July 27, 2007

Mr. Christopher M. Crane
President and Chief Executive Officer
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION - ISSUANCE OF AMENDMENT RE: REQUEST TO CHANGE TECHNICAL SPECIFICATION DEFINITION OF CHANNEL CALIBRATION, CHANNEL CHECK, AND CHANNEL TEST (TAC NO. MD3133)

Dear Mr. Crane:

The Commission has issued the enclosed Amendment No. 263 to Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station (Oyster Creek), in response to your application dated September 28, 2006.

The amendment revises the Oyster Creek Technical Specification definition of Channel Calibration, Channel Check, and Channel Test consistent with NUREG-1433, Revision 3.0, "Standard Technical Specifications General Electric Plants, BWR/4 Specifications," dated June 2004.

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/

G. Edward Miller, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure:
1. Amendment No. 263 to DPR-16
2. Safety Evaluation

cc w/encls: See next page

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TS(s) Accession Number: **ML072130293**

OFFICE	LPLI-2/PM	LPLI-2/LA	DIRS/ITSB/BC	OGC	LPLI-2/BC
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DATE	5/10/07	5/3/07	6/5/07	7/16/07	7/27/07

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AMERGEN ENERGY COMPANY, LLC

DOCKET NO. 50-219

OYSTER CREEK NUCLEAR GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 263
License No. DPR-16

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

   A. The application for amendment by AmerGen Energy Company, LLC, (the licensee), dated September 28, 2006, 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 Facility Operating 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. 263, 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 its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/ra/

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and
Technical Specifications

Date of Issuance: July 27, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 263

FACILITY OPERATING LICENSE NO. DPR-16

DOCKET NO. 50-219

Replace page 3 of Facility Operating License No. DPR-16 with the attached revised page 3. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

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

Remove	Insert
1.0-4	1.0-4
3.1-19	3.1-19
4.1-9	4.1-9
4.3-2	4.3-2
4.4-1	4.4-1
4.12-1	4.12-1
4.12-2	4.12-2
4.13-1	4.13-1
4.13-2	4.13-2
4.15-2	4.15-2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 263

TO FACILITY OPERATING LICENSE NO. DPR-16

AMERGEN ENERGY COMPANY, LCC

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

By application dated September 28, 2006, AmerGen Energy Company, LLC (AmerGen or the licensee) requested changes to the Facility Operating License for the Oyster Creek Nuclear Generating Station (Oyster Creek). The proposed amendment would revise the Oyster Creek Technical Specification (TS) definition for Channel Calibration, Channel Check, and Channel Test consistent with NUREG-1433, Revision 3.0, "Standard Technical Specifications General Electric Plants, BWR/4 Specifications," June 2004.

The proposed changes to the current definitions of Channel Calibration, Channel Check, and Channel Test in Section 1.19 of the Oyster Creek TSs will apply to all instrument functions in the TSs, including Reactor Protection System (RPS) instruments. The proposed changes would allow for overlapping or sequential testing of all instrumentation channels. Among other things, this manner of testing would minimize the time the RPS would be in a half-scram condition during surveillance testing, thereby minimizing the chance of a full scram due to spurious half scram signals from the opposite channel.

2.0 REGULATORY EVALUATION

The licensee identified the applicable regulatory requirements in Section 5.2 of Attachment 1 of its submittal. The criteria against which the Nuclear Regulatory Commission (NRC) staff evaluated the proposed change are Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Appendix A, General Design Criterion (GDC) 21, "Protection System Reliability and Testability," and 10 CFR 50.55a(h), "Protection and safety systems."

GDC 21 states as follows:

> The protection system shall be designed for high functional reliability and inservice testability commensurate with the safety functions to be performed.

> Redundancy and independence designed into the protection system shall be sufficient to assure that (1) no single failure results in loss of the protection function and (2) removal from service of any component or channel does not result in loss of the required minimum redundancy unless the acceptable reliability of operation of the protection system can be otherwise demonstrated. The protection system shall be designed to permit periodic testing of its functioning when the reactor is in operation, including a capability to test channels independently to determine failures and losses of redundance that may have occurred.

Since Oyster Creek was designed, built, and began operation prior to the codification of the GDCs, they were not a part of the original design basis for the plant. However, the Updated Final Safety Analysis Report (UFSAR) was subsequently revised to describe conformance with the GDC, including GDC 21.

