August 30, 2000

Mr. Ronald DeGregorio
Vice President Oyster Creek
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

SUBJECT: SAFETY EVALUATION OF THE REQUEST FOR RELIEF FROM THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE (ASME CODE) SECTION XI REQUIREMENTS FOR THE CONTAINMENT INSERVICE INSPECTION PROGRAM, OYSTER CREEK NUCLEAR GENERATING STATION (TAC NO. MA7859)

Dear Mr. DeGregorio:

By letter dated December 17, 1999, you submitted Relief Request (R-24) concerning the containment examination requirements for the Oyster Creek Nuclear Generating Station Containment Inservice Inspection (ISI) Program. You requested approval for the use of alternative inspection to support the preparation for scheduled ISI activities during the 2000 refueling outage. We have reviewed your request, and, based on the information provided, we conclude that the alternatives you have proposed will provide an acceptable level of quality and safety. Therefore, the proposed alternatives are authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the first interval of the IWE Containment Inservice Inspection Program.

On the date of the December 17, 1999, application, GPU Nuclear, Inc. (GPUN) was the licensed operator for Oyster Creek. On August 8, 2000, GPUN's ownership interest in Oyster Creek was transferred to AmerGen Energy Company, LLC (AmerGen). By letter dated August 10, 2000, AmerGen requested that the Nuclear Regulatory Commission continue to review and act upon all requests before the Commission which had been submitted by GPUN. Accordingly, the staff has completed its review of the requested relief request.

Our detailed evaluation and conclusions are documented in the enclosed safety evaluation.

Sincerely,

/RA/

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure: Safety Evaluation

cc w/encl: See next page

Mr. Ronald DeGregorio
Vice President Oyster Creek
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

SUBJECT: SAFETY EVALUATION OF THE REQUEST FOR RELIEF FROM THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE (ASME CODE) SECTION XI REQUIREMENTS FOR THE CONTAINMENT INSERVICE INSPECTION PROGRAM, OYSTER CREEK NUCLEAR GENERATING STATION (TAC NO. MA7859)

Dear Mr. DeGregorio:

By letter dated December 17, 1999, you submitted Relief Request (R-24) concerning the containment examination requirements for the Oyster Creek Nuclear Generating Station Containment Inservice Inspection (ISI) Program. You requested approval for the use of alternative inspection to support the preparation for scheduled ISI activities during the 2000 refueling outage. We have reviewed your request, and, based on the information provided, we conclude that the alternatives you have proposed will provide an acceptable level of quality and safety. Therefore, the proposed alternatives are authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the first interval of the IWE Containment Inservice Inspection Program.

On the date of the December 17, 1999, application, GPU Nuclear, Inc. (GPUN) was the licensed operator for Oyster Creek. On August 8, 2000, GPUN's ownership interest in Oyster Creek was transferred to AmerGen Energy Company, LLC (AmerGen). By letter dated August 10, 2000, AmerGen requested that the Nuclear Regulatory Commission continue to review and act upon all requests before the Commission which had been submitted by GPUN. Accordingly, the staff has completed its review of the requested relief request.

Our detailed evaluation and conclusions are documented in the enclosed safety evaluation.

Sincerely,

/RA/

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-219
Enclosure: Safety Evaluation
cc w/encl: See next page

DISTRIBUTION:

PUBLIC	SLittle	ACRS	PD1-1 Rdg.
HPastis	JShea	EAdensam	OGC
MGamberoni	CAnderson, RI	GHill(2)	

Accession Number: ML003732666 *See previous concurrence

OFFICE	PDI-1/PM	PDI-1/LA	EMEB*	OGC*	PDI-1/SC
NAME	HPastis	SLittle	DTerao	SUttal	MGamberoni
DATE	8/22/00	8/22/00	7/27/00	8/10/00	8/30/00

OFFICIAL RECORD COPY

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE 10-YEAR INSERVICE INSPECTION

PROGRAM RELIEF REQUEST R-24

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

In the Federal Register dated August 8, 1996 (61 FR 41303), the Nuclear Regulatory Commission (NRC) amended its regulations, pursuant to 10 CFR 50.55a, to incorporate by reference the 1992 Edition with 1992 Addenda of Subsections IWE and IWL of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). Subsections IWE and IWL provide the requirements for inservice inspection (ISI) of Class CC (concrete containment), and Class MC (metallic containment) of light-water cooled nuclear power plants. The effective date for the amended rule was September 9, 1996, and it requires the licensees to incorporate the new requirements into their ISI plans and to complete the first containment inspection by September 9, 2001. However, a licensee may propose alternatives to or submit a request for relief from the requirements of the regulation pursuant to Section 50.55a(a)(3) or (g)(5) of Title 10 of the Code of Federal Regulations (10 CFR), respectively.

