



VERMONT

NUCLEAR DECOMMISSIONING CITIZENS ADVISORY PANEL
PUBLIC SERVICE DEPARTMENT

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

2022

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Note that text appearing in Yellow Highlight indicates a placeholder paragraph or section that will be replaced after the Panel's December 12 Meeting

(**DRAFT Version as of 12/08/2022**)

1 **- Nuclear Decommissioning Citizens Advisory Panel -**
2 **2022 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%20Enacted.pdf>
16
17

18 Current Membership and duties of NDCAP were established during the 2021 legislative session as
19 part of Act 54, (Section 13, pages 11 through 16 of the Act). Details on the current membership
20 and 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). Changes in
25 Panel membership during 2022 may be discerned by reviewing the meeting minutes and meeting
26 recordings available at the NDCAP website. The Panel’s second representative for the Town of
27 Vernon (created in Act 54 of the 2021 Legislature) assumed office in time for the February 28 Full
28 Panel Meeting. As of September 1, the Panel’s second citizen-appointee by the Vermont House
29 Speaker is vacant. The two optional Panel representatives for Massachusetts and New Hampshire
30 towns near the Vermont Yankee site were vacant throughout 2022.
31

32 **II. Charter**

33
34 The NDCAP Charter was adopted on February 25, 2015 and was amended on May 26, 2016. The
35 current Charter is available at: [NDCAP Charter as of 2016.05.26](#). The Charter is also available on
36 the NDCAP website Main Page at:

37 <https://publicservice.vermont.gov/electric/ndcap>
38

39 No changes to the NDCAP Charter were made during 2022. However, changes to the NDCAP
40 Charter may be necessary due to the changes in Panel membership and duties implemented in

41 [ACT 54 of the 2021 Legislative Session](#). Where any discrepancies between Act 54 language and
42 NDCAP Charter exist, the Act 54 language takes precedence.

43
44 NDCAP's Federal Nuclear Waste Policy (FNWP) Committee studies federal policy options for
45 nuclear waste and considers how Vermont Yankee is situated within the national landscape. By
46 methodically procuring input from Vermont's federal delegation, industry experts and other
47 stakeholders, the Committee accordingly advances the learning goals of NDCAP. Should the
48 Committee arrive at an any affirmative policy position, the Committee will recommend that
49 NDCAP adopt the advisory opinion, pursuant to the Panel's stated purpose, where: "NDCAP shall
50 advise the Governor, General Assembly, the agencies of the state, and the public on issues related
51 to decommissioning."

52 53 **III. Meeting Highlights**

54
55 The NDCAP held five **Full Panel** meetings in 2022; meetings were held in January, February, May,
56 September, and December. **Additionally, the NDCAP FNWP Committee held five meetings in 2022.**
57 **FNWP Committee meetings were held in January, March, May, October, and December.** All **Full**
58 **Panel and FNWP Committee** meetings were open to the public and opportunities for public
59 comments were provided. Because of the continuing COVID- 19 pandemic, **with the exception of**
60 **the January 10 Full Panel meeting, all 2022 NDCAP meetings** were conducted entirely as webcasts,
61 as was permitted by [ACT 78 of the 2022 Legislative Session](#). (**Full Panel** webcasts were conducted
62 via Zoom using services provided by Brattleboro Community Television. **FNWP Committee**
63 **webcasts were conducted using Microsoft Teams.**) The January **Full Panel** meeting was conducted
64 primarily as Microsoft Teams webcast. However, in compliance with Open Meeting Law, a
65 physical meeting space was available in downtown Brattleboro for this meeting.

66
67 The May, September, and December **Full Panel** meetings included updates on recent VY
68 decommissioning activities by both NorthStar and the State of Vermont. Educational and issue-
69 specific topics were also discussed at these meetings. The January and February **Full Panel**
70 meetings each focused on dedicated topics that had previously been identified at the Panel's
71 December 2021 meeting. Opportunities for discussion and comments from Panelists and the
72 public on all covered topics were provided during each meeting. A summary of each **Full Panel**
73 meeting is presented below.

74
75 The minutes of each meeting can be found on the NDCAP website (a dedicated section of the
76 Public Service Department website) at <http://publicservice.vermont.gov/electric/ndcap>. A
77 complete video or webcast recording for each meeting can be found at:
78 <https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel>.

79
80 Links to these video recordings are also available through the NDCAP website. Additional
81 information regarding VY's active decommissioning is available at the Public Service
82 Department's "VY Decommissioning" website at:
83 <https://publicservice.vermont.gov/content/vermont-yankee-decommissioning>.

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Further details and meeting summaries of the FNWP Committee meetings held in 2022 are available in Section XI.B of this report.

January 10, 2022

The primary purpose of this meeting (as agreed upon at the Panel’s December 2021 meeting) was to review and potentially approve the Panel’s 2021 Annual Report to the Vermont Legislature. The draft Annual Report that was considered is available in the “Meeting of January 10, 2022” materials section on the Panel website (<https://publicservice.vermont.gov/electric/ndcap>). Several minor changes based on Panel and public feedback were incorporated after discussion during the meeting. Several additional comments from Panelist Lissa Weinmann were not incorporated after several Panelists expressed concern that the comments would introduce significant additional detail that had not had opportunity for review by other Panelists.

After additional discussion, consensus was reached that shorter versions of these comments could be incorporated into the report. Further details on Panel activities could be provided at the request of the Legislature. Details of the additional comments are available in the January 10 meeting minutes and the “Meeting of January 10, 2022” materials section on the Panel website.

The revised 2021 Annual Report was approved by the Panel by a 10-0 vote (with 2 abstentions) and is available at:
<https://publicservice.vermont.gov/content/2021-annual-report>

The Panel also discussed and approved a breakdown of the Panel’s FY 2022 budget. The approved breakdown is available at:
https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP_2022_Approved_Budget.pdf.

Because this meeting occurred prior to the passage of [ACT 78 of the 2022 Legislative Session](#), this was the Panel’s only meeting in 2022 in which a physical meeting location was designated. While one Panelist attended the meeting from this location, all members of the public in attendance joined the meeting via webcast.

February 28, 2022

The primary purpose of this meeting (as agreed upon at the Panel’s December 2021 meeting) was to consider the US Department of Energy’s (DOE’s) request for comments on a Consent-Based Siting process for selecting potential spent nuclear fuel (high-level radioactive) waste repositories within the continental United States. The meeting featured a presentation with a questions and answers period with Dr. Kim Petry, DOE Acting Deputy Assistant Secretary for Spent Fuel and Waste Disposition. Several additional DOE Office of Nuclear Energy officials also attended this meeting to answer questions. Additionally, Dr. Thomas Webler of the Social & Environment

127 Research Institute outlined research that he has conducted regarding the development of
128 Consent-Based Siting processes for spent nuclear fuel disposal facilities.

129
130 Presentations provided for these discussions are available in the “Meeting of February 28, 2022”
131 materials section on the Panel website. Details on DOE’s Consent-Based Siting effort **are** available
132 from the following DOE website: <https://www.energy.gov/ne/consent-based-siting>.

133
134 DOE discussion and responses to questions emphasized that the Department of Energy is not
135 currently seeking volunteer communities for hosting a spent nuclear fuel repository. The current
136 effort is a first step to develop the process by which a potential host community can engage with
137 the DOE to learn more about potentially hosting repository. The current process is geared
138 towards siting a Consolidated Interim Spent Fuel Storage Facility because the DOE currently has
139 Congressional funding to pursue a Consolidated Interim Storage Facility (CISF). The purpose of
140 the Consent-Based Siting effort is to build trust between DOE and potential facility host
141 communities. DOE will regard the Consent-Based Siting effort to be successful if communities
142 express interest in hosting a facility. The process will still be considered successful if a
143 community expresses interest, learns more about hosting a facility, but later withdraws from the
144 process. Responses provided to the Consent-Based Siting questionnaire will drive DOE’s next
145 steps, with the intent of providing a just selection process.

146
147 Dr. Webler’s presentation noted that consent means different things to different people. With
148 regards to siting a spent fuel storage facility, there are four general views on consent:

- 149
- 150 a) The “Expedient Yes” view – siting is acceptable when a good science and safety case are
151 available
 - 152 b) The “Acceptance to Gain Trust” view – independent oversight is **needed** for the siting to work;
153 this oversight develops from the grass-roots level.
 - 154 c) The “Inclusion and Transparency “ view – a facility **power-share** between DOE and the host
155 community is needed. The community needs independent confirmation of DOE-reported
156 status, usually through the community hiring its own experts.
 - 157 d) The “Demonstrate Legitimacy” view – DOE must show that it is listening to community
158 feedback on the process. Time must be taken to “do it right.”
- 159

160 Further details on the discussions with the DOE Officials and Dr. Webler are available in the
161 meeting minutes and meeting recording available in the “Meeting of February 28, 2022” materials
162 section on the Panel website.

163
164 A draft Advisory Opinion offered by the Panel’s Federal Nuclear Waste Policy Committee in
165 response to DOE’s Consent-Based Siting questionnaire was then discussed. **(The draft represents
166 a noteworthy and significant effort by FNWP Committee members with divergent viewpoints to
167 hash-out a consensus in a respectful and civil manner, which the Committee hopes can serve as a
168 model for others as the country seeks a workable policy solution for the nation’s accumulating
169 nuclear waste.)** Based on the presentations provided earlier in the meeting and after hearing

170 feedback from members of the public, the Panel voted to approve this Advisory Opinion. The
171 Approved Advisory Opinion is available from the Panel’s website at:
172 <https://publicservice.vermont.gov/content/vt-ndcap-response-doe-consent-based-siting-rfi>.

