/2005008

Dear Mr. Crane:

On November 4, 2005, the NRC completed a triennial fire protection team inspection at the Oyster Creek Nuclear Generating Station. The enclosed report documents the inspection results which were discussed at an exit meeting on November 4, 2005, with Mr. B. 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 purpose of the inspection was to evaluate your post-fire safe shutdown capability and fire protection program. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC identified one finding of very low safety significance (Green) that was a violation of NRC requirements. However, because of the very low safety significance and because it is 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 the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Oyster Creek Nuclear Generating Station.

In accordance with 10 CFR 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 NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/ADAMS.html (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: NRC Inspection Report 05000219/2005008

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, Interim Assistant Director of Radiation Programs, State of New Jersey
Acting Manager, 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

Mr. Christopher M. Crane

Distribution w/encl: **(via e-mail)**
S. Collins, RA
M. Dapas, DRA
A. Blough, DRS
M. Gamberoni, DRS
J. Rogge, DRS
K. Young, DRS
W. Schmidt, DRS
R. Bellamy, DRP
M. Ferdas, DRP, Senior Resident Inspector
J. DeVries, DRP, Resident OA
S. Lee, RI OEDO
R. Laufer, NRR
P. Tam, PM, NRR
J. Boska, NRR
Region I Docket Room (with concurrences)
ROPreports@nrc.gov

SISP Review Complete: JFR

DOCUMENT NAME: E:\Filenet\ML053400109.wpd

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:DRS		RI:DRS		RI:DRP		RI:DRS	
NAME	KAYoung/JFR for		JFRogge/JFR		RRBellamy/RC for		WLSchmidt/WAC for	
DATE	11/29/05		11/29/05		11/29/05		12/05/05	

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.	05000219
License No.	DPR-16
Report No.	05000219/2005008
Licensee:	AmerGen Energy Company, LLC
Facility:	Oyster Creek Nuclear Generating Station
Location:	Forked River, NJ
Dates:	October 17, 2005 - November 4, 2005
Inspectors:	K. Young, Senior Reactor Inspector, DRS L. Cheung, Senior Reactor Inspector, DRS R. Bhatia, Reactor Inspector, DRS T. Sicola, Reactor Inspector, DRS D. Werkheiser, Reactor Inspector, DRS
Approved by:	John F. Rogge, Chief Engineering Branch 3 Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000219/2005008; 10/17/2005 - 11/04/2005, Oyster Creek Nuclear Generating Station; Triennial Fire Protection Team Inspection, Fire Protection.

The report covered a two-week triennial fire protection team inspection by five Region I specialist inspectors. One Green finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, 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 Findings

Cornerstone: Mitigating Systems

- Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix R, Section III.G.2. AmerGen Energy included unapproved manual actions in their fire safe shutdown analyses and safe shutdown procedure to operate equipment necessary for achieving and maintaining hot shutdown. Several of these manual actions did not meet the requirements of Appendix R, Section III.G.2 and the NRC had not granted exemptions to allow these actions.

  In accordance with the guidance provided in inspection procedure 71111.05T, "Fire Protection," (issue dated: 02/18/05) this finding is greater than minor. The finding is of very low safety significance because the manual actions are reasonable and are expected to meet the criteria outlined in Enclosure 2 of inspection procedure 71111.05T. (Section 4OA5.01).

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, 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 Nuclear Generating Station (OCNGS). Four plant areas that included the following fire zones (FZs) and fire areas (FAs), were selected for detailed review based on risk insights from the Oyster Creek Individual Plant Examination (IPE)/Individual Plant Examination of External Events (IPEEE):

- Fire Zone OB-FZ-5
- Fire Zone TB-FZ-11C
- Fire Area TB-FA-3A
- Fire Area TB-FA-3B

The inspection team evaluated the AmerGen Energy's fire protection program (FPP) against applicable requirements which include 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 include the Updated Final Safety Analysis Report 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

1R05 Fire Protection

.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 instrumentation drawings (P&IDs), electrical drawings, the updated final safety analysis report (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 walkdowns were also performed to verify that the plant

configuration was consistent with that described in the post-fire 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 location(s) 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, and 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 AC electrical power, establishing the remote shutdown and local shutdown panels, establishing reactor coolant makeup using the control rod drive and isolation condenser systems 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. 5
- ABN-30, Control Room Evacuation, Rev. 4
- 346, Operation of The Remote and Local Shutdown Panels, Rev. 11

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 are adequate to ensure the functionality of the alternative shutdown capability.

b. Findings

No findings of significance were identified.

.02 Protection of Safe Shutdown Capabilities

a. Inspection Scope

The team reviewed the fire hazards analysis, 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 Energy'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 Energy'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 and fire dampers) to ensure they were appropriate for the fire hazards in the area. Additionally, the team reviewed a fire wrap (Mecatiss) installation in fire zone TB-FZ-11C to ensure it met it's installation and design requirements.

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.

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 deviations, and that they would control and/or extinguish fires associated with the hazards in the selected areas. A review of the design capability of suppression agent delivery systems was verified to meet the code requirements for the fire hazards involved. The team also performed a walkdown of accessible portions of the detection and suppressions systems in the selected areas as well as a walkdown of major system support equipment in other areas (e.g., fire protection pumps, Halon and/or Carbon Dioxide (CO_2) storage tanks and supply system) and 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 also assessed the fire brigade capabilities by reviewing training and qualification records, 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. In addition, the team inspected the fire brigade's protective ensembles, self-contained breathing apparatus (SCBA), and various 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 or 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 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).
- 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.

