# MAINE STATE LEGISLATURE



Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

John E. Baldacci, Governor  Brenda M. Harvey, Commissioner

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September 29, 2010

To: Honorable Ms. Elizabeth Mitchell, President of the Senate
Honorable Ms. Hannah Pingree, Speaker of the House

Subject: State Nuclear Safety Inspector Office's August 2010 Monthly Report to the Maine Legislature

As part of the State's long standing oversight of Maine Yankee's nuclear activities, legislation was enacted in the second regular session of the 123rd and signed by Governor John Baldacci requiring that the State Nuclear Safety Inspector prepare a monthly report on the oversight activities performed at the Maine Yankee Independent Spent Fuel Storage Installation facility located in Wiscasset, Maine.

Enclosed please find the Inspector's August 2010 monthly activities report. The highlights of this month's report includes the four Nuclear Regulatory Commissioners modified approvals of the Chair's July 22nd Waste Confidence Rule, which allows for the storage of spent nuclear fuel on-site for 120 years while directing the staff to prepare an update to the Rule for the storage of the used fuel up to potentially 500 years, a sampling of selected testimonies and correspondence presented at the Blue Ribbon Commission on America's Nuclear Future's Transportation and Storage Subcommittee meeting held in Wiscasset on August 10th, the refusal of two Nuclear Regulatory Commissioners to recuse themselves from the Department of Energy's (DOE) license application proceedings on the Yucca Mountain project, and the release of the first of five Safety Reports from the Nuclear Regulatory Commission on its evaluation of the Yucca Mountain license application.

Please note that this year's reports will not feature the glossary and the historical addendum. However, both the glossary and the addendum are available on the Radiation Control Program's website at http://www.maineradiationcontrol.org under the nuclear safety link. Should you have questions about its content, please feel free to contact me at 207-287-6721, or e-mail me at pat.dostie@maine.gov.

Patrick J. Dostie
State Nuclear Safety Inspector

Enclosure
cc: Ms. Vonna Ordaz, U.S. Nuclear Regulatory Commission
Ms. Nancy McNamara, U.S. Nuclear Regulatory Commission, Region I
Mr. James Connell, Site Vice President, Maine Yankee

Ms. Brenda Harvey, Commissioner, Department of Health and Human Services
Mr. Geoff Green, Deputy Commissioner, Department of Health and Human Services
Ms. Lucky Hollander, Director of Legislative Relations, Department of Health and Human Services
Dr. Dora Mills, Director, Maine Center for Disease Control and Prevention
Mr. Patrick Ende, Senior Policy Advisor, Governor's Office
Mr. Beth Nagusky, Commissioner, Department of Environmental Protection
Mr. Richard Davies, Maine Public Advocate
Lt. Christopher Grotton, Special Services Unit, Maine State Police
Ms. Nancy Beardsley, Director, Division of Environmental Health
Mr. Jay Hyland, PE, Manager, Radiation Control Program

# State Nuclear Safety Inspector Office

# August 2010 Monthly Report to the Legislature

## Introduction

As part of the Department of Health and Human Services' responsibility under Title 22, Maine Revised Statutes Annotated (MRSA) §666 (2), as enacted under Public Law, Chapter 539 in the second regular session of the 123rd Legislature, the foregoing is the monthly report from the State Nuclear Safety Inspector.

The State Inspector's individual activities for the past month are highlighted under certain broad categories, as illustrated below. Since some activities are periodic and on-going, there may be some months when very little will be reported under that category. It is recommended for reviewers to examine previous reports to ensure connectivity with the information presented as it would be cumbersome to continuously repeat prior information in every report. Past reports are available from the Radiation Control Program's web site at the following link: www.maineradiationcontrol.org and by clicking on the nuclear safety link in the left hand margin.

Commencing with the January 2010 report the glossary and the historical perspective addendum will no longer be included in the report. Instead, this information will be available at the Radiation Control Program's website noted above. In some situations the footnotes may include some basic information and will redirect the reviewer to the website.

## Independent Spent Fuel Storage Installation (ISFSI)

During August the general status of the ISFSI was normal. There was one instance of a spurious alarm due to an environmental condition. The alarm was investigated and no further action was warranted.

There were no fire-related impairments in August.

There was one security-related impairment in August. It occurred on August 3rd and involved communication issues. Additional measures were instituted and were still in effect at the end of the month. Since the issues involved safeguards information, they can not be disclosed to the public.

There were fourteen security events logged (SEL). Thirteen of the 14 SEL's logged, were associated with transient issues due to temporary environmental conditions. One SEL was for an Access Control System issue that involved sensitive security information, which is not available for public disclosure.

There were nine condition reports[1] (CRs) for the month of August. Two CRs were written on August 2nd. One was for the brakes sticking on the John Deere tractor and the other was for the Bush Hog attachment being dented from hitting a rock while mowing. The third CR was written on August 3rd on a smoke detector that was found damaged. The cause was unknown. The fourth CR was written on August 4th for an incorrect block being checked on a procedure attachment. Two CRs were written on August 5th. One was for a leak in the power washer and the other was for a testing package missing some forms. A seventh CR was written on August 8th for the DSX computer that was later shown to have functioned as designed. The eight CR was written on August 16th on a procedural issue where a previous attachment was used instead of the current one.

[1] A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Program's website.

The ninth CR was written on August 19th for tracking the security issue with the Access Control System.

*Other ISFSI Related Activities*

On August 2nd the Nuclear Regulatory Commission (NRC) sent a letter to Maine Yankee and other licensees on the revised security rule and its applicability to facilities undergoing decommissioning or in decommissioned status. The letter noted that some of the facilities may be out of compliance with the NRC's current security requirements. Therefore, the NRC is giving Maine Yankee and other licensees 120 days from the date of this letter to demonstrate compliance with the revised security rule or request an exemption from the security requirements that is not applicable to their facility.

On August 12th the Nuclear Regulatory Commission (NRC) sent a letter to Maine Yankee on its March 30th exemption request to extend the deadline from March 31st to December 31st to properly evaluate and implement the new NRC rule for the physical protection of licensed activities in nuclear power reactors against radiological sabotage. The NRC returned Maine Yankee's exemption request and directed Maine Yankee to address the NRC's August 2nd letter requirements.

## Environmental

There was nothing new to report this month in this category.

## Maine Yankee Decommissioning

There was nothing new to report this month in this category.

## Groundwater Monitoring Program

As part of its annual quality assurance oversight of the groundwater monitoring program, the State received seven well samples for analysis from the June groundwater sampling. The water samples were analyzed by the State's Health and Environmental Testing Laboratory and the results received on August 16th. All seven wells had positive indications of Tritium[2], ranging from 227 to 31,300 pCi/L[3]. However, six of the seven positive indications were less than 600 pCi/L. Any well sample that has a Tritium concentration of less than or equal to 600 pCi/L is considered to be at natural background levels. The highest Tritium well is projected to give an annual radiation dose of 0.941 mrem[4] above naturally occurring concentrations. The Tritium in this well has been steadily decreasing since its peak value of 59, 570 pCi/L in March of 2006. It is expected that this well will remain elevated for some time as the water infiltration rates are very low. Consequently, the decrease will be slow and steady.

This quality assurance testing is part of the last radiological testing to be performed at the site under the five year agreement between the State and Maine Yankee. The results from the June sampling and the last annual

[2] Tritium (Hydrogen-3 or H-3) is a special name given to the radioactive form of Hydrogen usually found in nature. All radioactive elements are represented as a combination of their chemical symbol and their mass number. Therefore, Tritium, which is a heavy form of the Hydrogen molecule with one proton and two neutrons in the nucleus of its atom, is abbreviated and represented by its chemical symbol, H, for Hydrogen and 3 for the number of particles in its nucleus, or mass number.

[3] pCi/L is an acronym for a pico-curie per liter, a concentration unit that describes how much radioactivity is present in a particular volume, such as a liter. A "pico" is a scientific prefix for an exponential term that is equivalent to one trillionth (1/1,000,000,000,000).

[4] A mrem or millirem is a measure of how much of the radiation energy was absorbed by the body. For a further explanation, refer to the glossary on the Radiation Program's website.

report will be available this fall.

## Other Newsworthy Items

1. On August 2nd the Nuclear Regulatory Commission issued a public notice on a potential rulemaking for spent nuclear fuel reprocessing facilities. The NRC plans to conduct two public workshops to solicit input from interested parties on major issues associated with the development of a regulatory basis document for the reprocessing facilities. The public is invited to provide written comments on the issues. The first workshop will be held in Rockville, Maryland on September 7-8, with the second held during the week of October 4th in Albuquerque, New Mexico. The focus of the workshops will be on four main areas - reprocessing waste issues, physical protection and materials control, risks, and licensing issues.

2. On August 3rd Utah leaders urged Interior Secretary Ken Salazar to appeal a July 26th ruling from the Tenth Circuit Court of Appeals ordering the Department of Interior (DOI) to re-evaluate its 2006 decisions to deny federal permits for the construction of an interim storage facility already licensed by the Nuclear Regulatory Commission for spent fuel on the Skull Valley Band of Goshute Indians' reservation in Toole County. DOI has 60 days from the ruling to appeal.

3. On August 4th the Nuclear Waste Strategy Coalition held a teleconference update on the statuses of the Yucca Mountain license application with the U.S. Court of Appeals and the Nuclear Regulatory Commission, the petitions from the Nuclear Energy institute and the National Association of Regulatory Utility Commissioners to stop the Nuclear Waste Fund fees, the Blue Ribbon Commission and Subcommittee hearings, the House FY 2010 and 2011 Appropriations activities and the recent ruling from the U.S. Court of Appeals for the 10th Circuit overturning the Department of Interior disapprovals and allow the Goshute Indians of the Skull Valley Band to store spent nuclear fuel on their reservation.

4. On August 6th the Department of Energy issued a letter to follow-up with radioactive waste transportation stakeholders to share highlights from the National Transportation Stakeholders Forum held on May 26th in Chicago. A copy of the letter is attached.

5. On August 9th Nuclear Regulatory Commissioner Svinicki issued her approval in part and disproval in part on the "Final Update of the Commission's Waste Confidence Rule" as recommended by Chairman Jaczko on July 22nd. Commissioner Svinicki's took issue with Chairman Jaczko's terminology "in the foreseeable future" as applied to the regulations and the second finding of the Waste Confidence Rule. Her recommendation was to delete the Chair's terminology and replace it with "when necessary". Commissioner Svinicki also proposed that the on-site storage should be at least 300 years up to 500 or more years. A copy of the her vote is attached.

6. On August 10th Nuclear Regulatory Commissioner Ostendorff issued his approval of the "Final Update of the Commission's Waste Confidence Rule" as modified by his recommendations. Commissioner Ostendorff agreed with Commissioner Svinicki's terminology. A copy of his vote is attached.

7. On August 10th the Blue Ribbon Commission's Transportation and Storage Subcommittee held a national meeting at the Chewonki Foundation in Wiscasset to listen to state and local officials' perspectives on the spent fuel waste stored at the Maine Yankee facility. The meeting also featured a state/regional panel on storage and transportation in the northeast. Several local residents also

expressed their views during the public comment period. To appreciate the various perspectives presented at the meeting, a sampling of selected testimonies and correspondence was provided. Attached are copies of the agenda, testimonies from Marge Kilkelly, Chair of the Maine Yankee Community Advisory Panel (CAP) on Spent Nuclear Fuel Storage and Removal, Wayne Norton, President and CEO of Connecticut Yankee and Yankee Rowe, and Chief Nuclear Officer of Maine Yankee, John Kerry, Director, Governor's Office of Energy Independence and Security, State Senator Deborah Simpson, representing Maine and the National Conference of State Legislatures High Level Waste Working Group, Jay Hyland, Manager of the Maine Radiation Control Program, Lewis Curtis, a member of the CAP, former Director of Boothbay Harbor's Emergency Services and retired Major General of the United States Air Force, Brian O'Connell, Professional Engineer representing the National Association of Regulatory Utility Commissioners, correspondence from Senators Olympia Snowe and Susan Collins, David O'Donnell, Vice-President of the New England Council, and The Lincoln County news report of the proceedings.

8. On August 11th Nuclear Regulatory Commissioners Magwood and Ostendorff both refused to recuse themselves from the motions by the States of Washington and South Carolina, Aiken County, South Carolina, and White Pine County, Nevada to disqualify themselves from the Atomic Safety and Licensing Board's denial of the Department of Energy's (DOE) motion to withdraw its Yucca Mountain application. The motions to recuse were based on their responses at their Senate Confirmation hearing that they would not second guess the DOE's decision to withdraw their license application. Copies of their refusals are attached.

9. On August 13th Nuclear Regulatory Commissioner Apostolakis issued his approval of the "Final Update of the Commission's Waste Confidence Rule" as modified by his recommendations. Commissioner Apostolakis agreed with Commissioner Svinicki on the use of when necessary, but did provide specifics to the regulation by adding "to dispose of commercial high-level waste and spent fuel". A copy of his vote is attached.

10. On August 13th Nuclear Regulatory Commissioner Magwood issued his approval of the "Final Update of the Commission's Waste Confidence Rule" as modified by his recommendations. Commissioner Magwood's modifications agree with Commissioner Apostolakis' revisions. A copy of his vote is attached.

11. On August 17th Nevada's Legislative Committee on High-Level Radioactive Waste met in Las Vegas. The purpose of the meeting was to decide on legislative bill drafts that would be recommended for the full Nevada Legislature to consider. Copies of the agenda and work session document are attached.

12. On August 17th Representative Doc Hastings from the State of Washington sent a letter to the Chair of the Nuclear Regulatory Commission (NRC), Dr. Jaczko, expressing his concerns on the Commission's delay to issue its decision on the NRC's Atomic Safety and Licensing Board's denial of the Department of Energy's motion to withdraw its license application for Yucca Mountain. A copy of the letter is attached.

13. On August 17th the Canadian Broadcasting Association reported that some aboriginal groups in the northern Saskatchewan Province were expressing an interest in storing nuclear waste. The provincial government has not made a decision on whether it would support such a venture. Canada's Nuclear Waste Management Organization (NWMO) is looking for communities to host a national storage facility and reported that the Metis village in Pinehouse visited the agency to gather information. NWMO did state that they have received a formal application to host a nuclear waste storage site in northern Ontario.

14. On August 18th the Secretary to the Nuclear Regulatory Commission responded to Congressman Hastings August 17th letter. A copy of the letter is attached.

15. On August 19th the State of Nevada provided its second update with the Nuclear Regulatory Commission's Atomic Safety and Licensing Board that it did not have any additional names to add to its other witness list.

16. On August 19th the Blue Ribbon Commission's Transportation and Storage Subcommittee held a full meeting in Washington, D.C. that covered current storage practices and obligations, storage as part of an overall waste management strategy, technical and regulatory unknowns, and the relationship between storage and development of disposal facilities. The first presentation from the Electric Power Research Institute (EPRI) provided a status of the spent nuclear fuel inventories at reactor sites through the end of 2009 and projected inventories by the end of this century for three different scenarios. EPRI noted that at the end of 2009 there were nearly 170,000 assemblies in pools and almost 52,000 assemblies in 1200 dry casks throughout the U.S. A presentation at the meeting by Dr. Singer from the University of Illinois at Urbana-Champaign provides some insight for a successful institutional framework for waste strategy. Copies of the agenda and Dr. Singer's presentation are attached.

17. On August 23rd the Nuclear Regulatory Commission (NRC) staff informed the Atomic Safety and Licensing Board that Volume I of its Safety Evaluation Report (SER) on Yucca Mountain was complete and provided the Board with a copy. The first volume of the SER does not address the safety issues associated with the proposed repository, but rather states that the Department of Energy has met the five NRC requirements for the proposed geologic repository at Yucca Mountain. Copies of the letter, the NRC press release, the cover page of Volume I of the NRC report, and the conclusions on the five required NRC elements are attached.

18. On August 24th the State of Nevada filed with the Nuclear Regulatory Commission's Atomic Safety and Licensing Board its third update of no additional witnesses for Phase I discovery on the Yucca Mountain licensing proceedings.

19. On August 26th the legal firm of Haynsworth Sinkler Boyd, P.A., filed with the U.S. Court of Appeals for the D.C. Circuit as counsel representing Aiken County, South Carolina's petition against the Department of Energy's motion to withdraw its license application on the Yucca Mountain Project before the Nuclear Regulatory Commission.

20. On August 27th Inyo County, California filed its second update and certification of no additional witnesses with the Nuclear Regulatory Commission's Atomic Safety and Licensing Board on two of its contentions for Phase I discovery.

21. On August 27th the Nuclear Regulatory Commission (NRC), the Department of Energy, the Department of Justice, and the State of Nevada filed a joint report as mandated on July 28th by the U.S. Court of Appeals for the District of Columbia Circuit on the status of the NRC's license proceedings on the Yucca Mountain application.

22. .On August 27th the Nuclear Regulatory Commission (NRC) staff filed with the NRC's Atomic Safety and Licensing Board certifying that there were no additional witnesses in support or defense of Phase I NEPA contentions.

23. On August 30th Clark County of Nevada filed with the Nuclear Regulatory Commission's Atomic Safety and Licensing Board its certification of no additional other witnesses on its 14 contentions to the Department of Energy's Yucca Mountain license application.

24. On August 30th Clark County of Nevada filed a second certification of no additional other witnesses with the Nuclear Regulatory Commission's Atomic Safety and Licensing Board.

25. On August 30th White Pine County in Nevada filed with the Nuclear Regulatory Commission's Atomic Safety and Licensing Board its notification that it did not identify any additional other witnesses on the Yucca Mountain license proceedings.

26. On August 30th the Joint Timbisha Shoshone Tribal Group's filed with the Nuclear Regulatory Commission's Atomic Safety and Licensing Board its certification of no additional other witnesses on the Yucca Mountain license proceedings.

27. On August 30th-31st the Blue Ribbon Commission's Reactor and Fuel Cycle Technology Subcommittee held a meeting in Washington, D.C. The first day focused on different opportunities in reactor technologies from several different organizations and viewpoints. The second day involved more panel discussions dealing with licensing issues from the Nuclear Regulatory Commission's perspective and the nation's capability readiness from different sectors of the economy. The final panel discussion focused on public safety, environment and local concerns. A copy of the agenda is attached.

**Department of Energy**
Washington, DC 20585

August 6, 2010

Dear Radioactive Waste Transportation Stakeholder:

I am writing to follow-up on the National Transportation Stakeholders Forum (NTSF) meeting that took place on May 26, 2010, in Chicago, IL, as part of a week-long program of activities. On behalf of the Department of Energy's Office of Environmental Management (DOE-EM) and the NTSF Planning Committee, I would like to thank the 170 attendees from State Regional Groups (SRGs), Indian tribes, federal agencies, and other organizations whose participation helped to make the event a great success.

We plan to build on this strong beginning by continuing to offer an annual forum and other opportunities, through webinars, ad hoc working committees and additional means. These communication methods will be used to assist our stakeholders in acquiring useful and timely information about DOE shipping campaigns and related issues, and for providing their questions, concerns and expectations regarding federal radioactive waste transportation policy and practices. This effort is expected to foster enhanced collaboration among the affected parties and help ensure transparency, openness and accountability for DOE's offsite radioactive waste shipping activities.

If you were unable to attend the NTSF meeting, I hope that you will join us next time. Please visit http://www.em.doe.gov/pages/NationalTransportationForum.aspx to find the NTSF Charter and detailed information about the May 26 meeting including the agenda, presentation materials, summary meeting notes and contacts.

A primary goal of the NTSF organizers was to solicit feedback from meeting attendees about the Forum's usefulness and how to improve future meetings along with determining priorities for planning webinars and establishing ad hoc working groups on key issues during the interim. For those purposes we used the Turning Point electronic evaluation system to engage participants during the session to answer a series of questions. Evaluation forms were also handed out for attendees to fill out. These mechanisms provided valuable input for the Planning Committee. The survey results are attached to this letter and can also be found on the NTSF website.

Some of the highlights of responses received from 89 respondents during the Turning Point survey with were as follows:

- More than 90% rated the meeting overall as excellent or very good
- More than 80% rated the Opening Plenary & several sessions very or somewhat useful
- The Risk Communication training was very well received

- 28% did not find the Communicating with States and Tribes Panels satisfactory
- Nearly all respondents supported holding NTSF, SRG and other meetings jointly

Written evaluations summarized from 34 respondents were as follows:

- Nearly all respondents rated the meeting communications, including electronic registration and the information provided as excellent
- Most responses about meeting location and space were also positive but more evenly split between excellent and good
- For future NTSF meetings and networking activities, more people appeared to be interested in continuing the organized nights out rather than attending a reception or networking on their own

In accordance with the NTSF Charter, the Planning Committee has discussed establishing ad hoc working groups to address current and emerging transportation-related issues that were identified at the meeting and affect shipment planning, preparedness, and execution, including intergovernmental consultation and cooperation. We intend for these working groups to be results-oriented with defined objectives, tasks and timelines. Future NTSF meetings will provide opportunities for working groups to engage further through breakout sessions and to report on their progress.

At the May NTSF meeting, participants were asked to identify the most important issues for the hoc working groups to address. The most popular topics selected were:

- Improving communications (e.g., risk communication, revising old National Transportation Program public information products)
- Improving notification of states, tribes, and local governments
- Developing guidance for DOE financial assistance agreements (e.g., Waste Isolation Pilot Plant)
- Improving the Prospective Shipment Report

The Planning Committee anticipates forming two or three working groups over the next few months to begin addressing those issues, and will soon begin recruiting people to serve on the working groups. Please consider joining one or more of the groups.

The Committee will also be planning several webinars over the next year. We have considered the topics rated by the Turning Point survey process. The most popular suggestions were for briefings on Nuclear Regulatory Commission (NRC) rulemakings and licensing issues related to DOE activities, which we will ask the NRC to pursue. We also are planning to conduct webinars to address some of the other highly rated topics such as spent fuel transfers, DOE Transportation Emergency Preparedness Program and TRANSCOM trainings, Greater than Class C Environmental Impact Statement, and other anticipated upcoming DOE policy documents.

The Planning Committee has begun discussing the next NTSF meeting and will be providing more details in the months to come. The Western Governors' Association has volunteered to coordinate the next NTSF, which is being tentatively planned for May 2011. We look forward to continuously improving and building effective relationships with each of you as our transportation stakeholders.

Sincerely,

Stephen C. O'Connor
NTSF Chair
Director, Office of Packaging and Transportation
DOE Office of Environmental Management

Attachment

**Attachment**

Summary of NTSF Meeting Comments

Arrangements
Good publicity was provided for the meeting, and the meeting location, registration, and rooms were more than satisfactory.

Positives:

1. Meeting was well planned and executed.
2. Great range of topics and excellent speakers.
3. Good update on DOE programs; included all DOE transportation activities (not just EM)
4. All state regional groups and many tribes were represented
5. The panel discussion format was very well received.
6. Presentations were broad and provided perspective to new attendees
7. Site tour and risk communication training were excellent

Negatives:

1. Not enough time for general discussion and Q&A after panel discussions, comment cards were not always captured and discussed.
2. Some meeting rooms were too small or too cold.
3. Future meetings need to be more focused on the details of transportation issues
4. Extensive use of acronyms difficult for newcomers

Suggestions:

1. Suggest having regional groups meet separately for half day and together for half day to distill common transportation issues, concerns, and lessons learned
2. Suggest future meeting in smaller city with more reasonable expenses and per diem costs
3. Suggest more and longer breaks for better networking
4. Suggest DOE sites with planned large shipping campaigns should be at the next meeting

# NOTATION VOTE

## RESPONSE SHEET

**TO:** Annette Vietti-Cook, Secretary

**FROM:** COMMISSIONER SVINICKI

**SUBJECT:** SECY-09-0090 – FINAL UPDATE OF THE COMMISSION'S WASTE CONFIDENCE DECISION

**Approved** XX In Part **Disapproved** XX In Part **Abstain** _____

**Not Participating** _____

**COMMENTS:** Below ___ Attached XX None ___

SIGNATURE

08/9/10

DATE

**Entered on "STARS"** Yes √ No ___

**Supplemental Comments of Commissioner Svinicki on SECY-09-0090**
**Final Update of the Commission's Waste Confidence Decision**

On September 24, 2009, I cast my original vote on SECY-09-0090, the draft final update of the Commission's waste confidence findings and rule. In that vote, I disapproved the publication in the *Federal Register* of the draft final update of the waste confidence decision and final rule, as proposed by the staff. Rather, I proposed that the decision and rule be renoticed for limited comment regarding the Administration's announced policy decision to re-examine the Nation's path forward on high-level radioactive waste disposal.

