

Statement before

Transportation and Storage Subcommittee
Blue Ribbon Commission on America's Nuclear Future

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August 10, 2010

Chairman Meserve and distinguished members of the Commission, my name is Wayne A. Norton and I am the President and CEO of Connecticut Yankee and Yankee Rowe and Chief Nuclear Officer of Maine Yankee (“the Yankee companies”). These three companies have undertaken the decommissioning and decontamination of three civilian nuclear power plants that during their operating lifetimes generated almost 275 billion kilowatts of non-emitting electricity for the consumers of New England. I also serve as the Chairman of the Decommissioning Plant Coalition (DPC)¹, and this statement is given in both my capacity with the Yankee companies and on behalf of the Coalition.

We would like to thank you for the invitation to speak with you about the important issues you have been asked to investigate by the President and the Secretary of Energy, and in particular the question posed for the work of this Subcommittee – “Should the US change the way in which it is storing used nuclear fuel and high level waste while one or more final disposal locations are established?” We appreciate this opportunity to open an on-going dialogue with the Commission as it carries out its mandate.

Background

When the Nuclear Waste Policy Act was enacted in 1982, the member companies who participate in the DPC were all actively operating their reactors for the production of electricity. As is well known, at that time the government promised to begin accepting used nuclear fuel from our sites, beginning in 1998, at a federal storage or repository facility constructed with the proceeds of a fee imposed on each megawatt hour of that electric energy. The fees collected were to be deposited in the federal Nuclear Waste Fund (NWF), which has to date accumulated more than \$34 billion in payments, interest and so-called “one-time fee” obligations; participants in the DPC have contributed over \$700 million of that amount, fully complying with the contractual obligations that resulted from the Act.

¹ The DPC was formed in 2001 to ensure a focus by policymakers on issues unique to single-unit commercial nuclear power plants undergoing decommissioning and decontamination. Members and participants have included the owners of the following reactors: Big Rock Point (MI), Haddam Neck (CT), LaCrosse (WI), Maine Yankee (ME), Rancho Seco (CA) and Yankee Rowe (MA).

The single-unit reactors operated by DPC participants were among the first to commence commercial operation in the United States and, during the 10-year period from the mid-80s to the mid-90s, corporate-specific considerations led to our individual decisions to permanently cease such operations. Permanently shutdown plants that are not represented in the DPC mostly fit this pattern as well. As the Commission has learned in previous meetings, the total amount of used fuel stored at all permanently shutdown reactors stands slightly in excess of 3,500 MTU. In addition, there is a relatively small amount (50-100 tons) of Greater-Than Class C (GTCC) material at these sites awaiting geologic disposal².

As detailed in information provided for the tour of the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) that preceded your meeting today, the Maine Yankee plant last operated in late 1996, decommissioning planning began in early 1997, commodity removal began in 1999 and the Nuclear Regulatory Commission (NRC) certified that decommissioning of the reactor was complete in October of 2005. At present, our ISFSI contains 64 transportable storage canisters, originally licensed for 20-years of storage; 60 of those canisters contain used nuclear fuel and 4 contain GTCC. We have appended to this statement, for inclusion in the record, the information provided for the ISFSI tour, as well as information regarding the status of decommissioning and used fuel management at the other reactor sites owned by participants in the DPC. We would be pleased to provide additional site-specific information that you believe might aid your inquiry.

The bottom line of our collective experience is that the decommissioning regime overseen by the NRC is reasonable and that the used fuel and high-level radioactive material can be stored safely and securely for some temporary period of time at the former reactor sites. The question of course, is for how long and at what cost.

The Costs of On-Site Storage

There are several costs associated with the on-site storage of used fuel and other high-level material, some of which particularly impact single-unit sites. Among them, are:

- the costs associated with the partial breach of the government's obligation; and
- the cost to local and state governments resulting from both the commitment of resources necessary to play an active and appropriate role in the oversight of continued storage activities and the revenues or other public benefits that are foregone from the lack of full and open access to the properties.

