

**Maine Yankee Community Advisory Panel on
Spent Nuclear Fuel Storage and Removal**

**September 21, 2015, Taste of Maine, Woolwich
Meeting Minutes**

Member

Attendance

Dr. Don Hudson, Chair	Yes
Mr. Dan Thompson, Vice-Chair	Yes
Mr. Steve Jarrett	Yes
Mr. Wayne Norton	Yes
Mr. Jay Hyland	Yes
General Lewis Curtis	Yes
The Honorable Chris Johnson	Yes
Ms. Misty Parker	Yes
Ms. Stacy Linehan	Yes
Mr. Ralph Keyes	Yes
Mr. Scott Houldin	No

Introduction

Chair Don Hudson welcomed everyone to the annual Maine Yankee Community Advisory Panel (CAP) meeting and asked CAP members to introduce themselves.

Approval of September 2014 CAP meeting minutes

The CAP unanimously approved the September 11, 2014 CAP meeting minutes.

Maine Yankee Independent Spent Fuel Storage Installation Update

Maine Yankee ISFSI Manager J. Stanley Brown provided the CAP with an update on the ISFSI and other issues related to the Maine Yankee site since the last CAP meeting. Mr. Brown spoke from slides contained in the CAP meeting package.

Mr. Brown said ISFSI operations have been normal since the September 2014 meeting and that Maine Yankee maintains regular contact with its primary regulator the Nuclear Regulatory Commission (NRC) and also the State of Maine.

Mr. Brown noted that the renovation of the ISFSI warehouse area begun last fall is largely complete. The renovation addressed facility limitations and ongoing security needs.

Mr. Brown briefed the CAP that during the move to the new area a VHS tape from the time of decommissioning containing some sensitive security information regarding the ISFSI was found in an office cabinet. The tape had been improperly downgraded to non-security related. Maine Yankee notified the NRC and State of Maine and is taking corrective action.

Mr. Brown said that Maine Yankee has begun installing a chain link fence along its Old Ferry Road property which is not strictly for security purposes but rather to deter trespassers, especially hunters at this time of year. Installing the approximately 3,500 foot fence will take 4-5 weeks.

Mr. Brown briefed the CAP that over Labor Day weekend a small drone overflew the site, hovered periodically and then departed. He said Maine Yankee notified the Lincoln County Sheriff, Wiscasset Police Department, the State Police, the State Fusion Center, the Federal Aviation Administration, the NRC and the State Nuclear Safety Inspector.

Senator Johnson said there will very likely be a lot more drones in use in the years to come and incidents like this will be more common. He noted that there is now a course on drones being taught at Wiscasset High School. He asked what can be done about drone over flights of Maine Yankee especially if there's malicious intent. Mr. Brown said that in accordance with NRC procedures and guidance Maine Yankee notifies federal and state regulatory agencies of suspicious activity such as this incident. Law enforcement responds to the site and investigates it from there. Mr. Keyes who teaches science at Wiscasset High School said he will speak with the instructor of the drone course to make sure none of the homework assignments are near Maine Yankee.

Mr. Brown said the October 2014 emergency planning exercise went very well with good attendance from state, local, and county law enforcement and emergency responders. The 2015 exercise is October 21st. Mr. Brown also noted the successful annual fire/medical tabletop drill held at the Wiscasset Fire Station in May.

Mr. Brown said former Radiation Protection Manager Jim Connell fully retired early this year and that Joe Bourassa has assumed that responsibility. Mr. Bourassa has extensive radiological protection experience and has been involved with Maine Yankee, Connecticut Yankee, and Yankee Rowe ISFSI operations since 2007.