In the intervening year since I originally deliberated on this issue and cast my vote, the Administration has acted on its announcements, commissioned a panel of experts to formulate policy recommendations, and filed a motion to withdraw the application for licensing of a deep geologic repository at Yucca Mountain. In response to these and other developments, many of those speaking on behalf of interested and impacted stakeholders have made their views known. I have followed this public discourse closely and have deliberated further on this matter. I now supplement my original vote on SECY-09-0090 to support the following outcome.

I approve a final rule revising the generic determination on the environmental impacts of storage of spent fuel at, or away from, reactor sites after the expiration of reactor licenses with the following revisions to 10 CFR § 51.23 and Waste Confidence Findings (2) and (4) to read as follows:

> 10 CFR § 51.23: **Temporary storage of spent fuel after cessation of reactor operation – generic determination of no significant impact.**
> (a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that sufficient mined geologic repository capacity will be available when necessary.
>
> Finding 2: The Commission finds reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of the commercial high-level waste and spent nuclear fuel generated by any reactor when necessary.
>
> Finding 4: The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life of operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations.

The Office of the General Counsel (OGC) should adjust the language in the statements of consideration (SOC) to reflect these revisions. The final rule package should be submitted to the Commission for its information five business days prior to sending it to the Office of the Federal Register for publication. As the revisions to the SOC are likely to be extensive, this five business day period of "negative consent" review will allow the Commission the opportunity to

assess whether the staff's revisions have correctly interpreted and communicated the Commission's decision in this matter.

In addition, I believe the Commission should issue direction to the staff to undertake a longer-term initiative to prepare an update to the waste confidence findings and rule to account for storage at onsite storage facilities, offsite storage facilities, or both, for a period of at least 300 years from the end of licensed operation of any nuclear power reactor (which may include the term of a revised or renewed license), and up to 500 years (or longer, if staff's technical judgment recommends a longer period based on its analysis.) Given this approach and the breadth of the analysis, the Commission should exercise its discretionary authority under 10 CFR § 51.20(a)(2) to direct the staff to prepare a draft Environmental Impact Statement (EIS) to accompany the proposed rule developed as a result of the analysis.

The lead responsibility for this rulemaking effort should be assigned to the Office of the Executive Director for Operations, with support from OGC. The Commission should designate this activity as a high-priority rulemaking. The staff should identify the funding adjustments necessary to begin this effort as soon as possible, and should begin this effort no later than the beginning of Fiscal Year 2011. Any funding in Fiscal Year 2011 dedicated to examining extended storage of spent nuclear fuel should be significantly redundant with these efforts and should be realigned to support this purpose.

Staff has estimated that the development of this rule package and EIS – depending on resourcing – could take as long as five years. This effort is clearly discretionary on the agency's part and its outcome – whatever that might be – does not bear any relation to the revised findings and rule language that I support at the present time. I simply believe that this longer-term analysis and rulemaking is a prudent action on the NRC's part and it may root future technical and environmental deliberations in more expansive ground. In no way should my support for undertaking this longer-term evaluation be interpreted as an endorsement of prolonged onsite storage of spent nuclear fuel as the preferred policy course for the Nation.

As I stated in my original vote, and consistent with the revised findings I now support, I continue to be "confident that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impact in either the reactor spent fuel storage basin, or in dry cask storage on an onsite or offsite independent spent fuel storage installation, or in some combination of these storage options, for many decades." I also reaffirm the statement from my original vote that "since the provision of permanent disposal capacity for high-level radioactive waste and spent fuel is, as a matter of law, the obligation of the federal government (a commitment affirmed to the Congress by the current Energy Secretary and which the current Administration has not sought to disturb), I believe that the existence of this obligation provides a basis for confidence that such disposal capacity will be provided by the federal government at a future time."

My support now for the promulgation of a rule and findings expressing confidence in the availability of mined geologic disposal capacity "when necessary" is intended to express confidence that whenever the Nation should confront the natural limits of its ability to continue to store spent fuel (whatever form those limits should happen to take either technically or environmentally, or as a matter of policy), and it therefore becomes "necessary" to provide for disposal, such limits will have been discovered and understood as they approach, and mined geologic repository disposal will have been developed in advance of that time. In the meantime,

the NRC has all of the regulatory authority it needs to compel the continued safe and secure storage of spent fuel at reactor sites, and will continue to exercise that authority on behalf of the public interest.

In my original vote, I also reflected on the heavy burden the Commission faces in weighing the equities of future generations of Americans who inherit the problems we fail to address in the present day. I quoted from the concurring opinion of Judge Tamm in Natural Resources Defense Council v. NRC (D.C. Cir. 1976) that "NEPA requires the Commission to fully assure itself that safe and adequate storage methods are technologically and economically feasible." I believe the path that I am supporting today – both in the near term and on an enduring basis – provides that assurance.

Finally, I benefited from the contributions to the Commission's deliberations on the broad issue of waste confidence made by Dr. Dale Klein, former Chairman and Commissioner, with whom I served. The Commission did not complete action on this paper prior to his departure from service on the Commission, but I believe the initial vote he cast is a useful augmentation of the Commission's voting record, for the consideration of future Commissioners and agency historians. So that it will be preserved, I insert Dr. Klein's vote here, in its entirety, with my supplemental vote.

Kristine L. Svinicki 8/ 9 /2010

The vote of Dr. Dale Klein follows:

DR. KLEIN'S COMMENTS ON SECY-09-0090:
FINAL UPDATE OF THE COMMISSION'S WASTE CONFIDENCE DECISION

I greatly appreciate the staff's effort in providing a draft final update of the Commission's Waste Confidence Decision and addressing the many public comments on the proposed update. However, I strongly believe that the Commission should give the public an opportunity to comment on whether and, if so, how the Administration's recent announcements of changes in the Nation's high-level waste (HLW) repository program should affect the proposed update. Thus, I do not support publication of the draft final update and final rule in the *Federal Register* at this time. Instead, I support continuation of this rulemaking through a limited re-noticing for the solicitation of comment on how the Commission should take account of these recent developments, as well as any recent developments in the HLW programs of other nations, and in particular how these developments may bear on the proposed draft final estimate of a target date for the availability of a geologic repository. As part of this re-noticing, I am also willing to explore and invite comment on whether the Commission could reasonably modify its draft final findings and draft final rule to reflect the potential consideration of a broader range of disposal options.

After the staff reviews any additional comments, the staff should resubmit a draft final update package that includes the staff's evaluation of the additional comments and any new or revised recommendations. I recommend that the Commission offer a 45-day comment period for this limited re-noticing and that the Commission direct the staff to resubmit a proposed final update within nine months of the receipt of this Commission direction.

The new Administration announced its intent to pursue alternatives to Yucca Mountain after the close of the comment period. The Commission published its proposed revision of the Waste Confidence Decision on October 9, 2008, and the comment period closed on February 6, 2009. Thus, stakeholders, when commenting, did not have the benefit of the Administration's announced intent to change course on the HLW disposal program and study long-term alternatives for HLW storage and disposal. Even without that news, many commenters argued that aspects of the proposed update were too speculative, particularly the Commission's proposed estimate of a target date for the availability of a geologic repository in proposed Finding 2.

The draft final update, which has been made public, acknowledges that the Administration's proposed budget plan to eliminate the Yucca Mountain project would likely have forced the Commission to consider an update to the Waste Confidence decision if the Commission had not already issued a proposed rule and update. The draft final update refers to proposals to initiate expert reviews of HLW and spent nuclear fuel (SNF) disposal options, goes on to take account of the recent developments, and provides an analysis of why these developments do not alter the staff's proposed draft final update. Thus, in my view a limited re-noticing that allows for public input on developments after the close of the comment period clearly would enhance openness, transparency, and public involvement in the Commission's decision-making process.

I am also concerned that the credibility of the Commission's decision-making process would be affected by proceeding to finalize the update at this time. Such an action might be perceived by many as a rush to judgment in the midst of a dynamic environment that promises to affect the Nation's approaches to storage and disposal of HLW and SNF.

In addition, a final decision at this time could lead unnecessarily to a variety of misinterpretations. Some may interpret the Commission's final decision, particularly one at this time, as reflecting a position for or against the Administration's recent actions or anticipated new approaches to HLW storage and disposal. I recognize, of course, that some misinterpretation is often unavoidable. I also recognize that the draft final update accurately explains that the Commission commenced this update for clearly articulated reasons in advance of the recent developments. It is also true that the Commission's proposed update has included the express assumption that the currently proposed HLW repository does not become a reality. Nonetheless, I think it is fair to conclude that a pause to obtain, consider, and respond with care to stakeholders' perspectives on the recent developments should diminish the potential for misinterpretation of the Commission's action.

Perhaps of most importance, a limited re-noticing should enrich the bases for the Commission's final analyses and decisions and strengthen the final conclusions. The Commission should benefit from the receipt and consideration of a wide variety of perspectives on the Administration's recent announcements, as well as recent developments in the HLW disposal programs in other countries. For instance, the Department of Energy (DOE) did not submit comments on our proposed update and rule change. Moreover, while Congress and the

Administration are considering the concept of establishing an expert commission to address options for HLW storage and disposal, no such plans are settled at this time. It could be helpful to know and take account of the expected schedule, charter and perhaps even the range of potential final products associated with an expert panel or commission.

It seems to me that DOE's submission of comments would be consistent with the spirit of Section 113(c)(3) of the Nuclear Waste Policy Act of 1982, as amended. That section provides that, if at any time the Secretary determines the Yucca Mountain site to be unsuitable for development as a repository, the Secretary shall, among other things, "report to Congress not later than 6 months after such determination the Secretary's recommendations for further action to assure the safe, permanent disposal of spent nuclear fuel and high-level radioactive waste, including the need for new legislative authority." It would also be useful to have a description of the current status of DOE's efforts to put into place contracts with current and potentially new commercial reactor licensees.

As noted above, I am also willing to support an invitation for comment on whether the Commission's waste confidence update can reasonably allow for consideration of a broader range of disposal options. A variety of potential technological solutions to ultimate disposal may be considered in the near future, even though the principal assessments, as well as the dominant policies in the U.S. and abroad, concern a mined geologic repository. For instance, I have heard the thoughtful suggestion that a deep borehole might be among the disposal paths for wastes remaining under some reprocessing and transmutation scenarios. Thus, I suggest that the Commission ask specifically whether the Commission's proposed Finding 2 and the related rule need reference a "mined" geologic repository when providing an estimate of the likely date of availability of a geologic repository. In addition, the Commission could inquire whether it would be reasonable to use the broader terminology, "sufficient disposal capacity," instead of the references to "sufficient mined geologic repository capacity" in the draft final updated Finding 2 and in the draft final rule, and whether it would be reasonable to make a similar change in Finding 3 (referring to "sufficient repository capacity").

The phrase, "sufficient disposal capacity" seems to encompass a geologic repository and the possibility of consideration of additional disposal paths. Yet, if such language were employed, it seems that the principal support for the pertinent findings would still be the statutory direction, technical data, and policy support for a mined geologic repository. I make no assumption about the likely outcome of this inquiry if the Commission pursues it to a resolution.

My proposal should not be read as intended to diminish the importance of the government's legal obligation to provide a permanent disposal capacity for HLW and SNF. At the same time, I also recognize that Secretary Chu has stated that the Administration does "remain committed to meeting our obligations for managing and ultimately disposing of spent nuclear fuel and high-level radioactive waste." Letter from Secretary Chu to Senator Inhofe, dated June 1, 2009. However, the Commission's Waste Confidence Decisions have always taken account of the nation's progress in meeting those obligations. Consistent with that history, I see potential benefit in gaining more perspective and information on recent developments as we proceed to finalize an update to the Waste Confidence Decision. I also believe that my proposal is consistent with the staff's statement in SECY-09-0090 that the

Commission may wish to defer action until it has additional information and insights that would provide a more informed decision. I look forward to deliberating with my fellow Commissioners on this proposal.

| /RA/ | 09/16/09 |
|---|---|
| Dale E. Klein | Date |

# NOTATION VOTE

## RESPONSE SHEET

**TO:** Annette Vietti-Cook, Secretary

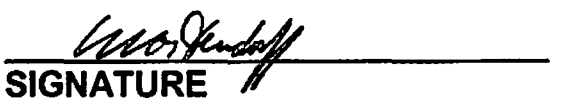
**FROM:** COMMISSIONER OSTENDORFF

**SUBJECT:** SECY-09-0090 – FINAL UPDATE OF THE COMMISSION'S WASTE CONFIDENCE DECISION

**Approved** XX **Disapproved** XX **Abstain** _____

**Not Participating** _____

**COMMENTS:** **Below** ___ **Attached** XX **None** ___



**SIGNATURE**

8/10/10

**DATE**

**Entered on "STARS"** **Yes** XX **No** ___

**Commissioner Ostendorff's Additional Comments on SECY-09-0090**
**Final Update of the Commission's Waste Confidence Decision**

I approve publication of the Waste Confidence update and final rule in the Federal Register. Specifically, for reasons stated below, I approve Finding 2 and § 51.23 as revised in my vote, and I approve Finding 4 as recommended by the staff. The Commission's deliberations on this matter must be informed by the current state of events and most up-to-date technical knowledge. The Commission also has an obligation to meet its safety, security and environmental responsibilities in the context of being a consistent and reliable regulator. Keeping these considerations in mind, completion of this rulemaking at this time is critical. I believe we can issue the update and final rule based on the information we have on hand. I think it is also prudent to initiate the technical and environmental studies to evaluate longer-term storage of high-level radioactive waste and spent nuclear fuel.

In addition to the excellent work done by the staff, I appreciate the work that the Chairman and Commissioner Svinicki have done on this rule prior to the arrival of the three new Commissioners. I also acknowledge Dr. Klein's efforts on this rulemaking prior to his departure. It was invaluable to have had the benefit of their insights.

For the reasons set forth below, I support adoption of the following versions of § 51.23(a), Finding 2, and Finding 4:

> **§ 51.23: Temporary storage of spent fuel after cessation of reactor operation – generic determination of no significant impact.**
> (a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life of operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that sufficient mined geologic repository capacity will be available when necessary.
>
> **Finding 2**: The Commission finds reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of the commercial high-level waste and spent nuclear fuel generated by any reactor when necessary.
>
> **Finding 4**: The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life of operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations.

With respect to the type of disposal capacity in which the Commission can have confidence, I believe that the term "mined geologic repository" is most appropriate. The nation's current understanding of the technical feasibility of the disposal of high-level waste and spent nuclear fuel is based nearly exclusively on information related to a mined geologic repository. For this reason, Finding 2 should refer narrowly to the assurance of the availability of a mined geologic repository.

I would also eliminate a target repository availability date in the final rule and Finding 2. I believe that predicting a target date for the availability of a geologic repository would be premature and does not provide any additional value for three reasons. First, I understand that the law does not require the NRC to determine or guess when a repository will be available. Throughout its history in dealing with the Waste Confidence Rule, the Commission has taken care to avoid relying on the success of a particular repository program. In both the 1984 and 1990 rulemakings, for instance, the determination of safe and secure storage was made without dependence on the timing of repository availability, and in fact assumed that the Yucca Mountain project would be abandoned. Rather than focusing on predicting repository availability, the appropriate inquiry is whether the Commission has reasonable assurance that the spent fuel can be safely stored onsite beyond the expiration of the operating licenses of nuclear power plants. The specific repository date used in past rules has never been associated with a health, safety, or environmental concern. This is still the case today.

Second, some stakeholders who commented on the proposed rule suggested that elimination of the target date would remove any incentive for the Federal Government to meet its responsibilities for the disposal of high-level waste. However, there is no evidence that keeping a target repository availability date as part of the rule has ever had the motivational effect on the development of a repository that these stakeholders desire.

Third, I think that asserting a prediction in the form of a repository availability date arguably undermines the validity of this rule. Notwithstanding the Commission's repeated explanation that the purpose of the target date is to establish a bounding time period for the environmental analysis, some stakeholders have viewed the target date as a binding prediction on the availability of the repository. Therefore, each time the Commission revises the target date, the Commission's credibility unnecessarily comes into question.

Instead of attempting to predict repository availability through the use of a target date, I join Commissioner Svinicki in recommending that Finding 2 and the rule apply the caveat "when necessary" to qualify when sufficient mined geologic repository capacity will be available. The term "when necessary" acknowledges our confidence that there will be no gap between the time when a repository will be necessary due to safety or other reasons and the availability of a repository. This is consistent with what the Commission proposed as an alternative approach in the proposed rule. Having reviewed the history of this rule, I do not see use of the phrase "when necessary" as a significant departure from the underlying rationale in past rules. In previous iterations of this rulemaking, the Commission has recognized the limitations of predicting a specific date of repository availability. Ultimately, the predictions were based on a belief that a repository would be available "when needed" or "in due course."

I believe that "when necessary" contemplates a wide array of situations that could ultimately trigger the need to dispose of high-level waste in a repository. Most importantly, a change in the political or societal elements necessary for acceptance of a national repository could mark this moment. Alternatively, although unlikely, a repository could become necessary because of some unforeseen safety, security, economic, legal, or capacity issue that could arise in the future. It is difficult to imagine a scenario which would necessitate disposal on the basis of safety or security, but I would not want to dismiss at least the possibility that some change of events would create a more urgent need for a repository.

I also approve the staff's recommendation to revise Finding 4 to reflect our assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life of operation (which may

include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations. I believe that the basis provided by the staff in the draft Federal Register Notice for extending the time period in Finding 4 from 30 years to 60 years is sound. Spent fuel has been stored safely for decades, and the staff currently has a technical basis, as evidenced by the studies referenced in the draft final rule, that suggests that it could continue to be stored as such for more than 60 years. From a security perspective, spent fuel storage locations are secure, and better protected than ever.

While a strong technical basis exists to issue this rule, the NRC and its federal partners continue research in this area to evaluate the feasibility of storage of spent fuel for longer timeframes. Therefore, I agree with the Chairman and Commissioner Svinicki's proposal to engage in a longer-term rulemaking that would provide greater longevity to the Waste Confidence Rule. The Commission should direct an Environmental Impact Statement (EIS) be completed to supplement the rulemaking using its discretionary authority under 10 CFR 51.20(a)(2). To provide the staff with flexibility in determining the appropriate period of review, I would propose that the staff be directed to analyze the storage of spent nuclear fuel at onsite storage facilities, offsite storage facilities, or both, for up to or beyond 300 years from the end of license operation of any nuclear power reactor, with the ultimate timeframe determined by the staff's technical judgment during the course of the analysis. The staff should provide the Commission with the resources needed for such a rulemaking.

While I support the technical analysis to determine the feasibility of spent fuel storage for up to or beyond 300 years from licensed life of operation, I would emphasize two points. First, I have complete confidence in the Commission's justification for issuance of this rule at the present time. Second, my support for the timeframe associated with this analysis should not be interpreted as advocating long-term onsite storage of spent nuclear fuel as a solution. The intent of directing the staff to analyze the impacts of storage for extended periods is to provide flexibility, and ensure that the Commission is prepared to respond to any future changes in the technical or political environment.

Addressing our confidence in the safe and secure management of nuclear waste has forced us into the very challenging business of considering the effects of our actions over extremely long periods of time. Nevertheless, I am confident in the Commission's basis for issuing this final rule now. I commend the staff for their continued diligence and my fellow Commissioners for their thoughtful attention to this rule. I look forward to reviewing the staff's future recommendations in this area.

William C. Ostendorff

8/10/2010

**Blue Ribbon Commission on America's Nuclear Future**
**Transportation and Storage Subcommittee Meeting**
**Chewonki Foundation, Wiscasset, Maine**

**August 10, 2010**
**AGENDA**

Tuesday, August 10th

| | | |
|---|---|---|
| 9:00 am | Opening Remarks | Dr. Richard Meserve<br>Hon. Marge Kilkelly |
| 9:10 am | Background on the Maine Yankee Community Advisory Panel (CAP)<br>Background on the Connecticut Yankee CAP | Ms. Kilkelly<br>Mr. Hugh Curley |
| 9:30 am | Maine Yankee and Decommissioning Plants Coalition | Mr. Wayne Norton |
| 9:50 am | Remarks from State and Local Elected Officials/Designees | TBD |
| 10:15 am | State/Regional Panel on Storage and Transportation in the Northeast | |

- Maine Senate/Natl. Conf. of State Legislatures — Sen. Deb Simpson (15th Dist.)
- Maine Radiation Control Program — Mr. Jay Hyland
- New England Governors' Conference — Mr. John Shea
- Northeastern High-Level Radioactive Waste Transportation Task Force — Mr. Ed Wilds, Mr. Cort Richardson
- National Association of Regulatory Utility Commissioners — Mr. Brian O'Connell
- Boothbay Harbor Emergency Services/CAP perspective — Gen. Lewis G. Curtis

| | | |
|---|---|---|
| 11:40 am | Public Comments (onsite registration, written comments also accepted) | |
| 12:20 pm | Wrap-Up | |
| 12:30 pm | Public meeting adjourns, | |

**Statement before the Transportation and Storage Committee of the Blue Ribbon Commission on America's Nuclear Future**

**The Honorable Marge Kilkelly, Chair, Maine Yankee Community Advisory Panel on Spent Nuclear Fuel Storage and Removal**

**The Chewonki Foundation, Wiscasset, ME**
**August, 10, 2010**

Chairman Meserve, distinguished Commissioners, my name is Marge Kilkelly. I have Chaired the Maine Yankee Community Advisory Panel since it began 13 years ago in August 1997. I currently serve as the Eastern Region Deputy Director of the Council of State Governments. Prior to that I was a member of the Maine House and Senate for 16 years representing Wiscasset and Lincoln County.

On behalf of the Maine Yankee Community Advisory Panel and our colleagues from Connecticut and Massachusetts, we are honored that you traveled here today to hear our concerns about the spent nuclear fuel and Greater than Class C Waste that remains stored at our three Independent Spent Fuel Storage Installations several years after the end of plant decommissioning and nearly a dozen years beyond the date the Department of Energy was required to begin removing this material. We believe the Community Advisory Boards at Maine Yankee, Connecticut Yankee, and Yankee Rowe provide a unique community perspective that is an essential element to your important work.

Our experience and lessons learned at the local and regional level apply at the national scale, for in both instances it is individuals and communities that are affected by the transportation and storage of spent nuclear fuel and the policy decisions that are made.

The risks of involving stakeholders intensively in a large project like a plant decommissioning or the national work you are undertaking are real, but from our experience they are far outweighed by the benefits. Not everyone is going to agree on a particular policy, and some will be vociferous in their opposition, but the community and individual input can often lead to epiphany moments that otherwise may never be found. When people know their voices are heard, even if they disagree with the outcome, conflict is diminished, trust is established, and often consensus can be reached.

Transparency is essential and transparency is created when time is invested in educating and listening to the public. Further, the role of non technical people in technical decision making should not be underestimated. The "dumb question" can provide an opportunity for new ideas.

The February 2005 report of the Maine Yankee CAP's experience with the decommissioning project is called A Model for Public Participation in Nuclear Projects. A copy of the report is provided for the record. It is also available on the Maine Yankee website at MaineYankee.com. Also provided for the record is a copy of a paper I presented at the American Nuclear Society's 9th International High-level Radioactive Waste Management Conference in Las Vegas on April 30, 2001. The title of the paper is

Preparing for the After Life, A discussion of Community Involvement in the Decommissioning of Maine Yankee. Connecticut Yankee Community Advisory Board Chair Hugh Curley also gave a presentation at that conference. Much of what I will share with you is in contained in these documents.

