

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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July 7, 2011

Subject: Distribution Integrity Management Program for Operators of Mobilehome Park Master-Metered Gas or Propane Systems

Dear Mobilehome Park / Propane Operator:

The California Public Utilities Code, §§ 4351-4361 and 4451-4465, authorizes the California Public Utilities Commission (Commission) to administer and enforce a safety program for mobilehome park (MHP) master-metered gas and propane systems operating in the state. The Commission is responsible for ensuring that MHP and propane system operators comply with the Natural Gas Pipeline Act of 1968 and the regulations set forth in Parts 190, 191, 192, and 199 of Title 49 of the Code of Federal Regulations (CFR).

Distribution Integrity Management Program

The Federal Pipeline and Hazardous Materials Safety Administration issued a new rule requiring operators of master-metered gas systems in MHPs and propane systems to develop and implement a Distribution Integrity Management (IM) Program that includes a written Plan. The written Plan must be in effect by August 2, 2011 and address the following elements:

1. Knowledge of the Pipeline System
2. Identify Threats
3. Rank Risks
4. Identify and Implement Measures to Mitigate Risks
5. Measure performance, Monitor Results, and Evaluate Effectiveness
6. Periodic Evaluate and Improve Program
7. Record Keeping

Inspectors from the Commission's Utilities Safety and Reliability Branch (USRB), during routine inspections of your master-metered gas or propane system, will review your IM Plan to determine if it meets the requirements of Title 49, CFR § 192.1015.

To assist you in developing your written Plan, attached is a guideline with examples of the required contents. If you have any questions, please call (800) 755-1447, and a USRB staff member will assist you.

Sincerely,

Michael Robertson
Program and Project Supervisor
Utilities Safety and Reliability Branch

**CALIFORNIA PUBLIC UTILITIES COMMISSION
 DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM GUIDELINES
 FOR OPERATORS OF NATURAL GAS MASTER- METER AND SMALL PROPANE GAS
 DISTRIBUTION SYSTEMS**

Pursuant to Title 49, Code of Federal Regulations (CFR) Part 192, § 192.1015, no later than August 2, 2011, each California operator of a master-metered natural gas distribution system located in a mobilehome park, or a jurisdictional propane system must develop and implement a Distribution Integrity Management (IM) Program that includes a written plan (Plan).

To assist you in developing your written Plan, the Utilities Safety and Reliability Branch of the Commission has prepared the following guidelines that emphasize the required elements which, at a minimum, must be addressed in your Plan. The examples provided herein should **not** be interpreted as being the only information that must be addressed in your Plan. It is the responsibility of the pipeline owner/operator to ensure that each element, to the operation of a particular master-metered gas or propane distribution system, is properly addressed in the Plan.

REQUIRED ELEMENTS OF AN INTEGRITY MANAGEMENT PLAN

1. **Knowledge:** The operator must demonstrate knowledge of the pipeline system, which, to the extent known when the Plan is first developed, should include the approximate location, type of material (bare or coated steel, polyethylene (PE), polyvinyl chloride (PVC), etc.), and size (length and diameter) of the pipeline(s) along with the type of equipment on the system. It is essential that the operator provide the following information in the Plan:
 - a. An explanation on the methods the operator will use to demonstrate knowledge of the pipeline system. For example, the plan needs to specify how information regarding the size, material, and location were obtained, including electronic records, photos, drawings, maps, and other methods.
 - b. For any missing information, the Plan needs to identify the missing information. Indicate to the extent possible the portions of the pipeline system (length, locations) with missing information.
 - c. An explanation on the methods the operator will use to identify and gather additional data (i.e., to assist with incomplete or missing records) to fill gaps in the Plan when it is first developed. The Plan needs to provide a method for gaining knowledge of the system over time through normal activities conducted on the pipeline system. For example, if a section of unknown buried pipeline is exposed, pipeline data (i.e., size, material type, coating condition, etc.) must be documented and maintained for as long as the pipeline system remains in operation. (Photograph/video documentation can be of great assistance.)
 - d. The Plan must also include provisions for recording new pipeline installations, including material, location, and pipeline dimensions (i.e., length, diameter, material type, manufacturer, etc.).
 - e. The operator must update the Plan and the pipeline system map as more information becomes available.

