

CONNECTICUT SITING COUNCIL

DOCKET NO. 265

SITING COUNCIL

IN THE MATTER OF

STATE OF CONNECTICUT

DOMINION NUCLEAR CONNECTICUT, INC.

MARCH 22, 2004

# POST HEARING BRIEF OF RICHARD BLUMENTHAL, ATTORNEY GENERAL OF CONNECTICUT

### **Summary**

On September 4, 2003, Dominion Nuclear Connecticut, Inc. ("DNC") filed an application with the Connecticut Siting Council under Conn. Gen. Stat. §16-50/(c) seeking approval of a proposed independent spent fuel storage facility ("ISFSI") at the Millstone nuclear power station in Waterford, Connecticut. Currently, nuclear fuel that has had its radioactivity decay to the point that it is no longer appropriate to use to produce power ("spent fuel") is stored in large water-filled pools ("wet storage") in order to permit the fuel to cool safely. One of the spent fuel pools at Millstone will soon be full and a second pool will be full in a few years. (Tr. 12/15/03, p 76, test. of D. Weekley; Applicant's Response to Council's Interrogatory 19; Tr. 1/7/04, p 216, test. of D. Weekley.) Without additional storage space, there will be no safe means to off-load fuel from Millstone's reactors in an emergency or to permit future refuelings.

DNC plans to address the imminent lack of storage capacity by moving some of the older spent fuel from the fuel storage pools into steel canisters which would then be mounted in concrete horizontal storage modules ("HSMs"). (Tr. 12/15/03, pp 67-69, 90 test. of S. Scace, R. Grubb; tr. 12/15/03, p 38, test. of R. Grubb.) This form of storage, known as "dry cask" storage, relies on passive air convection to dissipate the residual heat from the still highly radioactive

spent fuel assemblies. Both wet and dry systems are licensed by the Nuclear Regulatory Commission ("NRC"). (Tr. 12/15/03, p 60, test. of S. Scace.)

It is clear that, ultimately, the federal government must, as required by law, provide a national safe repository for long term storage of high-level nuclear waste. Until that long term storage is available, it is self-evident that there is a need to increase safety at existing nuclear power stations and, based on the existing evidence, experts believe that dry cask storage may have some definable advantages compared to spent fuel pools. (See, tr. 12/15/04, p. 67, test. S. Scace.) However, should the Siting Council approve this project, only a portion of the 135 requested HSMs should be permitted at this time. There are several important reasons for this limitation. Careful oversight of all aspects relating to the storage of high-level nuclear waste is a matter of great importance to the state and the Town of Waterford. However, once the Council gives permission to build the full facility, all relevant jurisdiction over the ISFSI passes to the NRC and state and local officials lose any further regulatory authority. Furthermore, it may be that the full facility will never be needed because the perceived need for 135 HSMs is dependent upon a number of contingencies which may not occur. These contingencies concern whether and when the proposed federal facility at Yucca Mountain opens and whether the Millstone units receive permission to continue operating past their current NRC license periods. In fact, the Applicant has acknowledged that only 19 HSMs will be sufficient until 2015. (Tr. 2/19/04, pp. 186, 189, test. of S. Scace; see also, Applicant's Ex. 3, tab 1.)

Consequently, in order to permit the state to retain important regulatory authority, and to ensure the best protection for the citizens of Connecticut, any approval for additional HSMs should be subject to the conditions as noted in the transcript for the hearing on January 20, 2004.

As contemplated by the Council, approval would be granted for a one-time buildout of the security fence and full drainage work. In addition, the Council anticipated granting permission for a concrete support pad for up to 69 HSMs, but approval for present construction of only 19 HSMs. Permission for expansion beyond this number could later be sought through the Siting Council's statutory petition process.

In addition to the above conditions, the Attorney General urges that these additional conditions be required by the Council:

- Prohibition on future expansion absent proof that DNC has obtained NRC relicensing of Units 2 and/or 3.
- Certification by DNC that Yucca Mountain National Repository is not then available and a condition prohibiting transfer or sale to any other nuclear power stations of any waste delivery schedule allocations granted to DNC by the Department of Energy for Millstone-generated waste unless needed to move waste to Yucca Mountain earlier.
- Opportunity through the petition process for appropriate involvement by the Town of Waterford and the State of Connecticut.
- Certification by DNC that it would employ the then best available storage technology compatible with operations at Millstone.
- Identification by DNC of a plan to address the Unit 1 waste.

