Maine Yankee
Community Advisory Panel on Decommissioning
Meeting Minutes – Adopted 9/15/04
Thursday, June 17, 2004

Member	Attendance
Paul D. Crary M.D., PA	Yes
General Lewis Curtis	Yes
Mr. Ted Feigenbaum	Yes
Senator Chris Hall	No
Mr. Don Hudson	Yes
Representative Ken Honey	Yes
Mr. Steve Jarrett	Yes
Mr. Ralph F. Keyes	Yes
The Honorable Marjorie L. Kilkelly	Yes
The Honorable Charles Pray	Yes
Mr. Don Schuman	Yes
Mr. Raymond Shadis	Yes
Mr. Dan Thompson	Yes

Chair Kilkelly called the meeting to order at 6:00 p.m. She also welcomed special guests Hugh Curley, Harvey Clew, and Bob Gallagher. Mr. Curley is the Chair of the Connecticut Yankee Decommissioning Advisory Committee (CDAC), Mr. Clew is a CDAC member and Mr. Gallagher is a member of the Yankee Rowe Community Advisory Board. Chair Kilkelly also welcomed Susan Smith from the U.S. Department of Energy. CAP members and the audience introduced themselves. Chair Kilkelly announced changes in the original agenda to accommodate the DOE's presentation. The State of Maine presentation will take place at the September CAP meeting and Eric Howes rather than Catherine Ferdinand will update the panel on the CAP report if time permits.

Meeting Introduction and Regulatory Update

Mr. Michael Meisner, Maine Yankee Vice-President and Chief Nuclear Officer welcomed the DOE's Susan Smith to the CAP meeting, noting this was the first time DOE had participated in a CAP meeting. With decommissioning winding down and spent fuel removal the one remaining issue to close out the site, Mr. Meisner said the DOE's participation was timely. Mr. Meisner indicated he was pleased Ms. Smith had toured the Maine Yankee site that afternoon with the Community Advisory Panel, congressional delegation representatives and members of the media. There is nothing like first-hand observation to gain a true understanding of spent fuel storage and decommissioning.

Mr. Meisner noted that while Maine Yankee hopes the DOE meets its goal of beginning to receive spent nuclear fuel at Yucca Mountain by 2010, Maine Yankee continues to look for other opportunities to remove the fuel. At this point

Private Fuel Storage in Utah looks like the best opportunity for getting the fuel out before 2010. Maine Yankee and the State of Maine also continue to advocate that spent fuel at single-unit shut down plants like Maine Yankee be removed in a DOE pilot project that could fully exercise spent fuel removal and transport.

Along with these efforts Maine Yankee continues to seek monetary damages from the DOE for its failure to remove spent fuel beginning in 1998. Previous federal court rulings found Maine Yankee has been damaged by DOE's failure to perform. The question now is how much are those damages? The damages trial begins in the Court of Federal Claims in Washington, DC July 12 and is expected to last about seven weeks. Separate damage claims for Connecticut Yankee and Yankee Rowe are also part of this trial.

The Yankee plants are not alone in this. In all 64 utilities have filed for monetary damages. In the first case, Indiana Michigan, just recently decided, the judge did not award damages but left the door open for future damages if DOE does not perform. In the Indiana Michigan case most of the costs were speculative in that they have yet to build a dry cask storage facility but plan to. The Yankee case is quite different and we expect a different outcome.

Mr. Meisner updated the CAP on a number of site restoration/reuse issues:

- Soil remediation, primarily in the restricted area backyard, began earlier this year and will be ongoing into the fall. As expected pockets of contamination have been found and remediated. For example, in the area of an historic spill water containing tritium was found pooled in a bathtub like sink.
- Final Status Survey is going very well and should be done in the February/March 2005 timeframe.
- ORISE (Oakridge Institute of Science Education) was on-site to perform confirmatory surveys. As in the last two visits their results were in good agreement with ours.
- The release of the backlands from RCRA (Resource Conservation Recovery Act) by the Maine DEP should occur very soon.
- We expect to submit the RCRA Facility Investigation report for Bailey Point to the DEP soon.
- The Maine Yankee/Friends of the Coast Marine Study mentioned at the March 25 CAP meeting has begun with some preliminary samples taken. Sampling will begin in earnest after the spent fuel pool is empty. A study report is expected by the end of the year.
- Maine Yankee is not prepared to offer Bailey Point for sale at this time largely due to the continued presence of the spent fuel. Given that, the staff building and warehouses will be demolished this fall as planned.
- On the positive side, Maine Yankee has signed a purchase and sales agreement with Wiscasset for the North Ferry Road property with an end of July closing likely. Also the Eaton Farm donation to Chewonki should occur soon.

