

financial risks of the proposed transaction, he deliberately chose to disregard “NorthStar’s claimed proprietary material” showing how it plans to execute and fund the decommissioning of the VY Station. His decision to ignore this essential material makes his conclusions about such financial risk completely unreliable and therefore inadmissible. Finally, documents attached to or excerpted in the testimony of Messrs. Shadis and Gundersen should be excluded because their admission would violate the rule against hearsay. NEC may not use the testimony of its witnesses as a mere vehicle for the introduction of hearsay.

ARGUMENT

I. Unqualified Opinion Testimony Of NEC’s Witnesses Should Be Excluded

The entirety of the testimony of Mr. Shadis and portions of the testimony of Mr. Gundersen fail to meet the evidentiary standard for admission and should be excluded. The Vermont Administrative Procedure Act incorporates the Vermont Rules of Evidence, which “are generally applicable in administrative proceedings,” including in proceedings before the Public Utility Commission. *See In re White*, 172 Vt. 335, 348, 779 A.2d 1264, 1274 (2001); 3 V.S.A. § 810(1) (“The Rules of Evidence as applied in civil cases in the Superior Courts of this State shall be followed.”). The Vermont Rules of Evidence limit the scope of both expert and lay witness testimony. For expert testimony, the expert must base any opinion on sufficient facts or data and the opinion must be “the product of reliable principles and methods,” for which “the witness has applied the principles and methods reliably to the facts of the case.” V.R.E. 702; *Lasek v. Vermont Vapor, Inc.*, 2014 VT 33, ¶ 7, 196 Vt. 243, 248, 95 A.3d 447, 451 (2014). The party sponsoring the expert must demonstrate that the reliability of the scientific method has been applied to conclusions. Expert opinions and conclusions that fall short of this standard should not be admitted into evidence. *Estate of George v. Vermont League of Cities & Towns*, 2010 VT 1, ¶ 36, 187 Vt.

229, 250–51, 993 A.2d 367, 379 (2010) (holding that expert opinion “based on data, a methodology, or studies that are simply inadequate to support the conclusions reached” must be excluded, quoting *Amorgianos v. Nat’l R.R. Passenger Corp.*, 303 F.3d 256, 266 (2d Cir. 2002)). This standard applies to all triers of fact to ensure that judgments are based on scientific evidence from experts in the relevant field, and not on the opinions and legal conclusions of lay people without support or reliability. *See id.*

Under Vermont Rule of Evidence 602, which applies to lay witnesses, “[t]he testimony of a witness may be excluded or stricken unless evidence is introduced sufficient to support a finding that he has personal knowledge of the matter.” V.R.E. 602. Lay witness opinion testimony must be limited to “opinions or inferences which are (a) rationally based on the perception of the witness, (b) helpful to a clear understanding of the witness’ testimony or the determination of a fact in issue, and (c) not based on scientific, technical or other specialized knowledge within the scope of Rule 702.” V.R.E. 701.

The Commission should exclude the testimony of Mr. Shadis in its entirety to the extent it is offered as expert testimony or, if it is offered as the testimony of a lay witness, the Commission should exclude the testimony except for that part of Mr. Shadis’ testimony regarding his experience at Maine Yankee and his personal observations from his visit to the VY Station site.¹ The Commission also should exclude the testimony of Mr. Gundersen as to the financial capability of NorthStar because he admits that he ignored “NorthStar’s claimed proprietary material” showing

¹ Joint Petitioners’ objection here differs from the objections raised by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. based on relevancy, federal preemption, and scope of intervention, which the Commission overruled in Docket No. 8300. The Commission was not asked to determine whether Mr. Shadis was offering expert or lay testimony in Docket 8300. *See Petition of Entergy Nuclear Vermont Yankee, LLC*, Docket No. 8300, Order of 2/11/2016.

how it plans to execute and fund the decommissioning of the VY Station, which is indispensable for forming a reliable opinion on that subject.

