



**NUCLEAR DECOMMISSIONING CITIZENS ADVISORY PANEL
PUBLIC SERVICE DEPARTMENT**

**Nuclear Decommissioning
Citizens Advisory Panel
Annual Report to the Governor
and the Vermont Legislature**

2019

***DRAFT FOR DISCUSSION AT JANUARY 13, 2020 MEETING
Distributed to Panel Members for review on January 6, 2020***

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(Approved by the Panel on xxx, 2020)

1 **- Nuclear Decommissioning Citizens Advisory Panel -**
2 **2019 Annual Report to the Governor of Vermont and the**
3 **Energy Committees of the General Assembly**
4 (House Energy & Technology,
5 House Commerce & Economic Development,
6 House Natural Resources, Fish and Wildlife, and
7 Senate Natural Resources & Energy Committees)
8

9 **I. Statutory Authority and Duties**
10

11 The nineteen-member Vermont Nuclear Decommissioning Citizens Advisory Panel (NDCAP) was
12 established during the 2014 legislative session. For details on membership and duties, see
13 <https://legislature.vermont.gov/statutes/fullchapter/18/034>. The list of current members of the
14 Nuclear Decommissioning Citizens Advisory Panel may be found at
15 [http://publicservice.vermont.gov/electric/ndcap \(aka, the NDCAP website\)](http://publicservice.vermont.gov/electric/ndcap_aka_the_NDCAP_website). Changes in Panel
16 membership throughout 2019 may be discerned by reviewing the meeting minutes and meeting
17 recordings available at the NDCAP website.
18

19 **II. Charter**
20

21 The NDCAP Charter was adopted on February 25, 2015 and amended on May 26, 2016. The
22 Charter is available at
23 [https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20NDCAP%20](https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20NDCAP%20Charter%20%28Adopted%202016.05.26%29.pdf)
24 [Charter%20%28Adopted%202016.05.26%29.pdf](https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20NDCAP%20Charter%20%28Adopted%202016.05.26%29.pdf). No changes to the NDCAP Charter were made
25 during 2019. However, as detailed in Sections III and XIII, potential changes to the NDCAP Charter
26 have been discussed throughout 2019.
27

28 **III. Meeting Highlights**
29

30 The NDCAP held four meetings in 2019; meetings were held in January, May, October and
31 December. All meetings were open to the public and opportunities for comments from the public
32 were provided. Each meeting included an update on recent activities by both NorthStar (Vermont
33 Yankee's owners as of January 11, 2019) and the State of Vermont, as well as ample time for
34 discussion and comments from Panelists and the public. Educational and issue-specific topics
35 were discussed at all meetings; a summary of each meeting is presented below. Much of the
36 meeting discussions in 2019 centered on understanding the information available to the State and
37 the general public through the reporting required by the Public Utility Commission decision
38 approving Vermont Yankee's (VY's) purchase by NorthStar. An additional meeting focus was
39 potential changes to Panel composition and duties now that Vermont Yankee's decommissioning is
40 actively underway.

41 The minutes of each meeting can be found on the NDCAP website (a dedicated section of the Public
42 Service Department website) at <http://publicservice.vermont.gov/electric/ndcap>. A complete
43 video recording of each meeting can be found at:
44 <https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel>.
45 (Links to these video recordings are also available through the NDCAP website).
46 Additional information regarding VY's active decommissioning is available at the Public Service
47 Department's recently launched "VY Decommissioning" website at:
48 <https://publicservice.vermont.gov/content/vermont-yankee-decommissioning>

49
50 **January 31, 2019**

- 51 • **Update on Decommissioning Activities at VY:** Panelist Corey Daniels, VY's Senior Spent
52 Fuel Storage Manager, provided a verbal update of recent activities at the VY site.
53 Removal and decontamination of Spent Fuel Storage racks from VY's (fully defueled) Spent
54 Fuel Pool has commenced. Preparations for segmenting VY's reactor vessel continue;
55 planning for the eventual removal of the reactor vessel and other large components from
56 site is underway. Strategies for abating onsite non-radiological hazardous materials (e.g.,
57 asbestos and lead) are being investigated.
- 58 • **Summary of January 9 NRC Pre-Decisional Enforcement Conference (PEC) on Holtec**
59 **Dry Cask Design:** Tony Leshinskie, Vermont State Nuclear Engineer, provided a brief
60 summary of this Nuclear Regulatory Commission (NRC)-sponsored meeting, which
61 discussed two NRC-identified apparent regulatory violations in Holtec's Dry Cask Design
62 Control practices. Holtec acknowledged that its actions in implementing a Dry Cask
63 component design change delivered to several nuclear power plant sites (including VY)
64 violated NRC regulations. During the PEC, Holtec outlined its investigation into the design
65 error, its impact on delivered dry cask components and its corrective actions to assure
66 that similar violations will not occur in the future. Holtec's presentation indicated that
67 VY's dry casks and their spent fuel are not adversely impacted by the improper design
68 change. While 35 of VY's 58 dry casks are potentially impacted by this design issue, the
69 NRC has no immediate safety concerns with the VY dry cask design.
- 70 • **State of Vermont Role in VT Yankee Decommissioning:** Vermont Public Service
71 Department Special Counsel Allison Bates-Wannop presented an overview of the NRC
72 and the VT Public Utility Commission (PUC) decisions approving VY's sale to NorthStar
73 Group Services.
74 State Agency officials then discussed the roles of the several State Agencies that will
75 oversee VY's active decommissioning. Allison Bates-Wannop outlined the Public
76 Service Department's role in tracking progress and expenditures during VY's
77 decommissioning and plans for publicly available project status information.
78 Justin Kolber, Vermont Assistant Attorney General in the Environmental Protection
79 Division, outlined the Attorney General's role. The Attorney General's Office is available
80 to provide legal advice to agencies and review financial documents during
81 decommissioning.

