September 10, 2002

Mr. John L. Skolds, President
and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION - ISSUANCE OF AMENDMENT RE: CORE SPRAY PUMP OPERABILITY (TAC NO. MB2892)

Dear Mr. Skolds:

The Commission has issued the enclosed Amendment No. 231 to Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station, in response to your application dated September 10, 2001.

The amendment revised the requirements in Technical Specifications (TSs), Sections 3.4.A.7.c and 3.4.A.8.c, changing confirmation of operability of core spray pumps and system components from testing to verification.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/RA/

Peter S. Tam, Senior Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosures: 1. Amendment No. 231 to DPR-16
2. Safety Evaluation

cc w/encls: See next page

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DISTRIBUTION:

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Accession Number: ML022380533

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DATE	8/30/02	8/28/02	9/9/02	9/10/02	8/30/02	5/21/02

OFFICIAL RECORD COPY

* Safety Evaluation input of 5/21/02 substantially unchanged

AMERGEN ENERGY COMPANY, LLC

DOCKET NO. 50-219

OYSTER CREEK NUCLEAR GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 231
License No. DPR-16

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by AmerGen Energy Company, LLC, et al., (the licensee), dated September 10, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-16 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 231, are hereby incorporated in the license. AmerGen Energy Company, LLC, shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard J. Laufer, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: September 10, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 231

FACILITY OPERATING LICENSE NO. DPR-16

DOCKET NO. 50-219

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
3.4-2	3.4-2
3.4-7	3.4-7

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 231 TO FACILITY OPERATING LICENSE NO. DPR-16

AMERGEN ENERGY COMPANY, LLC

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

By application dated September 10, 2001, AmerGen Energy Company, LLC (AmerGen or the licensee) requested to amend the Technical Specifications (TSs) for Oyster Creek Nuclear Generating Station (Oyster Creek). The licensee's proposed amendment would revise Section 3.4, "Emergency Cooling." Specifically, the revision would change the requirements in Subsections 3.4.A.7.c and 3.4.A.8.c from confirming operability of core spray pumps and system components and the fire protection system by testing, to confirming operability by verification. Verification of component operabiity is defined in the TSs as an administrative check of appropriate plant records (e.g, logs, and surveillance test records). The proposed amendment would also change the TSs Bases to replace the word "demonstration" with "verification."

The purpose of the proposed amendment is to provide an alternate means of determining component operability without reliance on frequent testing. The licensee stated that testing core spray components and the fire protection system every week as is currently required by Subsection 3.4.A.7.c, or testing core spray components every 72 hours as is currently required by Subsection 3.4.A.8.c, contributes to component wear and has a negative impact on component reliability and maintenance.

2.0 EVALUATION

The licensee proposed to replace the testing requirements in Section 3.4.A, "Core Spray System," with verification requirements when portions of the system are down for maintenance. The Nuclear Regulatory Commission (NRC) staff's evaluation is set forth below.

2.1 Reactor Systems Perspective

Current TSs Subsection 3.4.A.7 permits as few as one of four core spray pumps and system components to be operable when (a) in the cold shutdown condition or (b) in the refuel mode with the reactor coolant system less than 212 °F and vented, and (c) no work is being done on the reactor system capable of lowering the water level above the core to a level of less than 4 feet 8 inches. Operability of the operable core spray pump is required to be demonstrated by augmented testing on a weekly basis. Subsection 3.4.A.8 permits as few as two of four core spray pumps to be operable when the two operable core spray pumps are in different trains

when in the refuel mode with the reactor coolant system maintained at less than 212 °F or in the startup mode for the purposes of low power physics testing. Operability of each core spray pump is required to be demonstrated by augmented testing every 72 hours. The licensee requests that these augmented testing requirements be replaced with verification requirements consisting of administrative checks of the appropriate plant records at the same time intervals. Surveillance testing requirements for the core spray pumps in other sections of the TSs including automatic test starts will remain unchanged.

The core spray system at Oyster Creek is the low pressure emergency core cooling system designed to cool the reactor core at pressures below 285 pounds per square inch of gage pressure following postulated accidents. The core spray system is designed to cool the core from the top. Recirculation nozzles penetrate the Oyster Creek reactor vessel at a level below the reactor core, therefore, core flooding from the bottom might not be possible under all accident conditions.