Mr. Brown said that as required every Five years by the 2007 Compliance Order by Consent Maine Yankee submitted a report to the Maine Department of Environmental Protection (MDEP) in June recommending revisions to the chemical groundwater monitoring program to discontinue wells Maine Yankee and its consultants believe are no longer needed, focus the sampling at the remaining wells, and provide all the necessary groundwater information going forward. Maine Yankee currently has 23 wells which are part of the groundwater monitoring program. Two are measured for water level only and 21 are sampled for chemical constituents. Mr. Brown said Maine Yankee is recommending reducing the number of wells being sampled from 21 to 6 which will assure sampling in key areas continues. Maine Yankee is also recommending discontinuing the 2 wells which are measured for water level only. Changes to the groundwater sampling program are allowed after MDEP approval. MDEP continues its review of the report.

Senator Johnson asked if Mr. Brown has a map of the sampling locations. Mr. Brown said Maine Yankee does and can get a copy for Senator Johnson.

Mr. Brown reported that the quarterly meetings between Maine Yankee and the State agencies continue to be productive as the parties discuss planned State oversight activities and their expected costs. Mr. Brown noted that the next quarterly meeting is October 13 in Augusta.

The NRC's last inspection of Maine Yankee took place in mid-April 2014. The results are posted on the Maine Yankee website. Mr. Brown said "No findings of significance were identified". The next NRC inspection is scheduled for 2016.

Mr. Brown said Maine Yankee is a participant in the meetings on the proposed security rule changes for ISFSIs with the industry and NRC which has been discussed at the last four CAP meetings. Mr. Norton said the process began in 2009 and completion may be deferred by the NRC beyond the currently scheduled 2019 publication date of the proposed rule changes. In the meantime the NRC has been clear that security at ISFSI sites is adequate.

Mr. Brown said canister relicensing and aging management issues associated with the extended storage of spent nuclear fuel at the ISFSI continue to be a significant focus. Paul Plante is the manager for this project at Maine Yankee and the other two Yankee sites. He is much involved with industry, the NRC and others such as the Electric Power Research Institute to develop the technical basis for dry cask storage inspections and frequency to address issues such as the potential for corrosion of dry cask storage components and weathering of concrete structures over the long term. Mr. Brown said additionally, atmospheric monitoring and additional characterization testing is ongoing at Maine Yankee with the expectation that the data will be used once industry criteria are published on aging management. Senator Johnson asked if rainfall is measured. Mr.

Brown said he didn't think so. Chair Hudson said rainfall is measured at the airport. Mr. Keyes said rainfall measurements at the airport are for quantity not quality.

State of Maine Update

State Nuclear Safety Inspector (SNSI) Pat Dostie, updated the CAP on State oversight activities since the last CAP meeting. Mr. Dostie spoke from slides contained in the CAP meeting package.

Activities Mr. Dostie reported on included: various reports to the legislature including progress on the Confirmatory Summary report which he hopes to have a final draft of by the end of 2015; participating in Maine Yankee's 2014 ISFSI Emergency Plan exercise and 2015 medical drill; receiving yearly training to maintain unescorted access to the site and access to safeguards information; participating in quarterly State of Maine/Maine Yankee Oversight Group meetings on the ISFSI; meeting with Maine Yankee on the cask relicensing effort; participating in bi-weekly conference calls with the Nuclear Waste Strategy Coalition; attending in May the North East High-Level Radioactive Waste Transportation Task Force meeting and the National Transportation Stakeholders Forum in Albuquerque, NM,; discussing with the vendor concerns on anomalies experienced with Thermoluminescent Dosimeter (*TLD*) readings and explanations for increases, including discussing a path forward to minimize storage/transit exposures in order to more accurately derive the ISFSI dose impact.

Mr. Dostie briefed the CAP that the State did not have anomalies in their 4th quarter 2014 TLD readings as they did in the 4th quarters of 2013 and 2012. Mr. Dostie said in the 4th quarter of 2013 the TLDs picked up extra exposure from being stored at the vendor's location for a month. He said storage at the lab itself seems to be the cause for the 2013 anomalies. Mr. Dostie said the cause of the anomalies in 2012 may remain a mystery as there are too many unknowns that could have caused it.

