PHMSA
U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

Distribution Integrity Management

Final Rule

Vol. 74, No. 232

Friday, December 4, 2009

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Pipeline and
Hazardous Materials
Safety Administration

Subpart P

Effective Date: February 12, 2010

192.1001 - What definitions apply to this subpart?

192.1003 - What do the regulations in this subpart cover?

192.1005 - What must a gas distribution operator (other than a master meter or LPG operator) do to implement this subpart?

Subpart P

192.1007 - What are the required integrity management (IM) program elements?

192.1009 - What must an operator report when compression couplings fail?

192.1011- What records must an operator keep?

Subpart P

192.1013 – When may an operator deviate from required periodic inspections of this part?

192.1015 - What must a master meter or liquefied petroleum gas (LPG) operator do to implement this subpart?

§ 192.1001 What definitions apply to this subpart?

The following definitions apply to this subpart:

- *Excavation Damage*
- *Hazardous Leak*
- *Integrity Management Plan or IM Plan*
- *Integrity Management Program or IM Program*
- *Small LPG Operator*

Excavation Damage

- means any impact that results in the need to repair or replace an underground facility due to a weakening, or the partial or complete destruction, of the facility, including, but not limited to, the protective coating, lateral support, cathodic protection or the housing for the line device or facility.

Hazardous Leak

- means a leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous.

Integrity Management Plan or *IM Plan*

- means a written explanation of the mechanisms or procedures the operator will use to implement its integrity management *program* and to ensure compliance with this subpart.

Integrity Management Program or *IM Program*

- means an overall approach by an operator to ensure the integrity of its gas distribution system.

Small LPG Operator

- means an operator of a liquefied petroleum gas (LPG) distribution pipeline that serves fewer than 100 customers from a single source.

§192.1003 What do the regulations in this subpart cover?

General. This subpart prescribes minimum requirements for an IM *program* for any gas distribution pipeline covered under this part, including liquefied petroleum gas systems.

§192.1003 What do the regulations in this subpart cover?

A Gas Distribution Operator, other than a master meter operator or a small LPG operator, must follow the requirements in §§ 192.1005 - 192.1013 of this subpart.

A Master Meter Operator or Small LPG Operator of a gas distribution pipeline must follow the requirements in § 192.1015 of this subpart.

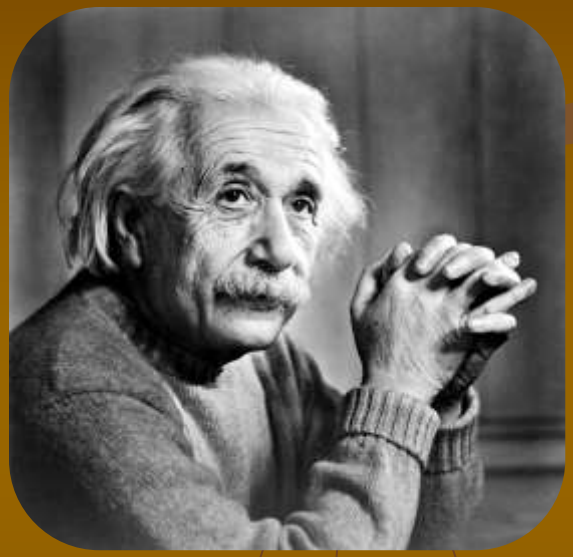
§192.1005 What must a gas distribution operator … do to implement this subpart?

No later than 8/2/2011 an operator of a gas distribution pipeline must develop and implement a written IM *program* that includes a written IM *plan* as specified in §192.1007.

§ 192.1007 What are the required elements of an integrity management plan?

A written integrity management *plan* must contain procedures for developing and implementing the following elements:

§ 192.1007 What are the required IM plan elements?



(a) *Knowledge*. An operator must demonstrate an understanding of the gas distribution system developed from reasonably available information.

§ 192.1007(a) - Knowledge

(1) Identify the characteristics of the pipeline's design and operations and the environmental factors that are necessary to assess the applicable threats and risks to its gas distribution pipeline.

What Do They Mean by Characteristics?

Identify threats (existing and potential).

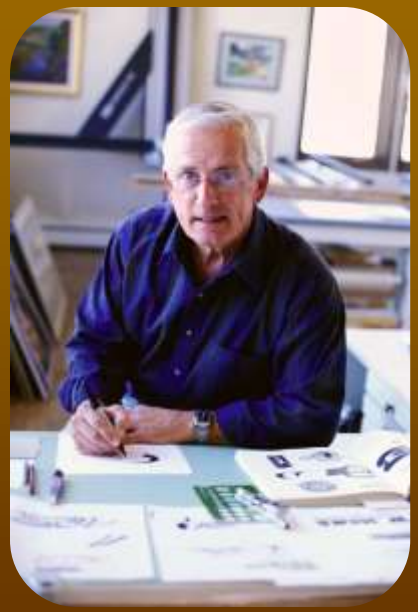
Operators need to evaluate their pipeline systems and the environments in which the pipelines operate to identify specific threats the pipelines face and to determine what are appropriate actions to manage the threats and minimize the risk.

Identify threats (existing and potential)

Outside force may be an applicable threat, i.e. landslides in a hilly area with loose soils even if no landslide has been experienced.

§192.1007(a) - Knowledge

(2) Understand the information gained from past design, operations and maintenance.



§192.1007(a) - Knowledge

(3) Identify additional information needed and provide a plan for gaining that information over time through normal activities conducted on the pipeline (for example, design, construction, operations or maintenance activities).

§192.1007(a) - Knowledge

(4) Develop and implement a process by which the IM program will be reviewed periodically and refined and improved as needed.

When Do I Do This?

- Operators would use measured performance to determine whether further improvements are needed and to make necessary changes in their IM *programs.*
- Operators would have to evaluate their *programs* periodically. Operators should determine how often these reviews are appropriate.

§192.1007(a) - Knowledge

(5) Provide for the capture and retention of data on any new pipeline installed. The data must include, at a minimum, the location where the new pipeline is installed and the material of which it is constructed.

§192.1007 What are the required IM program elements?

(b) Identify threats.

The operator must consider the following categories of threats to each gas distribution pipeline: corrosion, natural forces, excavation damage, other outside force damage, material, weld or joint failure (including mechanical couplings), equipment failure, incorrect operation, and other concerns that could threaten the integrity of its pipeline.

§192.1007 What are the required IM program elements?

