



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

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

**2021**

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1                               **- Nuclear Decommissioning Citizens Advisory Panel -**  
2                               **2021 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” or  
12   the “Panel”) was established during the 2014 Legislative Session as part of Act 179 (Section E.233;  
13   pages 141 through 148 of the Act). Details on the original membership and duties of NDCAP were  
14   outlined in this Act., which is available online at:

15   [https://legislature.vermont.gov/Documents/2014/Docs/ACTS/ACT179/ACT179%20As%20Enac](https://legislature.vermont.gov/Documents/2014/Docs/ACTS/ACT179/ACT179%20As%20Enacted.pdf)  
16   [ted.pdf](https://legislature.vermont.gov/Documents/2014/Docs/ACTS/ACT179/ACT179%20As%20Enacted.pdf).

17  
18   Membership and duties of NDCAP were modified during the 2021 legislative session as part of  
19   Act 54, (Section 13, pages 11 through 16 of the Act). Details on the current membership and  
20   duties of NDCAP are available online at:

21   <https://legislature.vermont.gov/statutes/fullchapter/18/034>.

22  
23   The list of current members of the Nuclear Decommissioning Citizens Advisory Panel may be  
24   found at [http://publicservice.vermont.gov/electric/ndcap \(aka, the NDCAP website\)](http://publicservice.vermont.gov/electric/ndcap_aka_the_NDCAP_website). Changes in  
25   Panel membership during 2021 may be discerned by reviewing the meeting minutes and meeting  
26   recordings available at the NDCAP website.

27  
28   **II. Charter**

29  
30   The NDCAP Charter was adopted on February 25, 2015, and amended on May 26, 2016. The  
31   current Charter is available at:

32   [https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20NDCAP%2](https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20NDCAP%20Charter%20%28Adopted%202016.05.26%29.pdf)  
33   [0Charter%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).

34  
35   No changes to the NDCAP Charter were made during 2021. However, revision to the NDCAP  
36   Charter is likely necessary due to the changes in Panel membership and duties implemented in  
37   Act 54 of the 2021 Legislative Session. NDCAP will review and update its Charter during calendar  
38   year 2022 to align it with Act 54 changes.

41 **III. Meeting Highlights**

42  
43 The NDCAP held four meetings in 2021; meetings were held in April, June , September, and  
44 December. All meetings were open to the public and opportunities for public comments were  
45 provided. In response to the COVID-19 pandemic, the April and June meetings were conducted  
46 entirely as Microsoft Teams webcasts. The September and December meetings were conducted  
47 primarily as Microsoft Teams webcasts. However, in compliance with Open Meeting Law, a  
48 physical meeting space was available in downtown Brattleboro for these latter meetings.

49  
50 All meetings included updates on recent VY decommissioning activities by both NorthStar and the  
51 State of Vermont. Educational and issue-specific topics were also discussed. Several of the issue-  
52 specific topics centered on Panel meeting logistics moving forward. Opportunities for discussion  
53 and comments from Panelists and the public on all covered topics were provided during each  
54 meeting. A summary of each meeting is presented below.

55  
56 The minutes of each meeting can be found on the NDCAP website (a dedicated section of the Public  
57 Service Department website) at <http://publicservice.vermont.gov/electric/ndcap>. A complete  
58 video or webcast recording for each meeting can be found at:

59 <https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel>.

60  
61 Links to these video recordings are also available through the NDCAP website. Additional  
62 information regarding VY's active decommissioning is available at the Public Service Department's  
63 recently launched "VY Decommissioning" website at:

64 <https://publicservice.vermont.gov/content/vermont-yankee-decommissioning>

65  
66 **April 12, 2021**

67 The Panel's first meeting of the year was originally scheduled for March 15. However, due to  
68 world-wide connectivity issues with the Microsoft Teams platform that evening, the meeting was  
69 rescheduled to April 12. At the start of the April 12 meeting, Panel Chair Emily Davis noted that  
70 Paul Wolossow was appointed as the Panel's New Hampshire Towns representative prior to the  
71 planned March 15 meeting. Unfortunately, Mr. Wolossow subsequently passed away during the  
72 week of March 28.

73  
74 • **NorthStar Update on VY Site Decommissioning Activities:**

75 Panelist Corey Daniels, VY's Senior Spent Fuel Storage Manager, provided a presentation  
76 that outlined ongoing decommissioning activities. Progress on Reactor Vessel (RV)  
77 segmentation was described. While RV segmentation is behind schedule, Orano continues  
78 to perform high-quality work on the task. No significant impact to the overall project  
79 schedule is anticipated. Segmentation of the Core Shroud cylinder is nearing completion,  
80 which is one of the last difficult component segmentations to be completed. Recent  
81 Control Rod Guide Tubes segmentation and waste packaging was also discussed. Current  
82 Turbine Building (TB) demolition and equipment removals were described; the current  
83 work includes removal of the Feedwater Heaters, disassembly of the Condenser and

84 removal of Emergency Diesel Generator Rooms equipment. The planned removal of the  
85 500,000 gallon Condensate Storage Tank was discussed. In response to Panelist  
86 questions, onsite storage plans for VY's Greater-than-Class C radioactive waste were also  
87 discussed. In response to a series of questions from the public, additional details on VY's  
88 radioactive waste shipment activities were described.

89  
90 • **State of Vermont Decommissioning Activities:**

91 Gerold Noyes, Environmental Engineer in the Department of Environmental  
92 Conservation's (DEC's) Waste Management and Prevention Division outlined the Agency  
93 of Natural Resources (ANR) / DEC's ongoing interactions with VY: regular (biweekly)  
94 status calls, draft permit and corrective action plan reviews. Information from these  
95 communications is available from both the NorthStar and ANR websites. Quarterly  
96 groundwater sampling, and the VY site post-demolition sampling plan were discussed.  
97 DEC's approval of an onsite groundwater intercept well system, which would divert  
98 groundwater from entering the Turbine Building and becoming contaminated, was  
99 discussed. After confirming that the diverted water is clean, the collected groundwater  
100 will be discharged to the Connecticut River.

101  
102 No new contamination areas have been found onsite thus far; however more sampling will  
103 be done as more site structures are demolished, allowing more areas to be sampled.  
104 Onsite asbestos abatements are largely complete.

105  
106 Panel Member Dr. Bill Irwin, Vermont Radiological and Toxicology Sciences Chief, outlined  
107 Vermont Department of Health oversight at VY. Health's sampling and monitoring  
108 programs for air, milk, groundwater, sediments, fish and water supplies within the Vernon  
109 and Brattleboro vicinities were described. Monitoring program results are available at  
110 [https://www.healthvermont.gov/health-environment/radiological-health/vermont-](https://www.healthvermont.gov/health-environment/radiological-health/vermont-yankee)  
111 [yankee](https://www.healthvermont.gov/health-environment/radiological-health/vermont-yankee). Health's support in DEC's oversight of VY activities was also discussed. Despite  
112 the Pandemic, Health was able to conduct several onsite inspections during 2020. Health  
113 was significantly involved in ANR's water discharge permit process for Vermont Yankee.  
114 Thus far, the decommissioning project has not had an adverse environmental impact.

115  
116 Eric Guzman, Special Counsel in the Vermont Public Service Department outlined the  
117 Department's monitoring of the VY Decommissioning Project since the Panel's December  
118 2020 meeting. Reviews conducted by Four Points Group, the Department's consultant for  
119 VY Decommissioning oversight was also discussed. In general, the expenditures thus far  
120 on the project are consistent with the project's observed progress. NorthStar remains on  
121 track to complete the project with available funding. NorthStar's required annual project  
122 certification report and financial disclosures were received on March 31, which the  
123 Department is currently reviewing.

