

**NUCLEAR DECOMMISSIONING CITIZENS ADVISORY PANEL (“NDCAP”)**

**Wednesday, February 21, 2018**

**Plymouth Community Intermediate School (“PCIS”), Little Theatre, 117 Long Pond Road,  
Plymouth, MA  
Meeting Minutes**

Meeting called to order at 6:30 p.m. by NDCAP Co-Chair Sean Mullin.

**NDCAP MEMBERS PRESENT:**

- Jessica Casey, President of the Senate Appointee
- Pat Ciaramella, Representative of Old Colony Planning Council
- H. Joseph Coughlin, Member from Plymouth Nuclear Matters Committee
- Pine duBois, Speaker of the House Appointee
- Robert Hayden<sup>1</sup>, Department of Public Utilities
- Jacqueline Horigan<sup>2</sup>, (Executive Office of Housing and Economic Development)
- David Johnston<sup>3</sup>, Department of Environmental Protection
- Robert Jones<sup>4</sup>, Executive Office of Health and Human Services
- Heather Lightner, Representative of the Town of Plymouth
- Joseph Lynch, Representative of Pilgrim Nuclear Power Station
- Elysse Magnotto,<sup>5</sup> President of the Senate Appointee
- John T. Mahoney, Representative of the Town of Plymouth
- Sean Mullin, Minority Leader of the Senate Appointee (Co-Chair)
- John Ohrenberger, Representative of Pilgrim Nuclear Power Station
- Jack Priest, Department of Public Health, Radiological Control Program
- Kurt Schwartz, Massachusetts Emergency Management Agency (Co-Chair)
- Paul D. Smith<sup>6</sup>, Representative of UWUA Local 369

**NDCAP MEMBERS NOT PRESENT:**

- John G. Flores, Appointee of Governor Baker
- Richard Grassie, Minority Leader of the House Appointee
- David C. Nichols, Governor Baker Appointee
- Kevin O’Reilly, Speaker of the House Appointee

**REVIEW AND APPROVAL OF JANUARY 24, 2018 MEETING MINUTES:**

Co-Chair Mullin noted that some panel members had made minor edits to the draft minutes. Co-Chair Mullin called for a motion to adopt the January 24, 2018 meeting minutes as amended. It was moved and seconded to adopt the January 24<sup>th</sup> meeting minutes as amended. The motion passed by a unanimous vote of the panel members present.

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<sup>1</sup> Designee of Angela O’Connor (DPU)

<sup>2</sup> Designee of John Chapman, (Executive Office of Housing and Economic Development)

<sup>3</sup> Designee of Secretary Beaton (EEA)

<sup>4</sup> Designee of Secretary Sudders (Executive Office of Health and Human Services)

<sup>5</sup> Designee of Senator Dan Wolf, (President of the Senate Appointee)

<sup>6</sup> Designee of Richard Sherman (Representative of UWUA Local 369)

1 **ADMINISTRATIVE UPDATE:**

2 Co-Chair Mullin asked whether each panel member had received the draft format and outlines that he  
3 had prepared. Co-Chair Mullin stated that he wanted to introduce a framework for the Panel's report  
4 for the panel to review. He began with the cover, then the table of contents, and lastly the layout for  
5 the working groups. In addition, he provided a sample for what the reports might look like. Co-Chair  
6 Mullin stated that the working groups first should provide a scope of their work in the report. Next, the  
7 report will describe the working groups' and the full panel's activities and findings. Lastly, Co-Chair  
8 Mullin stated that the report will include a list of recommendations. The Panel suggested that milestone  
9 reminders would be helpful. Mr. Ohrenberger asked what section would be appropriate for a working  
10 group's mission statement. Co-Chair Mullin replied that the scope would be appropriate for that. Co-  
11 Chair Mullin recommended that the report should be written in short, clear sentences.

12  
13 Co-Chair Mullin stated that the March meeting would take place at the Tilden Arts Center at Cape Cod  
14 Community College. He stated that invitations to state and federal officials have been sent, and that  
15 invitations to local officials would be sent shortly. He stated that he hoped to soon have a list of all  
16 confirmed attendees and that Panel members should encourage officials to attend. Ms. duBois inquired  
17 as to whether it would be possible to have a working group meeting prior to the panel meeting. Co-  
18 Chair Mullin stated that he would look into accommodations for that.