By letter dated December 17, 1999, GPU Nuclear, Inc. (GPUN), the licensee, proposed several alternatives to the requirements of Subsections IWE and IWL of Section XI of the ASME Code for its Oyster Creek Nuclear Generating Station (Oyster Creek). The NRC's findings with respect to authorizing the alternatives or denying the proposed request is discussed in this evaluation.

On the date of the December 17, 1999, application, GPU Nuclear, Inc. (GPUN) was the licensed operator for Oyster Creek. On August 8, 2000, GPUN's ownership interest in Oyster Creek was transferred to AmerGen Energy Company, LLC (AmerGen). By letter dated August 10, 2000, AmerGen requested that the Nuclear Regulatory Commission continue to review and act upon all requests before the Commission which had been submitted by GPUN. Accordingly, the staff has completed its review of the requested relief request.

2.0 EVALUATION

2.1 Relief Request No. 24 - One-Foot-Square Grids For Ultrasonic Thickness Measurements

2.1.1 Code Requirements

ASME Section XI, 1992 Edition, 1992 Addenda, Subarticle IWE-2500(c)(3) requires one foot square grids be used when ultrasonic thickness measurements are performed on augmented examination surface areas. The number and location of the grids is determined by the owner.

2.1.2 Specific Relief Requested

Relief is requested from the requirement to use one foot square grids for augmented examination areas.

2.1.3 Licensee's Basis for Relief

The licensee states that:

> Pursuant to 10 CFR 50.55a(a)(3)(i) relief is requested for Oyster Creek on the basis that the proposed alternative provisions to the ASME Section XI Code requirements would provide an acceptable level of quality and safety.
>
> 10 CFR, 50.55a was amended in the Federal Register to require the use of the 1992 Edition, 1992 Addenda, Section XI when performing containment inspections. Subarticle IWE-2500(c)(3) requires the use of one foot square grids for augmented examination areas to determine the minimum wall thickness within an examined area.
>
> Since 1987, Oyster Creek has developed and implemented a drywell corrosion monitoring program in which inspections are conducted at identified corroded locations. Inspections have been periodically performed during refueling outages and outages of opportunity in the former sandbed region, in the spherical region (Elevations 50'-2" and 51'-10") and in the cylindrical region (Elevation 87'-5"). The ongoing measurements are not taken in all the locations where measurements were taken initially. The initial locations where corrosion/material loss was most severe were selected for the ongoing program. A spot check of locations measured initially was performed during the 12R (October 1988) outage which confirmed proper selection for ongoing measurements.
>
> In March 1990, an additional check was performed at Elevation 50"-2". This check consisted of a continuous UT "A" scan in all accessible areas in a 1-inch band at Elevation 50"-2". As a result of this check, three additional grids at Elevation 50'-2" were added to the program. In April 1990, an additional elevation was investigated for corrosion. This investigation was performed by continuous UT "A" scan in a 1-inch band, at Elevation 51'-10". Results showed only one area which was less than nominal. An inspection grid of this area was added to the inspection program.

As experience increased with each data collection campaign, only grids showing evidence of change were retained in the inspection program. Additional assurance regarding the adequacy of this inspection plan was obtained by a completely randomized inspection that showed that all locations satisfied Code requirements.

The corrosion rate monitoring program involves the establishment of 6-inch by 6-inch grid locations on the containment vessel interior, the use of a template with 49 holes on 1-inch centers for locating the UT probe, a specified 1/8 inch tolerance on the location of subsequent measurements and taking thickness measurements periodically. This program enabled Oyster Creek to statistically determine corrosion rates at these grid locations. Because the grid locations are in the known areas where material loss is most severe, the corrosion rates and projected wall thicknesses are determined over a small fraction of the drywell but conservatively applied uniformly. Since this was and is a plant-specific issue which received significant NRC review and approval, GPUN [the licensee or AmerGen] is requesting a continuation of the NRC-approved approach.