173
174 The Approved Advisory Opinion is included in Appendix A of this report. The Approved Advisory
175 Opinion was submitted to the US Department of Energy as a public comment on its Consent-Based
176 Siting Process. The DOE received 225 comments in response to its questionnaire. These
177 comments are available from the following DOE website:

178 [https://www.energy.gov/ne/articles/responses-rfi-using-consent-based-siting-process-identify-](https://www.energy.gov/ne/articles/responses-rfi-using-consent-based-siting-process-identify-federal-interim-storage)
179 [federal-interim-storage](https://www.energy.gov/ne/articles/responses-rfi-using-consent-based-siting-process-identify-federal-interim-storage) in the document listed as “Public Responses to RFI.” The Approved
180 Advisory Opinion appears on pages 379 through 383 in this document. The Vermont State
181 Nuclear Engineer, Tony Leshinski, filed additional comments on behalf of the Vermont Public
182 Service Department. These comments appear on pages 1026 through 1035 in the “Public
183 Responses to RFI” document.

184
185 **May 9, 2022**

186
187 The Panel’s first regular meeting of the year occurred on May 9. Unlike the January 10 and
188 February 28 that focused on the 2021 Annual Report and DOE’s Consent-Based Siting Process,
189 respectively, the May 9 meeting was the first 2022 Panel meeting in which NorthStar and several
190 State Agencies summarized VY decommissioning activities during the current calendar year.

191
192 • **NorthStar Update on VY Site Decommissioning Activities:**

193 Panelist Corey Daniels, VY’s Senior Spent Fuel Storage Manager, summarized decommissioning
194 activities completed since December 2021. (Slides for this presentation are available from the
195 Panel’s website.) Reactor Vessel (RV) segmentation has progressed to segmenting the cylindrical
196 portion of the RV itself. Grout has been injected into the RV lower dome to simplify collecting of
197 metal shavings produced by the segmentation. Recent equipment removals from the Reactor
198 Building include Hydraulic Control Unit components, Control Rod Pump system components, and
199 the Stand-By Liquid Control tanks. Creation of a new accessway between the Reactor and Turbine
200 Buildings was described. Removal of components at the River Intake and Discharge Structures
201 continue; most recently, the Discharge Pumps were removed.

202
203 On May 1, the electrical feed from VY’s Start-Up Transformers was disconnected, which
204 transitioned the Power Block (Reactor, Turbine, Control Room, and Service) Buildings to a “Cold
205 and Dark” condition. Going forward, electricity to these buildings will be supplied through a
206 temporary power bus or via portable diesel generators, as needed. Achieving Cold and Dark
207 conditions is a major milestone for the decommissioning project. All station power lines in the
208 Power Block Buildings are now abandoned, which allows for a “rapid but controlled” removal of
209 wiring and cable trays. Over 40 miles of wiring must be removed.

210
211

212 • **Public Service Department (PSD) Update:**
213 PSD Special Counsel Eric Guzman outlined PSD's fiscal oversight of the VY Decommissioning
214 project required by the Memorandum of Understanding (MOU) in effect as part of NorthStar's
215 purchase of VY. Nick Capik and Mark Gymr of Four Points Group (FPG), PSD's consultants for
216 overseeing the project, were also present to provide additional information, as needed. (Slides for
217 this presentation are available from the Panel's website.)

218
219 PSD's financial and technical oversight role was outlined, which includes receiving updates on
220 work completed versus work remaining and project expenditures versus funds remaining. PSD
221 coordinates with other State Agencies and FPG to assess project status and whether
222 decommissioning trust fund reimbursement requests are consistent with the work completed.
223 PSD also meets with NorthStar regularly to conduct any follow-up necessary on NorthStar's self-
224 reporting. Regular site visits by FPG are conducted to observe completed work. The most recent
225 visit was on May 5. The site visits continue to show that project progress is consistent with that
226 described in NorthStar's status reports. NorthStar remains on track to complete the project in
227 2026 with the currently available funding.

228 NorthStar's required project Annual Financial Disclosures were received by their March 31
229 deadline and are currently under review by PSD, Agency of Natural Resources, Department of
230 Health, and the Attorney General's Office. These reviews thus far have not raised any causes for
231 concern for completing the VY decommissioning project as expected

232

233 • **Department of Environmental Conservation (DEC) Update:**

234 Graham Bradley, Hazardous Sites Manager in DEC's Waste Management and Prevention Division
235 outlined the Agency of Natural Resources (ANR) / DEC's recent interactions with VY. (Slides for
236 this presentation are available from the Panel's website.) Regular status calls (usually on a
237 biweekly basis), draft permit and corrective action plan reviews continue. DEC continues to work
238 closely with NorthStar's remediation contractor, Haley & Aldrich, to address contaminant issues
239 in previously identified Areas of Concern (AOCs). No new contamination areas have been found
240 onsite. Samplings at the former Cooling Tower sites were described. No contaminations have
241 been identified, but sampling will continue. Volatile Organic Compounds (VOCs) sampling near
242 the Turbine Building has identified two sites requiring clean-up. These were expected since
243 vehicle fuels were stored in these areas. Contaminated soil detected near the former East Cooling
244 Tower Transformer site was removed and used as ballast in a radioactive waste shipment sent to
245 Waste Control Specialists (WCS).

246

247 • **During Panel Questions:** **Panelist** Marvin Resnikoff asked about the status of VY's Greater-
248 than-Class C (GTCC) waste. Corey Daniels replied that all GTCC **waste** has been downsized and
249 packaged for placement in the Non-Fuel Waste Container that will eventually be moved to VY
250 Independent Spent Fuel Storage Installation (ISFSI, aka VY's Dry Cask Storage Pads). The GTCC
251 waste packaging is currently in the Spent Fuel Pool. The move to the ISFSI will likely take place in
252 October or so (later restated as between August and October). However, the move will not occur
253 until RV disassembly is complete. The GTCC waste move requires the Reactor Building Crane

254 which is currently essential to the RV disassembly work. The Spent Fuel Pool will be
255 decommissioned once the GTCC waste move is complete.

256
257 **Panelist Lissa Weinmann asked whether any Indigenous Peoples / cultural issues have arisen**
258 **during VY's decommissioning. Was NorthStar still in contact with the Abenaki Nation**
259 **representative, Rich Holschuh? Corey Daniels indicated that all site employees had been trained**
260 **about spotting and respecting potential Native American artifacts. However, with the site having**
261 **previously been disturbed ground, nothing has been found so far. Corey indicated he would**
262 **contact Rich about the possibility of a blessing ritual.**

263
264 • **In Response to Questions from the Public:** Corey Daniels clarified that all spent fuel
265 transfers to the ISFSI were completed in 2018. (This evening's discussions addressed waste from
266 RV segmentation.) All GTCC waste continues to be stored onsite. Mr. Daniels also clarified that
267 pipes at depths 4 feet **or more** below grade **that are clean and stabilized may be left in place rather**
268 **than removed.** However, any piping having radiological contamination will be removed. It was
269 also noted that High Efficiency Particulate Air (HEPA) filters are used during the RV segmentation
270 process to assure that a cool, clean air supply is available to workers in the Reactor Building. The
271 HEPA filters assure that any potential particulates are removed from the building air.

272
273 • **In Early General Public Comments:** The Panel was asked to improve its public outreach.
274 State Nuclear Engineer Tony Leshinskie outlined the press release distribution process that
275 normally occur prior to any NDCAP meeting. He also noted that he now directly controls updates
276 to the Panel website and is using the opportunity to improve its organization. Comments and
277 suggestions for website improvements are sought, which can be sent to the Panel's email address
278 (PSD.NDCAP@vermont.gov). Concern was also raised because the meeting thus far was being
279 conducted without a quorum of Panel members present. Panelists who are frequently absent
280 from meetings should be reminded of their duties and should consider resigning if they are
281 unable to serve.

282
283 Panel Chair Emily Davis noted that because Legislature was called into session this evening on
284 short notice, several Panelists became unexpectedly unavailable shortly before the meeting's
285 start. She suggested that meeting attendance could be pursued through the Public Service
286 Commissioner's Office. At this point, State Nuclear Engineer Tony Leshinskie noted that Panelist
287 Bob Leach had recently joined the meeting webcast. The Panel now had a quorum for the meeting
288 (which subsequently allowed the Panel to formally approve meeting minutes for the December
289 2021, January and February meetings).

290
291 • **Discussion of Federal Nuclear Waste Policy (FNWP) Committee Activities:**
292 Lissa Weinmann, Chair of the Panel's Federal Nuclear Waste Policy Committee, briefly described
293 the Committee's most recent activities. Representatives from Deep Isolation, Inc. outlined their
294 proposed alternative for geologic spent fuel repositories at the Committee's March 28 meeting.
295 (Details of this proposal are discussed in Section XI.B of this report.) The Committee will meet

296 again on May 23. Tony Leshinskie is working on having representatives from Holtec International
297 attend this meeting to discuss their current plans for long-term monitoring and aging
298 management for dry cask storage systems, such as those currently used at the VT Yankee site.
299

- 300 • **During General Public Comments:** The Panel was asked to do more to publicize its recent
301 Advisory Opinion on Spent Nuclear Fuel disposal, as this work is very important. The Legislature,
302 Governor’s Office, relevant State Agencies, Vermont’s Congressional Delegation, and the Public
303 must be kept apprised of Panel activities, particularly when Advisory Opinions are published.
304

305 **September 19, 2022**

306
307 Much like the Panel’s May 9 meeting, the September 19 meeting largely consisted of reports from
308 NorthStar and several State Agencies on recent VY decommissioning activities. Several Panel
309 administrative items were also discussed. With 11 Panelists in attendance at the start of the
310 meeting (a twelfth Panelist joined late), a quorum was present throughout the meeting (9
311 Panelists required for quorum).
312

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

314 NorthStar Panelist Corey Daniels summarized decommissioning activities completed since May
315 2022. (Slides for this presentation are available from the Panel’s website.) It was noted that
316 NorthStar continues to work without an OSHA Recordable Lost Time Accident since starting VT
317 Yankee’s active decommissioning in January 2019. The NRC has issued no cited violations, nor
318 have there been any non-cited violations, during this time. Progress on dismantling Reactor
319 Building (RB) components and the demolition of other onsite structures was described. The
320 Control Room and the RB Computer Room have been completely cleared of components. **Cabling**
321 **between the Control, Cable Spreading, and Switchgear Rooms has been cleared.** Demolition of the
322 Control Block Building (which housed the Control and Computer Rooms) has begun. Preparations
323 for Turbine Building demolition continue.
324

