STATE OF VERMONT
PUBLIC UTILITY COMMISSION

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. 17-3550-INV

Affidavit John St. Hilaire

I, John St. Hilaire, being duly sworn, hereby depose and state as follows:

1. I am employed by Vermont Gas Systems, Inc. ("VGS") as Vice President of Operations and I have held that position since 2015. I have been employed by VGS for 26 years in positions of increasing authority including Manager Gas Supply/Control and Director, Operations Services, Gas Supply and Gas control. I have an Associate in Science Degree in Mechanical Engineering Technology from Vermont Technical College (1989), a B.S. in Business management from Champlain College (1999), an M.S. in Administration from St. Michaels College (2005) and a B.S. in Accounting from Champlain College (2010). I have personal knowledge of the information submitted in this affidavit.

2. The Addison Natural Gas Project ("ANGP" or "Project") route commences at the pre-existing transmission line at Severance Road in Colchester and extends to Route 7 in Middlebury traversing through portions of the towns of Essex, Williston, St. George, Hinesburg, Monkton and New Haven.

3. In accordance with the CPG, VGS built the entire 41 mile ANGP pipeline according to state and federal Class 3 construction standards, which are generally more demanding than Class 1 and 2 construction standards. This means, among other things, that VGS installed stronger, heavier gauge pipe and implemented more rigorous testing and

monitoring standards, and met or exceeded the 36" depth required by Class 3 construction standards throughout the entire 41 miles. If state and federal pipeline safety standards had been applied, only 6 miles of the 41 miles of the ANGP pipeline would have required the application of Class 3 construction standards.

4. VGS had all of the approximately 4,500 welds along the pipeline x-rayed to confirm the integrity of the weld and that the pipe sections were correctly and securely joined together. This went above the practice of x-raying only a sample group of the welds, a practice that is routinely done in the industry.

5. VGS applied a protective coating and cathodic current to protect the entire pipeline from corrosion. It also installed an A/C mitigation system to provide an additional level of safety while operating near an electric transmission system.

6. Other safety measures include VGS installing 12" yellow ribbon above the pipeline to warn excavators of the presence of the natural gas transmission line, above ground pipeline markers to indicate the pipeline location, and conducting a quarterly patrolling program that requires above ground visual inspections of the pipeline for construction activity, "washouts," and other conditions that could affect pipeline safety.

7. In addition, VGS has public information programs in place designed to alert municipalities, schools, residents and excavation operators of the pipeline locations and how to report hazards. VGS also has a "one-call" (also known as "dig safe") program in place to ensure that before excavation near the pipeline is performed the pipeline location is identified and marked and that the excavation is safely performed in a manner that will not damage the pipeline.

8. For purposes of the Project construction, VGS engaged the engineering firm of Clough, Harbour & Associates ("CHA") to provide survey services, including staking out ROW and the pipeline centerline, taking both readings required to determine depth of cover (one reading at the time of installation and the second after final grade was achieved by the pipeline contractor).

9. All "jurisdictional streams," meaning those subject to the Stream Alteration Permit, were either installed through horizontal directional drilling ("HDD") or open cut trenching. Each of these 17 streams is buried to a depth of at least 7 feet below the stream bed. See the Stream Depth Table attached here as Attachment 1.

10. The attached Stream Depth Table also shows that wherever the ANGP is installed underneath a non-jurisdiction stream, the depth of cover is 5 feet or more.

11. Based on the depth of cover information from CHA and that gathered by VGS' own surveyors, at the time of installation, more than 95% of the ANGP pipeline was installed to a depth of at least 4 feet. The entire ANGP pipeline was installed at least 36 inches underground at every one of the more than 4500 welds along its 41 mile length.

12. Based on the depth of cover survey data, there are no areas which could be reasonably considered residential areas where the pipeline was installed at less than a 4-foot depth.

Dated at Burlington, Vermont this 4 day of August, 2017.

John St. Hilaire

Subscribed and sworn to before me this 4th day of August, 2017.