The above conditions assume that, as DNC has already agreed on the record, only waste produced at Millstone will be stored at the Millstone ISFSI.

## Factual Background

Millstone Nuclear Power Station ("Millstone") includes three (3) reactors known as Units 1, 2, and 3 and occupies a 540 acre parcel of land in Waterford, Connecticut adjacent to the Long Island Sound. (Tr. 12/15/03, p. 52, test. of W. Eakin; pp. 110-111, test. of S. Scace.) Unit 1 is currently mothballed, but not formally decommissioned, and all of its fuel is in a separate fuel storage pool. (*Id. see also*, Applicant's Responses to Council's Interrogatories 40, 50). DNC proposes using approximately 2 acres of land in and around the reactors and other buildings at

the site for the ISFSI. Part of the proposed ISFSI is now a parking lot. (Applicant's Ex. 3, Waterford Planning & Zoning transcript of August 5, 2003, p. 22.) The ISFSI site would be approximately 400 feet from the Sound, (tr. 12/15/03, p 54, test. of F. Kocon) and 1700 feet from the nearest residence. (Tr. 12/15/03, p 50, test. of R. Grubb.)

As a matter of engineering, construction of an ISFSI is a relatively straightforward project. The largest single structure would be a concrete pad, four feet thick, to support the 25 tons of spent fuel assemblies loaded into each cask (Tr. 12/15/03, p 43, test. of R. Grubb) as well as the 140 tons of the HSM itself. (Applicant's Ex. 3, Waterford Planning & Zoning transcript of August 5, 2003, p. 24.) Each of the concrete HSM structures would be about 21 feet tall (Tr. 12/15/03, p 166, test. of R. Grubb) and HSMs would be placed side-by-side in rows which would vary in length depending on how many HSMs were built. To avoid a series of overhead power lines, HSMs cannot be stacked upon each other at Millstone. (Tr. 12/15/03, pp 183-184, test. of Kocon.)

The DNC proposed a total of 135 HSMs, 85 for fuel from Units 2 and 3, and 50 HSMs for fuel from Unit 1, though DNC has indicated that it will not move Unit 1's fuel into dry cask unless necessary. (Tr. 12/15/03, pp. 77, 79, test. of D. Weekley; Applicant's Response to Council's Interrogatory 24.) Even with 135 casks, some fuel would remain in the existing fuel pools, partially because it would take 235 HSMs to fully off-load the pools and partially because, once fuel is removed from the core, it is still hot (approx. 400 degrees Fahrenheit) and retains considerable radioactivity. (Tr. 12/15/03, p 47, test. of R. Grubb.) Under NRC regulations, fuel must be stored at least five years in a "wet" spent fuel pool in order to cool sufficiently to permit transfer to a dry cask storage system. Therefore, whether or not DNC is granted permission to

construct the full proposed ISFSI, the existing fuel pools will remain on-site and loaded with spent fuel for the relevant future. (Tr. 12/15/03, pp 80, 141, test. of D. Weekley.)

In this regard, the testimony shows that the future may be very long indeed. According to federal law, specifically the Nuclear Waste Policy Act of 1982, 42 U.S.C. 10101, et seq., the Department of Energy ("DOE") was obligated to take over responsibility for commercial spent fuel in 1998 and begin shipments to Yucca Mountain National Repository. (Tr. 12/15/03, p 142, test. of D. Weekley.) This did not occur and, at present, no national disposal site exists. While all parties are hopeful that Yucca Mountain will eventually prove to be a safe and effective disposal site, it is impossible at this time to state when that might occur. (See, tr. 1/7/04, pp 217, et seq.) Furthermore, as noted above, if DNC is able to re-license its two reactors at Millstone, the facility will be able to continue in operation until 2045 and spent fuel may stay on-site for many years more to permit sufficient cooling. (See, tr. 12/15/03, p 80, test. of D. Weekley: "we would still have Units 2 and 3 spent fuel pools filled to capacity at that point in 2045.") Thus, it is prudent to assume that some waste fuel may remain at the site for the next four decades or more.

