



**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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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**

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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/vermont-nuclear-decommissioning-citizens-](http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap)
25 [advisory-panel-vt-ndcap](http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap) (aka, the NDCAP website). Changes in Panel membership during 2022
26 may be discerned by reviewing the meeting minutes and meeting recordings available at the
27 NDCAP website. The Panel’s second representative for the Town of Vernon (created in Act 54 of
28 the 2021 Legislature) assumed office in time for the February 28 Full Panel Meeting. As of
29 September 1, the Panel’s second citizen-appointee by the Vermont House Speaker is vacant. The
30 two optional Panel representatives for Massachusetts and New Hampshire towns near the
31 Vermont Yankee site were vacant throughout 2022.
32

33 Note that the NDCAP website was recently migrated to a new location:

34 [http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-](http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap)
35 [ndcap](http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap)
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37 The NDCAP website was previously available at:

38 <http://publicservice.vermont.gov/electric/ndcap>. In instances where Panel documents, including
39 previous Annual Reports, reference this older website, the newer
40 [http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-](http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap)
41 [ndcap](http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap) website should be accessed instead.

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II. Charter

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

<http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap>

No changes to the NDCAP Charter were made during 2022. However, changes to the NDCAP Charter may be necessary due to the changes in Panel membership and duties implemented in [ACT 54 of the 2021 Legislative Session](#). Where any discrepancies between Act 54 language and NDCAP Charter exist, the Act 54 language takes precedence.

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

III. Meeting Highlights

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

The May, September, and December Full Panel meetings included updates on recent VY decommissioning activities by both NorthStar and the State of Vermont. Educational and issue-specific topics were also discussed at these meetings. The January and February Full Panel meetings each focused on dedicated topics that had previously been identified at the Panel's December 2021 meeting. Opportunities for discussion and comments from Panelists and the

84 public on all covered topics were provided during each meeting. A summary of each Full Panel
85 meeting is presented below.

86
87 The minutes of each meeting can be found on the NDCAP website (a dedicated section of the
88 Public Service Department’s recently upgraded website) at
89 <http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap>. A complete video or webcast recording for each meeting can be found at:
90 <https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel>.

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93 Links to these video recordings are also available through the NDCAP website. Additional
94 information regarding VY’s active decommissioning is available at the Public Service
95 Department’s “VY Decommissioning” website at: <http://publicservice.vermont.gov/vermont-nuclear-decommissioning-citizens-advisory-panel-vt-ndcap>.

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

100
101 **January 10, 2022**

102
103 The primary purpose of this meeting (as agreed upon at the Panel’s December 2021 meeting) was
104 to review and potentially approve the Panel’s 2021 Annual Report to the Vermont Legislature.
105 The draft Annual Report that was considered is available in the “Meeting of January 10, 2022”
106 materials section on the Panel website ([noted in Section I herein](#)). Several minor changes based
107 on Panel and public feedback were incorporated after discussion during the meeting. Several
108 additional comments from Panelist Lissa Weinmann were not incorporated after several Panelists
109 expressed concern that the comments would introduce significant additional detail that had not
110 had opportunity for review by other Panelists.

111
112 After additional discussion, consensus was reached that shorter versions of these comments could
113 be incorporated into the report. Further details on Panel activities could be provided at the
114 request of the Legislature. Details of the additional comments are available in the January 10
115 meeting minutes and the “Meeting of January 10, 2022” materials section on the Panel website.

116
117 The revised 2021 Annual Report was approved by the Panel by a 10-0 vote (with 2 abstentions)
118 and is available at:
119 <https://publicservice.vermont.gov/document/2021-annual-report>

120
121 The Panel also discussed and approved a breakdown of the Panel’s FY 2022 budget. The approved
122 breakdown is available at:
123 [https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP_2022_Approved_Budget.p](https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP_2022_Approved_Budget.pdf)
124 [df](https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP_2022_Approved_Budget.pdf).

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

130

131 **February 28, 2022**

132

133 The primary purpose of this meeting (as agreed upon at the Panel’s December 2021 meeting) was
134 to consider the US Department of Energy’s (DOE’s) request for comments on a Consent-Based
135 Siting process for selecting potential spent nuclear fuel (high-level radioactive) waste repositories
136 within the continental United States. The meeting featured a presentation with a questions and
137 answers period with Dr. Kim Petry, DOE Acting Deputy Assistant Secretary for Spent Fuel and
138 Waste Disposition. Several additional DOE Office of Nuclear Energy officials also attended this
139 meeting to answer questions. Additionally, Dr. Thomas Webler of the Social & Environment
140 Research Institute outlined research that he has conducted regarding the development of
141 Consent-Based Siting processes for spent nuclear fuel disposal facilities.

142

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

146

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

159

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

162

- 163 a) The “Expedient Yes” view – siting is acceptable when a good science and safety case are
164 available
- 165 b) The “Acceptance to Gain Trust” view – independent oversight is needed for the siting to work;
166 this oversight develops from the grass-roots level.

- 167 c) The “Inclusion and Transparency “ view – a facility power-share between DOE and the host
168 community is needed. The community needs independent confirmation of DOE-reported
169 status, usually through the community hiring its own experts.
170 d) The “Demonstrate Legitimacy” view – DOE must show that it is listening to community
171 feedback on the process. Time must be taken to “do it right.”
172

173 Further details on the discussions with the DOE Officials and Dr. Webler are available in the
174 meeting minutes and meeting recording available in the “Meeting of February 28, 2022” materials
175 section on the Panel website.
176

177 A draft Advisory Opinion offered by the Panel’s Federal Nuclear Waste Policy Committee in
178 response to DOE’s Consent-Based Siting questionnaire was then discussed. (The draft represents
179 a noteworthy and significant effort by FNWP Committee members with divergent viewpoints to
180 hash-out a consensus in a respectful and civil manner, which the Committee hopes can serve as a
181 model for others as the country seeks a workable policy solution for the nation’s accumulating
182 nuclear waste.) Based on the presentations provided earlier in the meeting and after hearing
183 feedback from members of the public, the Panel voted to approve this Advisory Opinion. The
184 Approved Advisory Opinion is available from the Panel’s website at:

185 <https://publicservice.vermont.gov/document/vt-ndcap-response-doe-consent-based-siting-rfi>.
186

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

191 [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)
192 [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
193 Advisory Opinion appears on pages 379 through 383 in this document. The Vermont State
194 Nuclear Engineer, Tony Leshinskie, filed additional comments on behalf of the Vermont Public
195 Service Department. These comments appear on pages 1026 through 1035 in the “Public
196 Responses to RFI” document.
197

198 **May 9, 2022**

199

200 The Panel’s first regular meeting of the year occurred on May 9. Unlike the January 10 and
201 February 28 that focused on the 2021 Annual Report and DOE’s Consent-Based Siting Process,
202 respectively, the May 9 meeting was the first 2022 Panel meeting in which NorthStar and several
203 State Agencies summarized VY decommissioning activities during the current calendar year.
204

205 • **NorthStar Update on VY Site Decommissioning Activities:**

206 Panelist Corey Daniels, VY’s Senior Spent Fuel Storage Manager, summarized decommissioning
207 activities completed since December 2021. (Slides for this presentation are available from the
208 Panel’s website.) Reactor Vessel (RV) segmentation has progressed to segmenting the cylindrical
209 portion of the RV itself. Grout has been injected into the RV lower dome to simplify collecting of

210 metal shavings produced by the segmentation. Recent equipment removals from the Reactor
211 Building include Hydraulic Control Unit components, Control Rod Pump system components, and
212 the Stand-By Liquid Control tanks. Creation of a new accessway between the Reactor and Turbine
213 Buildings was described. Removal of components at the River Intake and Discharge Structures
214 continue; most recently, the Discharge Pumps were removed.

215

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

223

224 • **Public Service Department (PSD) Update:**

225 PSD Special Counsel Eric Guzman outlined PSD's fiscal oversight of the VY Decommissioning
226 project required by the Memorandum of Understanding (MOU) in effect as part of NorthStar's
227 purchase of VY. Nick Capik and Mark Gymr of Four Points Group (FPG), PSD's consultants for
228 overseeing the project, were also present to provide additional information, as needed. (Slides for
229 this presentation are available from the Panel's website.)

