October 30, 2000

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

SUBJECT: NRC's OYSTER CREEK GENERATING STATION INTEGRATED INSPECTION REPORT 05000219/2000-007

Dear Mr. DeGregorio:

On September 30, 2000, 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 October 13, 2000, with you and other members of your staff.

This inspection was an examination of 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. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC identified two findings that were evaluated under the significance determination process and were determined to be of very low safety significance (Green). These findings regarded the failure to promptly identify and correct a condition associated with the electromatic relief valve acoustic monitor instrumentation and failing to follow procedures that led to the dropping of a new fuel assembly. Both of these issues were determined to be violations of NRC requirements. However because of their very low safety significance and because they have been entered into your corrective action program, the NRC is treating these issues as Non-cited violations (NCV), in accordance with Section VI.A.1 of the Enforcement Policy. If you contest the violations or severity level of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Oyster Creek facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index/html (the Public Electronic Reading Room).

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 7
Division of Reactor Projects

Docket/License Nos.: 05000219/DPR-16

Enclosure: NRC Inspection Report No. 05000219/2000-007

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REGION I

Report No.	05000219/2000-007
Docket No.	05000219
License No.	DPR-16
Licensee:	AmerGen Energy Company, LLC (AmerGen) PECO Energy Company Nuclear Group Headquarters P.O. Box 160 Kennett Square, PA 19348
Facility:	Oyster Creek Generating Station
Location:	Forked River, New Jersey
Dates:	August 13, 2000 - September 30, 2000
Inspectors:	Laura A. Dudes, Senior Resident Inspector Thomas R. Hipschman, Resident Inspector Lois M. James, Reactor Inspector, September 13-14, 2000 Gregory C. Smith, Sr. Physical Security Inspector, August 28 - September 1, 2000
Approved By:	John F. Rogge, Chief Projects Branch 7 Division of Reactor Projects

SUMMARY OF FINDINGS

Oyster Creek Generating Station
NRC Inspection Report 05000219/2000-007

IR 05000219-00-007; 08/13-09/30/00; Oyster Creek; Operability Evaluations and Problem Identification and Resolution.

The inspection was conducted by resident and region based inspectors. The inspection identified two green issues which were non-cited violations. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process (SDP) in Inspection Manual 0609 (see Attachment 1).

Cornerstone: Mitigating Systems/Barrier Integrity

- **GREEN.** The inspectors evaluated the root cause analysis for the 'A' electromatic relief valve (EMRV) acoustic monitor failure in July 2000. The inspector determined that the licensee failed to take prompt corrective actions to resolve known degradation in the instrumentation assemblies. In particular, the licensee became aware of deficiencies associated with loose connections in the acoustic monitoring instrumentation microdot connectors in November 1999. However, in March 2000, three acoustic monitors were replaced during a forced outage without assembling the connectors per the system engineer's recommendation. In July 2000, the 'A' EMRV acoustic monitor failed requiring the licensee to request a notice of enforcement discretion from the NRC (IR 5000219/2000-06). This issue was considered to have very low safety significance (Green) using the Significance Determination Process (SDP) phase 1 evaluation for mitigating systems because this instrumentation performs a position monitoring function and the compensatory actions of verifying EMRV tail pipe temperatures were taken. This violation of 10 CFR 50 Appendix B, Criterion XVI is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the Enforcement Policy. **(NCV 05000219/2000-007-01)** (Section 1R15)

- **GREEN.** Several examples of poor procedural adherence and inadequate supervision culminated in a personnel error during new fuel receipt and processing. The specific errors that led to dropped fuel assemblies were the failure to install restraining devices on a new fuel assembly container and a lack of supervisory presence to verify proper rigging of the container. Because the procedural errors related specifically to the new fuel receipt inspection and processing procedure, greater potential existed to install fuel that did not meet the requirements of procedure 205.1; "Receiving and Processing New Fuel." This issue was considered to have very low safety significance (Green) using the Significance Determination Process (SDP) phase 1 evaluation for barrier integrity because the reactor coolant system activity performance indicator would monitor fuel performance. This violation of Technical Specification 6.8.1 is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the Enforcement Policy. **(NCV 050219/2000-007-02)** (Section 4OA3).

