

Gas Piping Technology Committee (GPTC)

Meeting the
Challenge of Changing
Regulations and Technology

Western Region Gas Conference
August 21, 2019
Leticia Quezada
GPTC Chair

- ❖ **Who is GPTC?**
- ❖ **GPTC history**
- ❖ **What does the GPTC do?**
- ❖ **Relationship with PHMSA/NAPSR**
- ❖ **Who uses the Guide?**
- ❖ **How to Use the Guide**
- ❖ **How is guidance created?**
- ❖ **What is the value of GPTC?**
- ❖ **Become a GPTC Member**
- ❖ **Questions?**

- ❖ **American National Standards Institute (ANSI) accredited committee**
 - **ANSI Z380, Gas Piping Technology Committee**
 - **Consensus process**
 - **Technically based**
 - **Independent**
 - **Members represent their profession**
 - **Guide is designated as ANSI Z380.1**

❖ **Gas Industry**

- Distribution
- Manufacturers
- Transmission

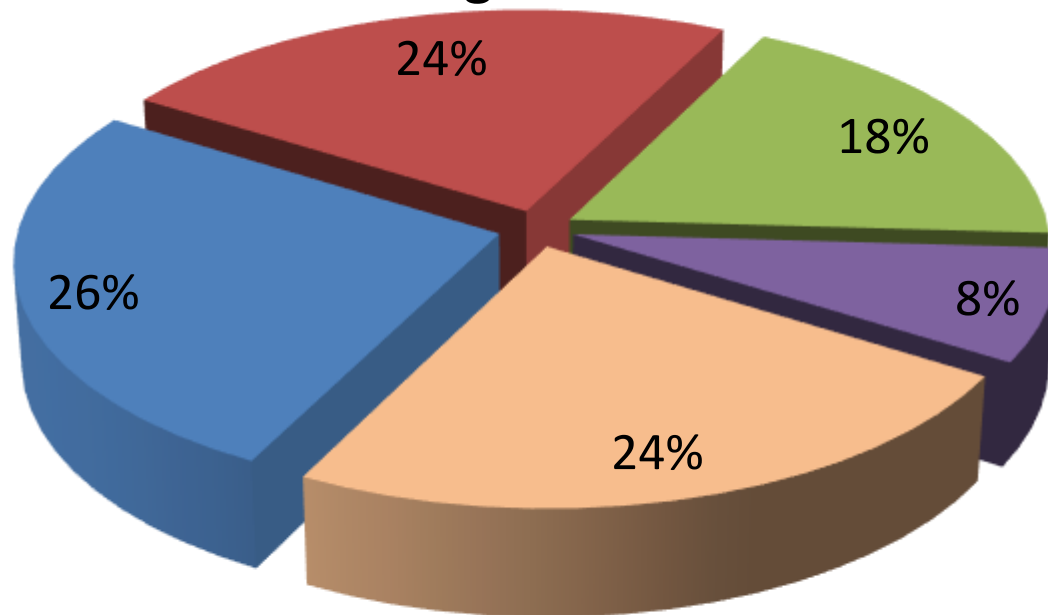
❖ **Gas Industry Regulators**

- Federal
- State

❖ **NTSB**

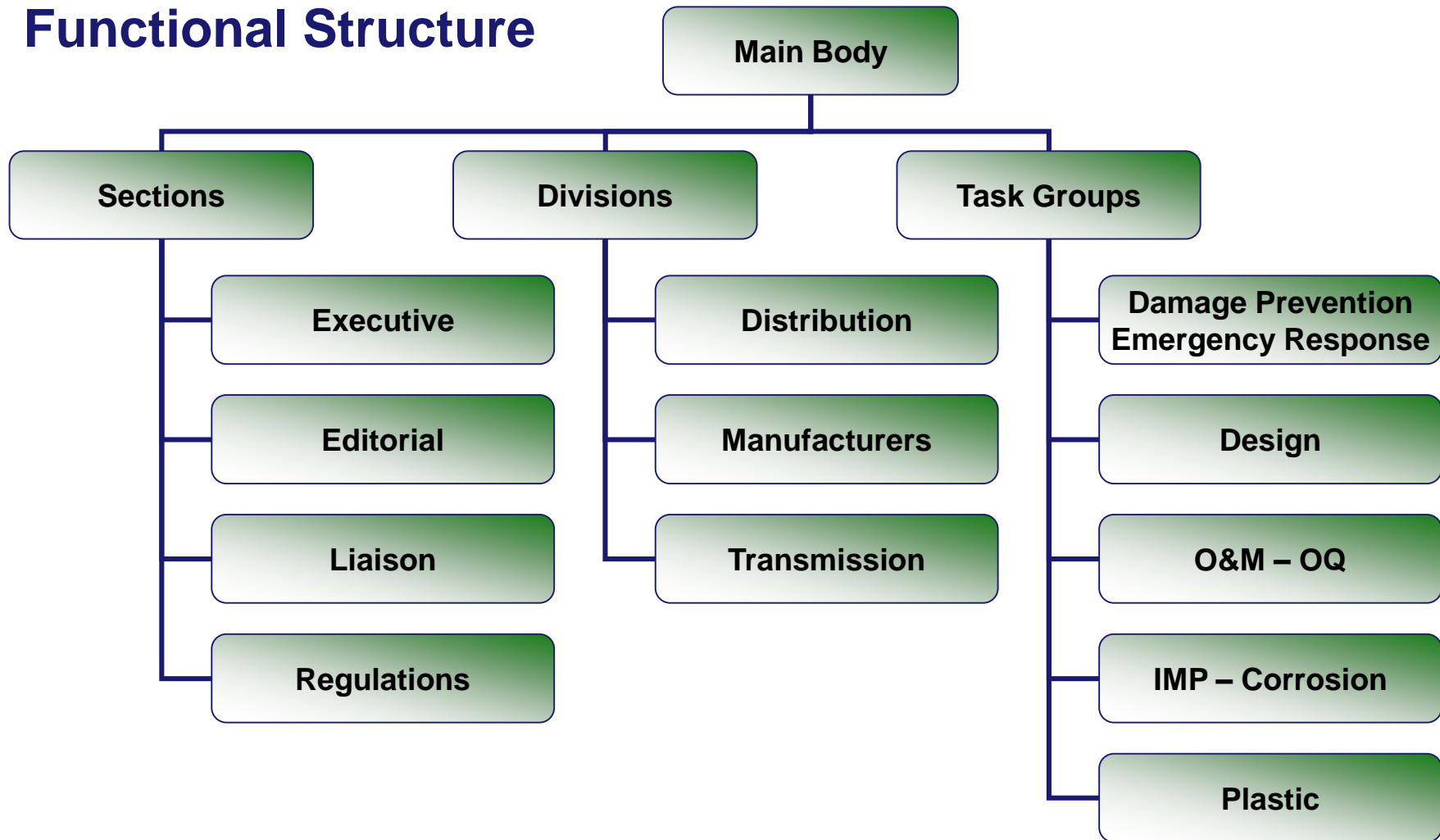
❖ **General Interest**

Approx. 100 members; 38 Main Body voting members

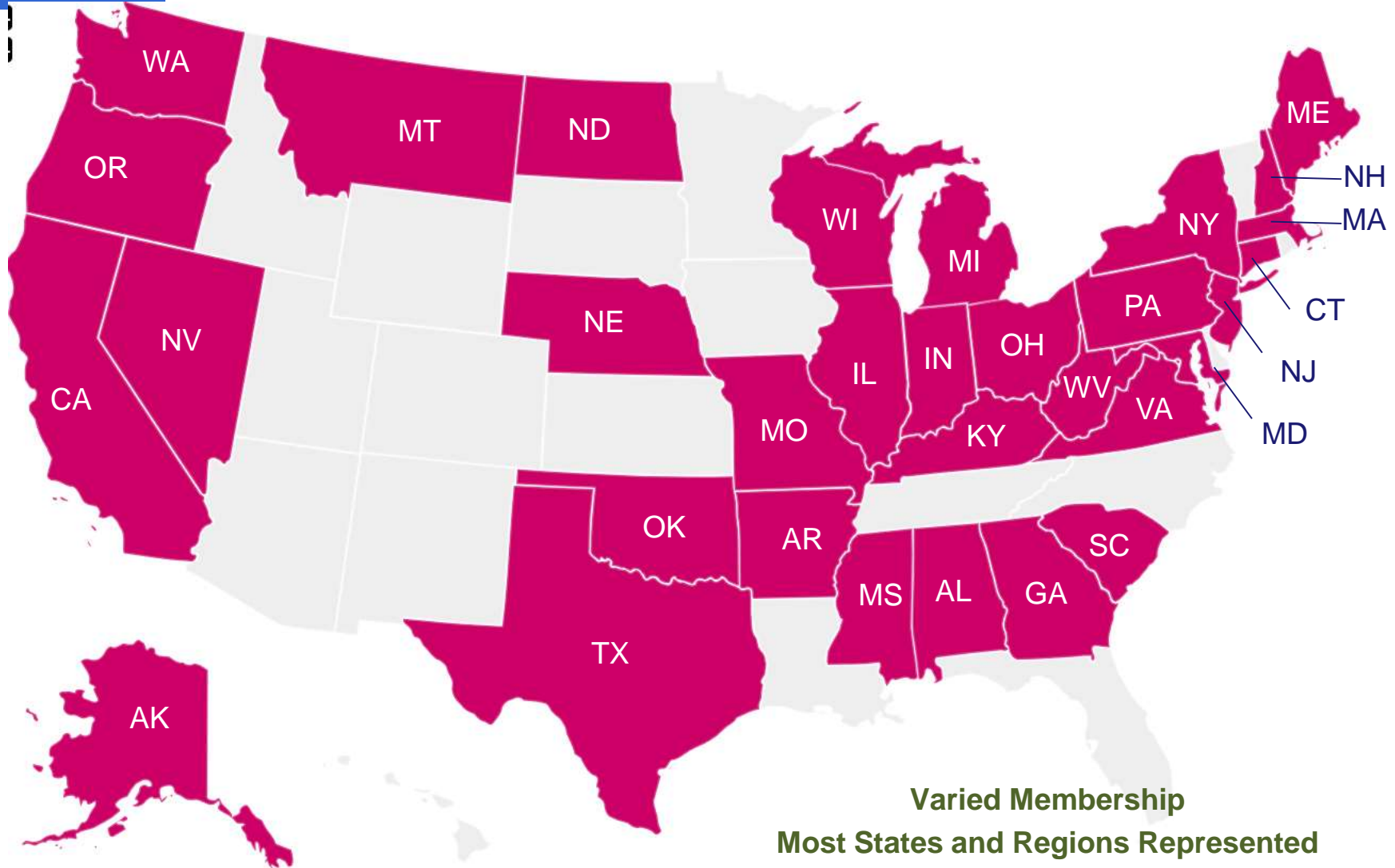