.07 Circuit Analyses

a. Inspection Scope

The team verified that the licensee performed a post-fire safe shutdown analysis for the selected fire areas and that the analysis appropriately identified the structures, systems and components important to achieving and maintaining post-fire safe shutdown. Additionally, the team verified that AmerGen Energy'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, multiple spurious actuations, actuations resulting in flow diversion or loss of coolant events.

The team also reviewed cable raceway drawings and routing lists 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-15-1B, Control Rod Drive Pump “B”
- V-14-32, Steam Line Valve - Train B (AC)
- V-14-33, Steam Line Valve - Train B (DC)
- V-14-35, Condensate Valve - Train B (DC)
- V-14-37, Condensate Valve - Train B (AC)
- LI-211-994 (ALT), Isolation Condenser B Shell Water Level
- LI-622-1028 & LI-622-1029, Fuel Zone Level 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 and 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 post-fire 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. The team also verified that communications equipment such as repeaters, transmitters, etc. 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, and in specified locations permanent essential lighting, 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 8-hour capacity. Preventive maintenance procedures and various documents, including the vendor manuals and completed surveillance tests were reviewed to ensure adequate surveillance testing and periodic battery replacements were in place to ensure reliable operation of the eight-hour emergency lights and that the emergency lighting units were being maintained consistent with the manufacturer's recommendations and accepted industry practices.

b. Findings

No findings of significance were identified.

.10 Cold Shutdown Repairs

a. Inspection Scope

The team verified that AmerGen Energy 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., precut cables with prepared attachment lugs) were available and accessible onsite. Repair procedures reviewed included M0344, Appendix R Repair Wide Range Level Transmitter LT-IA12 Replacement, Rev. 1, and alternative level instruments to provide wide range level indication.

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 Energy 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

4OA2 Identification and Resolution of Problems

.01 Corrective Actions for Fire Protection Deficiencies

a. Inspection Scope

The team verified that AmerGen Energy 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 Energy had taken or planned appropriate corrective actions.

The team reviewed corrective actions associated with Appendix R circuit breaker coordination for instrument panel IP-4 (IR 00387804), which included review of a 1985 Burns and Roe Co. report number 3731-030, Appendix R Evaluation for Coordination of Circuit Breakers Located at MCCs or Power Panels. The report identified circuit breaker coordination deficiencies associated with instrument panel IP-4. The team also reviewed modifications that were implemented to resolve the identified deficiencies as documented in GPU report SDD-OC-730A, Modification to Circuit Breaker Coordination for Compliance with Appendix R, 1985. The modifications included adding a 200 ampere fuse in series with a 70 ampere circuit breaker in IP-4. The circuit breaker and fuse were not properly coordinated with the IP-4 supply breakers (upstream breakers). A fire in the appropriate fire zones could cause the IP-4 supply breakers to trip, thus causing IP-4 to de-energize. AmerGen Energy did not provide a basis as to why the 200 ampere fuse was installed during the modification process.

Additionally, the team reviewed a March 2002, Engineering Planning and Management (EPM), Inc., letter (EL6642002-006) which identified several circuit breaker coordination enhancements. The recommended enhancements did not include resolution of the IP-4 circuit breaker coordination issues.

On October 19, 2005, AmerGen Energy identified lack of coordination for breakers at instrument panel IP-4 and issued IR 00387804.

b. Findings

No findings of significance were identified.

The team determined that the corrective actions in 1985 were not effective in resolving circuit breaker coordination issues because the issue for instrument panel IP-4 remained after modifications were incorporated. The 2002 evaluation and recommended enhancements, was an opportunity for AmerGen Energy to identify and correct the IP-4 lack of circuit breaker coordination issue. When AmerGen Energy identified the issue in October 2005, they entered it into their corrective action program and implemented compensatory measures (hourly fire watch) pending resolution.

4OA5 Other Activities

.01 (Closed) Unresolved Item (URI) 05000219/2002011-01, Spurious Operation of an Electromatic Relief Valve (EMRV) and Manual Operation of Core Spray.

During a previous triennial fire protection inspection (NRC IR 05000319/2002005, January 24, 2003) the team identified an unresolved item concerning the acceptability of AmerGen Energy's use of manual actions to remotely operate equipment necessary for achieving and maintaining hot shutdown, in lieu of providing protection to the cables associated with that equipment, as a method of complying with 10 CFR Part 50, Appendix R, Section III.G.2. Specifically, the team found that OCNGS relied on a manual operator actions, without an approved exemption from the regulations, to defeat the spurious operation of an EMRV for fire conditions in fire zone RB-FZ-1D.

During this inspection, the team reviewed CAP Number 02003-0035 and associated corrective actions, document number R0467050033.04, Oyster Creek Fire Risk Analysis Updated Project - Compartment Fire Scenario Development Report, Rev. 1, calculation C-1302-810-5450-004, Appendix R - Stuck Open EMRV, Rev. 1, document number C-1302-911-E120-005, Fire Area/zones RB-FZ-1D and RB-FZ-1G - Fire Safe Shutdown Analysis and various fire protection safety evaluation reports. The team determined that the likelihood of a fire in fire zone RB-FZ-1D to challenge EMRV operation is very small. However, AmerGen Energy's continued to implement unapproved manual actions to open the Core Spray System II, parallel path injection valve (V-20-21), in the unlikely event that a fire caused the spurious operation of an EMRV. The results of this review are described in the following paragraphs.

