

NUCLEAR DECOMMISSIONING CITIZENS ADVISORY PANEL (“NDCAP”)

Monday, March 28, 2022

Hybrid Meeting (in-person and virtual)

Meeting Minutes

The meeting was called to order at about 6:30 pm by NDCAP Chair John Mahoney.

NDCAP MEMBERS PRESENT

- John T. Mahoney, Representative of the Town of Plymouth (Chair)
- Pine duBois, Speaker of the House Appointee (Vice Chair)
- David C. Nichols, Governor Baker Appointee
- Mary Lampert, Senate President Appointee
- Mary Gatslick, Minority Leader of the Senate Appointee
- Seth Pickering,¹ Department of Environmental Protection
- John Viveiros,² Massachusetts Emergency Management Agency (virtual)
- Susan Whitaker, Executive Office of Housing and Economic Development (virtual)
- Jack Priest, Department of Public Health, Radiation Control Program
- Robert Jones,³ Executive Office of Health and Human Services (virtual)
- Robert Hayden,⁴ Department of Public Utilities
- Henrietta Cosentino, Plymouth Select Board Appointee
- Mary Waldron, Old Colony Planning Council (virtual)
- David Noyes,⁵ Holtec Decommissioning International
- John Moylan, Holtec Site Vice President (virtual)

NDCAP MEMBERS NOT PRESENT

- John G. Flores, Governor Baker Appointee, (resigned)
- Amy Naples, Senate President Appointee
- Kevin O’Reilly, Speaker of the House Appointee, (resigned)
- Richard Quintal, Representative of the Town of Plymouth
- Paul D. Smith,⁶ Representative of UWUA Local 369, (resigned)

GUESTS IN ATTENDANCE

- Anthony Demetriades, NRC Branch Chief for Region 1 (virtual)
- Mike Jackman, U.S. Representative Ed Keating’s Office (virtual)
- John Drobinski, ERM (virtual)
- Matt Daly, ERM (virtual)
- Neil Sheehan, NRC (virtual)
- Bruce Watson, NRC (virtual)
- Sen. Marc Pacheco (virtual)

¹ Designee of Secretary Theoharides (Executive Office of Energy and Environmental Affairs)

² Designee of Dawn Brantley (Massachusetts Emergency Management Agency)

³ Designee of Secretary Sudders (Executive Office of Health and Human Services)

⁴ Designee of Secretary Sudders (Executive Office of Health and Human Services)

⁵ Designee of Pat O’Brien (Holtec)

⁶ Designee of Richard Sherman (Representative of UWUA Local 369)

- 36 public and press (virtual)

REVIEW OF MINUTES

The draft minutes from the January 31, 2022 meeting were reviewed.

The following corrections were made:

- Ms. Cosentino noted that the intent of a prior question asked by her was to determine that neither tritium nor radionuclides was regulated or listed as a pollutant by the EPA or MassDEP, not the NRC. Ms. duBois clarified whether Ms. Cosentino wanted to replace NRC with EPA and MassDEP. Ms. Cosentino confirmed.
- Ms. Cosentino clarified that she had requested that a member of the public named Diane be referenced as Diane Turco in the minutes.
- Mr. Noyes referred to page 6 of the previous meeting minutes. He advised that the water mentioned on that page should refer to the cable vault water and not any other source of water on site.
- Ms. Cosentino referred to page 3 of the previous meeting minutes. She mentioned that the record should indicate that she would have seconded the motions proposed brought forth by Ms. Lampert, but was not allowed into the meeting. Ms. duBois and Mr. Mahoney indicated that Ms. Cosentino would have that opportunity again tonight.

Motion was made to approve the minutes as amended which was seconded.

The January 31, 2022 minutes were approved by unanimous vote.

DISCUSSION OF MEETING SCHEDULE

Ms. Lampert put forward three motions from the prior meeting session regarding the structure of NDCAP meetings. The purpose of these sessions is to advise members of the public, the Commonwealth, and agencies within the Commonwealth. Another purpose is to serve as a conduit for public involvement. Ms. Lampert noted that having more frequent meetings would provide an opportunity to discuss key issues at this juncture of the decommissioning process.

Mr. Mahoney asked Ms. Lampert to formally introduce the three motions.

