

December 12, 2001

Mr. Ron J. DeGregorio  
Vice President Oyster Creek  
AmerGen Energy Company, LLC  
P.O. Box 388  
Forked River, New Jersey 08731

SUBJECT: OYSTER CREEK GENERATING STATION- NRC INTEGRATED INSPECTION  
REPORT 50-219/01-09

Dear Mr. DeGregorio:

On November 10, 2001, the NRC completed an integrated inspection at your Oyster Creek reactor facility. The enclosed report presents the results of that inspection. The results of this inspection were discussed on November 30, 2001, with Mr. Ernie Harkness and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings of significance were identified.

Since September 11, 2001, Oyster Creek Generating Station has assumed a heightened level of security based on a series of threat advisories issued by the NRC. Although the NRC is not aware of any specific threat against nuclear facilities, the heightened level of security was recommended for all nuclear power plants and is being maintained due to the uncertainty about the possibility of additional terrorist attacks. The steps recommended by the NRC include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with local law enforcement and military authorities, and limited access of personnel and vehicles to the site.

The NRC continues to interact with the Intelligence Community and to communicate information to AmerGen Energy Company, LLC. In addition, the NRC has monitored maintenance and other activities which could relate to the site's security posture."

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Mr. Ron J. DeGregorio

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We appreciate your cooperation. Please contact me at 610 337-5146 if you have any questions regarding this letter.

Sincerely,

*/RA/*

John F. Rogge, Chief  
Projects Branch No. 7  
Division of Reactor Projects

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

Enclosure: Inspection Report 50-219/01-09  
Attachment: Supplemental Information

cc w/encl: Amergen Energy Company - Correspondence Control Deck  
J. A. Benjamin, Licensing - Vice President, Exelon Corporation  
M. Gallagher, Director-Licensing  
B. Stewart, Acting Regulatory Affairs Manager  
R. Shadis, New England Coalition Staff  
State of New Jersey  
N. Cohen, Coordinator - Unplug Salem Campaign  
E. Gbur, Coordinator - Jersey Shore Nuclear Watch  
E. Zobian, Coordinator - Jersey Shore Anti Nuclear Alliance

Distribution w/encl:    Region I Docket Room (with concurrences)  
                                   L. Dudes, DRP - NRC Resident Inspector  
                                   H. Miller, RA  
                                   J. Wiggins, DRA  
                                   J. Rogge, DRP  
                                   N. Perry, DRP  
                                   T. Haverkamp, DRP  
                                   T. Bergman, OEDO  
                                   E. Adensam, NRR  
                                   H. Pastis, PM, NRR  
                                   T. Colburn, Backup PM, NRR

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No. 50-219/01-09

Docket No. 50-219

License No. DPR-16

Licensee: AmerGen Energy Company, LLC (AmerGen)

Facility: Oyster Creek Generating Station

Location: Forked River, New Jersey

Dates: October 1, 2001 - November 10, 2001

Inspectors: Laura A. Dudes, Senior Resident Inspector  
Steve Dennis, Resident Inspector  
Todd Fish, Operations Engineer, October 15 - 19, 2001  
Aniello Della Greca, Senior Reactor Inspector,  
November 5 - 9, 2001  
Jack McFadden, Health Physicist, November 5 - 9, 2001

Approved By: John F. Rogge, Chief  
Projects Branch 7  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000219-01-09, on 10/01-11/10/2001, AmerGen LLC., Oyster Creek Generating Station, Resident Inspection.

The inspection was conducted by resident and region based inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation.

A. Inspector Identified Findings

No findings of significance were identified.

B. Licensee Identified Violations

A violation of very low safety significance which was identified by the licensee has been reviewed by the inspector. Corrective actions taken or planned by the licensee appear reasonable. This violation is listed in Section 4OA7 of this report.

## Report Details

### Summary of Plant Status:

Oyster Creek began the inspection period at full power and remained there for the duration of the inspection period.

### **1. REACTOR SAFETY Initiating Events, Mitigating Systems, Barrier Integrity (REACTOR-R)**

#### 1R04 Equipment Alignment

##### a. Inspection Scope

Partial walkdown inspections were performed on the systems listed below. A random sampling of valve positions in the field were verified to be properly aligned in accordance with operating procedures. Control room indications and controls were verified to be appropriate for the standby or operating status of the system and system maintenance action requests were reviewed to assure no degraded conditions existed to adversely affect operability.

- containment spray
- control rod drive systems A and B

##### b. Findings

No findings of significance were identified.

#### 1R05 Fire Protection

##### a. Inspection Scope

The inspectors conducted fire protection inspection activities consisting of plant walkdowns, discussions with fire protection personnel, and reviews of procedure 333, "Plant Fire Protection System," and the Oyster Creek Fire Hazards Analysis Report to verify that the fire program was implemented in accordance with all conditions stated in the facility license. Plant walkdowns included observations of combustible material control, fire detection and suppression equipment availability, and compensatory measures. The inspectors conducted fire protection inspections in the following areas.