A. Mr. Shadis' Testimony Fails To Meet The Requirements For The Admission Of Expert Testimony

Mr. Shadis' prefiled testimony covers a broad range of topics, including anthropology, law, and recreational economics, among others. Mr. Shadis may be a self-taught advocate for many positions the NEC holds, but he is not an expert in any of the topics on which he has presented testimony.²

First, Mr. Shadis purports to offer conclusions about radiological decay and chemical reactions for which he has no apparent credentials. *See, e.g.*, Shadis PFT at 14 (“There is generally agreement in the scientific community that any small quantity of radioactive material will have lost its punch over about ten half-lives. Some reactor-derived radionuclides have very long lives and will remain part of the site for ice ages to come.”); *id.* at 25 (“[T]he alkaline chemical reaction of concrete with (acid) rainwater, groundwater, wet soil is greatly enhanced by rubblization . . . This increases the interactive (soluble) surface of the original material by several orders of magnitude also by increasing absorption, increasing solubility.”); *id.* at 26 (“The difficulty in ferreting out such hotspots increases exponentially if a concrete wall is knocked down and broken up before every last exacting step of radiological survey and analysis is complete.”). Mr. Shadis,

² The Commission admitted Mr. Shadis' testimony relating to Maine Yankee in Docket 6545, but that situation is clearly distinguishable from the testimony Mr. Shadis offers in this Docket. Mr. Shadis was allowed to submit expert testimony about the narrow issue of the Maine Yankee shutdown, but the Commission noted that “the level of Mr. Shadis' experience will go to the weight we give his testimony.” *Investigation into Gen. Order No. 45 Notice Filed by Vermont Yankee Nuclear Power Corp.*, Docket No. 6545, Order of 1/31/2002, 2002 WL 32829115, at 4. In this Docket, Mr. Shadis is attempting to offer expert testimony on a much broader range of subjects, for which he has even less—and often no discernible—expertise.

whose education is in the arts, NEC-RS-PFT-EXHIBIT-1, and whose relevant experience relates only to participation as a citizen representative in decommissioning planning, Shadis PFT at 2-4, lacks any specialized scientific training that would permit him to opine on such matters.

Second, Mr. Shadis offers conclusions relating to nuclear radiation exposure and health outcomes for which he likewise lacks any demonstrated expertise. *See, e.g.*, Shadis PFT 19 (“Although ignored by NRC and EPA radiation standards, the actual risk depends on age and sex.”); *id.* at 19-20 (“The same radiation in the first year of life for children produces three to four times the cancer risk as exposure between the ages of 20 and 50. Female infants have almost double the risk as male infants.”); *id.* at 26 (“[T]oothed-abrading drums or wheels, usually set at a depth of 1/8 of an inch, removes most if not all detectable radiological contamination.”). But again, Mr. Shadis lists no qualifications that would permit him to opine on matters such as the health outcomes for radiation exposure.

Third, Mr. Shadis offers testimony relating to project management evaluation and economic analysis, but has no demonstrated expertise in this area. *See, e.g.*, Shadis PFT at 22 (“NorthStar does not account for the pile-up-on-the-freeway effect on decommissioning contractor traffic that a single contract default of quality or schedule can have.”); *id.* at 11 (speculating that “the local economy may actually benefit more” if the land is allowed to lie fallow); *id.* at 12 (“[I]t is unlikely that a field of solar collectors can be installed until after the Department of Energy removes the 1000 tons of irradiated fuel currently on site.”); *id.* at 21-22 (opining that NorthStar’s fixed-price contract approach will lead to “(a) miscommunication, (b) duplication of effort, (C) loss of quality assurance and quality control, (d) loss of continuity in the hand-off from one contractor to another, (e) maintenance of overall stewardship sensibilities and project momentum, (f) essential esprit d’ corps”). Mr. Shadis has failed to demonstrate that he possesses the necessary

expert credentials in project management, economics, finance, or any field related to these wholly speculative claims.

Fourth, Mr. Shadis reaches conclusions about anthropological, archaeological, recreational, and historical matters without possessing expert credentials in those fields. *See, e.g.*, Shadis PFT at 25 (“Establishing a demolition debris landfill on earth enriched with the blood and bones of several thousand years of Abenaki residence strikes me as extremely disrespectful. To proceed with tipping industrial waste concrete into the Vermont Yankee foundations while knowing what the site once was is in my opinion tantamount to a hate crime.”). Yet again, Mr. Shadis has no relevant expertise to support such an opinion.