19  
20 Mr. Coughlin noted that the website does not contain information such as presentations and research  
21 documents. He asked whether the website could be modified to include a repository for those types of  
22 documents. Co-Chair Schwartz explained that this type of website update is feasible. Co-Chair Mullin  
23 noted that the working groups also serve as a clearinghouse for these resources and that they could  
24 provide review of these materials before adding them to the website. He noted that Ms. Mary Lampert  
25 had provided a list of pending legislation as an example of the type of resource that might be  
26 appropriate for the website. Mr. Coughlin stated that he has a collection of documents that might also  
27 be appropriate and useful to the public. Mr. Smith stated that adding materials to the website could be  
28 interpreted as an endorsement of those materials. Co-Chair Mullin noted that it will be important to  
29 distinguish more controversial opinions from less controversial official government documents. Mr.  
30 Priest stated that he could draft an index of materials panelists would like to see added to the website.  
31 Co-Chair Schwartz requested that working groups send him materials that they are using.

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33 Co-Chair Mullin then introduced Mr. Lynch from Entergy

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35 **ENTERGY PRESENTATION:**

36 Mr. Lynch stated that he would provide updates on three subjects: (1) the status of the  
37 decommissioning trust fund; (2) the effects of Winter Storm Grayson on Pilgrim; and (3) an update on  
38 the siting of the second dry cask storage facility.

39  
40 *Decommissioning trust fund* – Mr. Lynch stated that at the May 2017 NDCAP meeting, he reported that  
41 the balance was just under \$1 billion, and that by January 2018 it had grown by \$90 million to a total of  
42 \$1.09 billion, and that another update would be available at the end of February. He stated that the  
43 fund is managed by a trustee and that the investment strategy for the fund is conservative. Co-Chair  
44 Mullin asked whether there have been any expenditures from the trust fund. Mr. Lynch replied that  
45 there have not been any. He stated that Entergy can start taking withdrawals to start paying for  
46 decommissioning planning, but that has not happened yet. Co-Chair Mullin asked at what point in time  
47 the NRC's figure for the minimum available balance was determined. Mr. Lynch stated that he believed  
48 it was at the end of Pilgrim's original 40-year license, and that he would confirm that. He stated that he

1 did not know offhand what the figure is. Co-Chair Mullin asked whether the monthly trustee’s report  
2 would be useful to the Panel. Mr. Lynch stated that it is primarily the overall balance and any expenses  
3 the fund incurred. He stated that once expenditures start to be made, he would report those to the  
4 Panel.

5  
6 *Winter Storm Grayson-* Mr. Lynch stated that mean sea level (“MSL”) is the reference elevation used at  
7 Pilgrim for sea level calculations. He stated that the site is located at 23 feet above MSL and that the  
8 lowest paved surface at the site is at 21.5 feet above MSL. He stated that the top of the breakwater is at  
9 11.2 feet above MSL. He stated that the existing ISFSI is at 25 feet above MSL, and that the distance  
10 from the ISFSI to the shore is roughly 200 feet. He stated that they measured to the water line, and that  
11 the tide has little effect on this measurement. Ms. duBois noted that the MSL has changed by 6 inches  
12 since Pilgrim opened, and asked which MSL is used in these calculations. Mr. Lynch stated that it is  
13 based on current data. Ms. duBois noted that MSL raises concerns as a reference point. Mr. Lynch  
14 showed a site map displaying MSLs at Pilgrim.

