

Operational Safety

To ensure our pipelines remain in safe and reliable operating condition, we employ a number of techniques – from high-tech monitoring at our gas control centers to foot patrols of pipeline rights-of-way.

Gas Control

Gas Control, our high-tech computer control center, monitors the flow of natural gas throughout our more than 14,000 miles of U.S. pipelines. Staffed 24 hours a day, seven days a week, the center collects data from all of these pipelines so that we always know what is happening along our system.

In addition to monitoring the flow of the natural gas with the use of Supervisory Control and Data Acquisition (SCADA), we monitor pressures and temperatures as well as the operating status of all the pipeline facilities. Gas Control monitors and reacts to equipment anomalies and, when necessary, dispatches employees who live and work along the pipeline to respond. As an added safety measure, remote control equipment is installed along the pipeline system, enabling us to operate valves remotely from Gas Control.

Gas Measurement

We precisely measure the quantity of natural gas when it is received at thousands of points along the pipeline from producers and at interconnections with other cross-country pipeline operators. We also measure the gas when it is delivered to local distribution companies, power plants and large industrial facilities. We constantly sample the natural gas at many sites to identify potential corrosive components and to ensure a high standard of quality is maintained.

Compressor Station Operations

As natural gas flows through a pipeline, the pipeline pressure will decrease due to friction and elevation differences. To maintain pipeline flow and pressure, compressor stations are located along the pipeline route.

Our experienced and well-trained employees operate over 100 compressor station sites around the clock – with nearly two million horsepower in the United States.

Rectifiers and Cathodic Protection

Rectifiers are devices that transfer a regulated amount of current flow to the pipelines. Rectifiers receive electric current from AC sources like power lines. We check all rectifiers along the pipeline system every two (2) months to ensure they are operating properly.

Proper electric current flow along the surface of a pipeline impedes corrosive activity and prolongs the useful life of pipelines for many decades. The amount of current applied to the pipelines is harmless to humans, animals and plant life.

Above/Below Ground Coating Maintenance

Pipeline facilities above and below ground are protected by a coating, applied under very exacting conditions, that inhibits corrosion. Routine visual inspection of all aboveground facilities is conducted to determine if any coating damage or deterioration has occurred and, if so, to repair the coating. When underground pipeline facilities are exposed, usually due to excavation or maintenance activities, we always inspect the coating for damage or deterioration.

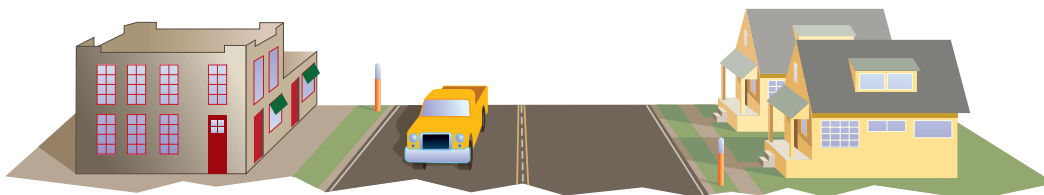
Internal Pipe Cleaning

Maintenance of the inside of the pipeline is as important to a prudent natural gas pipeline operator as the maintenance of the outside. Our pipeline facilities are cleaned to minimize internal corrosion and maintain high-flow efficiency. Cleaning is conducted using devices called “pigs” that travel inside designated sections of the pipeline and remove liquids and debris from inside the pipe.

Inline Inspection

Our pipelines pioneered many of the inline inspection techniques currently in use by the industry. These inline inspections are performed with “smart pigs” – mechanical tools that enable us to examine the pipelines from the inside. Smart pig inspections provide us with valuable information, locating possible internal and external corrosion or other irregularities of the pipeline so they can be monitored and repaired as needed.

(continued)



Ground Surveys

We patrol pipeline rights-of-way in populated areas and some other areas of interest on foot and by vehicle. Ground surveys can reveal leaks and other potential problems, enabling us to quickly repair the problem and minimize impact.

Leak Surveys

We routinely perform leak surveys on all of our facilities. Leak surveys look for fugitive emissions of natural gas so we can take action to eliminate them. Many miles of the pipeline are surveyed with ground surveying techniques and aerial patrols are also used. Our records show that natural gas leaks rarely occur on our pipelines.

Aerial Patrols

Company planes conduct aerial patrols of the pipeline rights-of-way at least once a week (in some places, as often as three times a week). Aerial patrols provide a bird's-eye view of the rights-of-way and surrounding areas. The pilots look for ground changes, construction activities, or other conditions that could affect the pipelines.

Waterway Inspections

Locations where the pipeline crosses waterways are inspected at the surface every year by our employees to check for bank erosion, visible pipeline exposure, and natural gas leaks indicated by bubbles. Many waterway crossings are inspected at the bottom of the waterway each year by contract divers under our direction. These divers determine if the pipeline is adequately covered. If the pipeline does not have adequate cover, any coating damage is repaired and the pipe is re-covered with grout bags or other suitable material.

Right-of-Way Maintenance

Right-of-way maintenance is important to us because it makes the location of our pipelines clearly apparent to the public and to any other individuals who might consider excavation in the area.

Mowing and clearing the right-of-way allows us to patrol the area by ground and air to discover activity that could lead to pipeline damage. It also allows the company to easily discover leaks and natural earth movement that could damage the pipeline facilities.

Sign/Marker Maintenance

We place markers and signs along pipeline rights-of-way to inform the public of the presence of the natural gas pipelines. The markers are placed at street and road crossings, railroad crossings and other significantly visible points along the right-of-way to reduce the possibility of damage to or interference with the pipeline.

In densely populated areas, we frequently place the markers within "line of sight" proximity – this means the markers are so close together that you can see from one marker to the next. Markers and signs include our name and the phone number to call if any abnormal condition or suspicious activity is detected that would threaten the integrity of the pipeline.

In addition, one foot below natural grade, we install a bright yellow warning ribbon reflecting the location of the pipeline to notify potential excavators of the pipe's location.