- Distribution
- Manufacturing
- Transmission
- General
- Regulatory

Functional Structure



Who is GPTC?



Varied Membership
Most States and Regions Represented
Operate in varied geographic and climatic conditions

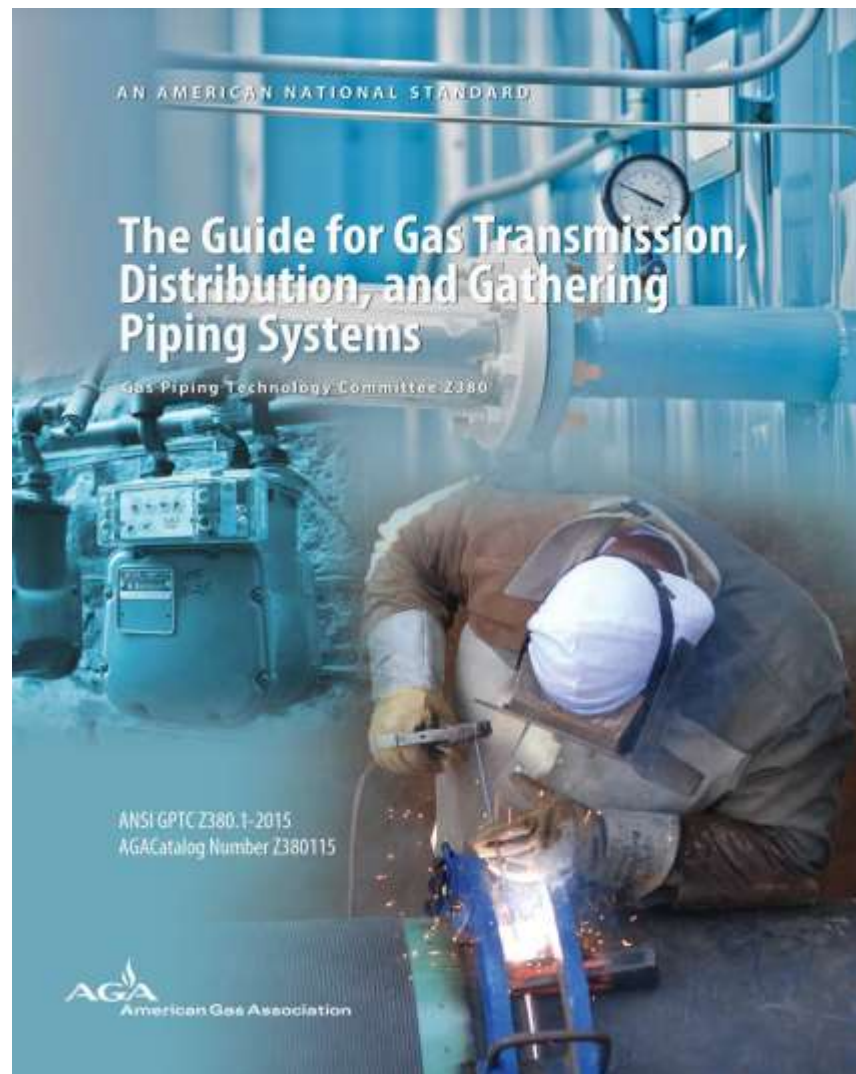
❖ History

○ – The Gas Piping Technology Committee

- Formed late 1960s
- OPS developing performance-based regulations
- OPS looking for “best practices”
- Gas Piping Standards Committee
- First “Guide” published same year as regulations, 1970