126 • **Discussion of Federal Nuclear Waste Policy Committee Activities:**  
127 Lissa Weinmann, Chair of the Panel’s Federal Nuclear Waste Policy Committee, briefly  
128 outlined the Committee’s activities during its first several meetings. The Committee has  
129 been compiling a reading list of relevant materials to help them come-up to speed on  
130 various nuclear waste policy issues. This reading list is included on a webpage that has  
131 been created for the Committee: [https://publicservice.vermont.gov/content/vt-ndcap-](https://publicservice.vermont.gov/content/vt-ndcap-federal-nuclear-waste-policy)  
132 [federal-nuclear-waste-policy.](https://publicservice.vermont.gov/content/vt-ndcap-federal-nuclear-waste-policy)  
133

134 Nuclear waste policy issues being considered by the Committee include Yucca Mountain,  
135 Consolidated Interim Storage, Nuclear Waste Transportation, the durability of Interim  
136 Nuclear Waste Storage Facilities (ISFSIs) and potential community compensation for  
137 hosting an ISFSI. The Committee plans to have recommendations for potential Advisory  
138 Opinions on these subjects for Panel consideration by the end of this year.  
139

140 The Committee has been meeting monthly, typically on the third Monday of the month,  
141 and tries to limit its meetings to one hour. Much of the Committee’s efforts is actually  
142 “homework” outside of the Committee meetings. The Committee has made arrangements  
143 to have invited speakers briefly present on Committee Topics.  
144

145 • **Overview of Texas Compact Commission Contingency Planning Report:**  
146 State Nuclear Engineer Tony Leshinskie reported that the Texas Compact Commission is  
147 required to publish a Contingency Planning Report to comply with Federal and State of  
148 Texas law. The report recommends that low-level radioactive waste producers maintain a  
149 contingency plan for alternate waste disposal in case the Compact Facility becomes  
150 unavailable for whatever reason. Of particular concern is Class B and Class C low level  
151 waste because there are no other licensed facilities in the US that can accept these waste  
152 classes. While active and decommissioning nuclear power plants have the ability to store  
153 Class B and C wastes for some period of time, other waste producers may not. Tony  
154 indicated that he will work with NorthStar and the Department of Health in coordinating a  
155 contingency plan for all Vermont radioactive waste producers. The Compact Facility does  
156 not currently foresee any reason why it would become unavailable; however, planning for  
157 this potential contingency needs to be done.  
158

159 • **Status Report on Panel Legislation:**  
160 Panel Members and Vermont House Representatives Sara Coffey and Laura Sibia briefly  
161 outlined the status of their bill to realign the Panel’s composition and provide a funding  
162 source for the Panel. This bill was the result of several Panel discussions in late 2019 and  
163 early 2020. The Panel voted on the wording of the bill in February 2020 and it was  
164 introduced to the Legislature. Due to other priorities (particularly the response to the  
165 Pandemic), the bill did not come to a Senate vote in 2020. The bill was reintroduced this  
166 year and has again passed the House (part of House Bill H.431,

167 <https://legislature.vermont.gov/bill/status/2022/H.431>). The bill has been referred to  
168 the Senate Finance Committee, which has yet to take testimony on the bill.

169  
170 • **Potential Revamp of Panel Website:**  
171 Panel Chair Emily Davis requested that Panel members review the Panel’s website  
172 (<https://publicservice.vermont.gov/electric/ndcap>) and consider whether there are ways  
173 to improve its usefulness to the Panel and the public. Panel member and Public Service  
174 Commissioner June Tierney cautioned that there may be limits on what can be done to  
175 update the website due to the current strain on PSD resources and the State’s standards  
176 for official websites.

177  
178 • **Scheduling 2021 Panel Meetings:**  
179 The Panel agreed to meet on June 14, September 20, and December 6.  
180

181 **June 14, 2021**

182 • **NorthStar Update on VY Site Decommissioning Activities:**  
183 NorthStar Panelist Corey Daniels summarized decommissioning activities completed since  
184 April 2021. (Slides for this presentation are available from the Panel’s website.) Progress  
185 on Reactor Vessel (RV) segmentation was described. RV core shroud segmentation is  
186 nearing completion. Segmentation of the RV shroud cylinder is done. The remaining steps  
187 in the RV segmentation project are to remove the RV jet pumps, segment the RV nozzles  
188 and then begin segmenting the RV itself. Degraded water clarity, which reduces visibility  
189 while conducting segmentation tasks, was noted, but thus far, this has not significantly  
190 impacted the project. Progress in clearing Turbine Building equipment and preparation  
191 for demolishing the Administrative Offices Building were described.

192  
193 • **Assessment of NorthStar 2020 Annual Project Report:**  
194 PSD Special Counsel Eric Guzman outlined PSD’s fiscal oversight of the VY  
195 Decommissioning project required by the Memorandum of Understanding (MOU) in effect  
196 as part of NorthStar’s purchase of VY. Nick Capik and Mark Gymr of Four Points Group  
197 (FPG), PSD’s consultants for overseeing the project, were also present to discuss the  
198 assessment. (Slides for this presentation are available from the Panel’s website.) Review  
199 of NorthStar’s required annual financial disclosures identified no causes for concern. The  
200 expenditures thus far on the project are consistent with the project’s observed progress.  
201 NorthStar remains on track to complete the project with available funding. It was noted  
202 that the Vermont Yankee indirect license transfer case before the Vermont Public Utility  
203 Commission is currently stayed pending a submittal change from the Petitioners  
204 (NorthStar ownership).

205  
206 • **Department of Environmental Conservation Update:**  
207 Gerold Noyes, Environmental Engineer in the Department of Environmental  
208 Conservation’s (DEC’s) Waste Management and Prevention Division outlined the  
209 Agency of Natural Resources (ANR) / DEC’s recent interactions with VY. (Slides for this  
210 presentation are available from the Panel’s website.) Regular status calls, draft permit

211 and corrective action plan reviews continue. Additionally, ANR / DEC staff visited the  
212 VY site on June 2, which allowed Panelist Patricia Coppolino and DEC's Anna  
213 Bourakovsky to observe site activities first-hand. (Both are new to working on VY  
214 oversight.) Quarterly groundwater sampling was also observed during this site visit.  
215 Some PFAS contamination has been found onsite, most likely due to an onsite  
216 transformer fire that occurred years ago. No site-wide contamination is expected from  
217 this finding. No other, new contamination areas have been found onsite; however, as  
218 more site structures are demolished, this will allow more areas to be sampled. Onsite  
219 asbestos abatements are largely complete.

220  
221 • **During Panel Questions:** Marvin Resnikoff voiced concerns that the radwaste volumes  
222 reported from the RV segmentation, particularly the Greater-than-Class C (GTCC) waste  
223 volumes are low. He has requested that NorthStar provide details on its radwaste  
224 measurement methods. Corey Daniels replied that while NorthStar has attempted to  
225 answer Marvin's questions, some of the requested information is proprietary. They may  
226 not be able to fully answer the questions as a result. Corey noted that some of the  
227 questions are based on 40-year-old NRC estimates. Lissa Weinmann asked whether some  
228 of the site's uncontaminated equipment can be sold for reuse rather than for scrap. Corey  
229 Daniels replied that while attempts to resell equipment have been made, the loss of quality  
230 assurance pedigrees when the equipment was abandoned makes resale difficult. In many  
231 instances, it is cheaper for a buyer to purchase new equipment than reestablishing the  
232 required pedigrees for old equipment.

233  
234 • **In response to questions from the Public:** Gerold Noyes clarified that onsite PFAS  
235 contamination is limited to the immediate vicinity of the transformer fire and nowhere  
236 else. In response to additional public questions, Corey Daniels noted that disposal  
237 locations for VY's non-radiological waste is tracked. Gerold added that DEC also tracks this  
238 through current State rules. Corey also noted that NorthStar plans to use current NRC  
239 radioactivity limits for radwaste disposal rather than any that may result from new NRC  
240 rulemaking.