Finally, Mr. Shadis detours into a legal discussion, summarizing and arguing in support of a motion for summary judgment filed on behalf of the NEC. *See* Shadis PFT at 28-30. Such testimony is clearly inappropriate, argumentative, and outside the scope of any expert testimony as it goes to the ultimate question in this proceeding, and for those reasons it should be excluded.

B. Mr. Shadis Lacks Personal Knowledge Of The Matters On Which He Offers Testimony

To the extent Mr. Shadis seeks to testify as a lay witness, his testimony should be excluded pursuant to Rule 602 because it primarily encompasses matters on which he possesses no personal knowledge. For instance, Mr. Shadis relays his conversation with Richard Holschuh of the Elnu Abenaki (Shadis PFT at 7-8), cites an internet search of the Connecticut River (*id.* at 10), quotes from public documents and internet sources on outdoor recreation (*id.* at 8-11), and quotes from emails, letters, and testimony on site restoration standards (*id.* at 16-17). Mr. Shadis similarly offers testimony on the half-lives of radionuclides (*id.* at 14), the risks of fatal cancer (*id.* at 18-20), and the sufficiency of financial assurances (*id.* at 23-24). Such testimony is not based on Mr.

Shadis' personal knowledge, as made clear by his reliance on these outside sources. Further, such testimony would require specialized knowledge, which Mr. Shadis lacks, as explained *supra*. The only areas of Mr. Shadis' testimony that fall within the permissible scope of lay witness testimony are his statements concerning his participation as an observer of the Maine Yankee decommissioning process and his personal observations regarding the VY Station site. All other testimony must be excluded under Rule 602.

C. Mr. Gundersen Fails To Employ A Reliable Methodology Because He Deliberately Disregards Evidence Indispensable To His Analysis

While Mr. Gundersen may have 45 years of "professional atomic power engineering experience" (Gundersen PFT at 2), his testimony in this case addresses the "financial risks associated with the proposed sale." Gundersen PFT at 1. In opining on financial risks, however, Mr. Gundersen states that he reviewed "NorthStar's claimed proprietary material" showing how it plans to execute and fund the decommissioning of the VY Station, but that he "found none of the material was useful in reaching any conclusions, so it is not incorporated." Gundersen PFT at 3. Instead, Mr. Gundersen relies on a 17-year old press release (*id.* at 4), an outdated decommissioning cost estimate (*id.* at 4-7), and an email from January 2011 (*id.* at 8) about the possible need for a particular NRC exemption that the NRC granted to the VY Station over two years ago, to reach his conclusions on financial risks.³ Reliance on such sources, to the exclusion of the key essential documents setting forth NorthStar's breakdown of tasks and associated costs for decommissioning, fails to comport with the principled and reliable methodology required to

³ The report cited in footnote 5 of Mr. Gundersen's testimony relies on the same sources and types of sources. See Gundersen PFT n.5, citing Fairewinds Associates, *The Nationwide Failures of Decommissioning Regulation: Decommissioning Trust Funds or Slush Funds?* (Mar. 17, 2016). It thus provides no support for Mr. Gundersen's opinion.

admit expert testimony on the financial risks of the proposed transaction. Accordingly, the portions of Mr. Gundersen's testimony set forth in Appendix A should be excluded.

II. Hearsay Contained In And Attached To The Testimony Of Mr. Shadis And Mr. Gundersen Should Be Excluded

Separately, Mr. Shadis and Mr. Gundersen inappropriately incorporate hearsay into their testimony, which also must be excluded. The Vermont Rules of Evidence require that opportunities for cross-examination be available to parties and litigants in order to arrive at "a full and true disclosure of the facts." 3 V.S.A. § 810. Thus, "[h]earsay is not admissible except as provided by these rules or by other rules prescribed by the Supreme Court or by statute." V.R.E. 802; *Investigation Pursuant to 30 V.S.A. §§ 30 & 209 & Pub. Serv. Bd. Rule 5.110(d)*, Docket No. 8843, Order of 8/22/2017, 2017 WL 3843482, at *2. In particular, expert testimony "may not be used to circumvent the restrictions of the hearsay rules generally." *State v. Recor*, 150 Vt. 40, 48, 49 A.2d 1382, 1388 (1988). Thus, the Commission has excluded as hearsay evidence for which "the witness that was relied upon to produce the finding is not available in this proceeding, and the parties, and the Board, cannot cross-examine that witness to determine the underlying assumptions and methodology." *Petition of Georgia Mountain Community Wind, LLC*, Docket No. 7508, Order of 3/3/2011, 2001 WL 840854, at 6.

