DOCKET NO. 265A - Dominion Nuclear Connecticut, Inc. Application to Amend and Modify the Certificate of Environmental Compatibility and Public Need for the existing independent spent fuel storage installation at Millstone Power Station, Rope Ferry Road, Waterford, Connecticut pursuant to Connecticut General Statutes § 4-181a(b) for the limited purpose of determining if changed conditions related to the existing independent spent fuel storage installation justify a modification of the Decision and Order.	}	Connecticut
	}	Siting
	}	Council
	}	May 2, 2013

Opinion

On May 27, 2004, under Docket 265, the Connecticut Siting Council (Council) granted a Certificate of Environmental Compatibility and Public Need to Dominion Nuclear Connecticut, Inc. (DNC) to construct an Independent Spent Fuel Storage Installation (ISFSI) at the Millstone Power Station. DNC was permitted to complete all subsurface infrastructure work to accommodate 135 Horizontal Storage Modules (HSMs) and install concrete pads to accommodate 49 HSMs.

On October 31, 2012, DNC, in accordance with the provisions of General Statutes §16-50k and §4-181a(b), applied to the Council for certain design modifications to the existing ISFSI, and for a modification of Condition 15 of the Council's May 27, 2004 Decision and Order (D&O) so as to allow the installation of all the concrete pads necessary to accommodate a potential full build-out of 135 HSMs. DNC is not proposing to install 135 HSMs as part of this application. On November 15, 2012, the Council voted to approve the application for modification as complete; further, consistent with the Council's jurisdiction, the proceeding was specifically limited to determining whether changed conditions warrant modification of Condition 15 of the Council's May 27, 2004 D&O and to nonnuclear environmental effects of modifications to certain physical features of the existing ISFSI.

During the proceedings for Docket 265, there was no national repository for spent nuclear fuel. At the time, the United States Department of Energy (USDOE) intended to submit a license application to the United States Nuclear Regulatory Commission (NRC) for construction of a national spent nuclear fuel repository at Yucca Mountain in Nevada with a target date to accept spent nuclear fuel for permanent disposal by 2010; however, the Yucca Mountain facility was not completed nor did it accept spent nuclear fuel.

In 2010, the USDOE withdrew its Yucca Mountain license application with the NRC so that new recommendations regarding a national repository could be completed. In January 2013, USDOE issued numerous recommendations that endorsed a national waste management system containing a pilot interim storage facility by 2021 with an initial focus on spent nuclear fuel from shut-down reactors; a larger, full-scale interim storage facility available by 2025 that will have sufficient capacity to provide flexibility in the waste management system and limit the federal government's liability associate with spent nuclear fuel; and a geologic repository by 2048.

In addition to changes in national policy since the Council's Docket 265 decision, there have been changes in DNC's planned plant operations and management of spent fuel. DNC has revised the spent fuel-loading schedule so that 49 HSMs would be loaded by calendar year 2021 rather than calendar year 2025, as originally contemplated. DNC has also identified changes in the original ISFSI pad design that would improve the spent fuel loading process.

DNC constructed the existing ISFSI in 2004 in accordance with a Council-approved Development and Management Plan. Work included subsurface work to provide a stable foundation for 135 HSMs, the installation of a concrete pad capable of supporting 20 HSMs, a concrete loading apron, a stormwater drainage system, security fencing, and underground utilities. Nineteen HSMs are presently located in the ISFSI, 18 of which are loaded with spent fuel.

Based on site operations to date, DNC has identified several ISFSI design modifications that would allow for easier loading of spent fuel into the HSMs, including; elimination of a trench drain in all future concrete loading aprons to allow for ease of alignment between the HSM and spent fuel canister; enlarging the northwest corner of the existing ISFSI by 0.23 acre to create a larger turning radius for the transport delivering and loading the spent fuel canisters into the HSMs; changes to the existing stormwater drainage system. DNC has also projected that the installation of HSM foundations and loading aprons for 135 HSMs would allow for cost savings by preventing unnecessary duplication of site engineering, mobilization, and repeated security issues related to work within and adjacent to the established ISFSI Protected Area.

The project would have no effect on wetlands or watercourses. Reconstruction of the ISFSI drainage system would not significantly increase stormwater run-off from the site and no modifications to stormwater discharge structures would be required.

The project is not within a flood hazard area as delineated by the Federal Emergency Management Agency. The ISFSI pad elevation is 21 feet above mean sea level (amsl). Flood elevations observed for Super Storm Sandy (2012) and Tropical Storm Irene (2011) were approximately 9 feet amsl. The Council defers to the NRC established conditions on general licenses issued for an ISFSI on matters including, but not limited to, the adoption of security measures and the design of structures, systems, and components to withstand the effect of natural phenomena such as hurricanes and floods.

No vegetation or habitats would be directly affected, as all modifications would be within previously disturbed and currently industrially maintained areas. The project would not affect any State or federally endangered, threatened or special concern species. The project would have no adverse effect on historic, architectural or archeological resources listed in or eligible for the National Register of Historic Places. The project would not alter the visual impact of the approved ISFSI site.

The project is consistent with the provisions of the Connecticut Environmental Protection Act, as it will not have the effect of unreasonably polluting, impairing, or destroying the public trust in the air, water or other natural resources of the state. In consideration of all relevant surrounding circumstances and factors, there is no feasible and prudent alternative to the proposed project.

Based on the record in this proceeding, the Council finds that the effects associated with the modification of the existing ISFSI at Millstone Power Station, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the state concerning such effects, and not sufficient reason to deny this application to amend and modify the Certificate. Therefore, the Council will modify DNC's Certificate issued on May 27, 2004.