

NORTHEAST UTILITIES



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

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 666-6911

March 30, 1984

Docket No. 50-336
B11039

Director of Nuclear Reactor Regulation
Attn: Mr. James R. Miller
Operating Reactors Branch #3
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2
Spent Fuel Disposition Plans

Northeast Nuclear Energy Company (NNECO), as licensee for Millstone Unit No. 2, is responsible for the spent nuclear fuel discharged from the reactor core. The original design of Millstone Unit No. 2 included a spent fuel pool with racks which could accommodate up to 301 spent fuel assemblies. This storage capacity was adequate for one reload discharge of spent fuel assemblies (72) as well as maintenance of full core reserve (217 assemblies). At the time the plant was designed this capacity would support orderly operation of the reactor considering the availability of fuel reprocessing facilities and other backend fuel cycle services.

Shortly after Millstone Unit No. 2 began commercial operation, application was made to amend the operating license to provide increased storage capacity in the spent fuel pool. The spent fuel pool capacity increases were necessitated by the fact that backend fuel cycle services did not materialize as anticipated and in particular, spent fuel reprocessing was and remains unavailable. An amendment to the operating license for Millstone Unit No. 2 was issued on June 30, 1977 authorizing an increase in the spent fuel pool storage capacity from 301 to 667 spent fuel storage locations. This capacity increase will provide storage for the normal spent fuel discharges at each refueling plus full core reserve through the Cycle 7 refueling outage, currently scheduled for the first quarter of 1985.

NNECO has entered into contract with the Department of Energy for disposal of high level waste and spent nuclear fuel as required by the Nuclear Waste Policy Act (Public Law 97-425). The Waste Policy Act provides a framework for the disposal of spent nuclear fuel and high-level radioactive waste generated by civilian nuclear power reactors. The Act also contains provisions for the interim storage of spent nuclear fuel while a repository for ultimate disposal is selected and developed.

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A proposed rule has been issued in 48FR19382 outlining the criteria and procedures by which the NRC would determine if a person owning and operating a civilian nuclear power reactor cannot reasonably provide adequate storage capacity for spent nuclear fuel. The proposed rule would not relieve licensees of the responsibility for spent nuclear fuel storage. In fact, it reinforces this responsibility and requires the diligent pursuit of licensed alternatives to the use of Federal storage capacity.

In concert with the Waste Policy Act and the proposed rule for determining the adequacy of spent nuclear fuel storage capacity, NNECO is actively pursuing options for disposition of spent nuclear fuel discharged from Millstone Unit No. 2 after the Cycle 7 refueling outage. Currently the plans call for the replacement of the Millstone Unit No. 2 spent fuel storage racks with high density poisoned and non-poisoned storage racks. NNECO is also pursuing the development of onsite capability for spent fuel consolidation (also described as pin compaction).

The attached paper outlines the program which NNECO has undertaken to increase the spent fuel storage capacity at Millstone Unit No. 2. We are providing this paper to the NRC Staff for information and plan to meet with the Staff to discuss these programs in the near future. At that time we would plan to exchange ideas in order to facilitate the NRC review of the license amendments which will be required to implement our program.

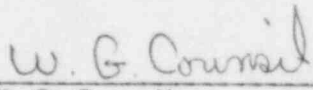
In order to cohesively describe our long-term plans, it was necessary to prepare the attached paper discussing the spent fuel pool reracking project and spent fuel consolidation project in an integral manner. Certain design features of the reracking portion of this effort are influenced by our ultimate objective of accommodating the fuel consolidation option. However, NNECO intends to conduct separate licensing activities for each project. Specifically, we currently envision applying for two distinct license amendments; the first governing the reracking and the second governing fuel consolidation. Both of these amendments will be submitted on a schedule to allow this project to be accepted as a demonstration of available technology as part of a contract that NNECO has entered into with the Electric Power Research Institute. Information generated as part of these efforts and in support of the required licensing activities may be applicable to one or both projects. For the purposes of this document, the attached information has been presented in a manner to facilitate a general understanding of NNECO's efforts in the area of spent fuel storage at Millstone Unit No. 2.

While the discussion of the two license amendments for reracking of the spent fuel pool and fuel consolidation has been merged for ease of presentation, the two requests are separate and independent. The amendment request regarding reracking has utility independent of fuel consolidation, and would be pursued irrespective of any Commission action on fuel consolidation. Further, approval of the reracking amendment request will not foreclose any available future options concerning spent fuel storage, such as additional reracking, transshipment of spent fuel or fuel consolidation, and will not commit the NRC to approve the subsequent request for pin compaction. In short, despite the consolidation of these two projects for presentation purposes, they are independent of each other and should be treated accordingly when formally submitted as license amendment requests.

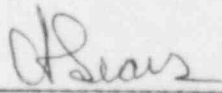
We will be discussing the contents of this document with the Millstone Unit No. 2 Project Manager and will arrange a meeting to discuss our plans and schedule through your office.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President



By: C. F. Sears
Vice President
Nuclear and Environmental Engineering

cc: Electric Power Research Institute