Introduction. The team identified a Green non-cited violation (NCV) because AmerGen Energy used manual actions to operate equipment necessary for achieving and maintaining hot shutdown in lieu of providing protection for the cables associated with that equipment, as required by 10 CFR Part 50, Appendix R, Section III.G.2.

Description. The team reviewed safety evaluation reports and did not identify any NRC reviews that approved manual actions for fire zone RB-FZ-1D (Appendix R, III.G.2. fire area). However, the post-fire safe shutdown analyses described the fire areas and the required manual actions to achieve and maintain safe shutdown. The actions included removing fuses, tripping or closing circuit breakers and manual operation of motor-operated valves (MOVs) from motor control centers.

During this inspection, the team reviewed post fire safe shutdown analyses for fire zones RB-FZ-1D and TB-FZ-11C. The team also reviewed the post-fire safe shutdown analyses for fire areas TB-FA-3A and TB-FA-3B. The team found that these analyses identified manual actions necessary for post fire safe shutdown and that these actions were incorporated into the post-fire safe shutdown procedure. These additional manual actions did not meet the requirements of Appendix R, Section III.G.2 and the NRC had not granted exemptions to allow these actions. The manual actions that were identified in the post-fire safe shutdown analyses but not approved by the NRC included removing fuses, tripping or closing circuit breakers and operating MOVs. Discussions with AmerGen Energy revealed that other Appendix R, III.G.2. areas of OCNGS also implement unapproved manual actions.

Analysis. Inspection procedure 71111.05T (issue date February 18, 2005) states that, "If the inspectors determine that manual actions are reasonable and are expected to meet the criteria outlined in Enclosure 2, then the inspection report will identify this issue as a green finding pending the Commission's acceptance of the proposed staff initiative to incorporate the use of manual actions into Section III.G.2 of the code. (The green finding is an indicator that while compensatory measures in the form of manual actions have been implemented and are acceptable, the licensee continues to be in violation of the code requirements). If the inspectors determine that the manual actions are not reasonably accomplishable and, therefore, implementation may not lead to a safe plant condition, the preliminary finding will be identified as potentially greater than green and entered into the significance determination process (SDP)."

The team determined that, (1) adequate diagnostic instrumentation was provided to detect spurious actuation of equipment and accomplishment of manual actions; (2) the environmental conditions potentially encountered by the operator(s) while accessing and performing the manual actions were reasonable; (3) staffing was sufficient and training adequate; (4) procedures were available for performing the planned manual action; (5) communication means had been provided; (6) when necessary, special tools had been dedicated and made available for use; (7) the equipment requiring manipulation was accessible; and (8) the AmerGen Energy fire protection team had confirmed their ability to perform the required manual actions within the specified time. Therefore, the team concluded that the manual actions were reasonable and were expected to meet the criteria of Enclosure 2.

Enforcement. Title 10 of the Code of Federal Regulations (CFR), Part 50.48, "Fire Protection," and 10 CFR Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," establish specific fire protection features required to satisfy 10 CFR Part 50, Appendix A, General Design Criterion 3, "Fire Protection." Appendix R applies to licensed nuclear power stations that were operating prior to January 1, 1979, which includes OCNGS. Section III.G.2 of Appendix R to 10 CFR Part 50 requires that, "where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of

primary containment, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:

a. Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of or supporting such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier;

b. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area; or

c. Enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a 1-hour rating. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area."

Contrary to the above, the team found that, at OCNGS, AmerGen Energy included manual actions in the fire protection safe shutdown analysis for Appendix R, III.G.2, fire areas, to operate equipment necessary for achieving and maintaining hot shutdown. Several of these manual actions did not meet the requirements of Appendix R, Section III.G.2. and the NRC had not granted exemptions to allow these actions. This issue was determined to be of very low safety significance because OCNGS application of manual actions met the criteria established in IP 71111.05T, Enclosure 2, and was entered into the OCNGS corrective action program (IR 00394035). This violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy:
NCV 05000219/2005008-01, Failure to Provide Protection in Accordance with 10 CFR Part 50, Appendix R, Section III.G.2. This unresolved item is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The team presented their preliminary inspection results to Mr. B. Swenson, Site Vice President, and other members of the site staff at an exit meeting on November 4, 2005. No proprietary information was included in this inspection report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

AmerGen Energy Personnel

B. Swenson, Site Vice President
M. Button, Site Engineering Director
J. O'Rouke, Site Engineering Director (Assistant)
A. Aggarwal, Electrical Engineer
H. Behrens, HR Manager
R. Brown, Operations
J. Camire, BOP Systems Manager (Acting)
M. Carlson, Fire Protection Program Engineer
J. Dontal, Shift Operations Superintendent
M. Heck, ELU System Engineer
S. Hutchins, Electrical and I&C Manager
J. O'Rouke, Assistant Site Engineering Director
R. Milos, Reg. Assurance Engineer
T. Powell, Engineering Programs Manager
C. Pragman, Corporate Fire Protection Program Manager
T. Prosser, Fire Marshal
H. Sharma, Electrical Design Engineer
B. Sullivan, Operator
T. Trettel, Fire Protection System Manager

NRC

J. Rogge, Chief, Engineering Branch 3, Division of Reactor Safety
M. Ferdas, Senior Resident Inspector, Oyster Creek Nuclear Generating Station

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Open and Closed

05000219/2005008-01	NCV	Failure to Provide Protection in Accordance with 10 CFR Part 50, Appendix R, Section III.G.2. (Section 4OA5.01)