Mr. Dostie said an average transit control value of 6.5 appears reasonable. He said if the vendor processes the State's TLDs early that should result in less storage time. Moving forward the State will seek to reduce the storage or waiting time at the vendor by having the TLDs rezeroed late in the quarter and shipped immediately back to Maine from the CA vendor; transition to a State lab storage dose assessment; and adhere to 2014 ANSI N13.37 Environmental TLD Standard to derive ISFSI radiation dose/impact.

Mr. Dostie also said he continues to serve as the State of Maine representative on an Inter-Regional Team which is making recommendations to the Department of Energy (DOE) on funding allocations to states under Section 180(c) of the Nuclear Waste Policy Act (NWPA). The purpose of section 180(c) is to provide technical assistance and funding for training public safety officials for dealing with routine and emergency response situations for SNF shipments. Mr. Dostie said the goal is for states and tribes to be ready when shipments begin and to be able to respond as necessary. What do we - states and communities along hypothetical routes - need in terms of funding, training, and equipment to be ready for emergency response? Mr. Dostie said he participated in conference calls for the Interregional Team on the funding allocation and Policy Implementation Exercise. He also commented extensively on drafts of the funding allocation approaches.

Mr. Dostie said there were positive lessons learned from the Policy Implementation Exercise and that the Exercise helped develop a good working relationship with the DOE. There were also areas for improvement such as some state participants felt they needed more support from DOE and the level of effort from states was underestimated. Mr. Dostie said it has taken and will take a lot of time and effort to participate in the process.

Senator Johnson asked, when you say it's a significant amount of work to be involved do you know how much going forward? Mr. Dostie said he hoped to have a better idea after the next conference call.

Ms. Linehan asked about the level of commitment to let communities know about transportation shipments. Mr. Dostie said under section 180(c) of the NWPA there is a requirement for public education regarding shipping campaigns. Mr. Dostie noted there are entities in a couple of states interested in hosting a consolidated interim storage facility (CIS) and they plan to file license applications with the NRC next spring. Mr. Norton noted that for CIS to be implemented prior to the NRC authorizing construction of the Yucca Mountain repository Congress will have to amend the NWPA. Responding to Ms. Linehan Mr. Norton said Mr. Dostie is right that there's a requirement for education regarding transportation in general versus information about specific shipments which is not made public. Chair Hudson noted that used nuclear fuel moves around this country all the time.

Mr. Hudson asked if there were questions from the panel or the public regarding Mr. Dostie's presentation. Wiscasset Newspaper reporter Susan Johns asked with so many unknowns and variables with the TLD issue how can you know what the true readings are? Mr. Dostie said all TLDs see the same exposure except the control TLDs that are kept in the vault. When the TLDs are shipped to the vendor in CA you can subtract the transit dose to derive the impact from the ISFSI and that the State is working to improve that process.

Michael Mayhew of Boothbay said this sounds like a quality control issue. Maybe you should be using a different vendor. Mr. Dostie said the State is looking at that possibility.

Senator Johnson said this still concerns me. There is not good signal to noise ratio. It's unclear how accurately we are measuring the small dose at the site. It seems it would be worthwhile to look at other vendors to improve quality control. Mr. Norton asked Mr. Dostie to clarify that the dose impact of Maine Yankee off-site is zero. Mr. Dostie said, that's right. We are trying to determine the on-site impact. Mr. Dostie noted that back when the State Lab read the TLDs we did not have this problem. We don't have that luxury anymore.

Mr. Jarrett asked about the well that Maine Yankee missed sampling during the 2014 sampling period. Mr. Brown said the well was subsequently sampled in 2015 and the constituents of concern are below the action guidelines. The well in question is one of the ones Maine Yankee is recommending to the MDEP to discontinue sampling.

Break and Audience Introductions

Following a short break Chair Hudson asked audience members to introduce themselves. Attendees included Charlotte Boynton, Lincoln County News reporter, Susan Johns, Wiscasset Newspaper reporter, George Richardson, First Selectman, Westport, Jamel Torres, Wiscasset Town Planner, Michael Mayhew, Boothbay, Bill Newbury, Woolwich, Kate O'Connor, Chair Vermont Nuclear Decommissioning Citizens Advisory Panel, and a few others.