325 Excavation and downsizing of the Interim Off-Gas (IOG) System was discussed, as was land
326 regrading at the Cooling Towers site. Progress on the new accessway between the Reactor and
327 Turbine Buildings was described. A monorail system is being constructed to facilitate removal of
328 the RB Torus structure through this accessway. Clearing of Torus structure internal components
329 was described. Segmentation and removal of the Reactor Vessel (RV) has completed; the last
330 several steps were described in detail. Demobilization of RV segmentation equipment is
331 underway.
332

- 333 • **Department of Environmental Conservation (DEC) Update:**

334 Panelist Trish Coppolino, ANR / DEC Waste Management and Prevention Division Program
335 Manager, outlined the Agency of Natural Resources (ANR) / DEC’s recent interactions with VY.
336 (Slides for this presentation are available from the Panel’s website.) Regular status calls, draft
337 permit and corrective action plan reviews continue. Sampling programs for non-radiological

338 contaminants continue to show no significant contamination issues at the VY site. No unexpected
339 site contaminations have been identified thus far. ANR/DEC continues to work closely with
340 NorthStar's remediation contractor, Haley & Aldrich, and DEC's consultant, Atlas, on plans for
341 addressing potential contaminant issues at VY's previously identified Areas of Concern (AOCs).
342 DEC is currently reviewing VT Yankee's annual groundwater monitoring report, which was
343 received in June as required. Due to ongoing structure demolitions onsite, DEC's groundwater
344 monitoring program is currently down to four sampling wells. The monitoring program has
345 collected data for over three years without identifying new causes for concern. Additional
346 monitoring wells will be sampled as onsite demolitions complete.

347
348 Recent samplings for PFAS (per- and polyfluoroalkyl substances) have identified several
349 contaminated locations (as expected). However, the environmental impacts are expected to be
350 minor; the contamination levels are only slightly above EPA limits. Samplings for PCBs and
351 Volatile Organic Compounds (VOCs) continue.

352
353 Corrective Action Plans for addressing contaminations in onsite AOC #5 and AOC #7 are currently
354 available for public comments. These planned remediations, once fully approved, would occur
355 sometime in 2023.

356
357 • **Public Service Department (PSD) Update:**

358 Jim Porter, PSD Director for Public Advocacy outlined PSD's fiscal oversight of the VY
359 Decommissioning project required by the Memorandum of Understanding (MOU) in effect as part
360 of NorthStar's purchase of VY. Nick Capik and Mark Gymr of Four Points Group (FPG), PSD's
361 consultants for overseeing the project, were also present to provide additional information, as
362 needed. (Slides for this presentation are available from the Panel's website.) PSD's financial and
363 technical oversight role was outlined similarly to the report provided at the May 9 Panel meeting.
364 Regular site visits by FPG are conducted to observe completed work. The most recent visit was on
365 July 18. The observed project progress was consistent with that described in NorthStar's most
366 recent (May and June 2022) status reports.

367
368 Updates on the Decommissioning and Site Restoration Trust Funds were provided. As of
369 August 31, approximately \$211.3 million remains in the Decommissioning Trust; approximately
370 \$51.7 million remains in the Site Restoration Trust. As of August 30, the projected cost to
371 complete Site Restoration is \$12.6 million. However, the projected cost to complete
372 Decommissioning and License Termination is \$214 million, meaning that there is currently a
373 shortage in the Decommissioning Trust Fund. PSD believes that the current Decommissioning
374 Trust shortage is reflective of rising interest rate impacts on the Decommission Trust investments.
375 The Decommissioning and Site Restoration Trust balances do not include the \$55 million
376 Financial Assurance Escrow required by Paragraph 2(c) of the Memorandum of Understanding
377 (MOU) established for VT Yankee's decommissioning. Overall, NorthStar remains on track to
378 complete the project on schedule with the currently available funding

379

380 • **Additional Agency Reports:** Panelist Bill Irwin, Vermont Radiological & Toxicological
381 Sciences Program Chief, reported that Vermont Department of Health continues to be satisfied
382 with the reporting NorthStar has provided to date. The reports indicate that the project is moving
383 forward reasonably and responsibly.

384
385 • **During Panel Questions:** In response to a question from Panelist Bill Irwin, Corey Daniels
386 indicated that building intrusion water continues to be collected as necessary. The water is
387 initially held in storage (frack) tanks and is then shipped offsite for disposal.

388
389 • **In response to questions from the Public:** Corey Daniels indicated that all radioactive
390 materials shipped offsite are sent to Waste Control Specialists (WCS) facilities in Texas. However,
391 some pre-release (non-radiological / non-hazardous) materials are shipped to industrial disposal
392 facilities. He also clarified that some parts of the Reactor Vessel are being shipped offsite since
393 they still qualify as Low-Level Radioactive waste. Only spent nuclear fuel qualifies as High-Level
394 Radioactive Waste. The next most radioactive waste category, Greater Than Class C (GTCC)
395 radioactive waste is the only low-level radioactive waste category that cannot be shipped. VY's
396 GTCC waste consists of several Reactor Vessel internal components, but not the Reactor Vessel
397 itself. VT Yankee's GTCC waste is expected to be moved to the onsite Spent Fuel Storage Facility
398 (aka the Dry Cask Storage pads or ISFSI) within the next month.

399
400 In response to a question from State Nuclear Engineer Tony Leshinskie, Corey Daniels indicated
401 that, with the completion of VY's Reactor Vessel segmentation, Orano's work on the VY
402 decommissioning project is coming to an end. However, Orano is still responsible for some Spent
403 Fuel Pool clean-up items and several tasks related to transferring the GTCC Waste to the onsite
404 ISFSI.

405
406 • **In the Early General Public Comments:** A Citizens Awareness Network representative
407 reiterated comments from previous meetings that the Panel needs more public outreach. Citizens
408 Awareness Network is open to assisting the Panel with this. It was also noted that the Panel had
409 problems meeting quorum at its last meeting. Vacancies on the Panel need to be filled.

410
411 In response to a question from Panelist Lissa Weinmann regarding the current decommissioning
412 schedule, Corey Daniels indicated that that NorthStar still anticipates beating the 2030
413 decommissioning project deadline by a few years. Active decommissioning could complete in
414 2026. However, this early end date does not include time for completing all site release activities.
415 Those would complete in 2027, assuming that ongoing decommissioning work continues to
416 progress smoothly. NorthStar's overall goal is to do the decommissioning project right with the
417 currently available funding. The project remains on track to be completed within the available
418 budget.

419
420 Panelist Chris Campany noted that the Statute establishing the Panel will need to be revisited once
421 active decommissioning is complete. State Nuclear Engineer Tony Leshinskie added that the

422 Yankee Rowe Spent Fuel Storage Facility's Community Advisory Panel could serve as a model for
423 VT NDCAP once VY's active decommissioning is complete.

424
425 • **Panel Membership Changes & Administrative Items:** Panel Chair Emily Davis noted that
426 Sara Coffey's term on the Panel expired at the end of August. She declined reappointment.
427 Accordingly, there are now three vacancies on the Panel, the Massachusetts Towns representative,
428 the New Hampshire Towns representative and one of two citizen **appointees** by the Vermont
429 House Speaker (Sara Coffey's former position on the Panel). Ms. Davis reported that the House
430 Speaker's Office is looking for recommendations for a new appointee. If anyone on the Panel has
431 suggestions, they can be forwarded to the Panel Chair.

432
433 State Nuclear Engineer Tony Leshinskie noted that filling a Panel vacancy is easier when there is a
434 volunteer willing to accept the position. Panelist Chris Campany added that recruiting Panelists
435 was likely easier when "groundworks" discussions for VY's decommissioning were underway.
436 Discussing plans and items such as the PSDAR (Post-Shutdown Decommissioning Activities
437 Report) were likely more interesting than the Panel's more recent meetings discussing steady
438 decommissioning progress. Mr. Campany suggested that the Press present **include** that the Panel
439 is looking for new members **in its coverage of this evening's meeting.**

440
441 Emily Davis proposed drafting a press release highlighting the Panel's recent work and noting that
442 it is looking new members to fill several vacancies. After additional discussion, the Panel agreed
443 with this idea. Ms. Davis agreed to have a draft of the press release available at the next Full Panel
444 meeting. After additional discussion, the Panel agreed that the proposed press release would
445 focus on filling the vacant Vermont House Speaker's appointee position.

446
447 **Panel Notifications on NRC Decommissioning Rulemaking:** Panel Chair Emily Davis noted that
448 an opportunity for public comments on the NRC's Decommissioning Rulemaking recently closed
449 without the Panel discussing whether it wanted to consider commenting on these **proposed** rules.
450 Ms. Davis asked whether the Panel wished to pursue comments on this Rulemaking.

451
452 State Nuclear Engineer Tony Leshinskie briefly outlined the history of this NRC Rulemaking effort,
453 which began in late 2015, when the NRC published a detailed questionnaire on decommissioning-
454 related topics for which it was considering rulemaking. Vermont State Agencies provided a
455 combined comments set on the questionnaire in early 2016, which were endorsed by
456 Massachusetts, New York, and Connecticut. Follow-up comments were provided to the NRC in
457 mid-2017. The currently proposed NRC rules focus on transitioning an operating power plant to
458 active decommissioning. **VY's** decommissioning is well past this phase, hence, the currently
459 proposed rules would not impact VY's decommissioning. Accordingly, this rulemaking effort has
460 not been a high priority for Vermont. Nonetheless, when asked to endorse comments from New
461 York State on the currently proposed rules, the State Nuclear Engineer recommended that
462 Vermont endorse them since they reiterated Vermont's comments filed in 2016 and 2017.

463

464 Chris Company added that Windham Regional Commission has filed comments on
465 decommissioning rulemaking for decades. The comments have not changed much in that time,
466 but WRC is open to hearing or suggesting Panel Positions. Lissa Weinmann suggested that the
467 Panel could endorse decommissioning rulemaking comments filed by other organizations, such as
468 the International Brotherhood of Electrical Workers (IBEW).