Notary Public
My commission expires: Feb 10, 2019

Kathleen McCann
My Commission Expires
February 10, 2019

ANGP Stream Depth Table

Crossing ID[1]	Recorded Depth[2]	Required Depth[3]	Reason for Depth	Notes	Location Notes
01	6.1-6.8	4.0	VTRANS		2012-SC-CM-1 (P)
02	36.0	7.0	DEC Stream	Depth from HDD profile	2012-SC-CM-3 (P) (Tributary to Indian Brook)
03	46.0	7.0	DEC Stream	Depth from HDD profile	2012-TB-IB-1 (P) (Indian Brook)
04	8.8-10.2	7.0	DEC Stream		2012-TB-IB-2 (P) (Indian Brook)
05	5.8-8.9	4.0	VTRANS	Stream runs parallel to the pipe	2012-SC-CM-16 (I)
06	N/A	N/A	N/A	Pipe crosses over a culvert. No impact to stream channel. (Avoided, as noted in JAN-7)	2012-TB-AB-1 (P)
07	N/A	N/A	N/A	Pipe crosses over a culvert. No impact to stream channel.	2012-SC-CM-22 (I)
08A	N/A	N/A	N/A	Pipe crosses over a culvert. No impact to stream channel. (Avoided, as noted in JAN-7)	2012-TB-AB (P)
124	12.3-16.7	7.0	DEC Stream		2012-TB-AB-7 (P) (Alder Brook)
09	16.0-20.0	7.0	DEC Stream	Depth from HDD profile	2012-TB-WR (P) (Winooski River)
10	8.8-9.3	4.0	Agriculture		2012-SC-CM-84 (I)
11	6.4-7.6	3.0	PHMSA		2012-TB/SC-CM-54 (P)
12	6.6-7.6	3.0	PHMSA	Depth of 7'7" by locator on 7/28/2017 in stream channel.	2012-SC-CM-57 (I)
116	8.8-10.8	7.0	DEC Stream		2012-TB-ALB-1 (P) (Allen Brook)
117	6.4-6.7	3.0	PHMSA		2012-SC-CM-34 (I)
15	5.7-6.2	3.0	PHMSA		2012-TB-CM-35 (P)
16	5.4	3.0	PHMSA		2012-TB/SC-CM-36 (P)
17	7.6-9.7	7.0	DEC Stream		2012-TB-SB-1 (P) (Sucker Brook)
19	8.1-8.3	3.0	PHMSA		2012-SC-PW-42 (P)
20	38.0	7.0	DEC Stream	FEH Stream Crossing, Geprags depth requirement is greater. From HDD Profile.	2012-SC-JB-10 (P)
21	25.0	7.0	DEC Stream	From HDD Profile	2012-TB-LPR-1 (P) (LaPlatte River)
123	8.8-9.7	7.0	DEC Stream		2015-SC-1 (P) (Tributary to LaPlatte River, previously 2012-AS-CM-3)
118	5.0-5.1	4.0	VELCO/Agriculture		2012-SC-PW-38 (P)
122	60.0	7.0	DEC Stream	From HDD Profile	2012-TB-LC-1 (P) (Lewis Creek)
104	140.0	4.0	VELCO/Agriculture	From HDD Profile	2012-SC-PW-36 (I)
120	30.0-75.0	4.0	VELCO	From HDD Profile	2012-SC-PW-33 (I)
106	6.8	4.0	Agriculture		2012-SC-PW-29 (I)
107	11.2-11.9	7.0	DEC Stream		2012/2015-TB/SC-PW-28 (P) (Tributary to Lewis Creek, previously 2013-AS-CM-6)
108	5.9-8.4	4.0	VELCO/Agriculture		2012-TB/SC-RS-3 (P)

ANGP Stream Depth Table

Crossing ID[1]	Recorded Depth[2]	Required Depth[3]	Reason for Depth	Notes	Location Notes
109	5.4-6.1	4.0	VELCO/Agriculture		2012-TB/SC-RS-1 (P)
32	7.6	7.0	DEC Stream		2012-TB-JB-7 (P) (Tributary to Little Otter Creek)
111	9.1	7.0	DEC Stream		2012-SC-RS-5a (P) (Tributary to Little Otter Creek)
112	8.0	5.0	Landowner		2012-SC-RS-5 (P)
113	45.0	7.0	DEC Stream	Depth from HDD Profile	2012-TB-LOC-4 (P) (Little Otter Creek)
39	7.4-9.7	4.0	VELCO/Agriculture		2012-SC-CM-63 (I)
40	20.0	7.0	DEC Stream	From HDD Profile	2012-TB-CM-62 (P) (Tributary to Little Otter Creek) Stream runs parallel with pipe
41	20.0	7.0	DEC Stream	From HDD Profile	2012-TB-CM-62a (P) (Tributary to Little Otter Creek)
42	20.0	7.0	DEC Stream	From HDD Profile	2012-TB-CM-62a (P) (Tributary to Little Otter Creek)
43	20.0	7.0	DEC Stream	From HDD Profile	2012-TB-CM-62a (P) (Tributary to Little Otter Creek)
44	32.0	7.0	DEC Stream	From HDD Profile	2012-TB-NH-1 (P) (New Haven River)
45	5.0-5.6	4.0	Agriculture/Landowner		2012-TB/SC-PW-7 (P)
46	6.8-7.7	4.0	Agriculture/Landowner		2012-TB/SC-PW-6 (P)
47	5.7-6.1	4.0	Landowner		2012-SC-PW-5 (I)
48	6.0-6.8	4.0	Landowner		2012-TB-PW-4 (I)
121	5.4	4.0	Agriculture		2012-SC-PW-3 (P)

[1] Refer to Exhibit JAN-7 - Stream Crossing Index Map and Summary Tables - Stream Crossings (dated June 25, 2013). Crossing ID's 13 and 18 crossed in wetland area and not under the stream bed.

[2] Recorded depth intervals due to multiple welds in the area.

[3] Depth Requirement based on DEC Stream, Landowner, VELCO, Agriculture, VTRANS, or PHMSA.