241  
242 • **Discussion of Federal Nuclear Waste Policy Committee Activities:**  
243 Lissa Weinmann, Chair of the Panel's Federal Nuclear Waste Policy Committee, briefly  
244 outlined the Committee's activities during its first several meetings. The Committee  
245 continues to compile relevant materials on several nuclear waste policy issues, particularly  
246 Yucca Mountain and Consolidated Interim Storage. Compiled materials are available at:  
247 <https://publicservice.vermont.gov/content/vt-ndcap-federal-nuclear-waste-policy>.

248  
249 The May Committee meeting featured an excellent discussion with Mark Holt of the  
250 Congressional Research Service that summarized nuclear waste policy bills that have been  
251 proposed in Congress over the past several years. It is expected that many of these bills  
252 will be offered again. The Committee is investigating whether Vermont should formally

253 support these efforts or any of the proposed Nuclear Waste Policy changes that the Biden  
254 Administration is currently considering.

255

256 • **Status Report on Panel Legislation:**

257 Panelist Sara Coffey reported that H.431 was signed into law on June 3 as Act 54 of the  
258 2021 Legislative Session. The NDCAP-related portions of the Act are effective July 1. The  
259 Act provides the Town of Vernon with an additional representative on the Panel (two  
260 representatives in total) and a \$35,000 annual budget for the Panel. The Panel briefly  
261 discussed potential uses for this budget. Initial suggestions included purchasing of  
262 hardware to support Panel meetings and bringing in subject matter experts to speak at  
263 Panel Meetings. Panel Chair Emily Davis committed to making a first draft of a Panel  
264 budget for discussion at a future meeting.

265

266 • **Formats for Future Panel Meetings:**

267 The Panel discussed logistics for upcoming Panel meetings. With COVID-19 emergency  
268 measures lifted, future Panel meetings once again require a physical meeting space (for  
269 compliance with Open Meeting Law). Pre-pandemic meeting sites were typically school  
270 facilities, which may remain unavailable for the rest of 2021. A few Panelists expressed a  
271 desire to return strictly to in-person meetings, but it was agreed that the Panel would  
272 adopt a hybrid meeting approach that would allow Panelists travelling from other parts of  
273 the state to instead join meetings through a webcast. State Nuclear Engineer Tony  
274 Leshinski noted that whatever meeting space is used, it will need to have high-speed  
275 internet access to assure that the webcast runs smoothly. Some concern was expressed  
276 that using webcasts was straining the Panel's public outreach. More outreach by the Panel  
277 is needed. Several potential meeting sites were discussed, but it was agreed that a specific  
278 meeting site would need to be determined at a later date, but in time for the Panel's  
279 planned September 20 meeting.

280

281 **September 20, 2021**

282 Due to the lifting of Pandemic countermeasures in June, this was the Panel's first meeting since  
283 early 2020 for which a physical meeting space was available. Most Panel members and all public  
284 attendees joined this meeting via webcast.

285

286 • **Texas Low Level Radioactive Waste Disposal Compact (TLLRWDC) Commission**

287 TLLRWDC Compact Commissioner Peter Bradford, one of Vermont's two Commissioners  
288 for the TLLRWDC, outlined the Compact's history and purpose. An overview of the  
289 Compact's Low Level Radioactive Waste (LLRW) Disposal Facility and its operations was  
290 provided. Interactions between the Disposal Facility and the Texas Commission on  
291 Environmental Quality, which regulates the facility's safety and environmental impact, was  
292 also discussed. (Slides for this presentation are available from the Panel's website.)  
293 Commissioner Bradford answered questions provided by Panel members and the public  
294 on the Compact's positions on several radioactive waste disposal and details of the  
295 Disposal Facility's operations. Some of this discussion centered on the NRC's recent  
296 (September 13) approval of an Orano / Waste Control Specialists request to construct and



297 operate a Consolidated Interim Spent Fuel Storage Facility adjacent to the Compact's LLRW  
298 Disposal Facility. The Compact has no position on the Interim Storage Facility; its  
299 operation would be outside the scope of the Compact's jurisdiction. It was noted that the  
300 Compact's Low Level Radioactive Waste (LLRW) Disposal Facility and its operator, WCS,  
301 has undergone some financial difficulties in recent years. However, based on Commission  
302 assessments, it is likely that the Disposal Facility and WCS will continue to remain operable  
303 and available to accept all low-level radioactive waste from VY's decommissioning.  
304 Additional details for this presentation are available from the Meeting Minutes and  
305 Meeting Recording available at the Panel's website  
306 (<https://publicservice.vermont.gov/electric/ndcap>).  
307

- 308 • **Discussion of Federal Nuclear Waste Policy Committee Activities:**

309 Lissa Weinmann, Chair of the Panel's Federal Nuclear Waste Policy Committee, discussed  
310 the draft report that the Committee published on the on the Panel website. This report is  
311 available at  
312 [https://publicservice.vermont.gov/sites/dps/files/documents/Final Nuclear Waste Com](https://publicservice.vermont.gov/sites/dps/files/documents/Final_Nuclear_Waste_Committee_Update_2021_NDCAP_Rev2.pdf)  
313 [mittee Update 2021 NDCAP Rev2.pdf](https://publicservice.vermont.gov/sites/dps/files/documents/Final_Nuclear_Waste_Committee_Update_2021_NDCAP_Rev2.pdf).  
314

315 The report summarizes many of the items that the Committee has examined thus far and  
316 discussions that have occurred at its monthly meetings. The Committee requests that  
317 Panel members review the draft and provide feedback to the Committee.  
318

319 The draft report highlights several potential topics where common ground among the  
320 Panelists may be possible for an Advisory Opinion.  
321

322 Additionally, the Panel may want to support the new US House Caucus for spent nuclear  
323 fuel solutions. A restart is needed on a national integrated spent fuel management system,  
324 as is a reexamination of deep geological repository requirements. Currently, there are no  
325 such repositories operating anywhere worldwide, although Finland and China are each  
326 close to opening one.  
327

328 The Committee expects to have at least one Advisory Opinion draft available for  
329 consideration by the end of the year.  
330

- 331 • **NorthStar Update on VY Site Decommissioning Activities:**

332 NorthStar Panelist Corey Daniels summarized decommissioning activities completed since  
333 June 2021. (Slides for this presentation are available from the Panel's website.) It was  
334 noted that the VY site recently exceeded 1,000,000 person-hours worked (since NorthStar  
335 took ownership of VY on January 11, 2019) without an OSHA Recordable Lost Time  
336 Accident. Progress on Reactor Vessel (RV) segmentation was described. Removal of RV  
337 internal components is essentially complete. Preparations for segmenting the RV nozzles  
338 and the RV itself have commenced. Efforts to removed expended cutting media, which is  
339 degrading water clarity, were discussed. Clearing of Turbine Building equipment

340 continues. Recent additional structure demolitions were also described, including  
341 demolition of the Effluent Stack, component removals at the River Intake Structure and  
342 the demolition of the remaining onsite radwaste processing and other system tanks. A  
343 walk-through of a radwaste transfer from the Reactor Building to shipment offsite via a  
344 dedicated railcar was also described

345  
346 Groundwater discharge from VY's several diversion wells to the Connecticut River occurs  
347 in accordance with the river discharge permit approved by the DEC. Discharges are  
348 typically 15,000 gallons per day when they occur.