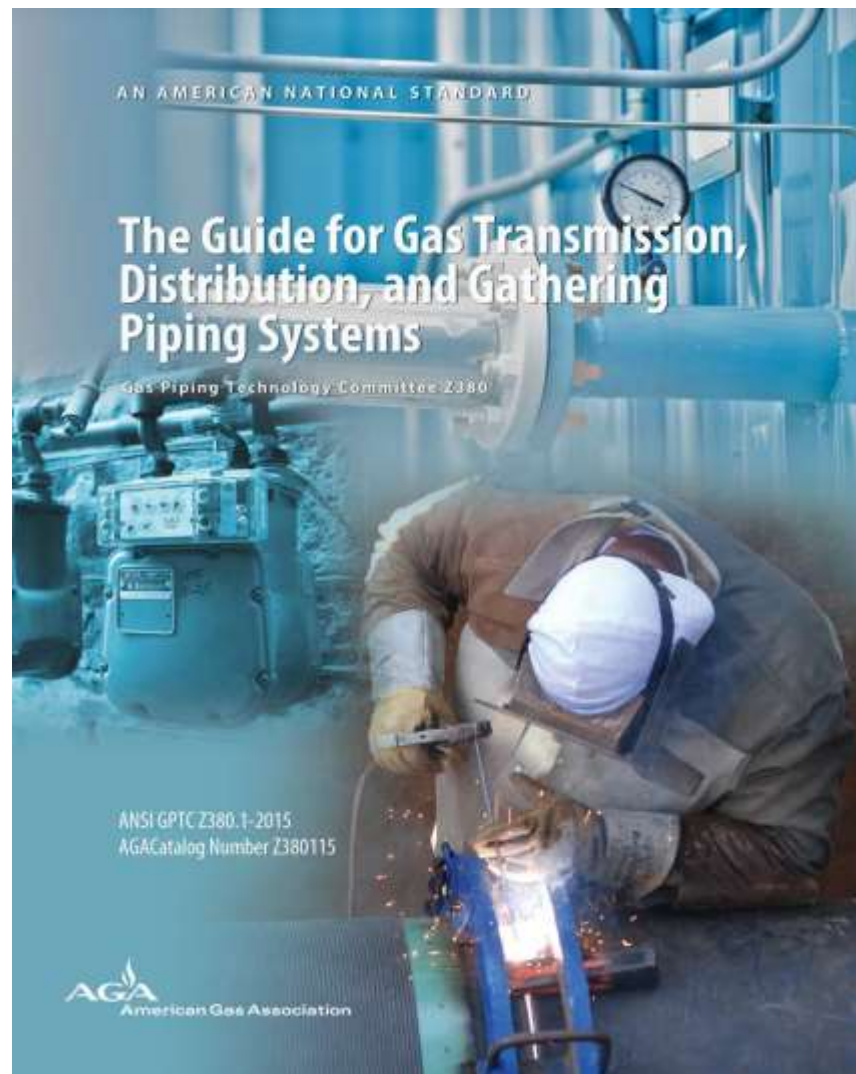
**“Guide for Gas Transmission
and Distribution Piping Systems”**

- ❖ Provides “Guidance” to operators of gas transmission, distribution (including propane), gathering and storage piping systems for compliance with DOT regulations, CFR 49 Parts 191 & 192