Closed

05000219/2002011-01	URI	Spurious Operation of an Electromatic Relief Valve (EMRV) and Manual Operation of Core Spray (Section 4OA5.01)

Discussed

NONE

LIST OF DOCUMENTS REVIEWED

Fire Protection & Fire Protection Licensing Documents

990-1746, Oyster Creek Fire Hazards Analysis Report, Rev. 13
EAGWB-593, RIA Response Letter to NRC for Fire Protection Program, dated October 3,1977
Final Safety Analysis Report (Updated), Section 9.5 - Fire Protection Program
Technical Requirements Manual
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

Calculations/Engineering Evaluation Reports

C-1302-211-E320-126, Isolation Condenser Shell Level Uncertainty Calculation
C-1302-622-5350-036, Rx Water Lvl Rng & Setpoint Recalibration-ID13s, RE18s, FZLS, Rev. 1
C-1302-730-5350-004, Generic Letter 89-10 MOV Degraded Grid Voltage Calculation, Rev. 8
C-1302-730-5350-008, Generic Letter 89-10 MOV Voltage Drop Calculation for MOVs, Rev, 4
C-1302-733-E510-015, OC Vital AC System Automatic Bus Transfer Switches Coordination, Rev. 1
C-1302-822-E610-076, Flooding due to HELBs Outside Containment, Rev. 0
C-1302-911-E120-001, Fire Area/Zones OB-FZ-5, Rev. OG2
C-1302-911-E120-005, Fire Area/Zones RB-FZ-1D and RB-FZ-1G - Fire Safe Shutdown Analysis, Rev. 0
C-1302-911-E120-008, Fire Area/Zones TB-FZ-11C & TB-FA-26, Rev. OG2
C-1302-911-E120-037, Fire Area/Zones TB-FA-3A, Rev. OG2
C-1302-911-E120-038, Fire Area/Zones TB-FA-3B, Rev. OG2
C-1302-810-5450-004, Appendix R - Stuck Open EMRV, Rev. 1
R0467050033.04, Oyster Creek Fire Risk Analysis Update Project Compartment Fire Scenario Development Report, Rev. 1
V-14-0035 & - 0037, AC Motor Operated Gate Valve Calculation, Rev. 1

3731-29-E005, Determination of Critical Length
3731-78-07-001, Determination of Critical Length of Feeders on Instrument Panels 4, 4A, 4B and 4C

Procedures

ABN-29, Plant Fires, Rev. 5
ABN-30, Control Room Evacuation, Rev. 4
CC-AA-102, Design Input and Configuration Change Impact Screening, Rev. 10
CC-AA-112, Temporary Configuration Changes, Rev. 10
CC-AA-209, Fire Protection Program Configuration Change Review, Rev. 1
CC-AA-211, Fire Protection Program, Rev. 2
CC-AA-211-1001, Generic Letter 86-10 Evaluations, Rev. 0
CC-OC-112-1001, Temporary Configuration Change Implementation, Rev. 4
CC-MA-209-1001, Fire Protection Program Configuration Change Review, Rev. 1
CC-MA-209-1002, Combustible Loading Database Control for Oyster Creek, Rev. 0
OP-AA-201-001, Fire Marshal Tours, Rev. 2
OP-AA-201-002, Fire Reports, Rev. 1
OP-AA-201-003, Fire Drill Performance, Rev. 6
OP-AA-201-004, Fire Prevention for Hot Work, Rev. 0
OP-AA-201-005, Fire Brigade Qualification, Rev. 4
OP-AA-201-006, Control of Temporary Heat Sources, Rev. 0
OP-AA-201-007, Fire Protection System Impairment Control, Rev. 3
OP-AA-201-008, Pre-Fire Plans, Rev. 1
OP-AA-201-009, Control of Transient Combustible Material, Rev. 4
OP-MA-201-004, Fire Prevention for Hot Work, Rev. 0
OP-MA-201-007, Fire Protection System Impairment Control, Rev. 3
OP-OC-100, Oyster Creek Conduct of Operations, Rev. 4
TQ-AA-127, Fire Brigade Training Program, Rev. 3
101.2, Oyster Creek Site Fire Protection Program, Rev. 53
333, Plant Fire Protection System, Rev. 81
346, Operation of The Remote and Local Shutdown Panels, Rev. 11
645.2.002, Fire Pump Diesel Weekly Battery Surveillance, Rev. 23
645.2.027, Fire Pump Diesel Monthly Battery Surveillance, Rev. 11
609.3.008, Isolation Condenser "B" Shell Water Level Instrument Calibration (IG06B)
645.3.037, Fire Pump Diesel 1-2 Controller Check and Component Cal., Rev. 2
645.4.001, Fire Pump #1 Operability Test, Rev. 56
645.4.018, Fire Pump Monitoring Test, Rev. 52
645.4.019, Redundant Fire Protection Water Supply Pump Operability Test, Rev. 15
645.4.036, Fire Pump #2 Operability Test, Rev. 9
645.6.010, Fire Suppression Deluge Valve Functional Test, Rev. 29
645.6.012, Fire Pump Functional Test, Rev. 28
645.6.013, Fire Suppression System Halon Functional Test, Rev. 19
645.6.014, Fire Suppression System Halon Cylinder Check, Rev. 9
645.6.015, Low Pressure CO2 System Valve Position Verification, Rev. 9
645.6.016, Fire Suppression Low Pressure CO2 System Functional Test, Rev. 8
645.6.017, Fire Barrier Penetration Surveillance, Rev. 10