349  
350 • **Department of Environmental Conservation Update:**  
351 Gerold Noyes, Environmental Engineer in the Department of Environmental  
352 Conservation's (DEC's) Waste Management and Prevention Division outlined the Agency  
353 of Natural Resources (ANR) / DEC's recent interactions with VY. (Slides for this  
354 presentation are available from the Panel's website.) Regular status calls, draft permit and  
355 corrective action plan reviews continue. Quarterly groundwater sampling for non-  
356 radiological contaminants continue to show no area-wide contamination issues at the VY  
357 site. The next sampling is scheduled for September 22. No new contamination areas  
358 (including potential PCB contaminations) have been found onsite; however, as more site  
359 structures are demolished, this will allow more areas to be sampled. A modification to the  
360 site's potable water system, required for demolishing the Administrative Offices Building,  
361 was discussed.

362  
363 • **Public Service Department (PSD) Update:**  
364 PSD Special Counsel Eric Guzman outlined PSD's fiscal oversight of the VY  
365 Decommissioning project required by the Memorandum of Understanding (MOU) in effect  
366 as part of NorthStar's purchase of VY. (Slides for this presentation are available from the  
367 Panel's website.) The expenditures thus far on the project are consistent with the  
368 project's observed progress. NorthStar remains on track to complete the project with  
369 available funding. It was noted that the Vermont Yankee indirect license transfer case  
370 before the Vermont Public Utility Commission is currently stayed at the Petitioner's  
371 (NorthStar ownership) request.

372  
373 • **During Panel Questions:** Lissa Weinmann asked whether all underground piping at the  
374 site had been removed. Corey Daniels answered no. To date, the bulk of piping removals  
375 have been from the interior of the Turbine Building. The Turbine Building needs to be  
376 taken "cold and dark" to assure that underground piping and other large below grade  
377 components can be removed safely. Portions of the Turbine and Reactor Buildings that  
378 still require electricity need to be transferred to "street power" (i.e., the local power grid)  
379 before these removals can start. Efforts for this transition have begun.

380  
381

382 • **Potential Panel Budget Uses:**  
383 Panel Chair Emily Davis provided a first draft of a proposed Panel budget, which is  
384 available at:

385 <https://publicservice.vermont.gov/content/2022-proposed-ndcap-budget>  
386

387 In addition to covering current Panel meeting expenses such as space rental and meeting  
388 recording fees, the budget proposes additional expenditures such as meeting  
389 infrastructure (e.g., a better projector for meeting presentations), a potential upgrade to  
390 the Panel's website, and possibly a transcription service for generating the meeting  
391 minutes. A Panel staff person was also proposed to assist in meeting promotion (press  
392 releases, additional social media, etc.). A line item for the State Nuclear Engineer's time  
393 supporting the Panel was also included. Public Service Commissioner June Tierney noted  
394 that any Panel staff and the State Nuclear Engineer's salary were within the Public Service  
395 Department's budget and outside of the Panel's \$35,000 annual budget allocation. Ensuing  
396 discussion determined that the Panel initially intended to use its budget to alleviate some  
397 of the State Nuclear Engineer's administrative burdens from the Panel. (It was noted that  
398 the State Nuclear Engineer's supervision for these tasks was still essential to assure they  
399 are properly carried out.) Consensus was reached that some of the budget should be used  
400 for improving the Panel's website. (It was noted that all website changes would need to  
401 comply with Vermont State standards for official websites.) Budget would also be  
402 allocated to make subject matter experts available to the Panel. Some discussion on  
403 whether Panel stipends could be increased occurred. But it was recognized that increasing  
404 the current stipend for Panel volunteers would require action by the Legislature. Based on  
405 this discussion, Panel Chair Emily Davis committed to revising the Panel budget draft for  
406 further discussion at a future meeting.  
407

#### 408 **December 6, 2021**

409 During Panel Member roll call, it was noted that the website for Massachusetts State  
410 Representative Paul Mark (Massachusetts Towns representative for the Panel) indicates that he  
411 has stepped down from NDCAP. Several letters have been sent to the Massachusetts Governor's  
412 Office requesting that a replacement be named.  
413

#### 414 • **Review of Panel Charge and Purpose / Panel Draft Budget:**

415 The latest version of the Panel FY 2022 budget is included in the Panel Duties and Budget  
416 Notes available at: [https://publicservice.vermont.gov/content/ndcap-duties-and-  
417 budget-notes-dec-6-discussions](https://publicservice.vermont.gov/content/ndcap-duties-and-budget-notes-dec-6-discussions).  
418

419 The Panel's duties center on disseminating information on Vermont Yankee  
420 decommissioning activities and assuring that public can ask questions or voice concerns  
421 about these activities. In short, the Panel's purpose is public outreach. Emily Davis  
422 noted that the proposed budget allocations reflect the Panelists' desires to enhance its  
423 public outreach and allow Panel members to be better informed on decommissioning-  
424 related topics. The proposed budget allocates funds for improving the Panel's website,  
425 potentially expanding meeting publicity, improving electronic access to meetings and

426 assuring that high-quality meeting recordings remain available. The budget also  
427 allocates honoraria for experts speaking to the Panel. This last item would be in lieu of  
428 allocations for Panel members to attend decommissioning conferences. Some discussion  
429 on Panelists potentially attending decommissioning conferences and how or whether  
430 expenses for such conferences could be covered by the Panel's \$35,000 annual budget  
431 ensued. However, with no specific conferences in mind, no consensus was reached.  
432 General agreement was reached that the current budget draft has sufficient detail for the  
433 Panel to use its current budget. Additional details for specific expenses can be addressed  
434 during the Public Service Department's approval process for individual expenses.

435

436 • **Panel Current Public Engagement / Participation:**

437 An outline of the Panel's current public engagement practices is included in the Panel  
438 Duties and Budget Notes available at:

439 [https://publicservice.vermont.gov/content/ndcap-duties-and-budget-notes-dec-6-](https://publicservice.vermont.gov/content/ndcap-duties-and-budget-notes-dec-6-discussions)  
440 [discussions.](https://publicservice.vermont.gov/content/ndcap-duties-and-budget-notes-dec-6-discussions)

441

442 Public engagement currently consists of notifications / publications on the Panel website  
443 (<https://publicservice.vermont.gov/electric/ndcap>), press releases for upcoming meetings,  
444 and redistribution of the press releases to a voluntary public interest email distribution list.  
445 The Panel discussed the potential enhancements in public outreach identified in the draft  
446 budget.

447

448 Meeting Webcast Platform: Panel Chair Emily Davis indicated that she and State Nuclear  
449 Engineer Tony Leshinskie have discussed having Brattleboro Community Television (BCTV)  
450 run the meeting webcasts. Tony currently runs the webcasts on Microsoft Teams; BCTV is  
451 currently responsible for recording "in-person" and webcast meetings. Having BCTV run  
452 the webcasts potentially allows Zoom to be used as the meeting platform rather than  
453 Teams. The contract for this new option is currently being worked out.

454

455 Panel Website Update: The Panel generally agreed that refreshing the Panel website  
456 would be helpful for improving outreach. It was suggested that recent updates to the  
457 Vermont Climate Control Council website could serve as a template for revamping the  
458 Panel's website. It was noted that the Panel website must remain the responsibility of  
459 the Public Service Department. However, its web design can be contracted out. Website  
460 updates would need to be reviewed by the Department to assure that they comply with  
461 State website requirements. It was again suggested that the Panel form a committee to  
462 oversee the website revisions.

463

464 Enhancements to Public Outreach: While it was agreed that additional public outreach is  
465 needed, no consensus was reached on potential improvements. A committee to look at  
466 potential new outreach options was suggested, but no action to create such a committee  
467 was taken. The Panel will pursue potential Public Outreach options in 2022.

