

February 7, 2002

Mr. Oliver D. Kingsley, 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: CONTROL ROOM HABITABILITY (TAC NO. MB0906)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment No. 225 to Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station (Oyster Creek), in response to your application dated December 19, 2000, as supplemented on September 24, 2001.

The amendment revises the Oyster Creek Technical Specifications, Section 3.17, to replace the reference to the current licensing basis control room calculated dose consequences with the associated regulatory dose limits that apply for control room habitability in accordance with General Design Criterion (GDC) 19, 10 CFR Part 50, Appendix A and Standard Review Plan Section 6.4.

Concurrent with this requested change, AmerGen Energy Company (AmerGen) recalculated control room relative concentration (X/Q) values using the ARCON96 methodology to demonstrate its capability to meet GDC-19 dose requirements. The NRC staff finds acceptable the use of the diffuse source X/Q values calculated by AmerGen because they appear to be more limiting than assuming a point source release through a building penetration.

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. 225 to DPR-16
2. Safety Evaluation

cc w/encls: See next page

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*SE input dated 12/20/01 was provided and no major changes were made.

OFFICE	PM:PD1-1	PM:PDI-1	LA:PD1-1	OGC	ASC:PDI-1	SPSB *
NAME	HPastis*	PTam	SLittle*	MO'Neil*	JMunday	MReinhart
DATE	1/24/02	2/4/02	1/24/02	1/31/02	2/4/02	12/18/01

OFFICIAL RECORD COPY

*See previous concurrence

Oyster Creek Nuclear Generating Station

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AMERGEN ENERGY COMPANY, LLC

DOCKET NO. 50-219

OYSTER CREEK NUCLEAR GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 225
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 December 19, 2000, as supplemented on September 24, 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. 225, 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/

Joel T. Munday, Acting 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: February 7, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 225

FACILITY OPERATING LICENSE NO. DPR-16

DOCKET NO. 50-219

Replace the following pages of 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

3.17-1

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Insert

3.17-1

3.17-2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 225

TO FACILITY OPERATING LICENSE NO. DPR-16

AMERGEN ENERGY COMPANY, LLC

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

By letter dated December 19, 2000, as supplemented on September 24, 2001, AmerGen Energy Company, LLC, (AmerGen or the licensee) submitted a request for changes to the Oyster Creek Nuclear Generating Station Technical Specifications (TSs). The requested changes would revise the Oyster Creek TS, Section 3.17, to remove reference to the current licensing basis control room calculated dose consequences, and substitute the associated regulatory dose limits that apply for control room habitability in accordance with General Design Criterion 19 (GDC-19) of 10 CFR Part 50, Appendix A and Standard Review Plan 6.4 (NRC 1981). Concurrent with this requested change, AmerGen recalculated control room relative concentration (X/Q) values using the ARCON96 methodology to demonstrate its capability to meet GDC-19 dose requirements. The NRC staff finds acceptable the use of the diffuse source X/Q values calculated by AmerGen because they appear to be more limiting than assuming a point source release through a building penetration. The application stated that the licensing basis control room doses had been reevaluated using updated Oyster Creek meteorological data and the ARCON96 computer code methodology (NUREG/CR-6331, Rev. 1, "Atmospheric Relative Concentrations in Building Wakes"), and that the calculated doses remain below regulatory limits. The September 24, 2001, letter provided clarifying information within the scope of the original application and did not change the staff's initial proposed no significant hazards consideration determination.

The conclusion that the calculated doses remain below regulatory limits was based upon a recalculation of the atmospheric dispersion relative concentration (X/Q) values that are one input into the dose assessment. Enclosure 1 of the AmerGen December 19, 2001, submittal stated that only Turbine Building releases to the control room air intake were being reevaluated using ARCON96 and updated meteorological data. As described in the enclosure, the postulated Turbine Building release scenario involved main steam isolation valve (MSIV) leakage, dispersion within the Turbine Building, and an assumed diffuse release from the Turbine Building east wall to the environment. The release height and control room intake were assumed to be equal, and the distance to the intake was assumed to be the shortest horizontal distance from the Turbine Building wall to the intake. AmerGen also evaluated dispersion between the Turbine Building and the "A" intake to the control room and determined dispersion

to the "B" intake to be more limiting.

2.0 EVALUATION

Oyster Creek Meteorological Data

An electronic copy of the Oyster Creek meteorological data for 1995 through 1999 was provided to the Nuclear Regulatory Commission (NRC). The wind speed, wind direction and temperature difference data were evaluated using the methodology described in NUREG-0917, "Nuclear Regulatory Commission Staff Computer Programs for Use with Meteorological Data," on meteorological data quality assurance. All data were in the correct sequence with few missing data. For the 5-year period, the data recovery rate appears to be in the high 90 percentiles, which surpasses the Regulatory Guide 1.23, "Onsite Meteorological Programs," which recommended a minimum of 90 percent. However, when data provided to the NRC were reformatted for use in NRC codes, there was evidence that some of the data had been manually inserted, so the exact data recovery rate was not clear.

The annual frequency distribution of winds and stability for the 5 years are reasonably consistent. None of the years stood out as having distinctly different meteorological conditions than the others, and there do not appear to be significant trends in the data.

There were indications that the temperature differences used to estimate stability may be affected by local changes in surface conditions (e.g., vegetation, surface roughness, thermal characteristics). These indications include: (1) the occurrence of a relatively large number of extremely and moderately unstable conditions (Pasquill-Gifford Stability Classes A and B) during the day in winter, (2) the occurrence of unstable conditions at night, and (3) the occurrence of stable conditions during the day. Another indication is that the joint frequency distributions of wind and stability show somewhat larger occurrences of extremely and moderately stable conditions and extremely unstable conditions during high wind periods than might be expected for open sites with homogeneous flat terrain. Despite these variances, the staff found the meteorological data adequate for use in calculating the 95 percentile X/Q values related to this amendment request.

With respect to the atmospheric dispersion estimates, the staff performed calculations and compared them with the AmerGen analysis. In the staff's opinion, diffuse source modeling should be used only for those situations in which the activity being released is homogeneously distributed throughout the building, and when the assumed release rate from the building surface would be reasonably constant over the surface of the building. Postulated steam releases within a turbine building with roof ventilators and other openings would generally not be suitable for modeling as a diffuse source from the wall of a building. Because leakage is more likely to occur at a penetration, consideration must be given to the potential impact of building penetrations exposed to the environment within this modeled area. If the penetration release would be more limiting, the diffuse area source model should not be used.

By letter dated September 24, 2001, the licensee provided further information to support the diffuse release assumption. The staff qualitatively reviewed the release configuration and scenario and performed sensitivity estimates assuming a point release from the MSIV

through the Turbine Building to the control room intake B. Results indicate that, for this postulated release scenario, a point release through a building penetration should result in lower, less limiting X/Q values than those estimated by the licensee in its analysis assuming a diffuse release.

Therefore, the staff finds use of the diffuse source X/Q values calculated by the licensee acceptable because they appear to be more limiting than assuming a point source release through a building penetration. Further, the staff finds that AmerGen may revise Oyster Creek TS Section 3.17 to remove reference to the current licensing basis control room calculated dose consequences, and substitute the regulatory dose limits that apply for control room habitability in accordance with GDC-19.

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 use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 (66 FR 44163). 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: L. Brown
M. Hart

Date: February 7, 2002