(b) Identify threats. (cont)

A operator must consider reasonably available information to identify existing and potential threats.

Sources of data may include, but are not limited to, incident and leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, and excavation damage experience.

§192.1007 What are the required IM program elements?

(c) Evaluate and rank risk.

An operator must evaluate the risks associated with its distribution pipeline.

In this evaluation, the operator must determine the relative importance of each threat and estimate and rank the risks posed to its pipeline.

§192.1007 What are the required IM program elements?

(c) Evaluate and rank risk. (cont)

This evaluation must consider each applicable current and potential threat, the likelihood of failure associated with each threat, and the potential consequences of such a failure.

§192.1007 What are the required IM program elements?

(c) Evaluate and rank risk. (cont)

An operator may subdivide its pipeline into regions with similar characteristics (e.g., contiguous areas within a distribution pipeline consisting of mains, services and other appurtenances; areas with common materials or environmental factors), and for which similar actions likely would be effective in reducing risk.

§192.1007 What are the required IM program elements?

(d) Identify and implement measures to address risks.

Determine and implement measures designed to reduce the risks from failure of its gas distribution pipeline. These measures must include an effective leak management *program*.

§192.1007 What are the required IM program elements?

(e) Measure performance, monitor results, and evaluate effectiveness.

(1) Develop and monitor performance measures from an established baseline to evaluate the effectiveness of its IM *program*. An operator must consider the results of its performance monitoring in periodically re-evaluating the threats and risks.

§192.1007 What are the required IM program elements?

(e) (1) (cont) These performance measures must include the following:

(i) Number of hazardous leaks either eliminated or repaired, per §192.703(c), categorized by cause;

(ii) Number of excavation damages;

(iii) Number of excavation tickets;

§192.1007 What are the required IM program elements?

(e) (1) (cont) These performance measures must include the following:

(iv) Total number of leaks either eliminated or repaired, categorized by cause;

(v) Number of hazardous leaks either eliminated or repaired as required by § 192.703(c) (or total number of leaks if all leaks are repaired when found), categorized by material; and

§192.1007 What are the required IM program elements?

(e) (1) (cont) These performance measures must include the following:

(vi) Any additional measures the operator determines are needed to evaluate the effectiveness of the operator's IM *program* in controlling each identified threat.

§192.1007 What are the required IM program elements?

(f) Periodic Evaluation and Improvement.

An operator must reevaluate threats and risks on its entire pipeline and consider the relevance of threats in one location to other areas. Each operator must determine the appropriate period for conducting complete *program* evaluations based on the complexity of its system and changes in factors affecting the risk of failure.

§192.1007 What are the required IM program elements?

(f) Periodic Evaluation and Improvement.

An operator must conduct a complete *program* reevaluation at least every five years. The operator must consider the results of the performance monitoring in these evaluations.

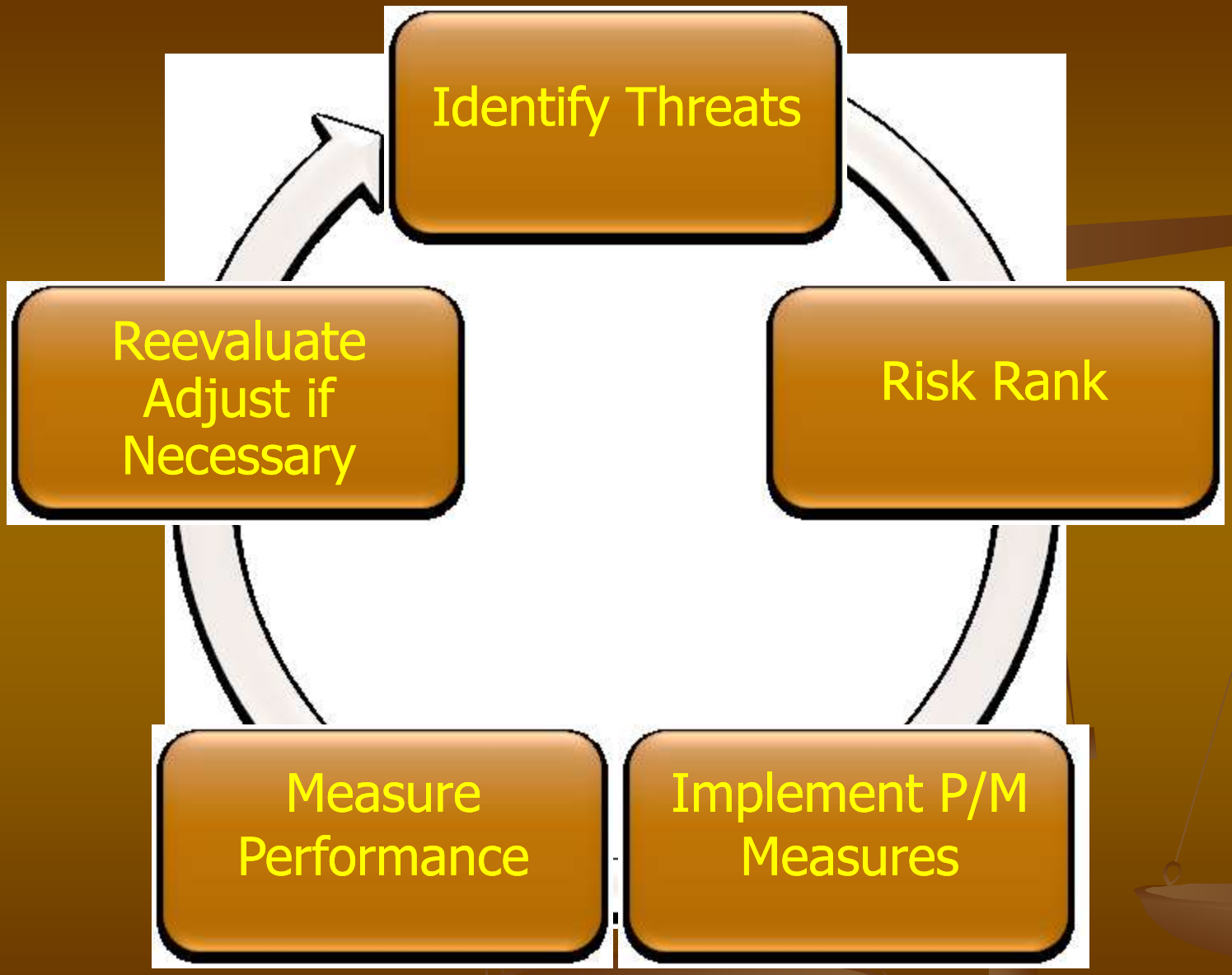
§192.1007 What are the required IM program elements?