82

83 Panelist Peter Walke, Deputy Secretary for the Agency of Natural Resources, outlined
84 ANR's oversight role in VY's non-radiological remediation and site restoration activities.
85 Panelist Dr. Bill Irwin, Vermont Department of Health, described surveillances that the
86 Department conducts at the VY site (and all in-state radioactive material user sites) and
87 outlined the Department's authority established by the Vermont Radiological Health
88 Rule. Surveillance results are available on the Department of Health's website.

89 The slides for this combined State Agencies presentation are available at:

90 <http://publicservice.vermont.gov/electric/ndcap>

91 State Agency websites that provide Vermont Yankee-related information include:

92 <http://publicservice.vermont.gov/electric/ndcap>

93 <https://publicservice.vermont.gov/publications-resources/consumers>

94 (accepts public comments on VY matters; comments may also be emailed to
95 PSD.NDCAP@vermont.gov)

96 <https://ago.vermont.gov/nuclear-matters>

97 <https://anr.vermont.gov/Vermont%20Yankee%20Decommissioning>

98 <http://www.healthvermont.gov/health-environment/radiological-health/vermont-yankee>

- 100 • **Finalization & Approval of Annual Report to the VT Legislature:** The Panel reviewed
101 the draft of the 2018 Annual Report to the Legislature. Several minor revisions to the draft
102 were made. Echoing discussion throughout this Panel meeting, concern was raised that
103 the report does not discuss who would be responsible for funding the VY site clean-up if
104 the current decommissioning funds are spent and NorthStar declares bankruptcy prior to
105 completion of the clean-up. The report was approved without adding any such discussion.
- 106 • **Reconstitution of the Issues Committee:** The Panel's Issues Committee was
107 reconstituted as described in Section XI herein.

109 May 20, 2019

- 110 • **State Evaluation of NorthStar Required Annual Report:** Public Service Department
111 (PSD) Special Counsel Allison Wannop summarized the State's evaluation of NorthStar's
112 annual report required by the Memorandum of Understanding (MOU) that went into in
113 effect with the completion of NorthStar's purchase of VY on January 11 of this year. The
114 report described what has been completed and what is to be expected in the remaining
115 decommissioning and site restoration work. All plans are progressing as expected and
116 are currently on budget. The presentation slides for this evaluation are available at
117 <http://publicservice.vermont.gov/electric/ndcap>
- 118 • **State Agencies' VY Decommissioning Oversight Status Update: Public Service,
119 Natural Resources, Health:** PSD has selected an independent technical consultant to
120 assist in decommissioning oversight. The consultant will be announced after contract
121 finalization. PSD's website will include a new "VT Yankee Decommissioning" web page.
122 PSD's existing NDCAP webpages will become part of this new webpage.
123 The Vermont Department of Health had nothing to report at this time.

124 Gerald Noyes of the Vermont Agency of Natural Resources (ANR) / Department of
125 Environmental Conservation (DEC) briefly described the types of non-radiological site
126 sampling and investigations conducted to date at VY. DEC and its hired technical
127 consultant, ATC Group Services, are currently reviewing monitoring plans and post
128 closure site restoration protocols specified in the MOU, as well as how to maintain an
129 efficient exchange of information from the VY Yankee site. One current project is the
130 asbestos abatement at the site cooling towers. ATC is reviewing the abatement
131 procedures with assistance from Vermont Department of Health.

132 PSD and DEC's presentation slides are available from the NDCAP website.

133 • **NorthStar Update on VY Site Decommissioning Activities:** NorthStar Panelist Corey
134 Daniels summarized decommissioning activities completed since January 2019. Of note,
135 all spent fuel racks have been removed from the Spent Fuel Pool (SFP). The SFP has
136 been fully drained. Refurbishment of the onsite rail spur is complete. Segmentation of
137 the dry well head is complete. The Reactor Vessel Head (RVH) has been removed;
138 preparations for segmenting the RVH are underway. The former Construction Office
139 Building has been demolished.

