STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 17-3550-INV

Investigation pursuant to 30 V.S.A. §§ 30 and 209 regarding the alleged failure of Vermont Gas Systems, Inc. to comply with the certificate of public good in Docket 7970 by burying the pipeline at less than required depth in New Haven, Vermont	

Case No. 18-0395-PET

Notice of Probable Violations of Vermont Gas Systems, Inc. for certain aspects of the construction of the Addison natural gas pipeline	

VGS'S REPLY TO INTERVENORS' OPPOSITION TO VGS'S MOTION TO STRIKE

Vermont Gas Systems, Inc. ("VGS") submits the following Reply to Intervenors' Opposition to VGS's October 11, 2021 Motion to Strike the Prefiled Testimony of Gregory Liebert and Nathan Palmer. VGS's Motion to Strike was predicated on the fact that Mr. Liebert had admitted he has no professional experience as an engineer in the pipeline industry, has never performed surface loading calculations on a pipeline before this case, and has never before applied the design requirements of ASME B31.8. Mr. Palmer's September 10, 2021 testimony relied on Mr. Liebert's testimony—including assertions Mr. Liebert himself subsequently retracted.[1] Accordingly, the testimony of both witnesses should be stricken, and the Commission should reject Intervenors' arguments opposing VGS's Motion for the reasons set forth herein.

[1] Intervenors made no argument opposing VGS's Motion to Strike Mr. Palmer's testimony. In order for a lay witness to offer opinion testimony under V.R.E. 701, the testimony cannot be "based on scientific, technical or other specialized knowledge within the scope of Rule 702." V.R.E. 701. In this instance, Mr. Palmer is parroting inadmissible expert opinion testimony from Mr. Liebert that Mr. Liebert himself has retracted substantially. This includes Mr. Palmer's opinion that it is "even more deplorable and alarming" to learn that the full axle-weight results in the SMYS being exceeded, which is a point that Mr. Liebert himself no longer agrees with. Accordingly, Mr. Palmer's testimony is not admissible because it is based on inadmissible testimony, purportedly expert testimony that has since been retracted, and is not "helpful to a clear understanding of the witness' testimony or the determination of a fact in issue" as required by Rule 701. *Id.*

1. <u>Mr. Liebert Does Not Possess Scientific, Technical, or Other Specialized Knowledge That Will Assist the Trier of Fact Because It is Undisputed That He Has No Pipeline Experience, Experience Calculating Surface Loading Under ASME B31.8, or Experience With AC Mitigation.</u>

Intervenors do not dispute the fact that Mr. Liebert lacks pipeline qualifications. He has never served as an engineer on a natural gas pipeline project; has never performed a surface loading calculation; has never used the GPTC, CEPA, or API RP 1102 loading calculators before; and has never applied the design requirements set forth in ASME B31.8.[2]

When asked whether his lack of experience contributed to his inaccurate September 10, 2021 testimony, Mr. Liebert testified that, "It definitely contributed to the one mistake that I made, which was using the wrong wheel loading."[3] When asked whether his engineering firm has the "design capabilities" to work on a project like the Addison Natural Gas Pipeline, Mr. Liebert responded, "Absolutely not."[4] Mr. Liebert has agreed that he does not have the knowledge and experience needed to design an AC mitigation plan,[5] he is "not qualified" to review and stamp such plans as a licensed engineer, and he is not aware of a single firm in Vermont that would have the "appropriate knowledge and expertise to design an AC Mitigation Plan."[6] Accordingly, while Mr. Liebert may be a licensed engineer, he does not have the "knowledge, skill, experience, training, or education" to "assist the trier of fact to understand the evidence or to determine a fact in issue."[7]

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2 Attachment 1, Deposition of Gregory Liebert, Volume 2 at 307.
3 *Id.* at 306.
4 *Id.* at 353.
5 *Id.* at 347.
6 *Id.* at 347.
7 V.R.E. 702.

2. Mr. Liebert's Testimony About Surface Loading Calculations Is Not the Product of Reliable Principles or Methods Because He Does Not Understand and Has Not Researched the Applicable Calculations.