#### **Dry Cask Storage**

As indicated in the Applicant's pre-filed testimony, the first commercial dry cask storage facility began operation about eighteen years ago and, currently, there are 15 existing ISFSIs and 25 more planned. (Tr. 12/15/03, pp 34-36, test. of R. Grubb; tr. 1/7/04, p 43, test. of B.

Wakeman.) DNC has two existing dry cask facilities, one at each of its North Anna and Surry nuclear plants.<sup>1</sup> (Tr. 12/15/03, p 39, test. of R. Grubb.)

Dry cask storage is widely believed to have advantages as a method of storing spent fuel because it is a "passive" system using natural air convection rather than an "active" system such as fuel pools, which require manned buildings, pumps, etc. to operate. (Tr. 12/15/03, pp 60-61, test. of R. Grubb; pp 66-67, test of D. Weekley, S. Scace.) Up to 90% of the residual heat produced by the spent fuel would be released by passive convection from each fuel canister. (*Id.*) The only active human intervention, other than in the case of some unexpected system failure, would be the daily site inspection. (Tr. 12/15/03, p 62, test. of R. Grubb.)

In addition, most fuel pools are not protected by a hardened concrete structure, as are reactors, which are housed in a reinforced containment dome. Dry cask containers, however, include heavy stainless steel canisters which are themselves housed in reinforced concrete casings up to four feet thick and are therefore considered very robust. (Tr. 12/15/03, pp 32-33, 112, test. of R. Grubb; see also, Applicant's Ex. 3, Transcript Town of Waterford Planning & Zoning Commission, Aug. 5, 2003, p. 25.) For Units 2 and 3, DNC proposes to use the NUHUMS 32PT steel canister. (Applicant's Response to Council's Interrogatory 26.) The 32PT has been extensively tested for safety and reliability. (Applicant's Responses to Council's Interrogatories 27, 45.)

As described by DNC, the fuel transfer process will begin with lowering a NUHOMS 32PT steel canister into the spent fuel pool and using a crane to move fuel assemblies, one at a

<sup>&</sup>lt;sup>1</sup> The DNC ISFSIs at Surry and North Anna use a slightly modified design in that the dry casks are stored vertically whereas the proposed Millstone site will use the state-of-the-art horizontal

time, into the steel canister. (Tr. 12/15/03, pp 67-69, test. of S. Scace, R. Grubb.) Due to space constraints within the pools, only one 32PT canister can be loaded at a time. (Tr. 12/15/03, p 90, test. of S. Scace.) Once the fuel assemblies are loaded, all remaining water in the canister is drained and the canister is welded shut, lowered by crane onto a truck, and moved to the ISFSI. (*Id.*) At the final storage site, the canister slides on rails from the transport truck into the waiting concrete HSM. (Tr. 12/15/03, p 38, test. of R. Grubb.)

Individual canisters will be ordered as needed from the manufacturer and take 12-24 months to prepare. (Tr. 12/15/03, p 72, test. of R. Grubb.) Canisters will not be stored or stockpiled on site. (Tr. 12/15/03, p 77, test. of D. Weekley; p. 89 test. of S. Scace.)

It is acknowledged by DNC that the spent fuel is still radioactive. (Tr. 12/15/03, p 48, test. of R. Grubb.) Exposure to unshielded fuel for even a short time can be harmful. (See, tr. 1/07/04, p. 182, test. of B. Wakeman; Applicant's Ex. 3, Waterford Planning & Zoning transcript of August 5, 2003, pp. 44-46.) However, the fuel assemblies, once in the 32PT canister and loaded into the HSMs, will produce less than 10 millirem/hour (mr/hr) of radioactivity at the surface of the cask. (Tr. 12/15/03, p 53, test. of W. Eakin; Applicant's Response to Council's Interrogatory 48.) Because radiation levels fall off with the square of the distance from the source, levels at the nearest residence would be below reliable detection levels above natural, or "background," levels and noticeably lower than the average level of exposure from natural sources. (Tr. 12/15/03, pp 188-190, test. of B. Wakeman; Applicant's Response to Council's Interrogatory 48.)

cask design which spreads the weight more evenly onto the foundation pad. The other two sites are to incorporate horizontal casks in the future. (Tr. 12/15/03, p 64, test. of D. Weekley.)