Ms. Lampert moved that the NDCAP meet once a month rather than every other month (with the exception of August and December).

Ms. Cosentino seconded the motion. Discussion ensued:

- Ms. Waldron asked whether the meetings would still have a virtual option if meetings were once a month. Mr. Mahoney affirmed that meetings moving forward would have this (zoom) option.

- Ms. duBois described the difficulties in setting up meetings once a month. As an alternative, Ms. duBois mentioned that the public has the right to gather on their own.
- Mr. Pickering read a statement from EEA indicating that administrative support would be difficult if meetings were moved to once a month. EEA recommends that lengthier quarterly minutes be produced, supplemented by minutes for interim meetings prepared by a NDCAP designee that focus on outstanding items for follow-up.
- Ms. Cosentino commented that NDCAP agendas have been fairly formulaic. Ms. duBois reiterated the time it takes to arrange speakers.

With regards to this motion, there were: 2 in favor; 6 abstentions; and 7 opposed. Mr. Mahoney declared that the motion did not pass.

Ms. Lampert made a second motion to extend the length of the meetings from two hours to three hours. Ms. Lampert explained that it would permit both the panel and the public to provide substantive input.

Ms. Cosentino seconded the motion.

With regards to this motion, there were: 2 in favor; 6 abstentions; and 7 opposed. The motion did not pass.

Ms. Lampert made a third motion to include more extensive public comments. Ms. Lampert explained that the purpose of the panel is to include members of the public and their feedback. Specifically, Ms. Lampert advised that there should be two periods for public comment during NDCAP meetings, rather than one.

Ms. Cosentino seconded the motion. Discussion ensued:

- Ms. Waldron asked whether including a second comment period would shorten the length of current meetings. In response, Ms. Lampert mentioned that it would depend on the agenda of each meeting.
- Mr. Mahoney indicated that he would not be opposed to including more opportunities for public comment and extending the length of the meeting as needed.
- Mr. Nichols mentioned that there are other alternatives for the public to give comments and feedback, for instance, through an email address where members of the public can submit questions.
- Ms. duBois commented that there is no formal procedure in place to receive public questions via emails, but it is a good idea. It would be helpful to have consolidated questions come in.

With regards to this motion, there were: 2 in favor; 6 abstentions; and 7 opposed. The motion did not pass.

HOLTEC UPDATE

Mr. Mahoney introduced Mr. Noyes to provide an update. The updated was given in conjunction with a PowerPoint presentation.

Demolition continues onsite. The most recent structures demolished were the security bullet resistant enclosures and the operations/maintenance building. 50% of on-site structures have been demolished to date.

Regarding regulatory affairs update: the ESA (environmental site assessment) workplan was revised and submitted to the Commonwealth. It is available to the public, the link can be found in the PowerPoint. The annual decommissioning funding update was submitted on March 25, 2022. It concluded that funding was sufficient to complete license termination planning, spent fuel management, and site restoration.

The waste management plan was submitted to the Commonwealth. A study on barge transportation concluded that it was not feasible due to uncertainty in permitting and environmental impacts.

For liquid radiological waste disposal, “dumping” is not the correct term. The processed water is still being used for shielding. The volume remains unchanged, 1 million gallons. Holtec is still evaluating the radiological and non-radiological characteristics of the water, and assessing three options for disposal: trucking, evaporation, or discharge. There is still no plan to discharge in 2022.

On March 16, 2022, the NRC Chairman, Christopher Hanson, visited the site.

Under the contract, the work under CDI has ceased and now transitioned to HDI. It was emphasized that only qualified individuals will work on the site.

Ms. duBois referred to the PowerPoint slide about structures and asked Mr. Noyes what did the blue figures indicate. In response, Mr. Noyes stated that the blue structures were slated for demolition in the next phase within the next quarter.

Ms. duBois asked what considerations are taken into account when transporting material from the site via road and via road to rail. In response, Mr. Noyes mentioned that the size of the shipment is a factor.

Ms. Lampert asked about the number of workers that were replaced on site. Mr. Noyes could not confirm the specific number of workers who were replaced.

A member from the public, Mr. Marshall, commented that 60 workers were locked out and replaced with workers who do not have prior experience working in nuclear power plants.

Mr. Noyes responded that it was not a lock out. The laborers union did not have a contract to work on site.