From 1995 into 1997 Maine Yankee was much in the public eye during steam generator repairs, a state-initiated NRC Independent Safety Assessment and anonymous accusations of safety violations. In the summer of 1997 the company decided to form a CAP to provide advice to the company and to serve as a liaison to the community. At the time, like other nuclear utilities Maine Yankee's communication with the public was mainly through its information center, speakers' bureau, and press releases. The CAP was created by the company but it represented a far different method of outreach to stakeholders.

When Maine Yankee asked me to chair a Community Advisory Panel my key concern was the company's level of commitment. Would they share information in a timely manner? Would CAP members be providing advice not just reviewing action taken by the company? If Maine Yankee was asking community members to spend several years serving on a CAP it needed to be an honest process.

The CAP was established "to enhance open communication, public involvement, and education on Maine Yankee's decommissioning and to "function as an advisory panel."

Inaugural members of the CAP represented a broad cross section of the community including local business, town government, state government, emergency planning, marine resources, education, medicine, environmental interests, and the local anti-nuclear activist group. Four of today's 10 members have served since the beginning or very nearly so. Three others have served for 10 years or more.

The company took several steps early on to fulfill its commitment to the CAP. Maine Yankee first made public at CAP meetings important information such as the Post Shutdown Decommissioning Activities Report and the selection of the decommissioning operations contractor. The company also gave individual CAP members access to previously internal documents.

From the outset Maine Yankee provided the resources necessary for the CAP to function efficiently. The first year was largely tutorial. Members learned the basics of nuclear power, plant decommissioning and options for spent fuel storage. After the first year the CAP was prepared to provide advice to the company which it did regularly.

In the first years, the CAP met monthly. By 1999 meetings were every six to eight weeks. Beginning in September 1998 and each year after the CAP met for a day long facilitated session to review the past year and plan its work for the year ahead. In these meetings the company provided the panel with a schedule for anticipated activities, and the panel identified issues of concern for constituents. In 2002 the panel began meeting quarterly. We now meet once a year.

During the seven year Maine Yankee decommissioning project the CAP held over 50 public meetings. Issues ranged from the momentary such as complaints from neighbors about noise from temporary spent fuel cooling fans, to the seemingly indefinite when talking about the storage and disposition of the spent nuclear fuel.

The fan noise issue established the CAP's credibility with the community. In 1998 Maine Yankee installed heat exchangers with large fans to keep the spent fuel cool after isolating the pool from the rest of the plant. When summer visitors arrived on Westport Island, Maine Yankee began receiving complaints from irate neighbors about the incessant fan noise. Their children couldn't sleep and they had to keep their windows closed. A CAP meeting was hastily scheduled so that residents could air concerns. As a result, within weeks modifications to the fans were made resolving the issue.

If only the spent fuel issue could be resolved so readily. As our CAP vice-chair Dr. W. Donald Hudson, Jr. wrote in the CAP's February 2005 report, "I believe we have to plan for changing the culture surrounding waste as we plan for the long-term storage of nuclear material either in Wiscasset or at Yucca Mountain... We have to plan, realistically, to manage the nuclear fuel cycle and its highly radioactive and dangerous by-products for at least another 500 generations." We sometimes call Don our 10,000 year man. We are encouraged by your presence here today that we won't be custodians of the spent fuel for 10,000 years.

The CAP also grappled with how clean is clean radiologically? The NRC's standard is 25 millirem plus ALARA above naturally occurring background radiation; the EPA's is 15 millirem. It was very confusing and disconcerting for the public when two agencies of the federal government were inconsistent on an issue so basic to the decommissioning process. How could there be public confidence that the site would be clean without a consistent standard?

While the CAP did not take a position in favor of one standard or another, we did take a strong position that inconsistency was not acceptable; it had the potential to impact the process / cost/ length of time of decommissioning as well as public confidence that the site would be really clean. The CAP hosted the NRC and EPA at a local school for a first-of-its-kind discussion of their respective radiation standards. The meeting, attended by over 150 citizens brought to the forefront the serious impact on public confidence of this disagreement among the two federal agencies. The meeting was a learning experience for the agencies who began to understand the CAP's commitment to the process and the seriousness with which we undertook our work. The NRC became a regular scheduled presenter at CAP meetings for several years. In the end, due to a lack of resolution on the federal level, the State of Maine chose a more stringent 10 millirem standard with a separate 4 millirem limit from groundwater that became State law.

Communicating scientific data in language that even I can understand is critical. The Maine Yankee site was cleaned radiologically to a level that couldn't be measured directly. It had to be modeled using a fictitious resident farmer who drills his well in the

old containment, drinks the water, irrigates his crops, and raises animals and vegetables that he consumes without exceeding the 10/4 millirem dose limit.

An audience member once asked, "How much is 10 millirem?" The late CAP member and Radiologist Dr. Paul Crary replied, "Like so many angels dancing on the head of a pin."

The role of the CAP in providing additional non-technical review of proposals was important as well. In addition to regulatory scrutiny, the decommissioning plans routinely were put through a public "straight face" test where the perceptions and perspectives of stakeholders were considered and plans sometimes altered as a result.

Maine Yankee's decommissioning operations contractor proposed cleaning the concrete so that it met the criteria of the License Termination Plan and then placing the rubblized concrete in building foundations. Technically and from a regulatory point of view the plan may have been feasible. However, a number of stakeholders viewed this proposal as on-site disposal of radioactive material because the concrete might have detectable levels of radioactivity, albeit at levels permitted by the License Termination Plan. Maine Yankee worked extensively with stakeholders on a plan that resulted in the rubblized concrete being shipped by rail from the site for disposal.

Maine Yankee's decommissioning was also the first to use controlled explosives. This technique, which was used three times, enhanced project safety and expedited the

demolition process. The idea of using explosives at a nuclear power plant site just after 9/11 seemed a real challenge from a public perception stand point. However, the demolition company in a presentation to the CAP carefully explained the process to the community and assured stakeholders that radiological and other risks from this proposed activity were small.

A significant measure of the success of the decommissioning and the role of the CAP was that hundreds of people came in September 2004 to watch the explosive demolition of the containment building – in fascination not fear. They knew what was going to happen, felt secure in the information they received and took pictures of the implosion.

The CAP process was transparent with no distance or filter between the decision makers and the general public. As a local newspaper reporter put it, "The CAP meetings became Maine Yankee's report card."

CAP members were very interested in learning all they could about the storage of spent nuclear fuel. At the first CAP meeting Maine Yankee invited the panel to become engaged in the "wet versus dry" discussion. At that time the company had not yet made a decision on whether to leave the spent fuel in the pool or move it to dry cask storage. As part of our education we visited dry cask storage facilities in Michigan, Maryland, and Colorado. In June 1998 the CAP went on record favoring dry cask storage at Maine Yankee. Later in the decommissioning we also visited Yucca Mountain to learn about plans for spent fuel disposal.

With decommissioning nearing a successful conclusion, in early 2005 the CAP voted to shift its emphasis to monitor the interim storage of spent nuclear fuel at the Maine Yankee site as it is too easy for an out of sight out of mind mentality to take hold. We also changed our Charter to advocate for the prompt removal of the spent fuel to a location outside New England.

It was clear then as it is now that no one knows how long this material will remain stored here. As one CAP member put it at the end of plant decommissioning, "This marks the end of a process, but not the end of the story." Recently another member put it slightly differently, "It's ironic that the stakeholders involved in Maine Yankee's decommissioning were able to reach consensus on challenging issues like site restoration and demolition debris disposal but still we are left with the legacy of the spent nuclear fuel because the federal government has not been able to do the same."

You have just returned from a visit to the ISFSI and have seen for yourselves that absent the 60 canisters of spent nuclear fuel and 4 canisters of GTCC waste stored there, Bailey Point would be a great location for another industrial enterprise that could rival Maine Yankee in terms of high paying skilled jobs and economic benefit to the community.

With the plant buildings removed and the site restored what remains is the valuable infrastructure that served Maine Yankee so well for 25 years: a rail line to the 180-acre

site, public water and sewer, a 345 Kv switchyard, a 115 kv switchyard; deep water access, and a barge slip.

Five years after the end of decommissioning we are left with a facility that costs electric ratepayers $6-$8 million per year to operate and valuable real estate that can not be reused until the spent fuel and GTCC waste is removed.

The Maine Yankee CAP adds its voice to those calling on the federal government to make it a priority to remove to centralized interim storage the spent nuclear fuel and GTCC waste from single-unit shutdown reactors sites. A site that only stores waste is the most inefficient method of storage. Moving this material will reduce the number of sites storing and securing spent fuel; relieve electric rater payers of the burden of paying the storage costs, and free these sites for other useful purposes.

Here at Maine Yankee we broke new ground through the emphasis on transparency and consensus building. Even though decades of work have gone into trying to close the back end of the fuel cycle, in many ways the work your Commission is undertaking is new ground as well since as a nation we haven't yet found a success path.

The Community Advisory Panel model builds trust among stakeholders and leads to project success if you have the courage to take the risks inherent in an open process.

Success depends on: Educating panel members, educating the public; embracing openness, respecting diversity, listening, taking risks; encouraging public involvement; answering questions; and sharing knowledge.

We hope you carefully consider how our accomplishments and lessons learned at Maine Yankee can be transferred to the national stage. Again, thank you for coming to listen. We look forward to helping you in any way we can, and I'm happy to answer any questions you may have.

Statement before

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

Wayne A. Norton
President and CEO of Connecticut Yankee and Yankee Rowe and CNO of Maine Yankee
Nuclear Power Plants (decommissioned) and
Chairman, Decommissioning Plant Coalition

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 disposal[2].

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 decommissioning[3]. 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 GTCC[4] 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

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[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 appropriate[7]. 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.

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[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.

STATE OF MAINE
OFFICE OF THE GOVERNOR
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AUGUSTA, MAINE
04333-0001

JOHN ELIAS BALDACCI
GOVERNOR

JOHN M. KERRY
DIRECTOR
OFFICE OF ENERGY
INDEPENDENCE AND SECURITY

August 10, 2010

The Honorable Lee Hamilton
The Honorable Brent Scowcroft
Co-Chairmen
Blue Ribbon Commission on America's Nuclear Future
c/o U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

The Honorable Richard A. Meserve
The Honorable Phil Sharp
Co-Chairmen
Transportation & Storage Subcommittee
Blue Ribbon Commission
1800 K Street, NW, Suite 1410
Washington, DC 20006

Dear Chairman Hamilton, Chairman Scowcroft, Commissioner Meserve, Commissioner Sharp and Members of the Commission:

The Governor's Office of Energy Independence and Security (OEIS) supports the development and use of energy resources in Maine that meets the goals of energy security, economic development and environmental quality. The OEIS was established to carry out responsibilities of the State relating to energy resources, planning and development and to coordinate state energy policy. The State of Maine Comprehensive Energy Plan identifies the primary goals of strengthening energy efficiency, conservation and weatherization; fostering renewable energy; improving transportation and fuel efficiencies; upgrading electricity and natural gas transmission services, systems and infrastructures; and ensuring energy emergency preparedness and response. While nuclear energy is not a primary component of Maine's Energy Plan, the safe storage, processing, transportation and disposal of nuclear fuel, waste and materials derived from nuclear activities is imperative to a sound energy security policy.

The Maine Yankee site, and its Independent Spent Fuel Storage Installation (ISFSI), is one of nine spent fuel storage sites which no longer have operating nuclear power plants affiliated with the ISFSIs. The State of Maine is a member of the Nuclear Waste Strategy Coalition (NWSC), a group whose goals include the "timely, safe, and cost-effective storage and disposal of spent nuclear fuel and high-level radioactive waste in a permanent repository" and "reform (of) the distribution of the Nuclear Waste Fund such that ratepayer contributions are used for their intended purpose." In its July 28, 2010 letter to the Blue Ribbon Commission on America's Nuclear Future (Commission), the NWSC advocates federal government responsibility in taking possession and responsibility for spent nuclear fuel and high-level radioactive waste at decommissioned reactor sites like Maine Yankee. We agree with the NWSC goals and position advanced in their July 2010 letter and urge the Commission to recommend the expedited removal of these nuclear materials from decommissioned sites.

We believe that good economic, national security and energy policy warrants removal of the waste from these "stand-alone" ISFSIs to a consolidation site which can be operated at a lower cost per unit of stored waste, be better protected from terrorist actions or other risks and relieve Maine ratepayers of a cost that could be better spent on renewable energy and energy efficiency measures.

From an economic policy perspective, prompt removal of spent nuclear fuel from decommissioned sites like Maine Yankee and consolidating the nuclear spent fuel will not only reduce the number of sites, it will likely result in cost efficiencies that flow through to ratepayers by relieving them of the cost burden of maintaining sites that no longer generate electricity. Billions of dollars have been spent examining interim and permanent storage options for nuclear spent fuel and waste. Despite decades of research and development activities associated with Yucca Mountain, that project has been terminated with no clear direction for an alternate repository. Meanwhile, Maine Yankee is responsible for storing spent nuclear fuel in accordance with Nuclear Regulatory Commission (NRC) regulations regarding security, emergency planning, radiological monitoring and oversight, quality assurance, inspections and reporting. It was permanently shut down in 1997 when it was no longer economically viable to operate and completed plant decommissioning in 2005. Removing the spent fuel could make sites available for other useful, productive purposes.

From a national security policy perspective, centralized interim storage facilities would provide a safe option for managing spent nuclear fuel and high-level radioactive waste from decommissioned power plants. We recognize that Maine Yankee is safely and securely storing the more than 550 metric tons of spent nuclear fuel at the ISFSI site and can likely continue to do so while private or government-owned candidate sites for consolidation of used nuclear fuel are identified. However, a comprehensive spent nuclear fuel management program with centralized facilities and rigorous transportation and storage requirements is necessary. It is likely safer to collect materials from these multiple sites and put them in a central location that is designed, managed and operated for that purpose.

From an energy policy perspective, Maine would rather invest in clean, reliable, indigenous, affordable, sustainable and renewable resources to help achieve the goals of energy independence and security. Ratepayers in Maine and others states continue to pay millions of dollars each year in storage fees, taxes, security and insurance to support the operation of spent fuel storage installations at shutdown reactor sites. Continued storage of spent nuclear fuel at decommissioned plants imposes additional costs on ratepayers and, as mentioned above, prevents economic reuse of the site. This type of system levies an opportunity cost on Maine and its communities.

It is imperative that the Commission make the removal of spent fuel from the shutdown reactor sites and consolidation at a single site pending a permanent solution a priority. This will reduce the number of sites storing spent nuclear fuel, relieve electric ratepayers of the burden of paying for the storage at sites no longer generating electricity and make these sites available for other useful purposes.

Thank you for choosing Maine Yankee as the location to explore these specific issues and problems. Governor Baldacci and the OEIS look forward to working with the Commission and providing the Transportation and Storage Subcommittee additional input as it continues its review of policies for managing the back end of the nuclear fuel cycle. While we must focus on cultivating indigenous, renewable resources such as on- and off-shore wind, solar, biomass and biofuels, geothermal and tidal energy, we must carefully examine the role of nuclear energy, including the safe and efficient storage and transportation of spent nuclear fuel, in Maine's immediate and future energy plans.

Respectfully submitted,

*John Kerry*

John M. Kerry
Director
Governor's Office of Energy Independence and Security

Testimony of Sen. Deborah Simpson, Maine State Senate and National Conference of State Legislatures High Level Waste Working Group

Commissioners Meserve, Bailey and Eisenhower, thank you for the opportunity to speak with you today. I am Deborah Simpson, member of the Maine state Senate and of the National Conference of State Legislatures High Level Waste Working Group. A few months ago you heard from my colleague, Delegate Sally Jameson on the work of NCSL and the issues facing Maryland and the nation regarding waste disposition and storage and the future of new reactors.

I am here today to speak to you about NCSL policy positions on these issues and the issues facing the state of Maine regarding interim storage of used fuel.

As you know, the Maine Yankee facility closed and was decommissioned starting in 1995. As of today, though the plant is fully decommissioned, the used fuel continues to be stored on site. This is a significant concern especially in light of the decision to stop forward progress on the licensing of Yucca Mountain as a geological repository.

We appreciate the work of the Blue Ribbon Commission and are encouraged by the thoughtful process you are undertaking. As you consider final recommendations we believe it is imperative that the federal government and industry work to develop one or more centralized interim used fuel storage facilities.

Of course state and local governments should have a role in site selection and such a facility should be licensed by the NRC and the first fuel moved to the interim facility should be from decommissioned plants.

The Nuclear Waste Fund should be used to support the facility through State and Community financial incentives and licensing and construction financing.

Legislation should be enacted instructing the federal government to lease space at the facility for interim storage of commercial used fuel and federal used fuel and high-level radioactive waste.

Moving ahead in this fashion will enable the federal government to, at least partially, fulfill its commitment to remove used nuclear fuel from commercial nuclear power plant sites. Additionally, this will enable the federal government to eliminate costly settlement payments due to its failure to meet its NWPA obligations. Further, a plan forward like this would allow decommissioned plant sites to be used for other, beneficial purposes.

Having an interim storage facility in place will also help demonstrate to the public and policymakers that a pathway to eventual disposition of used nuclear fuel is possible. Additionally, having an interim storage site will help demonstrate to the public and policymakers that routine safe transportation and central storage of used nuclear fuel is also possible.

Moving forward with an interim storage facility would also help to create a "breather" while public policy regarding used nuclear fuel recycling and ultimate disposal are resolved. Additionally, many believe that an interim storage facility could be used for studies, research and development in support of long-term storage of used fuel.

An interim storage facility would mean that nuclear power plants that have not implemented dry storage, would avoid such a need. And for nuclear power plants that have implemented dry storage, this facility would help with the expansion of such storage.

It is estimated that an interim storage facility could be built within 7-10 years and fuel moved accordingly.

As you are aware, NCSL has policy positions that support this path toward an interim storage facility. I have provided a copy of the applicable policy statements for your information. Again, I thank you for the opportunity to be here before you today and would be happy to answer any questions.

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John E. Baldacci, Governor  Brenda M. Harvey, Commissioner

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August 10, 2010

The Honorable Lee Hamilton
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The Honorable Phil Sharp
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Dear Chairman Hamilton, Chairman Scowcroft, Commissioner Meserve, Commissioner Sharp and Members of the Commission:

The Radiation Control Program is located within the Maine CDC, under the Department of Health and Human Services. We are the agency primarily responsible for the coordination of the Maine Yankee oversight.

The key Maine issues regarding the oversight of the Independent Spent Fuel Storage Installation (ISFSI) are:

- $220,000 paid annually for State oversight divided among the Department of Health and Human Services, the Department of Environmental Protection, the Department of Public Safety, and the Office of the Public Advocate.
- $185 million of outstanding fees to be paid to the Nuclear Waste Fund.
- Continued operating costs of the ISFSI paid by Maine utility ratepayers.
- Impact on local resources that would not be necessary if the waste was removed.

Nationally the issues of concern are:

- A viable path forward to a high level waste site.
- Large continuing costs for litigation and minimal money being spent on resolution.
- Spent fuel being stored next to rivers and oceans.

A successful path forward from this point will include reprocessing to reuse the usable materials and decrease the amount of time the waste will need to be isolated from the biosphere as well as interim centralized storage to minimize the financial impact to the taxpayers and ratepayers of the United States.

Respectfully Submitted,

Jay Hyland, P.E., Manager
Maine Radiation Control Program

**Statement to the Transportation and Storage Subcommittee of the Blue Ribbon Commission on America's Nuclear Future**

**Lewis G. Curtis, Major General (retired) USAF, member Maine Yankee Community Advisory Panel on Spent Nuclear Fuel Storage and Removal**

**The Chewonki Foundation, Wiscasset, ME**
**August, 10, 2010**

Chairman Meserve, distinguished Commissioners, my name is Lewis G. Curtis. I am a retired Major General who served 34 years on active duty as a logistics officer specializing in aircraft maintenance and nuclear munitions in the United States Air Force. I have been a member of the Maine Yankee Community Advisory Panel for the past 13 years. I was also the deputy director of Emergency Management for Boothbay Harbor for 17 years, and provided the structure for the Emergency Response Plans for three towns and the county after Maine Yankee ceased operations. Boothbay Harbor is just a few miles from here and was within Maine Yankee's emergency planning zoned during plant operations.

I join Maine Yankee CAP Chair Marge Kilkelly and Connecticut Yankee Community Advisory Board Chair Hugh Curley in welcoming you to Wiscasset to learn first hand about the Maine Yankee Independent Spent Fuel Storage Installation and to hear our thoughts on the storage and transportation of this material. As Chair Kilkelly indicated in her testimony, the CAP has provided a regular opportunity for input of public concerns regarding Maine Yankee issues, and the panel added immeasurably to a smooth

decommissioning and the transfer of spent nuclear fuel from pool storage to the dry cask system we have in place today.

In my last four assignments on active duty, the management, control and modification of Air Force nuclear weapons was one of my responsibilities. In that capacity nuclear storage sites came under my purview, and I can attest to the fact that the level of security at our ISFSI with its reliance on local, county, and state first responders should there be any inadvertent or deliberate attempts at intrusion rivals that of the Air Force. However, this reliance on external law enforcement places an added burden on these resources. Centralized storage of spent nuclear fuel from decommissioned reactor sites with independent security and a cohesive workforce would be more efficient.

Regarding the transportation of the spent nuclear fuel canisters, I am most concerned about deteriorating infrastructure and the need to strengthen the shipment tracking system. With the closing of numerous military installations resulting from the Defense Base Closure and Realignment Commission otherwise known by its acronym BRACC, fewer rail and road movements of nuclear materials are taking place and those that do take place are from fewer geographical locations. Our rail and road arteries will need to be refurbished, including the local area. Also, there is in existence a movement monitoring system known as Bird Dog that needs to be revitalized to track the movement of spent nuclear fuel shipments. At one time Bird Dog was present in every state but is no longer due to reductions in defense installations.

At the June 25, 2009 CAP meeting here at Chewonki Chair Kilkelly proposed two actions for the CAP to consider:

1.) Invite the Administration's proposed Blue Ribbon Commission to hold a meeting at Chewonki to include a tour of the Maine Yankee ISFSI. The CAP agreed this would be a great way to educate the Commission about the special circumstances of single-unit shut down reactor sites and to make the case for removing fuel from these sites on a priority basis. Again, we appreciate that you accepted our invitation.

2.) Send a letter to the Secretary of Energy, the Secretary of Transportation and the Northeast congressional delegation, urging that funding for spent nuclear fuel transportation planning and infrastructure be included in the FY 2010 budget.

The CAP agreed that a letter in specific support of transportation funding was needed because people change, transportation systems change, and continuity in planning is critical. It was noted that the CAP is the closest thing to a public voice on the spent fuel issue.

However, it became clear after the June 25 CAP meeting that the FY 2010 budget process was too far along to influence so the focus became the FY 2011 budget. In the end the CAP did not send the letter because it was clear the Administration was intent on eliminating funding for the Yucca Mountain program including transportation planning. Transportation planning is critical to successfully closing the back end of the fuel cycle

and the CAP respectfully asks you to make this a priority in your report to the Administration.

It will do little good to move forward with centralized interim storage, for example, if the DOE has not developed a transport cask for the spent nuclear fuel, and the necessary studies and infrastructure upgrades have not been completed.

Centralized storage of spent fuel from decommissioned sites in the long run will be less costly and more efficient than the present 9 sites around the country. It will enhance security and also reduce the overall number of sites storing spent nuclear fuel and make those sites available for other purposes to benefit the communities and regions where they are now located. But to be successful we must begin now to plan for the transportation of this material.

Thank you and I'll be glad to answer any questions you may have.

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# Consolidated Storage for Spent Nuclear Fuel from Decommissioned Commercial Sites

Presented by
Brian O'Connell, P.E.
National Association of Regulatory Utility Commissioners

to the

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

Wiscasset, Maine
August 10, 2010

Good morning, members of the Commission. Thank you for the opportunity to discuss the need for action by the federal government or other parties in cooperation with the federal government to remove spent nuclear fuel from shutdown reactor sites and consolidate it at a state of the art storage installation pending the final fulfillment of policy of the Nuclear Waste Policy Act, whether it be burial in a geologic repository, another disposal method or for recycling/ reprocessing. Since there has been no decision on the means of disposing or further reclamation of energy from the "spent" or used nuclear fuel under the mandate of the NWPA or any other law, there is also no schedule for when the spent fuel will be removed from any of the 104 active commercial reactors or the 14 shutdown reactors. It is only speculation on my part that unless there is a dramatic change in the civilian radioactive waste management program, I do not foresee movement of spent fuel to a disposal or reprocessing facility any sooner than 2030.