468

469

- 470
- 471 • **Discussion of Federal Nuclear Waste Policy Committee Activities:**  
472 Lissa Weinmann, Chair of the Panel’s Federal Nuclear Waste Policy Committee, discussed  
473 recent Committee activities. The Committee continues to meet monthly, with the last  
474 meeting of the year scheduled for December 20. The Committee’s meetings are drawing  
475 attention. Several members of the public from across the United States have attended  
476 Committee’s webcasts. One official from the US Department of Energy joins meetings on a  
477 regular basis. The Committee is currently working on a draft Advisory Opinion regarding  
478 the US Department of Energy’s development of a Consent-Based Siting process. Recently  
479 (last week) the Department of Energy issued a Request for Information (public comments)  
480 on the temporary, consolidated storage of spent nuclear fuel using a Consent-Based  
481 approach; the Committee will examine whether anything in this request should be  
482 addressed by the Advisory Opinion. The Committee plans to continue meeting in 2022 to  
483 discuss Federal Nuclear Waste Policy topics. However, it may opt to meet less frequently  
484 (probably quarterly, rather than monthly).
  - 485 • **NorthStar Update on Recent VY Site Decommissioning Activities:** NorthStar Panelist  
486 Corey Daniels summarized decommissioning activities completed since September 2021.  
487 (Slides for this presentation are available from the Panel’s website.) It was noted that the  
488 VY site recently exceeded 1,100,000 person-hours worked (since NorthStar took ownership  
489 of VY on January 11, 2019) without an OSHA Recordable Lost Time Accident. The Nuclear  
490 Regulatory Commission (NRC) has issued no cited violations, nor have there been any non-  
491 cited violations, for the decommissioning project thus far in 2021. There were no cited or  
492 non-cited violations in 2019 and 2020. Progress on Reactor Vessel (RV) segmentation and  
493 the ongoing dismantling of the Turbine Building was described. The RV is now empty; all  
494 RV internal components have been removed. In preparation for segmenting the RV itself,  
495 some drain down of water in the Reactor Cavity and the Dry Separator Pit (DSP) has  
496 occurred. Efforts for the remainder of the year will focus on filtering expended garnet  
497 cutting media from the RV and DSP water. Although RV segmentation remains somewhat  
498 behind schedule, the decommissioning project overall remains ahead of schedule. The  
499 largest Turbine Building structure, the Main Condenser, is essentially gone. Approximately  
500 2.5 million pounds of Condenser scrap has been removed thus far. Demolition of the  
501 Administration Building (adjacent to the north side of the Turbine Building) superstructure  
502 is complete. Progress on the demolition of the Radioactive Waste Clean-Up Building and the  
503 Cooling Tower basins / foundations was also described.
  - 504
  - 505 • **Department of Environmental Conservation Update:**  
506 Gerold Noyes, Environmental Engineer in the Department of Environmental Conservation’s  
507 (DEC’s) Waste Management and Prevention Division outlined the Agency of Natural  
508 Resources (ANR) / DEC’s recent interactions with VY. (Slides for this presentation are  
509 available from the Panel’s website.) Regular status calls, draft permit and corrective action  
510 plan reviews continue. ANR / DEC staff visited the VY site on December 1, which allowed  
511 DEC’s Grahame Bradley to observe site activities first-hand. (Mr. Noyes will be retiring

512 from state government in February 2022 and Mr. Bradley will be taking over Mr. Noyes'  
513 project role.) Quarterly groundwater sampling for non-radiological contaminants continue  
514 to show no area-wide contamination issues at the VY site. The next sampling is scheduled  
515 for December 14. No new contamination areas have been found onsite; however, as more  
516 site structures are demolished, this will allow more areas to be sampled. The first soil  
517 sampling for a demolished structure will occur on December 12 from under the concrete  
518 floor of Cooling Tower #1. No additional asbestos abatement work has occurred; onsite  
519 asbestos abatement is largely complete, although asbestos checks are still occurring.

520  
521 • **Public Service Department (PSD) Update:**

522 PSD Special Counsel Eric Guzman outlined PSD's fiscal oversight of the VY Decommissioning  
523 project required by the Memorandum of Understanding (MOU) in effect as part of  
524 NorthStar's purchase of VY. (Slides for this presentation are available from the Panel's  
525 website.) The expenditures thus far on the project are consistent with the project's  
526 observed progress. NorthStar remains on track to complete the project with available  
527 funding. It was noted that in Vermont Yankee indirect license transfer case before the  
528 Vermont Public Utility Commission (PUC), the Petitioner (NorthStar ownership) has asked  
529 to withdraw the case. In response to the withdrawal request, PSD has asked for several  
530 additional reporting requirements in NorthStar's self-reporting. NorthStar and PSD are  
531 awaiting PUC decisions for these requests.

532  
533 • **Draft Annual Report for 2021:**

534 State Nuclear Engineer Tony Leshinski summarized the current status of the Panel's 2021  
535 Annual Report to the Legislature, which is due on January 15, 2022. Expected contents for  
536 the report were described. A draft of this report will be available by December 21 for  
537 Panelist review and comments. After some discussion, the Panel agreed to hold a Special  
538 Meeting on January 10, 2022, to discuss and approve the final draft of the report.

- 539  
540 • **Election of New Panel Officers:** In separate votes, Emily Davis was reelected Panel Chair  
541 and Josh Unruh was reelected Panel Vice-Chair for terms of 1 year. The Panel thanked  
542 Emily Davis for her service as Panel Chair in 2021. Emily Davis thanked Josh Unruh for his  
543 assistance in addressing her "numerous questions" regarding the Panel Chair position.  
544

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

- 546  
547 • 1/4 Site Decommissioning Activities resume following Holiday Break  
548 • 1/4 Preparations for Reactor Vessel (RV) Core Shroud segmentation resume;  
549 Turbine Building (TB) piping and equipment removals resume; Radwaste Clean-Up  
550 (RWCU) Building Piping and component removal underway; Radioactive waste  
551 shipments via railcars resume  
552 • 1/11 Removal of Condensate Storage Tank (CST) ancillary structures begins;  
553 clearing of TB Feedwater Heater Bay equipment underway

- 554 • 1/19 Panel Chair & Vice-Chair tour VY site to observe current decommissioning activities
- 555 • 1/25 Clearing of TB Condensate Pump Room components begins; preparations for TB
- 556 Condenser dismantling begin
- 557 • 1/26 RV Core Shroud segmentation begins
- 558 • 1/29 Phase 1 of Radwaste Building Piping and component removal completed; clearing of
- 559 TB Feedwater Heater Bay equipment completed
- 560 • 2/1 RV Drywell insulation and ductwork removal begins
- 561 • 2/22 Dismantling of TB Condenser ancillary structures (water boxes) begins
- 562 • 2/23 First Nuclear Regulatory Commission (NRC) onsite inspection of the year occurs
- 563 (2/23 through 2/25)
- 564 • 3/5 Packaging & shipment of final Control Rod Guide Tube completed (activity began in
- 565 October 2020); clearing of TB Condensate Pump Room components completed
- 566 • 3/8 TB Condenser segmentation begins
- 567 • 3/19 RV Drywell insulation and ductwork removal completed
- 568 • 3/22 Modified RB Ventilation System fully operational; VY Effluent Stack abandoned
- 569 • 3/29 Northstar files required Annual VY Decommissioning Trust Fund and Spent
- 570 Fuel Management Fund reports
- 571 • 4/1 VY "Tabletop" Site Emergency Drills Completed
- 572 • 4/1 DEC issues revised VY river discharge permit; diversion well water from VY can
- 573 now be discharged to the Connecticut River
- 574 • 4/1 First shipment of VY "Process" Water occurs
- 575 • 4/5 Cutting of TB Condenser Tubes (largest portion of the Condenser) underway
- 576 • 4/5 Lead paint abatement at River Water Intake Structure begins
- 577 • 4/12 Dismantling of Effluent Stack internal components begins
- 578 • 4/14 Federal Railroad Administration inspections at VY to review hazmat rail shipment
- 579 procedures
- 580 • 4/15 Lead paint abatement at River Water Intake Structure completed
- 581 • 4/16 Clearing of abandoned RB Ventilation System components completed
- 582 • 4/19 Second NRC onsite inspection of the year occurs (4/19 through 4/22)
- 583 • 4/29 650,000 working hours without an OSHA lost time incident at VY celebrated
- 584 • 5/7 NRC approves VY disposal of up to 2,000,000 gallons of radioactive water at
- 585 US Ecology Idaho hazmat disposal facilities
- 586 • 5/10 CST decontamination and removal of internal components begins
- 587 • 5/15 Dismantling of - internal components completed
- 588 • 5/19 Demolition of Effluent Stack begins
- 589 • 5/20 First shipment of expended cutting media (sand-garnet) collected from RV water
- 590 sent to WCS
- 591 • 6/2 Quarterly groundwater sampling completed
- 592 • 6/2 First Groundwater Diversion Well discharge to the Connecticut River occurs
- 593 • 6/11 CST decontamination and removal of internal components completed
- 594 • 6/14 Demolition of TB Administrative Offices section begins