140 • **Orano Presentation on Reactor Vessel Segmentation:** Corey Daniels'
141 Decommissioning Activities presentation also discussed preparations underway for
142 upcoming reactor vessel segmentation work. (Sebastien Guillot of Orano was available
143 to answer questions on this part of Corey's presentation.) The specialized tools that will
144 be used for these activities were highlighted. The temporary radioactive waste storage
145 to be used for this project were also described. While most of the resulting radioactive
146 waste will be shipped via railcar for permanent disposal, the Greater Than Class C
147 (GTCC) Low Level Radioactive Waste produced will be stored in a Holtec dry cask
148 storage cannister very similar to those currently storing VY's spent nuclear fuel onsite.
149 This cannister will be stored on one of VY's two Independent Spent Fuel Storage
150 Installation (ISFSI) pads.

151 The NorthStar / Orano slides for this presentation are available are available from the
152 NDCAP website

153 • **Issues Committee Recommendations on Topics to be Addressed by the Panel in**
154 **2019:** Panel Chair Chris Campany brought the Panel's attention to the *Summary of*
155 *Items Selected for May 2019 NDCAP Meeting Agenda* and *Potential Items for Future*
156 *Meetings*, found on pages 5 and 6 of the April 22nd Issues Committee Meeting notes
157 (available at <http://publicservice.vermont.gov/electric/ndcap>). The Committee
158 meeting identified topics to be discussed in 2019 and beyond. The Panel consensus was
159 that these were reasonable topics for consideration.

160 Discussion turned to additional topics that the Panel may want to consider, including
161 items such as Congressional bills that could impact US nuclear waste policy, long-term
162 and interim spent nuclear fuel storage, and what potential alternatives are available. It
163 was noted that Windham Regional Committee (WRC) has suggested a dialogue between
164 potential host communities meant to receive nuclear waste and host communities with
165

166 plants being decommissioned. Perhaps the Panel should consider supporting WRC's
167 position? Chris Campany reminded the Panel that any Panelist can draft an advisory
168 opinion on topics such as these for Panel consideration.

- 169 • **Panel Participation in Nuclear Energy Innovation and Modernization Act**
170 **Requirements:** Part of the recently enacted Federal Nuclear Energy Innovation and
171 Modernization Act (NEIMA) of 2019 requires the NRC to prepare a Congressional
172 Report on "best practices" for facilitating public involvement in active reactor
173 decommissioning via panels such as VT NDCAP. The NRC will host at least 10 public
174 meetings throughout the US in 2019 to gather information for this report. Preferred
175 meeting locales are near actively decommissioning plants or in communities with
176 established public engagement panels. The WRC and VT PSD have each requested that
177 one of these meetings be held within the Vermont Yankee vicinity. (The NRC
178 subsequently granted these requests; a NEIMA public meeting was held in Brattleboro
179 on September 10, 2019.)

180 The Panel agreed to draft a NEIMA reply document outlining the function and scope of
181 the VT NDCAP for the NRC's best practices report to Congress. State Nuclear Engineer
182 Tony Leshinskie was directed to begin compiling a report outlining the formation of
183 NDCAP and its activities to date and to make this draft available to the Panelists for their
184 review. (The subject document was drafted and posted to the VT NDCAP website; it was
185 subsequently discussed at the Panel's October 16, 2019 meeting.)

- 186 • **Summary of First Nuclear Decommissioning Collaborative Meeting:** Panel Chair
187 Chris Campany gave a verbal overview of the inaugural meeting the Nuclear
188 Decommissioning Collaborative, held in Washington DC in April. The meeting included
189 several federal agencies, host communities and industry experts. The goal was to see
190 what existing governmental programs could be used to address economic issues
191 stemming from reactor decommissioning. The meeting did not address other impacts
192 such as carbon footprint changes, etc., or whether host communities should be
193 compensated for storing spent nuclear fuel at former power plant sites. Essentially, the
194 meeting considered whether federal planning money should go to communities in
195 which nuclear power plants are closing.

197 **October 16, 2019**

- 198 • **VT Agency of Natural Resources (ANR) Decommissioning update:** Panel member and
199 Commissioner of Environmental Conservation (DEC) Emily Boedecker summarized the
200 State environmental permitting required for VY's current decommissioning and demolition
201 activities and discussed the timelines for DEC to review several permit applications filed by
202 NorthStar for upcoming decommissioning and demolition work. DEC's draft permits (in
203 response to the NorthStar filings) are posted for 30 days on DEC's Environmental Notice
204 Bulletin for public comments. DEC's review to date on NorthStar's non-radiological site
205 characterization report filed on July 11 was also summarized. The report has been
206 reviewed by Haley & Aldrich (NorthStar's environmental consultant), ATC Group Services
207 (DEC environmental consultant for Vermont Yankee clean-up) and DEC Staff. On site