(g) Report results.

Report, on an annual basis, the four measures listed in paragraphs (e)(1)(i) through (e)(1)(iv) of this section, as part of the annual report required by § 191.11.

Leak info

Excavation info


Identify Threats
Risk Rank
Implement P/M Measures
Measure Performance
Reevaluate Adjust if Necessary

§192.1009 What must an operator report when compression couplings fail?

Report annually, compression coupling failures that result in hazardous leaks.

- Location in system
- Pipe size
- Material
- Nature of failure
- Manufacturer
- Lot number
- Date of manufacture

Everything you know!

§192.1009 What must an operator report when compression couplings fail?

Docket No. PHMSA-RSPA-2004-19854

Note: The portion of the annual report relative to mechanical fitting (compression coupling) failures will be delayed by one year and will take effect starting with the 2011 calendar year.

(2011 report due March 15th 2012)

§192.1011 What records must an operator keep?

- An operator must maintain records demonstrating compliance with the requirements of this subpart for at least 10 years.
- The records must include copies of superseded IM *plans* developed under this subpart.

§192.1013 When may an operator deviate from required periodic inspections under this part?

(a) An operator may propose to reduce the frequency of periodic inspections and tests required in this part on the basis of the engineering analysis and risk assessment required by this subpart.

(b) An operator must submit its proposal to PHMSA or the State agency responsible for oversight of the operator's system.

Must Demonstrate Overall Level of Safety

Master Meter & LPG Systems

§192.1015 What must a MM or small LPG operator do to implement this subpart?

- Knowledge
- Identify Threats
- Rank Risks
- Measures to mitigate
- Performance measures
- Periodic evaluation
- Records

§192.383 Excess flow valve installation.

(a) Two new definitions

Replaced service line - a natural gas service line where the fitting that connects the service line to the main is replaced or the piping connected to this fitting is replaced.

§192.383 Excess flow valve installation.

(a) Two new definitions

Service line serving single-family residence means a natural gas service line that begins at the fitting that connects the service line to the main and serves only one single-family residence.

§192.383 Excess flow valve installation.

(b) Installation required - The operator must install an EFV on any new or replaced service line serving a single-family residence after February 12, 2010, unless …

(1) Service doesn't operate at or above 10 psig throughout the year.

(2) Operator has prior experience with contaminants in the gas that could hinder operation of the EFV or cause loss of service to a residence.

§192.383 Excess flow valve installation.

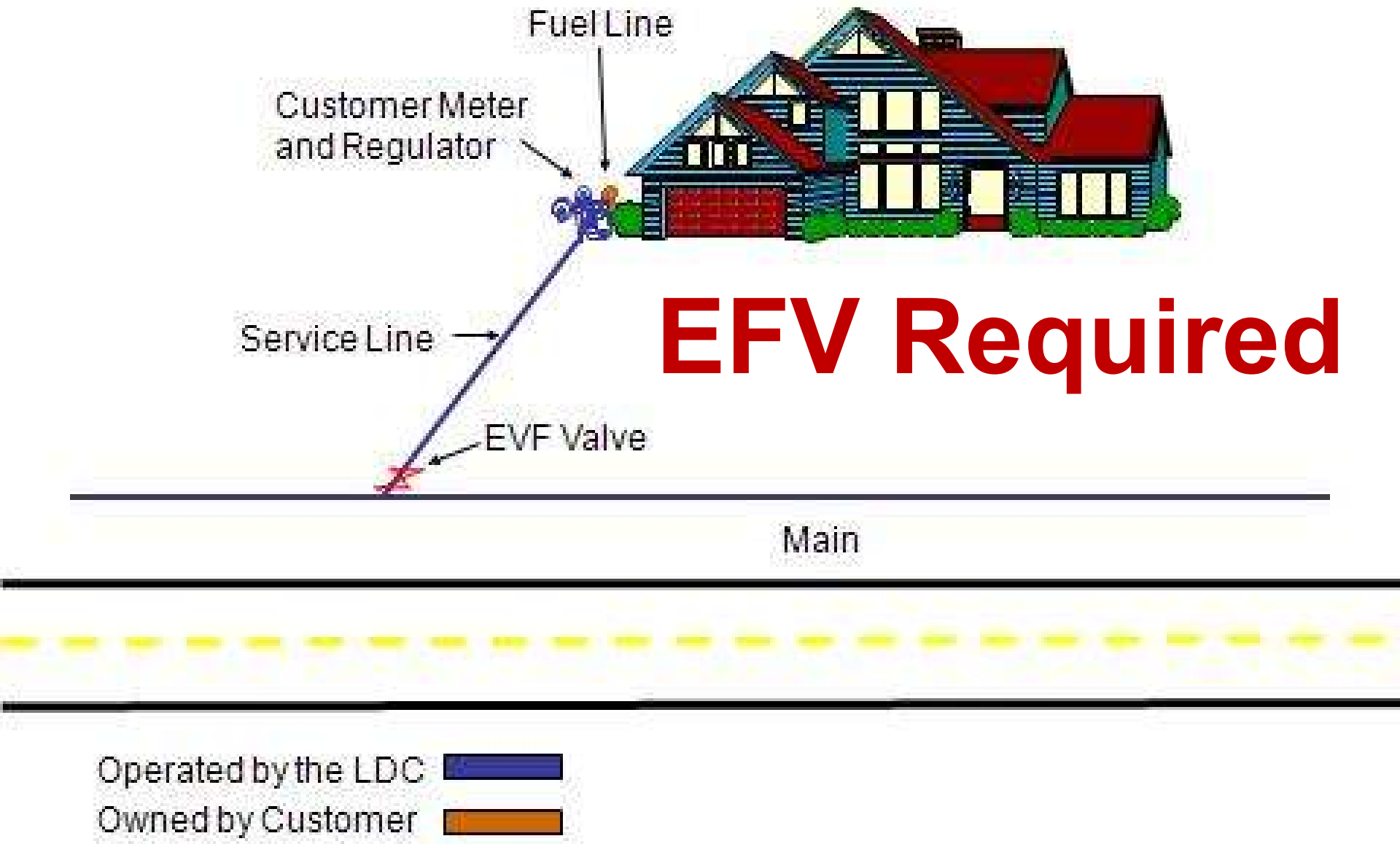
(3) The EFV could interfere with normal operations and maintenance activities, such as blowing liquids from the line.