Mr. Nichols asked Mr. Noyes to explain the impacts on decommissioning from the new company (HDI). Mr. Noyes mentioned that CDI was a combined unit of Holtec and SNC Lavalin. Mr. Noyes indicated that Lavalin is no longer involved in the project.

Mr. Priest questioned Mr. Noyes on the financial impacts and timing of the switch. Mr. Noyes confirmed that it does not have any impact on the overall ability of decommissioning.

Ms. Cosentino mentioned the three options of disposing of the radioactive waste (liquid effluent). Mr. Noyes stated that evaporation requires a lot of heat. Evaporation would be an an-intensive option that

would require electricity and fossil fuels. Ms. Cosentino and Ms. duBois said it was not a likely or desirable option.

IWG UPDATE

Mr. Pickering provided the update for the Interagency Working Group.

Regarding the environmental site assessment (ESA), MassDEP and DPH have been working with the AGO to provide a response to Holtec.

On February 25, 2022, Holtec responded and a revised ESA is currently under review. the Commonwealth must approve the ESA under the settlement agreement.

The AGO received a response dated on November 21, 2021, regarding Holtec's noncompliance of paragraph 24 of the Commonwealth's settlement agreement. The agencies are currently reviewing the response.

U.S. EPA, DPH and MassDEP were previously notified by Holtec that it is planning to dewater reactor/steam generation systems and the spent fuel cooling system that contain radioactive water. If the agencies receive a formal request to discharge to Cape Cod Bay, then EPA, DPH and MassDEP would review and provide a determination to Holtec on the applicability of the NPDES permit on the proposed discharge. A new NPDES permit would also be subject to a federal consistency review by the Office of Coastal Zone Management (CZM).

On December 6, 2021, Holtec released a statement on Twitter saying that there will be no release of water in 2022. To date, agencies have not received any notice of Holtec's intention of discharging the water into Cape Cod Bay.

The state is aware that both U.S. EPA and the National Oceanic and Atmospheric Administration (NOAA) have issued letters indicating their position on the discharge of cooling water into Cape Cod Bay. Multiple state agencies, including DPH, DEP, CZM, and DMF, are continuing to monitor the situation.

Mr. Pickering provided responses to prior questions received from Diane Turco (and James Lampert):

- Q: Does the state have a plan to stop Holtec dumping water or is the new legislation to prohibit radioactive discharges the plan? Answer: MassDEP, together with U.S. EPA, has been in contact with Holtec about its prior statements regarding potential discharges. If a formal request to discharge to Cape Cod Bay is received from Holtec, agencies will review the request and respond accordingly. The state agencies have no comment on the legislation.
- Q: Can MassDEP and/or DPH get samples of the spent fuel pool water now, as well as the water being used to disassemble the reactor? Answer: MassDEP and DPH are currently evaluating this question.
- Q: What was the consequence for Holtec's violation of the NPDES permit from the Nov. 2021 mistaken dumping? Answer: MassDEP is currently evaluating the 7,500 gallon "Unauthorized Discharge" (NPDES/Mass Surface Water Discharge Permit) to a storm drain connected to Outfall 007 that occurred at Pilgrim Station on November 8, 2021 from an electrical vault. The Department does not comment on cases that are under deliberation.
- Q: What chemicals/levels violate the Clean Water Act (CWA)? Answer: There are 126 Priority Pollutants regulated by the CWA. Levels are set by individual NPDES permits.

- Q: It is understood this dump was a violation of the NPDES permit. Correct? Answer: The pumping out of the electrical vault in question to a storm drain that is connected to Outfall 007, as identified in the NPDES is not authorized.
- Q: What is the consequence for Holtec? A fine? Answer: There has been no enforcement action to date. The Department does not comment on cases that are under deliberation.
- Q: Do you know when is Holtec planning to test the water in the spent fuel pool? Answer: No.
- Q: Will a Licensed Site Professional (LSP)/MassDEP/DPH be overseeing that? Answer: An LSP will not be involved. As stated previously MassDEP and DPH will be involved if testing occurs.
- Q: Has Holtec been required to test the spent fuel pool water periodically? If so, would you have an analysis for the latest test? Answer: No.
- Q: The NRC says Holtec can “resume” discharging.” Who is responsible for direct oversight to make sure that doesn’t happen? Answer: The facility will be required to comply with all federal and state requirements.
- Q (from James Lampert): What does Mass DEP do in the way of establishing limits and regulating radioactivity in, for example, Cape Cod Bay, Plymouth Bay and Duxbury Bay, all of which are clearly outside the plant boundary? Answer: MassDEP regulations do not establish limits on radioactivity in liquid discharges. MA DPH regulations do not apply as the facility is not licensed by the MA DPH. Radioactive effluent concentrations are regulated by the US NRC.