This delay from the date of January 1998 set in the NWPA and memorialized in contracts with each of the owners of commercial nuclear reactors to have begun acceptance by the Department of Energy (DOE) for transport to a geologic repository has caused the owners extra expenses for the added storage of the spent fuel past the time they had expected from their contracts with DOE. Just about all of those owners have sued in federal courts or will do so to seek compliance with the terms of the contracts or compensation for damages. The United States Court of Federal Claims has determined that the Government is liable for damages due to the delayed acceptance. Individual cases are being reviewed and judgments handed down, as the Commission was briefed at the initial meetings in March.

For many of the owners, knowing that their expenses to expand pool storage capacity or add dry cask storage capacity will be compensated in court or through settlements seems to have become manageable in most instances. But, there is a cohort of owners for which the delay places a different hardship. These are the owners of the ten shutdown reactors at nine sites that have shutdown for economic or other reasons and are either dismantled or are planned to

be as they head toward decommissioning as required by the Nuclear Regulatory Commission (NRC.) But full decommissioning cannot be completed because the spent fuel remains, mostly in dry casks, but in three instances fuel remains in cooling pools. Until DOE removes this fuel, the storage must be safely managed in accordance with NRC license requirements and the storage facilities and other facilities necessary for performance monitoring and security must remain in place. Because the decommissioning cannot be completed, the property cannot be put back into other economic uses. To varying degrees, this uncertainty either impedes return of the property to productive community use and/or increases the concern about when the Government is ever going to honor its obligation to remove the used fuel.

It is the recommendation of the National Association of Regulatory Utility Commissioners (NARUC) that the spent fuel from these nine decommissioned reactor sites be removed and consolidated at a single site once it is licensed and ready to safely receive and store that material until DOE is ready to move it once again to a disposal or reprocessing facility. DOE can be charged with leading, planning, seeking licenses and permits, constructing and operating the facilities and transporting the used fuel to it, or it can cooperate with other parties with the capability and interest in managing the facilities. DOE would need to be involved because:

- DOE would need to interface with the owners with which it has contracts and would probably retain title to the fuel once it is accepted.
- DOE or another party can conduct the transportation under federal regulations.
- DOE would have to budget for and pay for its own expenses or those of the storage facility operator.
- DOE would likely need to ensure compliance with the National Environmental Policy Act (NEPA.)

We further recommend and, dare I say, urge that the Commission not wait until the rest of your findings and draft recommendations are ready next July, but instead report to the Secretary by this fall that:

> The Commission has examined the special circumstances of nine sites where the reactors have shut down but the associated spent fuel remains on the sites and prevents the site from final decommissioning and reclamation of the property for other productive use. The Commission supports removal of that spent fuel and consolidation in a location that is better suited and optimally designed to NRC safety and security standards. Such consolidation makes good sense, is likely more economic and the Commission foresees no conflict between this consolidated storage and any likely recommended disposition the Commission is likely to recommend. Thus, DOE can begin a planning process without having to wait for the final report of the Commission and lead to movement of the fuel sooner.

Taking such an action now, will allow DOE to begin a planning process with owners, communities, possibly other parties who may seek to be the consolidated facility licensee and operator and with potential site hosts. Since DOE has stated it lacks authority to store commercial spent fuel, this early Commission action can cause DOE to seek legislation from Congress with the FY 2012 Budget cycle.

**What is the Extent of the Need for Consolidation?**

The focus of this proposal is to move the spent fuel from shutdown commercial reactors where there is no adjacent operating reactor. There are nine sites with ten shutdown reactors in eight States, see Table 1 for listing. Not included are some other shutdown reactors at Indian Point, Three Mile Island, Millstone, San Onofre or Shoreham. The nine sites are similar to the former Maine Yankee site at Wiscasset where the power plants have been dismantled and all that remains is the spent fuel storage and other infrastructure for management and security associated with it.

We also would suggest a survey be done among owners of active reactors to "means test" for any other situation that might make that site eligible for special consideration in a consolidated storage facility.

It is the premise of this proposal that it would be more economical to consolidate and manage the spent fuel at a central location than to manage it at nine or more scattered sites. We are unaware of any of these sites being designed for dry cask storage since that technology was developed out of necessity when it became apparent that the repository would not be ready to accept spent fuel in 1998. They were likely developed on an ad hoc basis. In contrast, the consolidated facility could be selected on a better set of selection criteria and would be required to meet 21st century state of the art safety and security requirements. There are 2813 metric tons (MTHM) of spent fuel at the nine sites.

If the fuel from the nine sites were consolidated, it would reduce the number of reactor storage sites to 64.

**2008 DOE Report to Congress on Interim Storage**

In the House Appropriations Committee report accompanying the FY 2008 Appropriations for the civilian radioactive waste management program, DOE was asked to develop a plan to take custody of the spent fuel from the decommissioned reactor sites and consolidate it at an existing federal site, one or more operating reactor sites or at a competitively-selected storage site chosen from among eleven sites where various local organizations had expressed an interest in having facilities associated with an earlier Global Nuclear Energy Partnership initiative. DOE submitted their report to Congress in December 2008.[1]

If communities such as Wiscasset were even aware of the report it would not have been through contact with DOE before, during or after the report was made. It is our understanding

that no contact was made with any of the nine communities in which these storage sites are located nor was there any contact with the owners with which DOE has contracts that call for the government to remove the spent fuel.

Far from seeing the report as an opportunity to remove the spent fuel from these sites, the report dwells on the opinion by DOE that the Department lacks the authority to "store" commercial spent fuel. Indeed, the NWPA states that owners of reactors have the primary responsibility for providing interim storage of spent fuel[ii], although the NWPA also had provisions for an away-from-reactor interim storage program for 1,900 metric tons, but that authority expired in 1990. But, of course, the NWPA and standard contracts with each reactor owner also promised waste acceptance for geologic disposal beginning in 1998 as well.

After presenting the arguments that DOE lacked the authority to develop a consolidated storage facility for its customers with decommissioned reactors, the report then turned to reasons why the agency would rather not pursue that course:

- With all the preparation needed to develop an interim storage facility (for which no planning had been done before) the permanent repository would be ready nearly as fast
- As with Yucca Mountain, there would likely be opposition to the site which would lead to delays and be a distraction
- While not explaining why, the report concluded that the Nuclear Waste Fund would be used for the consolidated facility in which case it would compete for funds with the repository, leading to further delays
- The report alluded to the possibility of a "negative impact" on the fee adequacy, without showing any calculations
- The report speculated that there could be additional litigation from other spent fuel owners if the decommissioned spent fuel were given priority out of sequence from the oldest fuel first basis of the standard contracts

The conclusion one could draw from the report is that it reluctantly "answered the mail," but DOE did not see the proposition as an opportunity to solve a problem for its customers nor to help lead to the final decommissioning and release of property to other beneficial uses for the adjoining communities. There was no public input nor was there broad distribution of the report beyond providing it to Congress. For its part, Congress took no follow-up action.

**Elements of the DOE Plan**

The report outlines the needed steps from planning, siting, licensing, construction, transportation and storage, spanning from 2009 through 2027 with further transport from the interim storage facility to the repository beginning in 2025 for three years. Cost estimates for each function are included for each year as shown in Table 3, with a total of $743 million, although whether that is in constant or discounted dollars is not indicated.

The report discusses siting at the three types of locations suggested in the tasking:

1. Existing Federal Site. DOE or other federal sites could likely be well suited with infrastructure, but it could be difficult importing waste from other sites to the three otherwise well suited sites (Hanford, Idaho National Laboratory and the Savannah River Sites) where DOE was to have removed some waste and there are consent agreements to that effect. The Governor of Washington expressed quite plainly at the Commission meeting in July how that State views the prospect of bringing more waste to Hanford.

2. Existing Operating Reactor Sites. The report indicated DOE could solicit expressions of interest from operating sites to see if any would volunteer to host additional spent fuel, but presented a potential obstacle in that under NRC regulations reactor operators are licensed to possess only that quantity of spent fuel "as required to operate their reactors." To modify the license would require public hearings which could be contentious.

3. Competitively Selective Sites. DOE acknowledged that there were expressions of interest in hosting GNEP facilities from communities, industry and partnerships of both. It is an open question of whether the interest shown in hosting a potential reprocessing facility with substantial capital investment and good paying jobs also translates into being a host to waste storage alone.

**Riley's Law of Nuclear Waste Storage**

Former South Carolina Governor Richard Riley expressed the aversion to having nuclear waste storage, by stating, "Nuclear waste tends to stay where you put it last." This is NIMBY phenomena which is seemingly a dominant factor in siting facilities that people (and their elected representatives and the media) are quick to invoke. There are several particular concerns that must be dealt with in terms of interim storage of spent nuclear fuel:

a. Distrust of the Federal Government. It is particularly evident in some Western States where the federal government owns or controls lands, that there is a skeptical or even hostile attitude over actions taken or proposed by the federal government. This was once called the Sagebrush Rebellion and it was evident in the Yucca Mountain case.

b. How Can We be Sure Storage is Temporary? Aside from having no nuclear power plants of their own, this seemed to be the concern in Utah when the Private Fuel Storage interim storage facility was proposed in Skull Valley. Utah was well aware that neighboring Nevada was opposed to Yucca Mountain and that if the PFS facility was built and spent fuel brought in for temporary storage, what would happen if Yucca was not built? A 2001 joint report by Harvard and the University of Tokyo, *Interim Storage of Spent Nuclear Fuel*[iii], put it well, saying, "Interim storage is likely to be difficult to implement as well, since potential hosts will ask the central question: what is the final destination for spent fuel?" The report concluded, **"To be fully credible, interim storage must be a part of a comprehensive plan for managing spent fuel."**

**2009 GAO Report on Nuclear Waste Management**

If the Commission has any interest in cost of interim storage you may wish to consult a GAO Report on Nuclear Waste Management in November 2009 at the request of Senators Harry Reid, Barbara Boxer and John Ensign that examined "key attributes, challenges and costs for the Yucca Mountain repository and two potential alternatives." The report is cautious in discouraging comparisons among the alternatives because they have different assumptions. For example, the report used a cost model to estimate costs from $23 billion to $81 billion to provide central storage of 153,000 metric tons for 100 years followed by geologic disposal. In another scenario it estimated $12 to $20 billion to store 70,000 metric tons for 100 years without disposal. The appendices give some useful unit cost factors.

**Cost In Perspective**

The Congressional Budget Office (CBO)[iv] now estimates the potential liability for damages for the failure of DOE to fulfill its obligation to begin waste acceptance in January 1998 will total $13.1 billion if DOE were to begin waste acceptance in 2021. DOE has previously used a figure of $500 million annually for each additional year of delay. All damage awards and settlement agreements are paid from the Judgment Fund (taxpayers) rather than the Nuclear Waste Fund (ratepayers.)

If we accept the DOE estimate of $743 million for the cost of transportation and consolidated storage for 2813 metric tons through 2027 (actually over a 19 year span from initial year) that figure approximates the $770 million in total fees paid each year to the Nuclear Waste Fund. While our State utility commissioners are opposed to having the money collected from ratepayers used to "pay for the government's avoidable delay," most take a more practical viewpoint and would agree that if one year's worth of fees will consolidate the spent fuel from these nine sites and free up those sites for decommissioning and return to productive use, that would be a worthwhile tradeoff. Besides, it does not get funded all at once (see Table 3) as the peak spending year calls for $123 million in the seventh year.

**Who Should be in Charge?**

Recognizing that the Commission Subcommittees are each to consider what entity should have responsibility for implementation of whatever activities the Commission recommends, here is a discussion of some alternatives included in the DOE report and some others.

The choices that might be considered for the task of developing and managing a consolidated storage could include:

1. DOE. It appears that the Office of Civilian Radioactive Waste Management (OCRWM), set up under the NWPA to manage the repository program is all but disbanded. Residual functions are being divided up among other DOE organizations, with the plan for the

Office of Nuclear Energy to be assigned to implement the disposal strategy that the Commission recommends and the Administration decides. To move forward on the relatively small-scale consolidation project, we are impressed with the capability to plan and implement the DOE consolidated storage project if it was assigned to the Office of Environmental Management. EM has demonstrated project management skills, contracting experience and is accustomed to community relations. The organization has coordinated some radioactive waste shipments and has worked with State and local governments. We would expect DOE would accept and retain title to the spent fuel.

2. Public-Private Partnership. Under the volunteer community and/or industry approach suggested in the congressional tasking, the site selection and licensing actions would be handled by the non-federal entity. DOE would still need to be involved in coordinating the transfer of title for the fuel, arranging and possibly conducting the transport and working out which entity retains title to the fuel. The Nuclear Energy Institute has been seeking interest from communities which may be potential hosts to a central interim storage facility.

3. A New Fedcorp. There have been suggestions over the years that a new quasi-governmental organization be created along the lines of what seems to be having success in Sweden, Finland and Canada. In May of this year, Senator Voinovich introduced a very comprehensive bill (S.3322)[v] that would create a United States Nuclear Fuel Management Corporation to "support all options for a long-term nuclear fuel cycle." It might take longer to get this new organization established since it is a sweeping change from the past repository-focused, government organization. On the other hand if a new used fuel management organization were to be created, developing a consolidated storage facility for decommissioned site fuel could be a good first project to start with. Under the so-called "Fedcorp" approach of the Voinovich bill, the new organization would assume the Secretary of Energy's responsibilities under the NWPA (although the bill seeks to amend the Atomic Energy Act.)

**The PFS Example**

Yucca Mountain was not the only proposed nuclear waste project to encounter political opposition in recent years. When it became apparent that the repository was not going to be ready to accept commercial spent nuclear fuel in 1998, a group of reactor owners looked into what they might do to adapt to the continued prospects of delay. They formed Private Fuel Storage LLC and negotiated a lease with the Skull Valley Band of the Goshute Tribe for use of tribal land in Utah for development of a storage facility for up to 40,000 metric tons of spent fuel from the member firms and other which would seek to have their spent fuel stored there. Planning proceeded well with the Goshutes, who sought economic development for a chronically depressed area. There was a far different reaction in Salt Lake City and among State elected officials. Nonetheless, PFS pressed ahead and in 1997 submitted a license application to the NRC to build the storage facility. The State of Utah opposed the project and there were

numerous delays, including a detailed risk assessment of proximity to the use of live ordnance in a nearby Air Force bombing range. The license was issued in 2005.

The project was also dependent on approvals by two agencies of the Department of Interior. Despite having earlier approved the proposed lease, the Bureau of Indian Affairs reversed course and said it could not sign off on the lease until the Bureau of Land Management approved a PFS request for a right of way for a rail line to connect the site to the Union Pacific main line. While one member of Congress appealed to the White House to have those approvals denied, another was successful in having the Cedar Mountain Wilderness Area established for the area of the right of way—by amending the *Defense* authorization bill for FY 2006. The net result was that while PFS was successful in getting a license to build the storage facility, it was prevented from getting rail access to the site. On July 27, 2010 a federal judge ruled for PFS in determining that the Department of Interior had been "arbitrary and capricious" and directed DOI to reconsider the lease and right of way requests.

PFS wrote to then-Senate Energy and Natural Resources Committee Chairman Domenici and House counterpart in 2005 with a proposal to provide a "solution to the issue of spent nuclear fuel," by having DOE transfer up to 40,000 metric tons to the licensed storage site at Skull Valley for around $60 million per year. The Committee asked that PFS make the offer to DOE. That was done, but if there was a response it was not made public.

It might be useful for the Subcommittee or Commission staff to have a presentation or discussion with PFS to evaluate what the prospects are for the storage facility being built and what cooperation they may need from the federal government.

**Why Consolidation of Spent Fuel from Decommissioned Sites Makes Sense**

The benefits of consolidation of this spent fuel include:

- Return nine sites to other productive use after final decommissioning
- Improved security at an optimal state-of-the-art storage facility
- Build public confidence in safe transportation of spent fuel
- Likely reduces costs to taxpayers
    - Presumed economies of scale of single site vs nine
    - Reduced legal fees for all concerned
- Greater peace of mind in nine communities
- Demonstrates federal government can do something about waste

While agreeing with the position of the NRC and the nuclear industry that spent fuel is securely managed and well regulated, public intuition suggests that this material would be even more secure if moved to a central location selected and designed to the most current security requirements. If it is true that an accident at a nuclear facility anywhere in the world is a concern at any other nuclear facility, it may have a corollary that a security incident at a spent nuclear fuel storage facility is a cause for concern at all other storage facilities. There is no way of verifying that to be substantiated with threat assessments that are not publicly available, but it not too far-fetched that the concerns might be more evident at a decommissioned site with spent fuel remaining. There are two studies/reports pertaining to spent fuel security from the National Research Council and the GAO that are valuable references.[vi]

**Downside of Consolidation**

- Need for support, or at least neutrality at receiving storage site
- There may be some access and/or handling challenges at present storage sites (that would have to be addressed eventually)
- Possible disputes with owners of older fuel
- Likely requires legislation
- Congress has become accustomed to using the surplus fee revenue for other uses

The last point is a potential obstacle that NARUC has previously described in testimony before the Commission on May 25. It should not be insurmountable, if Congress embraces the use of the Nuclear Waste Fund for the consolidation project, but if the new disposition strategy has some funding concurrency such that the Fund appropriations approach or exceed fee revenue during the same period, there might be some resistance. There has only been one year in which appropriations for the repository program have exceeded fee revenue, so Congress has routinely spent the surplus on other unrelated programs and leaves $25 billion in IOU's for the Fund to be returned by future congresses.

**The Appeal for Commission Action Now**

If you accept the premise highlighted in page 2 of this paper that the Commission finds that there is unlikely to be any conflict between the disposition strategies the Commission may recommend and developing and relocating spent nuclear fuel from the nine decommissioned reactor storage sites (and possibly another similar quantity in other special needs) to a new location to be built and operated by DOE or another party with DOE cooperation, then we request that this conclusion be conveyed to the Secretary of Energy before November. Sending such an initial partial report by that time would allow DOE to draft legislative language that would give the agency authority to develop a consolidated facility as discussed here in time for submittal to Congress with the FY 2012 Federal Budget.

We urge this action because it could result in getting started on a consolidated central storage facility two years sooner than if the recommendation had to await the submittal of the final Commission report in January 2012.

The other reason may seem bureaucratic, but it reflects budgetary realities. With the FY 2011 DOE budget requesting zero dollars from the Nuclear Waste Fund, it is likely to be the same for FY 2012 being formulated in the next several months (for final inclusion in the President's Budget presented to Congress in January 2011. If a "budget line" has zero dollars two years in a row it would be difficult to resume funding in the third year. It might be risky for DOE or even OMB to insert a "placeholder" request for contingency funding to provide the initial funding requirements for the disposal strategy the Commission will recommend in its final report. Congress may not go along with such a request, but it could be conditioned to restrictions. Remember, the Nuclear Waste Fund appropriations are "available until expended," meaning they can be retained for use when the disposal strategy is agreed to between Congress and the Administration. Left to "due course" sequence, the next normal available budget to begin appropriations for the Commission's strategy implementation is likely to be in FY 2013.

It is even more likely that Congress would deliberate and issue authorization in FY 2013 that would begin the appropriations cycle in the following year. We are unable to do much more than speculate how the Administration and Congress will reach agreement on the Commission's recommendation for the grand strategy on the back end of the fuel cycle, but as we said before, if creating a consolidated storage facility for the stranded spent fuel now at decommissioned sites like Wiscasset will not conflict with any disposition strategy, it would make good sense to set in motion now a plan to consolidate that material for the reasons stated in this paper. Even this seemingly simple plan will face difficulty in implementation, so it would be better to get started sooner rather than later.

## Notes and Tables

[i] *Report to Congress on the Demonstration of the Interim Storage of Spent Nuclear Fuel from Decommissioned Nuclear Power Reactor Sites*, December 2008, DOE/RW-0596

[ii] Section 131, NWPA

[iii] *Interim Storage of Spent Nuclear Fuel*, Harvard University Project on Managing the Atom and University of Tokyo Project on Sociotechnics of Nuclear Energy, 2001

[iv] *The Federal Government's Responsibilities and Liabilities under the Nuclear Waste Policy Act*, Congressional Budget Office Statement House Budget Committee July 27, 2010

[v] United States Nuclear Fuel Management Corporation Establishment Act of 2010, S. 3322 (proposed)

[vi] *Spent Nuclear Fuel- Options Exist to Further Enhance Security*, Government Accountability Office, GAO 03-426, 2003 and *Safety and Security of Commercial Spent Nuclear Fuel Storage*, Board on Radioactive Waste Management, National Research Council, 2006

Table 1 and 3 that follow are from the DOE Report to Congress cited in note i above.

Table 1. Status of Decommissioned Commercial Nuclear Power Reactor Sites in the U.S.

| Plant | State | MTHM Stored at Site | MTHM in Pool Storage | MTHM in Dry Storage | Number of Casks | DOE Estimated Casks | Total Casks (Actual Plus Estimated) | Average MTHM/Cask |
|---|---|---|---|---|---|---|---|---|
| Big Rock Point | Michigan | 58 | 0 | 58 | 7 | — | 7 | 8.3 |
| Haddam Neck | Connecticut | 412 | 0 | 412 | 41 | — | 41 | 10.1 |
| Humboldt Bay[a] | California | 29 | 0 | 29 | 5 | — | 5 | 5.8 |
| LaCrosse[b] | Wisconsin | 38 | 38 | 0 | 5 | — | 5 | 7.6 |
| Maine Yankee | Maine | 542 | 0 | 542 | 60 | — | 60 | 9.0 |
| Rancho Seco | California | 228 | 0 | 228 | 21 | — | 21 | 10.9 |
| Trojan | Oregon | 359 | 0 | 359 | 34 | — | 34 | 10.6 |
| Yankee Rowe | Massachusetts | 127 | 0 | 127 | 15 | — | 15 | 8.5 |
| Zion 1 & 2[c] | Illinois | 1,019 | 1,019 | 0 | — | 106 | 106 | 9.6 |
| | | | | | | | | |
| TOTALS | | 2,813* | 1,057 | 1,756* | 188 | 106 | 294 | — |

NOTE: [a]Dry storage underway in 2008. Holtec canister has capacity of 80 assemblies (five canisters for the 390 assemblies).

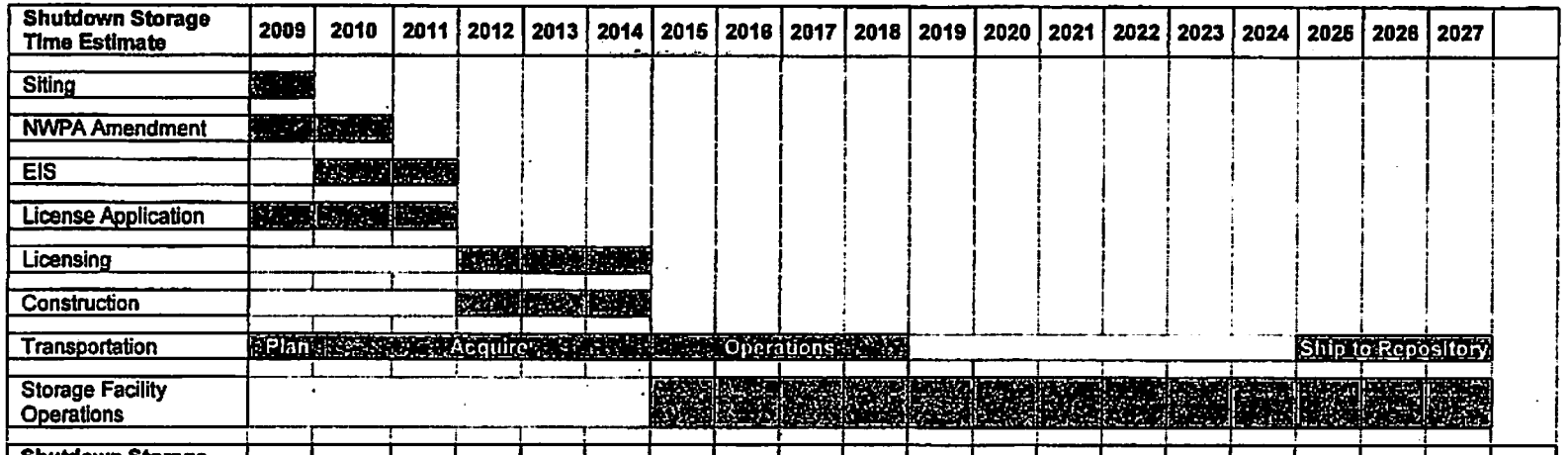
[b]Dry storage contract entered with NAC for five NAC-MPC canisters. Dry storage schedule indicates target completion by the end of 2010.

