

NUCLEAR DECOMMISSIONING CITIZENS ADVISORY PANEL (“NDCAP”)

Wednesday, January 24, 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
- Pine duBois, Speaker of the House Appointee
- John G. Flores, Appointee of Governor Baker
- Robert Hayden¹, Department of Public Utilities
- David Johnston², Department of Environmental Protection
- Robert Jones³, Executive Office of Health and Human Services
- Heather Lightner, Representative of the Town of Plymouth
- Joseph Lynch, Representative of Pilgrim Nuclear Power Station
- John T. Mahoney, Representative of the Town of Plymouth
- Sean Mullin, Minority Leader of the Senate Appointee (Co-Chair)
- David C. Nichols, Governor Baker Appointee
- John Ohrenberger, Representative of Pilgrim Nuclear Power Station
- Kevin O’Reilly, Speaker of the House Appointee
- Jack Priest, Department of Public Health, Radiological Control Program
- Kurt Schwartz, Massachusetts Emergency Management Agency (Co-Chair)
- Paul D. Smith⁴, Representative of UWUA Local 369
- Michael Twomey, Representative of Pilgrim Nuclear Power Station
- Senator Dan Wolf, President of the Senate Appointee

NDCAP MEMBERS NOT PRESENT:

- John Chapman⁵, Executive Office of Housing and Economic Development
- H. Joseph Coughlin, Member from Plymouth Nuclear Matters Committee
- Richard Grassie, Minority Leader of the House Appointee

REVIEW AND APPROVAL OF NOVEMBER 15, 2017 MEETING MINUTES:

Co-Chair Mullin noted that some panel members did not receive the draft minutes from the previous meeting and took steps to ensure there was no issue with email. Co-Chair Mullin called for a motion to adopt the November 15, 2017 meeting minutes as submitted. It was moved and seconded to adopt the November 15th meeting minutes as submitted without correction. The motion passed by a unanimous vote of the panel members present.

¹ Designee of Angela O’Connor (DPU)

² Designee of Secretary Beaton (EEA).

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

⁴ Designee of Richard Sherman (Representative of UWUA Local 369).

⁵ Designee of Secretary Ash (Executive Office of Housing and Economic Development).

1 **ADMINISTRATIVE/WORKING GROUP UPDATE:**

2 Co-Chair Mullin listed when video recordings of panel meetings air on TV. Co-Chair Mullin stated that
3 the next meeting will take place on February 21, 2018 at PCIS. He stated that the meeting would
4 address three primary topics: (1) Entergy's decommissioning fund report; (2) storm-related flooding;
5 and (3) working group updates. Co-Chair Mullin stated that the March meeting would be held at Cape
6 Cod Community College, and that invitations have been sent to local, state, and federal officials to
7 participate in that meeting. Mr. Johnston asked whether there is a list of individuals invited. Co-Chair
8 Mullin listed the individuals to whom invitations have been sent.

9
10 Senator Wolf asked whether the panel would take a position with regard to pending legislation.
11 Co-Chair Mullin stated that it could be a topic for an upcoming panel meeting. Senator Wolf suggested
12 that the panel should hear what the legislation is about, and whether the panel should take a position
13 on it. Senator Wolf offered to make a presentation on the legislation at an upcoming meeting. Co-Chair
14 Mullin requested a show of hands on whether this topic should be added to the February agenda, and
15 there was general agreement that it should be.