The Applicant has testified that 85 casks are needed to provide "full core reserve" for the expected remaining duration of the plant's operational life. (Tr. 12/15/03, pp 79-80, test. of D. Weekley.) Full core reserve refers to the need to preserve enough space in the spent fuel pools for all of the fuel currently in the active reactor cores. (Applicant's Response Council's Interrogatory 3.) The underlying point of maintaining full core reserve is to have enough storage space on-site to be able to move all the hot fuel out of the reactor cores in an emergency into wet storage and DNC acknowledges that it has had to move fuel out of the Unit 2 reactor in response to an "unexpected event." (Applicant's Response to Council's Interrogatory 19.) Full core reserve is considered prudent although it is not mandated by the NRC. (Id.; Tr. 1/7/04, p. 56, test. of S. Scace; tr. 12/15/03, p 76, test. of D. Weekley: "we think full core reserve is an absolute necessity.") Unit 2 will fail full core reserve by 2005 without the ISFSI and will have to cease operations by 2010 without additional storage space. (Tr. 12/15/03, p 76, test. of D. Weekley; Applicant's Response to Council's Interrogatory 19.) Unit 3 will be in the same situation by 2016 or 2020. (Tr. 1/7/04, p 216, test. of D. Weekley; but see test. of S. Scace; p. 216 that Unit 3 would fail full core reserve by 2019 and 2/19/04,p. 170, test of S. Scace, that Unit 3 will fail full core reserve by 2020.) This latter date, however, assumes that DNC successfully re-licenses its units. DNC personnel have testified that re-licensing is not guaranteed (tr. 1/7/04, pp. 58-59, test. of D. Weekley), although they anticipate approval, possibly in a few years. (Tr. 2/19/04, test. of D. Weekely.) In fact, prior to the close of testimony, DNC filed requests for 20-year license extensions for both Units 2 and 3 with the NRC. (Applicant's Ex. 18.) It should be noted, however, that: 1) if NRC should deny either or both of the requests for re-licensing; or 2) if DNC chooses to withdraw the applications because of changes in market conditions; or 3)

Yucca Mountain becomes available, then substantially less than 135 casks will be needed for the Millstone ISFSI.

From the above, it is clear that a 135 cask ISFSI is not mandated by any *current* need. To the contrary, 50 of the proposed 135 casks have nothing to do with maintaining full core reserve because they are related to Unit 1, which is no longer operating and has no fuel in its core. (Applicant's Response to Council's Interrogatory 40.) The bulk of the remaining 85 are needed only if re-licensing occurs. NRC may or may not choose to grant license extensions. Conceivably, economic or other business conditions could cause DNC to cease operations, as happened with Unit 1. In fact, DNC acknowledged the potential impact of market forces during the hearings when, in response to the question "Would you agree that economic and other external factors could influence the decision of a company to seek re-licensing?" Mr. Weekley answered: "Yes, that's true." (Tr. 1/7/03. p. 60.) It is no surprise, therefore, that DNC has acknowledged that there are many contingencies and uncertainties involved in the ISFSI issue. What is certain is that, as the Applicant has acknowledged, only 19 HSMs are needed to provide full core reserve through 2015. (Tr. 2/19/04, pp 186, 189, test. of S. Scace; *see also* tr. 1/7/04, p. 55, 12/15/04, p. 85, test. of D. Weekley; Applicant's Ex. 3, tab 1.)

## **ARGUMENT**

The Attorney General has intervened as a party under both Conn. Gen. Stat. §16-50 and §22a-19. Under either of these statutes, the Siting Council has the ability to examine the need for a proposed project, its impacts, and any reasonable alternatives.