(4) An EFV meeting performance standards in § 192.381 is not commercially available to the operator.

§192.383 Excess flow valve installation.

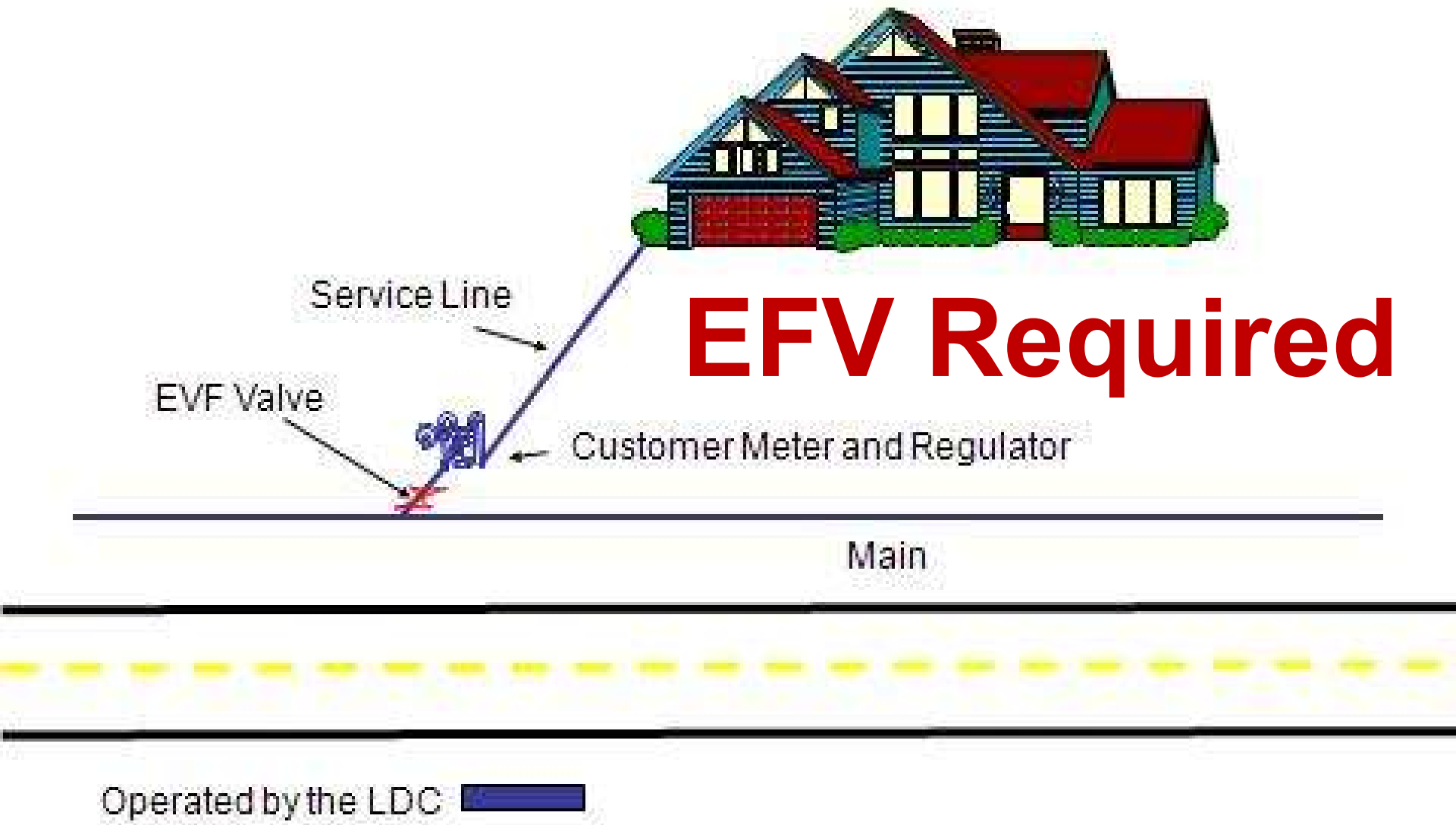
(c) Reporting – Report number of EFV's installed annually on annual report per 191.11.