Report Details

Summary of Plant Status:

Oyster Creek began the inspection period at full power. On August 15, 2000, a technical specification required shutdown was initiated because two reactor building ventilation valves leaked such that the standby gas treatment system could not maintain the design basis secondary containment differential pressure in the event normal ventilation was lost. The licensee conducted maintenance outage 17U6 to repair the ventilation valves. The licensee performed a reactor start up on August 19, 2000. Ninety-two percent power was achieved on August 21, 2000. The facility continued to coast down for refueling outage 18R and finished the period at eighty-two percent power.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather

a. Inspection Scope

The inspector reviewed the licensee's adverse weather procedures with respect to high winds and intake water levels due to the increase in potential for hurricanes in the fall season. The inspector reviewed abnormal operating procedure (ABN) 2000-ABN-3200.31, "High Winds," the Individual Plant Examination of External Events (IPEEE) regarding the Probable Maximum Precipitation and Chapter Two of the Final Safety Analysis Report regarding storm waters and flooding.

b. Issues and Findings

There were no findings identified.

1RO4 Equipment Alignment

.1 Emergency Diesel Generator

a. Inspection Scope

The inspector performed a complete walkdown of all accessible portions of the No. 1 emergency diesel generator (EDG) to verify equipment alignment, while EDG No. 2 was out of service for scheduled maintenance. Documents reviewed applicable to the EDG alignment verification included: Procedure 341, "Emergency Diesel Generator Operation," Technical Specification 3.7 "Auxiliary Electrical Power," and Updated Final Safety Analysis Report, section 8.3.1.1.5. In addition, temporary modifications, outstanding operator work arounds, and corrective action program deficiencies associated with the EDG were reviewed by the inspectors.

b. Issues and Findings

There were no findings identified.

1RO5 Fire Protection

.1 Annual Fire Drill Observation

a. Inspection Scope

On August 31, 2000, the inspector observed an unannounced fire drill at the Oyster Creek station. The inspector reviewed the fire drill scenario, the pre-fire plan for the affected area and observed the response of the licensee's fire brigade. In addition, the inspector reviewed the licensee's post drill critique.

b. Issues and Findings

There were no findings identified.

.2 Fire Protection Plant Tours

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. 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:

- Station Blackout Transformer Deluge System
- Reactor Building 75' Elevation; Control of Combustibles during Outage Preparation
- 4160 volt 'C' Electrical Distribution Center
- Compensatory Actions - Reactor Building Firewatch
- 4160 Electrical Switchgear Room CO2
- Redundant Fire Pump

b. Issues and Findings

There were no findings identified.

1RO6 Flood Protection Measures

a. Inspection Scope

The inspector reviewed the licensee's Individual Plant Examination of External Events (IPEEE) regarding the Probable Maximum Precipitation and Chapter Two of the Final Safety Analysis Report regarding storm waters and flooding. In addition, the inspector walked down accessible rooftop drains and scuppers to verify that the drains were clear of debris and could satisfy their functional requirements. Lastly, the inspector reviewed the licensee's abnormal operating procedures (ABN) 2000-ABN-3200.18, "Service Water Failure Response," and 2000-ABN-3200.18, "Response to Low Intake Level," to verify that all actions and equipment referenced in the procedures were within the capability of the plant to reach hot shutdown.

b. Issues and Findings

There were no findings identified.

1R07 Heat Sink Performance

Containment Spray/Emergency Service Water (ESW) Heat Exchanger Performance

a. Inspection Scope

The inspector reviewed the annual containment spray/ESW heat exchanger performance tests conducted in April and May 2000. The inspector reviewed surveillance tests 607.4.004 and 607.4.005, the test acceptance criteria and results (C-1302-241-E120-109), frequency of testing to detect potential degradation, and testing methodology for the year 2000 and 1998 tests (Calculations C-1302-241-E120-085 and C-3102-241-E120-078).

b. Issues and Findings

There were no findings identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the periodic evaluations required by 10 CFR 50.65 (a)(3) for Oyster Creek Generating Station to verify that structures, systems and components (SSC) within the scope of the maintenance rule were properly evaluated and dispositioned.