Status Blue Ribbon Commission on America's Nuclear Future Recommendations and National Spent Nuclear Fuel Issue Update

Maine Yankee Public and Government Affairs Director Eric Howes updated the CAP on the status of the 2012 Blue Ribbon Commission on America's Nuclear Future Recommendations (BRC) and the national status of the SNF issue since the last CAP meeting. He spoke from slides included with the meeting package.

Mr. Howes said at the CAP's request his presentation combines his usual annual update on the status of the SNF issue with an update on the status of the BRC recommendations issued in January 2012, over three and a half years ago.

Mr. Howes said little of substance has been done to implement the BRC recommendations because Congress and the Administration have not reformed the NWPA to allow the recommendations to go forward. Of note, the BRC recommended the "first in line" transfer of SNF stored at decommissioned sites to one or more CIS sites.

Mr. Howes quoted from the 2012 Maine Yankee annual report to the CAP and the 2015 Maine Yankee annual report to the CAP to show the language regarding the status of the national SNF program since 2012 is largely the same. The 2015 annual report concluded: "Meaningful progress this year appears unlikely."

Mr. Howes used a timeline to show a brief history of the SNF issue since 1982 when the NWPA was enacted. The timeline illustrated the political difficulties of siting a geologic repository or a CIS facility, a concept and that has been explored for decades.

Mr. Howes noted that over \$35 billion has been paid into the Nuclear Waste Fund which has an investment income of about \$1 billion annually. Ratepayers have paid to have the SNF and GTCC removed from commercial plant sites but the government has yet to fulfill its obligation under the Standard Contract and the NWPA. There is now about 74,000 metric tons of SNF being stored at plant sites and the amount is increasing by about 2,000 metric tons per year.

Mr. Norton clarified that while more than \$35 billion has been paid into the Nuclear Waste Fund, the money has been used to fund other government programs. There is no "fund" set aside to pay for SNF disposal but rather an IOU.

Mr. Howes referred CAP members to Maine Yankee's annual report to the CAP for more detail but noted that Maine Yankee first filed litigation in federal court with the DOE in 1998 over its failure to meet its obligation to begin removing SNF as required by the Standard Contract and the NWPA. The litigation is being conducted in phases. Phases 1 and 2 are complete. The Federal Energy Regulatory Commission (FERC) approved a filing effective July 1, 2013 following the award of the Phase I damages funds that accepted an agreement reached between Maine Yankee, Connecticut Yankee, and Yankee Rowe and state utility regulators in ME, CT, and MA that have historically intervened in the companies' FERC rate cases. That agreement detailed an approach for applying the Phase I damages proceeds and future damages awards that best serves the interests of the ratepayers in their state. Phase 3 litigation was filed in August 2013 and is for damages incurred for the years 2009-2012 resulting from the government's continuing failure to perform. The trial in the Phase 3 case was this past summer. Once post-trial briefing is complete in mid-October the case will be ready for decision by the judge.

Mr. Howes discussed the formation of the BRC and their charter from the DOE Secretary to "recommend a new strategy for managing the back end of the nuclear fuel cycle" which did not include consideration of specific sites for a repository such as Yucca Mountain. The BRC was appointed after the Obama Administration found Yucca Mountain "not a workable option." He also talked about the August 2010 meeting of the BRC Storage & Transportation Subcommittee at Chewonki as well as the site visit and dinner the evening prior. The Subcommittee came to Wiscasset at the invitation of the CAP. A number of

speakers at the Subcommittee meeting made the case for the BRC to include in its recommendations priority removal of SNF and GTCC from shutdown sites like Maine Yankee.

Mr. Howes discussed the first six BRC recommendations using quotes from the report to provide detail on each. They are: a new consent based approach to siting; a new organization dedicated to implementing the waste management program with the authority and resources to succeed; access to the funds ratepayers have provided for the purpose of nuclear waste management; prompt efforts to develop one or more geologic disposal facilities; prompt efforts to develop one or more CIS facilities, prompt efforts to prepare for the eventual large-scale transport of SNF and high-level waste to CIS and disposal facilities when such facilities become available.