Even if Mr. Liebert had adequate knowledge, skill, experience, or training, it is clear that he has not applied his engineering knowledge or skills in accordance with Rule 702, which allows an expert's opinion if it is (1) based on sufficient facts or data and (2) the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts in the case. Here, even if Mr. Liebert had any relevant experience or knowledge to apply, his testimony does not adhere to Rule 702 because he cannot explain his own conclusions and does not understand the calculations that are being performed.

Mr. Liebert submitted surface loading calculations performed using the CEPA and GPTC surface loading calculators, but when asked about the calculations themselves, Mr. Liebert testified, "I don't know … Because I can't see the calculations."[8] When asked whether he reviewed the CEPA Surface Loading Calculator User Manual, which describes how the calculations are performed, Mr. Liebert testified that he did not review the Manual and "didn't know what the calculations looked like because [he] did not have a manual."[9] When asked about how the calculations work, Mr. Liebert testified that the tool "did these calculations for me," and "questioning me on the nuances of the mathematics behind these equations is not relative to what I did, it's not – it doesn't have anything to do with what I did, which was plug in numbers into a calculator."[10] When asked about the formulas the calculators use to determine total stress, Mr. Liebert testified, "I'm unwilling to talk about this because it's been years since I've used one of

[8] Deposition of Gregory Liebert, Volume 1 at 52.
[9] *Id.* Volume 2 at 266.
[10] *Id.* at 271.

these stress calculations," and "I have no reason to be familiar forty-some years after school with these equations."[11]

The problem with Mr. Liebert testifying as an expert witness is not only that he lacks experience with pipelines, he has also failed to apply the general engineering principles he should have as a licensed Vermont engineer. He just plugged numbers into a calculator he does not understand. When he was asked about whether Mott MacDonald's calculation of the total effective stress (47,563 psi) was a "summation of the total internal hoop stress, a summation of the total longitudinal stress, or some combination of both," Mr. Liebert replied, "It's whatever the Tresca equation uses, apparently," and repeated that "I'm not going to answer any questions about that equation."[12] Apparently he cannot say whether his calculations are the product of reliable principles and methods, or whether he has applied these principles and methods reliably to this case.

At the same time, Mr. Liebert offers his "expert" opinion that Section 833 of the ASME B31.8 does not apply to a surface loading calculation because the equations in Section 833 do not account for "hoop stresses due to external loads such as soil and dirt."[13] Mr. Liebert cannot be qualified as an expert if he is unwilling or unable to discuss the equations that calculate total stress. If he cannot explain the calculations, he cannot testify reliably about ASME B31.8 Section 833, which expressly states that, "The maximum allowable sum of circumferential stress due to internal pressure and circumferential through-wall bending stress caused by **surface vehicle loads** or other local loads is 0.9*ST*" (or 90% of the pipe's Specified Minimum Yield Strength).[14]

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11 *Id.* at 275.
12 *Id.* at 278.
13 *Id.* at 284.
14 Attachment 2, ASME B31.8 Section 833.9

The equations and calculations of total stress on the pipeline are not only the "principle and method" being used by Mott MacDonald to calculate total stress on the pipeline, these are also the same equations Mr. Liebert purports to testify about and the same equations discussed in ASME B31.8. If Mr. Liebert has not used his general engineering experience to understand these calculations and cannot discuss what the calculations mean, he cannot be relied upon to explain how ASME B31.8 determines total allowable stress. Under V.R.E. 702, his testimony is not admissible because he has not applied his education and experience to understand the calculations, much less "applied the [relevant] principles and methods reliably to the facts of the case."[15]

3. Mr. Liebert's Testimony Regarding AC Mitigation Is Not Admissible Because He Has Admitted He Is Not An AC Mitigation Expert, Claims He Is Not Testifying As An "Expert," and Is Not Even Competent to Discuss Relevant Principles and Methods Let Alone Apply Them Reliably.

