



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

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

2018

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1 **- Nuclear Decommissioning Citizens Advisory Panel -**
2 **2018 Annual Report to the Governor of Vermont and the**
3 **Energy Committees of the General Assembly**
4 (House Energy & Technology, House Commerce &
5 Economic Development, House Natural Resources, Fish
6 and Wildlife, and Senate Natural Resources & Energy
7 Committees)
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9 **I. Statutory Authority and Duties**
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11 The nineteen member Nuclear Decommissioning Citizens Advisory Panel (NDCAP) was
12 established during the 2014 legislative session. For details on membership and duties see
13 <https://legislature.vermont.gov/statutes/fullchapter/18/034>. The list of current members of the
14 Nuclear Decommissioning Citizens Advisory Panel may be found at
15 [http://publicservice.vermont.gov/electric/ndcap \(aka, the NDCAP website\)](http://publicservice.vermont.gov/electric/ndcap_aka_the_NDCAP_website). Changes in Panel
16 membership throughout 2018 may be discerned by reviewing the meeting minutes and meeting
17 recordings available at the NDCAP website.
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19 **II. Charter**
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21 The NDCAP Charter was adopted on February 25, 2015 and amended on May 26, 2016. The
22 Charter is available at
23 <https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20NDCAP%20Charter%20%28Adopted%202016.05.26%29.pdf>. No changes to the NDCAP
24 Charter were made during 2018.
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27 **III. Meeting Highlights**
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29 The NDCAP held five meetings in 2018; meetings were held in March, May, June, September and
30 December. All meetings were open to the public and opportunities for comments from the public
31 were provided. Each meeting included an update on recent activities by both Entergy and the
32 State of Vermont, as well as ample time for discussion and comments from Panelists and the
33 public. Educational and issue-specific topics were discussed at most meetings; a summary of each
34 topic is presented below. Many of the meeting discussions centered on the two major Vermont
35 Yankee (VY) decommissioning related activities in 2018, namely the proposed sale of VY to
36 NorthStar Group Holdings and the transfer of VY's spent nuclear fuel to dry cask storage. The
37 minutes of each meeting can be found on the NDCAP website (a dedicated section of the Public
38 Service Department website) at <http://publicservice.vermont.gov/electric/ndcap>. A complete
39 video recording of each meeting can be found at:
40 <https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel>.
41 (Links to these video recordings are also available through the NDCAP website).

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March 22, 2018

- **Leadership Selection:** Kate O'Connor was re-elected as Panel Chair. Martin Langeveld was re-elected as Panel Vice Chair.
- **Overview of Settlement Agreement and Memorandum of Understanding for Approval of Proposed Sale of Entergy Nuclear Vermont Yankee to NorthStar Group Services Under Consideration in Public Utility Commission Docket 8880:** Presentations by Mike Twomey (Entergy), Scott State (NorthStar via webcast), two State of Vermont Officials (Steph Hoffman, Public Service Department Special Counsel, and Kyle Landis-Marinello, Assistant Attorney General in the Environmental Protection Division), and Josh Unruh, Chair for the Town of Vernon Selectboard, provided an overview of the Settlement Agreement and the related Memorandum of Understanding (MOU) that was negotiated and agreed to among the majority of parties to the docket. Rich Holschuh, representing the Elnu Abenaki Nation, and Clay Turnbull of New England Coalition provided commentary for their respective parties to the docket regarding the Settlement Agreement and MOU.

Of particular interest to NDCAP, Part 8 of the MOU requires NorthStar to “collaborate with the stakeholders to establish an appropriate public engagement process regarding the decommissioning and restoration of the VY Station site, including exploration of forming a subcommittee of the existing Nuclear Decommissioning Citizens Advisory Panel for this purpose.”

The Settlement Agreement and MOU documents are available through the Public Utilities Commission website at <https://epuc.vermont.gov/?q=node/64/27332>. Copies of these documents are also available through the NDCAP website.