Decommissioning Update

Mr. Meisner provided an update on decommissioning status. He spoke from a handout and overhead slides entitled "Maine Yankee Decommissioning Status," a copy of which is included with these minutes as **Attachment 1**. Mr. Meisner explained that he was filling in for Decommissioning Director Rocky Benner who was away on vacation.

Mr. Meisner said that with decommissioning 90 percent complete more and more of the work is being done by large machines and less by laborers. The site work force is now about 200 with industrial and radiological safety remaining strong. The spent fuel pool is nearly drained. Once that is complete the pace of demolition of remaining buildings adjacent to containment will accelerate. Explosive demolition of containment is expected in the Labor Day timeframe. The CAP will be invited.

Following Mr. Meisner's presentation Mr. Raymond Shadis asked for the ball park cost to store spent nuclear fuel. Maine Yankee's Vice President and Chief Financial Officer Michael Thomas replied it's about $7 million per year. Maine Yankee's President Ted Feigenbaum added that much of that cost is for security. Mr. Meisner noted that the fuel storage facility itself is paid for. Mr. Thomas said the cost to construct the facility was about $80 million.

Dr. Don Hudson asked Mr. Meisner how changing from the NRC clean up standard to the more stringent 10 milirem affected the decommissioning plan. Mr. Meisner replied that it wasn't just the change to the cleanup standard but also the change in method. For example, early on when Stone and Webster was the contractor their plan was to place demolished concrete in building foundations. Some fairly large changes were made to the overall decommissioning plan with the decision to ship concrete off-site but it was done just once. Agreeing to a 10 milirem standard was part of that. Changing the plan at a single point in time was not that difficult. Also, making the change to shipping concrete off-site mitigated a lot of other issues.

Containment Demolition Update

Director of Engineering Mr. William Henries then provided an update on containment demolition. He spoke from a handout and overhead slides entitled "Maine Yankee Containment Demolition," a copy of which is included with these minutes as **Attachment 2.**

Mr. Henries described the preparations and process for explosively imploding containment. The building is 150 feet in height and 144 feet in diameter. It is a right circular cylinder capped with a dome. The steel reinforced concrete walls are 4.5' thick and the dome is 2.5' thick. Nine 75' tall rectangles are being cut in

the wall to create columns that will be drilled laterally creating holes that will be loaded with explosives. Preparations are also underway to backfill the containment foundation. One of the remaining rectangles may be cut from the inside of containment after backfilling because the fuel building precludes access from the outside. Prior to demolition the columns will be wrapped in fabric and chain link fencing to contain the explosion and minimize blast debris. The blast will cause the columns to collapse and the dome to come down largely intact. Following the blast the remaining structure will be about 75' in height. The dome and concrete debris will be cut up conventionally using excavators with hoe rams. The debris will be loaded onto rail cars and shipped to Envirocare in Utah.

Mr. Shadis said he thought Maine Yankee was going to backfill containment with flowable fill. Mr. Henries responded that containment will be backfilled with clean sand. Mr. Henries explained that flowable fill is used in foundations such as the primary auxiliary building where there are lots of nooks and crannies to fill. Flowable fill was contemplated for containment until the decision was made to remove a lot more below grade concrete.

Mr. Dan Thompson asked if there is any chance of the containment dome falling asymetrically, that is coming down at an angle. Mr. Henries replied that this has been analyzed and will hopefully be avoided by essentially vaporizing the lower 15' of the columns supplemented by setting off charges in a spiral pattern above. This should set up a pile driver effect very similar to the World Trade Center where the weight of the material above collapses the material below. Mr. Henries said he believes the dome will come straight down but if it comes down somewhat tilted it won't be a big problem.

Mr. Curley asked how many rail cars it will take to remove the containment and how many trucks would that be equivalent to? Mr. Henries said the estimate is 100 rail cars which would be approximately equivalent to 500 truck loads (about 5 trucks equal one rail car).

Mr. William Odell former Maine Yankee plant manager who lives close by wondered if the blast will rattle his windows more than the turbine blast did. Mr. Henries said it is possible depending on the weather. Low cloud cover could increase the reverberation.

Mr. Charles Pray commented that Mr. Henries had indicated a concern about using too much explosives to accomplish the job. What if too little is used? Mr. Henries said Controlled Demolitions plans to do a test shot in order to get a good feel for the proper amount of explosives.

Mr. Pray also asked if there are any issues associated with cutting a rectangle from inside containment. Mr. Henries said noise and establishing a safe egress are the only real differences from doing the work outside the building.