#### Alternatives.

In the present case, several alternatives have been advanced or considered by the Applicant and others. Some of these are clearly not practical and at least one proposed alternative is not properly before this Council.

Specifically, DNC initially considered a 234 cask ISFSI design alternative. (Tr. 12/15/03, p 84, test. of D. Weekley.) This alternative was rejected by the Applicant after extensive negotiations with the Town. (*Id.*; Applicant's Response to Council's Interrogatory 25.) This alternative has not been further considered by the Applicant and is not before the Siting Council. Similarly, another discarded alternative considered involved building an additional new wet storage spent fuel pool. This alternative was rejected because it was expensive and involved an active, as opposed to passive, cooling system. Furthermore, it would require mixing fuel from both Units 2 and 3, which is not permissible under DNC's existing NRC license. (Tr. 12/15/03, p. 66, test. of S. Scace.) No party is advocating this alternative.

Another alternative can also be dismissed. Connecticut Coalition Against Millstone, generally known as "CCAM," a concerned citizen group that is a party to this case, has suggested a significant modification of the dry cask system whereby the HSMs would be enclosed in covered bunkers of gravel, earth, and concrete. (See, CCAM exhibits 15 and 18; testimony of Geralyn Cote Winslow. p 2.) This hardened, on-site storage, sometimes referred to as a "HOSS" system, has been advanced by CCAM as an alternative for the Millstone ISFSI.

<sup>&</sup>lt;sup>2</sup> A separate HOSS concept, not advanced by any of the parties but described by Mr. Lochbaum of the Union of Concerned Scientists, would not bury the casks but would surround them with a an open berm. (Tr. 1/20/04, pp. 201-205, test. of D. Lochbaum.) This modified HOSS alternative is not before the Council but the Attorney General's Office has no objections in principle to a berm if the Council deems it appropriate.

(*Id.*) The exact form of this alternative has changed somewhat over the course of this proceeding.

As initially described at the Planning & Zoning Commission hearing on August 5, 2003, a representative for CCAM specifically raised the issue "that Dominion hasn't considered burial, although it could be done . . . ." (Planning & Zoning transcript, 8/5/03, p. 100, comments of Atty. Nancy Burton.) Later submissions from CCAM describe a vault-like concrete and earthen structure. (Exhibits, 14-18.) In either event, this alternative is not technically feasible and, more importantly, the Siting Council lacks jurisdiction to consider it.

As an initial matter, any buried or vault-type enclosed system would be problematic at Millstone. At one point, CCAM envisioned a partially or fully underground system which, as the uncontroverted evidence shows, it would require a structure that would be partially below sea level close to open water. (Tr. 12/15/03, pp 169-171, test. of R. Grubb.) In this case, such a system would require pumps and other machinery that would transform a passive system into a functionally active system. (*Id.*) More importantly, a covered earthen or concrete structure as described by CCAM in its exhibits would prevent passive air convection from removing the excess heat which is the principle advantage of the dry cask system. (*Id.*) In fact, Dr. David Lochbaum, an expert witness for the Town of Waterford, pointed out that an underground facility "is not a great idea" because it makes it more difficult to remove residual heat and would increase the likelihood of a catastrophic fire. (Tr. 1/20/04, p. 207, test. of D. Lochbaum.)

Further, Conn. Gen. Stat. §22a-137(a) and (c) bar further consideration of this alternative. Specifically, this statute prohibits the burial of nuclear waste unless the planned facility has been approved by the Connecticut legislature. In fact, subsection (e) states that no agency "shall"

approve any such facility unless the General Assembly has approved it. This section is mandatory and can only be read as a prerequisite for Siting Council approval.

CCAM's HOSS was described initially as a "buried," system and later as an enclosed storage system that is fully covered by a gravel or earthen mound. (*See*, CCAM exhibits 15 and 18.) By the common meaning of the word, this is "burial," either by virtue of being belowground or in a vault. The Siting Council, as an administrative agency, is of limited jurisdiction and can only act as permitted by its enabling statutes. The legislature has not approved a HOSS installation at Millstone and, therefore, the Siting Council is barred from approving this proposal.