The inspectors selected the following safety significant system in (a)(1) status to verify that; (1) goals and performance criteria were appropriate, (2) industry operating experience was considered, (3) corrective action plans were effective, and (4) performance was being effectively monitored:

- Feedwater (Initiating Events)

In addition, the inspectors reviewed the following safety significant systems in (a)(2) status to verify that system performance compared to the licensee's performance criteria was acceptable.

- Spent Fuel Pool Cooling (Mitigating Systems)
- Emergency Diesel Generator (Mitigating Systems)

b. Issues and Findings

There were no findings identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

.1 Secondary Containment Isolation Valve Seat Failures

a. Inspection Scope

On August 14, 2000, the licensee entered technical specification action statement 3.5.B.2.4 due to the inability to maintain design basis secondary containment differential pressure with the standby gas treatment system in-service. Subsequently, the licensee identified that two secondary containment isolation valves, V-28-21 and V-28-22 were leaking and could not be repaired within the remaining allowed outage time. On August 15, 2000, the licensee completed a technical specification required plant shutdown. The inspector reviewed the emergent work activities associated with the failure of the secondary containment isolation valve seats. The inspector reviewed the compensatory actions associated with the degraded secondary containment and the emergent work activity to repair the valve seats.

b. Issues and Findings

There were no findings identified.

.2 Spent Fuel Pool Cooling

a. Inspection Scope

On September 16, 2000, the spent fuel pool cooling system (SFPCS) was removed from service for planned maintenance to investigate the source of water leaking onto a section of piping below the spent fuel pool skimmer surge tank. The licensee's inspection did not identify any conclusive degradation in the tank, and any leakage was determined to be significantly less than normal evaporation from the spent fuel pool. The inspector reviewed the licensee's actions to plan this emergent work activity and to evaluate the risk associated with the evolution.

b. Issues and Findings

There were no findings identified.

1R15 Operability Evaluations

.1 Root Cause Evaluation For Electromatic Relief Valve Acoustic Monitor

a. Inspection Scope

The inspector reviewed the final root cause analysis for the failure of several electromatic relief valve (EMRV) acoustic monitors. In addition, the inspectors reviewed the corrective actions the licensee took in response to industry information pertinent to the operation of the acoustic monitors and previous failures of similar instrumentation at Oyster Creek.

b. Issues and Findings

NRC inspection report 50-219/2000-006 documented an unresolved item (URI) regarding the failure of the electromatic relief valve (EMRV) acoustic monitor instrumentation and the resulting notice of enforcement discretion (NOED) issued by the NRC staff by letter dated July 21, 2000. The item was unresolved pending the licensee's root cause analysis of the failure of the EMRV acoustic monitor. The licensee completed the root cause testing on September 19, 2000. The results of the testing indicated the root cause of the failure of the acoustic monitor channels was a loose microdot connector on the accelerometers causing an intermittent connection signal.

This was the fifth acoustic monitor instrument failure due to a loose microdot connector. In addition, the nature of the failure mechanism was well understood by the licensee in March 2000, when three monitors, including the monitor that failed in July, were replaced using a defective microdot connector.

This potential failure mechanism was documented in industry information and as an engineering department tracking item since July 1999. In particular, an industry information bulletin describing the potential for failure of the pin connectors used in the monitor assembly was reviewed by the system engineer in November 1999. A recommendation to purchase a tool which would remedy the deficiency associated with the pin connector was developed. However, the tool was not procured until June 2000, after three acoustic monitors had already been changed out with the potentially defective pin connectors during forced outages in January and March 2000. 10 CFR 50 Appendix B, Criterion XVI, "Corrective Actions" requires that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Contrary to the above, the licensee failed to promptly procure and utilize a tool which would have precluded the multiple failures of the acoustic monitoring instrumentation. This violation of 10 CFR 50 Appendix B, Criterion XVI is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the Enforcement Policy. The licensee documented this issue in CAP 2000-0902. **(NCV 05000219/2000-007-01)**

This issue was considered to have very low safety significance (Green) using the Significance Determination Process (SDP) phase 1 evaluation for mitigating systems because this instrumentation performs a position monitoring function and the compensatory actions of verifying EMRV tail pipe temperatures were taken.