Mr. Pray then asked State Nuclear Safety Advisor Patrick Dostie if he had any questions or concerns. Mr. Dostie indicated he did not.

U.S. Department of Energy, Spent Nuclear Fuel/High-Level Nuclear Waste Removal Update

Ms. Susan Smith Senior Policy Analyst, Office of Systems Evaluation and Strategy Development within the Office of Civilian Radioactive Waste Management at the U.S. Department of Energy, provided an update on the DOE's plans for removing and disposing spent nuclear fuel and high-level nuclear waste from commercial nuclear power plants. She spoke from a handout and overhead slides entitled "Office of Civilian Radioactive Waste Management – Program Update" a copy of which is included with these minutes as **Attachment 3.**

In her presentation Ms. Smith covered the full range of issues associated with civilian radioactive waste management including: the history leading up to the choice of Yucca Mountain for the nation's first high-level waste repository, the repository licensing process, repository design, waste packaging, waste acceptance, transportation, program funding and the current difficulties with the FY 2005 and beyond budget, and law suits, both by utilities as well as the State of Nevada.

Following Ms. Smith's presentation Mr. Feigenbaum asked about the timetable for decisions in the Nevada law suits. Ms. Smith replied that decisions are expected by the end of the year and went on to say that currently the biggest challenge for the project is funding.

Mr. Thompson said he hopes the government is studying reuse of the spent fuel years down the road and that this option is not being precluded. Ms. Smith said that while her department, the Office of Civilian Radioactive Waste Management, is purely disposal there are others at DOE looking more broadly. The Science Office is looking at a variety of issues to maintain flexibility including reuse.

Referring to the effort to reclassify the Nuclear Waste Fund to make it more easily available for its intended purpose, Mr. Curley asked if there are examples since Graham/Rudman where funds have been reclassified. Ms. Smith said examples include the Highway Trust Fund and some smaller funds. Ms. Smith noted that the effort to reclassify the Highway Trust Fund enjoyed great support.

Mr. Curley then asked if the DOE is expecting suits over transportation issues similar to those filed against the Yucca Mountain repository. Ms. Smith said she does not believe so because while the repository is first of a kind in this country, the transportation of radiological waste is not new. As an example, the Waste Isolation Pilot Project has been receiving waste without incident for some time now. The program has worked well. Education of communities is key.

Mr. Pray noted that in reality the DOE has been working with states for years preparing for the time when spent nuclear fuel is routinely transported for disposal. Ms. Smith agreed saying that DOE works closely with first responders in particular.

Mr. Shadis asked how many transport casks are going to be needed and will it be by rail or truck? Ms. Smith said the shipments will be predominantly by rail and rough estimates are about 100 casks will be needed.

Mr. Shadis then asked how long it will take from the start until all the spent fuel is at Yucca Mountain. Ms. Smith said the DOE is likely initially to receive 3000 metric tons annually at the repository with that amount increasing over time. It will take about 35 years to move the spent nuclear fuel inventory to Yucca Mountain.

Mr. Shadis asked if Yucca Mountain gets started in 2010 would Maine Yankee's fuel all be shipped by 2028? Ms. Smith said it is hard to know what the exact schedule would be since utilities can trade places in the queue. Mr. Meisner said Maine Yankee's fuel could be gone by 2023 if things go well.

Mr. Shadis asked if there is a more recent Acceptance Schedule than 1996. Ms. Smith said there is not but that the DOE is issuing a new one in anticipation of 2010. Mr. Shadis asked how one could obtain the new Acceptance Schedule when it is issued. Ms. Smith said it should be available on the DOE's web site.

Mr. Shadis said he was amused by the "aging cask" concept Ms. Smith mentioned in her presentation. Is this a euphemism for interim storage? Ms. Smith said she could see how one might think this describes interim storage. However, the Nuclear Waste Technical Review Board is interested in a colder repository and one way to reduce the thermal load is to let fuel cool further before placing it in the repository.

Dr. Paul Crary commented that Maine Yankee's fuel is much cooler than when it was removed from the reactor.

Dr. Hudson asked if the DOE anticipates repackaging Maine Yankee's fuel or will it remain in the canisters? Ms. Smith replied that the DOE doesn't know yet. The DOE knows that utilities oppose repackaging but repository licensing and design are ongoing so some unknowns remain.

Mr. Ralph Keyes asked if Ms. Smith could further explain the funding issue and also characterize the level of support from the Maine congressional delegation. Mr. Pray provided further detail on the funding issue and said that congressional delegation is pretty much on board. Mr. Feigenbaum noted that the real funding

difficulty is in the Senate where Senator Reed of Nevada is a formidable opponent.

