

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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October 9, 1985

Docket No. 50-245
B11776

Director of Nuclear Reactor Regulation
Attn: Mr. Christopher I. Grimes, Chief
Systematic Evaluation Program Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 1
Integrated Safety Assessment Program

In a letter dated July 31, 1985,⁽¹⁾ Northeast Nuclear Energy Company (NNECO) was requested to provide the Staff with reviews of the planned NNECO plant improvement projects.

In response to this request, and in accordance with our understanding of the ISAP process, we are providing the Staff with a review of the following project:

- o ISAP Topic No. 2.18 - "Spent Fuel Storage Racks/Transportation Cask"

This letter also serves to formally notify the Staff that the following two NNECO projects have been canceled and thus will not be evaluated within the framework of ISAP.

- o ISAP Topic No. 2.13 - "Turbine Water Induction Modifications"
- o ISAP Topic No. 2.19 - "DC System Review"

(1) H. L. Thompson letter to J. F. Opeka, "Integrated Safety Assessment Program," July 31, 1985.

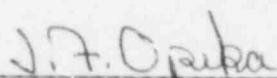
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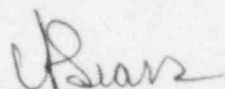
With this submittal NNECO has completed and docketed to the Staff issue-specific evaluations of all NNECO initiated projects/issues (Category 2). If you have any questions on this material or any previous submittals, please feel free to contact my staff.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. Opeka
Senior Vice President



By: C. F. Sears
Vice President

cc: J. A. Zwolinski

ISAP TOPIC NO. 2.18

SPENT FUEL POOL STORAGE RACKS/TRANSPORTATION CASK

ISAP Topic No. 2.18
Spent Fuel Pool Storage Racks/Transportation Cask

Background

Under the Nuclear Waste Policy Act of 1982-83, it is the responsibility of industry to provide interim storage for its spent fuel until long-term spent fuel storage becomes available. Full-core reserve is not required by the Atomic Energy Act, the Nuclear Waste Policy Act (NWPA) or the NRC's regulations, however the NWPA's provisions encourage the maintenance of full-core reserve capability and establishes it as an objective to be served in determinations as to eligibility for federal assistance. However, NWPA does not require provisions for full-core reserve capability to continue to operate.

At Millstone Unit No. 1, if the spent fuel storage capacity is not increased, full-core reserve capacity will be lost in 1987 (Cycle 11) and reload discharge capability will be lost in 1991 (Cycle 13).

Loss of full-core reserve could reduce the options available for fuel storage and possibly impact maintenance operations during a scheduled or unscheduled shutdown.

Reload discharge capability is necessary to provide the operating unit with enough spent fuel storage to discharge the spent fuel from each cycle. Loss of this capability could prevent the unit from returning to service.

Project Description

The scope of the project is to evaluate the options available to Northeast Utilities for increasing the spent fuel storage capacity at Millstone Unit No. 1.

Currently, the following alternatives are being examined by Northeast Utilities as potential options for augmenting the spent fuel storage capacity at Millstone Unit No. 1.

1. Engineering evaluation of the spent fuel pool at Millstone Unit No. 1, to determine if more efficient utilization of the space occupied by nonfuel components in the pool would result in additional limited spent fuel storage space (approximately 1-2 cycles).
2. Engineering study on the feasibility of a total reracking of the spent fuel pool at Millstone Unit No. 1 to increase the spent fuel pool storage capacity. The study includes development of an expanded spent fuel pool design configuration as well as an investigation into the structural capability of the building structure. The reracking of the spent fuel pool could yield approximately 4 - 5 additional cycles of spent fuel discharge capacity.
3. Engineering evaluation of the potential to transfer spent fuel assemblies from the Millstone Unit No. 1 facility and store them in the spent fuel pool at another nuclear facility within the Northeast Utilities System.

Other alternatives such as dry storage and independent fuel storage facilities are under consideration within the industry. However, at this time they are not considered feasible either economically or from a licensing perspective.

NNECO Evaluation

Unless Millstone Unit No. 1 increases its spent fuel storage capacity, it will lose full-core reserve capacity in 1987 and reload discharge capability in 1991. Implementation of one of the three options outlined above will allow Millstone Unit No. 1 to maintain sufficient spent fuel storage capacity to discharge spent fuel through the end of the current operating license. Increasing the spent fuel storage capability for Millstone Unit No. 1 would utilize a well-established technology and is not expected to pose any undue safety risks to the public or plant personnel.