July 15, 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 - NRC EMERGENCY PREPAREDNESS SUPPLEMENTAL INSPECTION REPORT NO. 05000219/2005007

Dear Mr. Crane:

On May 31- June 2, 2005, the U.S. Nuclear Regulatory Commission (NRC) conducted an emergency preparedness (EP) supplemental inspection at your Oyster Creek Generating Station. The enclosed report documents the supplemental inspection findings which were discussed on June 2, 2005, with Mr. Bud Swenson and other members of your staff.

The NRC performed this supplemental inspection to assess your evaluation of a low to moderate (White) safety significant finding involving an inaccurate Emergency Action Level (EAL) threshold value used for making a General Emergency (GE) declaration. The basis for the White finding was explained in our letter dated January 11, 2005, which transmitted Inspection Report No. 05000219/2004-009.

The supplemental inspection was conducted to determine if the root causes and contributing causes of the White finding were understood, to assess the extent of the condition review, and to determine if the corrective actions for risk significant performance issues were sufficient to address cause, and to prevent recurrence. To accomplish these objectives, the inspector reviewed your root cause analysis and evaluation of extent of condition and conducted an independent inspection to assess your conclusions. Based on our inspection, we concluded that your staff understood the root and contributing causes of the White finding, adequately addressed the extent of condition, and took adequate corrective actions for the underlying causes to prevent recurrence.

Given your acceptable performance in addressing the EAL issue, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters in accordance with the guidance in Inspection Manual Chapter (IMC) 0305, “Operating Reactor Assessment Program.”

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 for from the Publically Available Records (PARS) component of the 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/

Raymond K. Lorson, Chief
Plant Support Branch 1
Division of Reactor Safety

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

Enclosure: Supplemental Inspection Report No. 05000219/2005007

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
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K. Tosch - Chief, Bureau of Nuclear Engineering, NJ Dept. of Environmental Protection
R. Shadis, New England Coalition Staff
N. Cohen, Coordinator - Unplug Salem Campaign
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E. Gbur, Chairwoman - Jersey Shore Nuclear Watch
E. Zobian, Coordinator - Jersey Shore Anti Nuclear Alliance
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DATE	07/14/05		07/15/05			

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.	50-219
License No.	DPR-16
Report No.	05000219/2005007
Licensee:	AmerGen Energy Company, LLC (AmerGen)
Facility:	Oyster Creek Generating Station
Location:	Forked River, New Jersey
Dates:	May 31 - June 2, 2005
Inspector:	Nancy T. McNamara, Emergency Preparedness Inspector
Approved by:	Raymond K. Lorson, Chief Plant Support Branch 1 Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000219/2005007; 05/31/2005-06/02/2005; Oyster Creek Generating Station; Supplemental Inspection Report.

This on-site emergency preparedness (EP) supplemental inspection was performed by a region-based inspector. No findings were identified. 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.

Cornerstone: Emergency Preparedness

The NRC performed this supplemental inspection to assess the licensee's evaluation for an issue associated with not properly ensuring that an EAL used for making a GE declaration was correct following a change made to the minimum steam cooling reactor water level (MSCRWL) threshold value in the EOP. This performance issue was characterized as having low to moderate risk significance ("White") in NRC Inspection Report No. 05000219/2004006.

The inspector determined that the licensee performed a comprehensive evaluation of the inaccurate EAL issue. The licensee's evaluation identified two primary root causes of this issue: (1) AmerGen did not properly implement the configuration control process; and, (2) insufficient technical rigor was applied during resolution of a design input error which affected the EAL. The licensee implemented corrective actions to ensure that no other EOP changes were made that would ultimately affect the EALs. As a result of the root cause analysis, the licensee broadened their extent of condition review to ensure all program areas and their associated procedures continued to meet the requirements of the emergency plan (E-Plan).

Based on the results of this inspection, the inspector concluded that AmerGen adequately completed a root cause evaluation of the performance deficiency associated with this finding. Additionally, the inspector concluded that the planned and completed corrective actions appeared reasonable to address the related causes. Given AmerGen's acceptable performance in addressing the inaccurate EAL issue, the white finding associated with this issue will only be considered in assessing plant performance for a total of four quarters in accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program." Implementation of the licensee's remaining corrective actions may be reviewed during future inspections.