Currently, therefore, only the DNC proposal is properly before the Siting Council.

Assuming, therefore, that the Council chooses to approve some form of ISFSI at Millstone, the question remains what conditions should be imposed.

## A. Council's Suggested Conditions

As noted in the transcript for the hearing on January 20, 2004, a number of potential conditions were suggested by the Council. (Tr. 1/20/04, p. 58.) These include: 1) approval for the entire security fence buildout, 2) full drainage buildout, 3) approval for a 69 unit concrete pad, 4) approval for 19 initial HSMs, 5) approval for 50 contingent HSMs, and 6) use of the statutory petition process instead of a certificate process for future HSM expansion at the site.

The Attorney General's Office has no objection to the Council's suggested conditions regarding the security fence or drainage work, assuming the drainage work is limited to the 60-70 unit concrete pad design that has been agreed upon between the Town and DNC, because such drainage work will not affect any adjacent wetlands areas. Similarly, the Council's suggested condition 4—approval for an initial 19 HSMs—is acceptable to the Attorney

General's Office, as is condition 6 regarding the use of the petition process for future expansion requirements.

In addition to the above, however, the Attorney General's Office respectfully suggests the following additional conditions, primarily because the uncontroverted testimony shows that there are a number of contingencies that must occur before a need for more than 19 HSMs is established. Therefore, in order to preserve the ability of the state to have meaningful regulatory authority over important issues related to nuclear waste storage, approval for additional HSMs should be conditioned as follows.

### B. Re-licensing

The Applicant has testified that 19 HSMs are needed to maintain full core reserve through 2015. (Tr. 2/19/04, pp. 186, 189, test of S. Scace; *see also*, Applicant's Ex. 3, tab1; tr. 1/7/04, p. 55, 12/15/04, p. 85, test. of D. Weekley.) Beyond this date, the Applicant's pre-filed testimony clearly demonstrates that an 85 HSM sized ISFSI is required if, and only if, both Units 2 and 3 are re-licensed. As it stands, Unit 2's license expires in 2015. (Tr. 1/7/04 p 215, test. of S. Scace.) Unit 3's license expires in 2025. (Tr. 12/15/03, p 82, test. of D. Weekley.) Without license renewal, only 19 HSMs would be needed through 2015. (Tr. 1/20/04, p. 68, test. of S. Scace.) DNC has filed a request for a 20 year license renewal for each plant. (Applicant's Ex. 18.) However, as the Applicant's experts acknowledged, approval of an application for a license renewal is by no means guaranteed. (Tr. 1/7/04, pp. 58-59, test. of D. Weekley.) Consequently, while it is true that several nuclear power stations have been re-licensed, other have not.

Millstone's Unit 1, for example, was not re-licensed and other companies have decided not to re-

license their reactors. For example, New England power stations such as Yankee Rowe, Main Yankee and Indian Point Unit 1 have not been re-licensed.

Consequently, because the need for additional HSMs is predicated upon re-licensing which may or may not occur, there should be no grant of permission to build additional HSMs, unless DNC certifies that it has successfully re-licensed Units 2 or 3.

#### C. Yucca Mountain

The ultimate responsibility for commercial spent fuel lies with the federal government.

Any fuel at any nuclear power station in Connecticut that is eligible to go to Yucca Mountain should do so at the earliest permissible opportunity. Therefore, the Council should not approve additional HSMs, unless DNC certifies that Yucca Mountain is not available.

Related to this concern is the issue of shipment allocation. While the final shipment allocation system has not yet been determined, DOE has previously planned to assign priority for shipment according to a standard schedule and inform licensees of when designated waste may be shipped. (Tr. 12/15/03, pp. 127-130, test. of B. Wakeman, comments of Dr. Wilds.)

Licensees are not prohibited from transferring allocation assignments and receiving allocation for similar waste volumes at a later date. (Tr. 12/15/03, p 130, test. of B. Wakeman.) In addition, licensees are not prohibited from receiving financial consideration for transferring shipment allocations. (Tr. 1/20/04, p. 86, test. of B. Wakeman.)