Here, NEC has offered hearsay for the truth of the matter asserted without affording Joint Petitioners or the Commission the ability to examine the authors of out-of-court statements to determine the reliability and weight of the facts presented. Although an expert may assess the facts presented as part of their informed opinion, Mr. Shadis and Mr. Gundersen are merely acting as conduits to present factual testimony on behalf of declarants who are not witnesses and will not be available for cross-examination. The admission of hearsay evidence is inimical to the Rules of

Evidence and the goal of fair administration of justice and should be allowed only in certain exceptional situations, none of which applies here.

A. The Commission Should Exclude Hearsay Contained In The Prefiled Testimony And Exhibits Of The NEC Witnesses

Both Mr. Shadis and Mr. Gundersen cite and selectively quote from documents that cannot be verified and for which the declarant cannot be questioned. Mr. Shadis also submits such documents as exhibits. Such testimony and documents are inadmissible hearsay and should be excluded on this ground.

Excerpts of Emails and Letters. Mr. Shadis quotes an email purportedly sent by an employee of the New Jersey Department of Environmental Protection regarding remediation standards. Shadis PFT at 16. Mr. Shadis also quotes a 1996 letter from Carol Browner, then-Administrator of EPA, to the NRC. *Id.* at 17. Mr. Gundersen likewise quotes from a January 19, 2011 email that contains multiple layers of hearsay and ultimately concerns information relayed from the NRC. Gundersen PFT at 8-9. NEC has not offered any of these declarants as witnesses and the statements thus are impermissible hearsay and should not be admitted.

Outside Analysis. Mr. Shadis seeks to introduce an analysis prepared by Synapse Energy Economics (Shadis PFT at 24, NEC RS PFT EXHIBIT 4), an apparently excerpted version of a Maine Yankee Decommissioning Experience Report prepared by EPRI (NEC RS EXHIBIT 2), and a 2005 National Academies Committee to Assess Health Risks from Exposure to Low Levels of Radiation report (Shadis PFT at 17-18). These reports of other organizations may not be admitted without running afoul of the hearsay rule. *State v. Towne*, 142 Vt. 241, 246, 453 A.2d 1133, 1135 (1982) (“[O]ne expert may not put in evidence the opinion of a nontestifying expert without running afoul of the hearsay rule.”). Because NEC is not offering any Synapse, EPRI, or

radiation report authors as witnesses, these documents and the testimony quoting them should be excluded.

Newspaper Articles and Online Sources. Mr. Shadis and Mr. Gundersen also quote from a variety of news articles and online sources. For instance, Mr. Shadis quotes at length (at 11) from an Outdoor Industry Association Report (the “OIA Report”), but no author of the OIA Report is offered as a witness. The document is quintessential hearsay. Similarly, Mr. Gundersen quotes from a *Keene Sentinel* article (at pages 17-18) and a series of newspaper articles from the *Time Argus* (at pages 20-21) regarding the statements of NRC officials. Gundersen PFT at 20-21. Neither the reporters nor the NRC officials quoted in these articles have been offered as witnesses. These newspaper articles and the OIA Report should be excluded as hearsay. *See Amended Petition of Entergy Nuclear Vermont Yankee, LLC*, Docket No. 7862, Order of 2/8/2013, 2013 WL 587558, at *3 (“It is widely recognized that newspaper articles generally constitute hearsay and do not fall within any of the exceptions to the hearsay rule.”).

Prior Testimony. Finally, Mr. Shadis quotes an affidavit William Irwin filed with the NRC, along with a preface to the quoted statement. *See* Shadis PFT at 23; NEC RS PFT EXHIBIT 3. NEC may not offer Mr. Irwin’s affidavit from a separate proceeding as an exhibit here without offering him for cross-examination.