EFV Installations



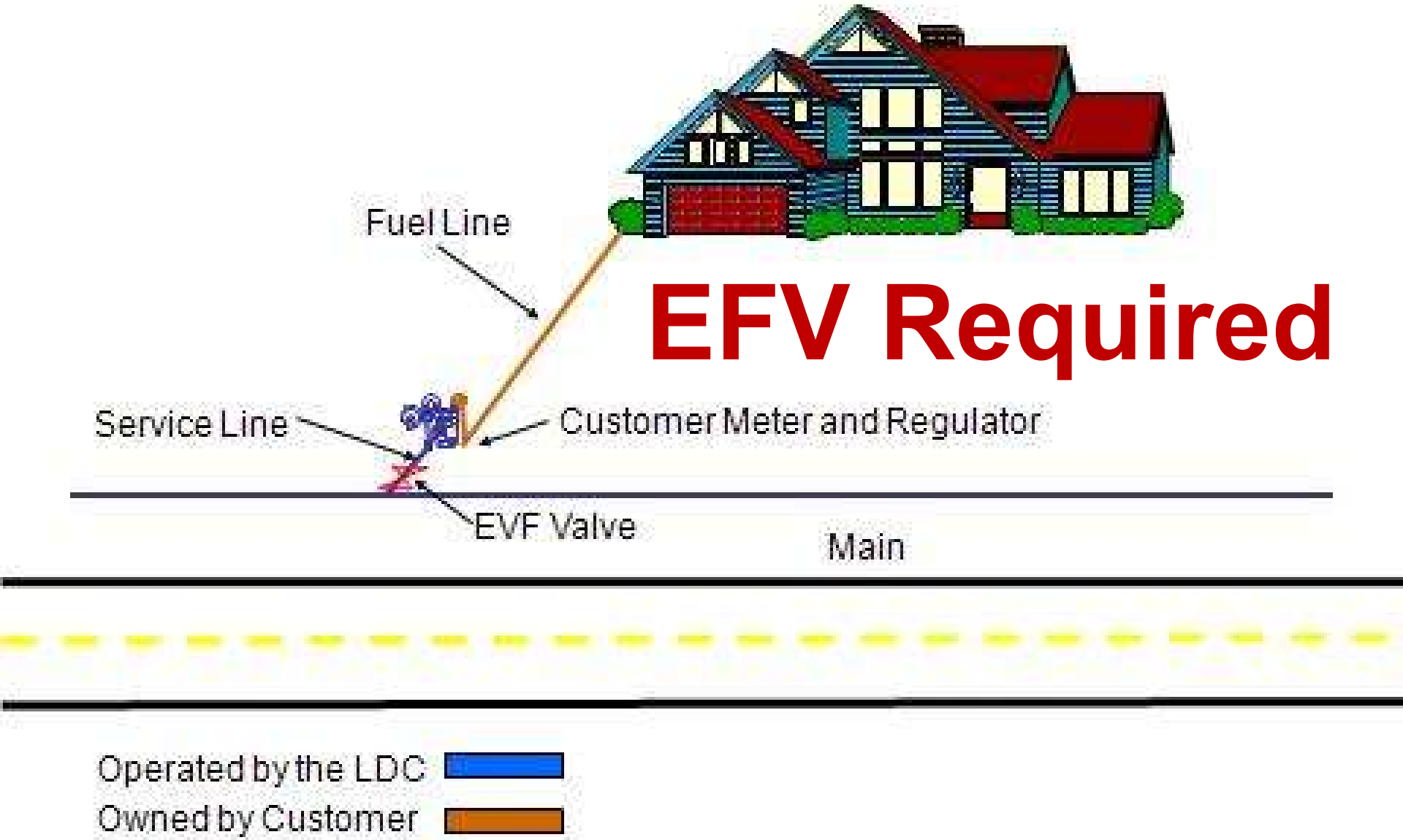
EFV Required

EFV Installations

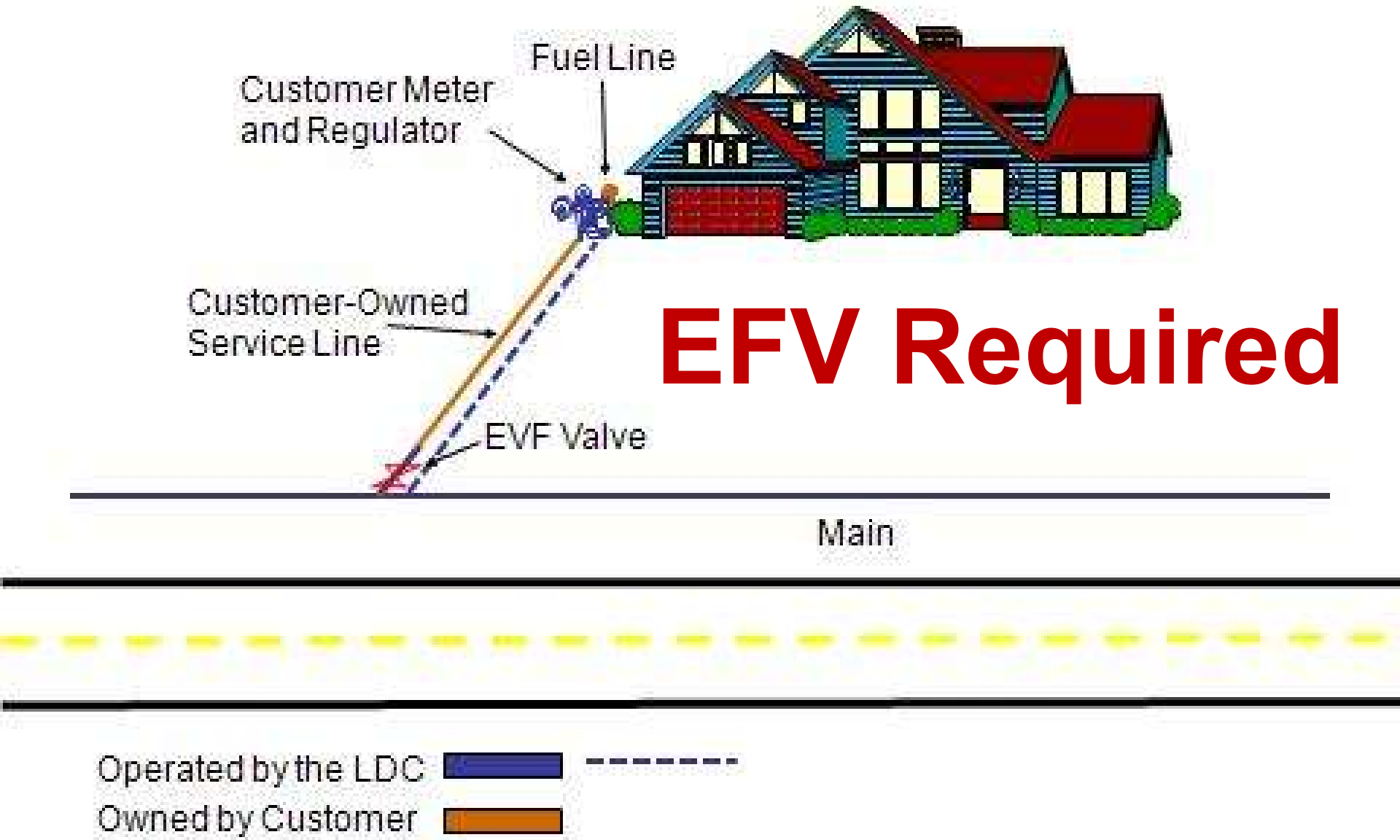


EFV Required

