

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

IN RE: : **DOCKET NO. 265**

**PROPOSAL OF DOMINION NUCLEAR :
CONNECTICUT, INC. TO MODIFY THE :
EXISTING MILLSTONE [NUCLEAR] :
POWER STATION TO ESTABLISH :
AN INDEPENDENT SPENT FUEL :
STORAGE INSTALLATION (DRY :
STORAGE SYSTEM) ON PROPERTY :
LOCATED OFF ROPE FERRY ROAD :
IN THE TOWN OF WATERFORD, :
CONNECTICUT :** **JANUARY 20, 2004**

TESTIMONY OF CLARENCE O. REYNOLDS

1. Please state your name and your status in these proceedings.

My name is Clarence O. Reynolds. I have been designated a party in these proceedings. I present this testimony in my individual capacity and as a member of the Connecticut Coalition Against Millstone, also a party.

2. Please state the purpose of your testimony.

The purpose of my testimony is twofold: to provide evidence that the Dominion application fails to meet the statutory requirement of "public need" and to present evidence why the application should be denied without prejudice to submission of a complete application.

3. Please state your work background.

I was employed as a skilled mechanic at the Millstone Nuclear Power Station by its former owner, Northeast Nuclear Energy Company ("NNECO"), from 1980 until 1994, when I was unlawfully terminated as a whistleblower for raising health and safety concerns which were found to have merit. My experience in the refueling operations of Millstone Unit 1 enabled other whistleblowers, including George Galatis and others, to go public with allegations that NNECO recklessly violated its federal license, leading to the unprecedented two-year shutdown of the three-reactor nuclear facility in 1996 in a scandal that rocked the nuclear industry.

4. What were some of the consequences of the 1996 shutdown?

All three reactors remained shut down for two years. During that two-year period, the state suffered no brownouts or blackouts. NNECO decided to permanently retire Unit 1. Unit 2 was determined to be so problem-plagued that the Department of Public Utility Control declared it no longer “used and useful” and DPUC removed it from the rate base in 1998. When NNECO attempted to restart Unit 2 in 1999, a Superior Court judge granted a temporary restraining order that kept Unit 2 shut down for a week to avoid harm to the indigenous Niantic winter flounder population which has been decimated by the intake activities of the Millstone cooling system. (The case was entitled Fish Unlimited v. Northeast Utilities.) Unit 3 was not allowed to restart until after NNECO poured millions of dollars into upgrades and reconfiguration. That NNECO operated the Millstone reactors at variance with its license and maintained poor recordkeeping continue to plague the plant. For example, a Dominion representative testified on January 7, 2004 in these proceedings that subsurface excavation was undertaken in the area of the proposed ISFSI because Dominion was not prepared to accept NNECO’s documentation of the location of underground utilities.

5. Are you familiar with other operational issues concerning Unit 2?

Yes. Millstone Unit 2 was one of the few operating reactors in the nation to suffer an operational event during the Y-2000 (“Y-2K”) New Year’s turnover involving its computer system, according to reports filed with the U.S. Nuclear Regulatory Commission (“NRC”).

Millstone Unit 2 has been plagued by unplanned shutdowns (“scrams”) during its operational history. According to Dominion’s own reckoning (See CCAM Exhibit I), Unit 2 has suffered 122 *unplanned* outages since going online in 1975, on an average of one every three months. This does not include the planned refueling outages which have kept the reactor shut down for 1,481 days, or 4.6 *years* (13.6 per cent) of its operational life. Many of the unplanned shutdowns – which typically entail dropping from 100 per cent to zero power within a fraction of a second, causing enormous changes to heat and pressure and leading to metal fatigue and other hazards - have occurred repeatedly in malfunctioning systems. This was the case in March of 2003 when charging pumps malfunctioned and radiation was released into the environment. (See CCAM Exhibit 2.)

Millstone Unit 2 was the subject of a federal criminal investigation that led to a \$12 million fine in 1998 after a chemistry technician and nuclear whistleblower, James Plumb, exposed the practices of illegal discharging of toxic chemicals – including hydrazine, a particularly toxic carcinogen – into the Long Island Sound in violation of the Millstone Clean Water Act discharge permit. The corporation entered a guilty plea in 1998 in the U.S. District Court. Unit 2 is presently discharging hydrazine in terms forbidden by the Clean Water Act permit by virtue of “emergency authorizations” DEP Commissioner Arthur J. Rocque, Jr. has

routinely issued, purportedly pursuant to Connecticut General Statutes §22a-6k, for indefinite terms since the guilty plea was entered. (Please see CCAM Exhibit 3, an internal DEP document bearing Commissioner Rocque's handwriting denoting his approval of renewal of such an "emergency authorization" despite his admission as follows: "I hate these things. Statutes are very limited in what the[y] define as emergency. Continuing emergency is not even contemplated.")

