APPENDIX G-192-8

*GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS – 2009*

# Distribution INTEGRITY MANAGEMENT PROGRAM

**G**as **P**iping **T**echnology **C**ommittee Z380



AGA American Gas Association

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B L A N K

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# GUIDE MATERIAL APPENDIX G-192-8

## DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM (DIMP)

(See Subpart P)

*The following is new guide material and, therefore, is not marked.*

### GENERAL NOTES TO GUIDE MATERIAL

1. This guide material was developed by the Gas Piping Technology Committee (GPTC) using a task group that, in addition to members of the GPTC, included persons representing segments of the gas pipeline industry not currently active on the GPTC, such as industry associations, small gas operators, State pipeline safety program directors, public representatives, and Pipeline and Hazardous Materials Safety Administration (PHMSA) personnel.

2. At the request of PHMSA and the National Association of Pipeline Safety Representatives (NAPSR), the guide material was developed based on the "Integrity Management for Gas Distribution Pipelines Report of Phase 1 Investigations" (Phase 1 Report), December 2003, prepared by joint work/study groups including representatives of: Stakeholder Public, Gas Distribution Pipeline Industry, State Pipeline Safety Representatives, and Pipeline and Hazardous Materials Safety Administration. This is outside the normal GPTC practice of preparing guide material for final rules.

3. In the Notice of Proposed Rulemaking (NPRM) issued by the PHMSA (73 FR 36015, June 25, 2008), several areas were addressed that had not been discussed in the Phase 1 Report. The most significant of these are identified as notes in this guide material.

4. It is unknown what the Final Rule will require. Therefore, the guide material is being issued in its current form to provide as much guidance as can be foreseen at this time.

5. After the Final Rule is issued, the GPTC, through its normal process, will develop additional guide material as soon as possible to address the areas not already covered. It is believed that issuing the guide material in its current form at this time best serves all segments of the industry.

### SPECIAL NOTES TO GUIDE MATERIAL

### MASTER METER AND LIQUEFIED PETROLEUM GAS OPERATORS

1. The NPRM issued by the PHMSA (73 FR 36015, June 25, 2008) would impose different requirements for Master Meter and Liquefied Petroleum Gas Operators (§192.1019) than for other operators (§§192.1003 through 192.1017).

2. This guide material was developed with a view that all operators would be covered under substantially the same requirements. Therefore, some portions of the guide material may not be applicable to certain operators if the Final Rule closely follows the NPRM.

Reserved

## CONTENTS

Reserved

# 1 INTRODUCTION

*1.1 Scope.*

(a) This guide material is intended to assist operators with development of a Distribution Integrity Management Program (DIMP), and compliance with proposed Federal Regulations §§192.1005, 192.1007, and 192.1015 on DIMP. It provides operators with practices that may be considered as they develop and maintain a DIMP specific to their gas distribution systems.

(b) Distribution pipeline systems and associated operating practices can vary widely. Examples of system differences include: materials used, age, manner of construction, operation and maintenance practices, and operating environments (natural and man-made). This guidance recognizes that there is wide diversity among distribution systems and is therefore flexible, allowing operators to identify considerations dealing with their unique threats and to select actions suited to their specific needs.

(c) The options in this guidance are intended to provide the operator with a selection of possible choices to use in improving the integrity of its distribution system. Operators may not need to consider or perform every step presented. It is not intended that an operator evaluate every option or provide justification or reasons why options were not implemented.

*1.2 How to use this guide material.*

The guide material is organized to coincide with the seven required elements of a DIMP. The order in which the guidance is presented does not imply the order in which it should be applied. However, the operator needs to address each element in some way. Once an operator determines how it can best accomplish distribution system integrity, the guide material may be used to support or direct the operator's approach. The operator is cautioned that the guide material may not anticipate all conditions that may be encountered, and the operator is not restricted from using other methods to comply with the regulations.

Two sample DIMP approaches are given in Section 10.

*1.3 Overview.*

(a) The objective of a DIMP is to manage the integrity of a gas distribution system. As discussed in detail in Section 5, an essential part of a DIMP is a risk evaluation of the distribution system. One approach to risk evaluation is to group facilities by common traits or problems, and then perform a risk ranking. This process allows the grouping of facilities that experience similar threats to be risk-ranked together. Then, if necessary, attention can be focused on developing measures that address the greatest risks.

(b) After identifying the problems, the operator should consider the concept of grouping facilities when first developing its DIMP. Such groupings could significantly affect how the operator assembles data about its system (see Section 3) and how it approaches its threat analysis (see Section 4).

(c) The operator should also recognize that the development of the DIMP may be an iterative (or repeating) process. That means each time a cycle (e.g., gather knowledge, identify threats, rank risks, take action to reduce risk, measure performance) is completed, areas needing additional data, analyses, or actions may become apparent. For example, the initial general knowledge of the system may be used to group facilities, identify the applicable threats, and begin the risk analysis. In attempting to complete the risk analysis, the operator may determine the need for additional information. The operator may also determine that the facility groupings need to be redefined, such as by subdividing groups or combining groups.

# 2 ELEMENTS OF A DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM (DIMP)

*2.1 General.*

Seven elements have been identified as the essential components of a DIMP. Collectively, these elements establish a program that should reasonably manage the integrity of distribution pipeline systems on a going-forward basis. These elements are as follows.