The core spray system is divided into two redundant trains. Each train contains two main pumps and two booster pumps. Connections are provided to the fire protection system which is equipped with two redundant pumps capable of supplying water to the core spray system. The Updated Final Safety Analysis Report (UFSAR) states that one main core spray pump alone can provide at least 2200 gallons per minute (gpm) to the core. One fire pump is stated to be capable of providing 2000 gpm. The capacity of one main pump or one fire pump is several times that needed for decay heat removal during cold shutdown or refueling.

For potential accidents during startup, the reactor system would be pressurized, and draining of the reactor system below the top of the core becomes more likely. The UFSAR states that a minimum core spray of 3100 gpm is required to ensure that each fuel bundle receives adequate cooling flow from the top. Two main core spray pumps provide a flow rate in excess of this capability, with backup provided by the fire protection system.

TSs Section 4.4.A provides surveillance testing requirements for the core spray system pumps, valves, automatic actuation circuitry and instrumentation. Automatic test starts every 3 months are required. The NRC staff agrees with the licensee that the surveillance requirements in Section 4.4.A are adequate to ensure operability of these systems and that additional testing under Subsections 3.4.A.7 and 3.4.A.8 is not needed and can be replaced by administrative verification of operability from the appropriate plant records. The NRC staff also notes that this change will make the Oyster Creek requirements consistent with the testing requirements for the engineered safety systems at other nuclear power plants.

2.2 Fire Protection System Perspective

Fire protection water supply is provided by two fire pumps taking suction from a pond formed by a small dam on Oyster Creek. The two fire pumps are housed in a common pump house and supply the plant through a single 14-inch line. Two vertical shaft centrifugal main fire pumps are provided, each with a capacity of 2000 gpm. The pumps are driven by separate diesel engines. Each engine has its own fuel supply located adjacent to the pump house. The fire pumps are arranged to start automatically if the pressure drops due to a large demand. Either pump can be manually started from the control room or at the pump house. In addition to supplying water for fire protection, the fire protection system also provides backup water to several other systems, including the core spray system.

As stated under 2.1 of this Safety Evaluation, the current Subsection 3.4.A.7 permits as few as one spray pump and system components to be operable under Conditions (a), (b), and (c), and requires these systems be demonstrated operable on a weekly basis. Under these same conditions, the current Subsection 3.4.A.7 also requires that the operability of the fire protection system (as a source of backup water to the core spray system) be demonstrated by testing on a weekly basis. The licensee's proposed change of Subsection 3.4.A.7, i.e., revising system demonstration by testing to verification, applies to the fire pretection system also.

Verification of operability is defined in TSs Definition 1.1 as an administrative check of appropriate plant records (logs, and surveillance test records) to determine that a system, subsystem, train, component or device is operable. The licensee stated that the surveillance of the fire protection system is performed in accordance with the fire protection program required by License Condition 2.C.3 and TSs Section 4.4.F. The diesel-driven pumps for the fire protection system are tested monthly in accordance with TSs Subsection 4.4.F.1. The fire protection system is also monitored for availability and reliability under the Maintenance Rule. Therefore, the licensee concluded that changing the demonstration of operability by testing to verification in accordance with TSs Definition 1.1 provides adequate assurance of operability. The NRC staff agrees that the surveillance requirements cited by the licensee are adequate to ensure operability of the fire protection system and that the testing requirement can be replaced by verification of system operability. The NRC staff also determined that this change has no impact on the licensee's compliance with 10 CFR 50.48 (fire protection), since the use of the fire protection system as a backup to the core spray system, when the plant is shutdown, is not addressed in the NRC fire protection requirements. The proposed changes are, therefore, acceptable.

2.3 Associated TSs Bases

The licensee proposed to also revise the TSs Bases on Page 3.4-7. In accordance with 10 CFR 50.36(a), the TSs Bases are not part of the TSs. The NRC staff reviewed the proposed changes and found them to be consistent with and supportive of the proposed changes to the TSs.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (67 FR 10008). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: W. L. Jensen
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Date: September 10, 2002

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