- **Presentation by Waste Control Specialists (WCS):** A presentation made by Scott State (CEO of NorthStar and WCS) discussed the current capabilities of the WCS radioactive waste disposal facility in Andrews, Texas, its current licenses, and its application to serve as an interim storage facility for spent nuclear fuel and high-level radioactive waste.

May 24, 2018

- **Annual Report Discussion & Approval Update on Meeting with Legislators:** NDCAP Member David Andrews provided a brief summary of the Panel’s presentation to the Vermont Legislative Committees. The purpose of the Annual Report is to inform the Legislature’s Energy Committees of what is going on, ideally early enough in the legislative session such that there is time to take action, if needed, on resources for the Panel. Panel discussion suggested that the 2018 report be completed in September to facilitate this. It was also noted that such Panel resources would need to come through a State Agency budget, most likely that of the Public Service Department, although Natural Resources or Commerce & Community Development were other possibilities. It was further noted that the Annual Report should reflect whether the Panel is being successful in its goals. Having financial resources available would greatly help this.

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- **State of Vermont Position on Spent Fuel Removal Requirement Outlined in (PUC) Docket 6545:** The Panelists held a discussion on the current status of this requirement. The Agreement for this docket (circa 2002) obligates Entergy to “use its commercial best efforts to assure that the spent fuel is removed from the VY site in a reasonable manner, as quickly as possible rather than (have it) stored at the VY site.” Entergy is to consult with the Department of Public Service in pursuing this issue. Public Service Commissioner June Tierney noted that while this requirement was still regarded as important, it is not currently a top Department priority. The Department’s current focus is on whether the proposed VY sale to NorthStar will be approved. Panelists then discussed options on how they could address the subject of spent fuel in the future.
 - **Discussion of Panel Organization Issues:** Several Panelists noted that there are a large number “Panel support tasks” that are being done by a few volunteer Panel members, particularly the Panel Chair (Kate O’Connor). Some of these tasks are supported by the State Nuclear Engineer (Tony Leshinskie). Tasks include generating meeting agendas, preparing meeting minutes, and setting-up and operating the Panel’s Public Address System. (A list of tasks was compiled by Kate O’Connor, Chris Campany and the State Nuclear Engineer.) For similar panels meeting in Montpelier, such tasks are handled by departmental resources readily available there. Administrative support for NDCAP uses Public Service Department resources and budget. However, with most Public Service Department staff (other than the State Nuclear Engineer) working primarily in Montpelier, the physical functioning of NDCAP (which typically meets in Brattleboro due to its proximity to Vermont Yankee) relies on contracted staff (e.g. BCTV), the State Nuclear Engineer or volunteers, particularly the Panel Chair. (The Public Service Department receives no additional funding for providing NDCAP administrative support.) The Panel discussed several options to alleviate these administrative issues, noting that these could potentially factor into a reorganization of the Panel prompted by NorthStar’s commitment to “collaborate with the stakeholders to establish an appropriate public engagement process” in the CPG Docket 8880 MOU.
 - Chair Kate O’Connor indicated that, because of other demands on her time, she would not seek reappointment to NDCAP when her term expires on August 31, 2018. A new Panel Chair will need to be elected and a plan for the Panel’s administrative support must be ready to address her departure.
 - David Andrews (current IBEW representative on the Panel) noted that he has been volunteering his time to run the PA system for Panel Meetings. He will be moving out of the area later this year, once his job at VY is eliminated. Another means for storing, setting up and running the PA system will be needed. He additionally noted that because of job eliminations at VY, the Legislature may need to change the Panel’s enabling legislation regarding a worker’s representative on the Panel.
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June 28, 2018