Chair Kilkelly noted that utilities aren't paying for the cost of the DOE's delay in removing spent fuel, consumers are paying. The money is available. This is an amazing issue of fairness. People are paying over and over and over. The money needs to be used for its intended purpose.

Referring to an article in the June 2004 "Science for Democratic Action" entitled "Rush to Judgment at Yucca Mountain" by former Nuclear Waste Technical Review Board member Paul Craig, Mr. Shadis said the congressional delegation is all in favor of sending money to Yucca Mountain when Mr. Craig, who is eminently qualified, makes the case that the propsed design for Yucca Mountain is not scientifically sound. The article is included with these minutes as **Attachment 4.** Mr. Shadis asked Ms. Smith what is the relationship between the DOE and the Nuclear Waste Technical Review Board? Is there a possibility that Yucca won't make the grade? Ms. Smith said the relationship with the Nuclear Waste Technical Review Board has been helpful. Concerns over science and modeling will be worked through in the licensing process.

Mr. Shadis asked how can you protect the environment when you don't know what the climate will be in the future? Mr. Shadis said that while visiting Yucca Mountain a scientist had told him that DOE wasn't planning on global warming. Ms. Smith said that she wasn't familiar with modeling to any great degree but that decisions about the repository can be changed over time. For example, perhaps at some point in the future the fuel will be reused.

Chair Kilkelly commented that having spent nuclear fuel spread all over the country feels a lot more risky than having it in one place. If there is no Yucca Mountain and single repository, what then? Current sites are less secure. They aren't desert and they aren't Mountain like Yucca.

Mr. Shadis asked if the DOE decided to look for a second repository would it be in the East? Ms. Smith said that is an unknown and would be Congress's decision.

Dr. Hudson asked might the DOE enlarge Yucca Mountain to store more waste rather than construct a second repository elsewhere? Ms. Smith said the DOE is only authorized to store 70,000 tons of waste but the mountain could take more.

Mr. Feigenbaum thanked Ms. Smith for coming and noted that it was good to hear directly about the DOE's plans for waste removal. Ms. Smith thanked the CAP for inviting her and offered to come back another time and bring other DOE experts depending on the subject area the CAP would like to learn more about.

Update on CAP Report

Mr. Eric Howes provided an update on the CAP Report. Ms. Catherine Ferdinand is continuing to draft sections III – V of the Report – CAP accomplishments, lessons learned, and recommendations Maine Yankee's CAP has for others. This information came from the CAP's May 19 facilitated session in Freeport. Ms. Ferdinand hopes to circulate a draft for CAP review shortly after the July 4 Holiday. She is also encouraging CAP members to submit individual perspectives (250 word limit) and biographies for inclusion in the Report. Thanks to those who have submitted their perspective. By the September CAP meeting the Report should be nearing completion.

Committee Business

The CAP approved the March 25 minutes

The next CAP meeting was scheduled for Wednesday, September 15 at Chewonki. Time and agenda are to be determined but it is anticipated that this meeting will be the final planning session with a site tour in the morning and meeting during the afternoon.

Chair Kilkelly then proposed that the CAP send a letter to the Maine Congressional delegation urging that the Yucca Mountain funding issue be addressed. Mr. Thompson agreed suggesting that Staff draft a letter for the CAP to review. Dr. Hudson urged that the letter not be too parochial as a letter that simply advocates moving Maine Yankee's fuel would be too easily dismissed. Mr. Shadis said he thought it would be more appropriate for selectmen, country commissioners, or the Advisory Commission on Radioactive Waste and Decommissioning to take the lead on advocating for the removal of the spent fuel and that it was not the purpose of the CAP. Senator Kilkelly responded that having worked so long on this issue and being united in wanting the fuel moved it would seem logical for the CAP to weigh in at this critical time. Mr. Pray suggested that the CAP could simply urge the federal government to live up to its promise to remove spent nuclear fuel and that Wiscasset was never intended to be a storage location. The CAP could take this approach without advocating for a particular storage location such as Yucca Mountain. Mr. Shadis said no matter how you dress it up it is lobbying to affect federal policy. Dr. Hudson said it is high time the nation figured out how to do this – industry and the government haven't figured out how to engage the public. Without public involvement the spent fuel will remain where it is. General Lewis Curtis said that in his view the government's priority has been on finding an answer to the disposal of the spent nuclear fuel and not on doing the research necessary to get it right.

The proposed letter from the CAP was not adopted.

The meeting adjourned at 8:50 p.m.

#