.2 Spent Fuel Pool Cooling

a. Inspection Scope

On August 30, 2000, the licensee identified that the pipe from the spent fuel pool skimmer surge tank to the pump suction header was severely corroded. The inspector reviewed the operability determination included in CAP 2000-1128 to verify that the remaining piping would provide adequate structural and seismic strength.

The inspector identified that the engineer had not performed a quantitative engineering evaluation to verify that the spent fuel pool cooling system was operable and bounded by the existing conditions. The system engineer performed an safety evaluation that included a calculation to determine that the existing degraded piping condition supported continued operability of the spent fuel pool cooling system. The inspector reviewed safety evaluation SE 000251-025 and calculation C-1302-251-E3100-031 to verify the operability of the spent fuel pool cooling system.

b. Issues and Findings

There were no findings identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors observed and reviewed several post maintenance tests (PMT) to verify the PMT was appropriate for the scope of maintenance work completed, the acceptance criteria were clear and demonstrated operability of the component and the PMT was performed in accordance with procedures. The following PMTs were observed:

- Standby Liquid Control System Maintenance and Testing: The inspector reviewed job order 530115 for an oil seal replacement on the 'A' standby liquid control (SLC) pump. The inspector also observed portions of the post maintenance test and interviewed operations and maintenance personnel regarding the adequacy of the test.

- Secondary Containment Isolation Valve Repair and In-service Testing: The inspector reviewed job order 544586 and surveillance procedure, "Standby Gas Treatment System Test," 651.4.001 to verify that the licensee appropriately tested the secondary containment valves V-28-21 and V-28-22 after maintenance.

- Safety Relief Valve NR28F Accelerometer: The inspector reviewed the post maintenance testing activity for job order 00540404 for cable and accelerometer

replacement for proper documentation and methodology; and to evaluate the test results.

b. Issues and Findings

There were no findings identified.

1R22 Surveillance Testing

.1 Isolation Condenser Isolation Test and Calibration - A2/B2 Sensors

a. Inspection Scope

The inspector observed portions of surveillance procedure 609.3.012, “Isolation Condenser Isolation Test and Calibration,” and reviewed the test data. In addition, the inspector verified that the equipment used in the test had the appropriate calibrations per the surveillance procedure.

b. Issues and Findings

There were no findings identified.

.2 Reactor Building Close Loop Cooling Water System In-Service Test (IST)

a. Inspection Scope

The inspector reviewed the test procedure, IST requirements and test data to verify that system operability was appropriately satisfied. The inspector verified that the licensee appropriately incorporated the requirements of the American Society of Mechanical Engineers (ASME) pump testing standards. In addition, the inspector verified that the licensee took appropriate corrective actions in response to a vibration data point that exceeded the acceptable threshold.

b. Issues and Findings

There were no findings identified.

.3 Safety Relief Valve Acoustic Monitor

a. Inspection Scope

The inspector reviewed the safety relief valve test procedure, 602.3.008, and test data to verify that system operability was appropriately satisfied.

b. Issues and Findings

There were no findings identified.

1EP6 Emergency Preparedness Drill Evaluation

a. Inspection Scope

The inspector reviewed the licensee's emergency preparedness drill scenario and observed the implementation of the drill on September 20, 2000. The inspector observed portions of the initiation of the drill in the licensee's simulator facility and then observed the remainder of the drill in the technical support center (TSC). The inspector verified that the emergency action levels (EAL) and the protective action recommendations (PAR) were accurate and developed in a timely manner. The inspector also reviewed the licensee's overall critique of the drill and the corrective actions initiated as a result of lessons learned during the drill.

b. Issues and Findings

There were no findings identified.