- **Presentation on the Texas-Vermont Low-Level Radioactive Waste Disposal Compact Commission:** Richard Saudek, Vermont Commissioner for the Texas-Vermont Low Level Radioactive Waste Disposal Compact Commission provided an overview of the Low Level Waste Compact Commission, its disposal facility in Andrews County, TX; recent facility activities and the status of the facility operator, Waste Control Specialists.
- **Congressional Update on Nuclear Issues on the Federal Level:** Haley Pero of Senator Sanders’ office, Tom Berry of Senator Leahy’s office and George Twigg of Congressman Welch’s office provided updates on recent decommissioning-related bills introduced in the US Senate and House of Representatives. (See Section XI for further details on these items.)
- **U.S. Department of Energy Update on Spent Fuel Storage and Transportation Activities:** Erica Bickford, Transportation Program Manager for the US Department of Energy (DOE), Office of Nuclear Energy and Steve Maheras of Pacific Northwest National Laboratory, subject matter expert on shut down nuclear power plant sites, provided a webcast presentation on the history of DOE spent fuel-related interactions with nuclear power utilities. Prior transportation planning efforts were discussed, as current efforts are on hold awaiting Congressional and Trump Administration direction. The most recent transportation planning studies indicate that approximately seven years will be necessary to implement a national spent fuel transportation policy.
- **Panel Discussion on Spent Fuel:** Panel discussion noted that while there is \$40 billion in the Nuclear Waste Fund (funding for a national nuclear waste repository), there is concern that Congress may never appropriate the money.
- **Update on Panel Activities Moving Forward:** Panel Vice-Chair Martin Langeveld announced that for personal reasons, he would be resigning from the Panel, effective August 30. Citizen Panelist Jim Matteau indicated that, with his term ending in August, he would also be leaving the Panel. David Andrews (VY Workers Representative for the Panel) is also resigning from the Panel, effective September 30. Panel Chair Kate O’Connor noted that a committee has been formed for transitioning the Panel leadership. In accordance with the Vermont Statutes establishing NDCAP, Public Service Commissioner June Tierney will serve as Interim Chair until new Panel Leadership is elected.
- Commissioner Tierney read a Proclamation by Governor Phil Scott thanking Kate O’Connor for her years of service as NDCAP Chair.

September 27, 2018

- **Public Service Commissioner June Tierney** served as interim Chair for this meeting.
- **Entergy Update on Decommissioning Activities at VY:** Panelist Corey Daniels, VY Director of Decommissioning, provided an update on recent activities at the VY site. The completion of the Dry Cask Storage Project, reduction of the VY Protected Area, and the anticipated departure of Entergy employees from VY were discussed.
- **Discussion on Panel Logistics Moving Forward:** In an effort to reduce costs associated with individual NDCAP meetings, the Panel made several decisions regarding logistics and practices: “Chatham House” meeting minutes format was

166 adopted to limit the effort needed to generate meeting minutes; meeting sites that are
167 less expensive than Brattleboro High School and Middle School will be used, when
168 practical; the Panel agreed to hold meetings on a quarterly basis, unless more are
169 deemed necessary (via Panel Chair determination). It was also agreed that the
170 continued use a PA system for Panel meetings was essential.

- 171 • **Election of Panel Leadership:** By Roll Call vote, the candidate slate of Chris Campany for
172 Panel Chair and Lissa Weinmann for Panel Vice-Chair were elected for terms of 1 year.

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174 **December 6, 2018**

- 175 • **Update on Decommissioning Activities at VY:** Joe Lynch, Entergy Senior Manager for
176 Government Affairs, presented an update on recent VY site activities. The US NRC
177 completed several onsite inspections during October and November; no violations were
178 identified by these inspections. An update on the Groundwater Management Program was
179 provided. Planned departures of Entergy employees from the VY site on October 31 and
180 November 29 were reported. An overview of the remaining onsite staff was described.
181 Modifications to the onsite rail spur were outlined. Recent NRC and VT PUC approvals of
182 VY's proposed sale to NorthStar were also noted.
- 183 • **Review and Comment on Draft Annual Report to Legislature:** A draft version
184 (available from the NDCAP website) of the Panel's 2018 Annual Report to the Legislature
185 was discussed. Comments from this discussion were noted for inclusion in the final draft
186 of the Report. Panel members will have opportunity to review the finalized Annual Report
187 in early January 2019. Formal approval of the Report is scheduled for the January 2019
188 Panel Meeting.
- 189 • **Panel Observations from November 8 VT Yankee Site Tour:** For the benefit of
190 Panelists who were unable to attend, a summary of the November 8 VY site tour was
191 discussed. (See Section IX for further details.)
- 192 • **Scheduling NDCAP Meetings for early 2019:** The Panel agreed to meet on January 24,
193 2019 (with January 31, 2019 reserved as a snow date) to discuss the PUC's approval of
194 VY's sale to NorthStar and to outline State Agency roles and reporting requirements
195 during VY's active decommissioning. The Panel's second meeting in 2019 was tentatively
196 scheduled for some time in April. Panel meetings for the remainder of 2019 will be
197 scheduled at a future date. At least two more meetings will be held in 2019 to comply with
198 the Legislature's requirements for the Panel.