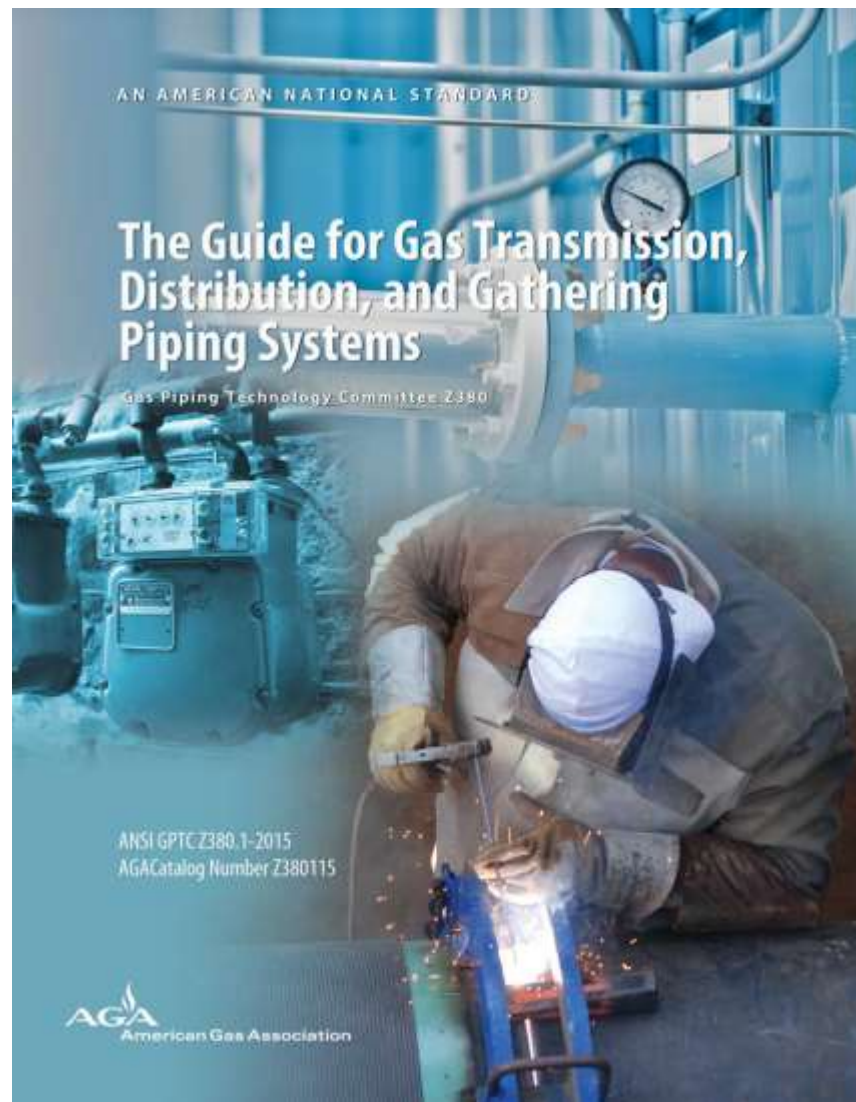


- ❖ **Guidance based on the expertise of GPTC membership operating throughout the U.S.**
- ❖ **Often referenced, it is not enforceable***

* Some States have adopted all or portions of the GPTC Guide into their regulations, which they enforce.



- ❖ **Reviews NTSB & State accident reports**
- ❖ **Responds to NTSB recommendation**
- ❖ **Comments on PHMSA Notices of Proposed Rulemaking**
- ❖ **Petitions PHMSA for Code changes**



- ❖ **Historic partnership**
- ❖ **Regulatory members of GPTC**
 - PHMSA (1) and NAPSR (3) Members plus other State Pipeline Safety Staff (4)
 - NSTB (1 vacant)
- ❖ **References of GPTC Guide in Federal Regulatory Rulemaking Activities**
- ❖ **Letter of support from PHMSA and NAPSR**