- 595 • 6/16 RV Core Shroud segmentation completed
- 596 • 6/21 Removal of RV Jet Pumps begins
- 597 • 6/21 Third NRC onsite inspection of the year occurs (6/21 through 6/24)
- 598 • 6/23 Onsite Rail Spur Maintenance completed (one day job)
- 599 • 6/24 Annual self-inspections spent fuel casks and ISFSI pads completed;
- 600 no significant issues identified
- 601 • 6/28 CST demolition begins
- 602 • 6/30 CST demolition completed
- 603 • 7/8 Cutting of TB Condenser Tubes (largest portion of the Condenser) completed
- 604 • 7/13 Effluent Stack demolition completed
- 605 • 7/15 Clearing of Effluent Stack debris completed
- 606 • 7/19 NRC Early 2020 Inspection Exit Meeting – no issues, findings, or violations
- 607 • 7/19 Vacuuming garnet cutting media from RV water begins
- 608 • 7/20 NRC Region 1 Administrator tours VY site
- 609 • 7/21 Annual site roadway assessment completed (required by Town of Vernon)
- 610 • 7/26 River Intake Structure Chemical Shed demolition begins
- 611 • 8/10 Fourth NRC onsite inspection of the year occurs this week (8/10 through 8/12)
- 612 • 8/12 River Intake Structure Chemical Shed demolition completed
- 613 • 8/25 Removal of RV Jet Pumps completed
- 614 • 9/13 Preparations for RV Nozzle Cutting begins
- 615 • 9/22 Quarterly groundwater sampling completed
- 616 • 9/27 RV Nozzle Decontamination begins
- 617 • 10/1 Removal of Condenser Internal Components completed
- 618 • 10/4 Condenser Outer Shell segmentation begins
- 619 • 10/7 DEC issues Potable Water System modification permit, allowing final phase of
- 620 TB Administrative Offices demolition
- 621 • 10/11 Potable Water System modified; Reactor and Turbine Buildings
- 622 disconnected from Potable Water System
- 623 • 10/11 Radiological characterization surveys at the Cooling Tower foundations begin
- 624 • 10/12 Fifth NRC onsite inspection of the year occurs (10/12 through 10/14)
- 625 • 10/15 RV Nozzle Decontamination completed
- 626 • 10/20 Onsite Radiological Emergency Drill completed
- 627 • 10/25 Preparations for Radwaste Processing Building demolition begin
- 628 • 10/28 Demolition of TB Administrative Offices completed\*
- 629 • 11/2 Demolition of Meteorological Towers completed
- 630 • 11/8 Draining of RV Cavity & Dryer / Separator Pit (DSP) begins
- 631 • 11/12 Condenser Outer Shell segmentation completed
- 632 • 11/15 East Cooling Tower foundation demolition begins
- 633 • 11/22 Radwaste Processing Building demolition begins
- 634 • 11/29 West Cooling Tower foundation demolition begins
- 635 • 12/3 East Cooling Tower foundation demolition completed
- 636 • 12/6 Control Blade Crushing begins



- 637 • 12/7 NRC postpones planned onsite inspection to January 2022
- 638 • 12/14 Quarterly groundwater sampling completed
- 639 • 12/17 Radwaste Processing Building demolition completed\*
- 640 • 12/21 Control Blade Crushing completed

641

642 \* Below grade portions of these structures will be demolished at a future date

643

644 **V. Nuclear Decommissioning Trust (NDT) and Site Restoration Trust (SRT) Fund Updates**

645 *(based on latest available data for 2021).*

646

647 NDT	647 SRT
648 \$361.1 M Balance on December 31, 2020	\$62.4 M Balance on December 31, 2020
649 \$342.5 M Balance on March 31, 2021	\$60.5 M Balance on March 31, 2021
650 \$322.8 M Balance on June 30, 2021	\$59.8 M Balance on June 30, 2021
651 \$307.8 M Balance on August 31, 2020	\$58.9 M Balance on August 31, 2020
652 \$298.7 M Balance on September 30, 2021	\$57.6 M Balance on September 30, 2021
653 \$276.3 M Balance on December 31, 2021	\$56.9 M Balance on December 31, 2021

654

655 Monthly balances for the NDT and SRT are available at:

656 [https://publicservice.vermont.gov/content/trust-balances.](https://publicservice.vermont.gov/content/trust-balances)

657

658 Summaries of monthly expenditures for the Vermont Yankee Decommissioning Project are  
 659 available: [https://publicservice.vermont.gov/content/public-reports.](https://publicservice.vermont.gov/content/public-reports)

660

661 **VI. Spent Nuclear Fuel Status at Vermont Yankee**

662 Transfer of VY’s entire spent fuel inventory to dry cask storage was completed on August 1,  
 663 2018. No changes to VY’s spent fuel storage have occurred since then. A total of 58 dry casks,  
 664 holding a total of 3,880 spent fuel assemblies, are stored at the VY Independent Spent Fuel  
 665 Storage Installation (ISFSI). VY’s spent fuel will remain stored at the VY ISFSI until such time  
 666 that the US Department of Energy fulfills its obligation to provide a national spent nuclear fuel  
 667 repository.

668

669 A total of 7 vacant cask spaces remain on the ISFSI pads. Four of these are required should the  
 670 arrangement of the dry casks on the two ISFSI pads need to be changed for any reason. The  
 671 remaining three spaces are designated for storing Greater than Class C (GTCC) Low Level  
 672 Nuclear Waste (e.g., highly contaminated VY Reactor Vessel internal components) resulting from  
 673 VY’s active decommissioning. VY continues to anticipate that the GTCC Nuclear Waste from VY’s  
 674 decommissioning can be stored in one GTCC waste container. A GTCC waste container will be  
 675 loaded and moved to the VY ISFSI at a future date. No US low level radioactive waste disposal  
 676 facilities are currently licensed to accept GTCC waste. As a result of Reactor Vessel segmentation

677 conducted at VY during 2021, VY's GTCC waste currently resides in the Spent Fuel Pool. Transfer  
678 of VY's GTCC to the ISFSI is expected to occur in mid-2022.

679

## 680 **VII. Significant Vermont Yankee Site Changes**

681 Monitoring of the Vermont Yankee Spent Nuclear Fuel is controlled from the site's Central Alarm  
682 Station (CAS) Building, which became operational on August 23, 2018. No significant changes to  
683 Vermont Yankee's spent fuel monitoring programs occurred during 2021. All Vermont Yankee  
684 site changes that occurred during 2021 were the result of continuing decommissioning activities  
685 which commenced on January 11, 2019.