EFV Installations



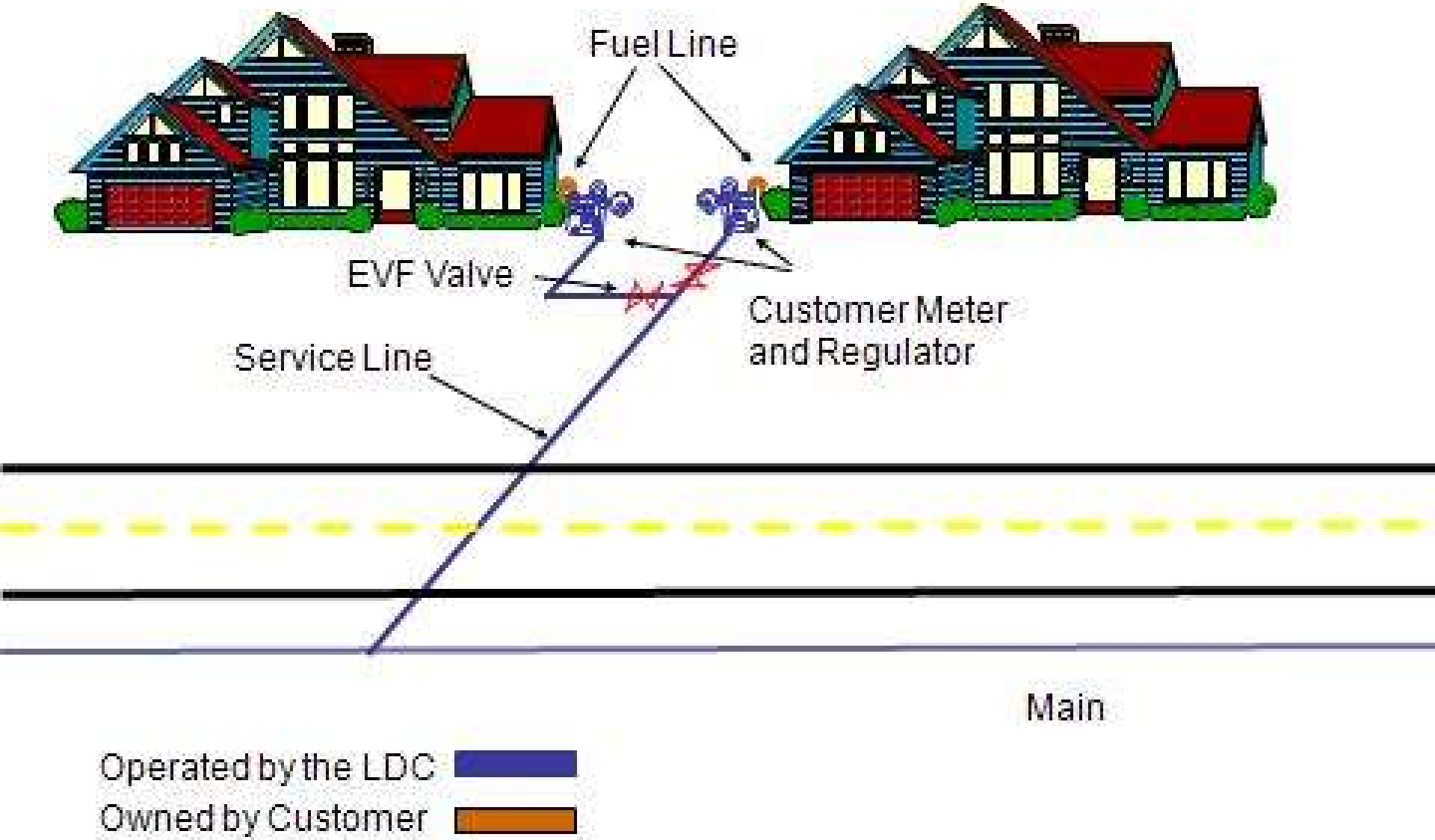
EFV Installations



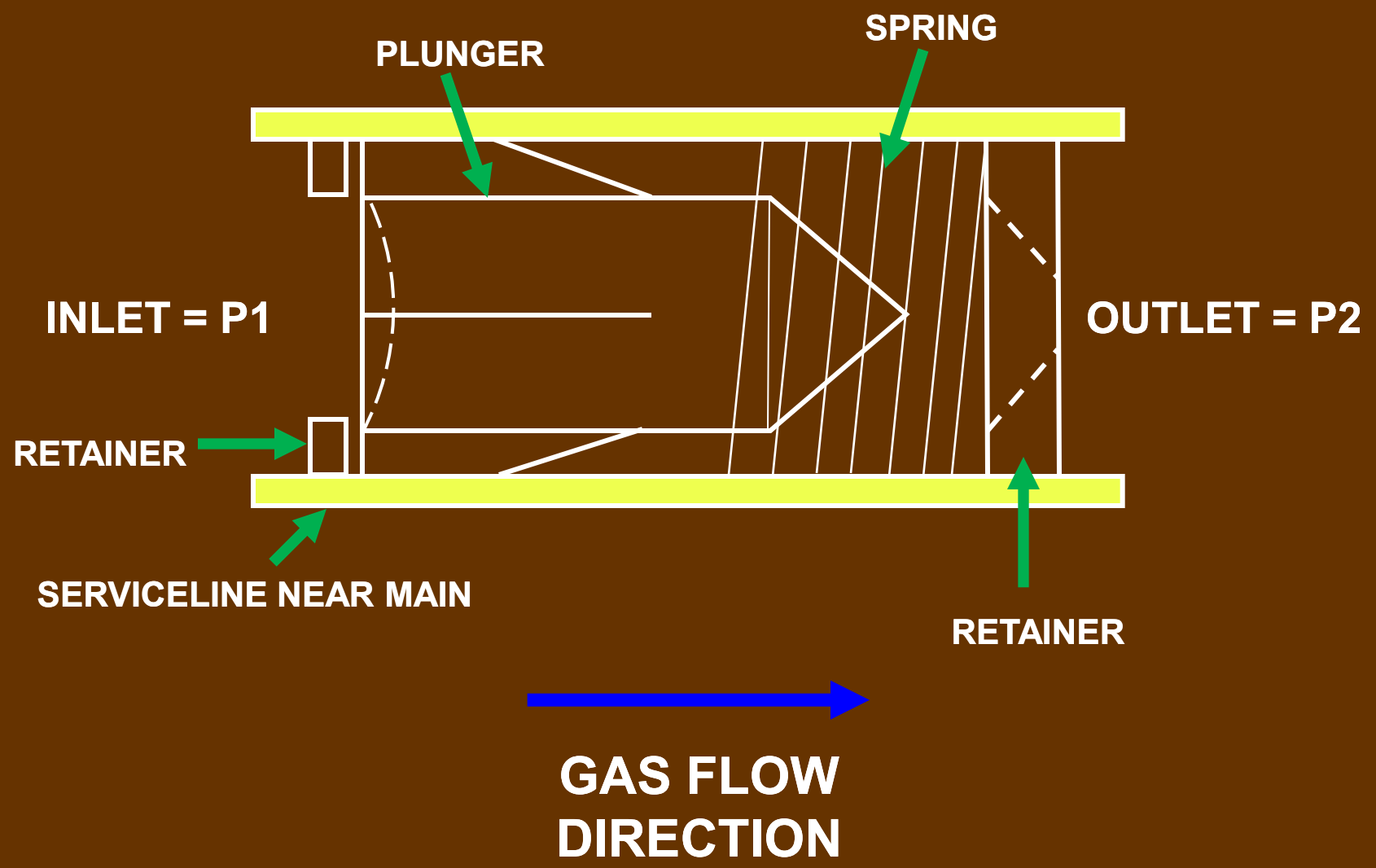
EFV Required

EFV Installation Options