- 208 hazmat sampling conducted to date was also described along with initial planning for
209 follow-up sampling.
- 210 • Several Panelist questions requested further details on the sampling process thus far. In
211 response, the process under which split samples are evaluated by both Haley & Aldrich and
212 ATC was outlined, as well as how the initial sampling locations were chosen. In response to
213 an additional question regarding the impact of the new groundwater intercept wells on
214 intrusion water leakage onsite, it was noted that some future contaminated groundwater
215 shipments would still be necessary. Pumping from the intercept wells shows significant
216 promise but has yet to be fully implemented.
 - 217 • **Vermont Department of Public Service on the Vermont Yankee Decommissioning**
218 **Update:** Panel Member and Commissioner of Public Service June Tierney presented an
219 update on Public Service Department activities regarding Vermont Yankee
220 decommissioning. The department remains in close contact with NorthStar and makes sure
221 that reporting protocols set in place (from the VT PUC ruling in the NorthStar Vermont
222 Yankee purchase case) are followed. A summary of the onsite activities under
223 Departmental observation was provided. Financial summaries for the Nuclear
224 Decommissioning Trust (NDT), the Site Restoration Trust (SRT) and disbursements from
225 these Trusts was also shared.
 - 226 • Panelist questions focused on what determined whether a decommissioning expense could
227 be paid from the NDT versus what could be paid from the SRT. Commissioner Tierney
228 noted NDT expenses primarily related to clean-up of Vermont Yankee's "power block"
229 buildings (i.e. the Reactor and Turbine Buildings). The SRT covered more general site
230 clean-up expenses. State Nuclear Engineer Tony Leshinskie added that the Public Service
231 Department does have staff that tracks which expenses are paid from which funds.
 - 232 • **Vermont Department of Health Update:** Panel member Dr. Bill Irwin gave a verbal
233 summary of the Health's current oversight of Vermont Yankee decommissioning activities.
234 At this stage, Health's primary focuses are the ongoing asbestos abatement tasks and the
235 radioactive waste shipments leaving the Vermont Yankee site. Additional onsite activities
236 will be reviewed as decommissioning moves forward. In response to Panelist questions on
237 to what extent radiation levels at Vernon Elementary School are known, Bill Irwin reported
238 that the school has been under continuous monitoring since 1972 (when Vermont Yankee
239 began producing electricity). The results of this monitoring are published annually on the
240 Department of Health website.
 - 241 • **NorthStar Update on VY Site Decommissioning Status:** Panel Member Corey Daniels,
242 NorthStar Senior ISFSI (spent fuel storage) Manager at Vermont Yankee, presented a
243 summary of recent site decommissioning activities, which focused on completed portions of
244 the ongoing reactor vessel segmentation tasks, dismantling of the site's former steam
245 turbine, rail spur enhancements for facilitating radioactive waste shipments and the
246 demolition of VY's cooling towers over the summer. The critical path for the
247 decommissioning project remains the reactor vessel segmentation task. Slides for this
248 presentation consisted primarily of photos of recent decommissioning activities. An
249 embedded video is included, which was played during the presentation. This video may be

250 viewed at <https://www.youtube.com/watch?v=S0Vm4MPCGqs> or through the presentation
251 slides available on the NDCAP website.

- 252 • **Congressional Delegation Update on Decommissioning Related Legislation:** The
253 provided update is summarized in Section XI herein.
- 254 • **VT NDCAP Submittal to NRC Summarizing History of the Panel:** Following a brief
255 discussion of several minor changes to the NEIMA reply document outlining the function
256 and scope of the VT NDCAP for the NRC's best practices report to Congress, the Panel
257 approved the document for its submittal to the NRC. The final version of this document is
258 available on the NDCAP website and was submitted to the NRC via the Federal Register
259 prior to the December 6 filing deadline for NEIMA comments.
- 260 • **Proposed Changes to the Panel Composition and Enabling Statute for Panel**
261 **Discussion:** Potential changes to the Panel's membership, duties and administration were
262 then opened for discussion. The Panel's Issues Committee had previously met on July 24 to
263 compile ideas for potential Panel changes to be discussed at the next several meetings of the
264 full Panel. Ideas compiled by the Issues Committee are summarized in the July 24 meeting
265 notes available on the NDCAP website. Panel discussion focused on the following topics:
266 The need for additional Town of Vernon representation on the Panel; whether Panel duties
267 should include discussing economic redevelopment of the Vermont Yankee site; whether
268 Agency of Commerce and Community Development (ACCD) and International Brotherhood
269 of Electrical Workers (IBEW) representation on the Panel should be eliminated and the
270 need for changing the Panel's funding source. The Panel referred these topics back to the
271 Issues Committee for a more defined recommendation.
- 272 • **Election of New Panel Officers:** In separate Roll Call votes, Josh Unruh was elected Panel
273 Chair and Lissa Weinmann was re-elected Panel Vice-Chair for terms of 1 year. The prior
274 Panel Chair, Chris Company, did not seek reelection, but remained on the Panel as
275 representative for the Windham Regional Commission.