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

- 201 • 1/2 Dry fuel cask loading activities resumed (after holiday & maintenance break)
- 202 • 1/8 ISFSI-only site Protected Area construction resumed (after holiday break)
- 203 • 1/8 NRC Fourth Quarter 2017 Inspection Exit Meeting – no issues, findings, or violations
- 204 • 1/9 First dry fuel cask transfer to ISFSI pads in 2018
- 205 • 2/13 NRC grants VY Exemption allowing dry fuel cask loading completion by end of 2018
- 206 • 3/2 Memorandum of Understanding (MOU) endorsing VY sale to NorthStar signed by all
207 but one party (Conservation Law Foundation) in the Docket 8880 CPG case.
- 208 • 3/12 Dry fuel cask loading activities suspended while VY inspects cask components for
209 damage observed at another decommissioning reactor site

- 210 • 3/30 Final \$2 Million payment to Windham County Economic Development Fund made
- 211 • 4/16 NRC First Quarter 2018 Inspection Exit Meeting – no issues, findings, or violations
- 212 • 5/2 Dry fuel cask loading activities resume after no cask component damage found
- 213 • 5/14 Hearings for Docket 8880 CPG case (VY sale to NorthStar) completed
- 214 • 5/21 Responses to recent NRC Requests for Additional Information on License Transfer
- 215 Application (LTA) filed
- 216 • 7/9 NRC Second Quarter 2018 Inspection Exit Meeting – no issues, findings, or violations
- 217 • 8/1 Dry fuel cask loading activities completed; all VY spent fuel now in dry casks
- 218 • 8/17 Final NRC approval to reduce site Protected Area received
- 219 • 8/21 VY files formal declaration to NRC that the Spent Fuel Pool is empty
- 220 • 8/23 ISFSI-only site Protected Area construction completed
- 221 • 8/23 ISFSI-only site Protected Area declared operational
- 222 • 10/4 NRC Decommissioning Activities Onsite Inspection Exit Meeting – no issues,
- 223 findings, or violations
- 224 • 10/11 NRC approves VY License Transfer Application with conditions consistent with
- 225 Docket 8880 CPG case MOU
- 226 • 10/31 VY staff reduction from 54 to 24 employees
- 227 • 11/19 Refurbishment of onsite rail spur completed
- 228 • 11/20 First NRC “ISFSI Only” Security Inspection completed - no issues, findings,
- 229 or violations
- 230 • 11/29 VY staff reduction from 24 to 13 employees
- 231 • 12/06 VT PUC approves VY License Transfer Application and Docket 8880 CPG case MOU
- 232

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

234 *(based on latest available data for 2018).*

235	236 NDT	236 SRT
237	\$581.5 M Balance on January 1, 2018	\$30.3 M Balance on January 1, 2018
238	\$51.5 M Qualified Withdrawals	
239	\$21.1 M Market Gains	\$3.2 M Net Gains
240	\$44.4 M Fund Expenses	
241	\$506.7 M Balance on October 31, 2018	\$33.5 M Balance on October 31, 2018
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244 **VI. Transfer of Spent Nuclear Fuel at Vermont Yankee**

245 Transfer of VY’s entire spent fuel inventory to dry cask storage was completed on August 1,
 246 2018.
 247 24 dry casks were loaded in 2018. A total of 58 casks are now stored at the VY Independent
 248 Spent Fuel Storage Installation (ISFSI). A total of 7 vacant cask spaces remain on the ISFSI pads.
 249 Four of these are required should the arrangement of the casks on the two ISFSI pads need to be
 250 changed for any reason. The remaining three spaces are designated for storage of any Greater

251 than Class C Low Level Nuclear Waste (e.g. highly contaminated VY Reactor Vessel and/or Spent
252 Fuel Pool components) resulting from VY's active decommissioning.