- Reactor Building 119' elevation
- Reactor Building 95' elevation
- Reactor Building 51' elevation
- Reactor Building 23' elevation
- "A" and "B" Battery Rooms
- Emergency Diesel Generator Building
- New Radwaste Building

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalificationa. Inspection Scope

The inspectors observed licensed operator simulator training on October 17, 2001, to verify that the Oyster Creek operator requalification program adequately evaluated how well operators have mastered the training objectives, including training on high-risk operator actions. In addition, the inspectors observed the training critique to assess the licensee's effectiveness in evaluating and correcting any observed deficiencies.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementationa. Inspection Scope

The inspectors selected the following safety significant systems in (a)(1) and (a)(2) status to verify that: (1) failed structures, systems and components (SSCs) were properly characterized, (2) goals and performance criteria were appropriate, (3) corrective action plans were appropriate, and (4) performance was being effectively monitored:

- Control Room Heating Ventilation and Air Conditioning HVAC (a)(1)
- Liquid Poison System (Standby Liquid Control) (a)(2)

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation.1 Emergency Service Water Pump - Discharge Pressure Gauge Line Replacementsa. Inspection Scope

On October 18, 2001, plant maintenance found that the "B" Emergency Service Water (ESW) pump discharge pressure gauge line was loose and upon further investigation found that the 1/2" line had separated from the discharge piping due to corrosion (CAP 02001-1584, AR 2016937). The inspector reviewed the documentation in the maintenance work package for replacement of the "B" ESW gauge line, the engineering assessments to determine extent of condition, and the subsequent post maintenance test (PMT) to assure ESW system operability. Based upon the extent of condition assessment, maintenance replaced the remaining three ESW pump discharge pressure

gauge lines and the inspector reviewed the additional work packages and PMTs associated with those repairs. The inspector also performed walkdowns of the standby trains and associated safety related equipment to assure that all equipment was aligned to perform its safety function while the repair work was in progress for the emergent work. The inspector used system operating procedures to verify train lineups and used guidelines outlined in procedure 2000-ADM-3022.01, "Work Management and On-Line Risk Management & Assessment," to identify specific actions to be taken during the gauge line replacement.

b. Findings

No findings of significance were identified.

.2 Containment Purge and Exhaust Valves - Valve Position Limit Switch Remount

On October 1, 2001, plant maintenance began planned activities (AR A0785884) to remount the valve position limit switches for the containment purge and exhaust valves V-23-13,14,15, and 16. The inspector reviewed the documentation in the maintenance work packages for each valve including the plant risk assessment and the additional work package (CAP 2001-1523) generated due to a wiring configuration issue with valve V-23-15. The inspector also reviewed the post maintenance tests and technical specifications to assure operability. Guidelines outlined in procedure 2000-ADM-3022.01, "Work Management and On-Line Risk Management & Assessment," were also reviewed to identify and confirm specific actions to be taken during the maintenance activities.

b. Findings

No findings of significance were identified.

.3 Torus to Drywell Vacuum Breaker Testing

a. Inspection Scope

On November 7, 2001, the torus to drywell vacuum breaker valve V-26-3 failed the operability test performed in accordance with station procedure 604.4.016, "Torus to Drywell Vacuum Breaker Operability and In-Service Test." Specifically, the licensee found that the force required for the initial opening of the valve, approximately 53 lbs, exceeded the procedure acceptance criteria of 50 lbs. Section 3.5.A.5.d of the Oyster Creek Technical Specifications requires that the reactor be placed in the cold shutdown condition within 24 hours if more than two of the 14 suppression chamber to drywell vacuum breakers are inoperable. During the conduct of the operability test, the licensee had also found that the position alarm of another valve, V-26-6, exceeded the 30 second opening time delay specified in the test procedure. Because of the identified issues, the licensee suspended the testing and developed appropriate follow-up actions.

On November 8, 2001, the licensee revised the station procedure to: (1) delete the valve opening time requirement of 30 seconds, and (2) increase the initial opening force



requirement from 50 to 58 lbs. Subsequently, the licensee retested V-26-3 and found it acceptable. The timing of V-26-6 was not retested, because the requirement had been deleted. The licensee also completed the test of the remaining vacuum breaker valves and found them also acceptable and operable. The inspectors evaluated the bases for the acceptance criteria stated in the test procedure, the changes to the procedure, the associated safety evaluation and the test results.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the operability evaluation associated with the following plant equipment deficiency to verify that the equipment was capable of performing its design basis function and in order to determine that the operability justification was performed in accordance with procedures OC-2, "Operability Review and Analysis," and 2000-ADM-7216.01, "Corrective Action Process." In addition, where a component was determined to be inoperable, the inspectors verified the technical specification (TS) limiting condition for operation (LCO) implications were properly addressed.