16
17 Co-Chair Mullin asked whether any panel members had comments on the progress of the working
18 groups. Ms. duBois stated that the site cleanup and restoration group was planning to hold a meeting
19 directly before a full panel meeting to simplify logistics. Ms. Lightner asked whether there was any
20 possibility of members meeting remotely rather than in person. Co-Chair Schwartz responded that the
21 Open Meetings Law and the Attorney General strongly discourage this practice, because it requires a
22 showing that such an accommodation is made for more than the sake of convenience. Ms. Casey asked
23 whether a shared document with version control could be used for panel members who are unable to
24 attend a meeting in person. Co-Chair Schwartz stated that this type of accommodation can be
25 problematic because the Open Meetings Law does not allow for deliberations in that type of forum. Ms.
26 Casey recommended that the panel adopt this type of technology. Mr. Johnston stated that the
27 economic development working group has not selected a chair. Co-Chair Mullin supported Ms. duBois'
28 proposal that working groups meet the day of full panel meetings. Mr. Flores stated that the
29 government and community affairs working group has not yet selected a chair, but that it had a list of
30 dates for its upcoming meetings and recommendations. Co-Chair Schwartz reminded the panel that
31 working group meetings are subject to the Open Meetings Law and notice of the meetings must be
32 posted. Mr. O'Reilly asked whether the usual meeting room for the working groups is available, to
33 which Co-Chair Mullin replied that he would have to check. Co-Chair Schwartz noted that restaurants
34 are inappropriate locations for working group meetings.

35
36 Co-Chair Mullin then introduced Dr. Bill Irwin, Radiological and Toxicological Sciences Program Chief at
37 the Vermont Department of Health

38
39 **VERMONT DEPARTMENT OF HEALTH PRESENTATION:**

40 Dr. Irwin explained that the VT Dept of Health ("Health") began conducting nuclear environmental
41 surveillance in the 1960s, before VT Yankee's construction. Dr. Irwin stated that Health provided
42 emergency expertise in support of the radiological emergency plan for most of the plant's history. He
43 stated that Health was a member of the original Vermont state nuclear advisory panel, until the
44 establishment of the Vermont NDCAP. He stated that the VT NDCAP has been meeting for four years,
45 and it was established in response to the unexpected announcement that VT Yankee would shut down.
46 Members of all relevant government agencies participate in the working group. A MOU was developed
47 with Entergy that resulted in a certificate of public good with Vermont. Part of the certificate was a site
48 assessment study, which Dr. Irwin recommended Massachusetts pursue for Pilgrim.

1
2 Dr. Irwin stated that pulling government agencies together helped to keep up with rapidly developing
3 issues, including following the VT Yankee's dockets at the NRC. He stated that VT Yankee's
4 decommissioning was unique because it was the first nuclear plant to be decommissioned that was not
5 a utility-owned plant, as is Pilgrim. Dr. Irwin stated that when there is an opportunity to obtain an
6 agreement on an important issue, it is important to seize that opportunity.

7
8 Dr. Irwin noted that in August 2014, the VT panel began meeting with Entergy about the preliminary site
9 assessment study. He stated that the preliminary site assessment study published in October 2014, and
10 that it included: a spent fuel management plan; a draft PSDAR; a radiological historical site
11 characterization; pollution legal liabilities policies; and funding strategy financial scenarios. Dr. Irwin
12 noted that the radiological historical site characterization was particularly useful because it included
13 maps showing the locations of all spills of radioactive material throughout VT Yankee's operational life.
14 Dr. Irwin stated that the PSDAR was issued by Entergy shortly thereafter. The PSDAR included a specific
15 decommissioning plan proposed by Entergy, including 50 years of SAFSTOR, followed by a ten-year
16 decommissioning phase, culminating in license termination in 2072, at a cost of \$1.25 billion.

17
18 Dr. Irwin stated that the VT NDCAP learned from this experience that PSDARs do not generally vary
19 much from site to site, and he expects that Pilgrim's PSDAR will likely closely resemble VT Yankee's. Dr.
20 Irwin did state that the site-specific cost information in the PSDAR was individualized to each
21 decommissioning. Dr. Irwin noted that site characterization is not required by the NRC until just before
22 major decommissioning activities, such as decontamination and deconstruction. He explained that,
23 under VT Yankee's current PSDAR, a site characterization will be submitted in 2062. However, Dr. Irwin
24 noted that the preliminary site assessment study does provide useful information radiological,
25 environmental, and health issues.

26
27 Dr. Irwin stated that the cessation of generation at VT Yankee caused significant changes at
28 VT Yankee, including a reduction in funds for emergency response. In 2015, groundwater flooded into
29 the turbine building basement at VT Yankee. He stated that Entergy took steps to limit that flooding and
30 that they captured the water and shipped it for off-site disposal, and the VT PSDAR received reports on
31 the flooding cleanup on a monthly basis. He stated that containing this groundwater remains a
32 challenge. Dr. Irwin explained that VT commented in an NRC rulemaking proceeding because it has a
33 vested interest in the future of VT Yankee's site.