469
470 Panel Chair Emily Davis asked if any Panel members felt that the Panel should review the NRC's
471 decommissioning rulemaking further. No replies were heard. Consensus was reached that the
472 Panel should consider endorsing IBEW's comments the NRC decommissioning rulemaking.

473
474 The Panel then discussed improving notifications of upcoming decommissioning-related actions.
475 After requesting clarification, Tony Leshinskie agreed to keep the Panel informed on any requests
476 from Federal Agency regarding decommissioning-related topics, as well as any significant State
477 actions in decommissioning-related topics.

478
479 Panel Chair Emily Davis noted that US Department of Energy published its initial report on
480 received Consent-Based Siting Process comments on September 15. More information on the next
481 steps in the process will be available soon.

482

483 • **Discussion of Federal Nuclear Waste Policy (FNWP) Committee Activities:**

484 Lissa Weinmann, Chair of the Panel's Federal Nuclear Waste Policy Committee, briefly described
485 the Committee's most recent activities. The Committee has been less active over the summer but
486 continues to learn about nation nuclear waste policy issues. The Committee had planned to meet
487 on August 22, but that meeting had to be postponed when the scheduled speaker became
488 unexpectedly unavailable.

489

490 State Nuclear Engineer Tony Leshinskie provided additional details. Oliver Edelson, Legislative
491 Assistant to California Congressional Representative Mike Levin, has agreed to speak to the FNWP
492 Committee. Congressman Levin co-chairs the Congressional Spent Nuclear Fuel Solutions Caucus,
493 which Mr. Edelson administers. From preliminary discussions with Mr. Edelson, the Caucus is in a
494 learning phase much like the FNWP Committee is. The Caucus has begun outreach to other
495 organizations interested in nuclear waste policy issues. Opening a discussion with the Caucus
496 could be beneficial for the Panel.

497

498 Based on Mr. Edelson's availability, the FWNP Committee's next meeting has been rescheduled to
499 Monday, October 3 from noon to 1:30 PM.

500

501 • **General Public Comments:** The Panel was thanked for tonight's discussions on improving
502 public outreach.

503

504

505

506 **December 12, 2022** (this section will be finalized after the December 12 meeting)

507
508 Much like the Panel's May and September meetings, the December 12 meeting largely consisted of
509 reports from NorthStar and several State Agencies on recent VY decommissioning activities. The
510 Panel's Annual Report was finalized and Election of Officers was conducted. With 13 Panelists in
511 attendance at the start of the meeting, a quorum was present throughout the meeting (9 Panelists
512 required for quorum).

513
514 • **NorthStar Update on VY Site Decommissioning Activities:**

515 NorthStar Panelist Corey Daniels summarized decommissioning activities completed since
516 September 2022. (Slides for this presentation are available from the Panel's website.) It was
517 noted that the NorthStar continues to work without an OSHA Recordable Lost Time Accident since
518 starting VT Yankee's active decommissioning in January 2019. The NRC has issued no cited
519 violations during this time. Progress on dismantling Reactor Building (RB) components and the
520 demolition of other onsite structures was described. Demolition of the Control Block Building
521 (which housed the Control and Computer Rooms) is complete, as is demolition of the Containment
522 Access Building. Demolition of the Reactor Building Airlock is underway. Preparations for
523 Turbine Building demolition continue.

524
525 On October 19, VY's Greater-Than-Class C (GTCC) low level radioactive waste was moved to the
526 ISFSI. The GTCC waste consists of several highly contaminated VY Reactor Vessel (RV) internal
527 components which had been stored temporarily in VY's Spent Fuel Pool following their removal
528 from the RV. The GTCC waste is stored in a Non-Fuel Waste Container, which is similar to the dry
529 casks used to store VY's spent nuclear fuel on the ISFSI pads.

530 Confirmatory radiological surveys at the Cooling Towers site were conducted during the week of
531 November 14 by an independent contractor (Oak Ridge Institute for Science and Education). The
532 monorail system in the new accessway between the Reactor and Turbine Buildings is fully
533 operational. Clearing of Torus structure components continues. Demobilization of RV
534 segmentation equipment has completed. Orano's work on the VY decommissioning project has
535 completed.

536
537 • **Department of Environmental Conservation (DEC) Update:**

538 Graham Bradley, Hazardous Sites Manager in DEC's Waste Management and Prevention Division
539 outlined the Agency of Natural Resources (ANR) / DEC's recent interactions with VY. (Slides for
540 this presentation are available from the Panel's website.) Regular status calls, draft permit and
541 corrective action plan reviews continue. Sampling programs for non-radiological contaminants
542 continue to show no significant contamination issues at the VY site. No unexpected site
543 contaminations have been identified thus far. ANR/DEC continues to work closely with
544 NorthStar's remediation contractor, Haley & Aldrich, and DEC's consultant, Atlas, on plans for
545 addressing potential contaminant issues at VY's previously identified Areas of Concern (AOCs).
546 DEC is closely following the remediation of the drain lines for the VY's abandoned onsite
547 Chemistry Lab (located in a gutted section of the Turbine Building).

549 • **Public Service Department (PSD) Update:**
550 Jim Porter, PSD Director for Public Advocacy outlined PSD’s fiscal oversight of the VY
551 Decommissioning project required by the Memorandum of Understanding (MOU) in effect as part
552 of NorthStar’s purchase of VY. Nick Capik and Mark Gymr of Four Points Group (FPG), PSD’s
553 consultants for overseeing the project, were also present to provide additional information, as
554 needed. (Slides for this presentation are available from the Panel’s website.) PSD’s financial and
555 technical oversight role was outlined similarly to the report provided at the May and September
556 Panel meetings. Regular site visits by FPG are conducted to observe completed work. The most
557 recent visit was on November 30. The observed project progress was consistent with that
558 described in NorthStar’s most recent status reports.

559
560 Overall, NorthStar remains on track to complete the project on schedule with the currently
561 available funding.

562
563 • **During Panel Questions:** In response to a question from Panelist Bill Irwin, Corey Daniels
564 indicated that building intrusion water continues to be collected as necessary. The water is
565 initially held in storage (frack) tanks and is then shipped offsite for disposal.

566
567 • **In response to questions from the Public:** Corey Daniels indicated that all radioactive
568 materials shipped offsite are sent to Waste Control Specialists (WCS) facilities in Texas. However,
569 some pre-release (non-radiological / non-hazardous) materials are shipped to industrial disposal
570 facilities. He also clarified that some parts of the Reactor Vessel are being shipped offsite since
571 they still qualify as Low-Level Radioactive waste. Only spent nuclear fuel qualifies as High-Level
572 Radioactive Waste.

573
574 • **In the Early General Public Comments:** The Panel was asked to continue work on
575 improving its public outreach. Concern was expressed that Panel meetings needed to be
576 publicized more.

577
578 • **Discussion of Federal Nuclear Waste Policy (FNWP) Committee Activities:**
579 Lissa Weinmann, Chair of the Panel’s Federal Nuclear Waste Policy Committee, briefly described
580 the Committee’s most recent activities. The Committee met on October 5 and December 5. The
581 October 5 meeting featured a presentation by Mr. Oliver Edelson, Legislative Assistant to
582 California Congressional Representative Mike Levin. Congressman Levin co-chairs the
583 Congressional Spent Nuclear Fuel Solutions Caucus, which Mr. Edelson administers. The
584 presentation discussed several bills recently introduced in Congress that could address national
585 spent nuclear fuel issues.

586
587 At the December 5 meeting, the FNWP Committee members brainstormed for nuclear waste
588 policy items to pursue further in 2023. The Committee agreed to meet next on XXXXXX XX, 2023.

589
590

- 591 • **Draft Annual Report for 2022:**
- 592 A first draft of the Panel's 2022 Annual Report to the Legislature, authored primarily by State
- 593 Nuclear Engineer Tony Leshinskie, was reviewed. Directions for completing the report by its
- 594 January 15, 2023 were authorized.
- 595
- 596 • **Election of New Panel Officers:** In separate votes, XXXXXXX was elected Panel Chair and
- 597 XXXXXXX was elected Panel Vice-Chair for terms of 1 year. The Panel thanked Emily Davis and Josh
- 598 Unruh for their service as Panel Chair and Vice-Chair, respectively, in 2022.
- 599
- 600 • **General Public Comments:** Emily Davis and Josh Unruh were thanked for their service as
- 601 Panel Chair and Vice-Chair, respectively, in 2022.
- 602

603 IV. Major Milestones and Activities at the Vermont Yankee Site

- 604
- 605 • 1/3 Site Decommissioning Activities resume following Holiday Break
- 606 • 1/3 Preparations for segmenting the Reactor Vessel (RV) itself begin; Collection of metal
- 607 shavings and cutting media from RV internals segmentations underway;
- 608 Decontamination of exposed RV Cavity & Dryer / Separator Pit (DSP) walls resume;
- 609 Turbine Building (TB) piping and equipment removals resume; Clearing of Radwaste
- 610 Processing Building rubble and River Intake Structure components resume; West
- 611 Cooling Tower foundation demolition resumes; Radioactive waste shipments via
- 612 railcars resume
- 613 • 1/10 Removal of Control Blade Hydraulic Control Units begins; Preparations to cut new
- 614 accessway between RB & TB lower levels begin;
- 615 • 1/12 NRC Second Half 2021 Inspection Exit Meeting – no reported issues, findings,
- 616 or violations
- 617 • 1/17 West Cooling Tower foundation demolition completed (except for required
- 618 radiological surveys); Cleaning / decontamination of TB sumps underway
- 619 • 1/24 Draining of RV Cavity & DSP resumes (started 11/8/2021); Travelling Screens
- 620 removed from River Intake Structure
- 621 • 1/28 Draining of RV Cavity & DSP completed; Circulating Water System pump motors
- 622 removed from River Intake Structure
- 623 • 2/7 First Nuclear Regulatory Commission (NRC) onsite inspection of the year occurs
- 624 (2/7 through 2/10)
- 625 • 3/7 RV Bellows removal begins; RV draining for eventual segmentation underway;
- 626 New TB personnel entrance cut into Lube Oil Storage Room west wall
- 627 • 3/9 Current phase of River Intake Structure components removal complete; River
- 628 Discharge Structure components removal begins
- 629 • 3/10 RV draining completed; removal of remaining RV Head Studs begins
- 630 • 3/16 Quarterly groundwater sampling completed
- 631 • 3/17 RV Head Studs removal completed; RV metal shavings / cutting media collection

