

My name is Larry Korte from Churchville, Virginia and I have an engineering background.

**1. Augusta County is too dangerous and sensitive for a high pressure 42” pipeline. This is a High Consequence Area.**

**2. Avoid Karst when you can:**

At the first public meeting, a Dominion project engineer stood up and made the statement on record that **Dominion would avoid karst in Augusta County.**

I’m confused. The proposed pipeline route seems to wander up and down the longest path through Karst in Augusta County, at the expense of adding miles to the line.

Why not cross at the narrow point or not at all?

Dominion says not to cross Karst yet they do.

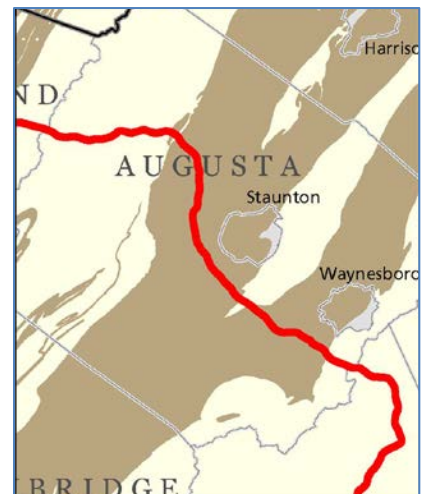
Why the contradiction?

Why play with fire when you don’t have to?

And there are all the historic and sensitive areas.

It’s like driving a semi through a china shop with a breakable floor,

Why do it when you don’t have to?



**3. Risk management of methane in a Karst region with tourists caves and caverns:**

It’s well documented that **methane, once underground, can flow for miles in Karst.** PIPA’s February 2015 report "*Hazard Mitigation Planning: Practices for Land Use Planning and Development near Pipelines*" seems to agree that methane can travel underground with a pipeline break: **“Natural gas leaked under asphalt, concrete, frozen ground, et cetera, will move laterally from its source via any path of least resistance (e.g., underground conduits and pipe casings). Soil that has been disturbed by excavation will allow for the easier passage of natural gas.”** Check what happened in Kansas.

**I believe a study is required to determine the risk of methane in area tourist caves and caverns when 1.5 Billion cubic feet of methane is forced underground during a pipeline break in karst. The financial impact and deaths should be included in any risk study.**

#### 4. **Quick-forming sinkholes and pipelines:**

For 10 years it's been strange **living with Karst**. The county and state has special rules we follow. I have sinkhole & earthquake insurance. In 2013 I drove across a crack in the pavement on Route 250, near Staunton and proposed pipeline route. When I returned in 2 hours there was a 10 foot deep hole about 30 feet across and a line of dump trucks and equipment repairing the damage. Thanks VDOT. The same year another sinkhole took out half of Interstate 81 just south of Staunton, near the proposed pipeline route. Everyone has a sinkhole story in Augusta County; ruined wells, cars falling in, \$28,000 wells, livestock loss. Scientists and engineers from around the world study our quirky Karst formations and warn of hazards. Even the **Virginia DMME warns against pipelines in Augusta County as does the 2013 Virginia Hazard Mitigation Plan.**

- a. Search the VDOT online database for sinkholes in Augusta County and about 65 shows up during a 4 year period, just for major roads.  
How would a pipeline handle 65 breaks in a 4 year period?
- b. **The VDOT has a team of engineers and geologists focusing on just sinkhole problems in this area.**  
Will PHMSA and Dominion have a team of engineers and geologists focusing only on this county?
- c. **How does the Pipeline Operator stop flow and repair a pipeline when a sinkhole drops the pipe 20 feet and 30 feet long in a couple of hours?**

#### 5. **Landslides:**

We had a **landslide** on interstate 64 near Afton in 2013.  
How does a high pressure pipeline handle our landslides?  
The Virginia DMME says not very well.

#### 6. **Earthquake and subsequent subsidence in Karst:**

Area contractors were busy repairing subsidence in Staunton after our 2011 **earthquake**.  
How does Karst and pipelines react with our earthquakes?

#### 7. **Pipeline construction monitoring methods and mitigation response times:**

Dominion waiting 3 years to fix **shoddy pipeline work** and erosion in West Virginia is unacceptable.  
How do we escalate when a problem is not resolved in 48 hours?