3. Safeguards

Cornerstone: Physical Protection

3PP1 Access Authorization Program

a. Inspection Scope

The following activities were conducted to determine the effectiveness of the licensee's behavior observation portion of the personnel screening and fitness-for-duty programs:

Five supervisors representing the Operations, Security, Radiological Control, and Instrumentation & Control Departments were interviewed, on August 29 and 30, 2000, regarding their understanding of behavior observation responsibilities and the ability to recognize aberrant behavior traits. Two Access Authorization/ Fitness-for-Duty self-assessments, an audit, and event reports and loggable events for the four previous quarters were reviewed, during this inspection. On August 29 and 30, 2000, five individuals, who perform escort duties, were interviewed to establish their knowledge level of those duties. Behavior observation training procedures and records were also reviewed.

b. Issues and Findings

There were no findings identified.

3PP2 Access Control

a. Inspection Scope

The following activities were conducted during the period August 28 - September 1, 2000, to verify that the licensee had effective site access controls, and equipment in place designed to detect and prevent the introduction of contraband (firearms, explosives, incendiary devices) into the protected area:

- A random sample of ten personnel, granted unescorted access to the protected and vital areas, was checked to assure that they were properly screened, identified and authorized.
- Site access control activities were observed, including personnel and package processing through the search equipment at the access point during peak ingress periods on August 29 - 30, 2000, and vehicle searches, on August 29, 2000.
- On August 30, 2000, testing of all access control equipment; including metal detectors, explosive material detectors, and X-ray examination equipment, was observed.
- The Access Control event log, an audit, and three maintenance work requests were also reviewed.

b. Issues and Findings

There were no findings identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

.1 Safeguards Performance indicators

a. Inspection Scope

The regional inspector reviewed the licensee's programs for gathering and submitting data for the Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment Performance Indicators. The review included the licensee's tracking and trending reports, personnel interviews and security event reports for the Performance Indicator data submitted from the 2nd quarter of 1997 through the 1st quarter of 2000.

b. Issues and Findings

There were no findings identified.

.2 Safety System Functional Failures Performance Indicator

a. Inspection Scope

The inspectors reviewed performance indicator (PI) data from the 3rd quarter of 1999, through the 2nd quarter of 2000, for *Safety System Functional Failures* to verify its accuracy. The inspectors used Nuclear Energy Institute (NEI) 99-02, Revision 0, "Regulatory Assessment Performance Indicator Guideline," as guidance and interviewed licensee personnel responsible for compiling the information. The inspector noted some minor deficiencies, but these deficiencies did not affect the performance indicator.

b. Issues and Findings

There were no findings identified.

.3 Performance Indicator Data Collecting and Reporting Process Review (TI 2515/144)

a. Inspection Scope

The inspectors reviewed the Oyster Creek performance indicator (PI) data collecting and reporting process to determine whether the NRC approved guidance, provided in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 0 was properly implemented. Verification included the data collecting and reporting process, PI definitions, data reporting elements, calculation methods, definition of terms, and use of clarifying notes. Overall, the PI collection and reporting process was consistent with NEI 99-02. The inspectors conducted interviews and reviewed the following documents:

- NRC Performance Indicator Process and Preparation Guidelines
- Performance Indicator data from April to August 2000 and additional historical data as applicable
- Operations Logs, power histories and corrective action documents
- Licensee Event Reports

The inspectors reviewed both historical and current data for the following five PIs:

- Unplanned Power Changes per 7000 critical hours
- Safety System Functional Failures
- Emergency Response Organization Drill Participation
- Occupational Exposure Control Effectiveness
- Protected Area Security Equipment Performance Index

b. Issues and Findings

There were no findings identified.

4OA2 Identification and Resolution of Problems

.1 (Closed) Unresolved Item (URI) 05000219/2000-006-01: Electromatic Relief Valve Acoustic Monitor Failure. The details of this item are discussed in section 1R15 of this inspection report. This unresolved item is closed.

