

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

September 28, 2016, Water's Edge, Edgecomb
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
The Honorable Chris Johnson	Yes
Mr. Ralph Keyes	Yes
Ms. Misty Parker	No
Ms. Stacy Linehan	No
Mr. Scott Houldin	No

Introduction

Chair Don Hudson welcomed everyone to the annual Maine Yankee Community Advisory Panel (CAP) meeting noting this is the CAP's 19th year. Chair Hudson asked panel members and the audience to introduce themselves. The audience included Patricia Aho, State Office Representative for Senator Collins, Gail Kezar, Regional Representative for Senator Angus King, a member of the public from Boothbay, and Maine Yankee staff Dennis Mercer and Larry Doucette.

Chair Hudson deferred the business portion of the meeting as there was not a CAP quorum due to traffic congestion on Route 1 when the meeting started shortly after 4:00 p.m. and began instead with the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) update.

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 2015 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 said that in fall 2015 Maine Yankee installed a 3,500 foot chain link fence along its Old Ferry Road property to deter trespassers, and since the fence installation there have been essentially zero problems with trespassers.

Mr. Brown said the 2016 biennial emergency planning exercise is scheduled for October 19. He said the fall 2015 drill simulated a tornado striking the ISFSI and demonstrated the staff's capability to assess a damaged cask and perform a radiological survey.

Mr. Brown updated the CAP on several maintenance projects including replacement of an obsolete radiation monitoring system, replacement of a section of the outer ISFSI nuisance fence to correct frost heaving, installation of below ground protection from rodents, and vertical concrete cask resealing.

Mr. Brown said that in fall 2015 Maine Yankee conducted an Independent Management Assessment (IMA) focused on the quality assurance program, safety culture, and the corrective actions identified in the 2013 IMA. Two outside experts performed the assessment. Results were positive overall with a number of opportunities for improvement Maine Yankee is addressing. Wayne Norton said the IMA is performed in the off-year from NRC inspections so that every year there is an independent review from a regulatory and compliance standpoint. Mr. Norton said the IMA is a commitment he made to the Maine Yankee Board of Directors.

Mr. Brown said that the Maine Department of Environmental Protection (MDEP) concurred with Maine Yankee's recommendations for the chemical groundwater monitoring program with the exception of one monitoring well. Based on this approval, Maine Yankee abandoned 14 monitoring wells in August reducing the number of monitoring wells from 21 to 7. MDEP staff members were on site for the second day of this activity.

Mr. Brown reported that the quarterly meetings between the State of Maine and Maine Yankee continue to be productive and that Radiation Control Program Manager Jay Hyland and State Nuclear Safety Inspector (SNSI) Pat Dostie are participants along with the MDEP, State Police, and the Public Advocate's office.

Mr. Brown said the April NRC Safety and Security Inspection was positive with no findings, deficiencies, or violations identified. He said the NRC praised Maine Yankee in the exit meeting which is atypical of the regulator.

Mr. Brown noted that as previously reported to the CAP in fall 2015 the NRC delayed ISFSI security rulemaking to 2020 while keeping the existing security requirements in place.

Mr. Brown updated the panel on the significant effort underway at Maine Yankee working with NAC International to prepare and submit the NAC storage license renewal application in advance of the 2020 expiration date. He said issues include: developing the technical basis for dry cask storage canister inspections and frequency to address issues such as the potential for corrosion of dry storage components and weathering of concrete structures over the long term; utilizing proposed aging management processes for inspecting the concrete casks and pads; and performing atmospheric and additional characterization at Maine Yankee. Results have been used by the Electric Power Research Institute (EPRI) to develop industry criteria for characterizing ISFSIs.

Chair Hudson asked if there is a sense at this point on the length of time for the canister storage license renewal. Mr. Brown said 40 years is the expected renewal length.

Mr. Brown also briefed the CAP on a successful project in July to remove the outer lid from a Greater than Class C cask (GTCC) to check for moisture intrusion. He said this was in response to a NRC Information Notice sent to the industry.