645.6.020, Redundant Fire Protection Water Supply Pump Functional Test, Rev. 7
645.6.023, Fire Suppression Water System Underground Flow Test, Rev. 9
645.6.026, Fire Damper Inspection, Rev. 11
645.6.028, Thermo-Lag and Mecatiss Envelope System Fire Barriers, Rev. 7
645.6.032, Fire Detection System Alarm Circuitry Test for Turbine Building & 4160V Switchgear Room, Rev. 16
645.6.033, Fire Detection System Alarm Circuitry Test for Control Room & Upper and Lower Cable Spreading Room, Rev. 12
664.3.006, Fuel Zone Channels C and D: Ancillary Components Calibration and Test
2400-APR-3665.01, Appendix R - Temporary Reactor Water Level Instrument, Rev. 9
2400-APR-3900.01, Appendix R Repair Kit Annual Inspection, Rev. 14

Completed Tests/Surveillances

6-Month ELU Conductance Test for TB & MOB, completed January 10, 2005; July 07, 2004
ELU 90 min. Discharge TB & MOB, completed July 09, 2005
Monthly App. 'R' ELU Inspection for TB & MOB, completed May 21, 2005; April 17, 2005
R2044667, Component Inspections to Verify Watertight, January 04, 2005
WO R2067430, Isolation Condenser "B" Shell Water Level Instrument Calibration (IG06B), Completed July 13, 2005
WO R2070743, Fuel Zone Level Channel "D" Component Calibration, Completed September 23, 2005
WO R2070492, Fuel Zone Level Channel "C" Component Calibration, Completed September 16, 2005
645.2.002, Fire Pump Diesel Weekly Battery Surveillance, Rev. 23, Completed September 8, 2005, & September 16, 2005
645.2.027, Fire Pump Diesel Monthly Battery Surveillance, Rev. 11, August 19, 2005, September 19, 2005, & September 22, 2005
645.3.037, Fire Pump Diesel 1-2 Controller Check and Component Calibration, Rev. 11, Completed July 8, 2004, & July 14, 2004
645.4.001, Fire Pump #1 Operability Test, Rev. 56, August 5, 2005, & August 9, 2005
645.4.018, Fire Pump Monitoring Test, Rev. 52, Completed July 12, 2004, & July 19, 2004
645.4.019, Redundant Fire Protection Water Supply Pump Operability Test, Rev. 15, Completed August 10, 2005, & September 16, 2005
645.4.036, Fire Pump #2 Operability Test, Rev.9, Completed August 5, 2005, & August 19, 2005
645.6.010, Fire Suppression Deluge Valve Functional Test, Rev. 27, Completed November 18, 2004 & January 8, 2005
645.6.012, Fire Pump Functional Test, Rev. 27, Completed December 9, 2003, November 29, 2004 & December 6, 2004
645.6.013, Fire Suppression System Halon Functional Test, Rev. 19, Completed September 16, 2004 & June 7, 2005
645.6.014, Fire Suppression System Halon Cylinder Check, Rev. 15, Completed August 4, 2004 & February 7, 2005
645.6.015, Low Pressure CO2 System Valve Position Verification, Rev. 9, Completed August 22, 2005 & September 22, 2005
645.6.016, Fire Suppression Low Pressure CO2 System Functional Test, Rev. 8, Completed

September 16, 2003, & April 15, 2004

Attachment

645.6.017, Fire Barrier Penetration Surveillance, Rev. 10, Completed November 15, 2004 & November 16, 2004
645.6.023, Fire Suppression Water System Underground Flow Test, Rev. 9, March 21, 2003
645.6.026, Fire Damper Inspection, Rev. 8, Completed December 4, 2001, & April 27, 2004
645.6.028, Thermo-Lag and Mecatiss Envelope System Fire Barriers, Rev. 7, Completed December 9, 2003 & June 9, 2005
645.6.032, Fire Detection System Alarm Circuitry Test for Turbine Building & 4160V Switchgear Room, Rev. 16, Completed June 4, 2003, & August 29, 2005
645.6.033, Fire Detection System Alarm Circuitry Test for Control Room & Upper and Lower Cable Spreading Room, Rev. 12, Completed March 5, 2004, & March 31, 2005
658.4.002, Fire Brigade & Safe Shutdown Radio Test, Rev. 25, Completed June 30, 2005 & July 15, 2005
680.4.006, RSP (App. R) Functional Test - Train B, Completed October 5, 2005
680.4.009, RSP Functional Test for Control Power Transfer and Isolation Condenser Valves, Rev. 3, Completed November 9, 2000, and June 21, 2001
680.4.009, RSP (App. R) Functional Test, Completed October 7, 2005
2400-APR-3900.01, Appendix R Repair Kit Annual Inspection, Completed December 27, 2003 and January 26, 2005

System Health Reports

OYS-01, 665, Plant Health Committee System Presentation, Fire Detection Systems, September 2005
OYS-01, 762, Quarterly SHIP Report, ELU System, 2nd Quarter 2005
OYS-01, 762, Quarterly SHIP Report, ELU System, 3rd Quarter 2005
OYS-01, 811, Plant Health Committee System Presentation, Fire Protection Water System, September 2005
OYS-01, 813, Plant Health Committee System Presentation, Fire Protection Halon System, September 2005
OYS-01, 814, Plant Health Committee System Presentation, Fire Barriers/Dikes/Penetrations, September 2005

