STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
APPLICATION OF DOMINION NUCLEAR	:	DOCKET NO. 265A
CONNECTICUT, INC. TO MODIFY SITING	:	
COUNCIL CERTIFICATE (DOCKET NO. 265)	:	
FOR THE EXISTING INDEPENDENT SPENT	:	
FUEL STORAGE INSTALLATION (DRY	:	
STORAGE SYSTEM) AT MILLSTONE	:	
POWER STATION, ROPE FERRY ROAD,	:	
WATERFORD, CONNECTICUT	:	FEBRUARY 28, 2013

PROPOSED FINDINGS OF FACT

INTRODUCTION

1. On October 31, 2012, Dominion Nuclear Connecticut, Inc. ("DNC") filed an application with the Connecticut Siting Council ("Council") to make certain modifications to the existing Independent Spent Fuel Storage Installation ("ISFSI") at Millstone Power Station ("MPS") in Waterford, Connecticut (the "Application"). (DNC Exhibit ("DNC") 1).

2. The proposed ISFSI modification proposal involves minor physical changes to certain ISFSI site features and a request by DNC to modify Council Docket No. 265, Decision and Order ("D&O"), Condition No. 15, so that it may install all remaining concrete pads at the ISFSI, to accommodate the full build-out of 135 HSMs. (DNC 1; DNC 4).

AUTHORITY AND PURPOSE

3. The Application was filed pursuant to the provisions of Conn. Gen. Stat. § 16-50k(a) of the Public Utilities Environmental Standards Act and § 4-181a(b) of the Connecticut Uniform Administrative Procedures Act. Pursuant to the Conn. Gen. Stat. § 4-181a(b), the Council may modify its final D&O in Docket No. 265 on a showing of changed conditions. (Conn. Gen. Stat. § 4-181a(b); DNC 4).

4. The scope of the Council's authority and jurisdiction is limited to a determination that (1) changed conditions, relating to the ISFSI, warrant a modification to Condition No. 15 of the D&O; and (2) the related minor physical ISFSI modifications will not result in a substantial adverse environmental effect beyond those previously approved by the Council in Docket No. 265. (DNC 1; DNC 4).

SITING COUNCIL JURISDICTION

5. MPS operates under federal licenses issued by the U.S. Nuclear Regulatory Commission ("NRC") pursuant to the Atomic Energy Act and Volume 10 Part 50 of the Code of Federal Regulations. (12/20/12 Transcript ("Tr.") 1, pp. 5-6; Admin. Notice 17; DNC 1, Attachment 6).

6. The NRC regulations authorize DNC, as the MPS licensee, to develop and store spent nuclear fuel at an ISFSI. (*See* 10 C.F.R. § 72.212; Admin. Notice 17; DNC 1, Attachment 6; DNC 5).

7. The regulation of radiological effects, operations, safety and security at commercial nuclear power stations and at associated spent fuel storage facilities is under the exclusive jurisdiction of the NRC. (*Maine Yankee Atomic Power Co. v. Bonsey*, 107 F.Supp. 247 (D. ME 2000); *Connecticut Coalition Against Millstone, et al. v. Connecticut Siting Council*, 286 Conn. 57 (2008); Tr. 1, pp. 5-8).

BACKGROUND

8. The ISFSI was approved by the Council on May 27, 2004, in Council Docket No. 265 subject to conditions. (DNC 1, Attachment 6; Admin. Notice 17).

9. The Council's 2004 D&O, Condition No. 15, authorized DNC to complete all subsurface infrastructure work for the ISFSI for a total of 135 Horizontal Storage Modules (HSMs); install a haul road for fuel transfer purposes; install stormwater drainage improvements and underground utilities; install a gravel and crushed stone finish within the ISFSI area; place excess fill material in the designated soil placement area to the north of the Amtrak rail line; install a reinforced concrete pad large enough to accommodate 49 HSMs; and install a security fence around the entire ISFSI area (the "Phase I Improvements"). (DNC 1, pp. 5-6, Attachment 6).

10. DNC completed the Phase I Improvements but installed a concrete pad and an adjacent concrete loading apron large enough to accommodate only 20 HSMs. (DNC 1, pp. 7-8).

11. DNC began transferring spent fuel to the ISFSI in 2005. By October 31, 2012, DNC had installed nineteen (19) HSMs at the ISFSI, eighteen (18) of which are loaded with spent fuel. (DNC 1, pp. 7-8, Attachment 7).

12. Prior to the next scheduled transfer of spent fuel to the ISFSI in 2015, DNC must expand the existing concrete pad and install additional HSMs. (DNC 1 pp. 9-11; DNC 9).

13. In the Application, DNC seeks Council approval to make certain minor modifications to the ISFSI to improve the overall performance and efficiency of the fuel transfer process. These modifications involve changes to the grade of the fuel loading apron; changes to existing on-site drainage systems; the widening of the area adjacent to the loading apron in the northerly portion of the ISFSI; the removal of the trench drain in the middle of all future loading aprons; the temporary relocation of the Protected Area ("PA") fence; and the completion of the remaining concrete pads to accommodate 135 HSMs. (DNC 1, pp.

