

Comments to PA-DEP at Atlantic Sunrise Hearing, Lutz Hall, Lebanon Valley College, 14 June 2017

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I am a historian, and I strongly suspect that when future historians sit down to write about the fracking & pipeline revolutions in Pennsylvania at the dawn of the 21st century, they will find it deeply & profoundly ironic that the state entity charged with protecting the environment – the PA-DEP – was the state entity most responsible for the degradation of the environment it was legally obligated to protect – at a historical moment, no less, when the fate of the entire planet and the lives of hundreds of millions of people are threatened by runaway global climate disruption. Investing \$3 billion in pipeline infrastructure to carry methane – 80 times more potent a greenhouse gas than CO₂ for the first 20 years – is the definition not only of myopic and imprudent public policy, but of insanity.

I harbor no illusions that this public hearing has a pre-determined outcome: I will wager my entire salary for the next ten years that you will approve the Chapter 102 and 105 permits that are the subject of this public hearing. This hearing offers only the illusion of public input – the reality is, regardless of what's said here tonight, you – the PA-DEP – will rubber-stamp these permits.

In what remains of my time here tonight, and for the historical record (for what that's worth), I would like to focus on the pipeline's projected crossing of Quittapahilla Creek in North Annville Township, and more broadly what has been aptly called the "Annville Bottleneck": the zone from Quittie Creek down Clear Spring Road and across Route 422 – the site of a major commercial development – the Clear Spring Crossing Mall – and the recently built Rutters gas station on Rt. 422, which tens of thousands of motorists pass each day.

I am the same Michael Schroeder referenced on page 4-23 of the final Environmental Impact Statement (EIS) who expressed concerns about the impact of live artillery shell practice at Fort Indiantown Gap and blasting at the Pennsy quarry, immediately adjacent to the pipeline's projected route.

The final EIS dismissed these concerns by citing two studies that are at best tangentially related to the concerns expressed.

The first study cited is a 2-page 2015 PA-DEP "Citizen's Guide to Explosives Regulations in Pennsylvania," which states that "Permanent movement or permanent displacement of the ground only occurs in the immediate area of the blast, about 15 or so feet from where the explosives are placed in a typical blast." But the fact is that "permanent movement or permanent displacement of the ground" is not the issue here. What is at issue is the long-term structural integrity of welds that are subjected to repeated "micro-traumas" of ground

vibrations. That FERC would cite this 2-page, reference-free 2015 “fact sheet” in dismissing concerns about these repeated micro-traumas on welds in high-pressure natural gas pipelines is emblematic of its superficial and perfunctory assessment of the risks that this pipeline project poses.

The second study cited in the final EIS used to dismiss concerns about repeated ground vibrations in this area was undertaken by Albert, et al., at the University of Nebraska--Lincoln in 2013 for the Department of Defense, titled “Ground vibrations produced by surface and near-surface explosions.” Of the various scenarios discussed in this study – “propagation over concrete” – “propagation over soil with light vegetation” – “propagation through a conifer forest” – etc. – none bear any resemblance whatever to what we face at the Annville Bottleneck: limestone bedrock in a geologic zone with karst (sinkhole-prone) geology. In short, the 2013 study by Albert et al. is wholly inadequate for assessing the risk to the long-term structural integrity of pipeline welds when subjected to repeated ground vibrations.

I suspect these two studies were cited because they are the closest FERC regulators could find to the situation in the Annville Bottleneck. But they are wholly inadequate to this task.

I therefore urge the PA-DEP to require Williams/Transco to commission an independent scientific study of the long-term impact of repeated ground vibrations on the structural integrity of pipeline welds in limestone, karst-prone geology. There is no relevant scientific data cited in the final EIS that addresses the concerns I expressed, and that were echoed by the Lebanon County Commissioners.

Siting a high-pressure natural gas pipeline in this heavily-trafficked Annville Bottleneck would be a profound mistake and would represent a catastrophe waiting to happen. As noted, tens of thousands of motorists pass this spot every day. Hundreds upon hundreds of people will likely be shopping at the Clear Spring Crossing Mall on any given day – in stores located well within the blast zone should the pipeline rupture and explode.

One final comment, this one directed to future historians: please note that at least some people were paying attention, and that state regulators were duly warned about the imprudence and foolishness – indeed, the insanity – of siting a high-pressure natural gas pipeline in the Annville Bottleneck.

Thank you.

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