Messrs. Shadis and Gundersen do not cite these materials for a non-hearsay purpose (*e.g.*, for the fact that Dr. Irwin filed an affidavit with the NRC), but rather for the truth of the matters asserted in the materials. None of this hearsay falls within the exceptions contained in V.R.E. 803 and 804. Accordingly, as set forth in Appendix B, the Commission should exclude such hearsay in the prefiled testimony and exhibits of Mr. Shadis and Mr. Gundersen.

B. The Commission Should Not Depart From The Rules Of Evidence

The Commission may depart from the Rules of Evidence to admit evidence otherwise impermissible in certain circumstances. 3 V.S.A. § 810 (“When necessary to ascertain facts not reasonably susceptible of proof under those rules, evidence not admissible thereunder may be admitted (except where precluded by statute) if it is of a type commonly relied upon by reasonably prudent men in the conduct of their affairs.”). The exceptions do not apply here.

Mr. Shadis and Mr. Gundersen have included excerpts from hearsay documents and attached these documents as exhibits to their prefiled testimony. No reason is provided nor is it apparent why any of the documents or excerpts is “necessary to ascertain facts not reasonably susceptible to proof” under the rules of evidence. Furthermore, these documents and excerpts containing hearsay are not “of the type commonly relied upon by reasonably prudent [people].” 3 V.S.A. § 810. A prudent person would only commonly rely upon hearsay statements with indicia of trustworthiness equivalent to those in V.R.E. 803 and 804. None of NEC’s proffered hearsay satisfies this requirement. Furthermore, none of the hearsay evidence offered is “necessary to ascertain facts not reasonably susceptible of proof under [the] rules.” 3 V.S.A. § 810. It is clear that the substance of the facts presented in the hearsay evidence could have been permissibly offered under the Vermont Rules of Evidence if the NEC had engaged witnesses with first-hand knowledge in order to introduce it. As presented, the evidence is impermissible hearsay and should not be admitted.

Finally, experts (including experts offered by the Department of Public Service in this proceeding) are available in the subject matters on which Messrs. Shadis and Gundersen testify. That NEC elected not to engage actual experts on the topics on which it presented testimony or that its expert chose to disregard evidence integral to the subject matter of the testimony presented

does not deprive NEC of any rights under the Commission's Rules. However, admission of such evidence and testimony would deprive the Joint Petitioners of the opportunity to question their adversaries and inquisitors, and would upend the purpose of the Rules of Evidence.

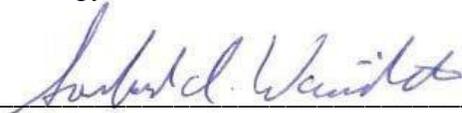
CONCLUSION

The exhibits and testimony listed in Appendices A and B should be excluded from the record in this proceeding.

New York, New York

DATED: September 29, 2017

Respectfully submitted,
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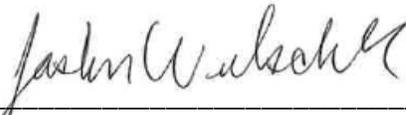
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APPENDIX A

Testimony To Be Excluded From the Record

Prefiled Testimony of Raymond Shadis, dated August 30, 2017	In its entirety
Prefiled Testimony of Arnold Gundersen, dated August 30, 2017	A8, A9, A10, A14, A15, A16, subparts 1, 3, and 4 of A19

APPENDIX B

Exhibits and Documents To Be Excluded From the Record

Shadis PFT	NEC RS EXHIBIT 2
Shadis PFT at 11	Outdoor Industry Association Report
Shadis PFT at 16	July 10, 2017 Email
Shadis PFT at 17	1996 Browner Letter excerpt
Shadis PFT at 17-19	<i>National Academies Committee to Assess Health Risks from Exposure to Low Levels of Radiation report excerpt and table</i>
Shadis PFT at 22-23	NEC RS EXHIBIT 3 (incorrectly cited as Exhibit 4)
Shadis PFT at 24	NEC RS EXHIBIT 4
Shadis PFT at 27	NEC RS EXHIBIT 5
Gundersen PFT at 8	January 19, 2011 Email
Gundersen PFT at 17-18	<i>Keene Sentinel</i> article excerpt
Gundersen PFT at 20-21	<i>Times Argus</i> article excerpts