Mr. Liebert testified that the depth of cover was "relevant" to AC mitigation because the "potential effect of stray current on a steel natural gas pipeline can be devastating" and a "higher voltage line will present greater risk to the pipeline."[16] But Mr. Liebert testified in his deposition that he had never worked on any case regarding AC mitigation.[17] When asked whether he thought it was relevant for the Commission to understand the basis of [his] knowledge to provide expert testimony about AC mitigation," he answered, "No."[18] He testified that he "**did not testify as an expert about AC mitigation**"[19] even though his testimony clearly sets forth expert opinion about AC mitigation.[20] When asked whether he "evaluate[d] the extent to which any …

15 V.R.E. 702.
16 Liebert pf. reb. 5 – 6.
17 Deposition of Gregory Liebert, Volume 2 at 326.
18 *Id.* at 326.
19 *Id.* at 327 (emphasis added).
20 In his prefiled testimony of September 10 and October 4, Mr. Liebert opines that depth of cover is relevant to AC mitigation, asserts the effects of stray current can be "devastating," disagrees with Mr. Connaughton's opinion that the as-built condition of the ANGP will not affect future construction plans, and claims a higher voltage

other factors [aside from depth of cover] would be relevant with respect to the adequacy of the AC Mitigation Plan in the New Haven area," Mr. Liebert replied, "No."[21] When asked whether he "review[ed] any of those other factors and their potential impact on the AC Mitigation Plan that was developed by ARK Engineering," Mr. Liebert replied, "No."[22] When asked whether he knew if any other factors would offset any change in the depth of cover as it relates to AC mitigation, Mr. Liebert replied, "No, I'm not qualified to answer that."[23]

Accordingly, even if Mr. Liebert had a generalized enough knowledge to testify about the adequacy of AC mitigation in the Clay Plains Swamp, his testimony is not based on sufficient facts or data, the product of reliable principle and methods, or the application of such principles and methods to the facts here. Since that is a prerequisite for the admission of expert opinion testimony under V.R.E. 702, Mr. Liebert's testimony is not admissible and should be stricken.

4. <u>The Commission Should Reject Intervenors' Extremely Low Bar for Admissibility Under Rule 702 Because it is Inconsistent With Applicable Precedent.</u>

Intervenors argue that Rule 702 is not that demanding given the wide discretion trial courts are afforded under Rule 702, and that Mr. Liebert's opinion testimony is admissible as long as his shortcomings are disclosed. While VGS agrees that the Commission has broad discretion under Rule 702, the bar for admissibility has not been set as low as Intervenors claim. Nor do the cases they cite support the conclusion that Mr. Liebert's testimony is admissible.

First, Intervenors claim that so long as Mr. Liebert's limitations are made clear his testimony is admissible based on *Cappiallo v. Northrup*.[24] In that case, a farmer's opinions about

line "will present greater risk." Liebert pf. at 5-6. These opinions are not lay testimony and Mr. Liebert himself agrees he is not a qualified expert. The Commission should not admit expert opinion testimony from a witness who admits he is not qualified.

[21] Deposition of Gregory Liebert, Volume 2. at 331.

[22] *Id.* at 331.

[23] *Id.* at 331.

[24] 150 Vt. 317, 319, 552 A.2d 415, 416, 1988 WL 143423 (1988).

whether eating bracken fern makes horses ill were admissible even though he was not veterinarian, because the farmer had experience with horses eating bracken fern from twenty-five years of farming. Just the opposite is the case here. Mr. Liebert has no experience with pipelines, surface loading calculations on pipelines, or the application of the design requirements of ASME B31.8. Moreover, he has not become familiar with the issues and cannot explain the surface loading calculations. Unlike the farmer in *Cappiallo*, who relied on extensive experience with the matter in issue even though his specific vocation was not apt, Mr. Liebert does not have decades of experience to fall back upon.

Second, Intervenors cite *USGen New Eng., Inc. v. Town of Rockingham*[25] for the proposition that a witness who "had no training or prior experience"[26] was allowed to testify. But the court in that case never found the witness had "no training" as asserted by Intervenors.[27] On the contrary, the court found the witness reliable even though he was not a licensed appraiser because the witness:

> showed himself to have the broadest experience of any of the witnesses in various disciplines that bear on New England power markets: as an economics teacher at the college level; as an entrepreneur in the market, as a consultant and advisor to public utilities commissions and legislatures throughout Northern New England; as an advocate at the Federal Energy Regulatory Commission ('FERC') and even as an individual member of the New England Power Pool.