A third, harder to measure cost, arises from the reduced public and stakeholder confidence that government policy can be consistently sustained and effectively implemented in this arena, a confidence necessary for the multi-generational energy decisions before us. We discuss these three issues briefly.

² By way of comparison, had the Department of Energy timely met its statutory and contractual obligations, it would have already moved over 25,000 MTU of used fuel and be continuing to move an additional 3,000 MTU per year, allowing it to have cleared out the complete inventory from the permanently shut down reactor sites.

During the past decade and a half, as each company pursued decommissioning strategies consistent with the regulations of the NRC, it became apparent that the Department of Energy (DOE) was not going to meet the obligations imposed on it by federal law and its contracts, and we have been forced to sue the DOE for its failure. This litigation has been complex, time consuming, and resource intensive. The government's liability for breach of these contracts is well established and the lawsuits will determine the extent of the damages incurred. Initial judgments for industry plaintiffs, some now on remand, indicate that damages could run into the hundreds of millions of dollars over the next few years just for DPC participants, judgments that will likely be satisfied out of the permanent appropriations account known as the Judgment Fund.

We would be happy to provide the Commission with additional details regarding the history of our litigation, but for purposes of today's inquiry, we think it sufficient to note that for every year that the government delays in fulfilling its obligations to remove our fuel, it will be required to repay us millions of dollars for our annual costs for the safeguarding and storage of that material that should have been removed, costs that bring us no closer to moving the used fuel and other material at these sites and truly completing the work of decommissioning³. Like Maine Yankee, many DPC participants and the owners of other permanently shutdown plants would be prepared to leave the nuclear business and release or otherwise return our sites for other beneficial uses, but for the fact that we are still NRC-regulated licensees responsible for the used fuel and GTCC⁴ material that the federal government was supposed to begin accepting for offsite management and disposal 12 years ago.

As the Commission will no doubt hear from many stakeholders dealing with shutdown plant issues, the removal of the used fuel and other material at our sites can have a positive impact, given that neither the oversight resources required nor the "deferred" benefits that would flow from full and unrestricted access to the sites is insubstantial. Speaking for the moment as a representative of Maine Yankee, when the day comes that the spent fuel and other waste material is removed and the site is freed for other uses, we look forward to working with the Town of Wiscasset and other stakeholders in supporting the highest and best use of the Bailey Point site. The community has been a neighbor to our nuclear facilities since 1972 and we intend to work with them to help achieve a smooth transition to potential future uses of the site.

As mentioned, the third category of costs is more difficult to measure, but we believe that a full discussion of the Nation's future energy choices is inevitably affected by the public's lack of confidence in the government's performance of, and commitment to, a sustained program for the

³ While the costs of storing and securing this material are currently well known, regulatory requirements are always subject to escalation as the staff at the NRC will review from time-to-time materials aging factors and its own security assessments and requirements. The Government Accountability Office conducted a review of on-site storage costs as part of a comparative analysis requested by the Congress. That report, "NUCLEAR WASTE MANAGEMENT: Key Attributes, Challenges, and Costs of the Yucca Mountain Repository and Two Potential Alternatives", U.S. Government Accountability Office (GAO-10-48) November 2009, might provide additional useful information to the Commission.

⁴ While the Department continues to debate during litigation its liability for failure to remove GTCC, NRC regulations require geologic disposal for GTCC material. While those regulations also allow DOE to propose an alternative that provides the same level of protection, DOE has never proposed an alternative and a resolution of this issue stands as an obstacle to productive discussions over its ultimate removal from shut down sites.

management of used fuel and other high level waste material. We believe that that confidence can only be enhanced through a program that removes the material from these permanently shutdown sites at the earliest time possible. Failure to enhance that confidence clearly has a cost.