- 632 & RV internal surface decontamination completed
- 633 • 3/24 RV Bellows removal completed; RV Nozzles cutting begins
- 634 • 3/31 NorthStar files required Annual VY Decommissioning Trust Fund and Spent Fuel
- 635 Management Fund reports
- 636 • 3/31 Removal of Control Blade Hydraulic Control Units completed
- 637 • 4/4 Cutting for new accessway between RB & TB lower levels begins
- 638 • 4/4 Second NRC onsite inspection of the year occurs (4/4 through 4/7)
- 639 • 4/14 VY “Tabletop” Site Emergency Drills Completed
- 640 • 4/18 Radiation Control Area (RCA) entrance relocated to TB Lube Oil Storage Room
- 641 • 4/26 Diesel Fire Pump & Circulating Water System Pumps removed from River Intake
- 642 Structure
- 643 • 4/29 Site staff in remaining RB & TB offices relocated to Plant Support Building & adjacent
- 644 office trailers; Onsite Chemistry Lab moved to Gate House #2
- 645 • 5/1 VY Start-Up Transformers disconnected from onsite switchyard, resulting in
- 646 RB & TB transition to “cold & dark” conditions
- 647 • 5/2 RV segmentation begins; removal of abandoned RB & TB electrical systems begins;
- 648 cable clearing and dismantling of VY Control Room begins
- 649 • 5/6 First RV “ring cut” segmentation completed; component removals from River Intake
- 650 & Discharge Structures complete (concrete structures to be removed later)
- 651 • 5/9 Excavation / underground pipes & foundations removal at Cooling Towers begins
- 652 • 5/13 Cutting for new accessway between RB & TB lower levels completed
- 653 • 5/23 Internal demolition (gutting) of TB “plant services” module begins
- 654 • 5/30 Materials Transfer “monorail” construction through RB & TB lower levels accessway
- 655 begins
- 656 • 6/1 Annual site roadway assessment completed (required by Town of Vernon)
- 657 • 6/10 RV Nozzles cutting completed
- 658 • 6/13 VY Control Room dismantling completed; VY Cable & Switchgear Rooms dismantling
- 659 begins
- 660 • 6/13 Third NRC onsite inspection of the year occurs (6/13 through 6/17)
- 661 • 6/16 New NRC Project Manager for VY Decommissioning visits site
- 662 • 6/22 Quarterly groundwater sampling completed; Annual groundwater sampling report
- 663 submitted for DEC review
- 664 • 6/29 Fifth & final RV “ring cut” segmentation completed
- 665 • 6/30 1.3 million working hours without an OSHA recordable injury at VY celebrated
- 666 • 7/5 Torus Structure segmentation begins
- 667 • 7/11 Excavation for remediation & removal of VY Interim Off-Gas (IOG) System begins
- 668 • 7/12 NRC First Half 2022 Inspection Exit Meeting – no reported issues, findings, or
- 669 violations
- 670 • 7/18 Excavation / structures removal at Cooling Towers site completed; regrading at
- 671 Cooling Towers site begins
- 672 • 7/25 RV Lower Head removal cutting & Cooling Tower spray pond demolition begin
- 673 • 8/1 IOG System structures demolition begins

- 674 • 8/1 Fourth NRC onsite inspection of the year occurs (8/1 through 8/4); Preliminary
- 675 License Termination Plan (LTP) meeting held at site
- 676 • 8/4 RV Lower Head removed from RV Cavity; segmentation for offsite disposal begins
- 677 • 8/16 NRC onsite for follow-up to 8/1 to 8/4 inspections
- 678 • 8/18 RV Lower Head segmentation completed
- 679 • 8/22 Torus Structure sludge removal begins; IOG System demolition completed
- 680 • 8/29 Excavation to remediate former Effluent Stack site begins
- 681 • 9/2 Torus Structure sludge removal completed; VY Cable & Switchgear dismantling
- 682 completed; final preps for demolishing "Control Block" building underway;
- 683 demobilization of RV segmentation equipment underway
- 684 • 9/15 Demolition of Control Block building begins
- 685 • 9/29 Demolition of Control Block building completed
- 686 • 9/30 Regrading at Cooling Towers site completed; Final radiological surveys at
- 687 Cooling Towers site begin
- 688 • 10/3 Fifth NRC onsite inspection of the year occurs (10/3 through 10/6)
- 689 • 10/4 NRC assigned License Termination Inspector visits site
- 690 • 10/6 Final radiological surveys at Cooling Towers and IOG System sites completed
- 691 • 10/10 DEC issues revised VY river discharge permit for public comment
- 692 • 10/10 RB Recirculating Water System (RWS) components removal begins
- 693 • 10/12 Onsite Radiological Emergency Drill completed
- 694 • 10/17 Demolition of Orano onsite Horizontal Transfer (radwaste) Storage modules begins
- 695 • 10/19 Greater-Than-Class C Radioactive Waste moved to VY Dry Cask Storage Pad
- 696 • 10/21 Last container of RV segments shipped to Waste Control Specialists
- 697 • 10/24 Orano demobilization from VY site begins
- 698 • 10/27 RWS Pump Motors removed
- 699 • 10/31 Equipment removals from RB airlock & Containment Access Building begin
- 700 • 11/7 Final draining & decontamination of Spent Fuel Pool begins; components clearing in
- 701 RB Radwaste Clean-Up System Room underway
- 702 • 11/10 Demolition of Orano Horizontal Transfer Storage (HTS) modules completed
- 703 • 11/14 DEC approves revised VY river discharge permit
- 704 • 11/14 Sixth NRC onsite inspection of the year occurs (11/14 through 11/17); NRC
- 705 Contractor conducts independent, confirmatory survey at Cooling Towers site
- 706 • 11/14 Demolition of Containment Access Building begins; RB Airlock equipment removals
- 707 completed
- 708 • 11/15 Demolition of Containment Access Building completed
- 709 • 11/21 Demolition of RB Airlock begins
- 710 • 11/22 Clearing of Orano HTS debris completed (last Orano task at VY site)
- 711 • 11/23 Orano demobilization from VY site completed
- 712 • 11/28 Excavations at former IOG System site covered and regraded; area cordoned-off
- 713 as radiologically clean
- 714 • 12/20 Demolition of RB Airlock completed

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

(Based on latest available data for 2022).

NDT	SRT
\$276.3 M Balance on December 31, 2021	\$56.9 M Balance on December 31, 2021
\$247.9 M Balance on March 31, 2022	\$52.8 M Balance on March 31, 2022
\$226.8 M Balance on June 30, 2022	\$52.2 M Balance on June 30, 2022
\$203.1 M Balance on September 30, 2022	\$50.8 M Balance on September 30, 2022
\$196.0 M Balance on October 31, 2022	\$50.6 M Balance on October 31, 2022
\$XXX.X M Balance on December 31, 2022	\$XX.X M Balance on December 31, 2022

Monthly balances for the NDT and SRT are available at:
<https://publicservice.vermont.gov/content/trust-balances>.

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

VI. Spent Nuclear Fuel Status at Vermont Yankee

Transfer of VY’s entire spent fuel inventory to dry cask storage was completed on August 1, 2018. A total of 58 dry casks, holding a total of 3,880 spent fuel assemblies, are stored at the VY Independent Spent Fuel Storage Installation (ISFSI). While no changes in the configuration of VY’s dry casks occurred in 2022, on October 19, a new, 59th dry cask containing VY’s Greater-Than-Class C (GTCC) low level radioactive waste was moved to the ISFSI. (This GTCC waste consists of several highly contaminated VY Reactor Vessel internal components which had been stored temporarily in VY’s Spent Fuel Pool following their removal from the RV.) With this move, all VY GTCC waste resides at the VY ISFSI. VY’s spent fuel will remain at the VY ISFSI until the US Department of Energy fulfills its obligation to provide a national spent nuclear fuel repository. VY’s GTCC waste will remain at the VY ISFSI until a US radioactive waste disposal facility is licensed to accept GTCC waste.

A total of 6 vacant cask spaces remain on VY’s ISFSI pads. Four of these are required should the arrangement of the dry casks on the two ISFSI pads need to be changed for any reason. The remaining two spaces were designated for storing additional VY GTCC Low Level Radioactive Waste. Early (circa 2014) GTCC volume estimates suggested that VY could require as many as three GTCC waste casks. More refined estimates (circa 2018 and later) determined that only one GTCC waste cask would be necessary.

754 **VII. Significant Vermont Yankee Site Changes**

755 Monitoring of the Vermont Yankee Spent Nuclear Fuel is controlled from the site's Central Alarm
756 Station (CAS) Building, which became operational on August 23, 2018. No significant changes to
757 Vermont Yankee's spent fuel monitoring programs occurred during 2022. All Vermont Yankee
758 site changes occurring in 2022 resulted from the continuation of decommissioning activities
759 which commenced on January 11, 2019.

760

761 The following onsite structures were demolished during 2022:

- 762 • Control Room Block (Building)
- 763 • Containment Access Building
- 764 • Interim Off-Gas System Structures
- 765 • Orano Horizontal Transfer Storage Modules (reinforced concrete structures used for
766 temporary radwaste storage)
- 767 • "Plant Services" Building (partial demolition of a section of the Turbine Building)
- 768 • River Intake & Discharge Structure major components (structures themselves remain)
- 769 • Several below grade Cooling Tower structures
- 770 • Abandoned security structures & barricades (none of which impact the VY ISFSI)

771

772 Additionally, the power transformer connections to the Reactor and Turbine Buildings were
773 disconnected on May 1, disconnecting these buildings from the local power grid. By doing so, the
774 wholesale removal of electrical connections within these buildings could safely begin.

