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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
VERMONT YANKEE NUCLEAR POWER CORPORATION POWER STATION
CASK LIFTING DEVICE
DOCKET NO. 50-271

1.0 Introduction

By letter dated May 17, 1985, Vermont Yankee Nuclear Power Corporation (VYNPC), the licensee for Vermont Yankee Nuclear Plant requested approval of a cask lifting device to be utilized to carry a cask over spent fuel. This approval is required in accordance with the requirements established in the operating license (DPR-28) of the plant by Amendment No. 29.

2.0 Description and Evaluation

Paragraphs 3.12 and 4.12 of Operating License DPR-28 for the Vermont Yankee plant requires that when the reactor building crane is used to lift a load over the fuel pool, redundancy of the lifting device should be provided such that the load will not be dropped in the event of a single failure in the lifting system. In their May 17, 1985 letter, the licensee proposes to use the reactor building crane to carry a cask over the spent fuel pool, and has described the design of the lifting system to satisfy the license requirement for redundancy. This lift is required in order to transport irradiated reactor components to a licensed disposal site. A Nuclear Energy Services, Inc. NES-5 cask will be used to contain these reactor components.

The proposed lifting system is compatible with the NES-5 cask, and consists of two components, the strongback and the rigging. The strongback incorporates four trunnions which engage the lifting lugs of the cask. The rigging connects the strongback to the reactor building overhead crane. Redundant rigging is provided to carry the cask, such that failure of one rigging component will not cause the cask to drop.

The lifting device has been designed to meet the stress and redundancy criteria of NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants." Further, a pre-operational test load for the lift system will consist of 150% of the loaded cask weight plus the weight of the lifting device or a total test load equal to 68,000 lbs.

3.0 Conclusion

Based on the above, we conclude that the proposed lifting device satisfies the redundancy requirements of the plant license for purposes of handling a cask containing reactor components over the fuel pool, and the lift system meets the guidelines of NUREG-0612. We, therefore, conclude that the lift system is acceptable.

Principal Contributor: A. Singh

Dated: July 1, 1985