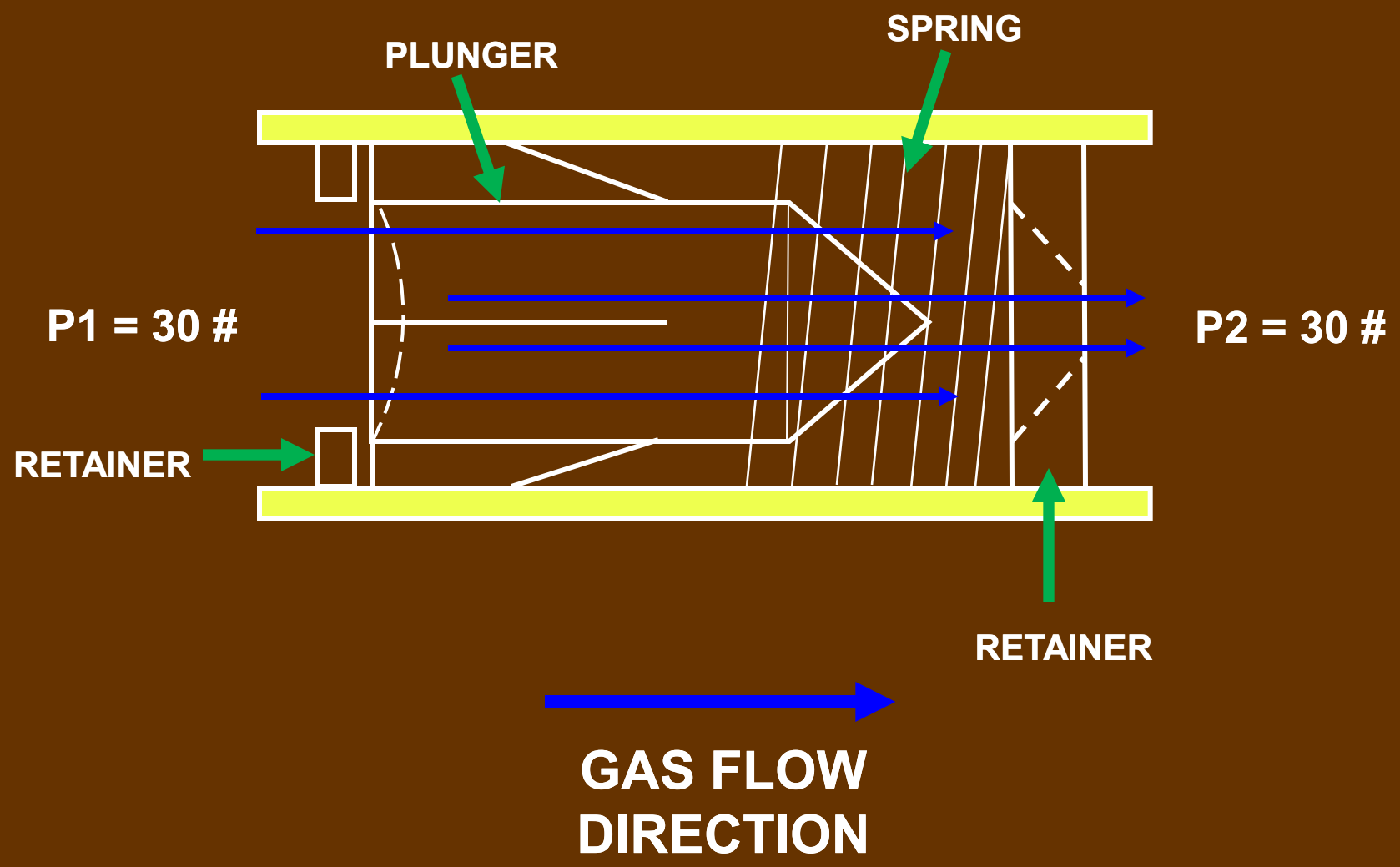
EFV NOT Required



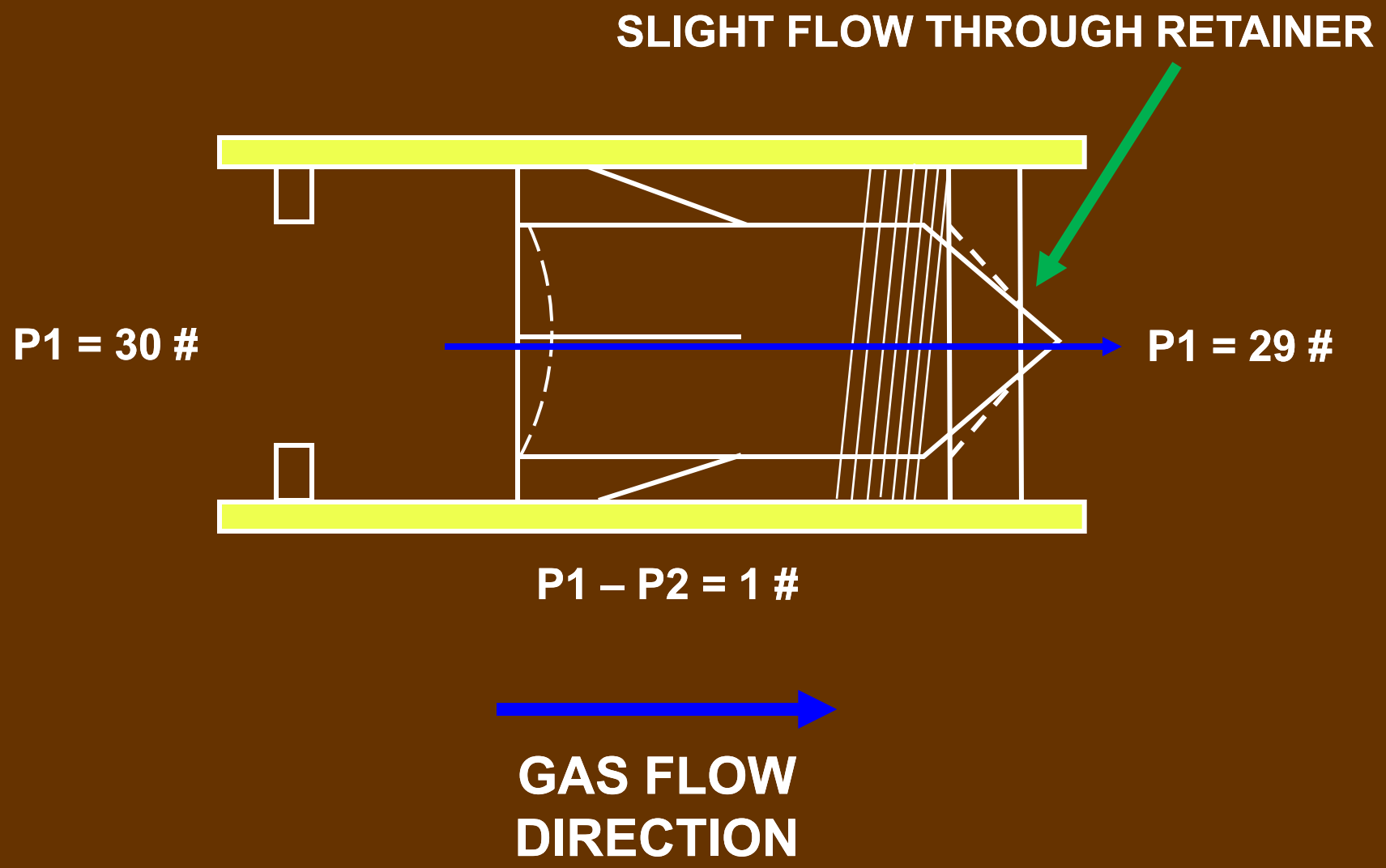
(CONDITION: NO FLOW CONDITION)
Excess Flow Valve Description