Mr. Brown reported that Maine Yankee at the same time supported an EPRI sponsored visual inspection of the GTCC canister using a robotic camera. This allowed EPRI to test recent robotic delivery system and visual inspection tool improvements. The inspections and demonstrations were very successful and the results are being evaluated by EPRI and Maine Yankee.

Mr. Brown said the robotic camera identified some limited areas of paint failure on the carbon steel liner of the vertical concrete canister (VCC). Mr. Norton noted that Mr. Brown was referring to the inner liner of the VCC, not the GTCC canister and that the paint observation is not a concern for the integrity of the VCC which is comprised of the 2.5 inch thick carbon steel liner and 28 inches of steel reinforce concrete.

Mr. Brown said this is proof we can inspect canisters. Mr. Norton said the theory behind this is similar to in-service inspections of operating plants, a tracking tool to assess conditions over time.

Mr. Jarrett asked if there was much difference in the radiation levels with the lid removed. Mr. Norton and Mr. Brown said there was not as the 8 inch thick shield plug remained in place and all that was removed was the bolted lid.

Senator Johnson asked if the robot was cabled noting that the high radiation field near the canister wall could affect electronics. Mr. Brown said it was on a cable and there was a video feed into the conference room where attendees watched real time.

Mr. Brown concluded his presentation with several photos of the lid removal and canister inspection.

Approval of 2015 Annual CAP Meeting Minutes, CAP's Continuation, Election of Officers

There now being a quorum of 7 CAP members, Chair Hudson opened the business portion of the meeting.

The September 21, 2015 CAP meeting minutes were approved unanimously without any changes.

Maine Yankee CAP staff Eric Howes prefaced the discussion of the CAP's continuation and election of officers by reminding the CAP that he should have included these business items on the 2015 CAP meeting agenda and that via e-mail in January 2016 the CAP agreed to continue its work with the current Chair and Vice-Chair until the 2016 annual meeting. Mr. Howes said that since the post-decommissioning CAP began in 2005 the CAP has extended itself in two year increments and at the same time elected officers for two year terms as required by the CAP Charter. Therefore, to continue this pattern the CAP would agree to continue to its 2018 annual meeting at which time the panel would again review its continuation and also elect a Chair and Vice-Chair to serve until the 2018 annual meeting.

Chair Hudson said if the CAP members wish to retain the current leadership that he and Vice-Chair Dan Thompson are willing to serve another two years.

Mr. Jarrett made a motion to continue the CAP until the 2018 annual meeting with Chair Hudson and Vice-Chair Thompson continuing in their respective positions until that time. Mr. Hyland seconded the motion.

Chair Hudson said he appreciated that the congressional staff were at the CAP meeting. He noted the letter sent by the 4 New England CAP chairs last fall to the New England delegation and the responses received. He thanked the Maine delegation for its support to reform the spent nuclear waste program. He said the CAP fills an important purpose by the fact we are still here ready to serve. He said he's sure the Maine delegation appreciates that we are here and they can share with their colleagues that they are hearing from constituents on the spent nuclear fuel (SNF) issue. Chair Hudson said in his view the CAP should continue its work and he is committed to seeing the SNF finally move. He asked for the views of Maine Yankee and the State of Maine.

Mr. Norton said for Maine Yankee it's obvious the CAP should continue as it brings the broader community and stakeholder perspective to the issue. Maine Yankee alone can seem self serving in its efforts to resolve the SNF issue. The

CAP amplifies the message that the federal government must meet its obligations to remove the SNF and high-level radioactive waste.

Mr. Hyland said things have changed since the plant decommissioned. Ever since the Blue Ribbon Commission report the emphasis has shifted on a bipartisan basis to consent-based siting. The CAP was probably the first consent-based panel. We should continue with the CAP and see what opportunities may emerge in the coming year in consent-based siting.

Vice-Chair Thompson said he has been a CAP member since the beginning. At that time, he was Wiscasset Town Planner and the town was working on its Comprehensive Plan using a consent-based process and he said he'd like to think the CAP was an off-shoot of that. He also said groups like the CAP embody institutional and community memory. We have experiences that should be shared with others. The CAP should continue its work.