- CAP O2001-1494, Liquid Poison System Flow Gage Anomalies

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspector reviewed the operator work-around database and associated corrective action items to identify conditions that could adversely effect the functionality of mitigating systems or impact human reliability in responding to initiating events. The inspector also reviewed open control room deficiencies and corrective action items to determine if there were any degraded or non-conforming conditions that should have been identified and evaluated as operator work-arounds.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testinga. Inspection Scope

The inspector reviewed and/or observed portions of the post maintenance testing associated with the following maintenance activity because of its function as a mitigating system. The inspectors reviewed the post maintenance test documents to verify that they were in accordance with the licensee's procedures and that the equipment was restored to an operable state.

- Emergency Diesel Generator #1, 6 month inspection and oil system bypass relief valve replacement (WO 01001239RC). Performed 636.4.003, "Emergency Diesel Generator Load Test," and inservice leak tests as PMTs.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testinga. Inspection Scope

The inspector observed pre-test briefings and portions of the surveillance performance for procedural adherence, and verified that the resulting data associated with the test met the requirements of technical specifications. The inspector also reviewed the results of past performances of the surveillance test (ST) with the system engineer to verify that degraded or non-conforming conditions were identified and corrected. The following STs were observed:

- Procedure 619.3.006, "Reactor Triple Low Water Level Test and Calibration."
- Procedure 603.4.001, "Recirculation Pumps Trip Circuitry Test."
- Procedure 620.3.003, "APRM Surveillance Test and Calibration."
- Procedure 612.4.001, "Standby Liquid Control pump and Valve Operability and In-Service Test."

b. Findings

No findings of significance were identified.

1R23 Temporary Plant ModificationsMonitoring of Chattering Relay Contacts RPS System 2 Logica. Inspection Scope

The inspectors reviewed temporary modification document EJ 2001-067 and Safety Evaluation Screening Form OC-2002-S-0689, "Install Dranetz on 2K117 and 2K118." The installation of the Dranetz Power Quality Analyzer on coil and contacts of the above relays was done to identify the cause and source of contact chattering observed by the

operating staff. The relays that are part of the Reactor Protection System, Division 2, provide half isolation signal when actuated (de-energized). The review included a verification that the change did not adversely impact the design functions of the system and was performed in accordance with licensee procedure 108.8, "Temporary Modification Control." The inspectors reviewed applicable documents and conducted appropriate personnel interviews.

b. Findings

No findings of significance were identified.

**2. RADIATION SAFETY  
Occupational Radiation Safety (OS)**

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope

The inspector reviewed the effectiveness of health physics instrumentation, installed radiation monitoring instrumentation, and the program to provide self-contained breathing apparatus (SCBA) to occupational workers.

The inspector reviewed the program for health physics instrumentation and for installed radiation monitoring instrumentation to determine the accuracy and operability of the instrumentation.

During plant tours, the inspector reviewed field instrumentation utilized by health physics technicians and plant workers to measure radioactivity and radiation levels, including portable field survey instruments, hand-held contamination frisking instruments, and continuous air monitors. The inspector conducted a review of the instruments observed in the toured areas, specifically verification of current calibration, of appropriate source checks, and of proper function. On November 7, the inspector observed the calibration by an Instrumentation and Control (I&C) technician for one of each of the following type survey meters: RO2A, E-520, and Extender 2000W. The inspector evaluated various calibration records and the following procedures for regulatory compliance and adequacy.

- Procedure 6633-PMI-4221.13, Calibration of the EIC Model E-520, Rev. 9
- Procedure 6633-PMI-4221.19, Calibration of the EIC portable ion chamber model RO2/2A, Rev. 4
- Procedure 6633-PMI-4221.21, Calibration of the EIC Model E-530, Rev. 6
- Procedure 6633-PMI-4221.29, Calibration of the EIC RO7 high range survey meter, Rev. 5
- Procedure 6633-PMI-4222.06, Calibration of the Canberra whole body counting system, Rev. 5
- Procedure 6633-PMI-4223.01, Calibration of the EIC beta particulate air monitor model AMS-3, Rev. 6
- Procedure 6633-PMI-4224.40, Calibration of the SAIC electronic alarming

- dosimeter, Rev. 1
- Procedure 6633-OPS-4460.03, Operation of the Shepard 28-5 100 millicurie 137 Cesium calibration source, Rev. 2

During plant tours, the inspector identified and noted the condition and operability of selected installed area and process radiation monitors and any accessible local indication information for those monitors. On November 8, the inspector also observed the field activities conducted by two I&C technicians for the calibration of two installed area radiation monitors (ARMs) (i.e., ARMs R014-B1 and R014-B2) and reviewed for compliance and adequacy the following procedure and calibration records for four installed area radiation monitors.

