GPU Nuclear

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September 22, 1992
5000-92-3068
C321-92-2254

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: Oyster Creek Nuclear Generating Station (OCNGS)
Operating License No. DPR-50
Docket No. 50-289
Oyster Creek Reactor Vessel
Fracture Mechanics Analysis
for Upper Shelf Energy Requirement

On May 28, 1992, GPU Nuclear met with NRC to discuss reactor vessel upper shelf energy (USE) for Oyster Creek Nuclear Generating Station. In the meeting, GPU Nuclear stated that a review of Generic Letter (GL) 92-01, "Reactor Vessel Integrity", indicates that three beltline plates at OCNGS currently have less than 50 ft-lb USE if the conservative 65% conversion factor given in Standard Review Plan 5.3.2 were used for converting Charpy V Notch longitudinal USE values to transverse USE values.

We also stated during the meeting that, based on preliminary analysis, ASME Section XI acceptance criteria for low USE are satisfied for the Oyster Creek reactor pressure vessel (RPV) beyond the end of licensed life.

As a result of our discussions on May 28, 1992, the Staff requested GPU Nuclear to submit the results of the reactor vessel USE analysis including description of how the emergency (Level C) and faulted (Level D) conditions were selected and analyzed. Our response to GL 92-01 dated June 30, 1992 stated that our analysis would be submitted to the Staff on a later date.

Attached report (GE-NE-523-70-0692) presents a fracture mechanics evaluation of Oyster Creek reactor pressure vessel using methods and acceptance criteria provided in a draft Code Case (Appendix XX) which has been approved by the ASME Section XI Subcommittee on Nuclear Inservice Inspection in August 1992 and is expected to be approved by the Main Committee of ASME Boiler and Pressure Vessel Code in December, 1992. In the evaluation four Service Level loading conditions, A through D, were analyzed.

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The results of the evaluation show that, even for the conservative case of 35 ft-lb USE (a projected USE at much beyond the end of the licensed life for the worst beltline plate), the acceptance criteria are satisfied for all four Service Level loadings.

Therefore, it is concluded that even though some beltline plates are currently below 50 ft-lbs USE value, these lower values are acceptable. Thus, the Oyster Creek RPV will continue to meet the requirements of 10CFR50, Appendix G. This conclusion would also remain valid for any realistic plant life extension that may be considered by GPU Nuclear for OCNGS in the future.

If you have any questions concerning the information provided in this letter, please call Mike Laggart, Manager, Corporate Licensing at (201) 316-7968.

Sincerely,

J. C. DeVine
Vice President & Director
Technical Functions

JCDV/YN:lga

cc: Administrator, Region I
Senior Resident Inspector
Oyster Creek NRC Project Manager