276

277 **December 5, 2019**

- 278 • At the start of this meeting, Panel Chair Josh Unruh noted that several representatives from
279 the Town of Buchanan, New York were present to observe the Panel's proceedings. (A
280 panel similar to VT NDCAP is currently being created in Buchanan for the Indian Point
281 Power Station's upcoming decommissioning.)
- 282 • **NorthStar Update on Recent VY Site Decommissioning Activities:** Panel Member Corey
283 Daniels, NorthStar Senior ISFSI (spent fuel storage) Manager at Vermont Yankee, presented
284 a summary of recent site decommissioning activities. This summary discussed recently
285 completed reactor vessel segmentation project tasks, the near completion of dismantling
286 VY's steam turbine, progress in onsite asbestos abatement, the current status and future
287 plans for onsite groundwater intrusion management and results from several recently
288 completed radiological and hazmat surveys. An embedded video is included, which was
289 played during the presentation. This video may be viewed at
290 <https://www.youtube.com/watch?v=-HSeTZDPYF8> or through the presentation slides
291 available on the NDCAP website.

292 This presentation also discussed several “stakeholder engagement” activities that recently
293 occurred. These included a confidential survey of selected stakeholders and a proposal for
294 Antioch University of New England (AUNE) to perform a VY site study / land use inventory
295 for potential redevelopment options. In response to a request from Public Service
296 Commissioner June Tierney, NorthStar committed to provide a public summary of this
297 engagement survey to document:

- 298 ○ How many people were contacted?
- 299 ○ When was the survey done?
- 300 ○ What survey questions were asked?
- 301 ○ What were the top findings of the report?

302 The resulting public summary is available from the NDCAP website.

- 303 • **Vermont State Agencies’ Update on VY Decommissioning:** VT Public Service
304 Department (PSD) Special Counsel Allison Bates-Wannop provided a brief presentation
305 on PSD’s continuing financial and technical reviews of Vermont Yankee’s
306 decommissioning. PSD’s primary responsibility is to confirm that the work completed to
307 date is reasonable after considering the NorthStar’s reimbursement requests from the
308 Nuclear Decommissioning Trust (NDT) to date. Overall, the VY’s decommissioning
309 continues to progress smoothly. It was noted that PSD’s hired expert to assist in this
310 oversight and assessment process performed similar work during Yankee Rowe’s active
311 decommissioning.

312 The PSD presentation also discussed the Department’s expanded “Vermont Yankee
313 Decommissioning” website that recently went live. This new website is available at:
314 <https://publicservice.vermont.gov/content/vermont-yankee-decommissioning>. The
315 new website reports monthly balances for Vermont Yankee’s Nuclear Decommissioning
316 Trust (NDT) and Site Restoration (SRT) funds. It also includes the summary of
317 decommissioning expenditures that PSD receives monthly. The website includes links to
318 other State Agency websites and webpages related to Vermont Yankee’s
319 decommissioning, the Panel’s website and Vermont Yankee-related sections of the NRC’s
320 website.

- 321 • In response to PSD’s presentation, Panel Member and Vermont Representative Laura Sibil
322 asked the following several questions regarding the State’s review of VY’s decommissioning:
 - 323 ○ What happens if there are surplus or a deficit in funds in the NDT and SRT after the
324 decommissioning project is complete?
 - 325 ○ Is the cost to complete (the decommissioning project) updated on a regular basis?
 - 326 ○ What is the cost to complete Vermont Yankee’s decommissioning?
 - 327 ○ Is there a “fudge factor” (i.e. an uncertainty) built into the cost to complete?
 - 328 ○ What is the estimate percentage of the work completed?

329 While preliminary replies were provided by Commissioner Tierney and Ms. Wannop, the
330 Commissioner committed to making a detailed, written reply available to the Panel. This
331 detailed reply is available through the NDCAP website at:

332 [https://publicservice.vermont.gov/content/commissioner-tierney-letter-representative-](https://publicservice.vermont.gov/content/commissioner-tierney-letter-representative-sibil)
333 [sibilia-regarding-vermont-yankee-decommissioning](https://publicservice.vermont.gov/content/commissioner-tierney-letter-representative-sibil)

- 334 • **Updating Statute Defining Panel Duties, Composition and Funding:** The Panel reviewed
335 several recommendations made by the Issues Committee from its November 21, 2019
336 meeting. The Issues Committee “list of ideas” from its July 24, 2019 meeting were also
337 reviewed. After some Panel discussion, the Panel voted and approved several
338 recommendations deemed to be straight-forward:
- 339 ○ The Town of Vernon’s representation on the Panel was increased to two
340 representatives
 - 341 ○ IBEW representation on the Panel was eliminated (prior Panel discussion had noted
342 that there were no longer any IBEW members working at the VY site; the IBEW had
343 previously indicated it had no objection to its removal from the Panel.)
 - 344 ○ Replace “Vermont Yankee Nuclear Power Station” and “VYNPS” nomenclature in the
345 Panel legislation to simply “Vermont Yankee.”