Drawings

BISCO Fire Test Report 748-79, DWG 1 Cross-Sectional view of Penetration Opening No. 4, dated September 20, 1996
BISCO Fire Test Report 748-134, DWG 2 Cross-Sectional view B-B, dated January 22, 1995
BR 3001, Sh 1, Plant Elect Generation - Main One Line Diagram, Rev. 8
BR 3001, Sh 2, Emergency Power Sys - One Line Diagram, Rev. 4
BR 3001B, 4160V System One Line Diagram - 4160V Swgr Bus 1B and Dilution Plant, Rev. 13
BR 3001C, 4160V System One Line Diagram - 4160V Emergency Swgr Bus 1C & 1D, Rev. 0
BR 3002, Sh. 2&4, 480V System One Line Diagram - 460V Unit Substations
BR 3004, Sh. 3, Reactor Building 460V MCC One Line Diagram, Rev. 14
BR 3013, AC Vital Power System One Line Diagram, Rev. 11
BR E1102, Emergency Condenser System Electrical Elementary Diagram, Outlet Isolation Valve V-14-0035, Rev. 15

DJP-3E-665, Halon Systems – Cont. Room, Hazards A, B, & C, Sh. 2 Rev. 0
DJP-FBS-TB-FZ-11C-01, Isometric Fire Barrier (Mecatiss), Sh. 1, Rev. 0
EB D-3033, 125 V Station DC System One Line Diagram, MCC DC-2, Rev. 30
E1131, Elementary Diagram 1B2-U043C CRD Feed Pump NC08B, Rev. 10
E1369, App R Modifications Fire Area/Zone Boundary Conduit Penetrations-Turbine Bldg EL 3'6" & 23'6", Rev. 0
E 1466, Connection Diagram Fuse Panel TB-A1154, Rev. 2
GE 148F262, Sh. 1, Emergency Condenser Flow Diagram, Rev. 51
GE 148F711, Sh. 1, Reactor Shutdown Cooling System Flow Diagram, Rev. 43
GE-148F712, Reactor Vessel Level/Pressure/Temperature Instruments-Flow Diagram, Rev. 45
GE 237E487, Control Rod Drive System Flow Diagram, Rev. 65
GE 237E798, Recirculation System Flow Diagram, Rev. 33
GU-3B-911-04-001, Pre-Fire Strategy Plan-Layout Notes and Symbols, Sh. 1, Rev. 2
JC 19629, Fire Protection CO2 – Flow Diagram, Sh. 1, Rev. 8
JC 19629, Fire Protection Halon – Flow Diagram, Sh. 2, Rev. 8
JC 19479, Fire Protection-Water System-Flow Diagram, Sh. 1, Rev. 37
JC 19479, Fire Protection-Water System-Flow Diagram, Sh. 2, Rev. 36
JC 19479, Fire Protection-Water System-Flow Diagram, Sh. 3, Rev. 65
JC 19479, Fire Protection-Water System-Flow Diagram, Sh. 4, Rev. 29
M0344, Appendix R Repair Wide Range Level Transmitter LT-IA12 Replacement, Rev. 1
02-026Q, Fire Barrier Penetration 435, Sh. 1, Rev. 0
148F912, Process Instrumentation, Rev. 25
3B-911-04-002, Pre-Fire Strategy Plan-Layout Turbine Bldg-4160V Switchgear Rm Floor EL. 23'- 6", Rev. 0
3C-733-11-006, 120V AC Vital Power System Panel Schedule, Instrument Panel 4, Rev. 4
3D-622-42-004, Reactor Plant Instrument Loop Diagram TE-622-1020 Fuel Zone Level Channel "C", Rev. 2
3D-622-42-005, Reactor Plant Instrument Loop Diagram TE-622-1021 Fuel Zone Level Channel "D", Rev. 2
4092 Turbine Bldg Floor Plan at EL. 23'6", 27'0", 36'0" Beam & Slab Schedules, Sh. 1, Rev. 10
645.6.017: Field Sketch 52, Fire Barrier Penetrations for 4160 Emerg Switchgear (1C & 1D) Vaults – Ceiling Plan, Rev. 4
645.6.017: Field Sketch 53, Fire Barrier Penetrations for 4160 Emerg Switchgear (1C & 1D) Vaults – Floor Plan, Rev. 3
7023-56742-53, Front View Remote Shutdown Panel, Rev. 4
7023-56747-33, Panel Front View, Local Shutdown Panel, Rev. 3
7023-56748-33, Panel Front View, Local Shutdown Panel LSP-DG2, Rev. 3

Evaluations and Modifications

AR A2014648 Eval 16, Evaluation of Acceptability of Penetration 435, dated October 21, 2005
BM-TE-05, Bounding Analysis for UL Test Deck 7, Rev. B dated July 20, 1999
BM-TE-13, Mecatiss MPF-180 at Pyrocrete Interface, Rev. Original dated November 8, 2000
ECD 312262, Fire Barrier Upgrade Mod (Mecatiss) for Raceway 86-71 in Fire Zone TB-FZ-11C, dated May 15, 2000
ECR OC-01-00652-004, 4160V Switchgear Vault, Roof Area Automatic Sprinkler, December 23, 2002

