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Secretary, U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attention: Rulemakings and Adjudications Staff

Subject: Millstone Nuclear Power Station, Unit No. 1, Docket No. 50-245
Proposed Amendments to 10 CFR 72 and 150

In Volume 65, Number 117 of the Federal Register, the Nuclear Regulatory Commission (NRC) requested public comments regarding proposed amendments to 10 CFR 72 and 150 that would allow licensing for interim storage of Greater Than Class C (GTCC) waste in a manner that is consistent with licensing the interim storage of spent fuel and would maintain Federal jurisdiction for storage of reactor-related GTCC waste. The proposed changes would allow a licensee who has a site specific 10 CFR 72 license to co-locate spent nuclear fuel and reactor-related GTCC waste within an Independent Spent Fuel Storage Installation (ISFSI) or Monitored Retrievable Storage (MRS) installation

Currently, 10 CFR 72 does not specifically address the storage of reactor-related GTCC waste within an ISFSI or MRS. This does not create an issue for licensees who continue to possess a license issued under 10 CFR 50, because this license includes 10 CFR 30 and 70 licenses. However, as stated in the discussion of the proposed rule, upon termination of the 10 CFR 50 license, this situation creates confusion and uncertainty on the part of decommissioning reactor licensees, and could result in the NRC handling GTCC waste licensing matters in an inconsistent manner.

Northeast Nuclear Energy Company (NNECO) believes that the changes to 10 CFR 72 and 150 proposed by the NRC could resolve the potential for future licensing and jurisdictional issues regarding reactor-related GTCC waste for licensees issued site-specific 10 CFR 72 licenses. In order to permit licensees to take full advantage of the proposed changes, NNECO believes that changes to 10 CFR 30 and 10 CFR 70 are necessary to include exceptions to identify that 10 CFR 72 would address possession of GTCC waste for those licensees who utilize an ISFSI following termination of their 10 CFR 50 licenses.

The discussion of the proposed rule states the intent of the proposed regulations as follows:

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“Under the proposed regulations, when a 10 CFR Part 50 license is terminated, the reactor licensee will only apply for an NRC license, but will have the option to store GTCC waste under either 10 CFR Part 72 or under 10 CFR Parts 30 and 70.”

Under the current regulations, NNECO believes that 10 CFR 30 and 70 licenses would continue to be required. 10 CFR 70.1(c) contains the following exception:

“The regulations in part 72 of this chapter establish requirements, procedures, and criteria for the issuance of licenses to possess:

“(1) Spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI), or

“(2) Spent fuel, high-level radioactive waste, and other radioactive materials associated with the storage in a monitored retrievable storage installation (MRS), and the terms and conditions under which the Commission will issue such licenses.”

This exception needs to be modified to include GTCC waste.

Currently, 10 CFR 30.1 does not include an exception similar to 10 CFR 70.1(c). It should be revised to include an exception to address 10 CFR 72 site specific licenses. For completeness, the NRC should also revise 10 CFR 40.1 to include a similar exception.

Attachment 1 provides NNECO response to the Commission’s request for public input on specific issues associated with the storage of reactor-related GTCC waste.

If you have any questions regarding this letter, please contact Mr. Bryan S. Ford at (860) 437-5895.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Larry G. Temple
Unit 1 General Manager

Attachment

cc: H. J. Miller, Region I Administrator
J. B. Hickman, NRC Senior Project Manager, Millstone Unit No. 1

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P. C. Cataldo, Resident Inspector, Millstone Unit No. 1

Attachment 1
Responses to the Commission's Request for Public Input on Specific Issues
Associated with the Storage of Reactor-Related GTCC Waste

1. Should the storage of certain forms of GTCC waste and spent fuel in the same cask be prohibited? Or, should storage be permitted if performance criteria can be established? If so, what criteria should be used? Note: As previously discussed, the NRC has already approved the storage of certain types of GTCC waste and spent fuel in the same cask on a case-by-case basis. The approved GTCC waste has typically been reactor core components, (e.g., thimble plugs, burnable poison rod assemblies, and control rod assemblies). In addition, the Commission is separately requesting information from DOE regarding DOE's position on the final disposal of commingled spent fuel and GTCC waste.