Mr. Pickering also provided other updates.

The company is conducting response actions under the Massachusetts Contingency Plan (MCP) to address releases of metals and per- and polyfluoroalkyl substances (PFAS) to the groundwater. If the response actions to address these releases cannot be addressed by April 21, 2022 then Comprehensive Response Actions under the MCP will have to be initiated until a Permanent Solution is achieved.

MassDEP’s asbestos section is actively engaged in overseeing the demolition activity occurring at the site, and is meeting regularly with the company to manage the asbestos discovery/identification and abatement/removal processes.

MassDEP has approved an amendment to the plant’s wastewater treatment license that would take excess leaching pits out of service in order to make room for the visual barrier.

MEMA continues to work with local partners on public safety planning. A meeting will be held virtually on April 19th at 10 A.M.

Mr. Mahoney asked whether there were any questions.

Ms. Lampert asked Mr. Pickering to clarify a prior statement that the NRC has permitted Holtec to resume discharging. Mr. Pickering restated his answer that the facility must comply with federal and state regulations.

Ms. Lampert referred to M.G.L. c. 132A Section 13, which protects Cape Cod, Plymouth, and Duxbury Bay(s). Ms. Lampert asked whether Holtec will have to comply with the statute. In response, Mr. Pickering stated that Holtec will have to comply with all applicable laws.

Ms. Lampert referred to M.G.L. c. 270 Section 16 which makes it a crime to deposit or discharge waste in or on coastal waterways or on property of another. Mr. Pickering suggested that specific questions about applicability of certain statutes be sent separately.

Ms. Lampert emphasized that there is a settlement agreement that Holtec agreed to comply with. The agreement mentions that Holtec must comply with all applicable human health standards and regulations of the Commonwealth. Holtec would not be allowed to 'dump' if the state decides to enforce the laws.

Ms. Lampert referred to four U.S. Supreme Court cases which ruled that states have regulatory authority if the issue involves economics and "after the fact instances" such as dumping in water.

Mr. Priest and Mr. Pickering indicated that the IWG could work with AGO to respond to Ms. Lampert's specific questions about statutory applicability.

Mr. Nichols raised a question regarding penalties and fines. If Holtec gets fined, would the fine come from the Nuclear Decommissioning Trust Fund or from another source? Mr. Priest suggested that the question be directed to Holtec.

NRC PRESENTATION

A PowerPoint presentation was given by Mr. Demetriades.

Mr. Demetriades explained the NRC's oversight of effluent releases and emphasized the importance of complying with federal regulations. Mr. Demetriades also explained that plant owners must document effluent releases in annual reports submitted to the NRC.

Mr. Demetriades reminded attendees that Holtec has not yet made a decision to release liquid radioactive releases at Pilgrim. If Holtec does release the radioactive liquid, there would be no need for separate NRC approval so long as Holtec follows all applicable NRC and EPA requirements. There is an expectation that Holtec will notify NRC regarding which disposal method will be used.

Mr. Demetriades described the procedure of discharge and the requirements associated with the practice. An analysis of the water must occur before discharge happens. If it is determined that gradual release of water from the tank can be done, the company may proceed.

Offsite Dose Calculation Manual (ODCM) is taken into consideration when undergoing the analysis. The manual specifies the methodologies by which a licensee must maintain compliance with 10 CFR (Code of Federal Regulations) 20.1301 and 1302. The federal statute details the limits set by the NRC. Mr. Demetriades noted that the EPA also has a set of regulations. The thresholds set by the EPA are lower than the ones prescribed by the NRC.

The NRC mandates specific requirements. One of those requirements include that the company document all liquid and gaseous releases and assessments of any impact on the environment, which is compiled into an annual report. Mr. Demetriades noted that these reports are available online to the public.

