

Excess Flow Valves In Applications Other Than Service Lines Serving Single Family Residences

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PIPES Act Of 2006

PHMSA codified the requirements of Section 9 in the DIMP Final Rule.

- Mandates installation for new or renewed service line serving one single-family residence.
- Requires reporting the number of EFVs installed on the annual report

NTSB Recommendation P-01-2

On September 21, 2009, NTSB conveyed to PHMSA that:

PIPES Act is fulfilled but the regulation does not require EFVs for branched service lines serving single-family residences, apartment buildings, other multifamily dwellings, and commercial properties, which are susceptible to the same risks from damaged service lines as single-family residences.

NTSB urged PHMSA to require EFVs on all new and renewed service lines for all gas service customers regardless of their classification.

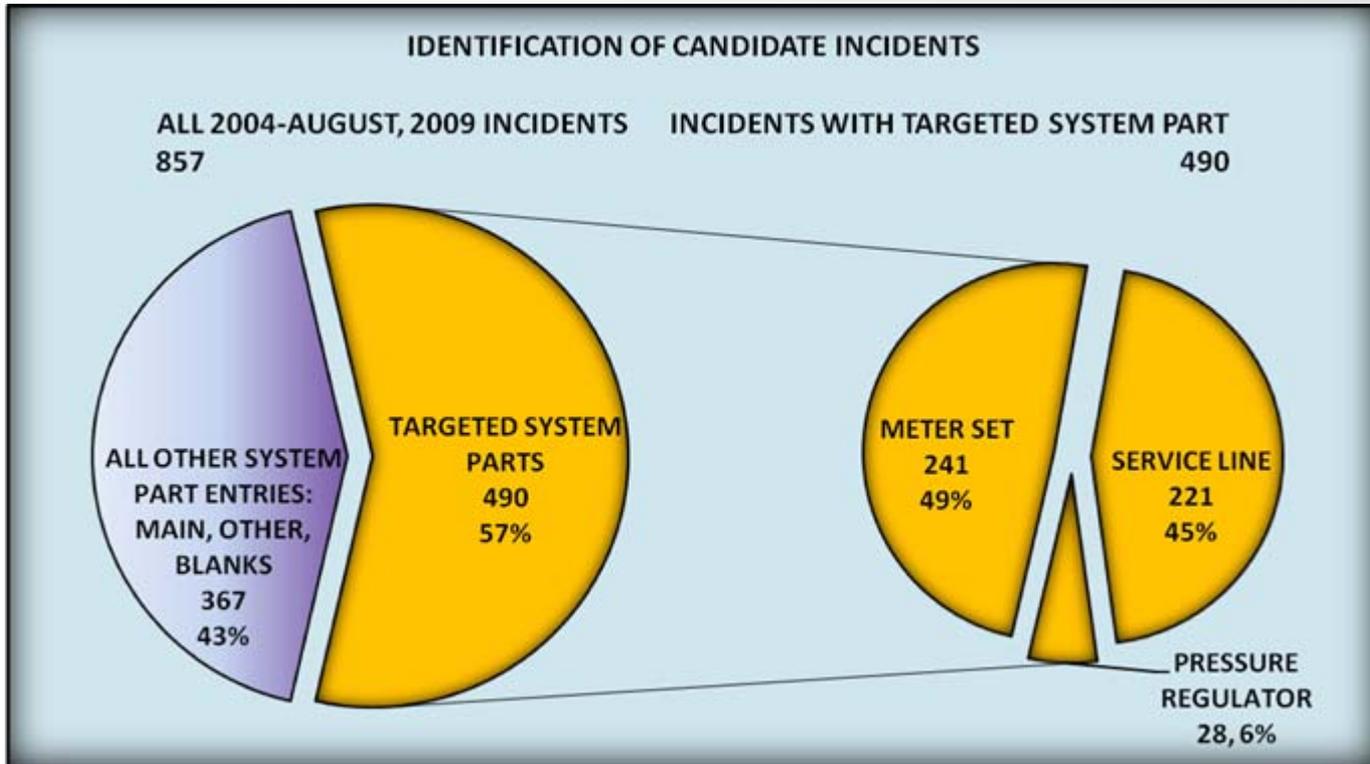
If Part 192 is not amended as requested, final classification of this recommendation may be “unacceptable.”