Report Details

01. INSPECTION SCOPE

The NRC performed this supplemental inspection to assess AmerGen's evaluation of an issue associated with not ensuring that an EAL used for making a GE declaration was correct following revision to the MSCRWL threshold value in the EOPs. This performance issue was previously characterized as "White" in NRC Inspection Report No. 05000219/2004009 and is related to the emergency preparedness cornerstone in the reactor oversight performance area. The inspection scope included a review of the following: (1) root cause investigation reports (CR 02004 -1986 - Revision 0 and Revision 1); (2) corrective action process reports (CAPs); (3) program procedures; (4) extent of condition determination; (5) adequacy of both the completed and long term corrective actions; and (6) Focus Area Self-Assessment (FASA) Report No. 295413, Revision 1. In addition, the inspector interviewed the root cause and FASA team leaders. The specific CAP reports and procedures that were reviewed are listed in Attachment One.

02. EVALUATION OF INSPECTION REQUIREMENTS

02.01 Problem Identification

a. Determination of who identified the issue and under what conditions.

On July 30, 2004, a nuclear oversight auditor identified the issue during an audit of the E-Plan EAL procedures.

b. Determination of how long the issue existed, and prior opportunities for identification.

The condition existed for a period of eight days until it was identified and corrected by the licensee.

The inspector noted some prior opportunities to identify this problem including:

- On several occasions, EOP procedure reviewers and corrective action program reports identified that the EAL was potentially affected by the EOP change, but no actions were initiated to address this issue.

- The Plant Operations Review Committee (PORC) reviewed and approved the EOP procedure change, but did not recognize the need for an EAL change.

- Subsequent to the EOP change, an EOP training instructor sent an electronic message to the engineering branch questioning the accuracy of the EAL; however, no immediate actions were implemented to correct the problem.

c. Determination of the plant-specific risk consequences (as applicable) and compliance concerns associated with the issue.

The failure to ensure the EAL was accurate was determined to be of low to moderate significance because a Risk Significant Planning Standard (RSPS) function was degraded. Specifically, it was degraded because an incorrect EAL scheme could, under certain circumstances, delay actions directed by State and local response plans. Not having an accurate EAL scheme is a violation of 10 CFR 10.47(b)(4). State and local response agencies rely on the EAL information for taking minimum initial offsite response measures.

02.02 Root Cause and Extent of Condition and Extent of Cause Evaluation

a. Evaluation of methods used to identify the root causes and contributing causes.

The methods of evaluation used included: (1) development of a detailed timeline from interviews and reference documents; (2) barrier determination to identify what barriers existed to break the sequence of events that led to the problem; (3) "Why Charting" analysis method which included a causal factor review; and, (4) evaluation of corrective actions for each root cause and causal factor. Also, the investigation considered the oversight of the work, qualifications of the personnel involved, communications between parties, individual accountabilities, and involvement of various levels of corporate and station management for identifying the contributing causes. The inspector found the evaluation methods used by the licensee to be acceptable.

b. Determination that the level of detail of the root cause evaluation was commensurate with the significance of the problem.

The licensee conducted an initial root cause analysis with both station and corporate personnel. Additionally, an FASA was conducted to determine the adequacy of the root cause and corrective action determination and the effectiveness of the completed actions. The FASA team, which included an independent expert, determined that the root cause report narrowly focused on the engineering/fuels department component of the problem and needed to be expanded. Following that evaluation, the FASA team issued a revised root cause report that identified two primary root causes related to program implementation and human performance as contributing factors to this finding: (1) individuals involved in the fuel emergency procedure guideline parameter change and subsequent EOP procedure changes did not implement the configuration control process due to knowledge-based human error; and (2) reviews were performed with insufficient technical rigor during resolution of a design input error which affected the EAL. The inspector determined the evaluation was thorough, detailed and commensurate with the significance of the problem.

c. Consideration of prior occurrences of the problem and knowledge of prior operating experience.

AmerGen's evaluation did not identify any previous events of an EAL revision not being made as a result of a configuration change. Their extent of condition review of other departments that may not have used a configuration change process for past procedure changes is ongoing and as of the date of this inspection, no similar occurrences have been identified.

d. Determination extent of condition and the extent of cause of the problem.

AmerGen immediately conducted an extent of condition review specific to the engineering department procedures and determined this was an isolated event. However, as stated above, as of the date of this inspection, they had not identified any additional problems. AmerGen's root cause and FASA review uncovered the following additional generic weaknesses: (1) personnel qualification on the configuration control process; (2) inefficient use of the CAP system for resolving identified deficiencies; (3) knowledge-based weaknesses associated with the understanding of processes used by the emergency planning department; and, (4) an ineffective questioning attitude by station review committee members.

02.03 Corrective Actions

a. Appropriateness of corrective actions.