775

776 Segmentation and removal of the Reactor Vessel was completed in October. RB demolition
777 efforts have turned to removing major components from abandoned reactor systems. Similar
778 component removals will continue throughout 2023. To help facilitate these component
779 removals, a new accessway between the Reactor and Turbine Building lower levels was cut. A
780 monorail system for moving RB component segments through this accessway for packaging and
781 offsite disposal became operational in November.

782

783 The partial demolition of the Plant Services section of the Turbine Building has resulted in two
784 significant onsite changes. Personnel access into the Reactor and Turbine Buildings is now
785 through a new doorway cut into the TB Lube Oil Storage Room. The site's previous Radiation
786 Protection Checkpoint (site of the previous personnel accessway for both buildings) has been
787 demolished. Radiation Protection Checkpoint functions are now performed in the Lube Oil
788 Storage Room and Gatehouse #2. Additionally, the Radiation Protection Checkpoint's onsite
789 Chemistry Laboratory has moved to Gatehouse #2.

790

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

794

795 No significant onsite road repairs were required this year. Maintenance for the onsite rail spur
796 occurred on an as needed basis but did not impact radioactive waste and debris shipments to
797 offsite facilities.

798

799 VIII. Vermont Yankee Water Management Program

- 800
- 801 • Rainfall at the VY site during 2022 returned to more typical annual values (rather than the
802 unusually high 2021 rainfall). Accordingly, the rate of groundwater entering the Turbine
803 Building in 2022 is similar to rates seen in 2018 through 2020.
 - 804 ○ In leakage rates ranged between 200 and 700 gallons per day in 2022
 - 805 ○ At End of Year, the rate was roughly 300 gallons per day (similar to previous end of
806 year rates).
 - 807 ○ In leakage remains below rates initially seen in 2015
 - 808 • Roughly 450,835 gallons of in-leakage water have shipped in 2022
 - 809 ○ All VT Yankee water shipments were sent to Waste Control Specialists (WCS) NRC-
810 licensed disposal site in Andrews County, Texas during 2022.
 - 811 ○ No water has shipped to US Ecology's hazardous waste disposal facility in
812 Grandview, Idaho, even though Vermont Yankee received NRC approval in 2021 to
813 ship up to 2,000,000 gallons of contaminated water to this facility. Vermont Yankee
814 was previously allowed to ship a total 200,000 gallons of contaminated water to this
815 facility during 2019 and 2020.
 - 816 ○ 20 in-leakage water shipments occurred in 2022, all shipments made were via
817 tanker rail cars.
 - 818 ○ Each in-leakage water shipment contained no more than 0.004 Curies of radioactive
819 material
 - 820 ○ Groundwater shipments to WCS facilities continue "as-needed."
 - 821 • A total of 1,709,000 gallons of in-leakage water have been shipped to date
 - 822 • The system of water diversion wells installed in 2020 along the Turbine Building periphery
823 to mitigate future water shipments remains in use. However, this system does not address
824 all potential intrusion water sources. Diverted, uncontaminated water is discharged to the
825 Connecticut River on an as-needed basis. Each discharge is limited to ~15,000 gallons per
826 day.
 - 827 • VY completed shipping a roughly 900,000 gallon inventory of contaminated Process Water
828 (water from abandoned VY systems) previously stored in the Suppression System Torus to
829 WCS facilities. Shipments of this inventory began in 2021.
 - 830 ○ ~23,000 gallons per shipment
 - 831 ○ 20 shipments (438,000 gallons) shipped in 2022
 - 832 • During 2022, VY also shipped roughly 288,000 gallons of contaminated water previously
833 used in the Spent Fuel Pool to WCS facilities. This was the last Process Water inventory at
834 the site.
 - 835 ○ ~23,000 gallons per shipment
 - 836 ○ 13 shipments (entire inventory) shipped in 2022
 - 837 ○ Each Process Water shipment contained between 0.065 and 0.1 Curies of
radioactive material

838

839 **IX. Decommissioning Waste Shipments Summary**

840

841 A summary of radiological and hazardous waste shipments made from the Vermont Yankee site
842 during 2022 follows.

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

844

845 An annual summary of Vermont Yankee’s radioactive waste shipments is published in mid-May
846 of the following calendar year as part of the “Radioactive Effluent Release Report” filed with the
847 US Nuclear Regulatory Commission and the Vermont Public Service Department. Preliminary
848 radioactive waste volume data available as of **November 21, 2022** indicates that approximately
849 **300,000 cubic feet** of radioactive waste was shipped from the Vermont Yankee site during 2022
850 **(similar to radioactive waste volumes shipped in 2020 and 2021)**. The total weight of the waste
851 shipped in 2022 exceeds **19,000,000 pounds (>9,500 tons)**. The total radiological activity of the
852 shipped waste is **11,100 Curies (somewhat lower than the 27,460 Curies shipped in 2021, but**
853 **well up from 522.8 Curies and 126,8 Curies shipped in 2020 and 2019, respectively)**. All 2022
854 calendar year radioactive waste shipments were sent to Waste Control Specialists’ (WCS)
855 disposal facility Andrews County, Texas. **152 radioactive waste shipments were made in 2022;**
856 **122 of these were made via railcar. The remaining 30 shipments were made by truck.**

857

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

860

- 861 • Total activity stored at the VY Independent Spent Fuel Storage Installation (ISFSI), consisting
862 of 3880 spent fuel bundles stored in 58 spent fuel canisters: 117,176,000 Curies (roughly
863 2,054,000 Curies per canister)
- 864
- 865 • The Greater Than Class C radioactive waste cask recently moved to the VY ISFSI contains
866 approximately 175,000 Curies.

867

868 **IX.B Hazardous Waste Shipments Summary**

869

- 870 • **6 tons of construction and demolition debris was shipped to the following facilities:**
 - 871 ○ **Resource Waste Services, Salem, NH**
- 872 • **74 cubic yards of asbestos was shipped to the following facilities:**
 - 873 ○ **Minerva Landfill, Waynesburg, OH**
 - 874 ○ **WMNH Tree, Rochester, NH**
- 875 • **609,360 pounds of ferrous and non-ferrous scrap metal was shipped to the following**
876 **facility for recycling:**
 - 877 ○ **Mattuchio Scrap Metal, Everett, MA**

878

879 **X. Vermont Congressional Delegation**

880
881 While Vermont Congressional Delegation Staff did not formally speak at any NDCAP Full Panel or
882 NDCAP Federal Nuclear Waste Policy Committee meetings during 2022, Staff from Senator
883 Bernie Sanders’ and Congressman Peter Welch’s Offices have kept Panel Leadership apprised of
884 DOE and NRC activities and publications of potential interest to the Panel. Most of these
885 communications **came** from Rebecca Ellis and Alex Piper of Congressman Welch’s Office and
886 Haley Pero of Senator Sanders’ Office.

887
888 Communications with Congressman Welch’s Office were especially helpful in arranging for Mr.
889 Oliver Edelson from California Congressman Mike Levin’s Office to speak at the Federal Nuclear
890 Waste Policy Committee’s October 3 meeting regarding the activities of the Congressional Spent
891 Nuclear Fuel Solutions Caucus. Details of this presentation are available in Section XI.B of this
892 report.

893
894 Links to nuclear decommissioning and spent fuel **policy-related** bills that Senator Sanders and
895 Congressman Welch have either sponsored or supported are available through the NDCAP
896 Federal Nuclear Waste Policy Committee webpage at:
897 <https://publicservice.vermont.gov/content/vt-ndcap-federal-nuclear-waste-policy>

898
899 Following the announced retirement of Senator Patrick Leahy and the subsequent election of
900 Congressman Welch as Vermont’s newest Senator, NDCAP will work to assure that
901 communication between the Panel and Senator Sanders, Senator-Elect Welch, and
902 **Congresswoman**-Elect Balint’s Offices continue to be a valuable information resource for Panel
903 activities.



905
906 **XI. Current NDCAP Committees**

907
908 **XI.A NDCAP Issues Committee**

909
910 The Issues Committee, formed in 2015 and reconstituted in 2019, is intended to provide
911 recommendations for topics to be discussed at meetings of the Full Panel. The Issues Committee
912 did not meet during 2022. For 2022, the Issues Committee’s function (selection of meeting
913 topics) was performed by the Full Panel at its regular meetings, with additional interactions
914 between the Panel Chair and the State Nuclear Engineer as needed.

915
916 **XI.B NDCAP Federal Nuclear Waste Policy Committee**

917
918 NDCAP created the Federal Nuclear Waste Policy Committee in December 2020 as a means for
919 the Panel to learn more about US national spent nuclear fuel storage and disposal issues. The
920 Committee is developing recommendations on US nuclear waste policies for the Full Panel to

921 consider as potential Advisory Opinions on these subjects. The Committee consists of the
922 following Panel members: Lissa Weinmann (Committee Chair), Corey Daniels, Maddy Arms, and
923 Marvin Resnikoff. No other Panel members attended any of the Committee's meetings held in
924 2022. The Committee is administered by State Nuclear Engineer Tony Leshinskie.

925
926 The Committee met 5 times in 2022, all via Teams webcast, to learn more about current US
927 national spent nuclear fuel storage and disposal policies. Several of the Committee's 2022
928 meetings included guest speakers from individual nuclear waste policy stakeholders. Brief
929 summaries for each meeting are included below. The Committee continued to compile a reading
930 list of relevant materials. This list is available at the Committee's webpage at:

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

932
933 This webpage also includes recordings of the individual Committee meetings.