346 Several items were tabled for subsequent discussion (in 2020):

- 347 ○ Making the Panel’s New Hampshire and Massachusetts representation optional
- 348 ○ Eliminating the Agency of Commerce and Community Development (ACCD)
349 representation from the Panel (ACCD representation requested for discussion)
- 350 ○ Making all Agency representation Ex Officio
- 351 ○ Whether State Agencies should be required to summarize their findings on the
352 required March 31 annual reporting to the Panel
- 353 ○ All potential duties changes noted in the July 24 Issues Committee Summary list
- 354 ○ Whether the required number of Panel meetings per year should be reduced from
355 four to one

356 The Panel then voted unanimously to authorize Reps. Laura Sibilila and Sara Coffey to
357 incorporate the approved language changes for introduction to the Legislature.

- 358 • **Draft Annual Report (for 2019):** The Panel voted to approve the following outline for the
359 Panel’s 2019 Annual Report to the Legislature:

360 <https://publicservice.vermont.gov/content/draft-outline-2019-annual-report>

361 State Nuclear Engineer Tony Leshinski committed to having a draft annual report based on
362 this outline available for Panel review by January 6, 2020.

363

364 **IV. Major Milestones and Activities at the Vermont Yankee Site**

365

- 366 • 1/11 Sale of Entergy Vermont Yankee to NorthStar Group Services completed
- 367 • 1/28 First major decommissioning task, removal of Spent Fuel Pool Storage Racks, begins
- 368 • 1/28 First Nuclear Regulatory Commission (NRC) onsite inspection with NorthStar as
369 VT Yankee owner / licensee begins
- 370 • 2/12 Work to expand VT Yankee’s onsite rail spur begins
- 371 • 3/7 Removal of last Spent Fuel Pool Storage Rack completed
- 372 • 3/18 Second NRC onsite inspection of the year begins
- 373 • 3/18 Reactor Vessel shield plug segmentation commences
- 374 • 4/9 VT Yankee’s expanded onsite rail spur is activated
- 375 • 4/10 Reactor Vessel Drywell Head segmentation commences

- 376 • 4/15 Third NRC onsite inspection of the year begins
- 377 • 4/15 Demolition of “Construction Office Building” completed
- 378 • 4/17 Reactor Vessel (RV) Drywell Head segmentation completed
- 379 • 4/17 RV Head segmentation activities commence
- 380 • 4/18 NRC Early 2019 Inspection Exit Meeting – no issues, findings, or violations
- 381 • 4/22 First radioactive waste shipment via railcar leaves VT Yankee site
- 382 • 5/13 Initial non-radiological site characterization begins
- 383 • 5/13 Dismantling of the Turbine begins
- 384 • 5/20 Fourth NRC onsite inspection of the year begins
- 385 • 6/7 Reactor Vessel Head segmentation commences
- 386 • 6/18 Fifth NRC onsite inspection of the year begins
- 387 • 6/27 RV Head segmentation completed
- 388 • 7/11 Initial non-radiological site characterization completed
- 389 • 7/11 Demolition of East Cooling Towers completed
- 390 • 7/22 Demolition of West Cooling Towers completed
- 391 • 7/29 Sixth NRC onsite inspection of the year begins
- 392 • 8/2 First RV internal component (Steam Dryer) removed for segmentation
- 393 • 8/19 Seventh NRC onsite inspection of the year begins
- 394 • 8/22 NRC Mid-2019 Inspection Exit Meeting – no issues, findings, or violations
- 395 • 9/6 Clearing of Cooling Tower debris completed
- 396 • 9/9 Segmentation of Turbine Shaft commences
- 397 • 10/21 “Contaminated Worker” Emergency Drill Completed
- 398 • 10/21 Eighth NRC onsite inspection of the year begins
- 399 • 11/11 Reflood of RV, Separator Pit and Spent Fuel Pool for underwater segmentation
- 400 activities begin
- 401 • 11/13 “Site Security” Emergency Drill Completed
- 402 • 12/2 Reflood of the RV, Separator Pit and Spent Fuel Pool for underwater segmentation
- 403 activities completed
- 404 • 12/4 Ninth NRC onsite inspection of the year begins
- 405 • 12/5 NRC Late-2019 Inspection Exit Meeting – no issues, findings, or violations
- 406 • 12/19 “Shipping & Receiving” Warehouse abandoned (mid-2020 demolition expected)
- 407
- 408

409 **V. Nuclear Decommissioning Trust (NDT) and Site Restoration Trust (SRT) Fund Updates**
410 *(based on latest available data for 2019).*

411	NDT	SRT
412		
413	\$506.7 M Balance on October 31, 2018	\$33.5 M Balance on October 31, 2018
414	\$498.4 M Balance on December 31, 2018	\$60.0 M Balance on January 11, 2019*
415	\$478.6 M Balance on June 30, 2019	\$63.0 M Balance on June 30, 2019
416	\$456.3 M Balance on September 30, 2019	\$63.3 M Balance on September 30, 2019
417	\$446.3 M Balance on October 31, 2019	\$63.1 M Balance on October 31, 2019
418	\$435.7 M Balance on November 30, 2019	\$62.6 M Balance on November 30, 2019

419 * Closing date of the Vermont Yankee Sale to NorthStar
420 Monthly balances for the NDT and SRT are available at:
421 <https://publicservice.vermont.gov/content/trust-balances>.