ECR OC-01-00683-001, Review Control Room Halon System A/B/C, dated September 19, 2001
ECR OC-03-00851-001, 480 V Switchgear -App R- Modification, July 9, 2004
ECR OC-04-00499-000, Resolve Reactor Head Vent Hot Short Concern, July 30, 2004
ECR OC-04-00635-000, Replace New Radwaste Building Fire Detection System, July 29, 2005
ECR OC 04-00769-001, Repair Mecatiss on Conduit 14-28, dated July 12, 2005
ECR OC 04-00880-001, Repair Mecatiss on Conduit 14-25 in Turbine Basement, dated July 11, 2005
ECR OC 04-00181-001, Damaged Mecatiss Fire Barrier, Element #504, TB Basement, dated March 28, 2005
FPE OC-000811-008, Sprinkler System #22 Installation, Rev. 0
FPE OC-000814-004,1C & 1D 4160V Switchgear Vault Repair, Rev. 1
FPE OC-000814-005, Fire Door Evaluation, Rev. 0
FPE OC-315403-002, Replace Oyster Creek Control Room Carpet, Rev. 3
FPE OC-402240-003, Replace 2" Tile Faced Block with Paneling in Control Room at OC, Rev. 0
FPEE 2005-001, Qualification of PCI Promatec Interamä Flexible Fire Protection Systems; Protection of Conduits 14-25, 14-28 and Cable 86-66 for a One-Hour Fire Rating, Rev. 0
NC1973, File on Raceway Fire Barriers for Aluminum Cable Tray and Aluminum Conduit Systems, dated February 08, 1996
PE 125-1: 0017-01, Structural Steel Survivability Analysis for 'C' Switchgear Rm, dated March 21, 2001
PE 125-1: 0018-01, Structural Steel Survivability Analysis for 'D' Switchgear Rm, dated March 21, 2001
SE-000911-007, Evaluation of 'C' Batt. Rm Ceiling/Roof Barrier Rating/FHAR Revision, Rev. 0
SE-000911-008, Evaluation of the 4160V 'C' & 'D' Vaults/FHAR Revision, Rev. 1
TDR864, Water Impingement from Water Fire Suppression Systems at Oyster Creek, August 17, 1987

Piping and Instrumentation Drawings

BR-2004, Sh. 2, Condensate Transfer System Flow Diagram, Rev. 83
BR-2006, Sh. 1 & 2, Reactor Building Closed Cooling Water System Flow Diagram

Pre-Fire Plans

OP-OC-201-008, Oyster Creek Pre-Fire Plans, Rev. 4
OP-OC-201-008 Attachment 1, Pre-Fire Plan for Fire Zone OB-FZ-5, Rev. 4
OP-OC-201-008 Attachment 1, Pre-Fire Plan for Fire Zone TB-FA-3A, Rev. 4
OP-OC-201-008 Attachment 1, Pre-Fire Plan for Fire Zone TB-FA-3B, Rev. 4
OP-OC-201-008 Attachment 1, Pre-Fire Plan for Fire Zone TB-FZ-11C/TB-FA-26, Rev. 4

Operator Safe Shutdown Training

836.0.0005, Response To Fire, Rev. 1
2611-PGD-2612, Simulator Training, Integrated Plant Training, Steam Cooling, Rev. 6
2611-PGD-2612, Simulator Training, Integrated Plant Training, Control Room Evacuation, Rev. 4
2621.836.0.0005, ABN-29, Response to Fire, Completed August & September 2005
2621.885.0.0054C, ABN-30, Control Room Evacuation, Completed August & September 2005

Job Performance Measures

262.09, Manually Close a 4160V Breaker
279.01, Lineup Fire Water to the 1-1 Air Compressor
286.01, Place Redundant Fire Pump in Service Locally
286.02, Start The Fire Diesel
286.03, Lineup Firewater to "A" Isolation Condenser
286.04, Lineup Fire Protection to The Core Spray System
286.05, Lineup Fire Protection to The Condensate Storage Tank
308.01, Operate The Remote Shutdown Panel for Operation Upon Control Room Evacuation
308.02, Operate The EDG #2 Control Transfer Switches From LSP-DG2
308.03, Operate Shutdown Cooling System Valves From LSP-1AB2
308.04, Transfer Control Power to LSP 1A2
308.05, Transfer Control to LSP 1B3
308.06, Start The 1-2 Condensate Transfer Pump at LSP 1B32

Fire Brigade Drill Critiques

OP-AA-201-003, Fire Drill Record / Critique, AB Battery Rm, C-Shift; dated August 04, 2005
OP-AA-201-003, Fire Drill Record / Critique, AB Battery Rm, D-Shift; dated August 10, 2005
OP-AA-201-003, Fire Drill Record / Critique, Site Emergency Bldg, B-Shift; September 06, 2005
OP-AA-201-003, Fire Drill Record / Critique, Main Control Rm, A-Shift; September 29, 2005
OP-AA-201-003, Fire Drill Record / Critique, 'C' Battery Rm-4160, E-Shift; September 26, 2005

Hot Work and Ignition Source Permits

Hot Work Permit for WO C2008557-02-01, dated November 11, 2004
Hot Work Permit for WO M2122061-01-01, dated August 23, 2005
Hot Work Permit for WO R2053608-01-01, dated June 02, 2005
Hot Work Permit for WO R2053608-06-01, dated June 06, 2005

Transient Combustible Evaluations

TCP 05-001a, TCP for Fire Zone OB-FZ-8C, dated January 25, 2005
TCP 05-001b, TCP for Fire Zone OB-FZ-8AB, dated January 25, 2005
TCP 05-003, TCP for Fire Zone OB-FZ-8AB, dated February 14, 2005
TCP 05-006, TCP for Fire Zone OB-FZ-04, dated March 01, 2005
TCP 05-007, TCP for Fire Zone OB-FZ-04, dated March 29, 2005