[c]Decommissioning contract entered with EnergySolutions. Canisters estimated using FuelSolutions W21 capacity. Target schedule for completion is 2013.

DOE = U.S. Department of Energy; MPC = multipurpose canister; NAC = Nuclear Assurance Corporation.

*Totals might differ from sums of values due to rounding.

Table 3. Estimated Cost and Schedule for Interim Storage of SNF from Decommissioned Nuclear Power Reactors Sites




| Shutdown Storage Cost Estimate | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Siting | $10 | | | | | | | | | | | | | | | | | | | $10 |
| EIS/LA/ Licensing | | $4 | $6 | $4 | $4 | $2 | $0 | | | | | | | | | | | | | $20 |
| Storage Facility Construction | | | | $4 | $6 | $10 | | | | | | | | | | | | | | $20 |
| Storage Overpacks | | | | | | $12 | $19 | $25 | $32 | | | | | | | | | | | $88 |
| Transportation Equipment | | | | | | $72 | $72 | | | | | | | | | | | | | $144 |
| Transportation Operations | | | | | | | $12 | $19 | $25 | $32 | | | | | | | $29 | $29 | $29 | $176 |
| Storage Facility Operations | | | | | | | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $130 |
| Site Benefits NWPA Sec.171 | | $5 | $5 | $5 | $5 | $5 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $155 |
| Total | $10 | $9 | $11 | $13 | $15 | $101 | $123 | $64 | $77 | $52 | $20 | $20 | $20 | $20 | $20 | $20 | $49 | $49 | $49 | $743 |

NOTE: The waste acceptance schedule does not consider technical attributes, such as the condition of the commercial SNF, that could affect the order and timing in which the Department could accept it for disposal. This estimate also assumes enactment of all necessary legislation, optimal project funding, the issuance of all necessary authorizations and permits, and the absence of litigation-related delays.

EIS = environmental impact statement; LA = license application; NWPA = Nuclear Waste Policy Act of 1982, as amended; SNF = spent nuclear fuel.

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DEPUTY WHIP

# United States Senate

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OCEANS, ATMOSPHERE, FISHERIES AND COAST GUARD SUBCOMMITTEE

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RANKING MEMBER, SMALL BUSINESS

August 10, 2010

Blue Ribbon Commission on America's Nuclear Future
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Commissioners Meserve, Eisenhower, and Bailey,

Please accept my welcome and appreciation for your acceptance of the Maine Yankee Citizen's Advisory Panel's invitation to hear about this community's issues and concerns about the stored nuclear waste that has remained here in Wiscasset despite the requirements of the Nuclear Policy Act. I also want to express my gratitude to you and the rest of the Commissioners who were unable to attend today for your work on behalf of our country.

I join in welcoming you with the rest of the Congressional Delegation and Governor Baldacci, and I also want to acknowledge the participation of George Richardson, a Member of the Westport Board of Selectmen, Bill Blodgett and Sheridan Bond of the Lincoln County Board of Commissioners, the Wiscasset Selectmen, and Laurie Smith, Wiscasset's Town Manager. This issue is critical for this community's future and our entire Congressional Delegation, the Governor, and local officials are clearly united in effort to remove the 550 metric tons of nuclear waste that has remained here for far too long.

Again, I thank you for your work in providing recommendations to the Secretary of Energy to address the unacceptable impasse regarding spent nuclear waste in our country. The failure of the Department of Energy to execute a nuclear waste policy has cost Maine ratepayers millions of dollars, and unnecessarily prolonged an environmental hazard adjacent to the Sheepscot River. While I appreciate your service to our country to provide recommendations to the Secretary, I do believe it unfortunate that our nuclear waste strategy, which was specifically prescribed in the Nuclear Waste Policy Act of 1982 to create a deep geologic repository, has floundered and led to the creation of the Blue Ribbon Commission on America's Nuclear Future in 2009.

As I wrote to the Secretary of Energy last year, I believe that the decision to reverse the recommendation of a single repository located at Yucca Mountain was profoundly regrettable and failed to include sufficient legal justification. In my letter to Secretary Chu I asked seven specific questions regarding the decision to close the Yucca Mountain project and to this day I have not received a satisfactory response. While I do believe it is critical that the Commission provide viable policy recommendations, the ratepayers throughout our country deserve a clear and concise analysis of the merits of the decision to, as the DOE's General Counsel recently stated to me, "wind down" Yucca Mountain.

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At the same time, the bottom line is that any progress towards removing this nuclear waste to a more secure location, at a lower cost to Maine ratepayers, is preferable to the status quo. To that end, I believe that the Blue Ribbon Commission should advise the Secretary to prioritize the nuclear waste that remains at decommissioned nuclear energy plants, such as Maine Yankee. In addition, while I strongly support a national repository, I do believe that identifying locations in communities that volunteer to accept nuclear waste should be considered as a short-term solution to reduce costs and minimize the security threat.

The fact is that the current impasse must be addressed expeditiously and I appreciate your willingness to personally review the situation here in Wiscasset, Maine. I look forward to reviewing your report and working together to develop a coherent nuclear waste strategy that does not leave communities like Wiscasset with the expensive, long term burdens.

Sincerely,

OLYMPIA J. SNOWE
United States Senator

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# United States Senate

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SPECIAL COMMITTEE ON AGING

August 10, 2010

The Honorable Richard Meserve – Co-Chair
Mr. Phil Sharp – Co-Chair
Transportation and Storage Subcommittee
Blue Ribbon Commission on America's Nuclear Future
1000 Independence Ave. SW
Washington, DC. 20585

Dear Mr. Meserve and Mr. Sharp:

Thank you for agreeing to my request that the Blue Ribbon Commission on America's Nuclear Future visit Wiscasset, ME. It is especially important that the Commission see firsthand the impact of the federal government's failure to take responsibility for spent nuclear waste from decommissioned plants.

In 1998, the Nuclear Waste Policy Act required the federal government to accept used nuclear fuel generated by commercial nuclear power plants. The Department of Energy (DOE) is responsible for managing and accepting this fuel. Due to the long delays in licensing a storage facility at Yucca Mountain, DOE has not accepted the waste, and several courts have ruled that the federal government is in breach of its obligation.

Until DOE develops a plan to deal with the waste, decommissioned nuclear power plants like Maine Yankee here in Wiscasset have to store their spent nuclear fuel onsite and charge ratepayers to pay for the storage. Nationwide, the combination of fees for storage and paying out settlements for the lawsuits has already cost taxpayers hundreds of millions of dollars. In Maine, the annual cost to electric customers is $6 - 8 million to store waste.

I urge you to give the utmost priority to removal of waste from shutdown reactors. Ratepayers in the affected states have paid for storing this waste for decades while waiting for the federal government to carry out its mandated responsibility. Also, sites like the location here in Wiscasset could be redeveloped for more economically productive purposes if the waste were removed. This could create much-needed jobs and government revenues to help communities recover from the economic recession.

Thank you for your work on this important matter.

Sincerely,

Susan Collins

Susan M. Collins
United States Senator

August 10, 2010

Richard Meserve, Co-Chairman
Phil Sharp, Co-Chairman
Transportation and Storage Subcommittee of the
Blue Ribbon Commission on America's Nuclear Future
1800 K Street, NW, Suite 1014
Washington, DC 20006

RE: Public Meeting at the Chewonki Foundation in Wiscasset, Maine

Dear Mr. Chairmen:

Please accept this correspondence on behalf of The New England Council (the Council), the oldest regional business organization in the country, before your Subcommittee at today's public meeting.

New England is home to three shutdown commercial reactors in Massachusetts, Maine, and Connecticut. Until the mid 1990's, these three sites provided New England residents with safe, reliable, and affordable power, but now are storing the spent material the federal government had agreed to take possession of by the end of the last decade. In the case of the New England plants, because they are now fully decommissioned, the costs being incurred are entirely related to the secure storage of the spent fuel.

The Commission established this Transportation and Storage subcommittee to address the question: "Should the United States change the way in which it is storing used nuclear fuel and high level waste while one or more final disposal locations are established?"

The Council does support the construction of some type of central interim storage facility for spent nuclear fuel, with priority given to the spent nuclear fuel collected and held at decommissioned reactor sites, and so long as title to the spent nuclear fuel passes to the federal government, while the final location for disposing such waste is developed. As you know, the Nuclear Regulatory Commission (NRC) has the authority to license these interim storage facilities under the Atomic Energy Act.[1] As such, "independent spent fuel storage installations" are usually licensed for on-site storage at reactor sites, but can also include central storage facilities.

Four years ago the NRC issued a license for a private central storage facility on February 21, 2006, on the reservation of the Skull Valley Band of the Goshute Indians in Utah that

[1] 42 U.S.C. s. 2011 et seq., 10 CFR Part 72.

was intended to receive waste from commercial reactor sites.[2] The 20-year license, renewable for an additional 20 years, allows up to 40,000 metric tons of spent fuel to be stored in 4,000 dry casks pending shipment by the Department of Energy to a permanent repository. However, the spent fuel would be returned to the utilities that own it if the Department of Energy could not dispose of it prior to the license expiring.[3] While this decision has been challenged and the license has not yet issued, it raises important issues concerning ownership of, the continuing obligation for, and liabilities stemming from such spent nuclear fuel if a permanent repository or some other method of disposal is not in place at the expiration of an interim license.

It is for these and other reasons that the Council respectfully urges you to also consider the importance of the proposed Yucca Mountain site for the permanent storage of spent nuclear fuel. We believe that this deep geologic repository remains the only sensible location for the permanent disposal of such high-level radioactive waste.

The Department of Energy's (DOE's) Office of Civilian Radioactive Waste Management (OCRWM) is responsible for management and disposal of spent nuclear fuel and other highly radioactive waste from nuclear power plants and defense facilities. Under the Nuclear Waste Policy Act (NWPA, 42 U.S.C. 10101 et seq.), the only candidate site for permanent disposal of such waste is Yucca Mountain, Nevada.[4]

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[2] Nuclear Regulatory Commission, *License for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste SNM-2513*, February 21, 2006.

[3] Private Fuel Storage, LLC, *Frequently Asked Questions: Financial Accountability*, http://www.privatefuelstorage.com/faqs/faqs.html.

[4] Congress enacted the NWPA in 1982 for the purpose of establishing a "definite Federal policy" for the disposal of high-level radioactive waste and spent nuclear fuel. Congress found that "[f]ederal efforts during the past 30 years to devise a permanent solution to the problems of civilian radioactive waste disposal have not been adequate."Congress' solution was to establish, through the NWPA, "a schedule for the siting, construction, and operation of repositories that will provide a reasonable assurance" of safe disposal of these materials. To that end, the NWPA set out a detailed, specific procedure for site selection and review by the Secretary of Energy, the President, and the Congress, followed by submission of the Application for a construction permit, review, and final decision thereon by the NRC.

In 1987, Congress adopted an amendment to the NWPA that directed DOE to limit its site selection efforts to Yucca Mountain and to "provide for an orderly phase-out of site specific activities at all candidate sites other than the Yucca Mountain site." In February 2002, following a comprehensive site evaluation, the Secretary of Energy concluded that Yucca Mountain was "likely to meet applicable radiation protection standards" and recommended to the President that Yucca Mountain be developed as a nuclear waste repository. The President then recommended the Yucca Mountain site to Congress. As provided in the NWPA the state of Nevada filed a notice of disapproval, and Congress responded with a joint resolution in July 2002 approving the development of a repository at Yucca Mountain. The joint resolution was presented to the President and

The NWPA also authorized the DOE to enter into contracts with nuclear power providers that required the DOE to collect and dispose of spent nuclear fuel in exchange for payments by the providers into a statutorily established Nuclear Waste Fund (NWF), consisting of a tenth of a cent per kilowatt hour fee paid by their ratepayers who benefited from the electricity generated by nuclear power.[5] Congress, through the NWPA, directed the federal disposal process to begin no later than January 31, 1998. The DOE failed to begin collecting and disposing of this spent nuclear fuel by the statutory deadline, forcing nuclear utilities to spend hundreds of millions of dollars on temporary storage for this spent nuclear fuel that the federal government was contractually obligated to remove.[6]

Not unexpectedly, seventy-one lawsuits have been filed by these nuclear power providers against the DOE since 1998, resulting in approximately $1.2 billion in damages and settlements thus far.[7] Estimates for the total potential liability incurred by the DOE as a result of the Yucca Mountain litigation range as high as $50 billion.[8] These monetary damages will continue to be assessed since there is little likelihood of constructing a facility able to store such radioactive waste in the United States within the foreseeable future.[9]

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signed into law. (Pub. L. No. 107-200, 116 Stat. 735 (2002), codified at 42 U.S.C. s. 10135). See *Nuclear Energy Inst.* v. *Envtl. Prot. Agency*, 373 F.3d 1251, 1302 (D.C. Cir.2004) holding that "Congress has settled the matter" of Yucca Mountain's approval for development because "Congress's enactment of the Resolution . . . was a final legislative action once it was signed into law by the President."

Accordingly, DOE filed an application for construction authorization with the Nuclear Regulatory Commission (NRC) for the proposed Yucca Mountain repository in June 2008.

[5] As of July 1, 2009, fees paid into the NWF totaled $16.3 billion. The NWF has also received $12.8 billion in intergovernmental transfers. The Congressional Budget Office predicted the NWF's balance at the end of FY2009 would be $23.8 billion.

[6] U.S. nuclear power plants spend hundreds of millions of dollars a year to store radioactive SNF at the bottom of 40-feet deep pools or in "dry casks" located outside of the facility. Steve Hargreaves, "Nuclear Waste: Coming to a Town Near You?", CNNMoney.com, November 4, 2009.

[7] Of the $1.2 billion, the federal government has paid only $565 million in settlements and damages. The remaining judgments are in the appeals process and are not yet final. Statement of Kim Cawley, Chief, Natural and Physical Resources Costs Estimates Unit, Congressional Budget Office before the House Committee on the Budget, July 16, 2009.

[8] Marcia Coyle, *Nuclear Dispute Fallout*, The National Law Journal, September 14, 2009.

[9] Statement of Kim Cawley, Chief, Natural and Physical Resources Costs Estimates Unit, Congressional Budget Office before the House Committee on the Budget, July 16, 2009, at 1 ("The Department of Energy has not yet disposed of any civilian nuclear waste and currently has no identifiable plan for handling that responsibility").

The earliest projected date for transporting spent nuclear fuel and other highly radioactive waste to Yucca Mountain is 2020 - 22 years beyond the 1998 deadline established by the NWPA. Because nuclear power plants will continue to generate nuclear waste after a repository opens, DOE estimates that all waste could not be removed from existing reactors until about 2066 even under the current Yucca Mountain schedule. Moreover, not all the projected waste could be disposed of at Yucca Mountain unless NWPA's current limit on the repository's capacity is increased.[10]

After years of decreases in funding for the Yucca Mountain project, the Obama Administration has decided to "terminate the Yucca Mountain program while developing nuclear waste disposal alternatives," according to the DOE FY2010 budget justification. Alternatives to Yucca Mountain are to be evaluated by a panel of experts convened by the Administration. At the same time, according to the justification, the Nuclear Regulatory Commission (NRC) licensing process for the Yucca Mountain repository is to continue, "consistent with the provisions of the Nuclear Waste Policy Act."

The FY2010 OCRWM budget request sought only enough funding to continue the Yucca Mountain licensing process and to evaluate alternative policies, according to DOE. All work related solely to preparing for construction and operation of the Yucca Mountain repository is being halted, according to the DOE budget justification. The House and Senate agreed with the Administration's plans to provide funding solely for Yucca Mountain licensing activities and provided $5,000,000 "to create a Blue Ribbon Commission to consider all alternatives for nuclear waste disposal."[11]

Thus, The Blue Ribbon Commission on America's Nuclear Future (Blue Ribbon Commission) was established to review federal policy on spent nuclear fuel management and disposal and to make recommendations for a new plan to address these issues, i.e. examine alternatives to the Yucca Mountain project. The Commission is required, however, to consider deep geological disposal as an alternative, allowing it to consider the current Yucca Mountain project as well.[12]

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[10] U.S. Department of Energy, Office of Civilian Radioactive Waste Management, *Total System Life Cycle Cost Report*, DOE/RW-0591, Washington, DC, July 2008.

[11] P.L. 111-85 (2009).

[12] See Advisory Committee Charter at 3 (c). Also, The House passed appropriations bill specified that the review must include Yucca Mountain as one of the alternatives, despite the Administration's contention that the site should no longer be considered. According to the House Appropriations Committee report, "It might well be the case that an alternative to Yucca Mountain better meets the requirements of the future strategy, but the review does not have scientific integrity without considering Yucca Mountain."

The DOE believes that abandoning the Yucca Mountain project "will provide finality in ending the Yucca Mountain project for a permanent geologic repository and will enable the Blue Ribbon Commission, as established by the Department and funded by Congress, to focus on alternative methods of meeting the federal government's obligation to take high-level waste and spent nuclear fuel."[13] The DOE has never questioned the technical, safety, and environmental merits of its 2008 application for construction authorization for the project that is pending before the NRC, but simply believes that the Yucca Mountain project is no longer a workable option and that alternatives will better serve the public interest. In other words, it appears that the project is being abandoned for political reasons.

But when Congress selected the Yucca Mountain site over Nevada's objection in 2002, it reinforced the expectation in the 1982 Act that the project would be removed from the political process and that the NRC would complete an evaluation of the technical merits:

> If this resolution is approved, a license application will be submitted by the Department of Energy for Yucca Mountain and over the next several years, the Nuclear Regulatory Commission will go through all of the scientific and environmental data and look at the design of the repository to make sure that it can meet environmental and safety standards. This will be done by scientists and technical experts.[14]

Nevertheless, the NWPA does not compel the NRC to grant a construction authorization for the repository at Yucca Mountain. It is possible that the application might not be granted, or the repository might not be constructed and become operational for any number of reasons. We recognize and respect the Administration's decision to explore other long-term solutions.

Current law, though, provides no alternative repository site to Yucca Mountain, and it does not authorize the DOE to open temporary storage facilities without a permanent repository in operation.[15] Without congressional action, then, the default alternative to the Yucca Mountain project would be indefinite onsite storage of spent nuclear fuel at reactor sites and other nuclear facilities. A decision to abandon the Yucca Mountain project leaves the United States without the permanent disposal solution mandated by the NWPA, and consequently without a federally promised process and timetable for remov-

[13] U.S. Department of Energy's Motion to Withdraw its Application for Authorization to Construct a National High-Level Nuclear Waste Repository at Yucca Mountain (Mar. 3, 2010) at 3.

[14] 148 CONG. REC. S6476 (2002) (statement of Sen. Levin).

[15] 42 U.S.C. § 10172(a) ("The Secretary may not conduct site-specific activities with respect to a second repository unless Congress has specifically authorized and appropriated funds for such activities.").

ing spent nuclear fuel from the onsite storage facilities maintained by nuclear power providers, at least until Congress legislates an alternative method of disposal. Although the NRC has determined that spent nuclear fuel can be stored safely at reactor sites for many decades, the licensing of new plants could be delayed by the lack of a definite disposal plan. No new commercial reactors have been ordered in the United States since the 1970s, but increasing fossil fuel costs, the possibility of controls on carbon emissions, and incentives provided by the Energy Policy Act of 2005 prompted electric utilities to apply for licenses for 26 reactors since September 2007, with several more expected through 2010.[16]

As previously discussed, the Commission could work to develop some type of alternative plan to remove the spent nuclear fuel, or at least the spent nuclear fuel stored at each decommissioned reactor site, to one interim consolidated storage facility. Congress, though, has considered legislation repeatedly since the mid-1990s to authorize a federal interim storage facility for nuclear waste but none has been enacted. The reprocessing or recycling of spent fuel is possible as well, but extremely expensive and raises concerns about the separation of plutonium that could be used in nuclear weapons. In any case, storage and reprocessing would still eventually require a permanent repository, whether on public or private land and a search for a new repository site would need to avoid the political obstacles that accompany such siting decisions. Put differently, if the Yucca Mountain project were abandoned, another repository site in the United States would still be required.

There is a broad scientific agreement in the necessity of providing for the long-term isolation of nuclear waste from the environment. Reprocessing and recycling of nuclear spent fuel can reduce the amount of radioactive waste requiring isolation but cannot entirely eliminate the need for such isolation. Alternatives to deep geologic storage have been studied, such as space and sub-seabed disposal, but none has ever been developed beyond the conceptual stage. After rejecting disposal options ranging from burying nuclear waste in polar ice caps to rocketing it to the sun, the scientific consensus has settled on deep geologic burial as the safest way to isolate spent nuclear fuel in perpetuity.[17]

The safety of the spent fuel during transportation has been raised by opponents as a reason to oppose a single, consolidated site such as Yucca Mountain. In response, the DOE has countered that "over the last 40 years, approximately 3,000 shipments of spent nuclear fuel have been transported safely over America's highways, waterways, and railroads. During this time, an exemplary safety record has been established with no fatalities, injuries, or environmental damage caused by the radioactive nature of the cargo."

For years The New England Council has been a strong supporter of the development of the Yucca Mountain nuclear waste repository. As you know well, the National Academy

[16] Nuclear Regulatory Commission, "Combined License Applications for New Reactors."
[17] *Nuclear Energy Inst.* v. *Envtl. Prot. Agency*, 373 F.3d 1251 (D.C. Cir.2004).

of Sciences has issued numerous studies on the scientific soundness of the facility, and it has been recognized on numerous occasions as the best way for the federal government to fulfill its obligations under the NWPA. Current law requires the Administration to implement the federal policy established for the disposal of high-level radioactive waste and spent nuclear fuel. The continued development of the Yucca Mountain project would obviously fulfill this goal, and provide many benefits, including; the safe and secure storage of our nation's spent nuclear fuel; a sense of fairness to electric ratepayers who bear the burden of the cost of the Nuclear Waste Fund; a clear signal to current and future generators of nuclear power that the government supports safe, reliable, carbon-free power generation; and as importantly, fulfills a commitment to producers of nuclear energy made by the federal government over 25 years ago.

Thank you for providing us with the opportunity to comment on this issue. If you have any questions, please do not hesitate to contact me.

Very truly yours,

*David J. O'Donnell*

David J. O'Donnell
Vice-President of Public Policy

The Lincoln County

Monday, August 16, 2010

Serving Maine and Lincoln County for over a century.





## News



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# Feds Receive Little Sympathy At Blue Ribbon Commission Meeting



**By J.W. Oliver**

**Jay Hyland, Manager of the Maine Radiation Control Program, addresses the transportation and storage subcommittee. (J.W. Oliver photo)**

Members of the Transportation and Storage Subcommittee of the **Blue Ribbon Commission** on America's Nuclear Future offered little response to strident criticism at a Tuesday, August 10 meeting at The Chewonki Foundation.

According to a notice for the meeting, the Obama administration formed the **Blue Ribbon Commission** in order to "conduct a comprehensive review of policies for managing used nuclear fuel and recommend a new plan."

The Transportation and Storage Subcommittee, according to the notice, "was established to address the question: 'Should the U.S. change the way in which it is storing nuclear fuel and high level waste while one or more final disposal locations are established?'"