34
35 Dr. Irwin noted that there needs to be preparation for the cessation of funds for emergency response,
36 and that funds will be eliminated as a site's emergency planning zone is reduced in size. He stated that
37 the VT NDCAP was unprepared for the quantity of groundwater flooding that occurred after shutdown,
38 and that this could happen at Pilgrim. Further, he recommended that the panel work to persuade the
39 NRC through participation in NRC proceedings.

40
41 Dr. Irwin explained that VT has attempted to negotiate site restoration standards with Entergy. He
42 noted that VT passed a law that state activities used to monitor shutdown activities could be recovered
43 through a billback process. He stated that the decommissioning is becoming a marketplace for business
44 activities. Further, he noted that there needs to be preparation for a lack of regulations in this area,
45 because the NRC regulations primarily concern plant operations, not decommissioning. He stated that
46 the resource allocation devoted to this process by the VT NDCAP was greater than anticipated.

47

1 Dr. Irwin explained that, in 2016, Entergy announced that they would sell VT Yankee to Northstar. He
2 stated that the sale is in hearings at the VT PUC and at the NRC, and that he is hopeful that the goal of a
3 15 millirem limit will be preserved through the sale, and that Northstar will be a reasonable partner. He
4 noted that Northstar has submitted a PSDAR that proposes to start decommissioning by 2019, and that
5 this process will require close attention, but that it will end much earlier than 2017. He noted that this
6 would leave only an ISFSI after deconstruction. He stated that it is best that states are actively involved
7 in nuclear decommissioning to preserve their interests in the process.

8
9 Dr. Irwin concluded his presentation, and Co-Chair Mullin requested that panel member s ask Dr. Irwin
10 any questions they had.

11
12 **PANELISTS QUESTION AND ANSWER:**

13
14 Mr. Smith asked why state radiological standards for a decommissioned nuclear site, such as Vermont's,
15 can be stricter than the NRC-mandated standards of 25 millirem. Dr. Irwin responded that Vermont
16 regulations require that emissions be limited to five millirem from three different pathways: air, liquids,
17 and gamma radiation from buried waste, resulting in a total of 15 millirem. He noted that other states
18 have different standards. Dr. Irwin noted that even a 25 millirem limit is extremely protective of human
19 health, but that the cost of reducing emissions below 25 is reasonable, and 15 millirem is more
20 protective of human health. Mr. Priest stated that the Mass Dept of Public Health is in discussions with
21 Entergy to meet a 10 millirem limit for residual radioactive material. Mr. Priest noted that studies show
22 that the costs associated with incremental reductions from 25 to 10 millirem is not prohibitive.

23
24 Co-Chair Schwartz asked Dr. Irwin who was doing the VT NDCAP's work, specifically whether it was the
25 panel itself or the agencies represented by panel members. Dr. Irwin responded that it was primarily
26 the agencies, and that each agency would report to the VT NDCAP what each agency had accomplished
27 on a monthly basis. Among the agencies mentioned by Dr. Irwin were the VT Attorney General,
28 Environmental Conservation, Public Service Department, and Health. He stated that the panel itself was
29 not involved in activities, but was kept aware of different activities, and kept the public notified as well.
30 Co-Chair Schwartz followed up by asking whether there was a working group that brought the different
31 agencies together. Dr. Irwin replied that there is, and that the VT Public Service Department was the
32 lead agency and brought the interagency group together.

33
34 Senator Wolf asked under what authority these agencies came together. Dr. Irwin responded that it was
35 an effort spearheaded by the Public Service Commissioner, who reports to the Governor. Senator Wolf
36 asked whether federal preemption issues have arisen and reduced VT's authority in the
37 decommissioning process. Dr. Irwin responded that Entergy has abided by VT's regulations, but that VT
38 recognizes that the NRC has ultimate authority over much of the issues. He stated that this can create
39 challenges between federal and state authorities.