- Procedure 621.3.001, ARM radiation monitoring calibration and test, Rev. 30
- Calibration record 621.3.001, ARM ID Nos. R014B7 and R014D1, dated April 25, 2000
- Calibration record 621.3.010-2, ARM ID Nos. RB-RM-0002 and RB-RM-0012, dated June 20, 2000

The inspector reviewed the adequacy of the program to provide SCBA for entering and working in areas of unknown radiological conditions and for use in emergency response. The inspection included a review of the status and surveillance records of SCBA air bottles and of SCBA with air bottles attached, all staged and ready for use in the plant. The following procedures and documents were examined in the course of this review for regulatory compliance and adequacy.

- Procedure OEP-ADM-1319.01, Oyster Creek emergency preparedness program, Rev. 9
- Procedure OEP-ADM-1319.02, Emergency response facilities and equipment maintenance, Rev. 9
- Procedure 6630-ADM-4020.01, Respiratory protection program, Rev. 11
- Procedure 6630-ADM-4020.03, Use of respiratory protection equipment, Rev. 12
- Procedure 6632-OPS-4030.02, Issue and control of respiratory protection equipment, Rev. 0
- Procedure 2000-ABN-3200.29, Response to fire, Rev. 26
- Procedure 6632-OPS-4030.03, Inspection and maintenance of respiratory protection equipment, Rev. 1
- Procedure 6632-OPS-4030.06, Operation of the breathing air filling station, Rev. 1
- SCBA check log monthly records, exhibit 6 of procedure 6632-OPS-4030.03, for September, October, and November 2001

The review was against criteria contained in 10 CFR 20.1501, 10 CFR 20 Subpart H, site Technical Specifications, and site procedures.

b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES (OA)

##### 4OA6 Meetings, including Exit

On November 30, 2001, the resident inspectors presented the inspection results to Mr, Ernie Harkness and other members of licensee management. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

##### 4OA7 Licensee Identified Violations

The following finding of very low significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a Non-Cited Violation (NCV).

<u>NCV Tracking Number</u>	<u>Requirement Licensee Failed to Meet</u>
50-219/01-09-01	<p>Technical Specification 6.8.1, requires, in part, that written procedures shall be implemented for surveillance and test activities of equipment affecting nuclear safety. Oyster Creek procedure 330, Standby Gas Treatment System (SBGTS), requires, in part, that the control switch for SBGTS 2 exhaust fan EF-1-9 be in the "AUTO" position to maintain system operability and auto start capability. Contrary to these requirements, on October 18, 2001, following a surveillance test, operations failed to properly implement the procedure and declared SBGTS 2 operable even though the control switch for exhaust fan EF-1-9 was left in the "OFF" position during system restoration. The issue was not corrected until noticed 8.8 hours later by an oncoming operations shift. This issue was determined to be of very low significance (GREEN) because operators could have manually started the system, from the main control room, when alerted to a system low air flow condition by a control room alarm. This issue is documented in the licensee's corrective action program as CAP No. 02001-1589.</p>

**ATTACHMENT 1  
SUPPLEMENTAL INFORMATION**

a. Key Points of Contact

V. Aggarwal, Director, Engineering  
 R. DeGregorio, Vice President  
 E. Harkness, Plant Manager  
 R. Hillman, Manager, Chemistry & Radwaste  
 J. Magee, Director, Maintenance  
 M. Massaro, Director, Work Management  
 D. McMillan, Director, Training  
 M. Newcomer, Senior Manager, Design  
 D. Slear, Manager, Regulatory Assurance  
 C. Wilson, Senior Manager, Operations

b. List of Items Opened, Closed, and Discussed

Opened and Closed

50-219/01-09-01	NCV	Violation of Technical Specification 6.8.1 for failure to follow procedures for proper restoration of Stand By Gas System 2. (Section 4OA7)
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c. List of Acronyms

ADAMS	Agencywide Documents Access and Management System
AmerGen	AmerGen Energy Company, LLC
AR	Action Request
ARM	Area Radiation Monitor
CAP	Corrective Action Process
CFR	Code of Federal Regulations
EF	Exhaust Fan
ESW	Emergency Service Water
HVAC	Heating, Ventilation and Air Conditioning
I&C	Instrumentation and Control
LCO	Limiting Condition for Operation
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OC	Oyster Creek
OS	Occupational Safety
PARS	Publicly Available Records
PMT	Post Maintenance Test
SBGTS	Standby Gas Treatment System
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SSCs	Structures, Systems and Components
ST	Surveillance Test
TS	Technical Specification
WO	Work Order