The issues are particularly sensitive for Wiscasset and the surrounding area due to the storage of spent fuel at the site of the decommissioned Maine Yankee Nuclear Power Plant.

A wide spectrum of concerned citizens, public officials and representatives of non-profit organizations leveled criticism at the commission as the envoy of the federal government.

Marge Kilkelly, Chair of the Maine Yankee Community Advisory Panel on Spent Nuclear Fuel Storage and Removal, or CAP, outlined a brief history of the CAP in her opening remarks.

Kilkelly set an optimistic tone through much of her presentation, praising Maine Yankee and the CAP. According to Kilkelly's 11-page written statement, "The Community Advisory Panel model builds trust among stakeholders and leads to project success if you have the courage to take the risks inherent in an open process."

Kilkelly did not hesitate to prompt action on the part of the federal government, however.

According to Kilkelly's statement, "Five years after the end of decommissioning we are left with a facility that costs electric ratepayers $6-$8 million per year to operate and valuable real estate that can not be

reused... A site that only stores waste is the most inefficient method of storage."

Richard Meserve, Co-Chairman of the subcommittee, President of the Carnegie Institution for Science, and former Chairman of the U.S. Nuclear Regulatory Commission, commended Kilkelly for the panel's work.

"We've been very impressed with the relationship Maine Yankee has with the local community," Meserve said.

Wayne Norton, Chief Nuclear Officer at Maine Yankee and Chairman of the Decommissioning Plant Coalition, addressed the panel on behalf of both organizations. Norton said Maine Yankee sued the Department of Energy for failure to meet its obligations under federal law.

According to Norton's written statement, "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 the material... costs that bring us no closer to moving the used fuel."

Subcommittee member Susan Eisenhower, granddaughter of President Dwight Eisenhower and President of Eisenhower Group Inc., a prominent consulting firm, asked Norton "for how long and at what cost" Maine Yankee could continue to "assure the safety and security" of Maine Yankee.

Norton did not provide a definite estimate. Maine Yankee wants to go out of business, he said, and make the company's land available for future redevelopment.

John Kerry, the Director of the state Office of Energy Independence and Security, read a brief joint statement from his office and from Governor John Baldacci.

According to the statement, "We believe that good economic, national security and energy policy warrants removal of the waste from these 'stand-alone' ISFSIs [Independent Spent Fuel Storage Installations] to a consolidation site which can be operated at a lower cost per unit of stored waste, be better protected from terrorist actions or other risks and relieve Maine ratepayers of a cost that could be better spent on renewable energy and energy efficiency measures."

Brian Whitney, Director of Outreach and Economic Development for U.S. Sen. Olympia Snowe, read a statement from Snowe's office. "The current impasse must be addressed expeditiously," Whitney said.

Snowe's statement criticized the Obama administration's decision to eliminate Nevada's Yucca Mountain as an option for long-term storage of spent fuel.

Eisenhower asked Whitney for advice on how to remove the issue from "the current political process."

"I assume that's why you're here," Whitney replied. "That's your job."

A representative of U.S. Sen. Susan Collins read a statement from Collins' office. According to the statement, Collins shares many of the concerns of other officials. "I urge you to give the utmost priority to removal of waste from shutdown reactors," Collins wrote.

Redevelopment of the Maine Yankee site "could create much-needed jobs and government revenues to help communities recover from the economic recession," Collins added.

John Graham, Deputy Chief of Staff for U.S. Rep. Mike Michaud, delivered Michaud's statement. "It is imperative that the commission take swift action," Graham said.

Nick Batista delivered a statement from U.S. Rep. Chellie Pingree. According to a press release from Pingree's office, "The federal government was supposed to have started removing the spent fuel in 1998 but it is still stuck in Maine at considerable expense to us."

Local officials spoke, too, including Wiscasset Selectman Ed Polewarczyk. Polewarczyk pointed out that the valuable spent fuel accounts for seven percent of Wiscasset's tax base, a "very real" financial incentive that leads some residents to question the necessity of removal.

"The argument is being made that the tax base would actually be enhanced," Meserve said. Despite concerns about groundwater pollution at Bailey Point, redevelopment could potentially lead to higher property valuation, he said.

Polewarczyk, a former NASA contractor, warned the commission about non-conformance with federal guidelines. "We learned some very hard lessons on the shuttle program," Polewarczyk said. "Acceptance of deviation is a bad thing."

In the next portion of the meeting, the commission heard testimony from the State/Regional Panel on Storage and Transportation in the Northeast.

Sen. Deb Simpson (D-Auburn) said the government needs to designate a central storage facility. "Decommissioned plant fuel should be first to move into this facility," she said.

"This first phase is taking a little too long," Simpson said. "We need a path forward."

Jay Hyland, Manager of the Maine Radiation Control Program, said rising sea levels could devastate Maine Yankee. "A sizable chunk of Bailey Point is 20 feet above sea level," Hyland said.

Uldis Vanags, the State Nuclear Engineer at the Vermont Department of Public Service, said Vermont Yankee, a still operative plant in Vernon, Vt., needs a 20-year license renewal in 2012.

The storage issue, however, "places at risk the continued operation of Vermont Yankee," Vanags said. "There is no plan for the fuel. It's stockpiling there. Vermonters are very concerned," he said.

Brian O'Connell, Director of the Nuclear Waste Program of the National Association of Regulatory Utility Commissioners, recommended "early action" by the Department of Energy to "consolidate storage" and "return nine [decommissioned] sites to productive use."

Lewis Curtis, a CAP member and former Deputy Director of Emergency Management for Boothbay Harbor, also recommended "less costly and more efficient" centralized storage.

According to his written statement, Curtis, a retired Major General, specialized in nuclear munitions for part of his 34 years in the Air Force and "provided the structure for the Emergency Response Plans for three towns and the county after Maine Yankee ceased operations."

Before the government can undertake the sensitive work of transportation, however, they need to address "deteriorating infrastructure and the need to strengthen the shipment tracking system," Curtis wrote.

Meserve questioned the wisdom of establishing a central, interim storage site before the development of a long-term storage site. If a storage site is a temporary solution, the government will need to transport the spent fuel twice - once from the reactors to the storage site and again from the storage site to a more permanent location.

"I don't think that's an insurmountable concern," O'Connell said.

Other issues, including public trust in the wake of the government's inability to find storage solutions, might hamper the search for a storage facility, Meserve said.

After a question and answer session between the panel and the subcommittee, several citizens took the podium.

Mariah Holt, a former legislator, said her research group has studied nuclear power for 30 years. "Even the lowest [radiation] doses can cause cancer," she said. "Couldn't we just stop making it?"

Matt Marston, a former Maine Yankee employee, said the federal government's right to ban further storage at Yucca Mountain is in question.

Michael Mayhew, who described himself as a professional engineer and environmentalist, said he "was very active on the referendums to shut Maine Yankee down."

"Nine of the ten communities in the Wiscasset area overwhelmingly voted to shut down the plant," Mayhew said. "We've got plenty of energy. We've got tidal power... We don't need nuclear power. It is the most expensive commercially available power," he said.

Roger Jones said he lives on Rt. 144. The state road is the "only evacuation route for Westport Island residents" in case of an emergency at the plant, which, he said, is "no more than a dirty bomb waiting to go off."

The deterioration of the road has been a persistent complaint from Westport residents in recent months. Jones asked the subcommittee to pressure the state to fix the road.

Clark Jones said he "can look right over and see Maine Yankee" from his home.

"I don't think nuclear power causes cancer," Jones said. Jones' mother died of cancer before the plant was built, he said. "I'd like to see another nuclear power plant," he said.

Margaret Schuler listed a variety of complaints with Maine Yankee and other energy providers, nuclear and otherwise. Referring to BP, Margaret Schuler said, "Apparently a lot of those people are watching pornography instead of doing their work, because it's taking all summer to clean up the oil spill."

"I don't think tourists really like industrial sites," Margaret Schuler added. She also said that business owners, like Maine Yankee, should "be more responsible for the waste that was created," regardless of the government's commitments.

"Who's protecting this site from terrorism?" Margaret Schuler asked. Maine Yankee doesn't have security, She claimed, and sometimes people hunt deer on the property.

Kenneth Schuler said the government "can find someone who wants [the spent fuel] if they have no morals - if the price is right."

"If this thing melts, we all might as well sit down and have a beer," Kenneth Schuler said. Kenneth Schuler said a Maine Yankee employee once gave him a code word - martini - in case of a meltdown.

Deb Katz of the Citizens Awareness Network said she "drove over five hours" from her Vermont home to attend the meeting. "I live four and a half miles from Yankee Rowe, 16 miles from Vermont Yankee," Katz said.

Katz referred to the plants as "pre-deployed weapons of mass destruction" and called on the government to "acknowledge that it has abdicated its responsibility and neglected nuclear communities."

In closing comments, Meserve thanked The Chewonki Foundation for hosting the meeting, thanked the CAP and said the meeting was "interesting and productive."

Subcommittee member Vicky Bailey, a former Commissioner of the Federal Energy Regulatory Commission, said "The public comments are quite helpful" and "underscore the passion" surrounding nuclear issues.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONER:
William D. Magwood, IV

| | | |
|---|---|---|
| In the Matter of | ) | |
| U.S. DEPARTMENT OF ENERGY | ) | Docket No. 63-001-HLW |
| (High-Level Waste Repository) | ) | |

**DECISION ON THE MOTION OF THE STATE OF WASHINGTON, THE STATE OF SOUTH CAROLINA, AIKEN COUNTY, SOUTH CAROLINA, AND WHITE PINE COUNTY, NEVADA FOR RECUSAL/DISQUALIFICATION**

**Introduction and Background**

The State of Washington, the State of South Carolina, Aiken County, South Carolina, and White Pine, Nevada (Movants) filed a motion on July 9, 2010, in which the Movants requested that Commissioner Apostolakis, Commissioner Ostendorff, and I recuse ourselves from any consideration of the Construction Authorization Board's (Board) decision to deny the U.S. Department of Energy's (DOE) motion to withdraw its application for authorization to construct a high level waste repository at Yucca Mountain.[1] Since individual Commissioners make their own individual decisions in response to motions for disqualification,[2] I respond to the motion only insofar as the Movants request my recusal. My review of the bases for the motion

[1] *State of Washington, State of South Carolina, Aiken County, South Carolina, and White Pine County, Nevada's Motion for Recusal/Disqualification* (July 9, 2010) (Motion).

[2] *See In re Joseph J. Macktal*, CLI-89-18, 30 NRC 167, 170 (1989).

and the pertinent legal standards lead me to a clear decision: I deny the motion that I recuse myself.

The Movants rely on my testimony before the Senate Committee on Environment and Public Works on February 9, 2010, at the hearing concerning in part my nomination for a position as a Commissioner of the United States Nuclear Regulatory Commission (NRC). The testimony at issue occurred as part of a brief exchange with Senator Barbara Boxer:

> Senator Boxer: Now, I have a question here for all three of you from Senator Reid. You can just answer it yes or no. If confirmed, would you second guess the Department of Energy's decision to withdraw the license application for Yucca Mountain from NRC's review?
>
> Mr. Magwood: No
>
> Senator Boxer: Okay. Anybody else?
>
> Mr. Apostolakis: No
>
> Mr. Ostendorff: No
>
> Senator Boxer: Thank you. I think he will be very pleased with that.[3]

DOE had recently filed a motion with the Board to stay the proceeding, in which its counsel stated that the President, in his budget for fiscal year 2011, had directed that the Department of Energy discontinue its application to the NRC, and that in accord with these determinations DOE intended to withdraw the application with prejudice and to submit a separate motion within 30 days to determine the terms and conditions of withdrawal.[4] Several weeks later, DOE filed its Motion to Withdraw.[5] After the Senate confirmed my nomination (March 19, 2010) and I was sworn in as Commissioner (April 1, 2010), the Board issued an

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[3] Hearing on the Nominations of George Apostolakis, William Magwood, and William Charles Ostendorff to be Members of the Nuclear Regulatory Commission Before the S. Comm. on Environment and Public Works, 111th Cong. 45 (2010) (unofficial transcript) (Senate Committee Hearing Transcript).

[4] *U.S. Department of Energy's Motion to Stay the Proceeding* (Feb. 1, 2010).

[5] *U.S. Department of Energy's Motion to Withdraw* (Mar. 3, 2010) (Motion to Withdraw).

order suspending the adjudicatory proceeding and consideration of the Motion to Withdraw.[6] The Commission subsequently issued a decision, which I supported, that vacated the Board's suspension order and remanded the matter to the Board for prompt resolution of the Motion to Withdraw.[7] The Board issued a decision that denied DOE's Motion,[8] and the Commission now has before it appeals of the Board's decision.

The Movants contend that recusal on the matter of the Motion to Withdraw is necessary because my testimony "can be reasonably interpreted to demonstrate" that I "have, in fact, prejudged this matter should the Commission choose to review the [Board's] decision."[9] The Movants add, among other things, that "[t]aken at face value, the testimony definitively establishes that [I] have in fact prejudged the issues in this matter."[10]

**Discussion**

Considering all relevant facts and circumstances, a reasonable person would not conclude that my testimony demonstrates prejudgment of the issues now before the Commission or raises doubt about my ability to consider the issues before the Commission fairly and impartially. "[A]n agency official should be disqualified only where 'a disinterested observer may conclude' that the official 'has in some measure adjudged the facts as well as the law of a particular case in advance of hearing it.'"[11] NRC has long recognized that a judge (or Commissioner) should disqualify himself or herself only if "a reasonable man, cognizant of all

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[6] Memorandum and Order (Suspending Briefing and Consideration of Withdrawal Motion) (Apr. 6, 2010) (unpublished).

[7] CLI-10-13, 71 NRC __ (Apr. 23, 2010) (slip op.).

[8] LBP-10-11, 71 NRC __ (June 29, 2010) (slip op.).

[9] Motion at 5.

[10] *Id.*

[11] *Nuclear Info. & Res. Serv. (NIRS) v. NRC*, 509 F.3d 562, 571 (D.C. Cir. 2007) (quoting *Cinderella Career & Finishing Sch., Inc. v. FTC*, 425 F.2d 583, 591 (D.C. Cir. 1970)).

the circumstances, would harbor doubts about the judge's impartiality."[12] Further, courts have long held that "[a]dministrative officers are presumed objective and 'capable of judging a particular controversy fairly on the basis of its own circumstances'"[13] and that "[a] party cannot overcome this presumption with a mere showing that an official 'has taken a public position, or has expressed strong views, or holds an underlying philosophy with respect to an issue in dispute.'"[14]

When Senator Boxer asked me if I would second guess DOE's decision to withdraw the application, it had been my understanding for some time, as learned through the media, that the President had decided to withdraw the application. At the time of the hearing, I believed this to be, in essence, a policy matter that had been already decided. I was aware of the policy debate associated with the intent to withdraw, but was not aware of legal questions regarding DOE's ability to withdraw.

I had resolved not to comment during the hearing on any specific regulatory or adjudicatory issue that might come before the Commission. While there may be some ambiguity about the meaning of "second guess," I certainly did not understand Senator Boxer's question in any sense to ask for my commitment to ignore the law or prejudge an adjudicatory issue of law or fact as to whether DOE could withdraw the application. I answered "no" in response to Senator Boxer's question because I had no intention of undertaking a gratuitous

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[12] *In re Joseph J. Macktal*, CLI-89-14, 30 NRC 85, 91 (1989) (citations and internal quotation marks omitted). NRC case law draws upon the standards for the Federal judiciary. *Id.* Under 28 U.S.C. § 455(a): "Any justice, judge, or magistrate judge of the United States shall disqualify himself in any proceeding in which his impartiality might reasonably be questioned." In a recent opinion, the U.S. Supreme Court observed that a judge should be disqualified under 455(a) only if it appears to a reasonable, objective observer "that he or she harbors an aversion, hostility, or disposition of a kind that a fair-minded person could not set aside when judging the dispute." *Caperton v. A.T. Massey Coal Co.*, 556 U.S. __, 129 S. Ct. 2252, 2266 (2009) (quoting *Litecky v. United States*, 510 U.S. 540, 558 (1994) (Kennedy, J., concurring)).

[13] *NIRS*, 509 F.3d at 571 (quoting *United States v. Morgan*, 313 U.S. 409, 421 (1941)).

[14] *Id.* (quoting *United Steelworkers of America v. Marshall*, 647 F.2d 1189, 1208 (D.C. Cir. 1980)).

assessment or criticism of the reasons for the intent to withdraw. My response reflected my view that the NRC – a regulatory organization – would simply not be a position to "second guess" a policy decision made by the President. Moreover, I was not familiar with how motions to withdraw are handled in cases before the NRC's licensing boards or what legal issues might be raised with such motions.

Further, I did not answer Senator Boxer's question in the context of DOE's Motion to Withdraw or the issues now associated with it. DOE did not file its Motion to Withdraw until several weeks after the hearing. At the time of the hearing, the Commission did not have before it – as it does now – extensive pleadings by multiple parties on the legal questions related to DOE's Motion to Withdraw. No laws or legal questions were the subject of discussion or even mentioned during the brief colloquy with Senator Boxer. Indeed, the brevity of the exchange with Senator Boxer is consistent with my belief that a reasonable person, knowing all the circumstances, would not see my response as seriously suggesting, or Senator Boxer's question as requesting, a fixed and unalterable position on a specific question of law and fact in this agency adjudication.[15]

Finally, for me to have indicated at the hearing an unwillingness to judge an issue fairly and impartially would have been entirely contrary to my testimony that I aspired to be a "strong, independent voice" and always "do the right thing, even when the right thing [isn't] easy."[16] In the Commission's quasi-adjudicatory role, it is my responsibility to weigh the evidence and arguments impartially and to base my decision on the adjudicatory record and the applicable

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[15] The brevity, nature, and timing of the exchange with Senator Boxer also belie the notion that it amounts to such undue and extensive legislative interference with my ability to exercise independent judgment in the agency's adjudicative function as to render invalid such decision-making. The circumstances presented here simply bear no resemblance to the facts that would meet such a high threshold. *See Pillsbury Co. v. FTC*, 354 F.2d 952, 964 (5th Cir. 1966). *Accord ATX, Inc. v. U.S. Dep't of Transp.*, 41 F.3d 1522, 1527-30 (D.C. Cir. 1994).

[16] Senate Committee Hearing Transcript at 36-37.

law. I intend to exercise that responsibility to the very best of my ability and consistent with my sworn duty to execute faithfully the laws of the United States.

**Conclusion**

I have considered carefully the motion seeking my disqualification and the applicable legal standards. I find no basis for my recusal and respectfully decline to recuse myself from the matters before the Commission in this proceeding.

/RA/
William D. Magwood, IV
NRC Commissioner

Dated at Rockville, Maryland
this _11_ day of August, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONER:
William C. Ostendorff

| | | |
|---|---|---|
| In the Matter of | ) | |
| U.S. DEPARTMENT OF ENERGY | ) | Docket No. 63-001-HLW |
| (High-Level Waste Repository) | ) | |

**DECISION ON THE MOTION OF THE STATE OF WASHINGTON, THE STATE OF SOUTH CAROLINA, AIKEN COUNTY, SOUTH CAROLINA, AND WHITE PINE COUNTY, NEVADA FOR RECUSAL/DISQUALIFICATION**

## I. Introduction

By motion dated July 9, 2010, the States of Washington and South Carolina, and the Counties of Aiken, South Carolina, and White Pine, Nevada (Movants) request that I, along with Commissioners Apostolakis and Magwood, recuse ourselves from any consideration of the Construction Authorization Board's (Board) decision to deny the Department of Energy's (DOE) motion to withdraw its application for a high level waste repository at Yucca Mountain.[1] Because Commissioner disqualification decisions are made individually by each Commissioner

[1] *State of Washington, State of South Carolina, Aiken County, South Carolina, and White Pine County, Nevada's Motion for Recusal/Disqualification* (July 9, 2010) (Motion).

whose disqualification is sought,[2] I speak only for myself in this matter. After carefully considering the motion and the applicable law on disqualification of quasi-judicial officers, I decline to recuse myself from this proceeding.

## II. Background

The focus of the Movants' concern is my testimony before the Senate Committee on Environment and Public Works on February 9, 2010, as part of the confirmation process to be a Commissioner for the United States Nuclear Regulatory Commission (NRC). The testimony in question, which consisted of a brief exchange with Senator Barbara Boxer, went as follows:

> Senator Boxer: Now, I have a question here for all three of you from Senator Reid. You can just answer it yes or no. If confirmed, would you second guess the Department of Energy's decision to withdraw the license application for Yucca Mountain from NRC's review?
>
> Mr. Magwood: No
>
> Senator Boxer: Okay. Anybody else?
>
> Mr. Apostolakis: No
>
> Mr. Ostendorff: No
>
> Senator Boxer: Thank you. I think he will be very pleased with that.[3]

Subsequent to this testimony, but prior to my confirmation by the Senate, DOE filed its Motion to Withdraw.[4] This was followed by a Board order suspending the adjudicatory proceeding and consideration of the Motion to Withdraw.[5] After I was sworn in as a

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[2] *See In re Joseph J. Macktal*, CLI-89-18, 30 NRC 167, 170 (1989).

[3] Hearing on the Nominations of George Apostolakis, William Magwood, and William Charles Ostendorff to be Members of the Nuclear Regulatory Commission Before the S. Comm. on Environment and Public Works, 111th Cong. 51-52 (2010) (unofficial transcript).

[4] *U.S. Department of Energy's Motion to Withdraw* (Mar. 3, 2010) (Motion to Withdraw).

[5] Memorandum and Order (Suspending Briefing and Consideration of Withdrawal Motion) (Apr. 6, 2010) (unpublished).

Commissioner, the Commission then issued a decision, which I approved, vacating the Board's suspension order and remanding the matter to the Board for prompt resolution of the Motion to Withdraw.[6] This culminated in the Board's decision to deny DOE's Motion,[7] and appeal of that decision is now pending before the Commission.

The Movants argue that the exchange during my confirmation hearing testimony "can be reasonably interpreted to demonstrate that each [Commissioner has], in fact, prejudged this matter should the Commission choose to review the [Board's] decision."[8] The Movants continue that "[t]here is no other logical meaning that can be ascribed to the statements not to 'second guess' DOE on the issue of withdrawal" and that "[n]o other meaning was intended or understood, nor can any other meaning be inferred."[9]

## III. Discussion

As discussed below, in light of the applicable law on disqualification of quasi-judicial officers and the facts and circumstances of this case, I deny the motion for recusal/disqualification with respect to myself.

"[A]n agency official should be disqualified only where 'a disinterested observer may conclude' that the official 'has in some measure adjudged the facts as well as the law of a particular case in advance of hearing it.'"[10] As a general matter, courts will only reverse an

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[6] CLI-10-13, 71 NRC __ (Apr. 23, 2010) (slip op.).

[7] LBP-10-11, 71 NRC __ (June 29, 2010) (slip op.).

[8] Motion at 5.

[9] *Id.*

[10] *Nuclear Info. & Res. Serv. (NIRS) v. NRC*, 509 F.3d 562, 571 (D.C. Cir. 2007) (quoting *Cinderella Career & Finishing Sch., Inc. v. FTC*, 425 F.2d 583, 591 (D.C. Cir. 1970) (emphasis added). *See also In re Kempthorne*, 449 F.3d 1265, 1269 (D.C. Cir. 2006) (explaining that "Under 28 U.S.C. § 455(a) [an adjudicator] must recuse himself 'in any proceeding in which his impartiality might reasonably be questioned . . . by *one fully apprised of the surrounding circumstances*'" (quoting *Cobell v. Norton*, 334 F.3d 1128, 1143-44 (D.C. Cir. 2003)).

agency official's decision not to recuse himself when the official "demonstrably made up [his] mind about important and specific factual questions and [is] impervious to contrary evidence."[11]

It is also well-settled that "[a]dministrative officers are presumed objective and 'capable of judging a particular controversy fairly on the basis of its own circumstances'" and that "[a] party cannot overcome this presumption with a mere showing that an official 'has taken a public position, or has expressed strong views, or holds an underlying philosophy with respect to an issue in dispute.'"[12]

At the time of Senator Boxer's question, I had only limited knowledge and appreciation for the matters at issue as part of the licensing proceeding, as well as only limited familiarity with DOE's latest efforts with regard to that application. I certainly had no knowledge of the legal issues pertaining to the withdrawal of the application. I understood Senator Boxer's question to ask whether or not I would take a position on DOE's decision to seek withdrawal of the application *as a matter of policy*. My belief at the time was, and still is, that it was not my place to question the decision made by the Secretary of Energy to *pursue* such a withdrawal.

