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UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY RULEMAKINGS AND ADJUDICATIONS STAFF

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges E. Roy Hawkens, Chairman, Dr. Paul B. Abramson and Dr. Anthony J. Baratta

In the Matter of:

January 30, 2006

AMERGEN ENERGY COMPANY, LLC

ASLB No. 06-844-01-L.R.

Docket No. 50-219-L.R.

(License Renewal for Oyster Creek Nuclear Generating Station

SUPPLEMENTAL BRIEF OF PETITIONER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION ON ISSUE OF REGULATIONS GOVERNING CUMULATIVE USAGE FACTOR

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Honorable Chairman Hawkens and Judges Abramson and Baratta:

Petitioner New Jersey Department of Environmental Protection ("NJDEP") submits this Supplemental Brief, pursuant to the Order of the Atomic Safety and Licensing Board ("Board"), issued on January 23, 2006. This supplemental brief addresses the requirements of the regulations governing the establishment of the cumulative usage factor ("CUF") to be applied as part of the metal fatigue evaluations for the reactor coolant pressure boundary and associated components of the reactor at the Oyster Creek Nuclear Generating Station ("Oyster Creek"). Metal fatigue is the subject of the second contention raised by NJDEP in its request for hearing and petition for leave to intervene in the proceeding filed by

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AmerGen Energy Company ("AmerGen") on its application for renewal of the license issued for Oyster Creek.

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BACKGROUND

Metal fatigue evaluations are critical in predicting the useful life of a structural component and when it must be replaced. Mechanical and thermal changes, or transients, result in cyclic loadings on the component. The degree of stress placed upon the given component in each cycle and the number of anticipated cycles in the component's useful life yield a fraction which is the individual usage factor. The sum of all the fractions of the transients is the CUF for that component.

The Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers ("ASME Code") has been recognized in the nuclear power industry for decades as the accepted standard for the establishment of CUFs for the reactor coolant pressure boundary and associated components. Indeed, the ASME Code was approved for incorporation by reference in applicable regulations of the Nuclear Regulatory Commission ("NRC"). 10 <u>C.F.R</u>. 50.55(b).

The Oyster Creek reactor vessel was designed in accordance with ASME Code Sections I and VIII and the Reactor Pressure Vessel Purchase Specification Design Requirements. The CUF in effect when Oyster Creek began operations in 1969, was, and remains, 0.8. As AmerGen acknowledges, "[T]he CUF of 0.8 was a specification provided by the General Electric Company, the

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vessel's manufacturer." (AmerGen Answer Opposing NJDEP Request for Hearing, page 19). The instant legal dispute arises because, in its license renewal application for Oyster Creek, AmerGen makes extensive use of a different CUF, 1.0.

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A CUF of 1.0 is less stringent than one of 0.8. NJDEP has observed that: "Using a CUF of 1.0 would be outside Oyster Creek's current licensing basis (CLB) and would result in a 25 percent increase in allowable fatigue life beyond that specified by the Code of record for Oyster Creek thereby significantly reducing the margin of safety for metal fatigue." (NJDEP Petition, Contention 2, page 2 of that contention). The extent to which the 0.8 CUF would be exceeded during extended operation is neither known to NJDEP nor specified in AmerGen's license renewal application. Id. This is particularly troubling because Oyster Creek began operations in 1969, and this renewal proceeding "would be the first practical test of nuclear operations beyond a 40-year license." (Letter of NJDEP Commissioner with Petition for Hearing, page 2).

LEGAL, ARGUMENT

AmerGen's use of the CUF of 1.0 in the license renewal application is not permitted at the present time. Since Oyster Creek was built in 1969, the originally-applicable 0.8 CUF must continue to be used. NRC's regulations are clear on this point. "For a nuclear power plant whose construction permit was issued

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prior to May 14, 1984 the applicable Code Edition and Addenda for a component of the reactor coolant pressure boundary continue to be that Code Edition and Addenda that were required by Commission regulations for such component at the time of issuance of the construction permit." 10 <u>C.F.R</u>. 50.55a(c)(4).

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Despite the express language of that provision, both NRC Staff and AmerGen claim that AmerGen may nonetheless use the 1.0 CUF. They primarily base their argument on the language of an NRC rule, found at 64 F.R. 51381, which applies only to versions of ASME Section III (See "Section III" caption to the rule, sec. 2.5.1). That rule states: "For operating plants, [section] 50.55a permits licensees to use the original construction code during the operational phase or voluntarily update to a later version which has been endorsed by 10 CFR 50.55a." Id. (AmerGen Answer to NJDEP, at 20; NRC Staff Answer to NJDEP, at 16). That provision does not, however, support the argument that AmerGen may use a CUF of 1.0 in its license renewal application. All it does is provide AmerGen with the opportunity to update, an opportunity it has had since ASME Section III came into effect in 1973. NRC Staff's reading of 64 <u>F.R</u>. 51381 again applies only to ASME Section III. It states: "A licensee retains the option, under section 50.55a(c), to voluntarily update...." (Staff Answer to NJDEP, page 16). While AmerGen may have that option, it has simply not yet exercised it. It has not updated its CUF.

Indeed, on December 9, 2005, three days before filing its Answer to NJDEP's Petition, AmerGen stated in a letter to NRC that it "will" incorporate an updated metal fatigue analysis limit into its current licensing basis. (AmerGen Answer, Exhibit 1, page 1). "Specifically, this revision will change the cumulative usage factor from 0.8 to 1.0 in accordance with ASME Section XI, Appendix AmerGen's use of the future tense in the letter is L." Id. significant. The letter was, at best, indicative only of future It did not effectuate the update. In order to update, action. AmerGen must request, and receive, authorization from the Director of the Office of Nuclear Reactor Regulation after a public process. Unless and until it receives such 10 <u>C.F.R</u>. 50.55a(a)(3). authorization, AmerGen's CUF remains at 0.8.

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CONCLUSION

Based on the foregoing, Petitioner New Jersey Department of Environmental Protection submits that NRC regulations require AmerGen's cumulative usage factor for the reactor coolant pressure boundary and associated components at the Oyster Creek Nuclear Generating Station be considered as 0.8 for relicensing purposes.

Respectfully submitted,

NANCY KAPLEN ACTING ATTORNEY GENERAL OF NEW JERSEY Deputy Attorney General

Dated in Trenton, N.J., this 30th day of January 2006

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UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

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January 30, 2006

AmerGen Energy Company, LLC

Docket No. 50-219-L.R.

(License Renewal for Oyster Creek Nuclear Generating Station) ASLB No. 06-844-01-L.R.

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney herewith enters an appearance in the captioned matter. In accordance with 10 C.F.R. 2.314(b), the following information is provided:

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Name of Party: New Jersey Department of Environmental Protection (NJDEP). My authority to represent NJDEP is based upon my assignment within the Division of Law to do so.

Respectfully submitted,

John A.^VCovino Deputy Attorney General

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

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(License Renewal for Oyster Creek Nuclear Generating Station January 30, 2006

CERTIFICATE OF SERVICE

I hereby certify that the Supplemental Brief of Petitioner, New Jersey Department of Environmental Protection, and Notice of Appearance of John A. Covino, Deputy Attorney General, were sent on this 30th day of January, 2006, by e-mail and, where designated, also by U.S. Postal Service to each of the following:

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