Chair Hudson noted that a lot of people now living in the region don't know there were two power plants in Wiscasset - Maine Yankee and Mason Station. When the time comes to move the SNF from Maine Yankee the CAP will be helpful with that process, especially as it relates to transportation. There have been times in the past when people filled the room for a CAP meeting such as when the reactor pressure vessel was shipped by barge from the site. The CAP provided a forum for the public to learn about the process and ask questions. The time will again come when the public fills the room for a CAP meeting.

The CAP voted unanimously to continue its work until the 2018 annual meeting and re-elected Chair Don Hudson and Vice-Chair Dan Thompson to serve until that time.

State of Maine Update

State Nuclear Safety Inspector 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.

Mr. Dostie said he was pleased to report that all the monthly reports to the legislature from June 2014 through July 2016 have been approved by Commissioner Mary Mayhew, that the August 2016 report is at the Commissioner's office for review and that he has started on the September 2016 report.

Mr. Dostie also updated the CAP on the status of other reports such as the SNSI's 2015 Annual Report that was approved by the Commissioner September 12 and the Maine Yankee decommissioning Confirmatory Summary report which is currently under management review.

Mr. Dostie said the various reports will be posted to the state website along with others now posted.

Additionally Mr. Dostie reported that he continues to be actively involved with the Northeast High-Level Radioactive Waste Transportation Taskforce (NEHLRWT Taskforce) which met in Portsmouth in December and then in May in Orlando as part of the Department of Energy's (DOE) National Transportation Stakeholder Forum.

Chair Hudson noted that there are radioactive waste shipments in the United States on a regular basis. He wondered if the experience of regional groups like the NEHLRWT Taskforce will help inform the transportation of SNF when DOE begins to remove fuel from commercial sites.

Mr. Dostie said meetings of the regional groups are valuable as participants learn about radioactive waste transportation in other parts of the country and the state emergency planning component that goes with them. The forums are also a good opportunity to be updated on national issues such as the ongoing recovery of the Waste Isolation Pilot Project (WIPP) from the 2014 container leak accident and progress on private consolidated interim storage (CIS) proposals such as in Texas and New Mexico. He noted that once operations resume there will again be weekly shipments of radioactive waste packages to WIPP. Mr. Dostie also mentioned planned radioactive waste shipments from the Chalk River research reactor in Canada to the DOE facility in South Carolina. There are valuable lessons learned from these shipments that will inform the transportation of SNF when the time comes.

Chair Hudson noted that we need to anticipate that when it comes time to move SNF there will be concerns about transportation. He said the CAP will need to provide time for a certain amount of venting while we are trying to provide information to educate the public. At the Boston DOE consent-based siting meeting there were people who came with a different agenda from consent-based siting which was a bit of a distraction but in the end DOE got through the agenda. It is what it is.

Through his involvement with the National Transportation Stakeholder Forum Mr. Dostie said he continued to participate in discussions of the Interregional Team on Section 180 (c) of the Nuclear Waste Policy Act on grant funds for emergency preparedness training for local responders on SNF shipments. He also participated in teleconferences and webinars and commented on meeting summaries, work plans, and issue papers for the Rail/Routing Ad Hoc Working Group, and commented on DOE's draft fact sheets for high-level and low-level waste transportation for the Information and Communications Ad Hoc Working Group.

Regarding activities at Maine Yankee, he said he regularly visits the Maine Yankee site and meets with Maine Yankee management on a variety of issues. He praised Maine Yankee ISFSI Manager J. Brown for being instrumental in identifying the need and then working with the Maine Emergency Management Agency and State Police to simplify the emergency notification call list.

Mr. Dostie noted that he attended the NRC April inspection of Maine Yankee and that the NRC indicated the inspection went well. Mr. Norton asked Mr. Dostie if that was his assessment too. Mr. Dostie said it was.

Mr. Dostie said he planned to participate in the October 19 Maine Yankee emergency planning exercise.