.2 (Closed) Unresolved Item (URI) 05000219/2000-003-01: Untimely resolution of the potential to create two fire zones simultaneously due to a common mode failure resulting from a fire in the A/B battery room. In April 2000, the NRC identified that a single fire in the A/B battery room could cause a loss of DC power and, subsequently, cause a second fire on the turbine operating floor. This scenario was not evaluated in the Fire Hazard Analysis. Once identified, the licensee initiated corrective action report 2000-0534, to address this scenario. The inspector conducted interviews, walked down the A/B battery room and the exciter fire zones, and reviewed the documents listed in Attachment A.

The 1998 revision of the Loss of DC Distribution Center 'A' and/or 'B' procedure identified the potential of a fire in the turbine exciter as a result of the loss of hydrogen seal oil pumps. The procedure revision did not address how the 'A' and 'B' DC sources were lost, rather the impact the loss of the DC sources had on the plant and actions to be taken to safely shut down the reactor and to protect plant personnel. As such, the engineer performing the revision did not investigate nor identify that a fire in the A/B battery room could cause the loss of both the 'A' and 'B' DC sources and, subsequently, cause a secondary fire in the exciter on the turbine operating floor. Therefore, no formal review of a fire in the A/B battery room and second fire in the turbine exciter was performed in 1998 by fire protection engineers and this condition had not been addressed by the Oyster Creek Fire Hazard Analysis.

In the licensee's CAP response, engineering concluded that a fire in the exciter on the turbine operating floor would not adversely affect the safe shutdown of the plant. The inspector determined the licensee's conclusion was appropriate. Safe shutdown equipment on the redundant electrical bus would be available and free from fire damage. Procedure 2000-ABN-3200.29, "Response to Fire," identifies manual operator action required to achieve hot shutdown. The inspector determined the locations of the manual actions would be accessible during a fire in the A/B battery room such that operators would be able to perform the required actions. No violation of NRC requirements occurred because the consequences of a fire in the A/B battery room and the second fire on the turbine operating floor did not alter the results of the fire hazards analysis. This item is closed.

4OA3 Event Follow-up

.1 Dropped Fuel Assembly

a. Inspection Scope

On August 26, 2000, while receiving and processing new fuel, two non-irradiated fuel assemblies fell from their metal container onto the refuel floor of the reactor building. The inspectors assessed plant conditions and interviewed plant personnel. The inspectors reviewed the licensee's plan for resuming processing new fuel and determined that the corrective actions were appropriate. In addition, the inspectors observed portions of new fuel receipt process.

b. Issues and Findings

Several examples of poor procedural adherence and inadequate supervision culminated in a personnel error during new fuel receipt and processing which resulted in two non-irradiated fuel assemblies falling from their metal container onto the refuel floor of the reactor building. On August 10, the inspectors identified that the licensee failed to follow procedure 205.1 "Receiving and Processing New Fuel," when trailers with new fuel for refueling outage 18R were not properly posted. Additionally, radiation protection personnel and licensee management demonstrated weak communications as demonstrated by the lack of timeliness in initiating a corrective action report (2000-1032) to document this failure to follow procedures. During the next week, the licensee identified three additional examples of procedure 205.1 non-compliance (2000-1035, 2000-1057, 2000-1086). These examples identified a pattern of procedure 205.1 non-compliance. The specific procedure non-compliance errors that led to dropped fuel assemblies included failure to install restraining devices on a new fuel assembly container and a lack of supervisory presence to verify proper rigging of the container. The assemblies dropped because the technicians failed to properly restrain the assemblies in the container during an evolution to place the container in an upright position. Procedure 205.1, "Receiving and Processing New Fuel," requires securing the fuel in the container and for a job supervisor to make a final inspection of crane rigging connections. Because the procedural errors related specifically to the new fuel receipt inspection and processing procedure, a greater potential existed to install fuel that did not meet the requirements of procedure 205.1 "Receiving and Processing New Fuel." This issue was considered to have very low safety significance (Green) using the Significance Determination Process (SDP) phase 1 evaluation for barrier integrity because the reactor coolant system activity performance indicator would monitor fuel performance. The dropping of the assemblies had very low risk significance due to the fact that the new fuel assemblies had not been irradiated. The licensee returned the dropped fuel assemblies to the vendor. One worker received a glancing blow from the falling fuel assembly. The worker was evaluated at a hospital and returned to work a few hours later with no injuries that restricted him from work activities. The licensee's failure to follow procedure 205.1, "Receiving and Processing New Fuel," is a violation of Technical Specification 6.8.1, which requires that written procedures shall be established, implemented and maintained. However, this violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued on