It was not my belief, nor do I think that any reasonable person could conclude as such in light of all the facts and circumstances, that Senator Boxer was asking for my opinion as to whether the application could be withdrawn as a matter of law. It was simply not conceivable to me that the Senator would ask me to provide an on-the-spot opinion on a legally and technically complex subject with simply a "yes or no" answer, or to opine on the matter without having been given sufficient opportunity to understand the extensive history or complicated technical or legal issues.

At the time of the hearing, the specific issue of the withdrawal of DOE's application was not before the Commission, nor was I familiar with the laws and regulations applicable to that

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[11] *United Steelworkers of America v. Marshall*, 647 F.2d 1189, 1209 (D.C. Cir. 1980), *cert. denied*, 453 U.S. 913 (1981).

[12] *NIRS*, 509 F.3d at 571 (quoting *United Steelworkers of America*, 647 F.2d at 1208).

issue. Therefore, no reasonable person, knowing all of the facts and circumstances of the confirmation hearing, the Yucca Mountain licensing proceeding, and the NRC's adjudicatory processes, could have understood my "no" answer to mean that I "had demonstrably made up [my] mind about important and specific factual questions and was impervious to contrary evidence," or had formed firm views on the pertinent legal issues.

Furthermore, though the courts generally do not "tolerate undue legislative interference with an administrative agency's adjudicative functions,"[13] the threshold for a court to reach such a conclusion is high. Disqualification is generally only found as the result of an administrative decision-maker being subjected to a "searching examination" or "investigation [that] focuse[d] directly and substantially upon the mental decisional processes of [an adjudicatory body] *in a case which is pending before it*."[14] "A point of view - even bias induced by legislative interference - as to questions of law . . . does not necessarily render invalid an agency's decision."[15]

Senator Boxer asked a single "yes or no" question (in fact directing the nominees that we could "just answer it yes or no"), and did not ask why I answered as I did. The question itself contained the ambiguous phrase "second guess," and there was no follow-up questioning that would have provided further illumination of the rationale behind my answer. This exchange could hardly be construed as a "searching examination" and could not be viewed as an "investigation [that] focuse[d] directly and substantially upon" my decision-making process.

## IV. Conclusion

Throughout my many years of federal service, my ability to objectively and fairly consider the matters that have demanded my attention has never been challenged. In my role as an

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[13] *Gulf Oil Corp. v. Fed. Power Comm'n*, 563 F.2d 588, 610 (3d Cir. 1977).

[14] *Pillsbury Co. v. FTC*, 354 F.2d 952, 964 (5th Cir. 1966) (emphasis added). *Accord ATX, Inc. v. U.S. Dep't of Transp.*, 41 F.3d 1522, 1527-1530 (D.C. Cir. 1994).

[15] *Gulf Oil Corp.*, 563 F.2d at 612.

NRC Commissioner, I have objectively and fairly considered and decided on all of the matters that have been brought before me based on their individual merits, and without prejudgment. This is also the case in this particular proceeding.

/RA/
William C. Ostendorff
NRC Commissioner

Dated at Rockville, Maryland
this 11th day of August, 2010

# NOTATION VOTE

## RESPONSE SHEET

**TO:** Annette Vietti-Cook, Secretary

**FROM:** COMMISSIONER APOSTOLAKIS

**SUBJECT:** SECY-09-0090 – FINAL UPDATE OF THE COMMISSION'S WASTE CONFIDENCE DECISION

**Approved** XX **Disapproved** _____ **Abstain** _____

**Not Participating** _____

**COMMENTS:** **Below** ___ **Attached** XX **None** ___

SIGNATURE

8/13/10

DATE

**Entered on "STARS" Yes** X **No** ___

**COMMISSIONER APOSTOLAKIS' COMMENTS ON SECY-09-0090:**
**FINAL UPDATE OF THE COMMISSION'S WASTE CONFIDENCE DECISION**

I approve staff's recommendation to publish the revised Commission's Waste Confidence decision and to make a conforming change to 10 CFR 51.23(a), subject to the following comments. I appreciate the extensive staff analysis and well developed proposal that are before the Commission. I also have had the opportunity of reviewing the thoughtful analyses and recommendations in the votes of my fellow Commissioners and former Chairman Klein.

I concur in the assessment of Chairman Jaczko and my fellow Commissioners that the Commission should now proceed to make its determination on the draft final waste confidence update and final rule. It appears that the Commission is close to consensus on immediate and longer term action. I understand the desire of former Chairman Klein, as well as Commissioner Svinicki, to move cautiously in their initial votes last year, given the uncertainties regarding changes in national policy at that time. Although the draft final rule that the staff submitted in 2009 assumed that Yucca Mountain would not be built, I appreciate the prudence of pausing to become better informed about current developments in the national policy on disposal of high-level waste and spent nuclear fuel.

At this juncture, the Administration has moved forward and has established the Blue Ribbon Commission on America's Nuclear Future. The Blue Ribbon Commission is chartered to conduct and is engaged in a comprehensive review of policies for managing the back end of the nuclear fuel cycle, including all alternatives for the storage, processing, and disposal of civilian and defense used nuclear fuel, high-level waste, and materials derived from nuclear activities. It is also to make recommendations for a new plan to address these issues. In addition, the Administration has moved to terminate the Yucca Mountain project, submitted a motion to the NRC to withdraw the construction authorization application for Yucca Mountain, and is in litigation concerning these actions. Thus, it appears that it will be several years at least before the Commission would have the benefit of any additional information and recommendations that might be of significant interest to the Commission as it assesses its continuing confidence in the safe management and disposal of high level waste and spent nuclear fuel.

Until such time as a disposal site is made available by the federal government, I am confident that NRC's licensing and inspection programs will continue to ensure the safe and secure management of spent nuclear fuel by licensees in either a spent fuel pool or in dry cask storage systems. I am also confident that storage can be accomplished without significant environmental impacts for many decades. In particular, I join my fellow Commissioners in supporting the staff's proposed updated Finding 4.

I also support modification of Finding 2 and the final rule to provide that a mined geologic repository will be available "when necessary" rather than offering a target date for repository availability. The federal government remains obligated to provide permanent disposal capacity for high-level radioactive waste and spent fuel, an obligation accepted and affirmed by the current Secretary of Energy. The Commission has confidence (as expressed in Finding 1) that safe disposal of HLW and spent fuel in a mined geologic repository is technically feasible, and I believe the NRC has, and will continue to have, the ability to require safe and secure storage of spent nuclear fuel until disposal is necessary. A federal imperative to shift to disposal may be premised upon a variety of reasons, including increased development of social and political acceptance for disposal as outlined in the supplementary information or some ultimate

determination of when temporary storage should end for technical, environmental, or policy reasons.

In summary, I support issuance of the final rule and Waste Confidence update with the following revisions:

10 C. F. R. § 51.23, **Temporary storage of spent fuel after cessation of reactor operation—generic determination of no significant environmental impact.**

> (a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of commercial high-level waste and spent fuel when necessary.

Waste Confidence Finding 2:

> The Commission finds reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of the commercial high-level radioactive waste and spent fuel generated by any reactor when necessary.

Waste Confidence Finding 4:

> The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations.

Both Finding 4 and the final rule refer to storage of spent fuel for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license). I think it should be clear in the supplementary information that these statements are premised on and bounded in part by the existing licensing limit of 60 years of operation when a renewed license is obtained and that the current regulatory regime allows for initial licensing of reactor operation for 40 years and renewal of the license for an additional 20 years. Thus, the updated Finding 2 reflects confidence in safe storage (supported by technical studies), without significant environmental effects for at least 120 years. The intent of this clarification is to ensure that the literal language is not interpreted as reflecting an assessment of safe storage without environmental effects for 60 years beyond the licensed life for operation, *whatever* the licensed life for operation. In this regard, I also note that efforts have begun on research that could contribute to an assessment of feasibility of licensing reactors for an additional 20 year period beyond 60 years. Thus, I think it would be useful if the supplementary information also explained that the Commission may need to revisit this finding and its technical bases if the

Commission eventually were to establish a regulatory program for such an additional period of operation.

I also support my fellow Commissioners' desire to direct staff to reassess the waste confidence decision with consideration of a longer time frame for storage and potential disposal, such as from 100 to up to 300 years, and to direct preparation of an Environmental Impact Statement (EIS) as an exercise of the Commission's discretion as part of a future rulemaking effort. My support for this effort should not be considered in any sense an endorsement of extended long-term or permanent spent fuel storage. Rather, I believe that the additional technical studies and environmental review of longer term storage would enhance future decision-making. At the same time, it will bolster the Commission's ability to respond to the possibility of future modifications in national policy regarding spent fuel storage and disposal, such as a shift toward centralized interim storage. I also agree with my fellow Commissioners that the lead for this effort should be assigned to the Office of the Executive Director for Operations with support from the Office of General Counsel.

In addition, I suggest that staff be directed to propose a time frame, and a rulemaking plan, based in part on its planning for the extended storage and transportation and regulatory program review discussed in COMSECY-10-0007. Integrated planning should be beneficial in establishing the scope of the studies, EIS, and future rulemakings. This approach should include consideration of the schedule for the activities and recommendations of the Blue Ribbon Commission.

The federal government is charged with providing for permanent disposal of high-level radioactive waste such as spent fuel. In exercising this responsibility, it is conceivable that the future path for the disposal of high level waste such as spent fuel may not even involve a mined repository. It might include, for example, a deep borehole. This approach would not be, as I would define it, a "mined repository." However, it most certainly could be considered under some reprocessing and transmutation scenarios for the remaining amount of waste. Therefore, staff should continue to monitor closely the activities of the Department of Energy's Blue Ribbon Commission on America's Nuclear Future to ensure that we can respond to potential modifications of national policy.

George Apostolakis 8/13/10

# NOTATION VOTE

## RESPONSE SHEET

**TO:** Annette Vietti-Cook, Secretary

**FROM:** COMMISSIONER MAGWOOD

**SUBJECT:** SECY-09-0090 – FINAL UPDATE OF THE COMMISSION'S WASTE CONFIDENCE DECISION

**Approved** __X__ **Disapproved** _____ **Abstain** _____

**Not Participating** _____

**COMMENTS:** **Below** ___ **Attached** _X_ **None** ___

/RA/
William D. Magwood, IV
**SIGNATURE**

8/13/2010
**DATE**

**Entered on "STARS"** **Yes** _X_ **No** ___

**Commissioner Magwood's Additional Comments on SECY–09–0090: Final Update to the Commission's Waste Confidence Decision**

I approve publication of the final update and rule, with modifications I believe are necessary to reflect the current status of the high-level-waste-repository program.

Since 1984 the Commission's Waste Confidence Decision and Rule have comprised the NRC's generic environmental analyses of the storage of spent nuclear fuel at, or away from, reactor sites after the expiration of reactor operating licenses. This process has complied with the direction from the United States Court of Appeals for the District of Columbia Circuit that the Commission should determine whether there is reasonable assurance that an offsite disposal solution will be available by the expiration of the plants' operating licenses and, if not, whether there is reasonable assurance that commercial spent fuel can be stored safely at nuclear power plant sites after plant operations have ended. For more than twenty-five years, the Commission has consistently found that spent fuel can be stored safely for decades after the expiration of a reactor's operating license and that a deep geologic repository will be available at some point in the future. But the uncertainties generated by the significant political challenge of siting a high-level waste disposal facility make it difficult for the Commission to base its considerations on a specific schedule by which a repository would be available. Therefore, I join with my fellow Commissioners in finding that a specific "target date" should be removed from Waste Confidence Finding 2.

Technical analysis performed by the NRC staff, which benefits from practical experience with dry cask storage facilities that have been deployed at many nuclear power plant sites across the country, confirm the safety of storing spent nuclear fuel for at least 60 years beyond expiration of a plant's license. With this analysis, the staff proposes to extend the period of safe storage (found in Waste Confidence Finding 4) from at least 30 years beyond licensed life to at least 60 years. I support this proposal and believe that the analysis is more than adequate to support this extension. I also recognize that the removal of a specific target date from Waste Confidence Finding 2 may cause some to question whether the Commission is endorsing the indefinite storage of spent nuclear fuel—it is not. Rather, Finding 2 reflects the Commission's confidence that disposal capability will be available when necessary. The Commission's Waste Confidence decision is anchored in the knowledge that the technologies exist to respond in a timely fashion to any Federal imperative to shift from storage of spent fuel and high-level waste to disposal of spent fuel and high-level waste. However, the Waste Confidence decision remains bounded by the safe-storage period discussed in Finding 4. Finding 4 is still limited to at least 60 years of storage beyond licensed life for operation, which means that, as it has done before, the Commission may need to revisit its Waste Confidence Decision in the future to ensure that it continues to have reasonable assurance in continued safe and environmentally sound storage and the eventual availability of a facility that can accept U.S. commercial high-level wastes for final disposition.

As a result, I join with my colleagues in recommending that the agency publish a final rule that revises 10 CRF 51.23 and Waste Confidence Findings (2) and (4). I suggest the following modifications:

1) I recommend that § 51.23, "Temporary storage of spent fuel after cessation of reactor operation—generic determination of no significant environmental impact" be changed to read:

   (a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of commercial high-level waste and spent fuel when necessary.

2) I recommend that Waste Confidence Finding 2 be revised as follows:

   The Commission finds reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of commercial high-level radioactive waste and spent fuel generated by any reactor when it is necessary.

3) I recommend that Waste Confidence Finding 4 be revised as follows:

   The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations.

I understand that, apart from the Waste Confidence Findings, some of my colleagues have proposed an additional long-term project to extend the scope of the Commission's confidence in the long-term storage of spent nuclear fuel to well beyond the 60 years after plant operation that is contemplated in the final rule and supported by the staff's current technical assessments. This project would take the form of a rulemaking supported by an Environmental Impact Statement (EIS) that would engage the public in the development of alternatives and consideration of impact and support the development of a potential update to the Commission's Waste Confidence Findings and Rule in the future. The proposed EIS would be initiated under the Commission's discretionary authority under 10 CFR 51.20(a)(2).

This long-term rulemaking and EIS would be separate from the final rule that I have discussed above. The final rule and update stand on their own and I support their publication (as modified in this vote) even if the Commission declines to approve a long-term rulemaking and EIS. The expanded scope of the long-term rulemaking and the additional public participation that accompany an EIS will allow the Commission to consider a more robust Decision and Rule that could support disposal options other than mined geologic disposal and that could expand the timeframe for safe storage of spent fuel and commercial high-level wastes well beyond the 60 years after licensed life contemplated in the current Decision and Rule.

It is important to stress that in launching a consideration of the storage of spent fuel and commercial high-level wastes over the very long-term future, the Commission is sailing boldly into *mare incognitum.* Current policies and technologies are unlikely to provide reliable paths with which the agency can confidently chart its course. It is, therefore, my view that the Commission should pursue this effort in a comprehensive manner.

In this light, I recommend that the staff develop a plan for the long-term rulemaking and EIS for Commission consideration that casts a wide net. The staff should consider not only the potential long-term storage of today's spent nuclear fuel and commercial high-level wastes, but also the potential ramifications of the future availability of advanced nuclear fuel cycle technologies and their concatenate waste management strategies. For example, some approaches would enable short-lived species to be separated from spent fuel and stored until they decay—thereby reducing the performance requirements of a future repository. Spent fuel treatment and recycling options such as this are being explored by researchers in many countries and consideration of the long-term storage of the products associated with these processes would help inform future Commission decisions.

Staff should assess how the proposed project to develop a long-term rulemaking and EIS might reflect the potential application of advanced spent fuel management technologies. Moreover, as part of developing a plan for this effort, staff should assess potential future strategies and, based on their assessment, recommend to the Commission the appropriate time period to be considered in the analysis.

I look forward to the staff's views on how best to design such an expansive project. I believe the Commission must receive a complete plan for its consideration in time to inform the development of FY 2013 performance budget.

/RA/ 8/13/2010

William D. Magwood, IV Date

**SECOND REVISED**
**MEETING NOTICE AND AGENDA**

| | |
|---|---|
| Name of Organization: | Legislative Committee on High-Level Radioactive Waste<br>(*Nevada Revised Statutes* 459.0085) |
| Date and Time of Meeting: | Tuesday, August 17, 2010<br>10 a.m. |
| Place of Meeting: | Grant Sawyer State Office Building<br>Room 4401<br>555 East Washington Avenue<br>Las Vegas, Nevada |

Note: Some members of the Committee may be attending the meeting and other persons may observe the meeting and provide testimony through a simultaneous videoconference conducted at the following locations: Legislative Building, Room 3138, 401 South Carson Street, Carson City, Nevada; Great Basin College, High Tech Center, Room 137, 1500 College Parkway, Elko, Nevada.

*If you cannot attend the meeting, you can listen or view it live over the Internet. The address for the Nevada Legislature website is http://www.leg.state.nv.us. Click on the link "Live Meetings - Listen or View."*

**Note: Minutes of this meeting will be produced in summary format. Please provide the secretary with electronic or written copies of testimony and visual presentations if you wish to have complete versions included as exhibits with the minutes.**

## AGENDA

**Note: Items on this agenda may be taken in a different order than listed.**

*Denotes items on which the Committee may take action.

I. Opening Remarks
Assemblyman Harry Mortenson, Chair

*II. Approval of the "Summary Minutes and Action Report" of the Meeting Held on May 11, 2010, in Las Vegas, Nevada

*III. Update on the Status of the Yucca Mountain Project and Presentation on "The Question of Reprocessing"
Bruce H. Breslow, Executive Director, Nevada's Agency for Nuclear Projects, Office of the Governor

*IV. Overview of Mission, History, and Future Activities of the United States Nuclear Waste Technical Review Board (NWTRB)
Nigel Mote, Executive Director, U.S. NWTRB

*V. Discussion of Historical and Current Nuclear Activities at the Nevada Test Site Including Nuclear Waste Disposal

Leo Drozdoff, Acting Director, State Department of Conservation and Natural Resources (SDCNR)

Colleen Cripps, Ph.D., Acting Administrator, Nevada's Division of Environmental Protection, SDNCR

*VI. Presentation on Scope of Pending Environmental Impact Statement for the Nevada Test Site

Marta Adams, Chief Deputy Attorney General, Nevada's Office of the Attorney General
Joe Strolin, Planning Advisor, Nevada's Agency for Nuclear Projects, Office of the Governor

VII. Public Comment
**(Because of time considerations, the period for public comment by each speaker may be limited, and speakers are urged to avoid repetition of comments made by previous speakers.)**

*VIII. Work Session—Discussion and Possible Action on Recommendations Relating to:

A. Bill draft request to remove "High-Level" from the Committee's name and amend the jurisdiction so the Committee can address other forms of radioactive waste and contamination in Nevada.

B. Bill draft request to broaden the jurisdiction of Nevada's Agency for Nuclear Projects to address various forms of radioactive waste and contamination in Nevada.

C. Bill draft request to broaden the jurisdiction of Nevada's Commission on Nuclear Projects to cover various forms of radioactive waste and contamination in Nevada.

D. Bill draft request for a resolution directing Nevada's Agency for Nuclear Projects, the Attorney General, and the SDNCR to jointly investigate the potential for Nevada to receive compensation from the federal government for environmental damage resulting from nuclear activities in the State. The resolution will stipulate that the investigation is to be revenue neutral and that the involved entities will report their findings to the 77th Session of the Legislature in 2013.

The "Work Session Document" is attached below and contains proposed recommendations. The document is also available on the Committee's webpage Committee on High-Level Radioactive Waste or a written copy may be obtained by contacting Patrick Guinan, Senior Research Analyst, Research Division, Legislative Counsel Bureau, at (775) 684-6825.

IX. Public Comment
**(Because of time considerations, the period for public comment by each speaker may be limited, and speakers are urged to avoid repetition of comments made by previous speakers.)**

X. Adjournment

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Note: We are pleased to make reasonable accommodations for members of the public who are disabled and wish to attend the meeting. If special arrangements for the meeting are necessary, please notify the Research Division of the Legislative Counsel Bureau, in writing, at the Legislative Building, 401 South Carson Street, Carson City, Nevada 89701-4747, or call Lucinda Benjamin at (775) 684-6825 as soon as possible.

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Notice of this meeting was posted in the following Carson City, Nevada, locations: Blasdel Building, 209 East Musser Street; Capitol Press Corps, Basement, Capitol Building; City Hall, 201 North Carson Street; Legislative Building, 401 South Carson Street; and Nevada State Library, 100 Stewart Street. Notice of this meeting was faxed and e-mailed for posting to the following Nevada locations: Clark County Government Center, 500 South Grand Central Parkway; Capitol Police, Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas; and Great Basin College, 1500 College Parkway, Elko. Notice of this meeting was posted on the Internet through the Nevada Legislature's website at www.leg.state.nv.us.

# Legislative Committee on High-Level Radioactive Waste

(*Nevada Revised Statutes* 459.0085)

# REVISED WORK SESSION DOCUMENT

## August 17, 2010

Prepared by the Research Division
Legislative Counsel Bureau


# REVISED
# WORK SESSION DOCUMENT

Legislative Committee on High-Level Radioactive Waste
(*Nevada Revised Statutes* 459.0085)

**August 17, 2010**

The following "Work Session Document" was prepared by the staff of the Legislative Committee on High-Level Radioactive Waste and is designed as an outline to assist the Committee members in making decisions concerning recommendations to be forwarded to the Legislative Commission and ultimately to the 2011 Session of the Nevada Legislature. The recommendations contained herein were either submitted in writing to the Committee and/or staff, or presented during one of the Committee's meetings.

The possible actions identified in this document are in no particular order and should not be construed as having the support of the Committee or its individual members. Rather, they are compiled so the members may review and discuss them during the work session to decide if they should be adopted, changed, rejected, or further considered.

To be adopted, recommendations from the Committee must be approved by a majority of the Senate members and a majority of the Assembly members.

In accordance with *Nevada Revised Statutes* 218D.160, the Committee may recommend no more than ten bill draft requests (BDRs), submitted no later than September 1, 2010. Other items not requiring legislation, such as requests for letters, may be sent by the Chair of the Committee.

## RECOMMENDATIONS FOR LEGISLATIVE MEASURES

**RECOMMENDATION NO. 1:**

Submit a BDR to remove "High-Level" from the Committee's name and amend the jurisdiction so the Committee can address other forms of radioactive waste and contamination in Nevada.

**RECOMMENDATION NO. 2:**

Submit a BDR to broaden the jurisdiction of Nevada's Agency for Nuclear Projects to address various forms of radioactive waste and contamination in Nevada.

**RECOMMENDATION NO. 3:**

Submit a BDR to broaden the jurisdiction of Nevada's Commission on Nuclear Projects to cover various forms of radioactive waste and contamination in Nevada.

**RECOMMENDATION NO. 4:**

Submit a BDR for a resolution directing Nevada's Agency for Nuclear Projects, the Attorney General, and the State Department of Conservation and Natural Resources to jointly investigate the potential for Nevada to receive compensation from the federal government for environmental damage resulting from nuclear activities in the State. The resolution will stipulate that the investigation is to be revenue neutral and that the involved entities will report the findings to the 77th Session of the Legislature in 2013.

**DOC HASTINGS**
4TH DISTRICT, WASHINGTON

COMMITTEE ON
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# Congress of the United States
## House of Representatives

August 17, 2010

Chairman Gregory B. Jaczko
U.S. Nuclear Regulatory Commission
Mail Stop O-16G4
Washington, DC 20555-0001

Dear Chairman Jaczko:

I write today regarding the delay in the release of the Nuclear Regulatory Commission's decision on the Department of Energy's (DOE) move to withdraw the license application for Yucca Mountain with prejudice.