230

231 PSD's financial and technical oversight role was outlined, which includes receiving updates on
232 work completed versus work remaining and project expenditures versus funds remaining. PSD
233 coordinates with other State Agencies and FPG to assess project status and whether
234 decommissioning trust fund reimbursement requests are consistent with the work completed.
235 PSD also meets with NorthStar regularly to conduct any follow-up necessary on NorthStar's self-
236 reporting. Regular site visits by FPG are conducted to observe completed work. The most recent
237 visit was on May 5. The site visits continue to show that project progress is consistent with that
238 described in NorthStar's status reports. NorthStar remains on track to complete the project in
239 2026 with the currently available funding.

240

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

245

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

247 Graham Bradley, Hazardous Sites Manager in DEC's Waste Management and Prevention Division
248 outlined the Agency of Natural Resources (ANR) / DEC's recent interactions with VY. (Slides for
249 this presentation are available from the Panel's website.) Regular status calls (usually on a
250 biweekly basis), draft permit and corrective action plan reviews continue. DEC continues to work
251 closely with NorthStar's remediation contractor, Haley & Aldrich, to address contaminant issues

252 in previously identified Areas of Concern (AOCs). No new contamination areas have been found
253 onsite. Samplings at the former Cooling Tower sites were described. No contaminations have
254 been identified, but sampling will continue. Volatile Organic Compounds (VOCs) sampling near
255 the Turbine Building has identified two sites requiring clean-up. These were expected since
256 vehicle fuels were stored in these areas. Contaminated soil detected near the former East Cooling
257 Tower Transformer site was removed and used as ballast in a radioactive waste shipment sent to
258 Waste Control Specialists (WCS).

259

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

269

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

276

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

285

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

295
296 Panel Chair Emily Davis noted that because Legislature was called into session this evening on
297 short notice, several Panelists became unexpectedly unavailable shortly before the meeting's
298 start. She suggested that meeting attendance could be pursued through the Public Service
299 Commissioner's Office. At this point, State Nuclear Engineer Tony Leshinskie noted that Panelist
300 Bob Leach had recently joined the meeting webcast. The Panel now had a quorum for the meeting
301 (which subsequently allowed the Panel to formally approve meeting minutes for the December
302 2021, January and February meetings).

303
304 • **Discussion of Federal Nuclear Waste Policy (FNWP) Committee Activities:**
305 Lissa Weinmann, Chair of the Panel's Federal Nuclear Waste Policy Committee, briefly described
306 the Committee's most recent activities. Representatives from Deep Isolation, Inc. outlined their
307 proposed alternative for geologic spent fuel repositories at the Committee's March 28 meeting.
308 (Details of this proposal are discussed in Section XI.B of this report.) The Committee will meet
309 again on May 23. Tony Leshinskie is working on having representatives from Holtec International
310 attend this meeting to discuss their current plans for long-term monitoring and aging
311 management for dry cask storage systems, such as those currently used at the VT Yankee site.

312
313 • **During General Public Comments:** The Panel was asked to do more to publicize its recent
314 Advisory Opinion on Spent Nuclear Fuel disposal, as this work is very important. The Legislature,
315 Governor's Office, relevant State Agencies, Vermont's Congressional Delegation, and the Public
316 must be kept apprised of Panel activities, particularly when Advisory Opinions are published.

317
318 **September 19, 2022**

319
320 Much like the Panel's May 9 meeting, the September 19 meeting largely consisted of reports from
321 NorthStar and several State Agencies on recent VY decommissioning activities. Several Panel
322 administrative items were also discussed. With 11 Panelists in attendance at the start of the
323 meeting (a twelfth Panelist joined late), a quorum was present throughout the meeting (9
324 Panelists required for quorum).

325
326 • **NorthStar Update on VY Site Decommissioning Activities:**
327 NorthStar Panelist Corey Daniels summarized decommissioning activities completed since May
328 2022. (Slides for this presentation are available from the Panel's website.) It was noted that
329 NorthStar continues to work without an OSHA Recordable Lost Time Accident since starting VT
330 Yankee's active decommissioning in January 2019. The NRC has issued no cited violations, nor
331 have there been any non-cited violations, during this time. Progress on dismantling Reactor
332 Building (RB) components and the demolition of other onsite structures was described. The
333 Control Room and the RB Computer Room have been completely cleared of components. Cabling
334 between the Control, Cable Spreading, and Switchgear Rooms has been cleared. Demolition of the
335 Control Block Building (which housed the Control and Computer Rooms) has begun. Preparations
336 for Turbine Building demolition continue.

337
338 Excavation and downsizing of the Interim Off-Gas (IOG) System was discussed, as was land
339 regrading at the Cooling Towers site. Progress on the new accessway between the Reactor and
340 Turbine Buildings was described. A monorail system is being constructed to facilitate removal of
341 the RB Torus structure through this accessway. Clearing of Torus structure internal components
342 was described. Segmentation and removal of the Reactor Vessel (RV) has completed; the last
343 several steps were described in detail. Demobilization of RV segmentation equipment is
344 underway.

345
346 • **Department of Environmental Conservation (DEC) Update:**
347 Panelist Trish Coppolino, ANR / DEC Waste Management and Prevention Division Program
348 Manager, outlined the Agency of Natural Resources (ANR) / DEC's recent interactions with VY.
349 (Slides for this presentation are available from the Panel's website.) Regular status calls, draft
350 permit and corrective action plan reviews continue. Sampling programs for non-radiological
351 contaminants continue to show no significant contamination issues at the VY site. No unexpected
352 site contaminations have been identified thus far. ANR/DEC continues to work closely with
353 NorthStar's remediation contractor, Haley & Aldrich, and DEC's consultant, Atlas, on plans for
354 addressing potential contaminant issues at VY's previously identified Areas of Concern (AOCs).
355 DEC is currently reviewing VT Yankee's annual groundwater monitoring report, which was
356 received in June as required. Due to ongoing structure demolitions onsite, DEC's groundwater
357 monitoring program is currently down to four sampling wells. The monitoring program has
358 collected data for over three years without identifying new causes for concern. Additional
359 monitoring wells will be sampled as onsite demolitions complete.

360
361 Recent samplings for PFAS (per- and polyfluoroalkyl substances) have identified several
362 contaminated locations (as expected). However, the environmental impacts are expected to be
363 minor; the contamination levels are only slightly above EPA limits. Samplings for PCBs and
364 Volatile Organic Compounds (VOCs) continue.

365
366 Corrective Action Plans for addressing contaminations in onsite AOC #5 and AOC #7 are currently
367 available for public comments. These planned remediations, once fully approved, would occur
368 sometime in 2023.

369
370 • **Public Service Department (PSD) Update:**
371 Jim Porter, PSD Director for Public Advocacy outlined PSD's fiscal oversight of the VY
372 Decommissioning project required by the Memorandum of Understanding (MOU) in effect as part
373 of NorthStar's purchase of VY. Nick Capik and Mark Gymr of Four Points Group (FPG), PSD's
374 consultants for overseeing the project, were also present to provide additional information, as
375 needed. (Slides for this presentation are available from the Panel's website.) PSD's financial and
376 technical oversight role was outlined similarly to the report provided at the May 9 Panel meeting.
377 Regular site visits by FPG are conducted to observe completed work. The most recent visit was on

378 July 18. The observed project progress was consistent with that described in NorthStar's most
379 recent (May and June 2022) status reports.

380
381 Updates on the Decommissioning and Site Restoration Trust Funds were provided. As of
382 August 31, approximately \$211.3 million remains in the Decommissioning Trust; approximately
383 \$51.7 million remains in the Site Restoration Trust. As of August 30, the projected cost to
384 complete Site Restoration is \$12.6 million. However, the projected cost to complete
385 Decommissioning and License Termination is \$214 million, meaning that there is currently a
386 shortage in the Decommissioning Trust Fund. PSD believes that the current Decommissioning
387 Trust shortage is reflective of rising interest rate impacts on the Decommission Trust investments.
388 The Decommissioning and Site Restoration Trust balances do not include the \$55 million
389 Financial Assurance Escrow required by Paragraph 2(c) of the Memorandum of Understanding
390 (MOU) established for VT Yankee's decommissioning. Overall, NorthStar remains on track to
391 complete the project on schedule with the currently available funding

392
393 • **Additional Agency Reports:** Panelist Bill Irwin, Vermont Radiological & Toxicological
394 Sciences Program Chief, reported that Vermont Department of Health continues to be satisfied
395 with the reporting NorthStar has provided to date. The reports indicate that the project is moving
396 forward reasonably and responsibly.