Risk = Likelihood x Consequence

- Recent PHMSA regulations lower the likelihood of failure
 - Public Awareness
 - Damage Prevention
 - Distribution Integrity Management
- NTSB recommendation P-01-2 addresses consequences
 - Current rules require that operators provide *emergency shutdown and pressure reduction in any section of the pipeline system necessary to minimize hazards to life or property.*
 - NTSB has identified incidents where quickly shutting off the gas may have mitigated the consequences
 - Uncontrolled gas leaks pose a significant hazard to emergency responders and the public
 - A quick shut down = lower consequence of failure

Incident Location

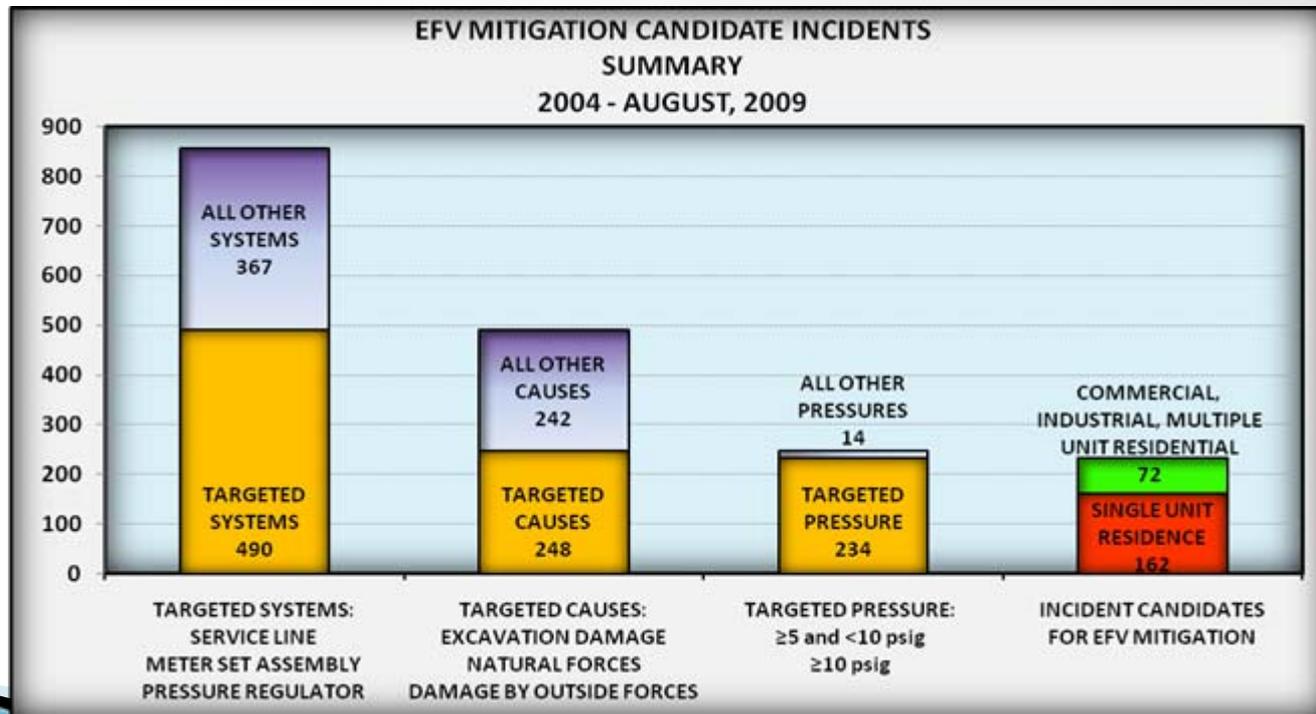
Nearly 6 out of 10 distribution incidents occurred due to a gas release on meter, regulator set, or service line.