Millstone Unit 2 suffers from weak areas which may develop cracks in its reactor vessel head, a condition identified before and during its October 2003 refueling outage. A similar condition in the case of the Davis-Besse nuclear reactor in Ohio, has led to severe corrosion and very dangerous conditions which could lead to a catastrophic meltdown. (See CCAM Exhibit 5.) Yet, Dominion has been permitted by the NRC to operate with the unsafe condition until the next scheduled refueling outage in 2005. (See CCAM Exhibit 6.) Dominion has requested the NRC to withhold records of this problem from the public. (See CCAM Exhibit 7.)

6. Do you have any other concerns particularly related to Dominion Unit 2?

Yes. Dominion has recently applied to the NRC for a license amendment that, if granted, would eliminate a requirement that it maintain the ability to mechanically close the door to containment during a fuel handling accident. Dominion has requested permission to substitute a requirement that it assign an employee to shut the door in the event of a fuel handling accident. However, at the same time, Dominion's license amendment application requests that it be excused from posting an employee to shut the door – and thereby activate a barrier to the potential release of high levels of radioactivity to the environment – if the radiation levels are so high as to expose the worker to an impermissible dose of radiation. My understanding is that the NRC approved the application and CCAM has appealed from such approval to the U.S. Court of Appeals.

7. How does this license amendment application relate to Dominion's plans to build an ISFSI?

I draw two conclusions: first, it illustrates Dominion's drive for cost-cutting at the expense of the public health and safety, and, second, it illustrates the NRC's continuing failure to adequately protect the public health and safety. NRC has demonstrated its historical failure to safeguard the public in the matter of the "disappearance" of two highly radioactive spent fuel rods from the Unit 1 spent fuel pool, despite the presence onsite of full-time NRC inspectors during the 20-year period during which NNECO has stated its inability to account for the missing rods.

The NRC will not conduct a public hearing on this proposal and it will not provide an opportunity for public comment or challenge. The Siting Council

should not rely on the NRC to adequately safeguard the public and Millstone workers.

8. What is your understanding of the NRC's oversight of the ISFSI proposal?

Under a "general license" application, the NRC has given a conceptual approval of the ISFSI design without regard to site conditions, nor will it consider issues of site conditions under its regulations.

10. Should this be a matter of concern to the Siting Council and, if so, what should the Siting Council do?

Yes. The Siting Council should require Dominion to demonstrate to it that the proposed ISFSI has been designed *for the site*.

9. To what extent has Dominion been required to demonstrate to the NRC that its ISFSI can withstand a terrorist attack and should this be a matter of concern for the Siting Council?

Officially, the NRC does not regard a terrorist attack as a credible threat and therefore has not required Dominion to demonstrate to it that its proposed ISFSI can withstand a terrorist attack. Recently, the federal Office of Homeland Security has identified Millstone as a high-risk terrorist target. Dominion's application fails to demonstrate that the ISFSI at the proposed site is suitably protected against acts of sabotage. Thus, Dominion should be required to demonstrate, for example, the feasibility of a "hardened" design (See Testimony of GERALYN COTE WINSLOW) as well as the feasibility of subsurface storage.

10. How does the limited review by the NRC impact the Siting Council consideration of the application?

The limited review by the NRC lends urgency to the level of scrupulous review the Siting Council should give the application in order to adequately protect the public health and safety.

11. In your view, how should the Siting Council decide the application?

The Siting Council should deny the application without prejudice. The application is incomplete. It fails to adequately address the following:

a. Public need

The application maintains the ISFSI is needed in order to provide nuclear waste storage so that it can continue to operate Unit 2 beyond the year 2005 and Unit 3 in the longer term. However, Dominion has demonstrated that it possesses sufficient storage capacity to continue to operate Unit 3 for another decade. The

application fails to address the issues of harm to the public from continuous radiation releases to the air and water during routine Millstone operations, the cumulative effect of radiation exposure to the population and workers and the fact that Millstone lacks valid Clean Water Act authorization. These facts should be considered by the Siting Council in its evaluation of whether there is a “public need” for the ISFSI. The application fails to address the fact that the electric needs of the state have been sufficiently met with completion of new electric generators. (See CCAM Exhibits 8 and 9.)

b. Suitability for the Site

The application fails to sufficiently address the suitability of the site for the ISFSI as designed. Unlike Dominion’s Surry and North Anna nuclear facilities in Virginia, the Millstone site is located on a comparatively small site close to dense residential development and schools and close to Amtrak’s Northeast Corridor rail bed. The application does not address the alternative of shipping the waste to the Surry facility. The application does not address the alternative of subsurface storage. The application does not address the cumulative impact of radiation releases to the environment during routine “passive” operation nor thermal impacts. The application does not address the desirability of separating the canisters by greater distances to diminish their potential as a terrorist threat.