397
398 • **During Panel Questions:** In response to a question from Panelist Bill Irwin, Corey Daniels
399 indicated that building intrusion water continues to be collected as necessary. The water is
400 initially held in storage (frack) tanks and is then shipped offsite for disposal.

401
402 • **In response to questions from the Public:** Corey Daniels indicated that all radioactive
403 materials shipped offsite are sent to Waste Control Specialists (WCS) facilities in Texas. However,
404 some pre-release (non-radiological / non-hazardous) materials are shipped to industrial disposal
405 facilities. He also clarified that some parts of the Reactor Vessel are being shipped offsite since
406 they still qualify as Low-Level Radioactive waste. Only spent nuclear fuel qualifies as High-Level
407 Radioactive Waste. The next most radioactive waste category, Greater Than Class C (GTCC)
408 radioactive waste is the only low-level radioactive waste category that cannot be shipped. VY's
409 GTCC waste consists of several Reactor Vessel internal components, but not the Reactor Vessel
410 itself. VT Yankee's GTCC waste is expected to be moved to the onsite Spent Fuel Storage Facility
411 (aka the Dry Cask Storage pads or ISFSI) within the next month.

412
413 In response to a question from State Nuclear Engineer Tony Leshinskie, Corey Daniels indicated
414 that, with the completion of VY's Reactor Vessel segmentation, Orano's work on the VY
415 decommissioning project is coming to an end. However, Orano is still responsible for some Spent
416 Fuel Pool clean-up items and several tasks related to transferring the GTCC Waste to the onsite
417 ISFSI.

418

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

423
424 In response to a question from Panelist Lissa Weinmann regarding the current decommissioning
425 schedule, Corey Daniels indicated that that NorthStar still anticipates beating the 2030
426 decommissioning project deadline by a few years. Active decommissioning could complete in
427 2026. However, this early end date does not include time for completing all site release activities.
428 Those would complete in 2027, assuming that ongoing decommissioning work continues to
429 progress smoothly. NorthStar’s overall goal is to do the decommissioning project right with the
430 currently available funding. The project remains on track to be completed within the available
431 budget.

432
433 Panelist Chris Company noted that the Statute establishing the Panel will need to be revisited once
434 active decommissioning is complete. State Nuclear Engineer Tony Leshinskie added that the
435 Yankee Rowe Spent Fuel Storage Facility’s Community Advisory Panel could serve as a model for
436 VT NDCAP once VY’s active decommissioning is complete.

437
438 • **Panel Membership Changes & Administrative Items:** Panel Chair Emily Davis noted that
439 Sara Coffey’s term on the Panel expired at the end of August. She declined reappointment.
440 Accordingly, there are now three vacancies on the Panel, the Massachusetts Towns representative,
441 the New Hampshire Towns representative and one of two citizen appointees by the Vermont
442 House Speaker (Sara Coffey’s former position on the Panel). Ms. Davis reported that the House
443 Speaker’s Office is looking for recommendations for a new appointee. If anyone on the Panel has
444 suggestions, they can be forwarded to the Panel Chair.

445
446 State Nuclear Engineer Tony Leshinskie noted that filling a Panel vacancy is easier when there is a
447 volunteer willing to accept the position. Panelist Chris Company added that recruiting Panelists
448 was likely easier when “groundworks” discussions for VY’s decommissioning were underway.
449 Discussing plans and items such as the PSDAR (Post-Shutdown Decommissioning Activities
450 Report) were likely more interesting than the Panel’s more recent meetings discussing steady
451 decommissioning progress. Mr. Company suggested that the Press present include that the Panel
452 is looking for new members in its coverage of this evening’s meeting.

453
454 Emily Davis proposed drafting a press release highlighting the Panel’s recent work and noting that
455 it is looking new members to fill several vacancies. After additional discussion, the Panel agreed
456 with this idea. Ms. Davis agreed to have a draft of the press release available at the next Full Panel
457 meeting. After additional discussion, the Panel agreed that the proposed press release would
458 focus on filling the vacant Vermont House Speaker’s appointee position.

459

460 **Panel Notifications on NRC Decommissioning Rulemaking:** Panel Chair Emily Davis noted that
461 an opportunity for public comments on the NRC's Decommissioning Rulemaking recently closed
462 without the Panel discussing whether it wanted to consider commenting on these proposed rules.
463 Ms. Davis asked whether the Panel wished to pursue comments on this Rulemaking.
464

465 State Nuclear Engineer Tony Leshinskie briefly outlined the history of this NRC Rulemaking effort,
466 which began in late 2015, when the NRC published a detailed questionnaire on decommissioning-
467 related topics for which it was considering rulemaking. Vermont State Agencies provided a
468 combined comments set on the questionnaire in early 2016, which were endorsed by
469 Massachusetts, New York, and Connecticut. Follow-up comments were provided to the NRC in
470 mid-2017. The currently proposed NRC rules focus on transitioning an operating power plant to
471 active decommissioning. VY's decommissioning is well past this phase, hence, the currently
472 proposed rules would not impact VY's decommissioning. Accordingly, this rulemaking effort has
473 not been a high priority for Vermont. Nonetheless, when asked to endorse comments from New
474 York State on the currently proposed rules, the State Nuclear Engineer recommended that
475 Vermont endorse them since they reiterated Vermont's comments filed in 2016 and 2017.
476

477 Chris Campany added that Windham Regional Commission has filed comments on
478 decommissioning rulemaking for decades. The comments have not changed much in that time,
479 but WRC is open to hearing or suggesting Panel Positions. Lissa Weinmann suggested that the
480 Panel could endorse decommissioning rulemaking comments filed by other organizations, such as
481 the International Brotherhood of Electrical Workers (IBEW).
482

483 Panel Chair Emily Davis asked if any Panel members felt that the Panel should review the NRC's
484 decommissioning rulemaking further. No replies were heard. Consensus was reached that the
485 Panel should consider endorsing IBEW's comments the NRC decommissioning rulemaking.
486

487 The Panel then discussed improving notifications of upcoming decommissioning-related actions.
488 After requesting clarification, Tony Leshinskie agreed to keep the Panel informed on any requests
489 from Federal Agency regarding decommissioning-related topics, as well as any significant State
490 actions in decommissioning-related topics.
491

492 Panel Chair Emily Davis noted that US Department of Energy published its initial report on
493 received Consent-Based Siting Process comments on September 15. More information on the next
494 steps in the process will be available soon.
495

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

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

502
503 State Nuclear Engineer Tony Leshinskie provided additional details. Oliver Edelson, Legislative
504 Assistant to California Congressional Representative Mike Levin, has agreed to speak to the FNWP
505 Committee. Congressman Levin co-chairs the Congressional Spent Nuclear Fuel Solutions Caucus,
506 which Mr. Edelson administers. From preliminary discussions with Mr. Edelson, the Caucus is in a
507 learning phase much like the FNWP Committee is. The Caucus has begun outreach to other
508 organizations interested in nuclear waste policy issues. Opening a discussion with the Caucus
509 could be beneficial for the Panel.

510
511 Based on Mr. Edelson's availability, the FNWP Committee's next meeting has been rescheduled to
512 Monday, October 3 from noon to 1:30 PM.

513
514 • **General Public Comments:** The Panel was thanked for tonight's discussions on improving
515 public outreach.

516
517 **December 12, 2022**

518
519 Much like the Panel's May and September meetings, the December 12 meeting largely consisted of
520 reports from NorthStar and several State Agencies on recent VY decommissioning activities. The
521 Panel's Annual Report was finalized and Election of Officers was conducted. With 12 Panelists in
522 attendance at the start of the meeting, a quorum (9 Panelists required) was present throughout
523 the meeting.

524
525 • **NorthStar Update on VY Site Decommissioning Activities:**
526 NorthStar Panelist Corey Daniels summarized decommissioning activities completed since
527 September 2022. (Slides for this presentation are available from the Panel's website.) It was
528 noted that NorthStar has worked over 1.4 million hours without an OSHA Recordable Lost Time
529 Accident since starting VT Yankee's active decommissioning in January 2019. The NRC has issued
530 no cited violations during this time. Progress on dismantling Reactor Building (RB) components
531 and the demolition of other onsite structures was described. Reactor Vessel (RV) segmentation
532 has completed. Current RB dismantling efforts are focused on removing Recirculating Water
533 System (RWS) components. Downsizing and removal of the RB Torus structure continues;
534 roughly one-sixteenth of the entire structure has been removed.