Adding to Mr. Brown's comments, Mr. Dostie said he observed and participated in Maine Yankee's July cask lid removal and robotic camera demonstration. Mr. Dostie said he took 342 photos and 13 videos. Mr. Dostie included several photos of the project in his slides. Mr. Jarrett asked about what appeared to him to be steam above the cask in one photo. Mr. Dostie said it was a cloud in the blue sky. Mr. Keyes was intrigued by the rover/robot technology used and will refer to it in his Wiscasset High School science classes.

Mr. Dostie updated the CAP on the Thermoluminescent Dosimeter (TLD) issue which has been a subject the last couple of CAP meetings. Mr. Dostie said the readings of control badges were back to normal in the 4th quarter of 2015. There were no increases comparable to the first two years of the four-year assessment. He said the state is working with the TLD Vendor to quantify the storage vault exposure so that the ISFSI impact on the environment can be derived. The assessment will take over a year but there should be results to discuss by next year's CAP meeting. He said that we suspect that since the State's vault is made of pre-World War II steel that our numbers may be lower than other facilities that use lead that is ever so slightly contaminated from the atomic weapons testing era.

Chair Hudson noted that the NRC radiological decommissioning dose limit is 25 millirem per year to the general public and that the radiological dose from the ISFSI is well under that. Mr. Dostie said the radiological dose from the ISFSI is very localized and essentially background a short distance from the ISFSI TLD locations.

Spent Nuclear Fuel Removal/Disposal Update

Maine Yankee Public and Government Affairs Director Eric Howes updated the CAP on the national status of the SNF issue and the Phase III DOE litigation. He spoke from slides included with the meeting package.

Mr. Howes reminded the CAP of DOE's contractual obligation to remove the SNF and GTCC waste from the Maine Yankee site and that until DOE performs Maine Yankee is required to remain in business at an annual cost of about \$10 million annually. Mr. Norton noted that the annual cost to operate the ISFSI is likely to increase over time, especially if current regulatory requirements change.

Mr. Howes said that while there have been positive developments such as the proposed CIS facility in Texas submitting a license application to the NRC, the stalemate in Congress on this issue continues and Maine Yankee expects the SNF to remain on site for years to come.

Chair Hudson said it makes sense to consolidate SNF from the shutdown sites because the cost of the current individual SNF storage sites is more than the cost of CIS.

Mr. Howes noted that Maine Yankee engages regularly with others to make progress toward the time DOE fulfills its contractual obligations to remove the SNF and GTCC waste. He thanked the congressional delegation for their strong support of a pilot program to remove SNF stored at shutdown reactor sites to a CIS facility and recognized the congressional staff attending the CAP meeting. He noted that Pamela Trinward of Rep. Pingree's staff had planned to attend the CAP meeting but was unable to.

Mr. Howes listed groups Maine Yankee is involved with on the SNF issue and gave examples of activities. The groups include: the Nuclear Waste Strategy Coalition (NWSC), the Decommissioning Plant Coalition (DPC), the Interim Storage Alternatives Effort, and the Nuclear Energy Institute (NEI). Mr. Norton is the chair of the DPC and a NEI board member. The State of Maine is also a participant in the NWSC and the Interim Storage Alternatives Effort.

Mr. Howes updated the panel on congressional activity noting that the Senate continues to be more open to CIS and the House continues to be more focused on completing the Yucca Mountain license application, though he did note that there are two bills in the House that would authorize the DOE to contract with private entities for the development of CIS facilities.

Chair Hudson asked if Congress would have to act in order for DOE to contract for private storage. Mr. Howes said that in recent testimony before the Senate Energy & Water Development Appropriations Subcommittee Secretary Moniz said DOE lawyers indicate DOE has the authority it needs to contract with private entities for SNF storage but that DOE prefers Congress act to explicitly provide that authority so that it is unambiguous. Mr. Norton said as a practical matter fully implementing private CIS is unlikely to happen without funding from Congress including for SNF transportation.

