Exhibit VGS-AG-098

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	

REBUTTAL TESTIMONY OF JOHN F. GODFREY ON BEHALF OF VERMONT GAS SYSTEMS, INC.

July 31, 2020

Summary of Testimony

Mr. Godfrey addresses several criticisms raised by the Parties in this case of the investigative process used by William R. Byrd as Independent Investigator for the Vermont Public Utility Commission and responds to certain testimony and reports prepared by Intervenors in this case regarding the use of P.E. seal, inspection reports, and construction methods.

EXHIBIT LIST

Exhibit VGS-JFG-1 (Mr. Godfrey's CV)

REBUTTAL TESTIMONY OF
JOHN F. GODFREY
ON BEHALF OF VERMONT GAS SYSTEMS, INC.

INTRODUCTION

Q1. Please state your name, business address, and present position.

A1. My name is John F. Godfrey. I currently serve as a Senior Principal Consultant with the Integrity Solutions group within the Pipeline Services Department of DNV GL USA, Inc. ("DNV GL"), with a business address of 5777 Frantz Road, Dublin, OH 43017.

Q2. Please describe what DNV GL does.

A2. DNV GL is the leading technical advisor to the global oil and gas industry. We provide consistent, integrated services within technical and marine assurance and advisory, risk management and offshore classification, to enable safe, reliable and enhanced performance in projects and operations. Operating in more than 100 countries, our 16,000 professionals serve our customers in the maritime, oil and gas, energy and other industries.

Q3. On whose behalf are you providing testimony in this case?

A3. On behalf of Vermont Gas Systems, Inc. ("VGS") about the Addison Natural Gas Pipeline project ("ANGP").

Q4. What is the purpose of your testimony?

A4. I was retained by VGS to address several criticisms raised by parties in this case of the investigative processes used by William R. Byrd as independent investigator for the Vermont

Public Utility Commission ("Commission"), Case Number 17-3550-INV, and to respond to certain testimony and reports prepared by intervenors in the case.

Q5. Please describe your educational background.

A5. I have a Bachelor of Science in General Engineering with an emphasis in Hydraulics and Strength of Materials from the University of Illinois, which I received in 1987. A copy of my C.V. is attached as **Exhibit VGS-JFG-1**.

Q6. Please describe your experience with pipeline design, construction, and quality management.

A6. I have been involved in pipeline safety initiatives for over 30 years. In my role at DNV GL I consult with companies and regulatory agencies in the development of construction specifications, construction quality management systems, and regulatory compliance. I have worked directly for pipeline regulators on several occasions including as an independent construction and quality auditor for the Louisiana Department of Natural Resources Pipeline Safety Division and the U.S. D.O.T. Pipeline and Hazardous Materials Safety Administration ("PHMSA") on pipeline construction projects in swamps and sensitive environments similar to the ANGP. This work has included review of pipeline design, construction planning and implementation, pipeline commissioning, and inspection. I am a co-author of the PHMSA research report prepared by DNV GL titled "Improving Quality Management Systems for Pipeline Construction Activities" which PHMSA makes available to pipeline operators through its website, and the principal author of "Pipeline Fittings Quality Assurance Technical Paper"

prepared for the National Energy Board of Canada. Finally, I have prepared and conducted training on auditing pipeline safety management systems for PHMSA staff and inspectors at the D.O.T. training center in Oklahoma City.

Along with my colleagues at DNV GL, I work with pipeline companies to improve pipeline safety by helping them enhance and implement integrity management programs. DNV GL's clients include all major pipeline companies in the U.S. and Canada. My experience also includes dozens of incident investigations, root cause analysis, and evaluation of management systems for both pipeline companies and regulators. Finally, I am experienced in both ISO and API quality management systems.

Prior to joining DNV GL I held positions in manufacturing, inspection and testing, and engineering consulting companies. During that time, I was responsible for quality assurance at a major line pipe manufacturer and process safety management implementation and pipeline fitness for service for an international testing and inspection firm. The first 22 years of my career I worked directly for pipeline operators in a variety of positions. This included staff engineering, project management, operations management, and department level management. I had responsibility for pipeline design, construction, maintenance, and operations. Over nine years of this time was spent in the field gaining direct, firsthand knowledge of construction and maintenance practices. This included construction of pipelines and facilities in a variety of environments including upland, wetland, and near shore environments. I also had the privilege of leading two companies' integrity management teams and working on industry committees to improve pipeline safety at the company and industry levels. My experience in pipeline operations includes regulatory compliance, cathodic protection, integrity assessment and remediation, and

failure investigations.

