

Reducing Fugitive Methane Emissions in Our Midstream Operations

The IEA notes that “natural gas has many advantages in a world concerned about carbon emissions and air quality. However, methane emissions along the natural gas value chain, if they are not abated, threaten to reduce the climate benefits of using natural gas.” We are implementing measures to reduce fugitive methane emissions across our natural gas gathering and processing operations. These methane emission reductions are a particularly effective way to limit GHGs because methane emissions are up to 25 times more potent than carbon dioxide emissions. The following measures are examples of some of the actions we are taking:

- **Pipeline launchers and receivers:**

As part of a settlement agreement with the EPA, we redesigned pipeline launcher and receiver stations to minimize emissions of methane and volatile organic compounds (VOCs) each time they are opened as part of required operation. These improvements are estimated to reduce methane emissions as much as 91%, eliminating approximately 1,000 tonnes per year. As part of the settlement, we also agreed to share our proprietary designs for the launcher and receiver stations on our website to promote reductions across the industry.



MPLX employees utilize state-of-the-art controls to perform routine tasks at our natural gas pipeline launcher and receiver stations.

- **Flaring reductions:** In April 2019, we received an environmental excellence award from the Gas Processors Association for developing a mobile compressor to recover gases vented from a launcher and receiver station that was previously required to be flared. The “zero emission vacuum compressor” (ZEVAC) is able to recover gases that would have been sent to a flare and compress them back into the gathering system. This eliminates hydrocarbon flaring and reduces GHGs, including methane.

- **Leak detection and repair (LDAR):** We have adopted a stringent LDAR program at our gas processing and fractionation plants that is estimated to reduce our methane emissions by another 2,000 tonnes per year. The program has lowered our VOCs leak detection rate from 10,000 ppm, which is the typical industry standard, to 500 ppm. We are also monitoring components such as fin fan plugs and product loading arms that are not required to be monitored under current LDAR regulations. In addition, we have adopted a policy that new valves must be certified as low-leak technology, which means they are tested by the manufacturer to not leak above 100 ppm by volume. We have memorialized these practices in an agreement with the EPA. The agreement includes a requirement to conduct third-party audits to ensure compliance with the practices.

- **High-bleed pneumatic controllers:** We have a program in place to phase out high-bleed pneumatic controllers at our compressor stations. We have completed a phase-out of these types of controllers in our Utica and Marcellus operations, and we are working toward a phase-out in other regions.

Collectively, these innovative practices and design modifications will continue to lower fugitive methane emissions throughout our natural gas gathering and processing system.