As you know, earlier this year several parties challenged the Obama Administration's decision to abandon the Yucca Mountain project as the site for permanent disposal of high level nuclear waste. These actions have been consolidated in the U.S. Circuit Court of Appeals for the D.C. Circuit, and were set for argument on September 23, 2010.

At the same time, DOE filed to withdraw the license application for the Yucca Mountain project from consideration by the NRC. The NRC directed the Atomic Safety and Licensing Board to consider the motion immediately. On June 29, 2010, the ASLB unanimously rejected DOE's motion and found that DOE must move forward with the application. The very next day, the NRC issued an order directing the parties to submit briefs by July 16 as to whether it should review the ASLB's decision.

Based on the NRC's action of requesting the parties provide briefs, the Department of Justice asked the D.C. Circuit to postpone the September 23 argument on the broader issue of abandoning the site, pending a decision by the NRC.

This matter has now been pending before the NRC since July 16, when all briefs were to have been filed. Although the NRC acted quickly in taking the case, and the D.C. Circuit postponed argument based on the NRC's response to the ASLB's opinion, the Commission has yet to act. I am also concerned that it took two commissioners almost a month to deny motions to recuse themselves, while a third commissioner decided to recuse himself in a matter of just six days of when the motions were filed, albeit for different reasons. I believe that every day of delay creates serious harm to the project. DOE continues to dismantle the Yucca Mountain project at great cost to taxpayers and in total disregard of the ASLB's decision that DOE has no authority to do so.

I would encourage you to decide on the merits of the claim that DOE acted illegally in seeking to withdraw its license application without delay. Thank you for your timely consideration and I would ask that you notify me when a decision will be reached.

Sincerely,

Doc Hastings
Member of Congress

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SECRETARY

August 18, 2010

The Honorable Doc Hastings
United States House of Representatives
Washington, D.C. 20515

Dear Congressman Hastings:

I am responding to your letter dated August 17, 2010, addressed to Chairman Jaczko, related to the pending adjudicatory proceeding that is associated with the U.S. Department of Energy's (DOE) application for the proposed Yucca Mountain high-level waste repository. You request that the Commission "decide on the merits of the claim that DOE acted illegally in seeking to withdraw its license application without delay."

Given the pendency of the adjudicatory proceeding the Commission cannot discuss or comment on issues involved in this matter. However, please be assured that the Commission, in its adjudicatory capacity and with due consideration to applicable law, is moving with all due haste in arriving at a decision relative to review of the Atomic Safety and Licensing Board decision LBP-10-11.

A copy of your letter and this response will be served on the participants in the *Yucca Mountain* proceeding. In addition, we will keep you informed of the Commission's decisions in this matter.

Sincerely,

Annette Vietti-Cook

Annette L. Vietti-Cook

cc: Service List

**Blue Ribbon Commission on America's Nuclear Future**
**Transportation & Storage Subcommittee**
**August 19, 2010**

**Washington Marriott, 1221 22nd Street NW**
**Washington, DC—Ballrooms D and E**

**Final Agenda**

| | | |
|---|---|---|
| 8:30 a.m. | Open Meeting, Review Agenda | Tim Frazier, Designated Federal Officer |
| 8:35 a.m. | Welcome, Opening remarks | Co-Chairs Meserve, Sharp<br>Subcommittee members |
| 8:45 a.m. | Industry projections of commercial used fuel inventories | Dr. John Kessler, EPRI |
| 9:00 a.m. | The evolution of the role of storage - a historical perspective | Dr. John Ahearne, Sigma Xi |
| 9:30 a.m. | Overview of current handling and storage practices | Dr. Everett Redmond, NEI |
| 9:50 a.m. | Overview of existing commitments and obligations governing used fuel storage | Mike McBride, Van Ness Feldman |
| **10:10 a.m.** | **Break** | |
| 10:30 a.m. | Panel discussion – the role of storage in an integrated US waste management system and strategy | Dr. John Ahearne, Sigma Xi<br><br>John Parkyn, Private Fuel Storage, LLC<br><br>Steve Kraft, NEI<br><br>David Wright, Chairman, Nuclear Waste Strategy Coalition<br><br>Dr. Cliff Singer, University of Illinois/Plan D for Spent Nuclear Fuel study co-lead |

| | | |
|---|---|---|
| **12:00 noon** | **Lunch** | |
| 1:00 p.m. | Panel discussion – technical and regulatory uncertainties | Dr. John Kessler, EPRI<br><br>Dr. David Lochbaum, Union of Concerned Scientists<br><br>Mike Waters, NRC<br><br>Ken Sorenson, Sandia Lab/DOE Used Fuel Disposition Campaign |
| **2:15 p.m.** | **Break** | |
| 2:30 p.m. | Panel discussion – relationship between storage and progress on disposal and fuel cycle facilities | David Blee, US Nuclear Infrastructure Council<br><br>Dr. Charles Forsberg, MIT<br><br>Jim Williams, Western Interstate Energy Board<br>David Wright, South Carolina Public Service Commission<br><br>President Victoria Winfrey, Prairie Island Indian Community Tribal Council |
| 4:00 p.m. | Public Comments | |
| 4:45 p.m. | Adjourn public session | |

# Getting the Institutional Framework Right and Using it Well

**Blue Ribbon Commission Subcommittee on Transportation and Storage**

**Presentation on Aug. 19, 2010**

Clifford Singer <csinger@illinois.edu>
Departments of Nuclear, Plasma, and Radiological Engineering, and of Political Science
University of Illinois at Urbana-Champaign

(1) As a reminder of the importance of institutional frameworks, I start presentations on spent nuclear fuel with a picture of Notre Dame. What kept this building maintained and standing is not so much the remarkable skill of its construction as the support of the enduring institutional framework set up in the flowering of the Middle Ages. The engineering of spent nuclear fuel storage casks with modern technology is much simpler. It is widely agreed that these casks can safely store spent fuel for at least a century. They can also be put in very durable overpacks and transported intact away from their point of origin. But without a sensible institutional framework, further R&D on spent nuclear fuel management is not well focused.

I have an appointment in Political Science partly because I directed our international security program. But as an elected official I also presided, by everyone else's default, over the final failure of our county to site a new landfill. I also supervised thesis projects on Illinois' failure to site a low-level radwaste facility. For both siting attempts the technical analysis was excellent. The problem was the institutional arrangements. In particular, the compensation offered local communities was either nil or less than 2% of project cost. So no willing and legally suitable local host sites could be found.

(2) This Commission is faced at the national level with the same dilemma. At the second Commission meeting the importance of building trust with local communities was well articulated. What has not come out quite as clearly is what will be necessary to avoid having state governments again actively oppose siting spent fuel facilities. What is critical to keep in mind is that states will view a good spent fuel management site as a valuable energy systems resource, just as Alaska views the oil and natural gas resources within it boundaries. Just as no private company would make an energy systems investment expecting a 1% return or less, no state is likely to willingly host long term spent nuclear fuel management for a just a few $/kg in a context where other states might be willing to see nearly $1000/kg paid to get rid of the stuff.

It follows that getting willing cooperation of host states is likely to require compensation to them in the range of tenths of total project costs, not just a few percent. This is worth repeating, because it is not clear that its implications have fully sunk in. A necessary condition for an institutional framework to deal with host state concerns is that it includes a mechanism for transferring to host states funds measured in tenths of total project costs.

(3) A framework for dealing with host state concerns is described in the report " 'Plan D' for Spent Nuclear Fuel." This report is on the Commissioners' desks here and is available on the internet. The report describes the reason for its title. It also contains an appendix on just how the Nuclear Waste Policy Act could be changed to implement its recommendations. A key recommendation is that every shipment of spent nuclear fuel material should be accompanied by a payment into a Permanent Fund, to be held by the recipient state as long as that material stays in the state. Federal regulations would require

a minimum balance in each Permanent Fund. The required minimum would depend on whether the facility was a geological repository, a spent fuel aging facility, or a reprocessing site. States would receive interest earnings on the Permanent Fund balance beyond any needed to maintain the minimum balance. In the long run, the source of payments into Permanent Funds would be Escrow Fund balances associated with each storage cask.

(4) Payments into Escrow Funds instead of the national Nuclear Waste Fund would be required for spent fuel from newly licensed reactors. DOE could also negotiate the establishment of Escrow Funds to avoid continuing lawsuits over failure to take title to spent fuel from already licensed reactors. Utilities or their ratepayers would receive any excess Escrow Fund balances when spent fuel is shipped out of state.

(5) This approach allows for a strong incentive for states to take in spent nuclear fuel from other states. It also provides an incentive for utilities to ship spent fuel out of state when and only when it becomes economically optimal to do so.

Economics might well dictate that much spent fuel stays at operating reactor sites until there has been substantial decay of the circa 30 year half life fission products that initially dominate the decay heat in dry casks. However, expeditious geological repository siting would still be necessary. That is needed for confidence that a host state will take in spent fuel when utilities want to ship it.

(6) I now go beyond the 'Plan D' framework to discuss how best to make use of appropriate institutional arrangements. The first and most critical point to emphasize is the importance of avoiding a monopoly situation where only one repository is licensed. A monopoly situation would generate tension within the state and with the federal government over whether the state had obtained adequate compensation. This could lead to delays or even failure of the whole project again. Even with success, cooperatively negotiated payments to the host state would be higher in a monopoly situation.

(7) Next comes a reminder of where U.S. commercial spent fuel is generated and stored. The West houses 8 operating reactors and 3 additional sites with stranded spent fuel. The greater Midwest has 31 operating reactors and the rest of the country 65.

(8) The West also holds the majority of DOE wastes, which legally need to be removed by 2035 at the latest. The Midwest does not have a problem with spent fuel from defense reactors. The Midwest also does not have stranded fuel in states with no operating commercial reactors. The East and Gulf Coast states have substantial amounts of DOE wastes and of spent fuel likely to be stranded at sites with no operating reactors. This includes the only reactor sites in Maine and possibly Vermont.

As noted at the second Commission meeting, it is not necessary that all U.S. spent fuel have the same fate. Some of the material in the West is a good candidate for permanent burial in salt or retrievable emplacement in a repository in an oxidizing or reducing environment. Some of the material in states along the Gulf Coast and near the Eastern seaboard could be shipped to an aging facility pending a decision on reprocessing or burial. Many of the reactor sites in the Midwest are not in heavily populated communities and may have operating reactors with suitable fuel storage sites for the rest of this century.

By licensing as many as three repositories, competition would be enhanced, and eventual transportation costs and associated controversy reduced. However, there is no need to place most spent fuel in the repositories promptly. Indeed, the design and operation of repositories is much easier if most of the material placed in them has been aged for a few times 30 years. Some of the aging can occur at repository sites, and some of it elsewhere.

(9) There are three reasons why trying multiple site licensing can be both economically advantageous and more likely to lead to at least one or two successes:

(a) There is now extensive U.S.+ Scandinavian operating or design experience with salt, a retrievable oxidizing environment, and copper casing in a non-oxidizing zone. By drawing on this experience, costs associated with generic aspects of licensing can be reduced.

(b) With a cooperative process, lower payments to competing states should more than compensate for extra licensing costs.

(c) Without a cooperative process, states' opposition is likely to lead to extensive delays and risk overall failure.

(10) While the Commission will not recommend specific sites, the Commission does need to recommend a process that will lead to successful siting. In view of the comments just made, here are two suggestions for the Commission's recommendations.

(a) The Commission should recommend a process that has about 6 finalist states competing for granting 2 or preferably 3 repository site licenses.

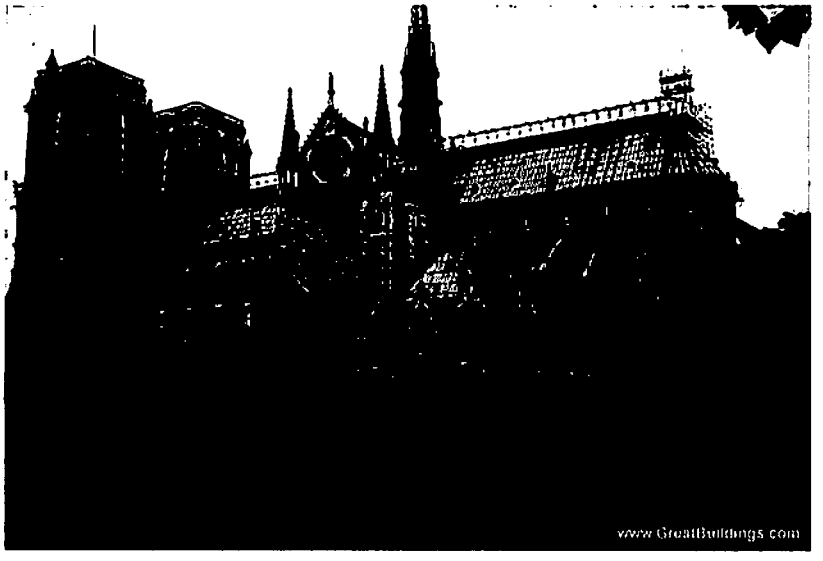
(b) At least an equal number of spent fuel aging facilities should be similarly be licensed, some at repository sites.

If such recommendations are implemented, reprocessing will not be economically favorable for many decades, if ever. A new article explaining why has been submitted to the Commission. If a pilot scale reprocessing facility is nevertheless contemplated, it should be licensed as an aging facility. This is a consensus recommendation from the group that produced the 'Plan D' report. This suggestion is based on the observation that no reprocessing facility has yet both operated as planned and removed all high-level radioactive materials from site. It would be imprudent to simply assume that another U.S. reprocessing facility would be an unqualified success, and thus fail to plan for possible long-term on-site storage of high-level radioactive materials. With such planning, however, a prospective reprocessing facility site could play a role in removing DOE wastes and stranded spent fuel from other states.

I and the group that produced the 'Plan D' report do not expect that the Commission will adopt all of our suggestions exactly as is. Hopefully, however, the Commission will come up with something as good or better.

*Aug. 18, 2010, draft*

# Institutional Framework and its Use for Spent Nuclear Fuel

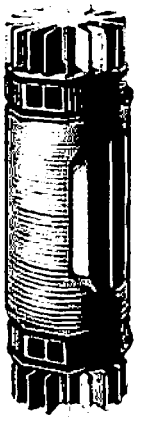



Notre Dame Construction: 1163-1250
Maintenance: 1250-present

*Clifford Singer: Aug. 19, 2010*
*University of Illinois, Departments of Nuclear Engineering and Political Science*

Dry Cask

Storage Overpack



Transport Overpack

August 23, 2010

Thomas S. Moore, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Paul S. Ryerson
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Richard E. Wardwell
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

U.S. Department of Energy
(High-Level Waste Repository)
Docket No. 63-001-HLW, ASLBP No. 09-892-HLW-CAB04

Dear Administrative Judges,

This letter is to inform you that the Nuclear Regulatory Commission staff has issued its "Safety Evaluation Report Related to Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada, Volume 1: General Information" (NUREG-1949, Vol. 1). A copy is attached and is available through the NRC's Web site at this address: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/.

Copies are being provided to the parties by means of this letter.

Sincerely,

*/RA/*

Daniel W. Lenehan
Counsel for NRC Staff
U.S. Nuclear Regulatory Commission
Mail Stop O-15-D21
Washington, DC 20555-0001
(301) 415-3501
dwl2@nrc.gov

Enclosure: as stated

cc w/encl.: EIE Service List Docket 63-001-HLW

# NRC NEWS

**U.S. NUCLEAR REGULATORY COMMISSION**


Office of Public Affairs Telephone: 301/415-8200
Washington, D.C. 20555-0001
E-mail: opa.resource@nrc.gov
Site: http://www.nrc.gov



No. 10-147 August 23, 2010


## NRC PUBLISHES VOLUME 1 OF YUCCA MOUNTAIN SAFETY EVALUATION REPORT

The Nuclear Regulatory Commission has published the first volume of the agency staff's safety evaluation report on the Department of Energy's license application seeking authorization to construct a high-level radioactive waste repository at Yucca Mountain, Nev. This first volume contains the staff's evaluation of the "General Information" section of the DOE license application, which contains introductory and overview information about the proposed facility and its operation.

Publication of Volume 1 does not represent a licensing decision or indicate what an eventual licensing decision might be. No decision to grant or deny a construction authorization can be made until after completion of the NRC staff's independent technical review of the application, the adjudicatory hearing and subsequent Commission review.

This is one of five planned volumes of the NRC staff's safety evaluation report. The staff currently is continuing its safety review of the application according to the schedule it provided to the Construction Authorization Board conducting the adjudicatory hearing.

DOE submitted the license application on June 3, 2008. On March 3, 2010, DOE filed a motion to withdraw its license application for the Yucca Mountain repository with prejudice. On June 29, the Construction Authorization Board denied the withdrawal motion. DOE's motion to withdraw its application is now before the Commission.

"Safety Evaluation Report Related to Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada, Volume 1: General Information" (NUREG-1949, Vol. 1) is available through the NRC's website at this address: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/.

###

U.S.NRC
United States Nuclear Regulatory Commission
*Protecting People and the Environment*

NUREG-1949, Vol. 1

# Safety Evaluation Report Related to Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada

## Volume 1: General Information

Office of Nuclear Material Safety and Safeguards

# CHAPTER 6

## Conclusions

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the general information for the Yucca Mountain repository that the applicant provided in its license application.

On the basis of the information provided in the license application and the commitments specified in the Safety Evaluation Report (SER), Volume 1, Chapters 1-5 and Appendix, the NRC staff concludes that the Yucca Mountain repository meets the following requirements of 10 CFR Part 63 with respect to a construction authorization. Pursuant to 10 CFR 63.21(b), the NRC staff has made the following findings:

- 10 CFR 63.21(b)(1)—On the basis of the evaluation in SER Volume 1, Chapter 1, the NRC staff finds that the applicant included an adequate general description of the proposed geologic repository at the Yucca Mountain site, identifying the location of the geologic repository operations area, the general character of the proposed activities, and the basis for the exercise of the Commission's licensing authority.

- 10 CFR 63.21(b)(2)—On the basis of the evaluation in SER Volume 1, Chapter 2, the NRC staff finds that the applicant included proposed schedules for construction, receipt of waste, and emplacement of wastes at the proposed geologic repository operations area that are sufficiently detailed to allow NRC staff to evaluate the overall construction program for the geologic repository operations and its infrastructure.

- 10 CFR 63.21(b)(3)—On the basis of the evaluation in SER Volume 1, Chapter 3, the NRC staff finds that the applicant included an acceptable description of the detailed security measures for physical protection of high-level radioactive waste in accordance with 10 CFR 73.51 and generally described the design for physical protection, the safeguards contingency plan, the security organization personnel training and qualification plan, how the physical protection system is performance-tested to provide assurance that the system functions as intended, and how the system is tested and maintained to ensure its continued effectiveness, reliability, and availability.

- 10 CFR 63.21(b)(4)—On the basis of the evaluation in SER Volume 1, Chapter 4, the NRC staff finds that the applicant included an acceptable description of the material control and accounting program to meet the requirements of 10 CFR 63.78.

- 10 CFR 63.21(b)(5)—On the basis of the evaluation in SER Volume 1, Chapter 5, the NRC staff finds that the applicant included an adequate description of work conducted to characterize the Yucca Mountain site.

Thus, the NRC staff finds that with respect to a construction authorization DOE has adequately described the proposed geologic repository at Yucca Mountain as specified in 10 CFR 63.21(b).

**Blue Ribbon Commission on America's Nuclear Future**
**Reactor and Fuel Cycle Technology Subcommittee Meeting**
**August 30-31st - Washington Marriott, 1221 22nd Street NW, Washington, DC**

**Day 1 (Ballrooms D/E)**

**8:00 – 8:05 Introduction/Agenda Review – Tim Frazier, DOE Designated Federal Officer**

**8:05 – 8:15 – Comments by Subcommittee Chairs – Sen. Pete Domenici and Dr. Peterson**

**8:15-10:15 a.m. - Opportunities in Reactor and Fuel Cycle Technologies (Panel #1, 2 hr)**

- AREVA (Dr. Alan Hanson, Executive Vice President Technologies and Used Fuel Management)
- GE Hitachi Nuclear Energy (Mr. Jack Fuller, Chairman of the Board)
- Westinghouse (Dr. Kate Jackson, Chief Technology Officer)
- Energy Solutions (Mr. Alan Dobson, Senior Vice President)
- Union of Concerned Scientists (Dr. Edwin Lyman, Senior Scientist)
- Radioactive Waste Management Associates (Dr. Marvin Resnikoff, Senior Associate)

**10:15-10:30 a.m. - Break**

**10:30 – 12:30 p.m. - Opportunities in Reactor and Fuel Cycle Technologies (Panel #2, 2 hr)**

- General Atomics (Dr. John Parmentola, Senior Vice President Energy and Electromagnetic Systems)
- NuScale (Dr. Paul Lorenzini, CEO)
- Babcock and Wilcox Nuclear Energy, Inc. (Mr. Christofer Mowry, President)
- Institute for Lifelong Education at Dartmouth (Study Group Leader, Dr. Robert Hargraves)
- Natural Resources Defense Council (Dr. Thomas Cochran, Senior Scientist)
- Stanford University (Dr. Geoffrey Rothwell, Associate Director Stanford Public Policy Program)

**12:30-1:30 p.m. – Lunch break (Not provided)**

**1:30-3:30 p.m. - Enabling and Incentivizing Commercial First Movers (Panel #3, 2 hr)**

- DOE - Review of ALWR and DOE-2010 program successes (Ms. Rebecca Smith-Kevern, Director DOE Light Water Technologies)
- NuStart Energy (Mr. Mike Cazaubon, Project Manager)
- ANS Special Committee on Small Modular Reactors - initial study findings (Dr. John Kelly)
- Venrock Capital (Mr. Ray Rothrock, Partner)
- Barclays Capital (James K. Asselstine, Managing Director)
- Heritage Foundation (Mr. Jack Spencer, Research Fellow)

**3:30 p.m. - End of public session**

**Day 2 (Ballrooms D/E)**

**8:00 – 9:30 a.m. Technology Neutral Regulatory Framework for New Reactor and Fuel Cycle Technologies (Panel #1, 1.5 hr)**

- NRC Office of Regulatory Research (Dr. Brian Sheron, Director)
- NRC Office of New Reactors (Mr. Mike Mayfield, Director Advanced Reactor Program)
- NRC Nuclear Materials Safety & Safeguards (Ms. Marissa Bailey, Deputy Director Fuel Cycle Safety and Safeguards Division)

**9:30 – 9:45 a.m. - Break**

**9:45 – 11:45 a.m. – Capability Forecast: Engineering, Manufacturing, Construction, and Operation (Panel #2, 2 hr)**

- AFL-CIO (Mr. Sean McGarvey, Secretary Treasurer AFL-CIO Building Trades Department)
- Nuclear Energy Institute (Ms. Carol Berrigan, Senior Director for Industry Infrastructure, Vice President of the Center for Energy Workforce Development)
- Edison Welding Institute/Nuclear Fabrication Consortium (Dr. Henry Cialone, President/CEO)
- U.S. Nuclear Regulatory Commission (Mr. John Gutteridge, Manager of Nuclear Education Programs)
- Precision Custom Components, LLC (Mr. James Stouch, Vice President Business Development)

**11:45 – 1:00 p.m. – Lunch break (Not provided)**

**1:00 – 3:00 p.m. – Topics related to Public Safety, Environmental, and Local Concerns (Panel #3, 2 hr)**

- Harmon, Curran, Spielberg & Eisenberg, LLP (Ms. Diane Curran, Partner)
- Energy Communities Alliance (Ms. Kara Colton, Senior Program Director)
- Citizens for Nuclear Technology Awareness (Dr. Clinton Wolfe, Executive Director)
- Nuclear Information and Resource Service (Ms. Mary Olson, Director Southeast Office)
- New York State Energy Research and Development Authority (Mr. Paul Bembia, West Valley Site Management Program Director)

**3:00 – 3:15 p.m. - Break**

**3:15 – 4:15 p.m. – Public Comment Period**