There are a number of organizations that have examined the issues confronting permanently shutdown plants in light of the current state of the government's implementation of the 1982 Nuclear Waste Policy Act. From 2007 to present, no fewer than 11 responsible organizations have noted the unique circumstances of permanently shut down plants and/or endorsed the prompt need to plan the removal of spent fuel and other legacy waste material from decommissioned sites, including: the American Physical Society, the National Commission on Energy Policy, The Keystone Center, The New England Council, the National Association of Regulatory Utility Commissioners, The Nuclear Waste Strategy Coalition, the National Conference of State Legislatures, the National Research Council, the Government Accountability Office and the New England Governors' Conference. Excerpts from these reports are appended to our statement. The common premise of these recommendations was both the equities inherent in the fulfillment of contractual responsibilities and the need to bolster public confidence by demonstrating the government's commitment and capability in spent fuel and high-level waste management.⁵

The Subcommittee's Question: "Should the US change the way in which it is storing used nuclear fuel and high level waste while one or more final disposal locations are established?"

As might be clear from our statement to this point, we believe that the short answer to the question posed for the work of this Subcommittee is, "yes". And we intend to fully support the work of the Commission as it fashions this new policy. What we hope is not lost in this forward looking thinking is the dilemma caused for our localities by the additional delay in government performance of its current obligations that is an inevitable result of the new policy process that has been initiated.

We believe the Commission, especially in light of the background of its Members, fully appreciates the enormous challenges inherent in the development of local, state and regional stakeholder support for the siting of used fuel management and other fuel cycle facilities. Hopefully you are hearing about the success stories as well as the well-chronicled failures; we hope that our experience is seen by you as the success story we believe it to be. This is not an easy task, and the development of trust and support necessary to site a fuel management facility of any kind with local and state support requires an honest and open dialogue that can take years to fully develop.

We also believe that the Commission is likely hearing about the time frames required to demonstrate the economics of various recycling technologies, and their impact on the entirety of the nuclear fuel cycle, including the eventual disposal waste form and the variety of media that might safely isolate that waste from the environment. The point is that these considerations take

⁵ In addition, a December 2008 report to Congress by the Department of Energy's Office of Radioactive Waste Management (DOE/RW-0596) found that a demonstration of interim storage of used nuclear fuel from decommissioned nuclear power reactor sites "could prove beneficial should Yucca Mountain experience delays due to licensing, litigation, lack of funding, or other causes."

time, raising the costs of storage at our sites to unnecessary levels and requiring the resolution of many issues involving policy considerations that have little or no bearing on our situation.

Recommendations

For these and other reasons, we believe that you should look favorably on the integrated approach recommended to you by the Nuclear Energy Institute that envisions a combination of on-site management at operating sites and the adoption of centralized interim storage as a strategic element of a used fuel management system while recognizing that current and advanced recycling technologies will not provide the sole solution for used fuel management and that the U.S. will still require a geologic disposal option at some point in the future. Such a management system, if properly implemented, can provide maximum benefit to both permanently shutdown and operating plants, as well as give additional confidence to those contemplating the construction of new nuclear energy plants.

Specifically, we believe that the Commission should recommend, as one strategic element of that integrated strategy, the development of one or more centralized storage facilities and that those facilities be utilized to accept, on a priority basis, the complete inventory of used fuel and GTCC currently stored at permanently shutdown single-unit facilities. The concept of shutdown plant priority is not novel to the government; the standard contract developed by DOE pursuant to existing law specifies that “priority may be accorded any SNF and/or HLW removed from a civilian nuclear power reactor that has reached the end of its useful life or has been shut down permanently for whatever reason.”⁶

These facilities should be licensed by the NRC and take advantage of previous efforts, as appropriate⁷. Ideally, the facilities would be developed at locations proximate to other fuel cycle facilities that might be developed as a result of other Commission recommendations or near well-established transportation routes to those facilities. There are a number of existing locations, for example, that are along established transportation routes where local and state governments are experienced with nuclear operations and where those operations will be active for years to come. Regional equities might also be a calculation in your recommendation.

While we believe that it is ultimately the federal government’s responsibility to honor the obligations of its existing contracts, we understand that facility siting is an extremely difficult issue. For that reason, we believe there is merit in examining the role that voluntary siting can play in resolving stakeholder issues, particularly as relates to the siting of centralized interim storage facilities. It is likely that voluntary siting efforts will require the payment of benefits for those localities and states that express interest. These benefits should be increased over time as these governmental units move from expressions of interest to an exploration of technical feasibility to licensing, construction and operation of the facility. Such benefits, to be meaningful, cannot be subject to the discretion of future Congresses and Administrations.

