



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 124

TO PROVISIONAL OPERATING LICENSE NO. DPR-16

GPU NUCLEAR CORPORATION AND  
JERSEY CENTRAL POWER & LIGHT COMPANY

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

By letter dated May 10, 1988 from E. E. Fitzpatrick, GPU Nuclear Corporation (GPUN/licensee) to U.S. Nuclear Regulatory Commission, GPUN proposed to change the Technical Specifications (TS) for Oyster Creek. The changes address the use of boron, enriched in the isotope B-10, in the sodium pentaborate solution used in the Standby Liquid Control System (SLCS) in order to meet the requirements of the Anticipated Transient Without Scram (ATWS) Rule, 10 CFR 50.62 paragraph (c)(4). The proposed changes are to TS Sections 3.2.C, 4.2.E, Figures 3.2-1 and 3.2-2, Bases Sections 3.2 and 4.2, and Section 6.9.3, all associated with the SLCS.

2.0 EVALUATION

The system description provided by GPUN for Oyster Creek has been reviewed by the staff against the requirements of the ATWS Rule (10 CFR 50.62), and Generic Letter 85-03, "Clarification of Equivalent Control Capacity for Standby Liquid Control Systems," dated January 28, 1985. The licensee will increase the boron enrichment to a minimum of 35 atom percent of B-10, and proposes to supply 30 gpm of a minimum 15 weight percent of sodium pentaborate solution to the reactor vessel. Accounting for the physical size of the Oyster Creek reactor vessel which is 213 inches inside diameter, the aforementioned flow/enrichment combination satisfies the ATWS Rule equivalency requirement which is based upon 86 gpm pump flow, 13 weight percent sodium pentaborate and 19.8 atom percent B-10, and a 251 inch diameter vessel, as discussed in Generic Letter 85-03. The proposed design is therefore acceptable. The new limits are reflected in the proposed Technical Specification Sections 3.2.C.2, 3.2.C.3, Figure 3.2-1 and Figure 3.2-2.

The approach taken by the licensee is one of three options approved by the staff as an acceptable response to the ATWS Rule (Reference: Safety Evaluation of Topical Report NEDE-31096-P, "Anticipated Transient Without Scram; Response to ATWS Rule 10 CFR 50.62," transmitted by letter, G. Lainas (NRC) to T. Pickens (BWR Owners Group), dated October 21, 1986). Associated with this option is a requirement for surveillance and positive verification of the correct isotopic concentration. The periodic surveillance is included in proposed Technical Specification Section 4.2.E and is acceptable.

The bases for the proposed Technical Specifications were revised to reflect the proposed changes. The revised bases are acceptable since they adequately explain the bases for the requirements.

GPUN has requested Technical Specification changes for Oyster Creek which would provide for the use of enriched boron in the SLCS to meet the requirements of 10 CFR 50.62(c)(4). The approach selected by GPUN and the associated Technical Specifications are acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact was published in the Federal Register on July 14, 1988 (53 FR 26694).

Accordingly, based upon the environmental assessment, the Commission has determined that issuance of this amendment will not have a significant effect on the quality of the human environment.

### 4.0 CONCLUSION

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Dated: July 14, 1988

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