535
536 Demolition of the Control Block Building (which housed the Control and Computer Rooms) and
537 the Containment Access Building has completed. Demolition of the Reactor Building Airlock is
538 nearing completion. Current decommissioning work in the Turbine Building consists of cable
539 clearing, which will continue for several more months. Essentially, the Reactor and Turbine
540 Buildings are the only structures from the operating plant that are still standing.

541
542 On October 19, VY's Greater-Than-Class C (GTCC) low level radioactive waste was moved to the
543 ISFSI. The GTCC waste consists of several highly contaminated VY Reactor Vessel (RV) internal

544 components which had been stored temporarily in VY's Spent Fuel Pool following their removal
545 from the RV. The GTCC waste is stored in a Non-Fuel Waste Container, which is similar in design
546 to the dry casks storing VY's spent nuclear fuel.

547
548 Confirmatory radiological surveys at the Cooling Towers site were conducted during the week of
549 November 14 by an independent contractor (Oak Ridge Institute for Science and Education). The
550 monorail system in the new accessway between the Reactor and Turbine Buildings is fully
551 operational. Orano's work on the VY decommissioning project has completed.

552

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

554 Graham Bradley, Hazardous Sites Manager in DEC's Waste Management and Prevention Division
555 outlined the Agency of Natural Resources (ANR) / DEC's recent interactions with VY. (Slides for
556 this presentation are available from the Panel's website.) Regular status calls, draft permit and
557 corrective action plan reviews continue. Sampling programs for non-radiological contaminants
558 continue to show no significant contamination issues at the VY site. No unexpected site
559 contaminations have been identified thus far. ANR/DEC continues to work closely with
560 NorthStar's remediation contractor, Haley & Aldrich, and DEC's consultant, Atlas, on plans for
561 addressing potential contaminant issues at VY's previously identified Areas of Concern (AOCs).
562 DEC is closely following the remediation of the drain lines for the VY's abandoned onsite
563 Chemistry Lab.

564

565 Due to ongoing structure demolitions onsite, DEC's groundwater monitoring program has
566 suspended to avoid inadvertently destroying sampling wells. The monitoring program has
567 collected well over three years of data without identifying new causes for concern. Minor PFAS
568 (per- and polyfluoroalkyl substances) and Volatile Organic Compounds (VOCs) contaminations
569 have been identified onsite but are not expected to be a significant issue. DEC will continue to
570 work with NorthStar on developing the post-demolition groundwater monitoring plan.

571

572 • **Public Service Department (PSD) Update:**

573 Eric Guzman, PSD Special Counsel outlined PSD's fiscal oversight of the VY Decommissioning
574 project required by the Memorandum of Understanding (MOU) in effect as part of NorthStar's
575 purchase of VY. Nick Capik of Four Points Group (FPG), PSD's consultants for overseeing the
576 project, was present to provide additional information, as needed. (Slides for this presentation
577 are available from the Panel's website.) PSD's financial and technical oversight role was outlined
578 similarly to the report provided at the May and September Panel meetings. Regular site visits by
579 FPG are conducted to observe completed work. The most recent visit was on September 29. The
580 observed project progress was consistent with that described in NorthStar's most recent status
581 reports.

582

583 Updates on the Decommissioning and Site Restoration Trust Funds were provided. As of
584 November 30, the projected cost to complete Decommissioning and License Termination is \$190
585 million, but the current value of the Nuclear Decommissioning Trust (NDT) is \$188.3 Million. The

586 NDT is invested in US Treasury Bonds. The NDT value reflects the current worth of these bonds.
587 If the bonds are held to maturity, which is usually the case, their value will be \$193.3 million,
588 which is sufficient to cover the current cost of decommissioning. PSD will continue to monitor the
589 fund values. Overall, NorthStar remains on track to complete the project on schedule with the
590 currently available funding.

591

592 • **During Panel Questions:** Corey Daniels indicated that VY's GTCC waste would not decay
593 down to Class C waste levels within our lifetimes. Eric Guzman reiterated that, despite recent
594 drops in US Treasury Bond values, VY's decommissioning funds remained sufficient to complete
595 VY's decommissioning, provided that the Bonds are held to maturity. The Public Service
596 Department will continue to closely track fund values and decommissioning costs.

597

598 • **In response to questions from the Public:** Corey Daniels outlined conditions for which
599 underground pipes could be left in place. This can only be done if the pipes are held in a stable
600 condition, e.g., encased in concrete, with radiological and hazmat surveys demonstrating that they
601 comply with site release criteria. It was also reported that there were currently no legislative
602 efforts underway that would allow transportation of GTCC waste.

603

604 • **In the Early General Public Comments:** The Panel was asked to continue work on
605 improving its public outreach.

606

607 **Endorsement of IBEW Decommissioning Rulemaking Comments:** In a 6 to 4 with one
608 abstention (and one Panelist absent), the Panel voted to endorse a set of International
609 Brotherhood of Electrical Worker (IBEW) comments regarding the NRC's ongoing
610 Decommissioning Rulemaking efforts. The endorsed comments are available at:

611 [https://publicservice.vermont.gov/document/ibew-comments-proposed-nrc-decommissioning-](https://publicservice.vermont.gov/document/ibew-comments-proposed-nrc-decommissioning-rules)
612 [rules.](https://publicservice.vermont.gov/document/ibew-comments-proposed-nrc-decommissioning-rules)

613

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

615 Lissa Weinmann, Chair of the Panel's Federal Nuclear Waste Policy Committee, briefly described
616 the Committee's recent activities. The Committee most recently met on December 5 to review the
617 summaries of its 2022 activities included in the Panel's draft annual report. Potential Committee
618 activities for 2023 were also discussed. The Committee will continue to meet on a quarterly basis,
619 with meeting dates set for March 6, June 5, September 11, and December 4. Lissa Weinmann will
620 continue as Committee Chair for 2023. For its March 6 meeting, the Committee will invite two
621 speakers who will provide opposing views on DOE's proposed Consolidated Interim Spent Fuel
622 Storage facilities.

623

624 • **Draft Annual Report for 2022:**

625 A first draft of the Panel's 2022 Annual Report to the Legislature, authored by State Nuclear
626 Engineer Tony Leshinskie, was reviewed. Actions for finalizing the report by its January 15, 2023

627 due date were determined. The report was unanimously approved, subject to implementing the
628 authorized changes.

629

- 630 • **Election of New Panel Officers:** In separate votes, Steve Skibniowsky was elected Panel
631 Chair and Lissa Weinmann was elected Panel Vice-Chair for terms of 1 year. The Panel thanked
632 Emily Davis her service as Panel Chair in 2022.

633

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

635

- 636 • 1/3 Site Decommissioning Activities resume following Holiday Break
- 637 • 1/3 Preparations for segmenting the Reactor Vessel (RV) itself begin; Collection of metal
638 shavings and cutting media from RV internals segmentations underway;
639 Decontamination of exposed RV Cavity & Dryer / Separator Pit (DSP) walls resume;
640 Turbine Building (TB) piping and equipment removals resume; Clearing of Radwaste
641 Processing Building rubble and River Intake Structure components resume; West
642 Cooling Tower foundation demolition resumes; Radioactive waste shipments via
643 railcars resume
- 644 • 1/10 Removal of Control Blade Hydraulic Control Units begins; Preparations to cut new
645 accessway between RB & TB lower levels begin;
- 646 • 1/12 NRC Second Half 2021 Inspection Exit Meeting – no reported issues, findings,
647 or violations
- 648 • 1/17 West Cooling Tower foundation demolition completed (except for required
649 radiological surveys); Cleaning / decontamination of TB sumps underway
- 650 • 1/24 Draining of RV Cavity & DSP resumes (started 11/8/2021); Travelling Screens
651 removed from River Intake Structure
- 652 • 1/28 Draining of RV Cavity & DSP completed; Circulating Water System pump motors
653 removed from River Intake Structure
- 654 • 2/7 First Nuclear Regulatory Commission (NRC) onsite inspection of the year occurs
655 (2/7 through 2/10)
- 656 • 3/7 RV Bellows removal begins; RV draining for eventual segmentation underway;
657 New TB personnel entrance cut into Lube Oil Storage Room west wall
- 658 • 3/9 Current phase of River Intake Structure components removal complete; River
659 Discharge Structure components removal begins
- 660 • 3/10 RV draining completed; removal of remaining RV Head Studs begins
- 661 • 3/16 Quarterly groundwater sampling completed
- 662 • 3/17 RV Head Studs removal completed; RV metal shavings / cutting media collection
663 & RV internal surface decontamination completed
- 664 • 3/24 RV Bellows removal completed; RV Nozzles cutting begins
- 665 • 3/31 NorthStar files required Annual VY Decommissioning Trust Fund and Spent Fuel
666 Management Fund reports
- 667 • 3/31 Removal of Control Blade Hydraulic Control Units completed
- 668 • 4/4 Cutting for new accessway between RB & TB lower levels begins