422
423 Summaries of monthly expenditures for the Vermont Yankee Decommissioning Project are
424 available: <https://publicservice.vermont.gov/content/public-reports>.

425
426 **VI. Spent Nuclear Fuel Status at Vermont Yankee**

427 Transfer of VY's entire spent fuel inventory to dry cask storage was completed on August 1,
428 2018. No changes to VY's spent fuel storage occurred in 2019. A total of 58 spent fuel dry casks
429 remain stored at the VY Independent Spent Fuel Storage Installation (ISFSI). A total of 7 vacant
430 cask spaces remain on the ISFSI pads. Four of these are required should the arrangement of the
431 casks on the two ISFSI pads need to be changed for any reason. The remaining three spaces are
432 designated for storage of any Greater than Class C (GTCC) Low Level Nuclear Waste (e.g. highly
433 contaminated VY Reactor Vessel and/or Spent Fuel Pool components) resulting from VY's active
434 decommissioning. It is currently anticipated one GTCC Nuclear Waste dry cask will be stored on
435 the VY ISFSI at a later date.

436
437 **VII. Significant Vermont Yankee Site Changes**

438 Monitoring of the Vermont Yankee Spent Nuclear Fuel is controlled from the site's Central Alarm
439 Station (CAS) Building, which became operational on August 23, 2018. No changes to Vermont
440 Yankee's spent fuel monitoring programs occurred during 2019. All Vermont Yankee site
441 changes that occurred during 2019 were the result of decommissioning activities which
442 commenced on January 11, 2019.

443 The following onsite structures were demolished during 2019:

- 444 • The Construction Office Building
- 445 • The East and West Cooling Towers

446 The Cooling Tower Basin structure (a concrete lined, man-made pond) remains intact for
447 potential future onsite water management use. The concrete pad from the Construction Office
448 Building has been repurposed as a temporary waste material storage area.

449 The onsite rail spur has been refurbished and expanded. In addition to the existing rail spur that
450 runs to south end of the Turbine Building, an additional spur has been added that runs to the
451 southeast corner of the site's former Protected Area (along the south side of the power block
452 buildings). This new spur joins the existing spur near the onsite Plant Support Building (the 3-
453 story office building near the western edge of the site). The location of the second spur allows
454 the concrete pad from the Construction Office Building to be used for staging scrap material that
455 will be shipped offsite via railcar. To facilitate railcar loading during poor weather conditions, a
456 prefabricated metal-frame and plastic wall "big-top" structure has been erected over the
457 southeastern end of the new rail spur.

458 A short "rail siding" has been added near the north end of the existing rail spur to facilitate
459 onsite railcar storage.

460

461 **VIII. Vermont Yankee Water Management Program**

462 • The rate of groundwater entering the Turbine Building is consistent with rates seen during
463 2017 and 2018.

464 ○ Seasonal variations to date produced a rate range between 250 and 800 gallons per
465 day (consistent with 2017 and 2018 rates)

466 ○ At End of Year the rate was approximately 300 gallons per day (consistent with
467 2017 rates). This rate was significantly lower than the 621 gallons per day
468 estimated on December 31, 2018. (The higher End of Year 2018 rate was due to
469 high rainfall in late 2018.)

470 ○ Over 90% reduction in leakage since 2015 (consistent with 2018 rates)

471 • Roughly 182,000 gallons have shipped in 2019

472 ○ 89,200 gallons of which have shipped to Waste Control Specialists (WCS) NRC-
473 licensed disposal site in Andrews County, Texas.

474 ○ 92,400 gallons have shipped to US Ecology's hazardous waste disposal facility in
475 Grandview, Idaho. (Vermont Yankee is currently licensed by the NRC to ship up to
476 200,000 gallons of contaminated water to this facility.)

477 ○ All 2019 water shipments made via tanker rail cars (tanker trucks used in prior
478 years); 8 rail shipments in total.

479 ○ Groundwater shipments to WCS and US Ecology facilities continue "as-needed."

480 • A total of 1,055,000 gallons have been shipped to date

481 • Onsite water storage can hold water as much as 820,000 gallons, if necessary, until
482 appropriate disposal arrangements are made.

483 • No water discharges to the Connecticut River.

484 • Intercept wells are being drilled at the Turbine Building periphery to mitigate the need for
485 future water shipments.