May 1, 2000. The licensee documented this issue in CAP 2000-1108. **(NCV 05000219/2000-007-02)**

.2 Closed Licensee Event Report 2000-004: Fire Barrier Enclosure Does Not Meet Design Requirements Due to Personnel Error. This is an old design issue discovered as part of the licensee's annual fire protection audit. The licensee took appropriate compensatory actions and will continue to do so until the condition can be restored to the design basis fire ratings. This issue has been entered into the licensee's corrective action program as CAP 2000-0635. The inspector performed an in office review of this LER and determined it to be a minor issue. This LER is closed.

.3 (Closed) Licensee Event Report (LER) 00-005: Failure to Identify that Charcoal Filter Failed Surveillance on Methyl Iodine Removal Efficiency Due to Personnel Error. The inspector performed an in office review of this LER and concluded that no new issues were raised requiring additional review. This issue was previously reported in NRC Inspection Report 05000219/2000-005. This LER is closed.

.4 (Closed) Licensee Event Report (LER) 00-006: Skin Dose Associated with Control Room HVAC System B Exceeds Limit after Revaluation. The inspector performed an in office review of this LER and concluded that there were no issues which required additional review. This LER is closed.

.5 Closed Licensee Event Report 2000-007: Plant Operation Outside of Technical Specifications Due to a Failed Acoustic Monitor. This issue was reviewed and discussed in section 1R15 of this inspection report. This LER is closed.

.6 Closed Licensee Event Report 2000-008: A Degradation in Secondary Containment Resulted in the Completion of a Plant Shutdown. This issue was reviewed and discussed in section 1R13 of this inspection report. This LER is closed.

4OA5 Other

Review of Institute of Nuclear Power (INPO) Report

Institute of Nuclear Power Operations (INPO) personnel conducted a plant evaluation and assessment at Oyster Creek during the period November 1-12, 1999. The final assessment report was issued August 9, 2000. The inspector reviewed the INPO Plant Evaluation and Assessment Report, determined that the observations and findings were consistent with documented NRC findings and determined that no additional follow-up inspection associated with the plant assessment report was warranted.

4OA6 Meetings

.1 Exit Meeting Summary

On October 13, 2000, the resident inspectors presented the inspection results to Mr. Ron DeGregorio 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.

.2 Revised Oversight Process Public Meeting

On July 31, 2000, Mr. John Rogge, Chief, Projects Branch 7 and other NRC staff personal conducted a public meeting at the Lacey Township Municipal Building, Forked River, New Jersey, to discuss the NRC's revised Reactor Oversight Process which became effective April 2, 2000.

PARTIAL LIST OF PERSONS CONTACTED

Licensee (in alphabetical order)
V. Aggarwal, Director, Engineering
R. Brown, Manager, Experience Assessment
M. Carlson, Engineering
P. Cervenka, Engineering
R. DeGregorio, Vice President
B. DeMerchant, Licensing Engineer
R. Ewart, Manager, Site Security
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D. Slear, Senior Manager, Design
R. Tilton, Manager, Assessment
W. Truax, Director, Work Management
T. Trettel, Engineering
C. Wilson, Senior Manager, Operations
K. Wolf, Manager, Radiological Protection