Examination personnel performing these augmented containment ultrasonic examinations are currently qualified and certified in accordance with the GPU [the licensee or AmerGen] qualification and certification procedure which meets the requirements of SNT-TC-1A. This meets the requirements of Paragraph IWA-2310, 1992 Edition, 1992 Addenda, Section XI which states, "Certifications based on SNT-TC-1A are valid until recertification is required." Recertification of IWE non-destructive examination personnel will be in accordance with ANSI/ASNT CP-189.

Relief is requested in accordance with 10 CFR 50.55a(a)(3)(i) in that the alternative examinations proposed provide an acceptable level of quality and safety.

2.1.4 Alternative Examinations

The licensee will continue to implement the current containment monitoring ultrasonic examination program utilizing 6-inch grid patterns. The ultrasonic measurement will be performed within 1/8 inch of designated locations. This will be accomplished by the use of a template. The drywell wall was previously stamped to match the notches provided in the template. The template is 6-inches square with circular holes cut out on 1-inch centers. This will allow for 49 UT readings to be taken at each grid location. This relief is requested for the first inspection interval for containment inspections.

2.1.5 Staff Evaluation of Relief Request R-24

In lieu of meeting ASME Section XI, 1992 Edition through 1992 Addenda, Subarticles IWE-2500(c)(3) and (4) that require 1-foot square grids be used when ultrasonic thickness measurements are performed on augmented examination surface areas, and the minimum wall thickness within each grid be determined, the licensee proposed to use the existing corrosion monitoring program, previously reviewed and approved by the NRC staff, to perform the ultrasonic thickness measurements on areas requiring augmented examination.

When the licensee's containment monitoring ultrasonic examination program (corrosion rate monitoring program) is applied, the procedures of the program involve the establishment of 6-inch by 6-inch grid locations on the containment vessel interior, the use of a template with 49 holes on 1-inch centers for locating the UT probe, a specified 1/8-inch tolerance on the location of subsequent measurements and taking thickness measurements periodically. Also, as stated in the "Basis for Relief" section above, the examination personnel performing these augmented containment ultrasonic examinations are qualified and certified in accordance with the licensee's qualification and certification procedure which meets the requirements of SNT-TC-1A. This personnel qualification program meets the requirements of Paragraph IWA-2310, 1992 Edition, 1992 Addenda, Section XI which states, "Certifications based on SNT-TC-1A are valid until recertification is required." The licensee also committed that recertification of IWE non-destructive examination personnel will be in accordance with ANSI/ASNT CP-189. In addition, this program has been reviewed and approved by the NRC in a letter dated November 1, 1995 (TAC No. M93658).

On the basis discussed above, the staff finds that the alternative proposed by the licensee will provide reasonable assurance of the containment (plate) integrity. Therefore, the request for relief is authorized pursuant to 10 CFR 50.55a(a)(3)(i) on the basis that the alternative provides an acceptable level of quality and safety.

3.0 CONCLUSION

On the basis discussed above, the NRC staff finds that the alternative proposed by the licensee will provide reasonable assurance of the containment integrity. Therefore, the request for relief is authorized pursuant to 10 CFR 50.55a(a)(3)(i) on the basis that the alternative provides an acceptable level of quality and safety.

Principal Contributor: T. Cheng

Date: August 30, 2000

AmerGen Energy Company, LLC
Oyster Creek Nuclear Generating Station

cc:

Kevin P. Gallen, Esquire
Morgan, Lewis & Bockius LLP
1800 M Street, NW
Washington, DC 20036-5869

Manager Nuclear Safety & Licensing
Oyster Creek Nuclear Generating Station
Mail Stop OCAB2
P. O. Box 388
Forked River, NJ 08731

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mayor
Lacey Township
818 West Lacey Road
Forked River, NJ 08731

Resident Inspector
c/o U.S. Nuclear Regulatory Commission
P.O. Box 445
Forked River, NJ 08731

Kent Tosch, Chief
New Jersey Department of
Environmental Protection
Bureau of Nuclear Engineering
CN 415
Trenton, NJ 08625

Deborah Staudinger
Hogan & Hartson
Columbia Square
555 13th St., NW
Washington, DC 20004