2. **Identify threats:** A threat is a condition that could result in the damage or loss of integrity of the pipeline system if not properly mitigated or prevented. The operator must consider, at a minimum, the following categories of threats (existing and potential), as defined in Table 1 with examples of related concerns:

THREATS	CONCERNS
Corrosion (Internal, external, and atmospheric)	Does the system include steel piping that is not protected from corrosion by cathodic protection (CP)?
	Has the system experienced leaks from corroded pipe?
	Does the system have isolated metallic sections (i.e., valves or risers) that do not have CP?
	Is the system located in an environment prone to atmospheric corrosion?

Table 1

THREATS	CONCERNS
Natural Forces	Are portions of the system highly susceptible to earthquakes / erosion?
	Are portions of the system susceptible to snow or ice loading?
	Are portions of the system located in areas that are subject to flooding?
	Are there large trees, near the pipeline system, which have roots that could damage the system?
Excavation Damage	Are portions of the system buried where excavation, that could damage your system, can occur without your knowledge?
Other Outside Force Damage	Are portions of the system (pipelines, meters, valves, regulators) located in areas that are subject to vehicular damage?
	Are the above-ground sections (pipeline, meters) of the system adequately supported and protected from potential damage?
Material / Weld Failure	Does the system experience frequent leakage as a result of defective pipeline material or fittings?
	Has the operator been contacted by the pipeline manufacturer regarding defects in the pipeline material or fittings?
Equipment	Are rectifiers properly working and providing adequate protection?
	Are pressure regulators in good mechanical condition and have the proper pressure setting? Does not apply to service regulators
	Are idle sections of service line properly maintained and equipped with a device to prevent the flow of gas?
Operations	Does the pipeline system require the operation of any device, other than valves, such as a pressure regulator that serves more than one customer? Are all valves, including service valves, working and accessible?

Table 1 Continued

3. **Rank Risks:** The operator must evaluate the risks to the pipeline system and estimate the relative importance of each identified threat. Consider both the relative likelihood of an accident occurring and the consequences that would result if it did.
 - a. Rank the risks, from most to least likely, by determining the relative likelihood that the identified threats will cause a leak or incident. Review of records (i.e., leak surveys, repairs, CP, and others) will be essential towards determining the most common and frequent cause of leaks on your pipeline system.
 - b. Consider the consequences of a leak or incident that occurred as a result of one of the identified threats. The following are examples of high consequence areas that the pipeline operator should consider:
 - Pipelines buried under mobile homes, trailers, or buildings
 - Pipelines located in close proximity to areas where people congregate such as a clubhouse
 - Locations where an incident on the gas pipeline system could block entrances or exits, which could then hinder agencies responding to an emergency or evacuation efforts
 - Pipelines in proximity to schools or commercial buildings. (This usually applies to propane systems.)

If the consequences are generally the same throughout the pipeline system, then your ranked list of threats becomes your ranked list of risks.
 - c. If you identify areas within your pipeline system that pose a greater risk than others, rank the identified risks into groups based on the consequence. For example, if there is an area within your pipeline system where the pipelines run beneath mobile homes, and an incident there would also block an entrance or exit, then that area could be classified as, say, Group 1 (a high risk). All other areas where the likelihood is the same, but the consequences less severe, could be classified as Group 2, 3, and so on

(lower risk groups). Document the locations of the high and low consequence areas in the Plan or on the map of the gas distribution system by means of color coding.

4. **Identify and implement measures to mitigate risks:** The operator must determine and implement measures designed to reduce the risks from failure of the pipeline system. For all the risks you rank, verify that actions are being taken or requirements are in place to protect against the risks. This should include, at a minimum, the actions required by Title 49, CFR Part 192. Also include the relative monitoring actions and additional measures that you determine are necessary to maintain the integrity of your system as in the examples provided in Table 2. If you have grouped the risks, then additional monitoring and related actions should be conducted in the manner the risks are grouped and ranked.