⁶ Article VI.B.1(b), codified at 10 CFR 961.

⁷ We note, for example that the licensing of the Private Fuel Storage facility in Utah has undoubtedly provided “lessons learned” with respect to the licensing and permitting processes of the Nuclear Regulatory Commission and other federal agencies examining centralized storage facilities as well as necessary stakeholder involvement in siting. A recent federal court ruling has remanded certain permitting issues to the Department of Interior.

Along with the development of a centralized storage capacity, attention needs to be refocused on the many issues related to transportation. The nation's efforts regarding the infrastructure necessary to transport civilian HLW and GTCC from existing nuclear sites has been characterized by best-intentions and executed in fits and starts. While it might make little sense to complete detailed inventories and plans for all 72 existing sites now – as conditions and factors may change until power operations are complete at many sites – it makes eminent sense to conduct several activities at the single-unit sites of permanently shutdown plants.

As with facility siting, the first priority would be constructive and enduring engagement with state and local elected officials responsible for transportation, security, safety, and emergency response activities. Specific activities that should be conducted could include:

- a compilation of existing routes that would be used to transport the material from its existing storage location to appropriate railheads, waterways and/or Interstate highways;
- the identification of infrastructure improvements that are needed along those routes to gain access to them;
- a compilation of the roles each responsible state and local entity is currently expected to play and an identification of resources and/or information state and local officials and federal and private entities would need to accomplish the transportation activity; and
- other matters identified by transportation experts as reasonably necessary.

Transportation activities should be informed by the successful shipments of defense material that have been conducted in this country and include the constructive involvement of non-governmental stakeholders and interest groups.

Two important matters related to these recommendations concern the governance of this new enterprise and the source of funds to effectively accomplish the mission.

We note with interest the chorus of recommendations concerning the establishment of a private or quasi-public corporation to take over the Department's non-policy-setting activities regarding spent fuel management. This is an interesting concept, but requires careful thought in addressing issues such as the form and reliability of mutual performance guarantees as between the government and the new corporate entity and the preservation of existing legal protections for contract holders, including cost protections for permanently shut down facilities. Whatever "corporate form" might ultimately be a part of the Commission's recommendations, we believe that key attributes of that organization should be openness, efficiency, and the ability to enter into binding agreements.

As to the funding issue, we share the frustration of state regulatory authorities and others over the fact that for significant portions of the immediate past, activities implementing the 1982 NWPA have been hamstrung by the federal government's budgeting practices. Many of the activities we would expect to be undertaken, were our recommendations to be adopted, must simply be shielded from those processes.

We know that the best source of such funds is the Nuclear Waste Fund, and we support the use of the Fund for activities so designated. We also realize that taking the fund “off-budget” has proven to be an enormously difficult legislative change to effect, although it is the most straightforward approach to solving resource issues. Should the Commission be looking at other options, we propose two alternatives for further examination that might provide other means of achieving the same objective. In the first case, Congress could set a date when receipts into the fund and its accumulated interest will not be used for budgeting purposes. That date can be five or ten years hence, given current budgeting mechanics. We also note that funds are committed for the Navy’s biggest fleet projects in advance and assure the flow of funds for the duration of the construction of new carriers and submarines. Congress could similarly adopt some form of assured funding (from the NWF) so that the flow of needed funds is available for the lives of designated projects.

Conclusion

In conclusion, we again express our gratitude to the Members of the Commission for the effort to visit our facility and learn more about the special circumstances confronting permanently shut down nuclear plants. We look forward to continuing our dialogue and have every confidence that your invaluable work will lead the development of a sustainable consensus on used fuel storage that both addresses legacy issues and provides the necessary underpinning to assure the deployment of new reactors as the Nation addresses its future energy and environmental needs.

I would be pleased to answer any questions you may have.