SUMMARY

Q7. Please summarize the testimony you are providing.

A7. I will respond to criticisms of the investigative process used by Mr. Byrd in developing his report including the methods and source documentation. I will also provide context regarding the use of a Professional Engineer ("P.E.") seal in the pipeline industry in rebuttal of Mr. Liebert. Finally, I respond to the Intervenors' testimony regarding inspection reports and construction methods.

REPORT OF WILLIAM R. BYRD

Q8. What is your response to the testimony of Dr. Smolker that Mr. Byrd's investigative process was biased and Mr. Byrd lacked candor? Have you reached an independent conclusion regarding the investigative process used by Mr. Byrd in preparing his report?

A8. I have read Mr. Byrd's report and Intervenors' testimony regarding various issues. In my opinion, Mr. Byrd conducted a thorough investigation of the issues enumerated by the Commission. I have been involved in numerous investigations of pipeline design issues, construction related incidents, and company regulatory compliance activities. In my experience a thorough investigation places emphasis on the collection of facts through documentation, interviews, direct examination, and testing. Suppositions are tested, and additional facts gathered to resolve them. A good, thorough report meets these criteria by relying on source documentation supported by firsthand accounts of activities and direct observation of the investigator.

Mr. Byrd's investigation and report are consistent with the standards I would expect of an independent investigation. This was done by comprehensively addressing each enumerated issue

by way of a comprehensive, fact-based document review, interviews with all parties, and site visits to confirm or refute suppositions. Mr. Byrd, through his investigation and research, compiled and reviewed extensive original source documentation supported by interviews and his own inspection of the right-of-way. The process he established was driven by documentation and direct observation and did not rely on uncorroborated information. His report details the steps he took throughout the course of his investigation to keep all parties apprised of his progress and provided opportunities for interested parties to observe and participate in the process.

Further, Mr. Byrd addressed the concerns of the Commission and Intervenors by verifying the pipeline's as-built condition. Mr. Byrd addressed concerns with depth of cover and cathodic protection by verifying and witnessing actual conditions on the right-of-way. The most direct way to resolve different perspectives is to simply go out and look. Mr. Byrd did just that as reflected in his report.

Q9. You mention original source documentation, why is that important to Mr. Byrd's investigation?

A9. Original source documentation, or documents produced contemporaneously with the design and construction of the pipeline provide the most accurate and verifiable record of the decision-making process during both design and construction. By compiling these records, Mr. Byrd was able to recreate the chain of events and decisions involved in the design and construction of the pipeline. This verifiable and traceable documentation trail, and most importantly the approved and implemented specifications, plans, and inspection records provide a timeline of the decision-making process. It is clear based on a review of the documents and

sources of information cited by Mr. Byrd that he was able to sufficiently address the issues raised. For example, Vermont Department of Public Service ("DPS") inspector reports, which demonstrate independent fact-based review were the primary source for Mr. Byrd's conclusions regarding compliance with pipeline safety regulations.

Q10. Does Dr. Smolker's criticism of Mr. Byrd for communicating directly with witnesses and parties during his investigation undermine Mr. Byrd's credibility or invalidate his conclusions?

A10. No. In my opinion, based on my professional experience, the appropriate course of action was to communicate directly with the various witnesses and parties to this case. An independent and unbiased investigator or auditor will look to the source to verify written documentation and that staff assigned to execute the subject matter are knowledgeable as to its content. This requires an investigator to engage and often interview the document or record owners. In this case, it was appropriate for Mr. Byrd to inquire directly with the people who were responsible for the records. In my opinion and based on my experience this is the best and most effective way to get a full understanding of the intent, revision history, and implementation of a plan, procedure or specification.