THREATS	EXAMPLES OF ACTIONS TO MITIGATE RISKS
General Monitoring	Patrol sections of pipeline that have experienced problems to look for signs of damage
	Patrol entire pipeline system to check for signs of excavation
Corrosion	Cathodically protect all areas of steel pipe experiencing active corrosion as indicated by leak history
	Monitor and test cathodic protection more frequently than required
	Inspect rectifiers more frequently than required
	Inspect above-ground pipe more frequently for atmospheric corrosion and leaks
	Inspect exposed buried pipe for corrosion
Natural Forces	Inspect more than 10% of isolated sections of steel pipeline each year or increase the frequency of inspections
	Conduct more frequent patrols to identify conditions that adversely affect the system, especially following, earthquakes, storms, or flooding
	Protect above-ground piping and meters from snow loading
Excavation Damage	Take immediate action to eliminate hazards or reduce threats
	Be aware of excavation activities
Other Outside Force Damage	Implement a damage prevention program
	Install vehicle barriers where appropriate
	Conduct more frequent patrols to identify areas susceptible to damage
	If pipelines are located in areas where they are potentially subject to damage, install warning signs or mark the pipelines with distinctive colors
Material / Weld Failures	Ensure customer meters are adequately supported and not used for other purposes
	Implement recommended actions from any notice received by pipeline or fitting manufacturer
Equipment	Replace pipeline or fittings in areas where the system has a history of pipeline failure due to leakage
	Ensure all personnel who operate equipment are qualified in accordance with Title 49, CFR, Subpart N
Operations	Ensure that emergency equipment is readily available
	Ensure all personnel who operate equipment are qualified in accordance with Title 49, CFR, Subpart N
	Ensure personnel are aware of the precautions to take to prevent over-pressuring, stopping the flow of gas, preventing unsafe gas-air mixtures, and restoring gas

Table 2

5. **Measure performance, monitor results, and evaluate effectiveness:** The Plan shall include provisions for monitoring, as a performance measure, the number of leaks eliminated or repaired on the pipeline system and their causes.
6. **Periodic evaluation and improvement:** The Plan must contain provisions to determine the appropriate period for conducting IM Program evaluations based on the complexity of the pipeline system and changes in factors affecting the risk of failure. An operator must re-evaluate the entire program at least once every five years. The operator must consider the results of the performance monitoring in these evaluations.

The operator needs to assess the integrity of the gas system whenever changes are made to the system or significant changes occur in the environment to determine if the threats of concern have been eliminated or if new risks have been introduced. For example, if a new commercial center is constructed within or near the pipeline system, the operator will need to consider the increased risk associated with the increase in population density.

WHAT RECORDS MUST AN OPERATOR KEEP?

Each operator must maintain, for a period of at least 10 years, the following records:

1. A Plan in accordance with Title 49, CFR § 192.1015, including superseded Plans
2. Documents supporting threat identification
3. Documents showing the location and material of all piping and appurtenances that are installed after the effective date of the operator's IM Program and to the extent known, when the IM Program is first developed, the location and material of all pipe and appurtenances that were existing on the effective date of the operator's program. Pipeline materials include polyethylene (PE), polyvinyl chloride (PVC), bare and coated steel, copper, anodeless risers, and any combination thereof. Appurtenances include valves, regulator stations, and cathodic protection facilities (rectifiers, anodes).
4. Documents showing the number of Grade 1 and Grade 2 leaks either eliminated or repaired including the date and the cause of the leaks along with copies of records supporting actions taken to address the leaks.
5. Keep a record of all instances in which the system is damaged by operations, excavation, natural forces (flooding, earthquake, landslide etc.), or vehicular damage.
6. Document IM Program evaluations and changes made to the risk factors or other parts of the Plan.

Note: The record keeping requirements noted here supplement, and do not replace, other record keeping requirements of 49 CFR, Part 192.