- 669 • 4/4 Second NRC onsite inspection of the year occurs (4/4 through 4/7)
- 670 • 4/14 VY "Tabletop" Site Emergency Drills Completed
- 671 • 4/18 Radiation Control Area (RCA) entrance relocated to TB Lube Oil Storage Room
- 672 • 4/26 Diesel Fire Pump & Circulating Water System Pumps removed from River Intake
- 673 Structure
- 674 • 4/29 Site staff in remaining RB & TB offices relocated to Plant Support Building & adjacent
- 675 office trailers; Onsite Chemistry Lab moved to Gate House #2
- 676 • 5/1 VY Start-Up Transformers disconnected from onsite switchyard, resulting in
- 677 RB & TB transition to "cold & dark" conditions
- 678 • 5/2 RV segmentation begins; removal of abandoned RB & TB electrical systems begins;
- 679 cable clearing and dismantling of VY Control Room begins
- 680 • 5/6 First RV "ring cut" segmentation completed; component removals from River Intake
- 681 & Discharge Structures complete (concrete structures to be removed later)
- 682 • 5/9 Excavation / underground pipes & foundations removal at Cooling Towers begins
- 683 • 5/13 Cutting for new accessway between RB & TB lower levels completed
- 684 • 5/23 Internal demolition (gutting) of TB "plant services" module begins
- 685 • 5/30 Materials Transfer "monorail" construction through RB & TB lower levels accessway
- 686 begins
- 687 • 6/1 Annual site roadway assessment completed (required by Town of Vernon)
- 688 • 6/10 RV Nozzles cutting completed
- 689 • 6/13 VY Control Room dismantling completed; VY Cable & Switchgear Rooms dismantling
- 690 begins
- 691 • 6/13 Third NRC onsite inspection of the year occurs (6/13 through 6/17)
- 692 • 6/16 New NRC Project Manager for VY Decommissioning visits site
- 693 • 6/22 Quarterly groundwater sampling completed; Annual groundwater sampling report
- 694 submitted for DEC review
- 695 • 6/29 Fifth & final RV "ring cut" segmentation completed
- 696 • 6/30 1.3 million working hours without an OSHA recordable injury at VY celebrated
- 697 • 7/5 Torus Structure segmentation begins
- 698 • 7/11 Excavation for remediation & removal of VY Interim Off-Gas (IOG) System begins
- 699 • 7/12 NRC First Half 2022 Inspection Exit Meeting – no reported issues, findings, or
- 700 violations
- 701 • 7/18 Excavation / structures removal at Cooling Towers site completed; regrading at
- 702 Cooling Towers site begins
- 703 • 7/25 RV Lower Head removal cutting & Cooling Tower spray pond demolition begin
- 704 • 8/1 IOG System structures demolition begins
- 705 • 8/1 Fourth NRC onsite inspection of the year occurs (8/1 through 8/4); Preliminary
- 706 License Termination Plan (LTP) meeting held at site
- 707 • 8/4 RV Lower Head removed from RV Cavity; segmentation for offsite disposal begins
- 708 • 8/16 NRC onsite for follow-up to 8/1 to 8/4 inspections
- 709

- 710 • 8/18 RV Lower Head segmentation completed
- 711 • 8/22 Torus Structure sludge removal begins; IOG System demolition completed
- 712 • 8/29 Excavation to remediate former Effluent Stack site begins
- 713 • 9/2 Torus Structure sludge removal completed; VY Cable & Switchgear dismantling
- 714 completed; final preps for demolishing "Control Block" building underway;
- 715 demobilization of RV segmentation equipment underway
- 716 • 9/15 Demolition of Control Block building begins
- 717 • 9/29 Demolition of Control Block building completed
- 718 • 9/30 Regrading at Cooling Towers site completed; Final radiological surveys at
- 719 Cooling Towers site begin
- 720 • 10/3 Fifth NRC onsite inspection of the year occurs (10/3 through 10/6)
- 721 • 10/4 NRC assigned License Termination Inspector visits site
- 722 • 10/6 Final radiological surveys at Cooling Towers and IOG System sites completed
- 723 • 10/10 DEC issues revised VY river discharge permit for public comment
- 724 • 10/10 RB Recirculating Water System (RWS) components removal begins
- 725 • 10/12 Onsite Radiological Emergency Drill completed
- 726 • 10/17 Demolition of Orano onsite Horizontal Transfer (radwaste) Storage modules begins
- 727 • 10/19 Greater-Than-Class C Radioactive Waste moved to VY Dry Cask Storage Pad
- 728 • 10/21 Last container of RV segments shipped to Waste Control Specialists
- 729 • 10/24 Orano demobilization from VY site begins
- 730 • 10/27 RWS Pump Motors removed
- 731 • 10/31 Equipment removals from RB airlock & Containment Access Building begin
- 732 • 11/7 Final draining & decontamination of Spent Fuel Pool begins; components clearing in
- 733 RB Radwaste Clean-Up System Room underway
- 734 • 11/10 Demolition of Orano Horizontal Transfer Storage (HTS) modules completed
- 735 • 11/14 DEC approves revised VY river discharge permit
- 736 • 11/14 Sixth NRC onsite inspection of the year occurs (11/14 through 11/17); NRC
- 737 Contractor conducts independent, confirmatory survey at Cooling Towers site
- 738 • 11/14 Demolition of Containment Access Building begins; RB Airlock equipment removals
- 739 completed
- 740 • 11/15 Demolition of Containment Access Building completed
- 741 • 11/21 Demolition of RB Airlock begins
- 742 • 11/22 Clearing of Orano HTS module debris completed (last Orano task at VY site)
- 743 • 11/23 Orano demobilization from VY site completed
- 744 • 11/28 Excavations at former IOG System site covered and regraded; area cordoned-off
- 745 as radiologically clean
- 746 • 12/16 Demolition of RB Airlock completed
- 747
- 748
- 749
- 750

751 **V. Nuclear Decommissioning Trust (NDT) and Site Restoration Trust (SRT) Fund Updates**
752 *(Based on latest available data for 2022).*

753		
754	NDT	SRT
755	\$276.3 M Balance on December 31, 2021	\$56.9 M Balance on December 31, 2021
756	\$247.9 M Balance on March 31, 2022	\$52.8 M Balance on March 31, 2022
757	\$226.8 M Balance on June 30, 2022	\$52.2 M Balance on June 30, 2022
758	\$203.1 M Balance on September 30, 2022	\$50.8 M Balance on September 30, 2022
759	\$196.0 M Balance on October 31, 2022	\$50.6 M Balance on October 31, 2022
760	\$180.2 M Balance on December 31, 2022	\$51.2 M Balance on December 31, 2022

761
762 Monthly balances for the NDT and SRT are available at:
763 [https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/trust-](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/trust-balances)
764 [balances.](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/trust-balances)

765
766 Summaries of monthly expenditures for the Vermont Yankee Decommissioning Project are
767 available: [https://publicservice.vermont.gov/public-advocacy/vermont-yankee-](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/public-reports)
768 [decommissioning/public-reports](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/public-reports)

769 .