9-11, Attachment 7; DNC 9).

CHANGED CONDITIONS

14. At the time of the Council's consideration of the Docket No. 265 application, it was the official stated position of the U.S. Department of Energy ("DOE") that it intended to submit to the NRC a license application to construct a national spent fuel repository by December 2004, and that its target for accepting spent fuel for permanent disposal was 2010. (Admin. Notice 17 – October 3, 2003 Response to Council Interrogatory No. 2; DNC 1, Attachment 6).

15. The efforts of the DOE to license the proposed Yucca Mountain national nuclear waste repository have slowed or halted. The current Administration has taken alternate steps to reconsider what path the nation might take to deal with the permanent disposal of spent nuclear fuel. As a result, DNC is planning for the use of additional on-site, interim storage of its spent fuel at the MPS ISFSI. (DNC 1, pp. 8-9; DNC 4; Admin. Notice 13).

16. Since 2004 and the approval of the Docket No. 265 Application, DNC's projections for spent fuel transfer to the ISFSI have been updated in response to changes in plant operations and spent fuel management strategies. (DNC 1, p. 12; DNC 4; DNC 5; Tr. 1, pp. 61-63).

17. DNC plans to change its management of the MPS Unit 2 spent fuel pool to accommodate a new fuel assembly design planned for first use in 2015. The new fuel assembly design is a standard product offered by DNC's fuel vendor and is used at nuclear plants across the country. Use of the new fuel assembly design will require increased fuel assembly spacing by creating additional empty rack locations in the MPS Unit 2 spent fuel pool. This will result in more MPS Unit 2 spent fuel being transferred to the ISFSI. (DNC 1, p. 12; DNC 4; Tr. 1, p. 133).

18. DNC will discharge more spent fuel from the MPS Unit 3 spent fuel pool to the ISFSI as a result of the NRC-approved 2008 MPS Unit 3 power uprate. (DNC 1, p. 12; DNC 4).

19. DNC plans to start transferring MPS Unit 3 spent fuel to the ISFSI in 2016, sooner than it had anticipated in 2003, to better accommodate fuel loading operations. (DNC 1, pp. 12-13; DNC 4).

20. DNC has identified several areas where changes to certain ISFSI site construction features and details would improve loading operations. For example, DNC intends to eliminate the slope and center trench drains from all future ISFSI loading aprons, widen the area adjacent to the northern-most loading apron, modify the ISFSI stormwater drainage system and temporarily relocate the PA fence so that construction will occur outside the PA. (DNC 1, pp. 9-10; DNC 4).

21. MPS Unit 1 spent fuel continues to be stored safely and securely in the MPS Unit 1 spent fuel pool. DNC is not currently required to transfer the MPS Unit 1 spent fuel to the ISFSI nor has it committed to do so. (DNC 8).

22. Given the significant uncertainty associated with the DOE's efforts to establish a national repository for spent nuclear fuel and the consequential impact on MPS Unit 1 spent fuel management costs, DNC is performing an analysis to determine if a change to its current MPS Unit 1 spent fuel management strategy is warranted. (DNC 1, p. 13; DNC 4; DNC 8).

23. The MPS Unit 1 evaluation requires DNC to consider several factors, including but not limited to: the DOE's assessment of the recommendations of the Blue Ribbon Commission of the options available for storage, processing and disposal of spent nuclear fuel; the evaluation of issues involved in the decommissioning of the MPS Unit 1 spent fuel pool; and the effect transferring MPS Unit 1 fuel to the ISFSI will have on the operations at MPS Unit 2 and MPS Unit 3, and other plants in Dominion's fleet, including personnel, scheduling and availability of fuel transfer equipment. (DNC 1, pp. 8-9 and 13; DNC 8).

24. If DNC decides to transfer MPS Unit 1 spent fuel to the ISFSI, it would account for the use of 50 of the 135 HSMs. (DNC 1, p. 13; DNC 8; Tr. 1 p. 116 and 121).

ENVIRONMENTAL EFFECTS

25. In its review and approval of the Docket No. 265 Application, the Council determined that the environmental effects associated with the full build-out of the ISFSI (135 HSMs) are not disproportionate either alone or cumulatively with other effects when compared to the need for the ISFSI, are not in conflict with the policies of the State of Connecticut; and are not sufficient reason to deny the Docket No. 265 Application. (DNC 1, pp. 14-18, Attachment 6; Admin. Notice No. 17).

26. The physical site improvements and modification of site construction features described in the Docket No. 265A Application will have no impact on nearby wetlands or watercourses, will not result in the change in the current flood plain designation for the ISFSI area; will not impact on-site ecology; will not result in the creation of more noise at MPS; will not impact historic, architectural or archeological resources listed on or eligible for listing on the National Register of Historic Places; will not change the visual impact of the ISFSI; will not impact recreational facilities in the area; will not impact public drinking water supplies at MPS; and will not impact local traffic. (DNC 1, pp. 14-18, Attachments 8-11).