The annual 2019 report from Pilgrim included assessments of air filters, charcoal cartridges, vegetation, sea water sediment, Irish moss, shellfish, American lobster, and fish. Nearly 1200 samples took place during 2019.

On August 10, 2021, an inspection report of Pilgrim occurred. The NRC described inspection activities which included a review of the results of routine radiological effluent, environmental monitoring, radioactive waste processing, and changes to the plant's off-site dose calculation.

During the August 10, 2021 inspection, an NRC inspector observed the condition of the liquid effluent radioactive waste radiation monitor. A pressure drop test was conducted to verify the integrity of the piping and connections. It was concluded that doses were below regulatory requirements. There were no releases between 2018 and 2021. The years 2011 and 2013 had the highest releases.

Mr. Demetriades explained radiation doses. It was emphasized that humans are exposed to radiation when getting x-rays (which has 10 millirems), from being near home smoke detectors, their occupations, and other sources. The average American is exposed to 620 millirems of radiation a year. Mr. Demetriades stated that there are many other man-made sources of radiation.

Mr. Demetriades concluded by stating that due diligence will be part of the process if Holtec decides to dispose the water. A separate approval would not be required if release is the route that the company decides to go down.

Mr. Mahoney asked whether there were any questions.

Mr. Nichols restated an earlier question, in the event of a violation by the licensee and a fine is assessed, can it be paid for with the decommissioning trust fund. In response, Mr. Demetriades mentioned that he does not believe it could be done and explained the fund is only to be used for decommissioning purposes.

Ms. Lampert mentioned that Holtec would have to ship and not dump the radioactive waste under both 10 CFR 20 and ALARA (As Low As Reasonably Achievable) principles. Ms. Lampert further questioned how to satisfy ALARA and emphasized that dose limits are antiquated.

Ms. Gatslick stated that tritium is the isotope of concern for the water that is being discharged. She then questioned if tritium occurred naturally. Mr. Demetriades responded in the affirmative. Ms. Gatslick then asked if tritium was already in the water. In response, Mr. Demetriades said probably even though he has not seen the samples of Cape Cod Bay. Lastly, Ms. Gatslick asked whether there are different kinds of tritium. Mr. Demetriades said no.

Ms. Lampert commented that once tritium enters the body, it remains there for a longer period than regular old tritium. Ms. Lampert then went on to explain the process of tritium on sediment, effect on aquatic life, and the health effects on pregnant women.

Ms. Cosentino asked a question regarding batches, inquiring whether a release of 1 million gallons in 20,000-gallon batches would make any difference. In response, Mr. Demetriades mentioned that there are environmental impacts studies for Pilgrim which includes a safety analysis report. He indicated that the process of timing of batches allows for analysis of each batch. It is different from "dumping" water indiscriminately.

Ms. duBois asked where the biological information comes from to assess the safety of liquid discharges, especially when considering aquatic life in the bay. Mr. Demetriades emphasized that the main focus is to protect public health and safety of humans. Medical treatment often involves radiative exposure.

PUBLIC COMMENTS

A member from the public raised concerns about those who were previously employed at the site and are currently locked out. Concerns were raised about the qualifications of those currently employed.

Another member of the public, Mr. Marshall, raised the same concerns and described the importance of safety on the site. Mr. Marshall asked that the workers who have been involved with Pilgrim for 54 years be allowed back on site.

In response to the comments made by Mr. Marshall, Mr. Hayden stated that safety and the environment were important to the panel, but that he was not sure whether the panel had jurisdiction over labor disputes. Mr. Mahoney agreed that there was no jurisdiction.

Mr. Marshall explained that the new laborers are being paid 25% more for less experienced people to get on site.

Ms. Lampert questioned Mr. Marshall on whether the AGO or Senator Markey's office has been notified of the issue. In response, Mr. Marshall stated that he has contacted the AGO, the Governor's Office, and Senator Markey's and Senator Warren's offices.

Mr. Noyes responded to the comments about the new laborers and stated that anyone working on site is qualified to be there and that there is no safety risk. Mr. Noyes confirmed that the owner of the plant did not change. Lastly, Mr. Noyes assured the public that those in charge of decommissioning the powerplant were doing so safely.

