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	

DIRECT TESTIMONY OF JOHN ST. HILAIRE ON BEHALF OF VERMONT GAS SYSTEMS, INC.

September 10, 2021

SUMMARY OF TESTIMONY

Mr. St. Hilaire provides testimony in response to the Vermont Public Utility Commission's procedural order regarding additional information about the penalty factors.

EXHIBITS

Exhibit VGS-JSH-10 Road Crossing Inspection

DIRECT TESTIMONY OF
JOHN ST. HILAIRE
ON BEHALF OF VERMONT GAS SYSTEMS, INC.

Q1. Please state your name, occupation, and business affiliation.

A1. My name is John St. Hilaire. I am the Vice President of Operations & Infrastructure at Vermont Gas Systems, Inc. ("VGS" or the "Company"), at 85 Swift Street, South Burlington, Vermont.

Q2. Have you previously submitted testimony in this case?

A2. Yes. I filed testimony on July 10, 2020 and July 31, 2020.

Q3. Describe the purpose of your testimony today.

A3. The Hearing Officer's most recent procedural order called for the parties to file any additional evidence relating to the 30 V.S.A. § 30 penalty factors. The purpose of my testimony is to convey some additional information that may be relevant to the Vermont Public Utility Commission's (the "Commission") consideration of penalties in the event that it concludes there were Certificate of Public Good ("CPG") violations in this case.

As I have previously testified, I do not agree the Company violated its CPG. The construction process for the Addison Natural Gas Project ("ANGP") was not perfect and I understand there are different perspectives about the interpretation of certain specifications and requirements. But I also think it is important for the Commission to understand that regardless of any differing perspectives about the CPG requirements, VGS is confident in the safety and integrity of the ANGP, and that confidence is rooted in factual, data-driven evidence. My

testimony today provides the Commission with an overview of various studies, tests, reviews, inspections, and monitoring that VGS has conducted since commissioning the pipeline over four and a half years ago, and explains why that evidence makes us confident in the ANGP's safety and integrity.

Q4. Please explain why you believe VGS's pipeline safety tests and other inspections are relevant to the Commission's consideration of a penalty in this case.

A4. Whether the pipeline was constructed safely and in accordance with plans and specifications is at the heart of this case. While we can go back over the inspection reports, photos, expert opinions, and analyses that have been presented in this case, it is also important to understand that VGS is continually conducting safety and integrity work on the ANGP along with other portions of our transmission and distribution system.

We know the ANGP is safe because we are constantly monitoring the ANGP for potential safety issues and concerns. We conduct an aerial inspection via airplane of the entire VGS transmission system on a monthly schedule.[1] On the ANGP we conduct physical on-the-ground patrol and leak surveys of the pipeline four times per year to identify anything that looks out of place, including encroachment on the right of way, erosion along the pipeline, irregularities at road and stream crossings, and the adequacy of line of sight markers. Additionally, our SCADA system monitors pipeline data, such as pressure and flows, 24 hours a day, 7 days a week, and is configured with alarm settings that identify irregularities in real time.

[1] During the early months of the Covid-19 pandemic outbreak, we temporarily halted the aerial inspections. We have since restarted our aerial patrols.

Our team is physically out on the pipeline or at our meter and regulation stations regularly checking the status of operational integrity and performing other work. Once a month, we perform a check on the odorization system including the endpoints on the ANGP and Addison distribution networks. We perform an inspection of our Alternating Current ("AC") mitigation system twice a year—twice the standard interval per Mr. Byrd's recommendation in his report[2]— and we have installed remote monitoring units at AC test stations. Our 2021 test of the AC mitigation system earlier this year demonstrated that it is functioning properly and there are no suspected corrosion impacts to the pipe from the co-location of the ANGP in the VELCO right of way.

We also perform surveys on a regular basis to ensure all systems are operating properly on the ANGP. In 2017, Ark Engineering performed a Direct Current Voltage Gradient ("DCVG") survey to look for coating anomalies and found only 3 anomalies—2 were minor anomalies that were fixed, and the third was a false indication. Ark Engineering returned in 2018 to re-test and found no anomalies, which indicates there are no pipe coating issues. In 2021, we performed an Over the Line Survey that consisted of a Close Interval Survey ("CIS"), which assesses the effectiveness of the ANGP's cathodic protection system. The 2021 CIS showed that ANGP has adequate cathodic protection across the entire length of the pipeline and is therefore well protected from corrosion.

The integrity of the ANGP has also been confirmed through an In-Line Inspection ("ILI"). We performed an ILI in 2018 and plan to conduct the next ILI in 2023. The ILI is the

[2] I am referring to William Byrd's Final Report from the Independent Investigation of the Vermont Gas Systems Addison Natural Gas Project at 73 (filed Jan. 8, 2020).

best method to evaluate the integrity of the pipe itself and involves placing a high-tech "smart pig" inside the ANGP to measure a variety of data points along the entire length of the pipeline. In our 2018 ILI of the ANGP, the inspection showed that there were no immediately actionable anomalies. This tells us several things. First, it tells us that the pipeline was installed safely without any damage to the integrity of the pipeline because there were no locations that showed any immediately actionable ovality, pipe loss, or deformations. Second, it tells us that site conditions around the pipeline are sufficient to protect the pipeline from shifting soils or any underground rocks or objects that could damage the pipeline.