770

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

772 Transfer of VY's entire spent fuel inventory to dry cask storage was completed on August 1,
773 2018. A total of 58 dry casks, holding a total of 3,880 spent fuel assemblies, are stored at the VY
774 Independent Spent Fuel Storage Installation (ISFSI). While no changes in the configuration of
775 VY's dry casks occurred in 2022, on October 19, a new, 59th dry cask containing VY's Greater-
776 Than-Class C (GTCC) low level radioactive waste was moved to the ISFSI. (This GTCC waste
777 consists of several highly contaminated VY Reactor Vessel internal components which had been
778 stored temporarily in VY's Spent Fuel Pool following their removal from the RV.) With this
779 move, all VY GTCC waste resides at the VY ISFSI. VY's spent fuel will remain at the VY ISFSI until
780 the US Department of Energy fulfills its obligation to provide a national spent nuclear fuel
781 repository. VY's GTCC waste will remain at the VY ISFSI until a US radioactive waste disposal
782 facility is licensed to accept GTCC waste.

783

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

790

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

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

797

798 The following onsite structures were demolished during 2022:

- 799 • Control Room Block (Building)
- 800 • Containment Access Building
- 801 • Interim Off-Gas System Structures
- 802 • Orano Horizontal Transfer Storage Modules (reinforced concrete structures used for
803 temporary radwaste storage)
- 804 • "Plant Services" Building (partial demolition of a section of the Turbine Building)
- 805 • River Intake & Discharge Structure major components (structures themselves remain)
- 806 • Several below grade Cooling Tower structures
- 807 • Abandoned security structures & barricades (none of which impact the VY ISFSI)

808

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

812

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

819

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

827

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

831

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

835

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

- 837
- 838 • Rainfall at the VY site during 2022 returned to more typical annual values (rather than the
839 unusually high 2021 rainfall). Accordingly, the rate of groundwater entering the Turbine
840 Building in 2022 is similar to rates seen in 2018 through 2020.
 - 841 ○ In leakage rates ranged between 200 and 700 gallons per day in 2022
 - 842 ○ At End of Year, the rate was under 300 gallons per day (similar to previous end of
843 year rates).
 - 844 ○ In leakage remains below rates initially seen in 2015
 - 845 • Roughly 434,400 gallons of in-leakage water have shipped in 2022
 - 846 ○ All VT Yankee water shipments were sent to Waste Control Specialists' (WCS) NRC-
847 licensed disposal site in Andrews County, Texas during 2022.
 - 848 ○ No water has shipped to US Ecology's hazardous waste disposal facility in
849 Grandview, Idaho, even though Vermont Yankee received NRC approval in 2021 to
850 ship up to 2,000,000 gallons of contaminated water to this facility. Vermont Yankee
851 was previously allowed to ship a total 200,000 gallons of contaminated water to this
852 facility during 2019 and 2020.
 - 853 ○ 20 in-leakage water shipments occurred in 2022, all shipments made were via
854 tanker rail cars.
 - 855 ○ Each in-leakage water shipment contained no more than 0.004 Curies of radioactive
856 material
 - 857 ○ Groundwater shipments to WCS facilities continue "as-needed."
 - 858 • A total of 2,143,400 gallons of in-leakage water have been shipped to date
 - 859 • The system of water diversion wells installed in 2020 along the Turbine Building periphery
860 to mitigate future water shipments remains in use. However, this system does not address
861 all potential intrusion water sources. Diverted, uncontaminated water is discharged to the
862 Connecticut River on an as-needed basis. Each discharge is limited to ~15,000 gallons per
863 day.
 - 864 • VY completed shipping a roughly 900,000 gallon inventory of contaminated Process Water
865 (water from abandoned VY systems) previously stored in the Suppression System Torus to
866 WCS facilities. Shipments of this inventory began in 2021.
 - 867 ○ ~23,000 gallons per shipment
 - 868 ○ 30 shipments (~633,700 gallons) shipped in 2022
 - 869 • During 2022, VY also shipped most of a 288,000 gallon contaminated water inventory
870 previously used in the Spent Fuel Pool to WCS facilities. This is the last Process Water
871 inventory at the site.
 - 872 ○ ~23,000 gallons per shipment
 - 873 ○ 9 shipments (~207,000 gallons) shipped in 2022
 - 874 ○ Each Process Water shipment contained between 0.065 and 0.1 Curies of
radioactive material

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IX. Decommissioning Waste Shipments Summary

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

IX.A Radioactive Waste Shipments Summary

An annual summary of Vermont Yankee’s radioactive waste shipments is published in mid-May of the following calendar year as part of the “Radioactive Effluent Release Report” filed with the US Nuclear Regulatory Commission and the Vermont Public Service Department. Preliminary radioactive waste volume data available as of December 29, 2022 indicates that approximately 293,900 cubic feet of radioactive waste was shipped from the Vermont Yankee site during 2022 (somewhat less than the ~380,000 cubic feet shipped in 2021). The total weight of the waste shipped in 2022 exceeds 19,500,000 pounds (>9,700 tons). The total radiological activity of the shipped waste is 7500 Curies (significantly lower than the 27,460 Curies shipped in 2021, but well up from 522.8 Curies and 126,8 Curies shipped in 2020 and 2019, respectively). All radioactive waste shipments in 2022 were sent to Waste Control Specialists’ (WCS) disposal facility Andrews County, Texas. 122 radioactive waste shipments were made in 2022; 111 of these were made via railcar. The remaining 11 shipments were made by truck. Over 500 radioactive waste shipments have occurred since the start VY’s active decommissioning in 2019.

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

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

IX.B Hazardous Waste Shipments Summary

- 107 cubic yards of asbestos was shipped to the following facility:
 - Minerva Landfill, Waynesburg, OH
- 1,596,310 pounds of ferrous and non-ferrous scrap metal was shipped to the following facilities for recycling:
 - Mattuchio Scrap Metal, Everett, MA
 - Minichiello Brothers Inc., Lowell, MA

917 **X. Vermont Congressional Delegation**

918
919 While Vermont Congressional Delegation Staff did not formally speak at any NDCAP Full Panel or
920 NDCAP Federal Nuclear Waste Policy Committee meetings during 2022, Staff from Senator
921 Bernie Sanders' and Congressman Peter Welch's Offices have kept Panel Leadership apprised of
922 DOE and NRC activities and publications of potential interest to the Panel. Most of these
923 communications came from Rebecca Ellis and Alex Piper of Congressman Welch's Office and
924 Haley Pero of Senator Sanders' Office.

925
926 Communications with Congressman Welch's Office were especially helpful in arranging for Mr.
927 Oliver Edelson from California Congressman Mike Levin's Office to speak at the Federal Nuclear
928 Waste Policy Committee's October 3 meeting regarding the activities of the Congressional Spent
929 Nuclear Fuel Solutions Caucus. Details of this presentation are available in Section XI.B of this
930 report.

931
932 Links to nuclear decommissioning and spent fuel policy-related bills that Senator Sanders and
933 Congressman Welch have either sponsored or supported are available through the NDCAP
934 Federal Nuclear Waste Policy Committee webpage at:
935 [https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/vt-](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/vt-ndcap-federal-nuclear-waste-policy)
936 [ndcap-federal-nuclear-waste-policy](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/vt-ndcap-federal-nuclear-waste-policy).

937
938 Following the announced retirement of Senator Patrick Leahy and the subsequent election of
939 Congressman Welch as Vermont's newest Senator, NDCAP will work to assure that
940 communication between the Panel and Senator Sanders, Senator-Elect Welch, and
941 Congresswoman-Elect Balint's Offices continue to be a valuable information resource for Panel
942 activities.

943

944

945 **XI. Current NDCAP Committees**

946

947 **XI.A NDCAP Issues Committee**

948

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

954

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

956

957 NDCAP created the Federal Nuclear Waste Policy Committee in December 2020 as a means for
958 the Panel to learn more about US national spent nuclear fuel storage and disposal issues. The

959 Committee is developing recommendations on US nuclear waste policies for the Full Panel to
960 consider as potential Advisory Opinions on these subjects. The Committee consists of the
961 following Panel members: Lissa Weinmann (Committee Chair), Corey Daniels, Maddy Arms, and
962 Marvin Resnikoff. No other Panel members attended any of the Committee’s meetings held in
963 2022. The Committee is administered by State Nuclear Engineer Tony Leshinskie.

