

Connecticut Department of  
**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

Daniel C. Esty, Commissioner

December 19, 2012

Robert Stein, Chairman  
Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051

RE: Independent Spent Fuel Storage Installation  
Dominion Nuclear Connecticut  
Waterford, Connecticut  
Docket No. 265A

Dear Chairman Stein:

The Department of Energy and Environmental Protection (DEEP) has reviewed the above-referenced application for a Certificate of Environmental Compatibility and Public Need. No site review was conducted for the purposes of preparing these comments, but staff within both the DEEP Radiation Division and the Office of Long Island Sound Programs who reviewed this application are personally familiar with the site.

Background

In 2004, the Connecticut Siting Council approved Dominion Nuclear Connecticut's (Dominion) original application to site a "dry cask" independent spent fuel storage installation (ISFSI) at Millstone. As part of its decision, the Council approved the overall site work and associated infrastructure for a total number of 135 horizontal storage modules (HSM). Of the 135 approved modules, 50 were needed to store the waste from the shut-down Unit 1 reactor and 85 HSMs were needed for the total anticipated waste produced by Millstone Units 2 and 3. However, the 2004 decision limited Dominion, to complete the concrete support pad for only 49 of the total 135 HSMs. The amended application now seeks permission to build the concrete support pad for the remaining 86 HSMs.

Longterm Waste Disposal Policy

The continued accumulation of spent nuclear fuel at Millstone and over 100 other nuclear power stations across the country is unacceptable and is the direct result of the federal government's failure to site a national waste repository as required under federal law. Nuclear waste is a federal problem and needs an immediate federal solution. In the interim, DEEP generally supports the transfer of spent nuclear fuel from wet pool storage to the ISFSI but insists that this cannot be considered a long-term solution. Further, DEEP strongly supports the prompt transfer of all fuel to the ISFSI from reactors that are no longer in service.

*Printed on Recycled Paper*

79 Elm Street • Hartford, CT 06106-5127  
[www.ct.gov/deep](http://www.ct.gov/deep)

*Affirmative Action/Equal Opportunity Employer*

### Advantages of Dry Cask Storage Technology

DEEP notes with interest Dominion's comments in its addendum to its application filed November 28, 2012, to the extent that it appears that Dominion is performing an analysis of its Unit 1 spent fuel management strategy. The transfer of spent fuel from the Millstone Unit 1 wet storage pool to the ISFSI is also mentioned of at several points in the instant application including on page i and page 6. The Unit 1 pool at Millstone is located in close proximity to the shoreline and only a few feet above high tide level. Over the last sixteen months, the region has experienced three 100-year storms with significant coastal infrastructure damage and lengthy periods without power. It has become clear that much of our coastal infrastructure has been designed to an inadequate standard and cannot reliably sustain the type of storm damage that is now becoming all too common.

As a practical matter, dry cask storage modules do not require pumps, coolant or any active measures to keep spent fuel safe. Wet pool storage, on the other hand, needs both coolant and pumps to circulate the coolant in order to avoid the build-up of heat and the potential loss of coolant that would expose the fuel assemblies with potentially catastrophic effects. This is not a hypothetical or remote possibility. The March 11, 2011 tsunami and accident at the Fukushima nuclear power station in Japan included damage to a spent fuel storage pool of the same type as Unit 1.

Clearly, the most prudent course is to transfer as much spent fuel at Millstone as is possible from pool storage to dry cask storage. Dry cask storage can keep fuel safe in the event of a full power outage, major storm damage, and even total immersion in salt water. None of the above is true with conventional wet pool storage. Unit 1, shut down in 1995, is well positioned for full transfer to dry cask as all of its spent fuel is more than five years old. Transfer of all Unit 1 spent fuel to dry cask would permit the shutdown of all spent fuel pool equipment at that unit. Complete shutdown of Unit 1 would result in long term savings and some streamlining of security procedures because there would be nothing left to inspect or secure at Unit 1, and the ISFSI already needs to be secured anyway. Most importantly, however, removing all fuel from the storage pool at Unit 1 materially reduces the potential for a major release in the event of significant storm or other damage. If Dominion does not intend to move the Unit 1 fuel to dry cask, there is no need for the ISFSI to be any larger than 85 units. One of the strongest arguments for expanding beyond 85 units is to facilitate the much safer storage of fuel from Unit 1.

Finally, because the pools for Units 2 and 3 continue to be needed for storage of fuel less than five years old and to hold fresh fuel until needed, there appears to be no reason not to transfer all fuel more than five years old to dry cask storage. Once again this would be a prudent and responsible way to open up more space in existing pools for operational needs.

### Other Application Commentary

DEEP's Office of Long Island Sound Programs has reviewed the application and is satisfied with the buffer between the proposed site work and the statutory coastal resources.

DEEP's Natural Diversity Data Base continues to show that there are no State or Federally-listed species at the ISFSI site. Two listed species do exist elsewhere on the Millstone

property. There is a peregrine falcon nesting site south of the ISFSI in a nesting box which has been set up by Dominion. Nesting activity for this species would occur from late February through June. Also the seabeach sandwort (*Honckenya peploides*) occurs in two beach areas south and west of the ISFSI but would not be affected by the proposed activities. Dominion is well aware of both of these species.

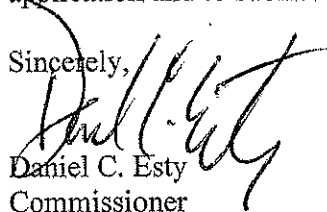
Dominion has been required, pursuant to a condition of its National Pollutant Discharge Elimination System (NDPES) Permit to evaluate different types of cooling technologies to reduce the environmental impact of the cooling water consumption and cooling water intake structures used at the Millstone Power Station. In order to reduce these impacts, which are principally upon fish and shellfish species, Dominion was instructed to look at systems to reduce the intake of cooling water, including a closed cycle cooling system, which could reduce required cooling water volumes by up to 90%.

Dominion has delivered the required evaluation to DEEP and has selected the use of natural draft cooling towers as the preferred option, should they be required to install a less consumptive cooling system. The proposed location of the three natural draft cooling towers would not be in conflict with the footprint of the 135 unit ISFSI build-out.

DEEP asks that the Council take administrative notice of our comments of December 8, 2003 on Dominion's Docket 265 application as those comments remain relevant in this proceeding. In particular, the lack of any meaningful analysis of available waste storage technologies, and the advantages and drawbacks of each, is absent for the Docket 265A application, as was also the case for Docket 265.

Thank you for the opportunity to review this application and to submit these comments.

Sincerely,



Daniel C. Esty  
Commissioner