Second, an independent investigator such as Mr. Byrd relies on objective evidence to avoid bias. Objective evidence as it relates to quality programs is defined in ISO 9000, as "data supporting the existence or verity of something. Objective evidence can be obtained through observation, measurement, test, or by other means. Objective evidence for the purpose of audit generally consists of records, statements of fact or other information which are relevant to the

audit criteria and verifiable." Mr. Byrd's report clearly lays out the objective evidence collected and how it influenced his conclusions.

Dr. Smolker's claim in her prefiled testimony that certain communications did not involve all parties, and therefore renders the report biased and unreliable misses the underlying goal of the effort – to obtain and review all relevant project information and render a fact-based opinion. In my experience with investigations and audits, it is common practice that the evidence collection effort involves the responsible parties and owners of documents. Mr. Byrd's efforts to be transparent should not be confused with the practical need to gather information. Document reviews or interviews by "committee" are rarely successful and often lead to significant delays. In my experience to avoid bias and ensure candor an investigation is structured in such a way that facts are clearly revealed, and all sources of information are documented. Mr. Byrd's extensive review meets that goal as demonstrated in his report and lengthy catalog of supporting information. By focusing on the process, who did what when, Dr. Smolker misses the purpose of the investigation which was to gather objective evidence and render a fact-based opinion. No evidence or analysis is provided to show Mr. Byrd's opinions are in conflict with the facts gathered.

Finally, Mr. Byrd's long history of work within the broader pipeline industry is widely recognized. I would expect the methodical detail and objective evidence provided in his report. This has been a hallmark of his previous work. I have known Mr. Byrd in a professional capacity for approximately 20 years and know of his reputation within the industry as an expert in regulatory compliance and pipeline safety. His work on industry committees responsible for setting safety standards and driving research across the pipeline industry (including ASME,

INGAA, API, and PRCI) make him uniquely qualified to assist the Commission in this investigation.

REBUTTAL TO MR. LIEBERT'S TESTIMONY

Q11. Do you have an opinion of Mr. Liebert's testimony concerning the suitability of the construction plans?

A11. I have reviewed Mr. Liebert's testimony and reports and have the following responses:

First, instead of a technical review based on the merits of the plans, Mr. Liebert focuses on a singular issue. Mr. Liebert claims that the lack of a P.E. seal and signature on construction documents compromises pipeline safety, but offers no facts or data showing that the engineering effort was inadequate. In the transmission pipeline industry, P.E. seals are required under various State laws although they are not required at the Federal level. In the Federal pipeline safety regulatory scheme, PHMSA (or their authorized State agents) reserve the sole authority to determine compliance with pipeline safety regulations including the adequacy of construction plans and documents. No deference is granted by PHMSA for plans sealed by a P.E.

Second, Mr. Liebert contends that the lack of a P.E. approval makes any quality assurance ("QA") effort invalid. However, QA programs do not rely solely on the approval of construction plans. QA along with quality control ("QC") make up a company's overall quality management system. In general terms, QA is the process a company follows to assure quality while QC is the inspection and testing (company, third party, and regulatory) done during manufacturing and construction. A QA process includes elements such as quality objectives, management reviews, management of change, document and records control, and continual improvement. When combined with QC such as construction inspection, material testing, and

regulatory oversight they form the overall quality management system. A quality management system may be a written document or in practice through other construction procedures.

Mr. Liebert states in his September 12, 2019 report titled Addison Natural Gas Project Safety and Regulatory Compliance and attached to his testimony "The QA plan, once it was adopted, was deficient, because it was not designed to implement the signed and sealed IFC civil, mechanical and electrical plans." Later in the report he restates his position "Since there were no signed and stamped IFC plans, there was nothing that a QA plan could ensure conformity with." Mr. Liebert misses an important point, QA and QC plans are based on the available processes, plans, and procedures. The position that a QA program is deficient because documents were not signed is incorrect. The QA program can operate based on the documentation at hand. Mr. Liebert also discounts the multiple layers of QA and QC on the ANGP. VGS managed the QA elements of management oversight, management of change, document control, etc. VGS in turn contracted for QC inspection during the full duration of the project. The DPS provided further inspection for regulatory compliance. Additional inspection was provided for road crossings, water crossings, and environmentally sensitive areas by various specialty engineering and inspection companies. In my experience, this level of inspection, both company and regulator, exceeds standard industry practice.