Further, 10 CFR 50.55a(h) lists the codes and standards that licensees must adhere to with regard to protection and safety systems. Currently, this regulation endorses Institute of Electrical and Electronics Engineers (IEEE) Standard 603, 1991 edition, including the correction sheet dated January 30, 1995. For those nuclear power plants whose construction permits were issued after January 1, 1971, but before May 13, 1999, the regulation requires that plant protection systems must meet either IEEE Standard 279 or IEEE 603, 1991 edition, including the correction sheet dated January 30, 1995. For nuclear power plants with construction permits issued before January 1, 1971, protection systems must be consistent with their licensing bases.

Although the Oyster Creek construction permit was issued prior to January 1, 1971, and the issuance of IEEE 279, the licensing basis as described in the Oyster Creek UFSAR has since been updated to reflect IEEE 279 as the design basis for Oyster Creek.

3.0 TECHNICAL EVALUATION

3.1 Description of Proposed Change

3.1.1 Channel Check

The proposed change would revise the definition of Channel Check from:

> A qualitative determination of acceptable operability by observation of channel behavior during operation. This determination shall include, where possible, comparison of the channel with other independent channels measuring the same variable

to:

> A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter.

3.1.2 Channel Test

The proposed change would rename a Channel Test as a Channel Functional Test and revise the definition from:

> Injection of a simulated signal into the channel to verify its proper response including where applicable, alarm and/or trip initiating action.

to:

> A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps.

3.1.3 Channel Calibration

The proposed change would revise the definition of Channel Calibration from:

> Adjustment of channel output such that it responds, with acceptable range and accuracy to known values or the parameter which the channel measures. Calibration shall encompass the entire channel, including equipment actuation, alarm or trip.

to:

> A CHANNEL CALIBRATION shall be the adjustment as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps.

3.2.1 Evaluation of Proposed Definition Changes

In its application, AmerGen stated that the Oyster Creek TSs were reviewed for all sections referencing and/or using the instrument terms check, test, functional test, and calibrate/calibration in the context of using the proposed definitions of Channel Check, Channel Calibration, and Channel Functional Test. Further, AmerGen stated that the differences resulting from the proposed definitions were consistent with the existing TS definitions for checking, testing, and calibrating instrument channels while allowing for alternate and improved testing methodologies and maintaining the performance requirements of the instrumentation and associated surveillance frequencies.

The NRC staff reviewed the impact of the proposed definition revisions to confirm the licensee's assertion that the proposed revision will allow flexibility in testing methodologies, while continuing to verify the operability of the instrument channels. The NRC staff finds that the proposed changes will allow for performing overlapping or sequential testing that will continue to test the entire channel, consistent with IEEE 279. Further, the proposed amendment does not modify the time intervals for Surveillance Requirements (SRs), required action times for failure to meet Limiting Conditions for Operation, or Limiting Safety System Settings. Therefore, the proposed change will continue to meet the design-basis standard of IEEE 279 for Oyster Creek .

Additionally, AmerGen stated that complying with the current Oyster Creek TS definitions of Channel Calibration, Channel Check, and Channel Test for the RPS requires placing the RPS in a half-scram condition during some SR testing. This situation creates a condition where a full-scram would occur while the reactor is at power and within operating limits if the opposite channel of the RPS received a spurious scram signal. By implementing the proposed definitions, overlapping or sequential testing of the RPS channels would be permissible, thus minimizing the time a half-scram condition exists during testing. Minimizing this time reduces the likelihood of a spurious scram at power, improving the reliability of the RPS.

Given that the proposed changes will continue to meet the design-basis standard of IEEE 279, while improving the reliability of the RPS, the NRC staff finds the proposed change acceptable.

3.2.2 Update of Wording in Associated Specifications

Revising the definitions of Channel Check, Channel calibration, and Channel functional Test also necessitates updating those sections of the TSs that reference the terms. The NRC staff reviewed the current Oyster Creek TSs and the proposed revisions and finds that the licensee appropriately identified those areas in the TSs needing revision and has proposed changes to these areas consistent with the definition changes discussed above. Therefore, the NRC staff finds the proposed revisions to be acceptable.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

This 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 SRs. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent 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 (71 FR 67392). 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.

6.0 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: M. Hamm, G. E. Miller

Date: July 27, 2007

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