Energy Transfer has a comprehensive pipeline integrity program that enables us to monitor our assets 24 hours a day, 7 days a week, 365 days a year. Pipeline operations personnel are trained and qualified in accordance with pipeline safety regulations. Qualifications cover all aspects of operations and maintenance and are periodically reassessed as required.

1. **Pipe**
   - High tensile strength steel
   - Protective coating
   - Pressure tested at the mill
   - Pipe design regulations require additional safety factor in higher risk areas such as road crossings, river crossings and high population areas
   - All welds 100% x-rayed or NDE inspected
   - Pressure tested at a minimum of 125% of maximum operating pressure

2. **In-Line Inspection Tools**
   - There are various tool technologies that may be used to identify and measure metal loss from corrosion and gouges, identify dents and other deformations, and detect longitudinal cracks and crack-like defects

3. **Pipeline Markers**
   - Pipeline markers and warning signs indicate approximate location of the pipeline
   - Located at frequent intervals along the pipeline right-of-way
   - List product, name of the pipeline operator, and operator’s telephone number in case of an emergency
   - Display 811 “Call Before You Dig” notification phone number

4. **Security**
   - Chain link security fencing
   - Security camera and monitoring

5. **Valves**
   - Both automated and manual valves are strategically placed along the pipeline
   - Can be used to stop flow along a certain section of pipe
   - Inspected periodically in accordance with regulations
   - A variety of valves are used both above and below ground

6. **Cathodic Protection**
   - Inhibits corrosion by application of electrical current with anode bed
   - Effective protection requires very low DC voltage
   - Entire pipeline is protected below ground
   - Inspected and tested annually, rectifier inspected every other month
   - Test stations approximately one mile apart

7. **Aerial Patrol**
   - Visual inspection along the right-of-way for: pipeline leaks (dead vegetation, discoloration, etc.), sunken backfill, exposed pipe, land erosion and unauthorized excavation

8. **Ground Patrol**
   - Visual inspections and surveillance of the pipeline along the right-of-way
   - Maintenance and inspections of equipment and valves

9. **Supervisory Control and Data Acquisition (SCADA) Systems**
   - Control system that uses computers and networked data
   - Sends critical information to pipeline operations teams
   - Automates data logging and processing

10. **Control Center**
    - Centralized control center to immediately and easily adjust flow rates in the pipeline
    - Pipeline engineers know exactly what is happening along the pipeline at all times
    - Can quickly react to equipment malfunctions, leaks, or any other unusual activity along the pipeline

Note: These illustrations are conceptual and general in nature; specific valve sites and external security measures vary.

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**PIPELINE OPERATIONS AND SAFETY OVERVIEW**