12. Do you or the Connecticut Coalition Against Millstone oppose construction of a dry storage facility as an alternative to wet pool storage?

No, but with qualifications. Because the Millstone Unit 1 spent fuel pool is elevated several stories above ground and inadequately shielded on three sides, it is the most vulnerable of the three pools to an act of sabotage. Dominion’s testimony in these proceedings acknowledges degrading conditions in the Unit 1 spent fuel pool structure which will continue to worsen over time. In my view, transfer of the Unit 1 spent fuel to an appropriately designed dry storage facility is a matter of paramount concern.

With regard to Unit 2, its continued operation is a hazard to the public. The Siting Council would mock the public health and safety were it to approve an ISFSI for the purpose of allowing Unit 2 to remain in operation. As a condition to approval of an ISFSI for Unit 2 spent fuel, Dominion should be required to shut Unit 2 down permanently prior to the next scheduled refueling outage.

With regard to Unit 3, its operations, too, should be phased out because of its continuing security threat, environmental damage and harm to the public health and safety from routine radiation and toxic emissions to the air and water. Dominion should be invited to resubmit an application for dry storage of Unit 3 spent fuel which addresses the concerns raised. There is no reason that the Siting Council should not impose conditions similar to those proposed by California public officials regarding the Diablo Canyon nuclear plant in San Luis Obispo. (See CCAM Exhibit)

13. What is your view with regard to the prospect of construction of the proposed Yucca Mountain facility?

Yucca Mountain is no panacea. If it is built, it will only encourage the production of more long-lived radioactive waste which is incredibly dangerous. It is my understanding that even if Yucca Mountain facility were to be built as now planned, it would lack storage capacity to accommodate spent fuel created at Millstone beyond the current license terms. In testimony before the U.S. Court of Appeals in Washington DC last week, attorneys for the State of Nevada argued that the waste will become its most dangerous in 300,000 years, although the site is supposedly being designed to store the waste safely for only 10,000 years. Even the Department of Energy has recognized the risk of a catastrophic criticality accident at Yucca Mountain. (See CCAM Exhibit 11.) The U.S. Department of Transportation has acknowledged the likelihood of accidents in shipment of the estimated 40,000 metric tons of irradiated nuclear fuel rods presently stored at reactor sites across the nation and containing in excess of 30,600,000,000 curies of radiation. (See CCAM Exhibits 12, 13.) (As a point of comparison, the 1986 Chernobyl accident is said to have released 40 per cent of the reactor core's 6 million curies of cesium 137 into the atmosphere. A typical spent fuel pond holds more cesium 137 than was deposited in all atmospheric nuclear weapons tests in the Northern Hemisphere combined. (See CCAM Exhibit 14.)

Given all these constraints, I believe the Siting Council should proceed very cautiously and deliberately with the present application because of the likelihood that the Town of Waterford will host a nuclear waste dump – in wet or dry storage or both - for a very long time indeed.

14. Does this conclude your testimony?

Yes. Thank you for the opportunity to provide testimony on these proceedings.

Clarence O. Reynolds

STATE OF CONNECTICUT

ss:

COUNTY OF

Sworn to and subscribed before me this day of January, 2004.

Commissioner of the Superior Court/Notary Public

CERTIFICATION

This is to certify that a copy of the foregoing was hand-delivered or mailed on January 20, 2004 to the following via U.S. Mail, postage pre-paid:

Robert L. Marconi, Esq.
Assistant Attorney General
Ten Franklin Square
New Britain CT 06051

Kenneth C. Baldwin, Esq.
Robinson & Cole, LLP
280 Trumbull Street
Hartford CT 06103

Lillian M. Cuoco, Esq.
Dominion Resources Services, Inc
Millstone Nuclear Power Station
Rope Ferry Road
Waterford CT 06385

Robert A. Avena, Esq.
Kepple, Morgan & Avena, P.C.
Box 3A Anguilla Park
20 South Anguilla Road
Pawcatuck CT 06379

Mark R. Sussman, Esq.
Murtha Cullina LLP
CityPlace I, 29th Floor
185 Asylum Street
Hartford CT 06103-3469

James S. Butler, Esq.
Southeastern Connecticut
Council of Governments
5 Connecticut Avenue
Norwich CT 06360

Robert D. Snook, Esq.
Assistant Attorney General
55 Elm Street
Hartford CT 06141-0120