Paul Francis expressed concerns about potential discharge of 1 million gallons of radioactive water.

Mr. Mahoney called Ms. Turco to give her public comment.

Ms. Turco stated that tritium will have a major impact on aquatic life such as shellfish in the bay. Ms. Turco then questioned Mr. Pickering on why he waited to respond to her questions.

Mr. Pickering stated that he wanted to be transparent with the public. Mr. Pickering mentioned that e-mailed questions will be addressed through NDCAP meetings. In response, Ms. Turco emphasized the need for monthly meetings.

Ms. Turco then questioned Holtec (Mr. Noyes) on whether Holtec recognized the AGO settlement agreement. Mr. Noyes affirmed that it did. Ms. Turco then questioned whether they were aware of both state and federal regulations. Mr. Noyes affirmed that it did.

Ms. Turco referred to Ms. Lampert's statement about regulations and hazardous materials. Specifically, Ms. Turco referred to H4444 and SB 2791 which would prohibit the dumping of hazardous materials into Cape Cod Bay.

Ms. Turco asked whether the water from the Vermont power plant was dumped into the Connecticut River. In response, Mr. Noyes stated that it was transported off site via rail.

Ms. Turco continued by asking Mr. Noyes whether he saw statements from Senator Markey, Warren, and Keating's offices about not dumping into Cape Cod Bay. Mr. Noyes responded that he had not seen any letters.

Ms. Turco questioned Mr. Noyes on why Holtec is still considering discharge of radioactive water into Cape Cod Bay as an option. Mr. Noyes affirmed that there was no plan to discharge the water. The plan is to study and review all options, but no decision has been made. The decision will be based on science.

Ms. Turco suggested that the dose be zero in accordance with NRC and EPA regulations. Further, Ms. Turco reminded the NRC that they are mandated to protect the people and the environment. Mr. Mahoney called Mr. Quinto to give his public comment.

Mr. Quinto reminded the panel of the dredging project that occurred in Plymouth Harbor in February 2022. Mr. Quinto mentioned the Plymouth Harbor Management plan issued in 2017. The term "protect our natural resources" is mentioned several times in the plan.

Mr. Quinto then questioned whether anyone would want to eat contaminated shellfish or fish from the harbor. Mr. Quinto concluded by stating he hopes the water is sent via rail or road and not dumped into Cape Cod Bay.

Mr. Mahoney called Ms. Michaud to give her public comment.

Ms. Michaud explained how mussels are typically inspected for containments when they are caught from Cape Cod Bay. When inspected, the results can indicate when road wash enters the bay and into the mussel.

Ms. Michaud questioned what the results will be when nuclear waste is dumped. She is concerned about the aquatic life, fishing careers, and local economies. Ms. Michaud concluded by saying the water would not get flushed out from Cape Cod Bay into the Atlantic Ocean because of the tides and currents in the harbor.

Ms. Perry described the procedure in place for when an accident occurs at a public pool. One of the options included draining the pool. Ms. Perry then stated that Cape Cod Bay cannot be drained. Ms. Perry then mentioned that if algae blooms cause concern to those swimming in bodies of water, nuclear contaminates should not be dumped into the bay.

Mr. Lampert spoke about the purpose of the NDCAP meetings and emphasized the importance of public involvement. Mr. Lampert questioned why the public is not given the time and space to give formal presentations to the panel. Mr. Lampert also commented that NRC regulations take a "safe enough" approach that is not sufficiently protective of health and safety.

Ms. Corrigan emphasized that the meetings should be once a month.

Ms. O'Brien mentioned that there are only a few answers to questions that have been asked during NDCAP sessions.

Doctor Cronin stated that profit is involved in decommissioning. Doctor Cronin then read a quote from Upton Sinclair.

ADJOURNMENT

Ms. duBois asked if there were any other comments from the panel and anything that should be discussed in the next meeting. In response to Ms. duBois, Ms. Cosentino mentioned the emergency legislation, H4444.

Ms. Lampert recommended that there should be a status update on the union workers, a review on choice of terminology between dumping and discharge, and discussion of circulation in the bay.

No further questions or comments were made.

A motion to adjourn was made and seconded. The motion passed unanimously.

The meeting was adjourned at about 9:10 pm.