Mr. Liebert makes another claim related to QC in his 2019 report that "Inadequate compaction can cause breakage of the pipeline when farm equipment, trucks or other heavy vehicles cross over it, or from lifting or sagging of the pipeline." This claim was evaluated by VGS which I would argue demonstrates the QA process, and is further addressed in Mr. Byrd's report. High strength welded steel pipelines by their nature are designed to resist external loading

as is the ANGP, as was concluded in this case.

Finally, Mr. Liebert includes in his testimony a statement of his qualifications. I noted that Mr. Liebert has no experience in transmission pipeline design or construction which immediately calls into question his ability to ascertain if the ANGP plans were adequate for construction.

PROJECT OVERSIGHT AND INSPECTION

Q12. Ms. Palmer's testimony criticizes VGS based on a summary of inspection reports. In your opinion was VGS's inspection practice on the ANGP consistent with industry practices?

A12. Yes, it was. Construction inspection is a specialized discipline within the pipeline industry. As I testified above, inspectors perform quality control within the overall quality management system for the project. Their purpose is to assure conformance with construction specifications, plans, industry standards, permit requirements, and applicable regulations. Typical inspection responsibilities include safety, grading, ditching, welding, coating, backfill, and environmental controls. Many of these activities require extensive training and certification. In the event an inspector identifies a nonconformance during construction they have the experience and knowledge to work with the construction contractor to identify and implement corrective actions. Often these corrective actions are taken immediately to resolve the nonconformance as they are discovered. For example, an inspector may determine ditch spoil is unsuitable for backfill and require additional fill material to be brought on-site. In the event the inspector cannot rectify the nonconformance on-site they escalate the issue in accordance with the overall QA program. Inspectors are the company's on-site representative to ensure work is

completed safely, completely, and according to specifications. Similarly, regulatory inspectors such as those from the Department identify non-conformances and elevate their concerns through the regulatory framework. Regulatory inspectors would not be expected to work with the contractor to find solutions, but they would report on any variances which would then be communicated to the pipeline operator for resolution.

Inspectors are also required to document construction progress and observations. Inspection documentation in general focuses on nonconformances or exceptions. It is common practice within the industry to document findings rather than affirm all conformances. For example, the suitability of backfill material is assumed to conform to specifications unless expressly noted in the backfill inspectors report. There are exceptions for critical tasks such as welding where regulations require a weld to be accepted by a qualified welding inspector.

Q13. Mr. Palmer testifies that VGS's construction methods deviated from the plans. In your opinion, was the installation method selected for the Clay Plains Swamp a reasonable construction practice consistent with industry standards?

A13. Based on the information I have reviewed it was a reasonable method. There seems to be some confusion regarding the term "open cut" trenching or ditching. The common understanding of open cut in the pipeline industry is where a ditch is open to the surface when excavated. This is in contrast to other installation methods such as boring, directional drilling, or tunneling. Open cut trenches can employ different techniques depending on the route and soil conditions. These may include shoring, sheeting, terracing, benching, or blasting. In wetland conditions it is not uncommon to excavate a "wet" ditch and allow the weight of the pipe to settle the pipe in the

ditch. This is still considered an open cut method.

Since the method conformed to the plans for open cut installation, in my opinion, it was within scope for the contractor, in consultation with inspection, to adopt the method with or without escalating it for engineering review. In addition, the pipe installed in the Clay Plains Swamp was concrete coated for negative buoyancy and additional coating protection. Possible concerns related to pipe or coating damage due to pipe bedding and padding practices during installation were mitigated by this design.

In general, these kinds of site-specific decisions are normal in pipeline construction. There may be instances where the plan or specification does not specifically address an issue identified during construction. It is unrealistic to think that plans and specifications can anticipate all conditions that will be encountered during cross country pipeline construction. Differences in topography and surface conditions can be planned, but underground challenges such as soil types, sub soil conditions, and underground utilities will not be completely known until construction begins. Similarly, weather and labor availability can affect plans and schedules. The contractor and inspection team are expected to interpret the plan or specification based on their specialized knowledge of pipeline construction and implement the plans based on the situation at hand.

Q14. Does this conclude your testimony?

A14. It does.