## **Pipelines: Engineered for Safety & Reliability**



Pipelines are a proven safe mode of transportation for petroleum products that are central to our everyday life and essential to the United States' economy. Sunoco Logistics L.P. and its subsidiary, Sunoco Pipeline L.P. are committed to safety at the highest level.

The safety of Sunoco Logistics' (SXL) employees and the community is our highest priority as an organization, and we believe that no project is worth doing if it cannot be done safely. It is every employee's responsibility to conduct business in accordance with this mission, and it is management's commitment to provide the resources, equipment, training, and tools to ensure continued improvement.

That means rigorous testing of all pipes, new and existing, using the most advanced technologies available to analyze a pipeline's condition, and monitor its operation in real time. Certified controllers closely watch the pipeline's pressure, temperature and flow, 24 hours, 7 days a week from a control center dedicated exclusively to the safe operation of our pipelines, and can shut down pipeline operations remotely. We patrol the pipeline route, or right-of-way, on the ground and by air for any potential hazards. And we reach out to neighbors, contractors and first responders to educate them about the pipelines in their communities.

America's vast pipeline network stretches over 2.5 million miles. Each year, pipelines carry billions of gallons of petroleum products -- including crude oil, gasoline, diesel and natural gas liquids like propane -- from areas where they are produced, to areas where they are refined and ultimately used. Sunoco Pipeline has been moving all of these products safely for 75 years.

Products will ultimately be transported from an origin point to a destination where they are in demand. Of all of the modes of transportation available, pipelines are the safest mode of transporting petroleum products, both for humans and the environment, as documented by the U.S. Department of Transportation. Pipeline safety increased by more than 60 percent between 2003 and 2012, and serious incidents, already rare, hit a record low in 2013, according to the Pipeline and

Hazardous Material Safety Administration (PHMSA), the division of the U.S. Department of Transportation responsible for enforcing pipeline safety standards.

SXL controls more than 7,500 miles of pipeline, and we employ best management practices in the design, fabrication and the systematic testing and inspecting

of our pipelines and our facilities. We adhere to a strict integrity management and maintenance program on all of our existing operations to ensure that our network meets or exceeds the requirements of regulatory agencies including the Pipeline and Hazardous Material Safety Administration.

SXL will take the necessary steps to both minimize the possibility of a leaks and detect any possible leaks in the event they do occur. These steps include:

## SXL works closely with the companies that design, build and coat the pipelines

that we use in our operations. All new pipe is thoroughly tested and inspected to ensure the pipe meets industry standards and is in accordance with all regulatory requirements.

All newly-installed steel pipelines are treated with a protective bonded-epoxy coating to prevent corrosion. In addition, cathodic protection systems which further inhibit corrosion are placed along the pipeline.

As the sections of pipeline are being welded together, an independent, third-party inspector must approve each weld, using x-ray technology to ensure that each section is securely attached.

Once the pipeline is installed, SXL will test the line with water at pressures at least 25 percent above the top pressure at which the line will be operating. This confirms the pipeline's strength.

**SXL conducts periodic inspections of our pipelines** to determine that they are operating safely and efficiently. Inspection tools, commonly referred to as "smart pigs," travel internally throughout the line, measuring wall thickness and searching for indications that warrant attention. We monitor via several testing methods and take appropriate steps such as external coating repairs or internal Biocide treatment in addition to the smart pigs. We make necessary repairs to ensure that the line is operating safely.

In the unlikely event a leak would occur, we have in place the emergency and spill response plans required by Federal and State regulatory agencies and we have teams trained to respond immediately.

In an effort to prevent damage to underground facilities, SXL participates in the *One Call* program in all areas where we have operations. *One Call* works with project owners, designers, excavators and facilities owners to make sure utilities and pipelines are clearly marked prior to any surface work being done.

**Pipeline markers and signage are placed along all of our routes** at key intersections to notify the community of the pipeline location. All signage will identify **Sunoco Pipeline** or affiliate company as the operator and have our emergency toll-free number: 800-786-7440.

**SXL conducts emergency response training** with local first responders throughout all of our development area.

## We conduct routine inspections and aerial patrols of our pipelines and facilities.

Our inspectors look at any abnormalities and for nearby construction activity that could compromise the line. If an issue is detected, an SXL field technician is immediately assigned to correct the matter.

Through our community engagement plan, we work with landowners and other members of the community to educate them about our operations and encourage them to contact SXL with any potential issues.

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SXL monitors our network via a computerized Supervisory Control and Data Acquisition (SCADA) system on an around-the-clock basis, 365 days of the year, from our control center. The control center is staffed by highly trained pipeline controllers and features redundant computer and electrical systems. A completely separate control center is also available if needed.

The SCADA system tracks pressure, flow, temperature and other operating data via a series of field instruments in order to ensure that all operations are normal. The system provides alarms to alert the controller to take action in the event of an abnormal condition and will automatically shut down the system if needed. Our pipeline controllers maintain communications with field and terminal operations so that all involved employees are kept abreast of current and planned pipeline operations.

In addition to our vast network of pipeline infrastructure, we operate and maintain other facilities that play integral roles in our operations, including pump stations and above-ground valve sites. Pump stations adjust pressure, pump the product along the line, monitor the flow of the product, and keep track of other critical information. Typically, stations are positioned at intervals throughout the length of the line, depending on the product, the size of the pipe, engineering design, terrain, and power availability.

Above-ground valve sites are installed along our pipeline system to provide an additional way of controlling flow. The valves normally are open, but when a section of pipeline requires maintenance, the valves can be closed to isolate that section of the pipeline. Many of these valves can be closed remotely from our control centers.

Our safety program will continue to evolve and improve as best practices and lessons learned are shared among all of our operations, with a constant goal of achieving safe, incident-free operations throughout all of Sunoco Logistics.

For more information, please contact us at:

*Sunoco Logistics Hotline:* 855-430-4491

Sunoco Logistics Projects Website: www.SXLpipelineprojects.com

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A Sunoco Logistics employee inspects the pipeline during construction of the Mariner East I pipeline.