AmerGen issued 34 CAP reports that were directly linked to a root cause, causal factor and/or generic implication and included actions for preventing recurrence. Of the 34 CAPS, 28 have been completed. Upon identification of this issue, AmerGen took immediate corrective actions that included: (1) the reactor power was reduced in order to support the rod pattern change to satisfy the previous MSCRWL limit; (2) a 10 CFR 50.54(q) review was conducted to ensure the change would not decrease the effectiveness of the plan; and (3) the EAL change was reviewed by PORC and approval was obtained from the State of New Jersey, Bureau of Nuclear Engineering prior to implementation. Some of the long-term corrective actions included: (1) reviewed the EAL process brief with all engineering/operations personnel; (2) prepared a supervisory brief on expectations that corrective actions in the CAP process shall be specific and actionable to all responsible departments; (3) conducted a standdown with the Exelon fuels staff to review the root cause, lessons learned and expectations; (4) conducted training on the configuration control change process; and, (5) revised the administrative procedure for control of EOP documents to include instructions to use the configuration control process. The inspector found the corrective actions to be appropriate to correct this issue and prevent recurrence.

b. Prioritization of corrective actions.

The corrective actions were found to be appropriately prioritized. As previously stated, 28 of 34 corrective actions have been completed. The remainder actions, related to preventing recurrence and extent of cause of

condition, will be closed once AmerGen has determined that the corrective actions were effective.

c. Establishment of a schedule for implementing and completing the corrective actions.

The inspector determined that the licensee's schedule for implementing and completing the corrective actions was adequate.

d. Establishment of quantitative or qualitative measures of success for determining the effectiveness of the corrective actions to prevent recurrence.

The inspector determined that AmerGen's review contained sufficient methods for determining the effectiveness of corrective actions to prevent recurrence. Some of these actions included: (1) enhanced guidelines for review committees regarding E-Plan commitments and requirements; (2) enhanced the process for documenting and performing recurring training within engineering; (3) added an engineering program engineer to the engineering quality review committee to enhance their understanding of configuration control processes and procedures; and (4) performed an overall effectiveness review of each assigned CAP.

03. MANAGEMENT MEETINGS

Exit Meeting Summary

The inspector presented the inspection results to Mr. B. Swenson and other licensee personnel, at the conclusion of the inspection on June 2, 2005. The licensee acknowledged the results of the inspection. The inspector confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Kandasamy, Regulatory Assurance Manager
K. Poletti, EP Manager
D. Neff, Exelon, MAROG EP
Thomas Powell, Engineering Programs Manager

New Jersey State Department of Environmental Protections

R. Russell, Nuclear Engineer, Bureau of Nuclear Engineering (BNE)

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Open
None

Closed

05000219/2004009-02	AV	Incorrect EAL Due to EOP Change. (Section 1EP4)

LIST OF DOCUMENTS REVIEWED*

Procedures:

CC-AA-102, Design Input and Configuration Change Impact Screening, Rev. 9
CC-AA-10, Configuration Control Process Description, Rev. 4
CC-AA-309, Control of Design Analyses, Rev. 4
HU-AA-102, Technical Human Performance Practices, Rev. 1
LS-AA-125-1001, Root Cause Analysis Manual, Rev. 4
LA-AA-126, Self-Assessment Program, Rev. 4
LS-AA-126-1001, Focused Area Self-Assessments, Rev. 3
AD-AA-102-1001, Station Qualified Reviewer's Guide, Rev. 3
LS-AA-125-1004, Effectiveness Review Committee, Rev. 2

Corrective Action Process Report Numbers :

CAP No. 02004-1986, Assigned Actions 1-34
CAP No. 02004-3941
CAP No. 02004-2498
CAP No. 02005-1666
CAP No. 02004-2822
CAP No. 02005-1047
CAP No. 02005-1998
CAP No. 02005-2065
CAP No. 02005-2252-3
CAP No. 02005-1074

* - Does not include all procedures reviewed in preparation for the supplemental inspection.

LIST OF ACRONYMS

CAP	Corrective Action Process
EAL	Emergency Action Level
EOP	Emergency Operating Procedure
EP	Emergency Preparedness
E-Plan	Emergency Plan
FASA	Focus Area Self Assessment
GE	General Emergency
IMC	Inspection Manual Chapter
MSCRWL	Minimum Steam Cooling Reactor Water Level
NRC	Nuclear Regulatory Commission
PORC	Plant Operations Review Committee
RSPS	Risk Significant Planning Standard
SDP	Significance Determination Process