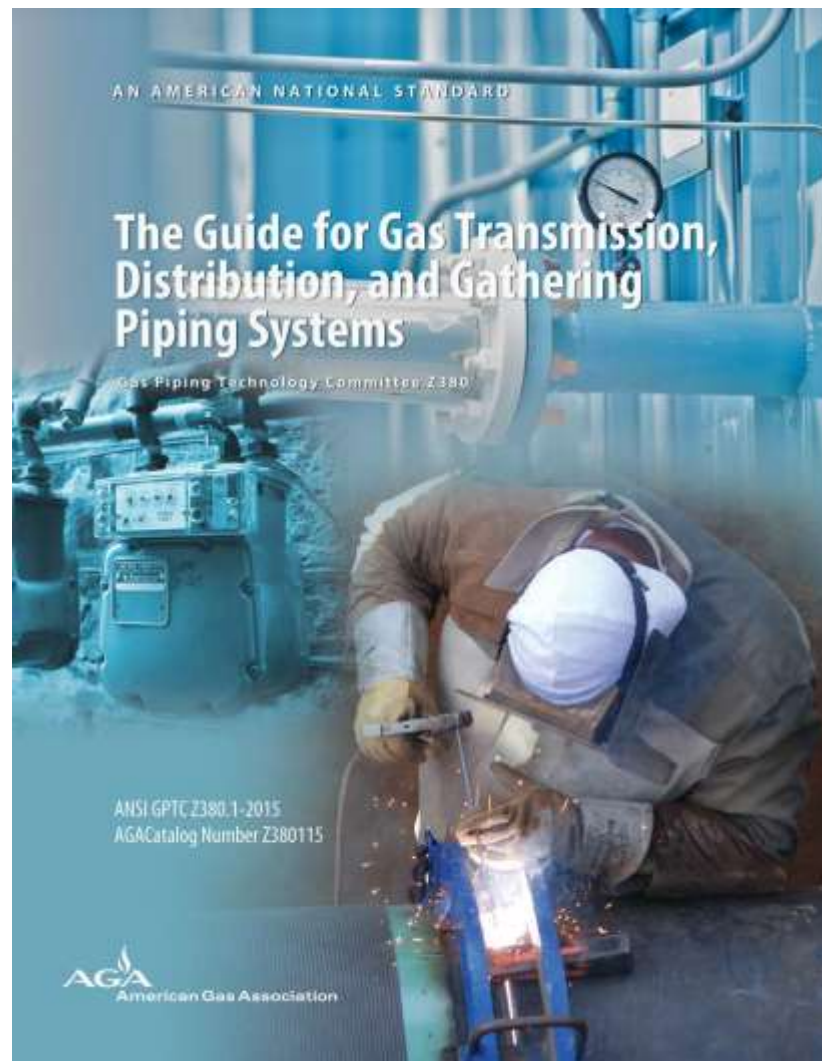
“The U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA) appreciates the cooperative effort needed to develop the *Guide for Gas Transmission, Distribution, and Gathering Piping Systems* (Guide). **The Guide**, advisory in nature, **provides clear and concise guidance to gas piping systems operators on complying with the Federal pipeline safety standards.** PHMSA recognizes the efforts of the Gas Piping Technology Committee (GPTC) to enhance the pipeline safety practices of those who use the Guide. **PHMSA looks forward to the continued and coordinated efforts by the GPTC members toward improvements in pipeline safety practices through the use of the Guide.”**

“NAPSRS appreciates the cooperative effort needed to develop the *Guide for Gas Transmission, Distribution, and Gathering Piping Systems* (GPTC Guide). **The GPTC Guide, which is advisory in nature, provides additional, comprehensive guidance to gas piping systems operators on complying with the Federal pipeline safety standards.** NAPSRS recognizes the efforts of the Gas Piping Technology Committee (GPTC) to enhance the pipeline safety practices of those who use the Guide.

NAPSRS looks forward to the continued collaborative efforts by the GPTC members toward improvements in pipeline safety practices through the ongoing development, improvement, and use of the GPTC Guide”.

- ❖ **Federal & State regulators**
- ❖ **Transmission (pipeline, gathering and storage) operators**
- ❖ **Distribution (local gas utility, propane) operators**
- ❖ **Municipalities and Master Meter operators**
- ❖ **Many gas operators, both large and small, incorporate sections of the Guide in their O&M manuals.**
 - **Federal Regulations require operators to have and maintain operating procedures**

- ❖ **Structured in the same fashion as the regulations (Parts 191 and 192)**
- ❖ **Includes design recommendations, material reference, and recommended practices**
- ❖ **Includes “how to” supplementary recommendations related to the regulations**
- ❖ **Recognizes system and operator diversity**



❖ **Guide structure**

- **Historical Amendment list**
- **Code language**
- **Guide material**

❖ **Guide Appendices**

- **191 – 5**
- **192 – 26**

❖ Guide Material Appendices

○ G-192-X

- X does not designate Code section

○ GMA G-192-7 *Large-scale distribution outage response and recovery - 5 pages*

○ GMA G-192-8 *Distribution Integrity Management Program (DIMP) – 29 pages*

○ GMA G-191-5 *Calculating gas loss from a damaged pipeline – 4 pages*

○ GMA G-192-11 *Gas leakage control guidelines for natural gas systems – 23 pages*

○ GMA G-192-9A *Pressure testing guidelines for Transmission integrity assessments - 5 pages*

❖ Check Table of Contents for more

❖ Editorial conventions

- “Includes” does not limit any list to the items presented
- “Includes” means “includes but not limited to”
- A list is not intended to set a minimum requirement
- “Should” means not mandatory
- “Required” means the Code says you must

❖ Editorial conventions

- No guide material necessary
 - The regulation is self-explanatory
- No guide material available at present
 - Hasn't been developed or
 - Not determined yet if needed
- This guide material is under review following Amendment XXX
 - Currently reviewing
- Changes are marked by wide vertical lines to the left of the modified text or tables

§192.703

General.

[Effective Date: 11/12/70]

- (a) No person may operate a segment of pipeline, unless it is maintained in accordance with this subpart.
- (b) Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service.
- (c) Hazardous leaks must be repaired promptly.

