Presentation to the

Committee on Criteria for Installing Automatic and Remote-Controlled Shutoff Valves on Existing Gas and Hazardous Liquid Transmission Pipelines

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July 26, 2022

My Background:

- B.S., mechanical engineering (MIT), B.A., English (Amherst College), M.S., civil/environmental engineering (Stanford)
- Licensed engineer in Alaska (current), Maryland (expired)
- Consultant to tribal and conservation orgs., Pipeline Safety Trust (including testimony on pipeline law reauthorizations), U.S. EPA on tank and groundwater issues
- Employee of Environmental Defense Fund (13 years); The Wilderness Society (11 years)
- Two TRB committees addressing pipelines and offshore inspections
- Technical Hazardous Liquid Pipeline Safety Standards Committee, public member, 1995-2007
- Pipeline Safety Trust board member, 2010-present

Important Considerations

- I began following pipelines in the mid-90s. After major incidents – particularly involving discharges that reach ground or surface water (whether or not a waterway is commercially navigable) – the public is always frustrated if there are no automatic or remotely controlled shutoff valves. That frustration makes it harder to site new pipelines, likely a non-quantified economic cost.
- Valve placement currently is discretionary by operators which could leave environmentally sensitive areas unprotected. Regulatory oversight thus is uneven among operators. There will be industry laggards and leaders with respect to shutoff valve placements.
- Pipelines that could affect HCAs have the strongest regulatory requirements. That made sense when IM requirements were put in place two decades ago. How has that changed the risks and likelihood of releases posed by pipelines that may not affect HCAs?
- How does satellite detection of pipeline methane super-emitters play into your analysis? This is particularly important in rural areas, including the North Slope of Alaska.

Recent Case Study

- On June 29, 2022, Energy Transfer's Mid-Valley Pipeline had a spill of roughly **200,000 gallons** (+/-) in Henderson, Tennessee. This was the second largest crude oil spill in state history.
- ~1,000 mile transmission line.
- Spill began at 12:34 pm on June 29 and was **stopped 23 hours later** with a clamp on June 30 at 11:40 am. Cause likely was a pipeline contractor's lawn mower on the right of way.
- PHMSA told the Pipeline Safety Trust that operators used a remotely controlled valve to stop the flow.
- How far away was that valve? Should the maximum release volume be a factor in valve placement?

Additional Recent Incidents

- On July 8, 2022, Holly Energy Partners' Osage Pipeline leaked approximately 1,001 barrels, equivalent to 42,042 gallons of crude oil, into Skull Creek in Payne County, Oklahoma. No shutoff valve information available.

- On June 25, 2022, a Kinder Morgan pipeline in western Colorado released at least 25 million cubic feet of natural gas/methane from a compressor station. Will compressor and pump stations be covered in your work?

- On July 12, 2022, Kinder Morgan's Tennessee Gas Pipeline's 24" line exploded and caught fire near Clermont, Pennsylvania. Two valves closed and at least one was an automatic valve according to PHMSA staff.

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Questions?