27. The ISFSI, as modified would continue to comply with the applicable provisions of the Waterford Plan of Conservation and Development, Zoning Regulations and Inland Wetlands and Watercourses Regulations. (DNC 1, pp. 19-20, Attachments 4 and 5).

FLOOD INSURANCE RATE MAP

28. According to the published Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map (Map Number 09011C0491G) effective July 18, 2011, the ISFSI lies in an area that is outside the 500 year flood plan. (DNC 15; Tr. 1, pp. 57-58).

29. FEMA has developed preliminary revised flood plain maps for all of New London County, Connecticut. These new maps have not yet been officially published by FEMA. Regardless, even on these preliminary FEMA maps, the ISFSI remains outside the 500 year flood plain. (DNC 15; CCAM/Burton 4).

30. The pad elevation at the ISFSI is 21 feet Above Mean Sea Level (AMSL). (DNC 1, Attachment 7; DNC 5, Resp. 7). Storm surge along the shoreline adjacent to MPS reached only 9 feet during Super Storm Sandy and 9.7 feet during the 1938 hurricane. The storm surge at MPS during the Tropical Storm Irene in 2011 was less than 9 feet. (Tr. 1, pp. 73-74 and 77).

31. The NUHOMS dry storage system used at MPS is designed and evaluated, as a part of its NRC license, to be submerged in water to a depth of 50 feet, with the water moving at a rate of 15 feet per second. As part of that evaluation, the NRC reviews the pressure placed on the fuel canister, the spent fuel inside the canister and the stability of the HSMs. (Tr. 1, pp. 53 and 60).

BENEFITS TO COMPLETION OF FULL ISFSI PADS

32. To construct the remaining concrete pads and other proposed ISFSI modifications, DNC plans to temporarily relocate the PA fence so that the loaded HSMs remain completely within the PA and ISFSI construction activity occurs outside the PA. (DNC 1, p. 11; DNC 9).

33. Certain limited pad construction activity would occur inside the PA before the fence is temporarily relocated. This activity would occur in the vicinity of HSMs 21-27 and 68-71. (DNC 1, Attachment 7; DNC 9).

34. To avoid having to relocate the PA fence every time DNC needs to expand the ISFSI concrete pads for the storage of more spent fuel and to provide for fuel loading accommodations in a timely fashion, DNC seeks Council approval to complete the full build-out of the remaining concrete pads for all 135 HSMs. (DNC 9; Tr. 1 35, 39-40, 47-49, 51-53).

35. Even with the full build-out of the concrete pad needed to accommodate 135 HSMs, DNC will continue to transfer fuel to the ISFSI only as required for plant operations and spent fuel management strategies. (DNC 1, pp. 12-13; DNC 9; Tr. 1 35, 39-40, 47-49, 51-53).

ON-SITE HSM FABRICATION

36. All HSMs installed at the ISFSI since 2005 were fabricated in Virginia and transported by rail to MPS. The HSM components are then assembled at the ISFSI. By 2014, DNC will need to assemble and install twenty-three (23) additional HSMs at the ISFSI for future fuel transfers. (DNC 1 pp. 13-14).

37. DNC intends to pursue plans to fabricate the HSMs needed at the ISFSI at MPS to avoid problems with transportation delays experienced when the HSMs were fabricated in

Virginia. (DNC 1, pp. 13-14; Tr. 2, pp. 21-23).

38. DNC will provide the Council and the Town with additional information on the fabrication process and the location selected to complete this work as soon as it is available. (DNC 1, pp. 13-14).

CERTIFICATION

This is to certify that on the 28th day of February, 2013, a copy of the foregoing was sent, electronic mail to the following:

Robert A. Avena, Esq.
Town Attorney
Kepple, Morgan & Avena, P.C.
Box 3A Anguilla Park
20 S. Anguilla Road
Pawcatuck, CT 06379
raa@kccaz.com

Daniel M. Steward
First Selectman
Waterford Town Hall
15 Rope Ferry Road
Waterford, CT 06385-2806
firstsel@waterfordct.org

Nancy Burton
147 Cross Highway
Redding Ridge, CT 06876
NancyBurtonCT@aol.com

James S. Butler, AICP
Executive Director
Southeastern Connecticut Council of Governments
5 Connecticut Avenue
Norwich, CT 06360
jbutler@seccog.org

Robert D. Snook, Esq.
Assistant Attorney General
Office of the Attorney General
P.O. Box 120
55 Elm Street
Hartford, CT 06141-0120
Robert.snook@ct.gov

Thomas Kelly
21 Billow Road
Niantic, CT 06357
tjkelly2009@gmail.com

Kenneth C. Baldwin