Identification of Target Incident

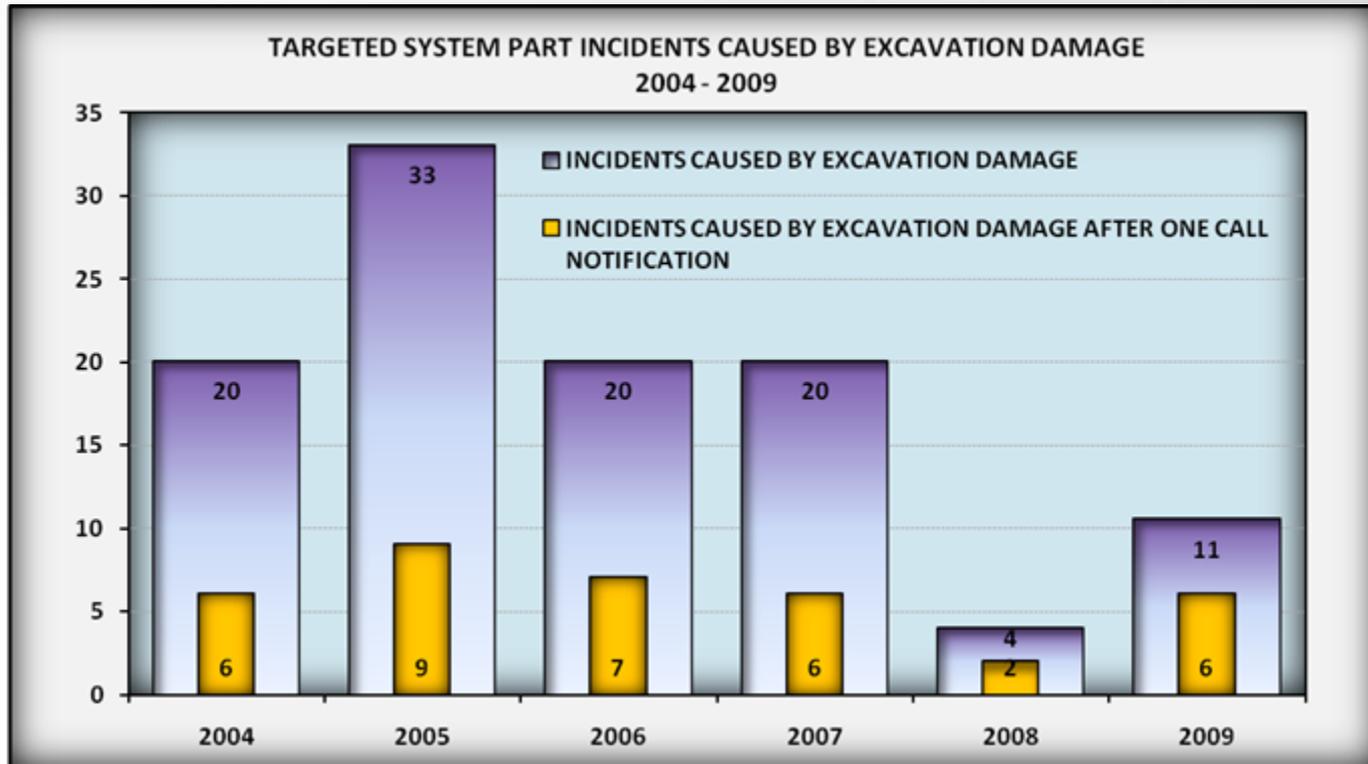
Incident data was filtered by:

- Leak Location – Meter/Regulator Set or Service
- Leak Cause – Excavation Damage, Natural Forces, or Damage by Outside Forces
- Line Pressure – Greater than 10 PSIG
- Customer Classification – MFR, Commercial, Industrial



Of the target incidents, 70% SFR and 30% MFR/Commercial/Industrial

Effectiveness of One-call to Prevent an Incident



One-third of incidents caused by excavation damage occurred after a one-call notification.

Key Take Aways From Meetings

- EFVs are important to Emergency Responders to control gas flow; currently dependent on the gas company for manual shutoff.
- NTSB and Emergency Responders advocate that EFV should be installed if technically feasible, unless otherwise justified.
- DIMP rules and damage prevention requirements should reduce incidents and lessen the need for EFVs.
- Operators advocate that more time is needed to collect data and better understand EFV effectiveness in applications other than SFR.
- EFVs are currently available up to 2" dia. and a capacity of ≤ 5.5 MCFH
- Technical challenges to specifying an effective EFV include:
 - Customer load changes
 - Snap loads
 - Non-interruptible loads due to criticality of supply
 - Complex service configurations
- Cost-benefit analysis
 - Should reflect benefits gained on SFRs & account for impractical applications.
 - Highly dependent on the est. no. of incidents an EFV would have mitigated.

Next Step

- Develop interim report to:
 - Establish basis for response to the NTSB safety recommendation
 - Build a foundation for a framework for a cost-benefit analysis
 - Consider the need for enhancing industry consensus standards or guidelines
- Interim report will compile findings:
 - NTSB recommendation and regulatory actions taken to date
 - Perspective of various stakeholders
 - Industry consensus standards and guidelines
 - Current US, international, and state regulations
 - Operator experience with EFVs other than SFR
 - Commercial availability of EFVs
 - Characteristics of US distribution systems
 - Issues and challenges identified by stakeholders
- First draft expected for stakeholder review by January 2010

Path Forward

- Finalize interim report
- Perform benefit-cost analysis
- Develop final report to reflect benefit-cost analysis
- Respond to NTSB
- Implement recommendation