486

487 **IX. Radioactive Waste Shipments Summary**

488

489 An annual summary of Vermont Yankee's radioactive waste shipments is published in mid-May
490 of the following calendar year as part of the "Radioactive Effluent Release Report" filed with the

491 US Nuclear Regulatory Commission and the Vermont Public Service Department. Preliminary
492 radioactive waste volume data available as of December 31, 2019 indicates that approximately
493 122,000 cubic feet of radioactive waste was shipped from the Vermont Yankee site during 2019.
494 Excluding the contaminated water shipments to US Ecology reported in Section VIII herein, all
495 2019 calendar year radioactive waste shipments were sent to Waste Control Specialists' (WCS)
496 disposal facility Andrews County, Texas. Excluding two shipments made by truck, all 2019
497 calendar year shipments were made via railcar.

498

499 **X. Vermont Congressional Delegation**

500

501 Representatives of Senator Patrick Leahy, Senator Bernie Sanders, and Congressman Peter
502 Welch attended several NDCAP meetings in 2019.

503 At the October 16, 2019 meeting, Haley Pero of Senator Sanders' office provided a verbal update
504 on the recent bills proposed in Congress that, if enacted, would impact the overall reactor
505 decommissioning process within the United States. All decommissioning-related bills
506 introduced in the 2019 Congressional session were bills that had been introduced in prior
507 sessions. These bills remain in Committee. Bills that were sponsored by Senator Sanders or
508 Vermont Congressman Peter Welch were specifically identified.

509 It was noted that the Trump Administration's budget bill for FY2020 includes funding for the
510 restart of Yucca Mountain licensing efforts; the Congressional FY2020 budget bills do not.
511 Additional information on any of these bills, including their text, can be obtained through
512 Senator Sanders' Office. contact Haley for additional information. It was also noted that the
513 Nuclear Regulatory Commission's ongoing Decommissioning Rulemaking effort remains on-
514 target for Commission Approval in October 2021.

515 Questions from the Panel noted whether any of the bills would support reducing (i.e. result in
516 more-stringent) radiological site release standards. Ms. Pero agreed to report back to the Panel
517 regarding this question. A second Panel question inquired whether private interim (spent fuel)
518 storage facilities were even legal. Ms. Pero deferred on answering this question, citing the
519 ongoing legal debate on this topic.

520

521 **XI. The Issues Committee of NDCAP**

522

523 The Issues Committee, formed in 2015 to make recommendations on topics for discussion at
524 NDCAP meetings, was reconstituted at the January 31, 2019 meeting of the Full Panel. The
525 following Panel members volunteered to serve on the Committee: Chris Campany, Corey
526 Daniels, Derrik Jordan, Michael Root and Lissa Weinmann. Several additional Panel members
527 also participated in at least one of the Issues Committee meetings held during 2019: Bob Leach,
528 Sara Coffey, David Pearson and Josh Unruh. The Issues Committee met three times during 2019,
529 in April, July and November. In addition to identifying topics for discussion at Full Panel
530 meetings, the Committee brainstormed potential Panel changes in composition and duties for
531 further discussion by the Full Panel.

532 Topics discussed at the Issues Committee meetings are summarized in the meeting notes
533 available at the NDCAP website. Mark-ups of the Panel Charter and Legislation creating the

534 Panel that resulted from the Issues Committee discussions are also available from the NDCAP
535 website. (These latter items are included as meeting materials for the Full Panel meetings rather
536 than with the Issues Committee notes.)

537

538 **XII. Meeting Schedule and Priorities for 2020**

539

540 During the Panel’s December meeting, it was agreed that the Panel will continue to meet
541 quarterly, with the understanding that frequency and timing will be influenced by reporting
542 requirements in Vermont Yankee Sale Agreement (PUC Docket 8880 Approval Order, CPG and
543 MOU) and significant milestones during Vermont Yankee’s active decommissioning and site
544 restoration.

545 To this end, the Panel agreed to meet on January 13, 2020, with the primary focus of this meeting
546 to be finalizing the 2019 Annual Report to the Legislature. The Panel also agreed to meet on
547 May 4, 2020. The primary focus of this second meeting will be to receive summaries and State
548 Agency evaluations for the March 31, 2020 annual reporting required by Vermont Yankee Sale
549 Agreement. Scheduling of the Panel’s required third and fourth meetings in the 2020 calendar
550 year will be decided no later than during the May 4, 2020 meeting.

551

552 **XII. Panel Composition Change Recommendations**

553 Consistent with Panel Duties outlined in Part II of the Panel Charter (see Section II of this
554 Report), the Panel “shall assess further changes to the Panel’s membership or duties as
555 appropriate.” Discussion on potential Panel composition and duties changes have occurred
556 during the several Full Panel and Issues Committee meetings held in 2019. These culminated in
557 the Panel voting at its December 5, 2019 meeting to 1) eliminate IBEW representation from the
558 Panel and 2) add an additional Town of Vernon representative to the Panel, thereby increasing
559 Town representation to two Panelists (without increasing the overall size of the Panel).

560 As noted in the December 5, 2019 meeting highlights (in Section III herein) discussion on several
561 additional potential Panel changes were tabled for subsequent discussion in 2020.
