## Pipeline Reports: A Special Series

## Let's talk about natural gas pipeline safety.

During the last several months of meeting with landowners and talking with community members – the topic of safety has emerged as a key concern among our Mountain Valley Pipeline (MVP) project neighbors and communities.



"The initial reaction of a large safety concern from people who are unfamiliar with the nation's extensive transmission pipeline network is understandable, but the irony is that the natural gas transmission industry has such a strong safety record that many don't realize how often they live, work and play near or above pipelines," said Shawn Posey, Senior Vice President, Mountain Valley Pipeline Engineering and Construction. "The reason for the strong safety record is that those of us who build and operate pipelines take every precaution to protect the integrity of our pipelines, assure peoples' safety and protect the environment. It's not an exaggeration to state that the level of seriousness we take to pipeline safety far surpasses the concern of the most skeptical local resident or landowner."

The National Transportation Safety Board and the U.S. Department of Transportation (DOT), report that natural gas pipelines have the best safety record of any energy delivery system, including rail, in the U.S.

According to the U.S. Energy Information Administration, more than 200 interstate natural gas transmission pipeline systems transport energy across more than 300,000 miles of transmission pipelines nationwide. In Virginia, there are more than 2,500 miles of existing pipeline infrastructure; and in West Virginia there are close to 4,000 miles.

The MVP project includes a proposed underground, interstate natural gas pipeline that when complete will transport natural gas from the Marcellus and Utica shale regions through West Virginia and Virginia to energy consumers along its approximately 300-mile route and then access existing infrastructure to provide natural gas to the nation's Mid-Atlantic and Southeast regions.



The project is subject to approval and regulatory oversight from the Federal Energy Regulatory Commission (FERC).

"Local residents have said they worry about possible leaks and accidents; that construction could have an adverse impact on the environment; and that the pipeline may not be adequately monitored, said Posey. "It is extremely important for MVP to inform the communities of how safety is addressed in the design and operations of a transmission pipeline."

Project planners start by surveying proposed routes and all major alternatives. Surveys help to avoid sensitive or protected areas when feasible, including wetlands, endangered species and habitats; as well as limit surface disturbance by minimizing impacts on the environment. In some locations, the pipeline can be co-located with pre-existing utility transmission corridors. Erosion and sediment control plans, among other environmental plans, are developed and adhered to during construction and reclamation to mitigate construction impacts.

Even seismic activity is considered. Following a geologic seismic analysis, if seismic activity emerges as a possible threat to a pipeline segment, proactive measures can be taken such as increasing inspection patrols, adding extra protective industrial padding, and taking additional material design factors into consideration.

Prior to a pipeline being ready for in-service operations, engineers design and oversee a series of tests to confirm integrity and

operational safety, which are verified according to U.S. DOT regulations. One test involves pumping water through the line at higher pressures than are used for the gas to assure that the pipe can withstand the pressure. All pipeline welds are individually X-rayed to assure construction integrity. Internal inspection tools are also pushed through the pipeline with nitrogen to evaluate the mechanical properties.

Once transmission begins, operators use sophisticated technologies and system analysis to monitor pipeline gas pressure at all the mainline valves in real time 24 hours a day, seven days a week. This monitoring ensures that pressure and flow operate at safe, normal levels. Pipeline and compressor stations automatically shut down if elevated levels are detected, or any other problems are identified.

Above ground, easements allow light vehicles and agricultural equipment to access and cross the pipeline without having extra precautions, allowing landowners to resume the majority of their prior land-use activities. Where heavy equipment is required, pipeline operators work with landowners to create plans and easement agreements that allow for roads and heavy equipment crossings.

At least once per year, the pipeline operator meets with local emergency responders to review established first-response plans.

The safety of our communities, our employees, our contractors, and our pipeline will always remain a top priority. This is the standard we live by every day, reinforcing what we mean when we say we're completely committed to building the Mountain Valley Pipeline safely and responsibly. Nothing is more important to us.