Vice-Chair Thompson asked if the proposed private CIS facilities in Texas and New Mexico are seen as one or the other or both of them becoming licensed and eventually receiving SNF from the DOE for storage. Mr. Howes said both entities have said there is enough SNF to go around and that the local support in Texas and New Mexico appears strong. Mr. Norton said he has been to the area which has a long history with the gas and oil industry as well as nuclear facilities. A prevalent view in the area is that nuclear related industry is less hazardous than oil and natural gas.

Mr. Howes said that DOE continues activities in support of its 2013 strategy within its existing budget and authority toward the milestones of a pilot CIS facility focused on SNF from shutdown reactor sites, a larger CIS facility, and eventually a geologic repository. DOE has indicated it is likely to return to Maine Yankee in 2017 to take a closer look at the rail option for removing SNF from the site.

Mr. Howes discussed DOE's consent-based siting initiative effort over the past six months including the DOE meetings in Boston, where former CAP Chair Marge Kilkelly was the keynote speaker, and the public meeting in Wiscasset. He said Maine Yankee responded to the DOE's request for comments through the DPC and the NWSC.

He said DOE expects to release several draft documents related to consent-based siting by the end of the year. DOE has said one of them will be a request for comment on how DOE might work with private entities interested in developing a CIS facility.

On DOE Phase III litigation Mr. Howes said the DOE did not appeal the decision issued April 7, 2016 which awards Connecticut Yankee, Yankee Atomic, and Maine Yankee approximately \$76.8 million in total damages for the costs related to the government's continuing failure to honor its contractual obligations to remove SNF and high-level waste from the three sites. These Phase III litigation awards represent damages that Maine Yankee, Connecticut Yankee and Yankee Atomic incurred from January 1, 2009 through December 31, 2012. Maine Yankee was awarded approximately \$24.6 million in the Phase III decision. Maine Yankee expects the funds to be transferred to the company's trust fund soon.

Mr. Howes said in the interim, a dialogue is ongoing between the three Yankee Companies and the state utility regulators in ME, MA, and CT that historically have intervened in the three companies' FERC rate cases to work toward timely agreement on the application/distribution of the Phase III DOE litigation proceeds.

Mr. Norton noted that The Phase I and Phase II damages proceeds were disbursed in accordance with a 2013 FERC order and the same model is expected to be used for the disbursement of the Phase III funds. The

FERC approved a filing in June 2013 following the award of the Phase I damages proceeds that accepted an agreement reached between the three Yankee Companies and the state utility regulators that detailed an approach for applying the Phase I damages proceeds and future damages awards in a manner that best serves the interests of the ratepayers in each of the states.

Mr. Norton said the model is based on retaining the litigation proceeds needed to operate the three ISFSIs over time and returning to owner companies the funds in excess of that amount. He noted that the owners of the three companies each have their own regulatory requirements for the use of those funds to benefit ratepayers.

Mr. Howes said the three Yankee Companies expect to continue to litigate with the DOE every several years to request damages for costs incurred by ratepayers resulting from the federal government's failure to remove the SNF from the site as required by contract.

Mr. Norton said the three Yankee Companies would be open to a settlement with the DOE rather than continued litigation but would only agree to a settlement that protects our ratepayers. To date efforts at settling with DOE have not been fruitful.

Chair Hudson said he looks forward to a CAP meeting where we have a different agenda. The stalemate on this issue is costing taxpayers a lot of money.

Vice-Chair Thompson said he is interested in hearing about how other nations are doing in dealing with their SNF and developing disposal sites. Mr. Howes noted that this question came up at last year's CAP meeting and that he sent the CAP a report following that meeting. Chair Hudson said he is familiar with the consent-based process for siting a low-level radioactive waste facility in Canada. Mr. Howes said the woman responsible for Canada's SNF repository program was a panelist at one of the DOE's consent-based siting meetings. Mr. Howes said he would see if there is updated material on the issue of what other countries are doing to dispose of their SNF, and if so he will send it to the CAP.

Mr. Jarrett thanked Maine Yankee for keeping the CAP abreast of what is going on with the SNF issue.

The meeting adjourned at 5:47 p.m.