686

687 The following onsite structures were demolished during 2021:

- 688 • Abandoned 500,000 gallon Condensate Storage Tank (CST)
- 689 • River Intake Structure Chemical Shed
- 690 • Radioactive Waste Clean-Up Building
- 691 • Effluent Stack
- 692 • Administrative Offices Building (a section of the Turbine Building)
- 693 • Cooling Tower foundations and water basins
- 694 • Several abandoned security structures (none of which impact the VY ISFSI)

695

696 Additionally, all Reactor Vessel internal components have been removed. Segmentation and  
697 removal of the Reactor Vessel itself is expected in 2022. A significant portion of Turbine  
698 Building components, including the Main Steam Condenser, have been demolished.

699

700 The concrete pads for the previously demolished Shipping and Receiving Warehouse and the  
701 Advanced Off-Gas (AOG) Building remain in place. The below grade structures for the AOG  
702 Building and the Transformer pad also remain in place.

703

704 No significant onsite road repairs were required this year. The onsite rail spur has undergone  
705 maintenance as needed.

706

707 Several modifications to the onsite potable water supply system were made to permit  
708 demolition of the Administrative Offices Building.

709

710

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

- 712 • Because 2021 has had significantly more rain than several previous years, the rate of  
713 groundwater entering the Turbine Building has been higher than rates seen in 2018  
714 through 2020.
- 715 ○ Increased rainfall produced a rate range between 300 and 1500 gallons per day
  - 716 ○ At End of Year the rate was roughly 300 gallons per day (similar to 2019 and 2020  
717 end of year rates).
  - 718 ○ In leakage is still below rates initially seen in 2015
- 719 • Roughly 450,835 gallons of in leakage water have shipped in 2021
- 720 ○ All in leakage water has shipped to Waste Control Specialists (WCS) NRC-licensed  
721 disposal site in Andrews County, Texas during 2021.
  - 722 ○ No water has shipped to US Ecology’s hazardous waste disposal facility in  
723 Grandview, Idaho, even though Vermont Yankee received NRC approval to ship up  
724 to 2,000,000 gallons of contaminated water to this facility (authorization received  
725 May 7, 2021); Vermont Yankee was previously authorized to ship 200,000 gallons of  
726 contaminated water to this facility. Shipments under this prior authorization  
727 occurred in 2019 and 2020.
  - 728 ○ All 2021 water shipments made were via tanker rail cars; 20 rail shipments in total.
  - 729 ○ Groundwater shipments to WCS facilities continue “as-needed.”
- 730 • A total of 1,709,000 gallons have been shipped to date
- 731 • The system of water diversion wells along the Turbine Building periphery that was installed  
732 in 2020 to mitigate the need for future water shipments received its water discharge permit  
733 from the Department of Environmental Conservation on April 1. Diverted, uncontaminated  
734 water is discharged to the Connecticut River roughly 2 to 3 times per week. Each discharge  
735 is ~15,000 gallons per day.
- 736 • VY has begun shipping an ~900,000 gallon inventory of contaminated Process Water (water  
737 from abandoned VY systems previously stored in the Suppression System Torus) to WCS  
738 facilities.
- 739 ○ ~23,000 gallons per shipment
  - 740 ○ 21 shipments (462,843 gallons) shipped in 2021
- 741

742 **IX. Decommissioning Waste Shipments Summary**

743  
744 A summary of radiological and hazardous waste shipments made from the Vermont Yankee site  
745 during 2021 follows.

746 **IX.A Radioactive Waste Shipments Summary**

747  
748 An annual summary of Vermont Yankee’s radioactive waste shipments is published in mid-May  
749 of the following calendar year as part of the “Radioactive Effluent Release Report” filed with the  
750 US Nuclear Regulatory Commission and the Vermont Public Service Department. Preliminary  
751 radioactive waste volume data available as of December 31, 2021 indicates that approximately  
752 379,944 cubic feet of radioactive waste was shipped from the Vermont Yankee site during 2021

753 (similar to the 309,152 cubic feet of radioactive waste shipped in 2020). The total weight of the  
754 waste shipped in 2021 exceeds 19,500,000 pounds (>9,750 tons). The total radiological activity  
755 of the shipped waste is 27,460 Curies (up from 522.8 Curies shipped in 2020 and 126.8 Curies  
756 shipped in 2019). All 2021 calendar year radioactive waste shipments were sent to Waste  
757 Control Specialists' (WCS) disposal facility Andrews County, Texas. 171 radioactive waste  
758 shipments were made in 2021; 142 of these were made via railcar. The remaining 29 shipments  
759 were made by truck.

760  
761 Based on data provided by NorthStar in response to Panel questions in April 2021, the total  
762 activity of radioactive waste stored at the VT Yankee site is estimated as follows:  
763

- 764 • Total activity stored at the VY Independent Spent Fuel Storage Installation (ISFSI), consisting  
765 of 3880 spent fuel bundles stored in 58 spent fuel cannisters: 117,176,000 Curies (roughly  
766 2,054,000 Curies per cannister)
- 767
- 768 • The Greater Than Class C radioactive waste cask to be stored at the VY ISFSI will contain  
769 approximately 175,000 Curies once loaded.

770

#### 771 **IX.B Hazardous Waste Shipments Summary**

772

- 773 • 6 tons of construction and demolition debris was shipped to the following facilities:
  - 774 ○ Resource Waste Services, Salem, NH
- 775 • 74 cubic yards of asbestos was shipped to the following facilities:
  - 776 ○ Minerva Landfill, Waynesburg, OH
  - 777 ○ WMNH Tree, Rochester, NH
- 778 • 609,360 pounds of ferrous and non-ferrous scrap metal was shipped to the following  
779 facility for recycling:
  - 780 ○ Mattuchio Scrap Metal, Everett, MA

781

#### 782 **X. Vermont Congressional Delegation**

783

784 Representatives of Vermont's Congressional Delegation attended the August 23 NDCAP Federal  
785 Nuclear Waste Policy Committee meeting and discussed nuclear waste policy bills currently  
786 before Congress. Haley Pero from Senator Bernie Sanders' Office and Thea Wurzburg from  
787 Congressman Peter Welch's Office outlined the Nuclear Plant Decommissioning Act of 2020, a  
788 bill that Senator Sanders and Congressman Welch sponsored. If enacted, the bill would give  
789 states and local governments a meaningful role in the development of reactor decommissioning  
790 plans, as well as any post-shutdown reactor license transfer efforts. The bill would require  
791 consultation with host state governments and neighboring local governments for a  
792 decommissioning nuclear power plant. The Nuclear Regulatory Commission would be required  
793 to document its evaluation and disposition of comments received via this consultation

794 process. Details of this bill are available at:  
795 [https://publicservice.vermont.gov/sites/dps/files/documents/NDA\\_of\\_2020\\_OnePage\\_Summar](https://publicservice.vermont.gov/sites/dps/files/documents/NDA_of_2020_OnePage_Summary.pdf)  
796 [y.pdf](https://publicservice.vermont.gov/sites/dps/files/documents/NDA_of_2020_OnePage_Summary.pdf).