Mr. Liebert cannot claim any experience, let alone the "broadest experience" with the technical issues in this case. Accordingly, these cases do not lower the Rule 702 bar in the manner Intervenors claim. Scientific, technical, or other specialized knowledge is still required under Rule 702, and expert witnesses are still expected to be able to explain and understand the principles and methods they are applying.

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25 2004 VT 90, ¶ 38, 177 Vt. 193, 209, 862 A.2d 269, 281, 2004 WL 2071722.

26 Intervenors' Opposition at 4.

27 This was the movants assertion, not the court's finding. 2004 VT 90, ¶ 38.

Intervenors cite *985 Associates, Ltd. v. Daewoo Elecs. Am., Inc.*[28] for the proposition that an expert's reliability should be tested on cross-examination rather than excluded under Rule 702, but that case is also inapposite. In that case, the witness was:

> [A] certified fire investigator who has worked as a fire analyst for over ten years. In conducting his investigation of the fire at issue, he relied on his own examination of the scene, a two-hour interview with the fire marshal who authored the BFD report, and an interview with plaintiff Uroskie–Lewis.[29]

The trial court abused its discretion by essentially reaching the merits of the issue because the expert had not reviewed a report.[30] This was error because the fire investigator's testimony was in his expert wheelhouse and excluding his testimony amounted to weighing the evidence. In contrast, Mr. Liebert's testimony is so far afield of his expertise that Mr. Liebert has never before in his entire forty-year career performed surface loading calculations or reviewed the relevant surface loading equations. VGS's Motion does not ask the Commission to reach the merits prematurely. It is only asking that it apply Rule 702 to a witness that has not only admitted no relevant pipeline experience, but also claims he has "no reason to be familiar forty-some years after school with these equations;"[31] referring to the same equations that two pipeline experts with undisputed knowledge and experience have testified govern total allowable stress.[32]

Finally, Intervenors argue that none of the foregoing issues about Mr. Liebert's qualifications and testimony matters because the dispute is limited to an interpretation of ASME

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28 2008 VT 14, ¶ 12, 183 Vt. 208, 216, 945 A.2d 381, 385, 2008 WL 343841.

29 *Id.* ¶ 12.

30 *Id.* ¶ 11 ("Rather than conducting a threshold inquiry into the factual basis and methodology underlying the experts' opinions to determine their reliability, however, the court appears to have used the reliability prong of the *Daubert* analysis to make a substantive determination on the merits of plaintiffs' case.").

31 Deposition of Gregory Liebert, Volume 2 at 275.

32 Prefiled Rebuttal Testimony of Kevin Bodenhamer (Nov. 1, 2021) at 3 ("The subject of wheel loading specifically is addressed in ASME B31.8.833.9(b) which allows a maximum allowable stress of 0.90."); Prefiled Rebuttal Testimony of Carlos Chaves (Nov. 1, 2021) at 13 ("To determine if the stress values are acceptable, the computed total longitudinal stress value must be less than 90% of SMYS, the total circumferential stress value must be less than 90% of SMYS, and the total combined biaxial stress must be less than either 90% or 100% of SMYS depending on the load duration.").

B31.8, which the Commission will be able to review itself. The suggestion that Mr. Liebert's testimony is harmless because the Commission can read the ASME B31.8 code itself misses the point. Intervenors aim to bolster their own interpretation of ASME B31.8 by presenting a so-called expert who agrees with their position. Since that witness cannot assist the Commission in understanding the relevant equations, principles, and methods used to calculate the total allowable stress of a HS20+15% surface load, his testimony is not admissible.

Conclusion

For the foregoing reasons, as well as those set forth in VGS's Motion to Strike, the Commission should strike the September 10, 2021 and October 4, 2021 testimony of Gregory Liebert and the September 10, 2021 testimony of Nathan Palmer.

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