934
935 Through the course of 2022, the Committee built on its 2021 Calendar Year work. A summary of
936 this earlier work is available at:

937 [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)
938 [draft-report](https://publicservice.vermont.gov/content/federal-nuclear-waste-policy-committee-rev-2-draft-report)

939

940 **January 31, 2022 Committee Meeting**

941 The Committee began the year by assessing the US Department of Energy's December 2021
942 Request for Information (RFI) regarding the temporary, consolidated storage of spent nuclear
943 fuel using a Consent-Based approach. This RFI is available at:

944 [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)
945 [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)

946

947 Further details on this Consent Based Siting process are available at:

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

949

950 Based on discussions and public input from the January 31 meeting, the Committee drafted an
951 Advisory Opinion that the Full Panel discussed at its February 28 meeting. The Committee's
952 draft Opinion is available at:

953 [https://publicservice.vermont.gov/content/vt-ndcap-draft-advisory-opinion-usdoe-consent-](https://publicservice.vermont.gov/content/vt-ndcap-draft-advisory-opinion-usdoe-consent-based-siting-request-information)
954 [based-siting-request-information](https://publicservice.vermont.gov/content/vt-ndcap-draft-advisory-opinion-usdoe-consent-based-siting-request-information)

955

956 As noted in Section III, the Full Panel approved a version of this Advisory Opinion. The approved
957 version is available in Appendix A.

958

959 **March 28, 2022 Committee Meeting**

960 At this meeting, representatives from Deep Isolation, Inc. outlined their proposed alternative for
961 geologic spent fuel repositories. A Deep Isolation repository would store spent fuel in a series of
962 horizontal drilled holes between 1 to 2 miles in depth, using current technology for oil drilling.

963 The horizontal portion of each storage hole (where fuel assemblies would be stored) could be 2
964 to 3 miles long. Individual repository holes would store fuel assemblies end-to-end, with up to
965 200 fuel canisters (individual fuel assemblies) per borehole. Further information on Deep
966 Isolation's proposal is available at:

967 <https://www.deepisolation.com/nuclear-waste-solutions/>

968

969 While most of Deep Isolation's research into this proposal assume a shale geology, other bore
970 hole depths for other geologies can be determined. Much of Deep Isolation's current research is
971 intended to establish site selection criteria

972

973 **May 23, 2022 Committee Meeting**

974 The May 23 meeting featured a presentation by representatives of Holtec International (Joy
975 Russell and Kim Manzione), who provided an overview of its spent nuclear fuel storage systems
976 used at Vermont Yankee. Aging management of these systems and proposed long-term spent
977 fuel storage was discussed, resulting in a lively questions and answers period. From the
978 presentation and subsequent discussion, it was clear that efforts to qualify the spent fuel storage
979 systems beyond their currently licensed 40-year use period remain under development. Holtec
980 remains confident that the licensed use period for its spent fuel storage systems can be extended
981 to as much as 100 years. Holtec's presentation slides provided for this meeting are available at:

982 [https://publicservice.vermont.gov/content/holtec-spent-fuel-storage-aging-management-](https://publicservice.vermont.gov/content/holtec-spent-fuel-storage-aging-management-presentation-vt-ndcap-nuclear-waste-policy)
983 [presentation-vt-ndcap-nuclear-waste-policy.](https://publicservice.vermont.gov/content/holtec-spent-fuel-storage-aging-management-presentation-vt-ndcap-nuclear-waste-policy)

984

985 **October 3, 2022 Committee Meeting**

986 The October 3 meeting was devoted to a discussion with Mr. Oliver Edelson, Legislative Assistant
987 to California Congressional Representative Mike Levin. Congressman Levin, whose district
988 includes the actively decommissioning San Onofre Nuclear Generation Station, co-chairs the
989 Congressional Spent Nuclear Fuel Solutions Caucus, which Mr. Edelson administers.

990

991 The meeting discussion outlined the Caucus' current efforts. Presently, the Caucus is focused on
992 getting various sides in spent nuclear fuel policy debates to talk to each other. The US
993 Congressional Representatives that comprise the Caucus are in a learning phase to better grasp
994 spent fuel-related issues. As part of this, the Caucus has begun meeting with other organizations
995 interested in nuclear waste policy issues.

996

997 Part of the meeting discussion touched on several proposed bills that would address spent fuel
998 issues to some extent. The Sensible, Timely Relief for America's Nuclear Districts Economic
999 Development (STRANDED) Act was mentioned as one option. The Increasing Nuclear Safety
1000 Protocols for Extended Canister Transfers (INSPECT) Act, which would require a Resident NRC
1001 Inspector at decommissioning nuclear power plants until all spent fuel has been removed from a
1002 site's spent fuel pool(s), was also discussed.

1003

1004 Mr. Edelson's presentation to the Committee is available at:

1005 [https://publicservice.vermont.gov/content/presentation-congressional-spent-nuclear-fuel-](https://publicservice.vermont.gov/content/presentation-congressional-spent-nuclear-fuel-solutions-caucus)
1006 [solutions-caucus.](https://publicservice.vermont.gov/content/presentation-congressional-spent-nuclear-fuel-solutions-caucus)

1007 Links to the STRANDED and INSPECT bills are also available from the Committee website.

1008
1009 A key point to the meeting’s discussion was that selecting a spent nuclear fuel repository site
1010 (regardless of whether an interim or permanent facility is being considered) is not quick work.
1011 Finland recently established its national spent fuel repository after a 35-year siting effort.
1012 Sweden, Switzerland, and Canada have made recent progress following sustained (multi-year)
1013 siting efforts.

1014

1015 **December 5, 2022 Committee Meeting**

1016 The December 5 meeting provided the Committee with an opportunity review its 2022 activities.
1017 The summary of Committee activities included in the (12/01/2022 version of the) VT NDCAP
1018 2022 draft Annual Report was reviewed and revised based on feedback from Committee
1019 members and members of the public present at this meeting. Specifically, sentences were added
1020 to Section III noting the number of Committee meetings held this year. (This was done to show
1021 the Panel’s level of activity during 2022 early in the report.) The Committee’s mission statement
1022 (adopted in March 2021) was added to Section II, since the Annual Report covers both Full Panel
1023 and FNWP Committee activities. The Committee crafted a sentence for addition to the
1024 February 28 Full Panel meeting summary that emphasized that the recommended Advisory
1025 Opinion (that was eventually adopted that evening) represented a consensus reached by
1026 Committee members, despite their divergent views and backgrounds on spent fuel issues. This
1027 consensus was reached through a civil, respectful process.

1028

1029 The Committee meeting logistics for 2023 were discussed. The Committee agreed to continue
1030 meeting on a quarterly basis; the following meeting dates were chosen for 2023:

- 1031 • March 6
- 1032 • June 5
- 1033 • September 11
- 1034 • December 4

1035

1036 Meetings will nominally run from 12 noon to 1:30 PM on those days. (Note that the March 6
1037 meeting will likely run from 12 noon to 2 PM.) Committee meetings will be conducted primarily
1038 as webcasts. However, unless the Vermont Legislature opts to extend [ACT 78 of the 2022](#)
1039 [Legislative Session](#), physical meeting spaces will be designated for these meetings. Lissa
1040 Weinmann will continue as FNWP Committee Chair during 2023.

1041

1042 The Committee then considered potential discussion topics during 2023. The Committee
1043 reached consensus that its March 6 meeting would discuss legal issues surrounding the
1044 Consolidated Interim Storage Facilities proposed in New Mexico and western Texas. Committee
1045 Member Marvin Resnikoff suggested Diane Curran and Jay Silberg as potential speakers for
1046 presenting the opposing sides in the CISF legal debate. Drs. Erica Bickford and Kim Petry were

1047 suggested as speakers who could provide the DOE’s perspective on CISFs. The Committee will
1048 pursue having these suggested speakers attend the March 6 meeting.

1049

1050 Additional topics for consideration at subsequent 2023 Committee meetings include:

- 1051 • DOE’s Next Steps in Developing a Consent-Based Siting Process (which could be an
1052 additional presentation topic for Drs. Petry and Bickford)
- 1053 • A Waste Control Specialists’ Presentation on its Radwaste Disposal Operations
- 1054 • Radioactive Waste Environmental Justice Issues
- 1055 • Learn More about Low-Level Radioactive Waste Disposal in General
- 1056 • Use of the US Justice Department’s Judgement Fund for Spent Fuel Storage Expenses
- 1057 • A Presentation from the Nuclear Waste Strategy Coalition
- 1058 • Spent Fuel Reprocessing History and Issues
- 1059 • Whether a Statement Emphasizing the Need to Resolve Nuclear Waste Issues is Needed

1060

1061 The Committee will narrow down its discussion topics at its currently scheduled 2023 meetings.
1062 Additional meetings will be scheduled, if deemed necessary.

1063

1064 **XII. Meeting Schedule and Priorities for 2023**

1065

1066 During the Panel’s December 12 meeting, the Panel reached consensus on the following meeting
1067 dates for 2023:

1068

- 1069 • January 10: Special Meeting for approval of the 2021 Annual Report
- 1070 • February 28: Tentative meeting for discussing potential filings in response to the US
1071 Department of Energy’s Consent-Based Siting Request for Information
- 1072 • May 9: Regular meeting discussing and assessing the Decommissioning Project Annual
1073 Status Reports (required by PUC Case 8880)
- 1074 • September 19: Regular meeting (agenda items to be determined)
- 1075 • December 12: Regular meeting (agenda items to be determined)

1076

1077 The Panel continues to consider improvements in its public outreach. As noted in the
1078 September 19 and December 12 meeting summaries (see Section III), the Panel intends to use
1079 parts of its new \$35,000 annual budget to improve its webcast / hybrid meeting capabilities, and
1080 identify additional options for public outreach.

1081

1082

1083

1084

1085

1086

1087

1088

1089 **XIII. Panel Composition and Duties Change Recommendations**

1090

1091 As part of the Panel Duties outlined in Part II of the Panel Charter (see Section II of this Report),
1092 the Panel “shall assess further changes to the Panel’s membership or duties as appropriate.” The
1093 most recent changes in Panel composition and duties are those approved by the 2021
1094 Legislature in Act 54. The Panel currently has no additional change recommendations for its
1095 composition or duties.