Response to Question 1

For many decommissioning licensees, the volume of reactor-related GTCC waste will be minimal (e.g., Millstone Unit No. 1 has approximately 15 ft³). Thus, the capability to commingle GTCC waste and spent nuclear fuel would offer the following advantages to these licensees:

- a) Reduced decommissioning costs due to the potential elimination of specific GTCC radioactive material canisters; and
- b) Reduced waste volume due to the more efficient utilization of canister volume.

In order to take full advantage of this option, a clear and defined position from the Department of Energy (DOE) would be needed to establish that they would accept casks that contain commingled GTCC waste and spent nuclear fuel. The current contracts that exist between the DOE and the US nuclear utilities for the disposal of spent nuclear fuel and high level radioactive waste are silent on the concept of commingling spent nuclear fuel and GTCC radioactive wastes. If this option were to be NRC approved without DOE approval, utilities that utilize the option would be at risk. Prior to transferring the casks to the DOE, those utilities may be required to open the canisters, separate the spent nuclear fuel from the GTCC wastes, and repackage the fuel and wastes into separate canisters. This would be a tremendous burden, especially for those US nuclear plants that have entered into decommissioning, because they would lack the necessary facilities (i.e., spent fuel pool) and personnel (i.e., significantly reduced staffing levels), and the activity would increase the dose and radioactive wastes due to the additional processing. Further, these items could have a significant detrimental impact on limited decommissioning funds.

2. Should the storage of explosive, pyrophoric, combustible, or chemically reactive GTCC waste be prohibited in either commingled or separate GTCC casks? Or should storage be permitted if performance criteria can be established? If so, what criteria should be used?

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3. Should the storage of GTCC that may generate or release gases via radiolytic or thermal decomposition, including flammable gases, be prohibited in either commingled or separate GTCC casks? Or should storage be permitted if performance criteria can be established? If so, what criteria should be used?
4. Should the storage of solid GTCC waste that may contain free liquid (e.g., dewatered resin) be prohibited in either commingled or separate GTCC casks? Or should storage be permitted if performance criteria can be established? If so, what criteria should be used?
5. Should the storage of liquid GTCC waste be prohibited in either commingled or separate GTCC casks? Or should storage be permitted if performance criteria can be established? If so, what criteria should be used?

Response to Questions 2 through 5

An option to separately store the types of GTCC waste described above would be beneficial. Designing a canister to store the GTCC waste described above would need to consider:

limited capacity,
potential need for "relief" devices (i.e., safety relief valves, rupture disks, blow-out panels, etc.), and
potential damage to neutron absorbers integral to the canister from types of GTCC waste described above.

Designing a cask to permit commingling of spent nuclear fuel would require the consideration of:

the potential damage to fuel cladding, and
the impact of introducing a moderator.

The cost to designing a canister to store the types of GTCC waste described above would be very high. Thus, before the feasibility of canister design and storage for the GTCC waste described in Questions 2 through 5 could be considered, specific design criteria for a canister would have to be developed. In addition, the issue of DOE acceptance of a canister containing the types of GTCC waste described in Questions 2 through 5 would have to be established.

6. If reactor licensees, after termination of their 10 CFR Part 50 license, elect to store reactor-related GTCC waste under the provisions of 10 CFR Parts 30/70, is additional guidance needed to provide a more efficient licensing process?

Response to Question 6

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Yes, additional guidance should be provided regarding the steps to take to obtain a license under 10 CFR 30 and 70 prior to the termination of a 10 CFR 50 license. The guidance should be simple and include consideration of facility history, design, experience, and backfit costs of upgrading to newer regulations as a result of transfer to 10 CFR 30 and 70 licenses.