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254 **VII. Reduction of Protected Area Size at Vermont Yankee**

255 On August 23, acceptance inspections and systems testing for the newly constructed Central
256 Alarm Station (CAS) Building, the last step in the ISFSI-only site Protected Area construction
257 project, were completed. The CAS Building and its systems were then declared operational. In
258 combination with the NRC's final approval to reduce the size of the site Protected Area
259 (August 17) and VY's formal declaration that the Spent Fuel Pool no longer contains spent fuel
260 (August 21), VY implemented its planned reduction of the site Protected Area.

- 261 • The CAS Building, rather than the VY Control Room, now provides all required
262 monitoring for the VY ISFSI.
- 263 • All emergency communications between VY, State and local Emergency Response
264 Organizations and the NRC previously handled by the VY Control Room are now handled
265 by the CAS
- 266 • The VY Reactor and Turbine Buildings are now designated as VY's "Site Industrial Area."
- 267 • While controlled access to the Reactor and Turbine Buildings remains in place, it is now
268 less stringent.

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270 **VIII. Status of the Vermont Yankee Sale to NorthStar Group Services**

271 On October 11, 2018, the US Nuclear Regulatory Commission approved NorthStar's request to
272 transfer the NRC license for the Vermont Yankee plant from Entergy to NorthStar, and issued a
273 second, separate approval related to use of funds from the nuclear decommissioning trust. The
274 NRC license transfer order largely adopted the Memorandum of Understanding approved by
275 most Vermont Public Utility Commission Docket #8880 parties on March 2, 2018. The Vermont
276 Public Utility Commission approved the sale and issued a Certificate of Public Good on
277 December 6, 2018. Final closure on the sale was completed on January 11, 2019.

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279 **IX. NDCAP Tour of Vermont Yankee Site**

280 On November 8, nine members of Panel toured the Vermont Yankee (VY) site to see firsthand the
281 current site conditions, following the complete transfer of all spent fuel to dry cask storage and
282 the recent reduction of the VY "Protected Area" to only the dry cask storage pads and the (newly
283 constructed) Central Alarm Station Building. Exterior conditions within VY's Industrial Area
284 (the former Protected Area that included the Reactor and Turbine Buildings) were also
285 observed.

286 Corey Daniels, VY's Decommissioning Director and NDCAP member, briefed the other eight
287 Panelists on the recently completed spent fuel transfer campaign and VY's overall progress in
288 decommissioning since the plant's December 2014 permanent shutdown in December 2014.
289 Transitions in onsite staffing and the status of several ongoing activities, including the onsite rail

290 spur refurbishment, were also discussed. The staffing discussion noted that several current
291 onsite staff, including Mr. Daniels, would become NorthStar employees and remain onsite to
292 oversee VY decommissioning activities, should VY's sale to NorthStar be fully executed following
293 approval by the PUC.

294 Panel members made observations about the VY Site Tour at the December 6, 2018 Panel
295 Meeting. This discussion may be reviewed via the meeting's video recording available at:
296 <https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel>.

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298 **X. Water Management Program at Vermont Yankee**

- 299 • The rate of groundwater entering the Turbine Building is consistent with rates seen during
300 2017.
 - 301 ○ Seasonal variations to date produced a rate range between 300 and 800 gallons per
302 day (consistent with 2017 rates)
 - 303 ○ While an End of Year rate of 200 – 300 gallons per day was expected (consistent
304 with 2017 rates), significantly higher rainfall in late 2018 (vs. 2017), resulted in
305 rates of 500 – 700 gallons per day at End of Year (621 gallons per day estimated on
306 December 31, 2018)
 - 307 ○ Over 90% reduction in leakage since 2015 (consistent with 2017 rates)
- 308 • A total of 873,000 gallons have been shipped to date
- 309 • Roughly 211,000 gallons shipped in 2018
- 310 • No discharge into Connecticut River
- 311 • Groundwater shipments (to EnergySolutions licensed disposal site in Tennessee) continue
312 on an “as-needed” basis
- 313 • Onsite water storage can hold water until NorthStar makes new arrangements for disposal

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315 **XI. Vermont Congressional Delegation**

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317 Representatives of Senator Patrick Leahy, Senator Bernie Sanders, and Congressman Peter
318 Welch attended multiple NDCAP meetings in 2018.