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

0500219/2000-007-01	NCV	Inadequate corrective actions to promptly identify and correct a deficiency which resulted in multiple failures of the acoustic monitor instrumentation. (Section 1R15)
0500219/2000-007-02	NCV	Failure to follow Procedure 205.1, "Receiving and Processing New Fuel," culminated in a personnel error which resulted in dropped new fuel assemblies. (Section 4OA3)

Closed

05000219/2000-006-01	URI	Electromatic Relief Valve Acoustic Monitor Failure. (Section 4OA4.1)
05000219/2000-003-01	URI	Untimely resolution of the potential to create two fire zones simultaneously due to a common mode failure resulting from a fire in the A/B battery room. (Section 4OA4.2)
0500219/2000-004	LER	Fire Barrier Enclosure Does Not Meet Design Requirements Due to Personnel Error. (Section 4OA3.2)
0500219/2000-005	LER	Failure to Identify that Charcoal Filter Failed Surveillance on Methyl Iodine Removal Efficiency Due to Personnel Error. (Section 4OA3.3)
0500219/2000-006	LER	Skin Dose Associated with Control Room HVAC System B Exceeds Limit after Revaluation. (Section 4OA3.4)
0500219/2000-007	LER	Plant Operation Outside of Technical Specifications Due to a Failed Acoustic Monitor. (Section 4OA3.5)
0500219/2000-008	LER	A Degradation in Secondary Containment Resulted in the Completion of a Plant Shutdown. (Section 4OA3.6)

Attachment A
Documents Reviewed during the Resolution of
Unresolved Item 05000219/2000-003-010

- Procedure 2000-ABN-3200.13A/B, “Loss of DC Distribution Center A and B,” Revision 0
- Procedure 2000-ABN-3200.29, “Response to Fire,” Revision 23
- Corrective Action Report No. O2000-0534
- Engineering Evaluation 125-1 File no. 0144-00, Changing Conditions on the Turbine Operating Floor, 6/2/2000
- Procedure 2000-RAP-3024.05, “Master Fire Alarm Panel Alarm Response Procedures,” Revision 3
- Safety Evaluation SE-945100-283 for 2000-ABN-3200.13A/B, 5/99
- Special Procedure 97-003, “Oyster Creek Pre-Fire Plans,” Revision 7
- Procedure 336.2, “Hydrogen Shaft Seal Oil System,” Revision 15
- Procedure 315.2, “Turbine Lube Oil System,” Revision 25
- Drawing BR 2014, Turbine Lube Oil System, Revision 28
- Drawing BR 3431, E1710, Appendix R Safe Shutdown Circuit Routing Turbine Building Basement, Revision 1
- Drawing BR 3431, E1711, Appendix R Safe Shutdown Circuit Routing Turbine Building Mezzanine, Revision 1
- Drawing GE 865D741, Hydrogen Seal Oil, Revision 10
- FH-1-R9, Fire Hazards Analysis
- GEI 75253F, Oil Pump System
- GEI 75346B Booster Pump
- TB 170X29, Design Data Hydrogen System

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
AmerGen	AmerGen Energy Company, LLC
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Process
CFR	Code of Federal Regulations
DC	Direct Current
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EAL	Emergency Action Levels
EDG	Emergency Diesel Generator
EMRV	Electromatic Relief Valve
ESW	Emergency Service Water
HVAC	Heating, Ventilation and Air Conditioning
INPO	Institute of Nuclear Power Operations
IPEEE	Individual Plant Examination of External Events
ISI	In-service Inspection
IST	In-service Test
JO	Job Order
LER	Licensee Event Report
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NOED	Notice of Enforcement Discretion
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
NSIC	Nuclear Safety Information Center
PAR	Protective Action Recommendation
PARS	Publicly Available Records
PI	Performance Indicator
PMT	Post Maintenance Tests
SDP	Significance Determination Process
SE	Safety Evaluation
SFPCS	Spent Fuel Pool Cooling System
SLC	Standby Liquid Control
SSC	Structures, Systems and Components
TS	Technical Specification
TSC	Technical Support Center
URI	Unresolved Item

ATTACHMENT 1

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety
- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety
- Occupational
- Public

Safeguards
- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.