

January 10, 2013

To: The Monkton Selectboard

I am writing to express some concerns regarding the proposed route of the Vermont Gas natural gas pipeline through Monkton. The proposed route does not directly affect my home or property, but as a volunteer firefighter, I would be called upon to respond to any emergency resulting from the placement of the pipeline, so in addition to concern for my neighbors generally, I have concerns specifically related to issues involved in such an emergency response. I need to be absolutely clear, however, that I am writing as a private citizen, not in any official capacity as a member of the Monkton Volunteer Fire Department.

During the December fire department business meeting, it was decided that the department should not publicly express any concerns about the proposed pipeline route, for fear it would upset the gas company, on whom we will have to rely for training and help responding to any emergencies involving the proposed pipeline, since as a small rural department, there is not very much we could do in the event of a pipeline disaster in a populated area. (The irony of that reasoning was not discussed.) Given that decision by the department, any opinions expressed in this letter must be considered to be strictly my own, though they are influenced by my 14 years as a volunteer firefighter in Monkton.

In the current proposal, 7.7 miles of pipeline will run through Monkton, of which 1.7 miles will be along the Existing VELCO powerline Right Of Way, meaning that the remainder, fully 6 miles of it, would run along town roads. By my count, this route will bring the pipeline within 200 feet of at least 64 houses. In comparison, keeping the pipeline in the VELCO right of way for the entire distance would bring it within 200 feet of just 4 houses.

From a firefighting perspective, this makes a huge difference, for a couple of reasons. First, the likelihood of a pipeline incident is increased significantly if the pipe is in an area where there is human activity; people digging to install wires, septic systems, culverts, driveways, etc. Second, in the event of a pipeline rupture and subsequent fire, the risk of loss of life or property is obviously much, much greater if the pipeline is in a populated area. The first rule in dealing with a natural gas or propane fire is to *avoid* extinguishing it, (not that this would be even remotely possible with a transmission pipeline fire) because that would only result in a buildup of gas which at some point will explode. Rather, firefighters have to let the gas burn until the supply is exhausted, and put their effort into saving any lives or property that are at risk from the resulting heat.

Unfortunately, the heat from a natural gas transmission pipeline fire is so extreme that there is usually little that can be done other than attempt to evacuate nearby residents before their homes are consumed. The gas escaping under pressure creates a flame of such intensity that the radiant heat alone will ignite structures hundreds of feet away, and make it impossible for firefighters to even approach. As the recent event in Sissonville W. Virginia illustrates, the damage from a pipeline fire in a populated area is far beyond

anything a rural fire department can be expected to control. Even full-time paid municipal departments are hard-pressed to mount an effective response. A look at the quantity of fuel involved might help to explain why this is so.

The materials made available by Vt Gas indicate that there are gate stations planned for Colchester and New Haven, and remotely operated valves at approximately 8 mile intervals between stations. Even assuming that Vt Gas personnel close the valves immediately in the event of an incident, that still means all the gas in 8 miles of 12 inch pipe, at 600 psi. would be released in a rupture. That amounts to about 1.4 million cubic feet of natural gas, at atmospheric pressure. If you're like me, that kind of number is sort of meaningless... beyond my ability to fathom, so I will try to put that in a more familiar context. The bulk-delivery propane trucks that we are accustomed to seeing on the road typically hold 3,000 gallons of liquid propane. The amount of natural gas released would be the fuel equivalent of about *five* of those trucks, fully loaded. So try to imagine a propane truck crashing in front of your house and catching fire, and then over the course of the next half hour, *four more* fuel trucks crashing into the first and also catching fire. That may give you some sense of the destructive potential of a pipeline rupture, and you will perhaps understand why there's not much any fire department can do to save homes in the vicinity.

Finally, to add to the difficulty of responding, the topography and road layout of Monkton means that accessing both sides of such an incident would in many cases involve a drive of 6 to 9 additional miles, (Boro Hill to Piney Woods, or Rotax to Hollow Rd, etc.) because with the pipeline right next to the road, any incident will obviously make that road impassable.

Keeping the pipeline in the existing VELCO right of way for the entire distance would not eliminate the risk to life and property: some homes would still be too close for comfort, but it would at least reduce the risk significantly for 60 Monkton residences, and greatly improve the chances that secondary fires resulting from a rupture could be contained. I realize that the odds of a rupture may be small, but pipelines *do* fail, and however small the odds of an incident may be, it is difficult for me to imagine that Vt Gas will save enough money or time by using the road instead of the VELCO corridor, to justify putting 60 additional Monkton families in harm's way. More to the point, it is incredible to me that they could even be allowed to *make* such a calculation.

I appreciate your consideration of my input.

Respectfully,

John (Buzz) Kuhns
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Monkton, VT