**Regulations
regarding pipeline
repairs.**

OPTC GUIDE FOR GAS TRANSMISSION, DISTRIBUTION,
AND GATHERING PIPING SYSTEMS: 2015 Edition

§192.701
SUBPART M

SUBPART M MAINTENANCE

§192.701 Scope.

[Effective Date: 11/12/70]

This subpart prescribes minimum requirements for maintenance of pipeline facilities.

GUIDE MATERIAL

No guide material necessary.

§192.703 General.

[Effective Date: 11/12/70]

(a) No person may operate a segment of pipeline, unless it is maintained in accordance with this subpart.

(b) Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service.

(c) Hazardous leaks must be repaired promptly.

GUIDE MATERIAL

1 GENERAL

Any time a pipeline is found to be damaged or deteriorated to the extent that its serviceability is impaired or leakage constituting a hazard is evident, immediate temporary measures should be employed to protect the public and property. If it is not feasible to make a permanent repair at the time of discovery, permanent repairs should be made as soon as feasible.

2 REPAIR OF PIPE

2.1 General.

Prior to repairing a pipeline, the operator should consider the operating conditions, design, maintenance history, as necessary, to ensure that repair actions do not further damage the pipe. Where warranted, the operating pressure should be lowered, pipe exposure should be limited, access to the area should be limited, personnel protection should be provided, and fire extinguishing equipment should be available.

2.2 Repairs to distribution lines.

Methods of permanent repair to non-thermoplastic distribution lines include the following:

(a) Cutting out as a cylinder and replacing the piece of damaged pipe.

(b) Applying a full-encirclement welded split sleeve of appropriate design.

Over 3 pages of *Guidance* on pipeline repairs, including:

- ❖ Repairs to distribution lines
- ❖ Repairs to transmission lines
- ❖ Repairs to plastic lines
- ❖ Inspecting & testing
- ❖ Consideration for replacement or renewal

§192.723

Distribution systems: Leakage surveys.

[Effective Date: 07/14/04]

(a) Each operator of a distribution system shall conduct periodic leakage surveys in accordance with this section.

(b) The type and scope of the leakage control program must be determined by the nature of the operations and the local conditions, but it must meet the following minimum requirements:

(1) A leakage survey with leak detector equipment must be conducted in business districts, including tests of the atmosphere in gas, electric, telephone, sewer, and water system manholes, at cracks in pavement and sidewalks, and at other locations providing an opportunity for finding gas leaks, at intervals not exceeding 15 months.

(2) A leakage survey with leak detector equipment must be conducted outside business districts as frequently as necessary, but not less frequently than at intervals not exceeding 63 months. However, for operations subject to §192.465(e), surveys must be conducted at least once every 3 calendar years at intervals not exceeding 36 months.

Regulations regarding leakage surveys.

GUIDE MATERIAL APPENDIX G-192-11

(See guide material under §§192.3, 192.503, 192.557, 192.615, 192.703, 192.706, 192.723, and 192.941)

GAS LEAKAGE CONTROL GUIDELINES FOR NATURAL GAS SYSTEMS (METHANE)

(See Guide Material Appendix G-192-11A for petroleum gas systems)