40
41 Mr. Johnston asked Dr. Irwin to explain the negotiating process for the MOU between VT and Entergy.
42 Dr. Irwin responded that VT had leverage in this process because Entergy required a certificate of public
43 good from Vermont in order to continue operating past its original 40-year license. He stated that the
44 MOU was a requirement for the certificate of public good that was a requirement for Entergy's 20-year
45 license extension. He stated that there is a certificate of public good for the sale from Entergy to
46 Northstar, and that VT hopes to include conditions in that certificate that are to everyone's benefit. Mr.
47 Johnston followed by noting that having an understanding of what each agency will be doing in
48 decommissioning will be helpful.

1
2 Ms. Casey asked where VT would be without the leverage provided by the certificate for public good.
3 Dr. Irwin responded that the public process can sway public opinion. He stated that Entergy often
4 negotiated in a way that demonstrated that they were willing to do the right thing, including accepting
5 VT's stricter environmental requirements, and that Entergy may take a similar approach to Pilgrim. Ms.
6 Casey asked whether Dr. Irwin had recommendations for developing a collective voice. Dr. Irwin stated
7 that education of the panel and community are essential for understanding whether decommissioning is
8 going well or not going well. He stated that the legislature is a resource for protecting the rights of its
9 citizens.

10
11 Mr. O'Reilly asked Dr. Irwin to expound upon the list of entities involved in the VT NDCAP process
12 beyond the Public Service Department. Dr. Irwin responded that the Public Service Department's
13 attorneys, as well as consultants, have been involved. He stated that they hire the most experienced
14 and knowledgeable experts. He stated that the Dept of Environmental Conservation was involved to
15 focus on non-radiological issues. He mentioned that the Office for Community Economic Development
16 was involved to assist with the loss of employment associated with the plant's closure. Also the
17 Windham Regional Planning Commission participated as a party to hearings, as was the Attorney
18 General's Office and Emergency Management Agency.

19
20 Mr. Flores asked what conflicts have arisen during the VT NDCAP process. Dr. Irwin responded that
21 licensees push for a faster-than-expected pace during regulatory proceedings. He noted that someone
22 should monitor the Pilgrim license's docket because that is the source of public notice, and that it can be
23 challenging to keep up with this. Further, he explained that it is an expensive process that results in long
24 legal battles. He stated that it is difficult to locate the resources, either internal or external to keep up.

25
26 Senator Wolf noted that the Pilgrim decommissioning is potentially the most important public safety
27 issue in Massachusetts, but that proposed legislation permits the panel to, at best, seek grants and
28 donations for funding. Senator Wolf asked Dr. Irwin whether material resources are needed. Dr. Irwin
29 responded that the VT NDCAP and the VT interagency panel are distinct. He stated that the interagency
30 panel worked within their roles in their agencies to carry out their duties. Senator asked whether he
31 recommends the panel asking state agencies to find resources to participate in this effort. Dr. Irwin
32 replied that the Public Service Department has always had billback authority, which allows it to be
33 compensated for those resources. Co-Chair Schwartz stated that determining the interagency dynamic
34 was his responsibility in developing the panel, and that he would revisit how the state can work across
35 agencies to develop resources.

36
37 Mr. Smith noted that similar sized plants have been decommissioned, and that the authorities of the
38 relevant state and federal agencies and standards have not changed. Mr. Lynch concurred, stating that
39 the decommissioning of Yankee Rowe provides a roadmap for a successful decommissioning in
40 Massachusetts. Mr. Priest noted that there will be differences between Yankee Rowe and Pilgrim
41 because of Pilgrim's larger size and coastal location. He noted that additional resources remain
42 necessary to make recommendations to the Governor.