Mr. Howes noted that the DOE continues to implement the BRC recommendations within the agency's existing authority and budget. The DOE made clear in January 2013 that congressional reform of the SNF program in the near term is necessary to fully implement the BRC recommendations and to achieve its strategy milestones of a pilot CIS facility for shutdown reactor site SNF by 2021, a larger CIS facility by 2025, and a repository by 2048.

Mr. Howes said DOE continues to work on transportation activities such as rail car design, CIS facility design, gathering information about decommissioned reactor sites for the eventual transport of SNF and GTCC from those sites, working with state regional groups on issues such as 180 (C) as discussed by Mr. Dostie. DOE has indicated it may in the near term publically initiate the consent based siting process; likely beginning with public discussion about what is meant by consent based siting.

Mr. Howes noted, as Mr. Dostie alluded, that Waste Control Specialists in West Texas and the Eddy-Lea Energy Alliance across the state border in Southeast New Mexico both intend to submit a license application to the NRC in spring 2016 for a CIS facility with the intention of storing SNF and both continue efforts to build local and state support for the proposed projects.

Mr. Howes briefed the CAP on the ongoing impasse in Congress on the SNF issue. In the Senate S. 854 introduced in March would largely implement the BRC recommendations. It's the same bill that was introduced in 2013 (S.1240). A hearing on S. 854 scheduled for August was cancelled and has not been reschedule.

The Senate Energy & Water Appropriations Subcommittee again included a pilot provision for SNF store at decommissioned reactor sites in its annual appropriations bill. The bill this year also includes a provision for DOE to enter into contracts with private entities for the storage of SNF.

There is no mention in either Senate bill of Yucca Mountain. Mr. Howes also noted that Senate Minority Leader Harry Reid will not seek reelection in 2016. How that will change the dynamics of the discussion on the SNF issue isn't known. Leadership in NV remains largely opposed to Yucca Mountain.

Mr. Howes said in the House Energy Committee Subcommittee Chairman Shimkus is expected to introduce a bill that looks similar to a 2008 Bush Administration bill that sought to address Yucca Mountain obstacles such as land and water rights. It may also include a provision for CIS but is expected to link implementation with a final NRC ruling on Yucca Mountain. Texas Congressman Conaway is expected to introduce a bill that among other things would enable CIS to move forward without linkage to Yucca Mountain progress. In May the House approved \$150 million for the SNF management program including \$25 million for the NRC to continue the Yucca Mountain license application review process. The House bill does not mention CIS.

Mr. Howes concluded his presentation by saying Congress is likely to fund the government with a continuing resolution beyond the end of the fiscal year, September 30; the interest in Texas and New Mexico on CIS is a notable development; there are now discussions among republican members of the House on CIS but differences remain on whether CIS implementation should be linked to progress on Yucca Mountain; how Senator Reid's retirement will affect the dynamics of the issue remains to be seen; and meaningful progress on the SNF issue and implementation of the BRC recommendations are not expected this year.

Chair Hudson noted there is no formal consent based process as yet but Yucca Mountain shows us that if a community can't garner state support then it's not a viable option for CIS or a repository.

Mr. Jarrett asked if 2021 is the soonest SNF could be expected to begin moving and wondered where does the money come from to pay for the SNF program given the delay. Mr. Howes said the 2021 DOE date for the opening of a pilot CIS facility focused on removing SNF from decommissioned reactor sites was premised on Congress reforming the NWPA in 2013-14. DOE has said the pilot date slips with each passing year of inaction. Most of the money for DOE's current program is part of the agency's budget.