CONTENTS

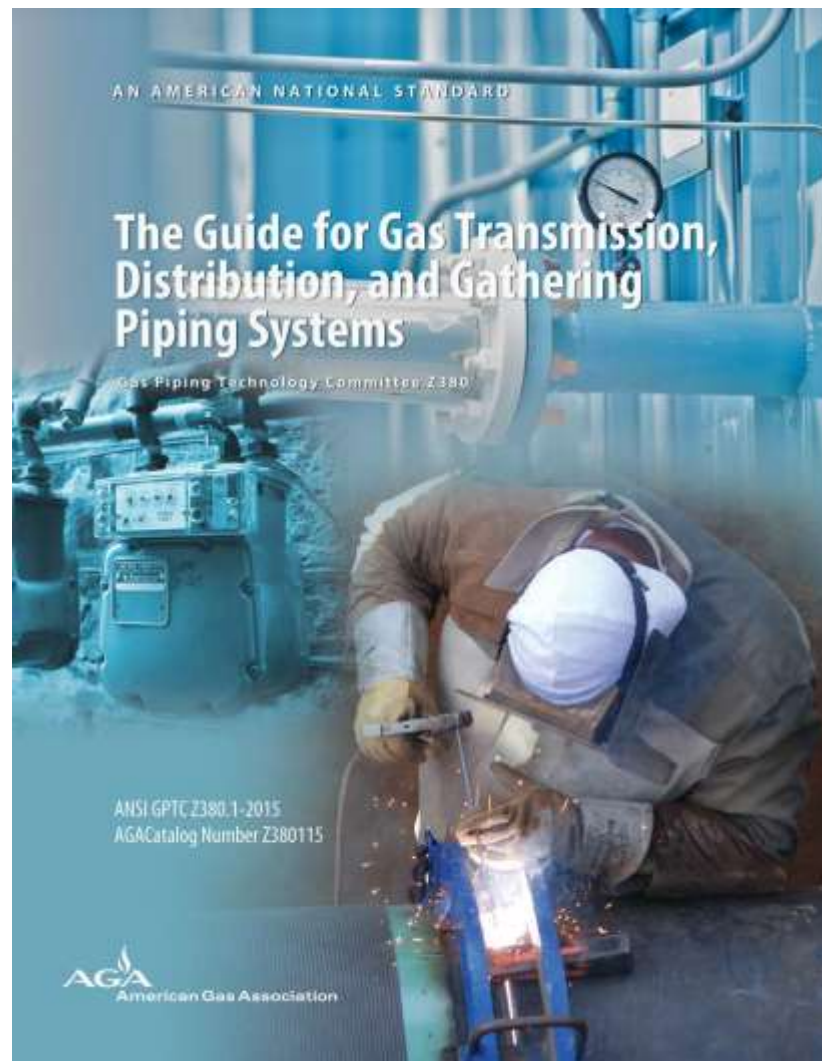
- 1 SCOPE
- 2 GENERAL DISCUSSION
- 3 DEFINITIONS
- 4 LEAKAGE DETECTION
 - 4.1 *Qualification of personnel.*
 - 4.2 *Reports from outside sources.*
 - 4.3 *Odors or indications from foreign sources.*
 - 4.4 *Leak surveys and test methods.*
 - (a) *Surface Gas Detection Survey.*
 - (b) *Subsurface Gas Detection Survey.*
 - (c) *Vegetation Survey.*
 - (d) *Pressure Drop Test.*
 - (e) *Bubble Leakage Test.*
 - 4.5 *Selecting an instrument for the detection of gas.*
 - 4.6 *Maintenance of instruments.*
 - 4.7 *Calibration of instruments.*
- 5 LEAK INVESTIGATION AND CLASSIFICATION
 - 5.1 *Scope.*

23 pages of guidance including:

- ❖ Definitions
- ❖ Leakage detection
- ❖ Leak investigation & Classification
- ❖ Pinpointing
- ❖ Available methane detection technologies
- ❖ Records & Self Audits

- ❖ **I want something changed**
 - **Regulations – write PHMSA**
 - **Guidance – write GPTC**
 - **See the Forward for contact info**

- ❖ A new edition of the Guide is typically published every 3 years
- ❖ GPTC publishes as many as 3 Addenda each year between new editions
- ❖ Guide available at www.aga.org
ANSI GPTC Z380.1-2018
AGA CATALOG NUMBER Z380118



- ❖ **Today, there are 100_± transactions in various stages of development**
- ❖ **Topics/categories of active transactions include:**
 - **Performance Effectiveness**
 - **Construction Inspection**
 - **Handling Inside Leak Orders**
 - **Underground Storage**
 - **Hydrocarbon Permeation in Plastic**
 - **Joining Equipment Maintenance**

- ❖ **Transactions are initiated in response to**
 - **Rulemaking**
 - **NTSB reports**
 - **Member request**
 - **Public request**
 - **PHMSA/NAPSR request**
- ❖ **Transaction assigned to task group**
- ❖ **Task group creates ad hoc group to write draft guidance**

- ❖ **Task Group approves**
- ❖ **Three Divisions review and approve**
 - **Distribution**
 - **Manufacturing**
 - **Transmission**
- ❖ **Main Body letter ballot**
- ❖ **Public comment**
- ❖ **Published**



- ❖ **Historic relationship with PHMSA/NAPSR**
- ❖ **Independent group, not industry committee**
- ❖ **Technically based committee**
- ❖ **The Guide provides clear and concise guidance to gas piping systems operators on complying with the Federal pipeline safety standards**
- ❖ **Guide is advisory in nature – does not restrict other methods of compliance**
- ❖ **Recognizes system and operator diversity**
- ❖ **Often referenced, it is not enforceable**

- ❖ **The Committee welcomes new members**
- ❖ **A membership term is for 3 years and can be renewed. All memberships are subject to Main Body ballot**
- ❖ **To become a new member, complete an application form and return it along with a resume to the ASC Z380 Secretary**
- ❖ **Contact Betsy Tansey (GPTC@aga.org), Secretary, ASC Z380, with any questions you may have on joining the GPTC**

❖ GPTC Next Meeting

- November 11-13, 2019 Fort Lauderdale

❖ GPTC 50th Anniversary

- Meeting and Celebration in July 2020
- Columbus, OH



