

ENCLOSURE 1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO 10 CFR 50.62(c)(4), ATWS RULE
GPU NUCLEAR CORPORATION
OYSTER CREEK NUCLEAR GENERATING STATION
DOCKET NO. 50-219

1.0 INTRODUCTION

In letters dated September 3, 1987 (5000-87-1361) and December 30, 1987 (5000-87-1447) GPU Nuclear Corporation submitted a description of its plans for implementing the requirements of 10 CFR 50.62 at Oyster Creek Nuclear Generating Station. The proposed Standby Liquid Control System (SLCS) is designed to supply 30 gpm of enriched sodium pentaborate solution (35 atom percent of B-10) to the reactor vessel to meet ATWS requirements.

2.0 EVALUATION

The SLCS description provided by GPU for Oyster Creek has been reviewed by the staff against the requirements of the ATWS rule (10 CFR 50.62(c)(4), 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 licensee should confirm that surveillance and positive verification will be performed periodically (once per month) to assure that the correct isotopic enrichment is maintained. When additional chemicals, e.g., boron or boric acid are added to the storage tank, isotopic enrichment of B-10 in the solution should also be verified. This commitment as well as periodic verification of the 30 gpm flow rate should be reflected in the plant Technical Specifications.

3.0 CONCLUSIONS

The description of the proposed SLCS operation by GPU Nuclear Corporation for the Oyster Creek Nuclear Generating Station in letters dated September 3, 1987 and December 30, 1987 is acceptable because it is consistent with the equivalency requirements of 10 CFR 50.62(c)(4).

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