It is very important to the State that stored waste be transferred to the national repository at the <u>earliest</u> opportunity. The system for shipment allocation that has been previously considered by DOE is based "on oldest fuel first." (Tr. 12/15/03, p 129, test. of B. Wakeman.)

Furthermore, under the 1995 annual capacity report, waste from Millstone Unit 1 was assigned a

high priority for early shipment to Yucca Mountain. (Tr. 1/20/04, p 92, test. of B. Wakeman.) While it is not certain that DOE will ultimately adopt this allocation approach, it is still feasible for the Siting Council to condition approval of the Millstone ISFSI on an agreement by DNC, and its successors and assigns, to agree to remove stored waste to an approved national repository at the earliest legally possible time. Further, the Council could require DNC to agree not to transfer its shipment allocations to other utilities except in order to acquire earlier shipment opportunities.

#### D. Town of Waterford

There can be no doubt that the Town of Waterford bears a unique burden among Connecticut's municipalities in hosting the proposed ISFSI. It only seems appropriate that, before the Siting Council approve any expansion of the site, that DNC inform the Town and permit the Town to offer its comments on the plan. Similarly, the Attorney General's Office would need to be notified in order to obtain its comments. Use of the Council's petition process would effectively accomplish this.

#### E. Spent Fuel Canisters

It is clear from the testimony that the steel fuel storage canister is perhaps the most vital element of a safe ISFSI installation. DNC has introduced evidence that the canister proposed for the Millstone ISFSI, the NUHOMS 32PT, is fully licensed and has met all relevant safety requirements of the NRC. However, testimony was also introduced that dry cask technology is relatively new (approx. 18 to 20 years old) (tr. 1/7/04 p. 74, test. of B. Wakeman) and that manufacturers are continuing to improve on cask design. (Tr. 12/15/03, p. 40 test. of R. Grubb, tr 1/7/04, p. 43, test. of B. Wakeman.) In fact, one of DNC's experts noted that the company has

adopted new technology canisters when these became available at the North Anna and Surry ISFSIs. (Tr. 1/7/04 pp 67-68, test. of B. Wakeman ("We've done that three times at Surry.")) However, there was also testimony that even though manufacturers may develop a superior canister design, the NRC may not require the use of such a design if older models are deemed good enough. (Tr. 12/15/03, pp. 113-114, test. of S. Scace.)

Consequently, the Council should require, as a condition of approval of the ISFSI, that DNC agree to use the best available and most current NRC licensed technology that is compatible with its operations at Millstone when ordering casks.<sup>3</sup>

#### F. Unit 1 Waste

As DNC has noted, the oldest waste at Millstone is from the no longer operating Unit 1 reactor. (Tr. 12/15/03, p. 109, test. of S. Scace.) All Unit 1 waste is more than five years old and can be moved into dry cask. (Tr. 12/15/03, pp. 109-110, test. of S. Scace.) Yet the first phase of DNC's proposed plan does not mention moving any of the Unit 1 fuel into the ISFSI. As a condition of approval, DNC should submit to the Siting Council a comprehensive management plan for the waste at Unit 1.

#### H. Storage of Millstone Fuel Only.

All parties have acknowledged the importance of using the proposed ISFSI only for fuel produced from Millstone. DNC has expressly agreed to this condition and the Siting Council should include it as an express condition. (Tr. 1/20/04, p. 44 test. of B. Wakeman.)

<sup>&</sup>lt;sup>3</sup> In this regard, there was evidence that the NRC may adopt new regulations to improve the safety of dry cask systems with regard to terrorist threats, either through a new cask design or a retro-fit to older casks. (Tr. 1/20/04, p. 175 test. of D. Lochbaum.) If so, if the choice is available, DNC should be required to employ the new cask design rather than purchase older casks and retrofit them.

### **CONCLUSION**

For the foregoing reasons, the Attorney General respectfully requests that should this Council grant approval to Dominion to build the ISFSI, any such approval should be conditioned as described above.

Respectfully submitted,

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### **CERTIFICATION**

I hereby certify that a copy of the foregoing was faxed or mailed, first class postage

prepaid or provided in hand, this 22<sup>nd</sup> day of March, 2004 to:

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