797  
798 While the bill was introduced, but not passed, in the 2020 Congressional Session, Senator  
799 Sanders and Congressman Welch expect to reintroduce the bill in the current Congressional  
800 Session. Both offices seek feedback regarding any changes to the 2020 bill language that should  
801 be introduced. Ms. Pero and Ms. Wurzburg also took questions from the Committee and  
802 members of the public attending the meeting regarding other potential Congressional actions. It  
803 is expected that several decommissioning and spent fuel disposition-related bills that were  
804 introduced in the past several sessions will likely be reintroduced. Differences between the  
805 Trump and Biden Administration's approaches to nuclear decommissioning and spent fuel  
806 policies were highlighted. The Trump Administration focused on restarting Yucca Mountain as  
807 the nation's permanent spent fuel repository. However, no significant funding was appropriated  
808 for this effort. The Biden Administration has indicated that it will not pursue Yucca Mountain as  
809 a repository. The US Department of Energy has been directed, under existing authority (that is  
810 currently being challenged in Federal Court), to pursue one or more locations for an interim  
811 spent fuel storage facility. (Note that these are not the storage facility efforts currently being  
812 pursued by Waste Control Specialists and Holtec International at locations in Texas and New  
813 Mexico, respectively.) It was noted though that additional Biden Administration policies in these  
814 areas are currently unknown.

815  
816 Ms. Pero and Ms. Wurzburg agreed to follow-up with the Committee to track additional  
817 decommissioning and spent fuel policy bills as they are introduced or reintroduced in the  
818 current Congressional Session. They also agreed to provide further information to the  
819 Committee about the Spent Nuclear Fuels Solutions Caucus recently formed by US Rep. Mike  
820 Levin of California (whose district includes the currently decommissioning San Onofre Nuclear  
821 Generating Station). Details on this caucus are available at:  
822 [https://www.sandiegouniontribune.com/news/politics/story/2021-07-22/nuclear-regulatory-](https://www.sandiegouniontribune.com/news/politics/story/2021-07-22/nuclear-regulatory-caucus)  
823 [caucus](https://www.sandiegouniontribune.com/news/politics/story/2021-07-22/nuclear-regulatory-caucus).

824  
825 Additional information on the August 23 NDCAP Federal Nuclear Waste Policy Committee  
826 meeting is available in the Committee's Summary Report available at:  
827 [https://publicservice.vermont.gov/sites/dps/files/documents/Final\\_Nuclear\\_Waste\\_Committee](https://publicservice.vermont.gov/sites/dps/files/documents/Final_Nuclear_Waste_Committee_Update_2021_NDCAP_Rev2.pdf)  
828 [Update\\_2021\\_NDCAP\\_Rev2.pdf](https://publicservice.vermont.gov/sites/dps/files/documents/Final_Nuclear_Waste_Committee_Update_2021_NDCAP_Rev2.pdf).

829  
830 In one significant follow-up to the August 23 discussion, Ms. Pero alerted NDCAP to the US  
831 Department of Energy's (DOE's) restart of a Consent-Based Siting process for locating a national  
832 consolidated interim spent fuel storage facility. Restart of this process began on November 30.  
833 Details regarding DOE's Consent-Based Siting efforts are available at:  
834 <https://www.energy.gov/ne/consent-based-siting>.

835

836 **XI. Current NDCAP Committees**

837

838 **XI.A NDCAP Issues Committee**

839

840 The Issues Committee, formed in 2015 and reconstituted in 2019, is intended to provide  
841 recommendations for topics to be discussed at meetings of the Full Panel. The Issues Committee  
842 did not meet during 2021. For 2021, the Issues Committee’s function (selection of meeting  
843 topics) was performed by the Full Panel at its regular meetings, with additional interactions  
844 between the Panel Chair and the State Nuclear Engineer as needed.

845

846 **XI.B NDCAP Federal Nuclear Waste Policy Committee**

847

848 NDCAP created the Federal Nuclear Waste Policy Committee in December 2020 as a means for  
849 the Panel to learn more about US national spent nuclear fuel storage and disposal issues. The  
850 Committee is developing recommendations on US nuclear waste policies for the Full Panel to  
851 consider as potential Advisory Opinions on these subjects. The Committee consists of the  
852 following Panel members: Lissa Weinmann (Committee Chair), Corey Daniels, Maddy Arms,  
853 Marvin Resnikoff and Emily Davis (NDCAP Chair). Other Panel members, including Bill Irwin,  
854 Sara Coffey and Bob Leach, have attended several of the Committee’s meetings held in 2021. The  
855 Committee is administered by State Nuclear Engineer Tony Leshinskie.

856

857 The Committee met monthly throughout 2021, typically on the third Monday of the month. In  
858 learning about current US national spent nuclear fuel storage and disposal policies, the  
859 Committee has compiled a reading list of relevant materials. This list is available at the  
860 Committee’s webpage at:

861 <https://publicservice.vermont.gov/content/vt-ndcap-federal-nuclear-waste-policy>

862

863 A summary of the topics considered and the current status of Committee recommendations for  
864 the Full Panel to consider are available at:

865 [https://publicservice.vermont.gov/content/federal-nuclear-waste-policy-committee-rev-2-](https://publicservice.vermont.gov/content/federal-nuclear-waste-policy-committee-rev-2-draft-report)  
866 [draft-report](https://publicservice.vermont.gov/content/federal-nuclear-waste-policy-committee-rev-2-draft-report)

867

868 The Committee has begun assessing the US Department of Energy’s recently published Request  
869 for Information (RFI) regarding the temporary, consolidated storage of spent nuclear fuel using  
870 a Consent-Based approach. The Department of Energy’s RFI is available at:

871 [https://www.federalregister.gov/documents/2021/12/01/2021-25724/notice-of-request-for-](https://www.federalregister.gov/documents/2021/12/01/2021-25724/notice-of-request-for-information-rfi-on-using-a-consent-based-siting-process-to-identify-federal)  
872 [information-rfi-on-using-a-consent-based-siting-process-to-identify-federal](https://www.federalregister.gov/documents/2021/12/01/2021-25724/notice-of-request-for-information-rfi-on-using-a-consent-based-siting-process-to-identify-federal)

873

874 Further information on the US Department of Energy’s effort to develop a Consent Based Siting  
875 process is available at:

876 <https://www.energy.gov/ne/consent-based-siting>

877

878 The Committee expects to have at least one Advisory Opinion and comments on the US  
879 Department of Energy Consent-Based Siting RFI available in early 2022.

880

## 881 **XII. Meeting Schedule and Priorities for 2022**

882

883 During the Panel's December 6 meeting, the Panel reached consensus on the following meeting  
884 dates for 2022:

- 885 • January 10: Special Meeting for approval of the 2021 Annual Report
- 886 • February 28: Tentative meeting for discussing potential filings in response to the US  
887 Department of Energy's Consent-Based Siting Request for Information
- 888 • May 9: Regular meeting discussing and assessing the Decommissioning Project Annual  
889 Status Reports (required by PUC Case 8880)
- 890 • September 19: Regular meeting (agenda items to be determined)
- 891 • December 12: Regular meeting (agenda items to be determined)

892

893 The Panel's initial focus for 2022 will be assessing any Advisory Opinions submitted for  
894 consideration by the Federal Nuclear Waste Policy Committee. Any proposed Advisory Opinions  
895 will likely focus on the US Department of Energy's renewed efforts in developing a Consent-  
896 Based Siting Process for national spent nuclear fuel repositories. The tentative February 28  
897 meeting date was selected with the US Department of Energy's March 4, 2022 deadline for  
898 comments in mind.

899

900 The Panel will also focus on improving its public outreach. As noted in the September 20 and  
901 December 6 meeting summaries (see Section III), the Panel intends to use parts of its new  
902 \$35,000 annual budget to revamp its website, improve its webcast / hybrid meeting capabilities,  
903 and identify additional options for public outreach.

904

## 905 **XIII. Panel Composition and Duties Change Recommendations**

906

907 As part of the Panel Duties outlined in Part II of the Panel Charter (see Section II of this Report),  
908 the Panel "shall assess further changes to the Panel's membership or duties as appropriate."  
909 With the recent changes in Panel composition and duties approved by the 2021 Legislature in  
910 Act 54, the Panel currently has no additional change recommendations for its composition or  
911 duties.

912