1096

DRAFT

1097 **Appendix A: Panel Advisory Opinions Approved in 2022**

1098

1099 March 3, 2022

1100 US Department of Energy
1101 Office of Nuclear Energy
1102 1000 Independence Ave. SW
1103 Washington DC 20585

1104

1105 **Re: Comments on the U.S. Department of Energy ‘Request for Information on**
1106 **Using a Consent-Based Siting Process to Identify Federal Interim Storage**
1107 **Facilities’**

1108

1109 To Whom It May Concern:

1110

1111 The Vermont Nuclear Decommissioning Citizens Advisory Panel submits the enclosed
1112 comments (Advisory Opinion) in response to the Department’s December 2021
1113 ‘Request for Information on Using a Consent-Based Siting Process to Identify Federal
1114 Interim Storage Facilities.’ These comments were approved by the Panel at a Special
1115 Meeting held on February 28. Presentations and other details from this meeting are
1116 available at the Panel website: <https://publicservice.vermont.gov/electric/ndcap>.

1117

1118 Additionally, the Panel wishes to thank Dr. Kim Petry, Dr. Erica Bickford, Ms. Natalia
1119 Saraeva and Mr. Rob Howard of the Department for their presentation and
1120 supporting discussion at our February 28 meeting.

1121

1122 Thank-you for your consideration. We appreciate the opportunity to share these
1123 comments with the Department and look forward to further interactions as the
1124 Consent-Based Siting Process progresses.

1125

1126 Sincerely yours,

1127

1128

1129 /s/ Emily Davis

1130 Emily Davis, 2022 Panel Chair
1131 Vermont Nuclear Decommissioning Citizens Advisory Panel

1132

1133 **Advisory Opinion Adopted February 28, 2022**

1134 **Comments on the U.S. Department of Energy ‘Request for Information on Using**
1135 **a Consent-Based Siting Process to Identify Federal Interim Storage Facilities’**

1136
1137 **INTRODUCTION**

1138 The Vermont Nuclear Decommissioning Citizens Advisory Panel (VT NDCAP) appreciates the
1139 opportunity to share information and insights on ‘Using a Consent-Based Siting Process to Identify
1140 Federal Interim Storage Facilities’ and associated questions upon which the Department of Energy
1141 (DOE) seeks public input.

1142
1143 **BACKGROUND ON VT NDCAP**

1144 The 19 member VT NDCAP was established by an act of the Vermont legislature in 2014. It
1145 includes six citizen members, two each to be appointed by the Governor, the Senate President Pro
1146 Tempore and the House Speaker, as well as representation from eleven additional Vermont Yankee
1147 decommissioning stakeholder organizations, including the plant owner and the town where the
1148 facility resides, to oversee decommissioning of the Vermont Yankee nuclear reactor, share
1149 information with and receive feedback from the public.

1150 In December 2020, the VT NDCAP voted to establish a committee to learn more about nuclear
1151 spent fuel storage and disposal concerns. The resulting Federal Nuclear Waste Policy Committee
1152 (FNWPC) met monthly in 2021 and continues to meet, studies federal policy options for nuclear
1153 waste storage and considers how Vermont Yankee is situated within the national landscape. By
1154 methodically procuring input from Vermont’s federal delegation, industry experts and other
1155 stakeholders, the FNWPC accordingly advances the learning goals of VT NDCAP by sharing
1156 findings with the full Panel at regularly scheduled meetings. The Committee may recommend that
1157 the VT NDCAP adopt Committee-approved draft advisory language for the full VT NDCAP’s
1158 consideration and potential vote in order to fulfill the Panel’s stated purpose under Vermont law to:
1159 "advise the Governor, General Assembly, the agencies of the state, and the public on issues related
1160 to decommissioning."

1161 Some individual VT NDCAP members plan to submit independent information to DOE that may
1162 reflect different perspectives on how the US should solve the problem of where and how to store
1163 the nation’s high level radioactive waste. The value of this document is that it reflects basic
1164 agreement among Committee members on the following points, voted on at a special session of the
1165 full VT NDCAP on February 28, 2022, a recording of which is available at:

1166 <https://youtu.be/W7ZAHGUaD4M>

1169 **DOE RFI Area 3: Interim Storage as Part of a Waste Management System /**
1170 **Questions: 3 and 4: To what extent should development of an interim storage**
1171 **facility relate to progress on establishing a permanent repository? What other**
1172 **issues should DOE consider in developing a waste management system?**

1173 In 2015, the Congress authorized a two-year consent-based siting process for the general siting for
1174 nuclear waste disposal facilities that was not limited to ‘interim’ sites. The process to date has not
1175 resulted in a successful siting of any waste disposal facilities. VT NDCAP believes management of
1176 the nation’s nuclear waste management system must not depend upon inconsistent congressional
1177 appropriations.

1178 VT NDCAP recommends that development of a consolidated interim storage facility (CISF) should
1179 remain directly coupled to establishing a permanent repository as required under the Nuclear Waste
1180 Policy Act. In developing an integrated waste management system, VT NDCAP believes that DOE
1181 and the Administration should focus on amending existing law rather than relying on agency
1182 rulemaking.

1183 Appropriate geomorphology and geohydrology of potential site selection for a permanent
1184 repository should be a limiting and qualifying factor in any consent-based siting. Prioritizing
1185 locations with sound environmental suitability will likely aid in establishing public acceptance and
1186 trust to obtain consent-based siting. With proper planning, moving high level radioactive waste
1187 from independent fuel storage installations (ISFSIs) should only happen one time. Any CISF(s) to
1188 be constructed and operated should ideally be sited at or in close proximity to a location that is also
1189 acceptable and approved for a permanent deep geologic repository. Any CISF or permanent
1190 repository should be subject to the same EPA standards other energy producers must adhere to.

1191 Further, asking a community to consent to act as an ‘interim’ site in the absence of any progress
1192 toward a permanent site will continue to undermine confidence in the DOE ‘consent-based siting’
1193 process.

1194 The VT NDCAP supports the application of the consent-based siting process to any previously
1195 designated high level radioactive waste disposal or storage sites.

1196

1197 **DOE RFI, Area 2: Removing Barriers to Meaningful Participation / Question 5:**
1198 **What information do communities, governments, or other stakeholders need to**
1199 **engage with the Department on consent-based siting of federal interim storage**
1200 **facilities?**

1201 Communities, governments, local stakeholders, and the nation at large need more information
1202 before deciding on the best course of a functioning integrated nuclear waste management system.
1203 The Nuclear Regulatory Commission says such waste is safely and securely stored at its current
1204 location. An independent and comprehensive economic analysis from the Congressional Budget
1205 Office or General Accounting Office on options for nuclear waste should inform how to proceed.

1206 All public comments received in DOE's 2015 to 2017 Consent-Based Siting effort should be
1207 available for public review and be considered as part of the DOE's current Request for Information.

1208

1209 **ADVISORY OPINION VOTING RECORD**

1210 **PANEL MEMBERS VOTING YES**

1211 Madeline Arms (Town of Vernon); Todd Amato (Town of Vernon); Chris Campany (Windham Regional
1212 Commission); Sara Coffey (Citizen Appointee); Emily Davis (Citizen Appointee & Panel Chair); Marvin
1213 Resnikoff, Ph.D. (Citizen Appointee); Lissa Weinmann (Citizen Appointee & FNWPC Chair).

1214

1215 **PANEL MEMBERS VOTING NO**

1216 None.

1217

1218 **PANEL MEMBERS VOTING TO ABSTAIN**

1219 Corey Daniels (NorthStar Vermont Yankee); David Pearson (NorthStar Vermont Yankee);

1220 Jim Porter (VT Public Service Department Designee).

1221

1222 **PANEL MEMBERS ABSENT FOR THIS VOTE**

1223 Trish Coppolino (VT Agency of Natural Resources); Dr. Bill Irwin (VT Agency of Human Services); Bob
1224 Leach (Citizen Appointee); Brett Long (VT Agency of Commerce and Community Development); Mark
1225 MacDonald (Vermont Senate); Laura Sibilila (Vermont Legislature); Josh Unruh (Citizen Appointee &
1226 Panel Vice-Chair).

1227

1228 *There are currently two vacancies on the Panel.*

1229 **END**

1230

1231

1232 **Appendix B: List of Acronyms Used in this Report**

ANR	Vermont Agency of Natural Resources
AOC	Area of Concern (potential hazardous materials contamination location)
AOG	Advanced Off-Gas (system)
CAS	Central Alarm Station
CISF	Consolidated Interim Storage Facility
DEC	Vermont Department of Environmental Conservation (part of Agency of Natural Resources)
DOE	United States Department of Energy
DSP	Dryer / Separator Pit
EPA	United States Environmental Protection Agency
FNWP	Federal Nuclear Waste Policy (acronym for an active VT NDCAP Committee)
FPG	Four Points Group (a PSD consultant for VT Yankee’s decommissioning)
GTCC	Greater than Class C (a type of low-level Radioactive Waste)
HEPA	High-Efficiency Particulate Air
HTS	Horizontal Transfer Storage
IBEW	International Brotherhood of Electrical Workers
IOG	Interim Off-Gas (system)
ISFSI	Interim Spent Fuel Storage Installation
LTP	License Termination Plan
MOU	Memorandum of Understanding
NDCAP	Vermont Nuclear Decommissioning Citizens Advisory Panel (VT NDCAP also used)
NDT	Nuclear Decommissioning Trust (fund)
NRC	United States Nuclear Regulatory Commission
ORISE	Oak Ridge Institute for Science and Education
OSHA	United States Occupational Safety and Hazards Administration
PCBs	Polychlorinated Biphenyl substances
PFAS	Per-Fluoroalkyl and Polyfluoroalkyl Substances
PSD	Vermont Public Service Department
PSDAR	Post-Shutdown Decommissioning Activities Report
RB	Reactor Building
RFI	Request for Information
RV	Reactor Vessel
RWCU	Radioactive Waste Clean-Up (system)
RWS	Recirculating Water System
SFP	Spent Fuel Pool
SRT	Site Restoration Trust (Fund)
TB	Turbine Building
VOCs	Volatile Organic Compounds

VY Vermont Yankee
WCS Waste Control Specialists (a sister company to NorthStar)

1233
