

## CHAPTER I

### INTRODUCTION AND OVERVIEW

**This chapter contains a simplified description of the pipeline safety requirements. The complete text can be found in 49 CFR Part 192.**

#### INTRODUCTION

Public Law 104-304 requires the U.S. Department of Transportation (DOT) to develop and enforce minimum safety regulations for the transportation of gases by pipeline. The safety regulations became effective in 1970, and are published in Title 49 of the Code of Federal Regulations (CFR), Parts 190, 191, 192, and 199. The Office of Pipeline Safety of DOT's Research and Special Programs Administration (RSPA) is charged with their enforcement.

The gas pipeline safety regulations apply to natural gas systems and operators of natural gas master meter systems. The pipeline safety regulations require operators of natural gas systems to: deliver gas safely and reliably to customers; provide training and written instruction for employees; establish written procedures to minimize the hazards resulting from natural gas pipeline emergencies; and, keep records of inspection and testing based on suggested forms found in Appendix B.

Additionally, operators of all natural gas systems, **except master meter systems**, must test employees in safety-sensitive positions for prohibited drugs and alcohol and provide an employee assistance program. The requirements for drug and alcohol testing of pipeline employees are found in 49 CFR Part 199, which incorporates the overall OPS drug testing requirements found in 49 CFR Part 40.

Natural gas operators who do not comply with the safety regulations may be subject to civil penalties, compliance orders, or both. If safety problems are severe, a "Corrective Action Order" may be issued by OPS. This could result in the shutdown of the system.

State agencies may enforce pipeline safety regulations under certification by OPS. The state agency is allowed to adopt additional or more stringent safety regulations for intrastate pipeline transportation as long as such regulations are compatible with the federal minimum regulations. However, if a state agency is not certified, the DOT retains jurisdiction over intrastate pipeline systems.

Operators should check with the pipeline safety agency in their state (Appendix C) to determine:

- whether a state agency has safety jurisdiction;
- whether the state agency has pipeline safety requirements that exceed the federal regulations;
- the inspection and enforcement procedures of the state agency.

## OVERVIEW

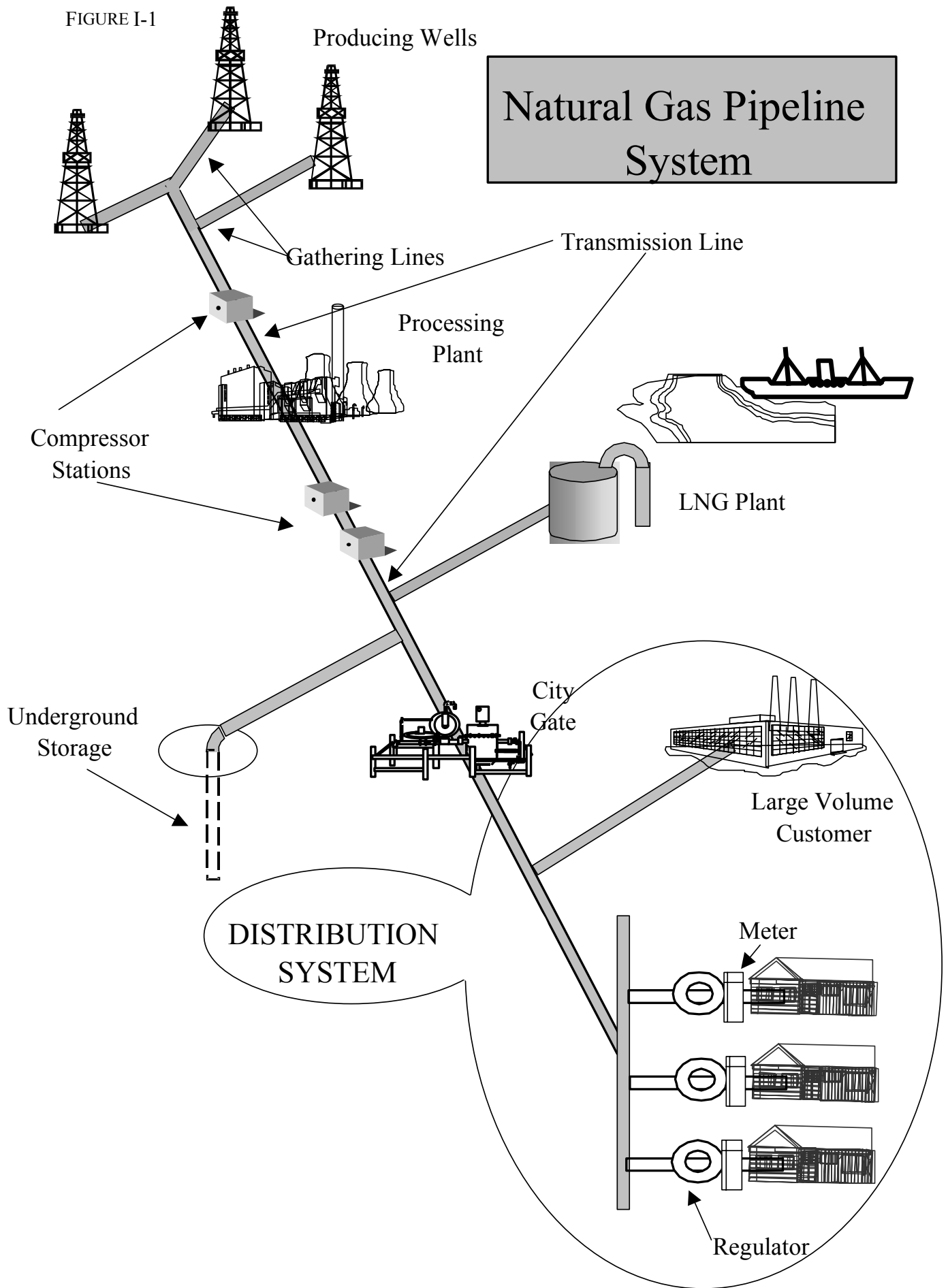
The natural gas pipeline industry consists of transmission and distribution companies. These pipeline systems can be simple or complicated. However, all gas pipeline companies are held to the same safety standards.

FIGURE I-1 represents one of the many possible configurations of natural gas transmission and distribution systems. The natural gas:

- Flows from the producing wells into gathering line(s).
- Through gathering lines and compressors or compressor stations.
- After the compressor(s), through transmission lines.
- To a processing plant where the heavy ends, such as propane, butane, ethane or natural gasoline, which are initially components of the gas stream, are removed.
- Through the transmission line and additional compressors.
- From the compressors to underground storage or a liquefied natural gas (LNG) plant (where natural gas is liquefied by reducing its temperature to - 260 °F), or directly to a city gate station or master meter system.

FIGURE I-2 is an example of a distribution system that consists of mains and services operating at different pressures, which are controlled by regulators. Ordinarily, industrial customers receive gas service through high-pressure distribution mains. The small commercial and the residential gas systems can be either low- or high-pressure distribution systems.

FIGURE I-1



# Natural Gas Distribution System

FIGURE I-2