15  
16 Mr. Lynch noted that there was significant flooding in the area as a result of the storm, but that Pilgrim  
17 experienced no flooding. He explained that the maximum high sea level was 13.5 feet above MSL as  
18 recorded by Pilgrim’s instrumentation, and that this was 8 feet below the site’s lowest elevation at the  
19 site and 11.5 feet below the ISFSI level. He also stated that there was splashover at the breakwater, but  
20 that the breakwater was not underwater. Ms. duBois asked whether the 13.5 feet above MSL figure  
21 was recorded inside the intake structure or outside the intake structure. Mr. Ohrenberger explained  
22 that the instrumentation is located just inside the trash racks, so it is not inside the building. Ms. duBois  
23 noted that the instrumentation is therefore on the building side of the trash racks inside the structure of  
24 the intake canal, and not exposed to waves. Mr. Ohrenberger explained that the instrumentation is not  
25 exposed to the waves on board of the breakwater, and that it is located right as the water enters the  
26 intake structure. Ms. Dubois asked whether Pilgrim measured the height of the waves between the two  
27 jetties. Mr. Lynch stated that visual exams were conducted and that no flooding was observed at any  
28 structures. Co-Chair Mullin asked about the instrumentation, and how records are kept. Mr. Lynch  
29 explained that measurements are taken every five minutes, but could be taken more frequently. Mr.  
30 Ciaramella asked how often visual inspections took place. Mr. Ohrenberger replied that they were  
31 conducted hourly, and possibly more often. He also stated that these visual inspections are usually  
32 done outdoors, unless weather conditions render that too hazardous. Ms. duBois stated that NOAA  
33 operates buoys in Boston, Sandwich, and Scituate, noted that Pilgrim must have performed its MSL  
34 calculations using data from these buoys, and asked how that calculation is performed. She also stated  
35 that a buoy in Cape Cod Bay would eliminate the need for such calculations. Mr. Lynch responded that  
36 Pilgrim uses all available information ahead of storms, including wind direction wind speed, to make  
37 determinations with regard to taking the plant to lower power levels, or to taking it offline. Mr. Smith  
38 stated that the screen house, or intake structure, is manned throughout every storm.

39  
40 *Siting of the Second Dry Cask Storage Pad-* Mr. Lynch noted that the siting team is evaluating every  
41 possible location at the site. He stated that proposals have been received from engineering firms who  
42 will do the detailed design. He stated that those engineering firms would verify the assumptions  
43 regarding possible sites, and that they would then design the pad. He noted that certain considerations  
44 are most important in siting the pad, and that security has emerged as a key consideration. He stated  
45 that a protected area would be placed around the pad. A second primary consideration is the site’s  
46 impact on decommissioning. Mr. Lynch stated that the site needs to be located in a way that enables  
47 decommissioning to be conducted safely. He stated that radiological considerations and underground

1 interferences are also key considerations. He explained that environmental considerations are likely  
2 grouped with hazard considerations.

3  
4 Co-Chair Mullin asked about timing for a decision and key milestones for the decision making. Mr. Lynch  
5 stated that it would be a lengthy process involving numerous parties. Mr. Ohrenberger explained that  
6 sometime between May and June is a likely target for determining a site. Mr. Lynch stated that costs  
7 associated with the pad have not factored in as a primary concern because no one site is significantly  
8 more costly than another.

9  
10 Mr. Lynch stated that there are significant security regulatory requirements, including control of the  
11 area and protection of the pad once it is filled with fuel. With radiological requirements, Mr. Lynch  
12 stated that dose impacts have to be within certain limits, and these requirements also apply to  
13 individuals working at a switchyard. He stated that waste storage is also taken into consideration. He  
14 noted that for any site that is chose, existing utilities will be underground, and they will need to be  
15 relocated. He also explained that soil stability can vary and requires testing. Ms. duBois asked whether  
16 offsite transportation is a consideration. Mr. Lynch responded that it is a consideration, and that barge  
17 was the likeliest type of offsite transport. He stated that any destination for offsite waste transportation  
18 would be determined by the Department of Energy. Ms. duBois asked when in the process DOE would  
19 become involved, to which Mr. Lynch stated that it occurred at Vermont Yankee after it shut down.

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21 Ms. Casey asked about instrumentation at Pilgrim. Mr. Lynch stated that it is for temperature and for  
22 radiological matters. He stated that weather data is measured at towers.

23  
24 **WORKING GROUP UPDATE:**

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26 *PSDAR and Decommissioning Working Group-* Mr. Coughlin noted that this group first met in October  
27 and covered administrative matters. More recently, he explained, the group has been familiarizing itself  
28 with NRC regulatory requirements. The group aims to be informed about NRC regulations so that when  
29 the NRC proposes new rules, the group can report to the Panel and make recommendations regarding  
30 the possible submission of comments to the NRC on its proposed rules. He suggested that all panels  
31 familiarize themselves with certain NRC documents. Co-Chair Mullin suggested that the group consider  
32 where outside expertise would benefit the group.