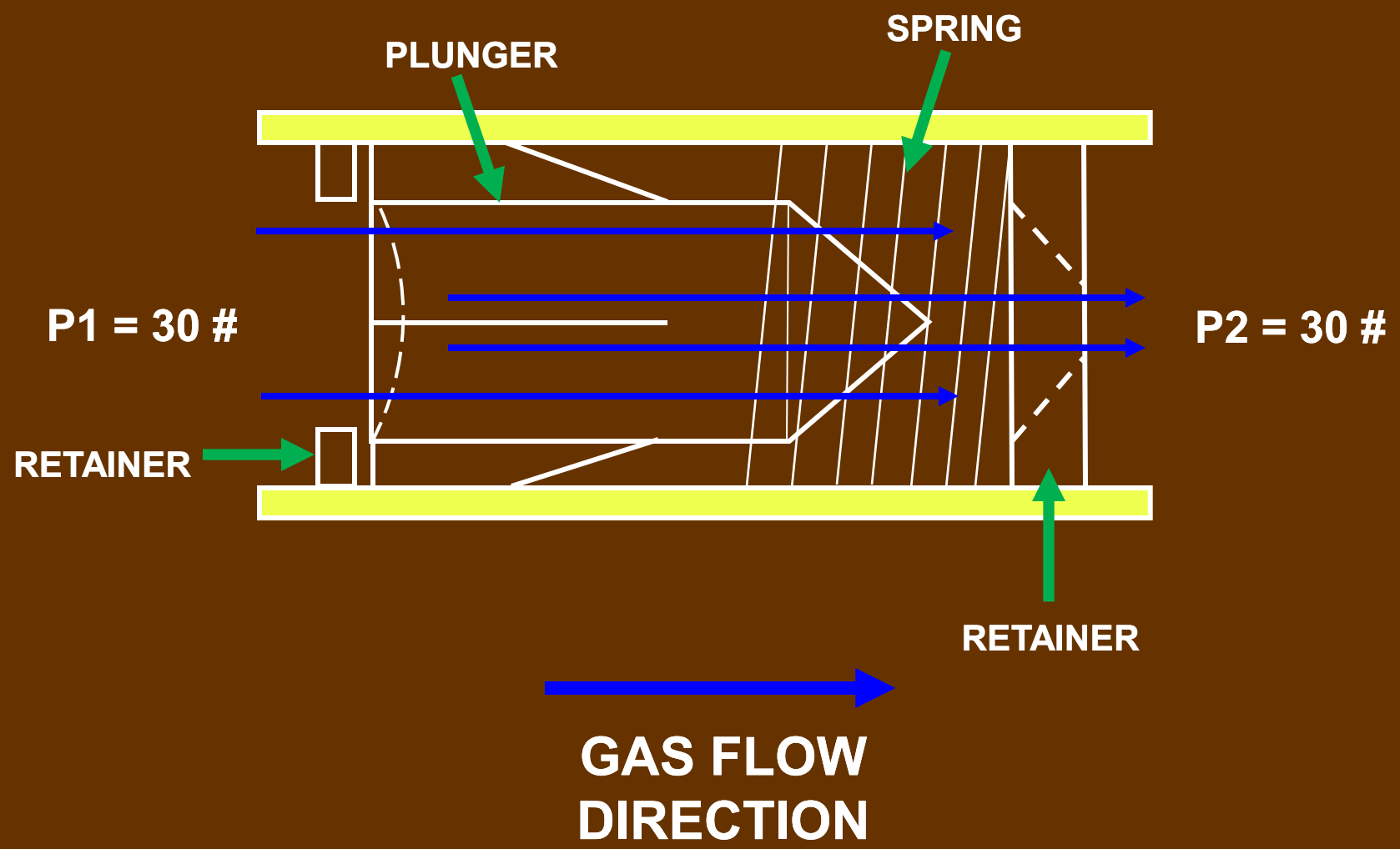
(CONDITION: NORMAL FLOWING CONDITIONS <u>BEFORE</u> DAMAGE DOWNSTREAM)



(CONDITION: CUT SERVICELINE DOWNSTREAM OF EFV, PRESSURE AT CUT = 0 psig)



(CONDITION: NORMAL FLOWING CONDITION, AFTER SERVICELINE DAMAGE REPAIR)



Information Websites

PHMSA DIMP Website

http://primis.phmsa.dot.gov/dimp/faqs.htm

New FAQ's Posted August 3, 2010

Information Websites

PHMSA Training and Qualification

http://www.phmsa.dot.gov/pipeline/tq

PHMSA Pipeline Safety Regulations

http://www.phmsa.dot.gov/pipeline/tq/regs

PHMSA Rulemaking

http://www.phmsa.dot.gov/pipeline/regs/rulemaking