964
965 The Committee met 5 times in 2022, all via Teams webcast, to learn more about current US
966 national spent nuclear fuel storage and disposal policies. Several of the Committee’s 2022
967 meetings included guest speakers from individual nuclear waste policy stakeholders. Brief
968 summaries for each meeting are included below. The Committee continued to compile a reading
969 list of relevant materials. This list is available at the Committee’s webpage at:

970 [https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/vt-](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/vt-ndcap-federal-nuclear-waste-policy)
971 [ndcap-federal-nuclear-waste-policy](https://publicservice.vermont.gov/public-advocacy/vermont-yankee-decommissioning/vt-ndcap-federal-nuclear-waste-policy)

972
973 This webpage also includes recordings of the individual Committee meetings.

974
975 Through the course of 2022, the Committee built on its 2021 Calendar Year work. A summary of
976 this earlier work is available at:

977 [https://publicservice.vermont.gov/document/federal-nuclear-waste-policy-committee-rev-2-](https://publicservice.vermont.gov/document/federal-nuclear-waste-policy-committee-rev-2-draft-report)
978 [draft-report](https://publicservice.vermont.gov/document/federal-nuclear-waste-policy-committee-rev-2-draft-report).

979 980 **January 31, 2022 Committee Meeting**

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

984 [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)
985 [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)

986
987 Further details on this Consent Based Siting process are available at:

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

989
990 Based on discussions and public input from the January 31 meeting, the Committee drafted an
991 Advisory Opinion that the Full Panel discussed at its February 28 meeting. The Committee’s
992 draft Opinion is available at:

993 [https://publicservice.vermont.gov/document/vt-ndcap-draft-advisory-opinion-usdoe-consent-](https://publicservice.vermont.gov/document/vt-ndcap-draft-advisory-opinion-usdoe-consent-based-siting-request-information)
994 [based-siting-request-information](https://publicservice.vermont.gov/document/vt-ndcap-draft-advisory-opinion-usdoe-consent-based-siting-request-information).

995
996 As noted in Section III, the Full Panel approved a version of this Advisory Opinion. The approved
997 version is available in Appendix A.

998
999
1000

1001 **March 28, 2022 Committee Meeting**

1002 At this meeting, representatives from Deep Isolation, Inc. outlined their proposed alternative for
1003 geologic spent fuel repositories. A Deep Isolation repository would store spent fuel in a series of
1004 horizontal drilled holes between 1 to 2 miles in depth, using current technology for oil drilling.
1005 The horizontal portion of each storage hole (where fuel assemblies would be stored) could be 2
1006 to 3 miles long. Individual repository holes would store fuel assemblies end-to-end, with up to
1007 200 fuel canisters (individual fuel assemblies) per borehole. Further information on Deep
1008 Isolation’s proposal is available at:

1009 <https://www.deepisolation.com/nuclear-waste-solutions/>

1010

1011 While most of Deep Isolation’s research into this proposal assume a shale geology, other bore
1012 hole depths for other geologies can be determined. Much of Deep Isolation’s current research is
1013 intended to establish site selection criteria

1014

1015 **May 23, 2022 Committee Meeting**

1016 The May 23 meeting featured a presentation by representatives of Holtec International (Joy
1017 Russell and Kim Manzione), who provided an overview of its spent nuclear fuel storage systems
1018 used at Vermont Yankee. Aging management of these systems and proposed long-term spent
1019 fuel storage was discussed, resulting in a lively questions and answers period. From the
1020 presentation and subsequent discussion, it was clear that efforts to qualify the spent fuel storage
1021 systems beyond their currently licensed 40-year use period remain under development. Holtec
1022 remains confident that the licensed use period for its spent fuel storage systems can be extended
1023 to as much as 100 years. Holtec’s presentation slides provided for this meeting are available at:

1024 [https://publicservice.vermont.gov/document/holtec-spent-fuel-storage-aging-
1025 management-presentation-vt-ndcap-nuclear-waste-policy.](https://publicservice.vermont.gov/document/holtec-spent-fuel-storage-aging-management-presentation-vt-ndcap-nuclear-waste-policy)

1026

1027 **October 3, 2022 Committee Meeting**

1028 The October 3 meeting was devoted to a discussion with Mr. Oliver Edelson, Legislative Assistant
1029 to California Congressional Representative Mike Levin. Congressman Levin, whose district
1030 includes the actively decommissioning San Onofre Nuclear Generation Station, co-chairs the
1031 Congressional Spent Nuclear Fuel Solutions Caucus, which Mr. Edelson administers.

1032

1033 The meeting discussion outlined the Caucus’ current efforts. Presently, the Caucus is focused on
1034 getting various sides in spent nuclear fuel policy debates to talk to each other. The US
1035 Congressional Representatives that comprise the Caucus are in a learning phase to better grasp
1036 spent fuel-related issues. As part of this, the Caucus has begun meeting with other organizations
1037 interested in nuclear waste policy issues.

1038

1039 Part of the meeting discussion touched on several proposed bills that would address spent fuel
1040 issues to some extent. The Sensible, Timely Relief for America’s Nuclear Districts Economic
1041 Development (STRANDED) Act was mentioned as one option. The Increasing Nuclear Safety
1042 Protocols for Extended Canister Transfers (INSPECT) Act, which would require a Resident NRC

1043 Inspector at decommissioning nuclear power plants until all spent fuel has been removed from a
1044 site's spent fuel pool(s), was also discussed.

1045

1046 Mr. Edelson's presentation to the Committee is available at:

1047 [https://publicservice.vermont.gov/document/presentation-congressional-spent-nuclear-fuel-
1048 solutions-caucus](https://publicservice.vermont.gov/document/presentation-congressional-spent-nuclear-fuel-
1048 solutions-caucus).

1049

1050 Links to the STRANDED and INSPECT bills are also available from the Committee website.

1051

1052 A key point to the meeting's discussion was that selecting a spent nuclear fuel repository site
1053 (regardless of whether an interim or permanent facility is being considered) is not quick work.
1054 Finland recently established its national spent fuel repository after a 35-year siting effort.
1055 Sweden, Switzerland, and Canada have made recent progress following sustained (multi-year)
1056 siting efforts.

1057

1058 **December 5, 2022 Committee Meeting**

1059 The December 5 meeting provided the Committee with an opportunity review its 2022 activities.
1060 The summary of Committee activities included in the (12/01/2022 version of the) VT NDCAP
1061 2022 draft Annual Report was reviewed and revised based on feedback from Committee
1062 members and members of the public present at this meeting. Specifically, sentences were added
1063 to Section III noting the number of Committee meetings held this year. (This was done to show
1064 the Panel's level of activity during 2022 early in the report.) The Committee's mission statement
1065 (adopted in March 2021) was added to Section II, since the Annual Report covers both Full Panel
1066 and FNWP Committee activities. The Committee crafted a sentence for addition to the
1067 February 28 Full Panel meeting summary that emphasized that the recommended Advisory
1068 Opinion (that was eventually adopted that evening) represented a consensus reached by
1069 Committee members, despite their divergent views and backgrounds on spent fuel issues. This
1070 consensus was reached through a civil, respectful process.

1071

1072 The Committee meeting logistics for 2023 were discussed. The Committee agreed to continue
1073 meeting on a quarterly basis; the following meeting dates were chosen for 2023:

1074

- 1075 • March 6
- 1076 • June 5
- 1077 • September 11
- 1078 • December 4

1079

1080 Meetings will nominally run from 12 noon to 1:30 PM on those days. (Note that the March 6
1081 meeting will likely run from 12 noon to 2 PM.) Committee meetings will be conducted primarily
1082 as webcasts. However, unless the Vermont Legislature opts to extend [ACT 78 of the 2022](#)
1083 [Legislative Session](#), physical meeting spaces will be designated for these meetings. Lissa
1084 Weinmann will continue as FNWP Committee Chair during 2023.

1085
1086 The Committee then considered potential discussion topics during 2023. The Committee
1087 reached consensus that its March 6 meeting would discuss legal issues surrounding the
1088 Consolidated Interim Storage Facilities proposed in New Mexico and western Texas. Committee
1089 Member Marvin Resnikoff suggested Diane Curran and Jay Silberg as potential speakers for
1090 presenting the opposing sides in the CISF legal debate. Drs. Erica Bickford and Kim Petry were
1091 suggested as speakers who could provide the DOE's perspective on CISFs. The Committee will
1092 pursue having these suggested speakers attend the March 6 meeting.