We also engaged a third-party engineer to review all open-cut road crossings for any signs of erosion, compaction, or other issues caused by ANGP construction per Mr. Byrd's recommendation. I am including the results of that review as **Exhibit VGS-JSH-10**. It demonstrates that there were no significant concerns with the installation of the ANGP in those locations. Fourteen of the fifteen locations showed no signs of compromised roadbed performance, erosion, or settlement above the ANGP. In just one location, the review found a "small depression" in the edge of the road over the gas line. We will continue to monitor these locations during our quarterly patrol of the entire ANGP. These inspections show that there are no significant issues with the installation of the pipeline at open-cut road crossings and demonstrate that adequate compaction and installation of the ANGP were performed during construction.

Q5. What do the above-referenced data points tell you about the specific alleged violations in this case?

A5. These inspections tell us a lot about the issues raised in this case. The data we continually collect about the integrity of the ANGP demonstrate that it is in great condition and there are no safety issues resulting from construction techniques that would impact the ongoing safe operation of ANGP.

Clay Plains Swamp Construction

For example, we have no concerns about the integrity of the ANGP in the Clay Plains Swamp, in part because our 2018 ILI showed no indications, ovality, or deformations along that section of the pipeline. We have had the HS20+15% loading standard reviewed for this area of the pipeline three times now and have confirmed every time that the ANGP meets the standard. Our continual on-site inspection of the ANGP also ensures that the ANGP's location is clearly marked, including with signage placed in accordance with Mr. Byrd's recommendations in this case and line markers as requested by VELCO.

Burial of the Pipe on Trench Bottom

We are also confident that the burial of the pipeline on the trench bottom in a limited number of locations had no impact on the integrity of the ANGP. Not just because we believe the installation was consistent with our specifications at the time of construction, but also from performing inspection digs and finding sandy or firm clay in-situ soils without rocks or sharp objects around the pipeline. We confirmed these findings with our ILI, which showed only one small indication that was excavated and remediated. This demonstrates that there is no basis for concern about deformation of the pipe. We also know there is no basis for concern about coating

damage in these areas. Not only because we know the in-situ soils were acceptable bedding and backfill material and would not harm the pipe coating, but because our subsequent DCVG survey showed that there are no issues with the ANGP coating. Additionally, we know there is no basis for concern about oxygen differentials between the in-situ soils, which was the concern about this installation method in the first instance. We know this not only from Mr. Byrd's analysis, but also because our inspections would tell us if there was a concern that oxygen differentials in the soil were contributing to corrosion. Our inspection data show no such corrosion concerns.

Trench Breakers and Stream Crossings

Our continual monitoring and inspection of the ANGP also demonstrate there is no basis for concern about pipeline integrity regarding the allegations in this case about trench breakers and stream crossings. If trench breakers were not installed adequately, we would expect to see erosion along the pipeline's path. Our patrols, which are conducted by air each month and by land four times a year, have identified no such concerns. If burying the pipe at several non-jurisdictional streams five feet rather than seven feet deep were to have any impact at all, it would result in erosion at those locations. Our inspections have identified no such erosion, either at the few jurisdictional streams that were at least seven feet, or the remainder of all streams that were buried at least five feet deep.

Compaction

One of the issues raised in the case concerned compaction. As I have previously testified, compaction on the ANGP was performed largely by mechanical means using an excavator bucket. The excavators used on the ANGP were large machines capable of significant compaction. We know the ANGP was adequately compacted because, again, we have

continually conducted inspections of the entire ANGP and have identified no locations of concern, such as natural settling of the pipeline trench or unexpected erosion along the pipeline. Likewise, as noted above, we have had all open-cut road crossings inspected by a third party and the inspections demonstrate there is no concern with compaction of the backfill over open-cut road crossings.

In summary, the safety and integrity of the ANGP is not a matter of opinion or argument. While we believe that Mr. Byrd conducted a thorough investigation and offered valuable expert advice in this case about the safety and integrity of the ANGP, we want the Commission to understand that the data and facts that we continually gather as part of our safety and integrity management process continue to show that the ANGP was safely constructed. While we may have differences of opinion about the meaning of various specifications, all the data shows that the ANGP is a remarkably well-constructed and safe pipeline. Our safety program demonstrates that the ANGP is subject to rigorous and continual inspection and monitoring that will ensure that it continues to maintain the highest levels of integrity and safety.

Q6. Have the issues in this case had any impact on the reliability of service or customers' interests?

A6. No. The ANGP has been in safe operation since its commissioning in 2017, so for more than four years. We currently serve Addison County customers—residences and businesses—with more than 750,000 Mcf of gas per year, including some of the largest commercial users on our system. For those customers, the ANGP provides them with heat and hot water that is affordable and has helped them reduce their carbon emissions. As discussed above, the

allegations in this case have not had any impact on the safe, reliable, and affordable service we have provided over the last four years. Our customers in Addison County count on us to continue building our customer base there and doing what we do best: providing safe, reliable, and affordable energy services.

Q7. Does this conclude your testimony?

A7. Yes.