43
44 Co-Chair Mullin stated that the proposed legislation is insufficient for the panel's needs. He asked Dr.
45 Irwin how many attorneys have been involved in the VT Yankee decommissioning. Dr. Irwin responded
46 that there are likely dozens. Co-Chair Mullin followed up by asking how many different types of
47 technical experts have participated. Dr. Irwin responded that likely dozens, but like the attorneys, they
48 are not working on decommissioning full time. He noted that there is a wide range of issues and that

1 people with a range of areas of expertise are required. Co-Chair Mullin asked what issues were covered
2 in the MOU, to which Dr. Irwin responded that he could not answer definitively, but that he could
3 provide a copy because it is a public document. Co-Chair Mullin inquired about the source of funds
4 associated with the billback process. Dr. Irwin responded that they have come from Entergy's operating
5 revenues, but now it comes from a different source, possibly the decommissioning trust fund. He
6 explained that Entergy would be a better source for this information. Co-Chair Mullin followed up by
7 asking whether there is a means for finding out how much money has been billed back to this point. Dr.
8 Irwin stated that he does not know whether the information is publicly available, and that Entergy
9 would be a better source for that information. Mr. Flores noted that the government relations working
10 group had discussed these issues and that recommendations need to be made soon in order for the
11 panel to produce its report.

12
13 Ms. Casey asked the source of money associated with the billback, specifically whether it was the \$10
14 million that originated with the certificate of public good. Dr. Irwin responded that the site restoration
15 fund is managed separately from the decommissioning fund and it totals \$25 million. Dr. Irwin stated
16 that he does not know the source of funds associated with the billback. Mr. Lynch clarified that there is
17 \$25 million in the site restoration fund, \$10 million in an economic development fund, and \$5 million in
18 energy resource funds for the region, that these were paid prior to VT Yankee's shutdown, and that
19 none of them were associated with billback.

20
21 Co-Chair Mullin announced that Dr. Irwin and the Panel would next receive questions from members of
22 the public.

23
24 **PUBLIC QUESTION AND ANSWER:**

25
26 Ms. Mary Lampert requested that Dr. Irwin's slide deck be made available. She noted that the panel
27 could make recommendations more than once a year, and on an as-needed basis instead, and that one
28 should be made ASAP. She mentioned that there is pending legislation, and that the panel should
29 consider House Bill 1147 which requires a licensee to make payments for emergency planning expenses
30 post operation until the spent fuel pool is emptied. She stated that there is a risk until the pool is
31 empty. She mentioned House Bill 1133, which approves radiological monitoring funds for DPH. She
32 mentioned that Senate Bill 2206 would add three members to the panel. She explained that the NRC
33 has stated that the previous three decommissioned sites were from 1 to 3 millirem.

34
35 Mr. Richard Rothstein asked about the time and cost-effectiveness of requiring lower emission
36 standards than the NRC's 25 millirem requirement. Dr. Irwin responded that certain radioactive
37 material decays, but that Northstar has represented that they can clean the VT Yankee site without
38 exposing workers to radioactivity. Further, he noted that many countries require nuclear sites to be
39 decommissioned rather than remain in SAFSTOR.

40
41 Mr. Jim Lampert stated that the Public Records Law is extremely broad and includes all communications
42 involving the panel and that there should be a public records custodian. Regarding federal preemption,
43 he stated that the NRC standard is a standard for unrestricted release and can terminate a license. He
44 noted that, at this point, the NRC has no further authority over a site. Beyond this, states have
45 authority, and the state and Entergy should be reach an agreement on cleanup standards. He also
46 noted that 25 millirem is a maximum, but hat what is reasonably achievable is well below 25 millirem,
47 and that Pilgrim should be cleaned to well below 25 millirem. He noted that VT had the foresight to
48 establish an entity that has authority to participate in VT Yankee's decommissioning. Senator Wolf

APPROVED AT 2/21/18 MEETING

1 responded that the panel meets in order to achieve this same result. Senator Wolf also asked whether
2 the state can intervene after PSDAR to impose additional requirements. Dr. Irwin responded that this
3 question would be better answered by lawyers.
4

5 **WRAP UP AND ADJOURN:**

6 Co-Chair Mullin thanked Dr. Irwin for his presentation. Co-Chair Mullin adjourned the meeting.
7

8 ***Meeting adjourned at approximately 8:30 p.m.***
9

10 **DOCUMENTS USED AT MEETING:**

- 11 • Vermont Department of Health Presentation
12