- 1093
1094 Additional topics for consideration at subsequent 2023 Committee meetings include:
- 1095 • DOE's Next Steps in Developing a Consent-Based Siting Process (which could be an
1096 additional presentation topic for Drs. Petry and Bickford)
 - 1097 • A Waste Control Specialists' Presentation on its Radwaste Disposal Operations
 - 1098 • Radioactive Waste Environmental Justice Issues
 - 1099 • Learn More about Low-Level Radioactive Waste Disposal in General
 - 1100 • Use of the US Justice Department's Judgement Fund for Spent Fuel Storage Expenses
 - 1101 • A Presentation from the Nuclear Waste Strategy Coalition
 - 1102 • Spent Fuel Reprocessing History and Issues
 - 1103 • Whether a Statement Emphasizing the Need to Resolve Nuclear Waste Issues is Needed

1104
1105 The Committee will narrow down its discussion topics at its currently scheduled 2023 meetings.
1106 Additional meetings will be scheduled, if deemed necessary.

1107
1108 **XII. Meeting Schedule and Priorities for 2023**

1109
1110 During the Panel's December 12 meeting, the Panel reached consensus on the following meeting
1111 dates for 2023:

- 1112
- 1113 • May 8: Regular meeting discussing and assessing the Decommissioning Project Annual
1114 Status Reports (required by PUC Case 8880); additional agenda items to be determined
1115 as needed.
 - 1116 • September 18: Regular meeting; agenda items to be determined
 - 1117 • December 11: Regular meeting; agenda items to be determined

1118
1119 The Panel's main priority for 2023 will be to continue its work as outlined in the Panel Charter
1120 and required by the Legislation that established the Panel's composition and duties. The Panel
1121 will also continue to consider improvements in its public outreach. Any changes to these
1122 priorities will be communicated to the Legislature and the Governor's Office once they are
1123 known.

1124
1125
1126

1127

1128 **XIII. Panel Composition and Duties Change Recommendations**

1129

1130 As part of the Panel Duties outlined in Part II of the Panel Charter (see Section II of this Report),
1131 the Panel “shall assess further changes to the Panel’s membership or duties as appropriate.” The
1132 most recent changes in Panel composition and duties are those approved by the 2021
1133 Legislature in Act 54. The Panel currently has no additional change recommendations for its
1134 composition or duties.

1135

1136 **Appendix A: Panel Advisory Opinions Approved in 2022**

1137

1138 March 3, 2022

1139 US Department of Energy

1140 Office of Nuclear Energy

1141 1000 Independence Ave. SW

1142 Washington DC 20585

1143

1144 **Re: Comments on the U.S. Department of Energy ‘Request for Information on**
1145 **Using a Consent-Based Siting Process to Identify Federal Interim Storage**
1146 **Facilities’**

1147

1148 To Whom It May Concern:

1149

1150 The Vermont Nuclear Decommissioning Citizens Advisory Panel submits the enclosed
1151 comments (Advisory Opinion) in response to the Department’s December 2021
1152 ‘Request for Information on Using a Consent-Based Siting Process to Identify Federal
1153 Interim Storage Facilities.’ These comments were approved by the Panel at a Special
1154 Meeting held on February 28. Presentations and other details from this meeting are
1155 available at the Panel website: <https://publicservice.vermont.gov/electric/ndcap>.

1156

1157 Additionally, the Panel wishes to thank Dr. Kim Petry, Dr. Erica Bickford, Ms. Natalia
1158 Saraeva and Mr. Rob Howard of the Department for their presentation and
1159 supporting discussion at our February 28 meeting.

1160

1161 Thank-you for your consideration. We appreciate the opportunity to share these
1162 comments with the Department and look forward to further interactions as the
1163 Consent-Based Siting Process progresses.

1164

1165 Sincerely yours,

1166

1167

1168 /s/ Emily Davis

1169 Emily Davis, 2022 Panel Chair

1170 Vermont Nuclear Decommissioning Citizens Advisory Panel

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Advisory Opinion Adopted February 28, 2022
**Comments on the U.S. Department of Energy ‘Request for Information on Using
a Consent-Based Siting Process to Identify Federal Interim Storage Facilities’**

INTRODUCTION

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

BACKGROUND ON VT NDCAP

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

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

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

<https://youtu.be/W7ZAHGUaD4M>

1208 **DOE RFI Area 3: Interim Storage as Part of a Waste Management System /**
1209 **Questions: 3 and 4: To what extent should development of an interim storage**
1210 **facility relate to progress on establishing a permanent repository? What other**
1211 **issues should DOE consider in developing a waste management system?**

1212 In 2015, the Congress authorized a two-year consent-based siting process for the general siting for
1213 nuclear waste disposal facilities that was not limited to ‘interim’ sites. The process to date has not
1214 resulted in a successful siting of any waste disposal facilities. VT NDCAP believes management of
1215 the nation’s nuclear waste management system must not depend upon inconsistent congressional
1216 appropriations.

1217 VT NDCAP recommends that development of a consolidated interim storage facility (CISF) should
1218 remain directly coupled to establishing a permanent repository as required under the Nuclear Waste
1219 Policy Act. In developing an integrated waste management system, VT NDCAP believes that DOE
1220 and the Administration should focus on amending existing law rather than relying on agency
1221 rulemaking.

1222 Appropriate geomorphology and geohydrology of potential site selection for a permanent
1223 repository should be a limiting and qualifying factor in any consent-based siting. Prioritizing
1224 locations with sound environmental suitability will likely aid in establishing public acceptance and
1225 trust to obtain consent-based siting. With proper planning, moving high level radioactive waste
1226 from independent fuel storage installations (ISFSIs) should only happen one time. Any CISF(s) to
1227 be constructed and operated should ideally be sited at or in close proximity to a location that is also
1228 acceptable and approved for a permanent deep geologic repository. Any CISF or permanent
1229 repository should be subject to the same EPA standards other energy producers must adhere to.

1230 Further, asking a community to consent to act as an ‘interim’ site in the absence of any progress
1231 toward a permanent site will continue to undermine confidence in the DOE ‘consent-based siting’
1232 process.

1233 The VT NDCAP supports the application of the consent-based siting process to any previously
1234 designated high level radioactive waste disposal or storage sites.

1235

1236 **DOE RFI, Area 2: Removing Barriers to Meaningful Participation / Question 5:**
1237 **What information do communities, governments, or other stakeholders need to**
1238 **engage with the Department on consent-based siting of federal interim storage**
1239 **facilities?**

1240 Communities, governments, local stakeholders, and the nation at large need more information
1241 before deciding on the best course of a functioning integrated nuclear waste management system.
1242 The Nuclear Regulatory Commission says such waste is safely and securely stored at its current
1243 location. An independent and comprehensive economic analysis from the Congressional Budget
1244 Office or General Accounting Office on options for nuclear waste should inform how to proceed.

1245 All public comments received in DOE's 2015 to 2017 Consent-Based Siting effort should be
1246 available for public review and be considered as part of the DOE's current Request for Information.

1247

1248 **ADVISORY OPINION VOTING RECORD**

1249 **PANEL MEMBERS VOTING YES**

1250 Madeline Arms (Town of Vernon); Todd Amato (Town of Vernon); Chris Company (Windham Regional
1251 Commission); Sara Coffey (Citizen Appointee); Emily Davis (Citizen Appointee & Panel Chair); Marvin
1252 Resnikoff, Ph.D. (Citizen Appointee); Lissa Weinmann (Citizen Appointee & FNWPC Chair).

1253

1254 **PANEL MEMBERS VOTING NO**

1255 None.

1256

1257 **PANEL MEMBERS VOTING TO ABSTAIN**

1258 Corey Daniels (NorthStar Vermont Yankee); David Pearson (NorthStar Vermont Yankee);
1259 Jim Porter (VT Public Service Department Designee).

1260

1261 **PANEL MEMBERS ABSENT FOR THIS VOTE**

1262 Trish Coppolino (VT Agency of Natural Resources); Dr. Bill Irwin (VT Agency of Human Services); Bob
1263 Leach (Citizen Appointee); Brett Long (VT Agency of Commerce and Community Development); Mark
1264 MacDonald (Vermont Senate); Laura Sibilila (Vermont Legislature); Josh Unruh (Citizen Appointee &
1265 Panel Vice-Chair).

1266

1267 *There are currently two vacancies on the Panel.*

1268 **END**

1269

1270

1271 **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 (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)