33  
34 *Safety and Security* – Ms. duBois noted that the committee met once and had not yet selected a chair.  
35 She noted that among the issues under examination are those related to shutdown, spent fuels in spent  
36 fuel pools, and dry cask storage. Co-Chair Mullin noted that this is an important issue and should be  
37 kept at the forefront.

38  
39 *Financial and Economic* – It was noted that this group does not have a chair. Ms. Casey offered to  
40 coordinate with members of the group to schedule a meeting. Mr. Mahoney noted that town of  
41 Plymouth established a shutdown fund that will have roughly \$6 million in it. The fund was intended to  
42 be available to react to unexpected requirements.

43  
44 *Site Cleanup* – Ms. duBois noted that this group has met three times and that she is the acting chair. She  
45 stated that the group has prepared a mission statement for use in its report. Mr. Priest noted that the  
46 group is considering what needs for outside expertise may arise.

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48 *Government and Community Relations* – It was noted that this group does not currently have a chair.

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**PUBLIC QUESTION AND ANSWER:**

Ms. Sheila Lynch Bentinen asked what would happen if seawater were to flood the dry cask storage facility, and if salt water floods would affect the storage facility differently than fresh water. Mr. Lynch responded that a representative from Holtec, the cask manufacturer, would be a better resource to answer this type of question. He noted that Holtec’s president made a presentation to the VT NDCAP in which he reported that the casks could be exposed to flood water and still function properly. He suggested that the Panel request that he speak to the Panel.

Mr. Jim Lampert asked what instrumentation measures wave height and where they are located. He noted that waves can be higher than MSL, and can yield different elevation data. Mr. Lynch responded that he provided information about the breakwater and its elevation, and the fact that excessive waves were not observed there. Next, Mr. Lampert asked about the distance between the first pad and buildings slated for demolition. Mr. Lynch responded that it was likely hundreds of feet between the first pad and an unused office building. Next, Mr. Lampert suggested that additional materials should be made available for the public on the NDCAP website to comply with the public records law. He also mentioned that he had reviewed the NRC’s January 2018 publication, and recommended that Panel members familiarize themselves with it.

Ms. Mary Lampert referenced the same NRC publication, and noted that she approached it by analyzing the assumptions that are driving the recommendations. She noted that one assumption is that a boiling water reactor is not a fire risk after ten months, and she stated that she expects that the NRC will not require adequate emergency planning at Pilgrim. She recommended that the panel have a backup plan for this. She mentioned that Holtec has stated that cracks in dry casks can be difficult to repair. She also suggested that the Panel consider how casks will be replaced when they deteriorate.

Ms. Janet Lazarovich asked whether there had been any movement on inter-agency cooperation for supporting the Panel. Co-Chair Schwartz responded that there has been movement, but that he is not in a position to discuss it further at this time. Co-Chair Mullin stated that there has been significant interest in supporting this effort.

Mr. Richard Rothstein asked whether the current pad could be used as a staging area in the event that it has to be moved. Mr. Lynch responded that the pad would have to be decommissioned itself, and that its space would be used as efficiently as possible.

Ms. Henrietta Copertino asked whether the breakwater could be raised to prevent future flooding. Mr. Lynch responded that that is possible, and that flood protection measures on land are also possible. Ms. Copertino also asked what would happen if Holtec casks fail decades into the future. Mr. Lynch responded that the casks are owned by the licensee until DOE takes them. He stated that Holtec is the license holder for the cask design itself, and that it therefore will remain involved in Pilgrim well into the future. Mr. Lynch reiterated his recommendation that these questions be directed to the president of Holtec. Ms. Copertino next requested that Mass DPH set its own standards for radiological cleanup.

Ms. duBois asked if the Panel could have the report that Entergy prepared for the siting of the first storage pad. Mr. Lynch responded that he would provide it if there is no confidential information. Ms. duBois also noted the Dr. Kris Singh is the president of Holtec and that he maintains an informative youtube channel.

**APPROVED AS AMENDED AT 5/17/18 MEETING**

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**WRAP UP AND ADJOURN:**

Co-Chair Mullin adjourned the meeting.

***Meeting adjourned at approximately 8:20 p.m.***

**DOCUMENTS USED AT MEETING:**

- Entergy update presentation