319 At the March 22, 2018 meeting, Haley Pero of Senator Sanders' office reported that, in February, the
320 Senator reintroduced the Nuclear Plant Decommissioning Act. Companion legislation was
321 introduced in the US House of Representatives by Congressman Welch. The initial version of the
322 bill (circa 2012 or 2013), called for a meaningful role for states in reactor decommissioning. The
323 revised bill would extend that public input to reactor license transfers. A one-page summary of the
324 proposed legislation is available on the NDCAP website (in the “Meeting of March 22, 2018”
325 meeting materials section).

326 At the June 28, 2018 meeting, representatives from Vermont's entire Congressional Delegation
327 discussed several reactor decommissioning-related bills introduced before the US House and
328 Senate. Haley Pero of Senator Sanders' office reported that the Senator proposed wording in the
329 2019 appropriations bill which directs the NRC to compile information on the economic,
330 environmental, health and safety impacts of power reactor decommissioning. The energy and
331 water appropriations bill contains an interim waste storage pilot program provision. Senator

332 Sanders and Congressman Welch are two of the co-sponsors for the Stranded Act, which
333 compensates communities storing spent fuel providing grants for economic development. The
334 status of the NRC's draft decommissioning rulemaking effort was also discussed.
335 George Twigg of Congressman Welch's office discussed the US House version of the proposed
336 Stranded Nuclear Waste Accountability Act, which would provide payments to communities
337 such as Vernon, VT that store nuclear waste. Such payments could provide roughly \$10 million
338 compensation annually to a host community. Congressman Welch voted for HR3053, which
339 addresses the ongoing Yucca Mountain stalemate. Lastly, Congressman Welch is urging the NRC
340 to include state and local stakeholder concerns in its ongoing reactor decommissioning
341 rulemaking effort.
342 Tom Berry of Senator Leahy's office reported that the Senator included language in funding for the
343 US Economic Development Administration to report to the Senate Appropriations Committee on its
344 support for communities going through plant closures.

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346 **XII. The Issues Committee of NDCAP**

347 The Issues Committee, formed in 2015 to make recommendations on topics for discussion at
348 NDCAP meetings, met once in 2018. Members of the committee: David Andrews, Chris Campany,
349 Martin Langeveld, Jim Matteau, and Kate O'Connor. Panel members David Deen, Derrick Jordan and
350 Lissa Weinmann also participated in this Issues Committee meeting. With the departure of the
351 majority of Issues Committee members from NDCAP in August and September 2018 (Messrs.
352 Andrews, Langeveld, Matteau, and Deen, along with Ms. O'Connor), the Issues Committee is
353 currently on hiatus. NDCAP will need to decide in 2019 on whether to reconstitute the Issues
354 Committee or develop another means for recommending discussion topics at NDCAP meetings.

355 **XIII. Meeting Schedule and Priorities for 2019**

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357 During the Panel's September and December meetings, it was agreed in concept that the Panel
358 should generally meet quarterly, with the understanding that frequency and timing may be
359 influenced by the (recently approved) VY Sale Agreement (PUC Docket 8880 Approval Order, CPG
360 and MOU), and what these mean for decommissioning and site restoration reporting requirements
361 and procedures.

362 Consistent with Panel Duties outlined in Part II of the Panel Charter (see Section II of this Report),
363 the Panel "shall assess further changes to the Panel's membership or duties as appropriate." While
364 the Panel has yet to discuss such changes, they will need to be considered in 2019 as the impacts of
365 VY's staffing changes and the VY Sale Agreement become known.