TCP 05-008, TCP for Fire Zone RB-FZ-01F2, dated May 17, 2005

Specifications

SP-1302-06-013, Augmented Quality Fie Protection Specification For Post-Fire Safe Shutdown Program Requirements at Oyster Creek Nuclear Generating Station, Rev. 2
SP-9000-31-213, Technical Specification for Class 1E Electric Cable for Power Control & Instrumentation in Nuclear Stations, Rev. 8

Miscellaneous Documents

BISCO Test Report 748-134, Fire Test Utilizing BISCO SF-20 and SE-Foam, dated May 14, 1984
BISCO Test Report 1042-01, Qualification, Fire, and Hose Stream Tests, February 1978
BISCO Test Report, Fire Endurance Test on Configuration for BISCO Block-Out Reduction System-Wall Openings with Inner Lagging Attachment Supports, September 1979
Chemtron Fire Systems, Halon 1301 Computer Output for Hazard 'A' (Control Room Halon Local Application Zone A), dated October 28, 2005
Chemtron Fire Systems, Halon 1301 Computer Output for Hazard 'B' (Control Room Halon Local Application Zone B), dated October 28, 2005
Chemtron Fire Systems, Halon 1301 Computer Output for Hazard 'C' (Control Room Halon Local Application Zone C), dated October 28, 2005
Fireload by FoxPro, Oyster Creek Fire Loading Database output, dated October 19, 2005
GE, Wire & Cable Product Data Sheets for Vulkene Cable
GPU Letter 1000003180, Oyster Creek NGS Fire Protection-Exemption Request, dated September 16, 1983
Manual Actuation Tabulation from NRC Correspondences
OP-AA-201-002, Fire Report for on-site fire, dated March 28, 2002
Oyster Creek, Fire Marshal's Fire Brigade Qualification Electronic Database, dated October 19, 2005
Oyster Creek, Fire System Impairment database via EX-EAST-1, dated October 18, 2005
Oyster Creek, Fire Marshal's Fire Zone ID / Allowable BTU Load / Actual BTU Load / Notebook, dated September 05, 2001
Oyster Creek work week schedule for week of October 18, 2005
Oyster Creek work week schedule for week of October 31, 2005
Oyster Creek Organization Charts, April 19, 2005
SP 79-62, Halon Fire Suppression System Test, Control Room, dated March 24, 1980
SP 80-70, CO2 Fire Suppression System Test #1, Vital 4160 Swgr Room, dated April 23, 1980
SP 80-82, CO2 Fire Suppression System Test #2, Vital 4160 Swgr Room, dated May 07, 1980
SP 80-82, CO2 Fire Suppression System Test #3, Vital 4160 Swgr Room, dated May 07, 1980
VM-OC-2785, Big Beam Emergency Lighting Equipment-Vendor Manual, Rev. 0

QA Audits & Self Assessments

Oyster Creek Fire Protection Self-Assessment Report, dated November 22, 2002
NOSA-OYS-04-09, NOS Audit of Fire Protection Program, dated October 13, 2004
FASA-AT# 344199, Focus Area Self-Assessment Report, dated September 21, 2005

Corrective Action Documents

CAP O1999-0800	CAP O2000-0219	CAP O2001-1349	CAP O2002-1942
CAP O2004-2128	CAP 02004-3847	CAP 02004-4076	CAP 02005-0593
IR 00371841	IR 00373059	IR 00381279	IR 00382246
IR 00383362	IR 00387378	IR 00387419	IR 00387511
IR 00387804	IR 00387807	IR 00387870	IR 00387832
IR 00388296	IR 00388361	IR 00388586	IR 00388631
IR 00388826	IR 00390556	IR 00393021	IR 00393023
IR 00393035	IR 00393589	IR 00393852	IR 00393885
IR 00394035	IR 00394178	IR 00396314	

Work Orders

M2123783	R0805636	R0805689	R0805697	R0805918	R0805919
R0806254	R0806260	R0809251	R2034743	R2036146	R2037860
R2053924	R2054623	R2075091			

LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agency Documents Access & Management System
ALT	Alternate
BISCO	Brand Industrial Services, Inc.
CFR	Code of Federal Regulations
CO_2	Carbon Dioxide
DC	Direct Current
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
ELU	Emergency Light Unit
EMRV	Electromatic Relief Valve
EPM	Engineering Planning and Management, Inc.
FA	Fire Area
FHA	Fire Hazards Analysis
FHAR	Fire Hazards Analysis Report
FPP	Fire Protection Program
FSSA	Fire Safe Shutdown Analysis
FZ	Fire Zone
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IPE	Individual Plant Examination
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report

IR	Issue Report
LSP	Local Shutdown Panel
MOB	Main Office Building
MOV	Motor Operated Valve
NCV	Non-cited Violation
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
OCNGS	Oyster Creek Nuclear Generating Station
PAR	Publicly Available Records
P&ID	Piping and Instrumentation Drawing
QA	Quality Assurance
RAI	Requests for Additional Information
RSP	Remote Shutdown Panel
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SER	Safety Evaluation Report
SISP	Sensitive Information Screening Project
SRP	Safety Review Plan
TB	Turbine Building
TCP	Transient Combustible Permit
TRM	Technical Requirements Manual
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
WO	Work Order