Vice-Chair Thompson said he didn't think Mr. Howes' characterization of little progress since the BRC recommendations were issued in 2012 is fair. Mr. Thompson noted that bills have been drafted and submitted in Congress and there are two sites interested in hosting a CIS facility. Mr. Thompson mentioned his experience working in the Carlsbad, New Mexico area noting the area has good salt caverns suitable for disposal. Mr. Thompson said he was troubled by the Administration decision to separate some military waste from commercial waste for disposal. Mr. Thompson said this is a good opportunity for the CAP to

express concern about the glacial pace of the SNF issue and that places like Maine Yankee should still be first on the list. He expressed concern about losing institutional memory.

Mr. Howes agreed there's been some progress but how do you bring the House and Senate together to reform the NWPA? Chair Hudson said it's great the people are working on transportation but we need overarching legislation. The likelihood of that happening before 2017 at the earliest is not great. Should we bother to write another letter this year?

Vice-Chair Thompson said if we do we should emphasize the pilot project.

Ms. Linehan asked how other countries are progressing with the issue of transportation, storage, and disposal of SNF. Mr. Howes said geologic disposal is the approach internationally and that Sweden is the farthest along in terms of having a disposal facility. Mr. Howes said he will send Ms. Linehan information on the Swedish program.

Chair Hudson said the Canadian program to dispose of low level radioactive waste near Lake Huron is a good consent based model that may positively affect the Canadian program to site a geologic repository for SNF.

Senator Johnson said Congress needs to get its act together and address this problem. With more and more plants decommissioning security is going to be a greater concern. It's safer for this material to be stored in one location than at sites throughout the country.

Westport First Selectman George Richardson asked why we aren't reprocessing SNF rather than storing it? It's done in other countries. Vice-Chair Thompson said we ought to be learning from other countries. Chair Hudson said reprocessing concentrates the waste but doesn't eliminate it. Mr. Howes said the BRC touched on the topic in its report and concluded the next generation of reprocessing technology isn't mature enough for commercial use.

Bill Newbury of Woolwich asked if the proposed CIS facilities in Texas and New Mexico could store the current 70,000 metric tons of SNF. Mr. Norton said he couldn't speak to capacity but both projects are talking about storing SNF from decommissioned reactor sites as proposed in the pilot concept. He also noted that the Texas site has a lot of land.

Chair Hudson said maybe we do need another letter to members of Congress that's more succinct and focused than our last one. Focus on the need for the pilot project. For many sites ratepayers and taxpayers are paying for the government's inaction. It's important to do this. Encourage others to join us.

Senator Johnson suggested broadening the letter to the other New England citizen's advisory panels in MA, CT and VT. He said it's time for action. Chair Hudson agreed and recommended the letter focus on congressional members in New England. Mr. Norton said as a second stage beyond the initial New England letter there may be a role for the Decommissioning Plant Coalition (DPC) to send a similar message to members of Congress outside New England that have decommissioned plants in their states. He noted that Maine Yankee, Connecticut Yankee, and Yankee Rowe are members of the DPC.

Mr. Howes will draft a one page letter that will hopefully be signed by the four CAP chairs in New England to be sent to the New England congressional delegation.

Mr. Jarrett asked if we ask our congressional representatives to come to the CAP meeting. Mr. Howes said he did invite them. He also noted he meets regularly with congressional staff and that the delegation has been very supportive of efforts to remove SNF and GTCC from the Maine Yankee site.

Vermont Nuclear Decommissioning Citizens Advisory Panel Chair Kate O'Connor said she would bring the idea of the joint CAP letter to the next meeting of the VT NDCAP on September 24. She said she appreciated attending the Maine Yankee CAP meeting and that the longevity of the Maine Yankee CAP is an inspiration, especially since the Vermont Yankee decommissioning may continue for the next 50 years.

General Lew Curtis announced that this was his last CAP meeting. In his letter of resignation to Chair Hudson dated September 21, 2015 he said "The time has come for me to step aside. Age and living in Texas most of the year prohibit me from being an effective member of the CAP. I have enjoyed being able to participate and humbled that I was selected to be a member back in 1997. I have deep respect for the members and wish you every success in the coming years."

Vice-Chair Thompson said it's been a tremendous pleasure to serve with you all these years. Those sentiments were echoed by others.

The meeting adjourned at 5:45

