Pipeline Safety – State Perspective

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States and Pipeline Safety

• States have delegated authority to inspect intrastate pipeline systems

• Approximately 80% of all pipelines are regulated by state programs

• The National Association of Pipeline Safety Representatives (NAPSR) is an organization representing state programs.

• NAPSR Mission – to strengthen State pipeline safety programs through the promotion of improved pipeline safety standards, education, training, and technology.
2017 NAPSR Priorities

• Continuation of the Federal-State partnership for pipeline safety
• Help operators understand and comply with recent or prospective rule changes (Transmission/Gathering, OQ/Cost Recovery, Underground Storage, Excess Flow Valves, Plastic Pipe)
• Continue to improve state Damage Prevention programs
• Prepare for the Congressional mandate for a national integrated pipeline safety regulatory inspection database
• Continue to promote Safety Management Systems
• Continue to advocate for state program funding
Recent and Pending Pipeline Safety Rule Changes
Rules keep getting bigger and more complicated

- Transmission/Gathering rule
- Excess Flow Valves
- Enforcement of State Excavation Damage laws
- Plastic Pipe / Marking Standards
- Operator Qualifications / Incident Notification
- Enhanced Emergency Order Procedures
- Underground Storage
- Onshore Hazardous Liquid Lines
- Valve Installation and Minimum Rupture Detection Standards
Incident Trends

• What do incident trends tell us about pipeline safety threats?
• Observations
  • Excavation Damage is the top threat for Distribution piping
  • Time dependent threats (Material, weld or joint failure, corrosion) are the top threats for Transmission lines
  • Damage Prevention programs appear to be effective
  • A Safety Management Systems approach may be helpful
20 Year Trends - Gas Transmission and Distribution Significant Incidents

Transmission
Distribution
Safety Management Systems (API RP 1173)

- Provides operators with a framework to develop and implement a pipeline safety management system
- Based on approaches from other high hazard industries - nuclear, airline, etc.
- “Plan-Do-Check-Act: continuous improvement model
- Promotes a “Safety Oriented Culture” – where communication, risk reduction and continuous improvement is part of day to day activities
Example

• An operator has experienced a number of excavation damages (dig-ins) in the recent past, including an incident that burned down a multi-unit building.

• Checking the data on their PHMSA 7100 report shows a damage per thousand locate ticket rate almost twice the state average.

• Need a plan to reduce excavation damage.
PLAN
What exactly is the problem?

• Old Way
  • Anecdotal Evidence – What do you think the problem is based on your personal experience (can work for small systems)
  • Or – Classify damages by
    • One call notification practices not sufficient
    • Locating practices not sufficient
    • Excavating practices not sufficient
    • Other
PLAN
What exactly is the problem?

• New Way
  • Review locate request procedures
  • Establish damage investigation procedures
  • Classify damages so the results can tell you something. Ex:
    • Locating practices not sufficient:
      • Incorrect facility records / maps
      • Facility marking or location not sufficient
      • Facility was not located or marked
      • Facility could not be found or located
DO
Put the plan into action

• Train your people on your procedures
• “Operational Controls” – check to make sure the procedures are being followed
• Investigate failures (damages) for lessons learned
• Keep good records so somebody reviewing the records later can understand what happened
• “Stakeholder engagement” – Keep everyone (employees, contractors, excavators) involved. Public awareness.
CHECK
Can we use what we learned to get better?

• Check to see if your plan is effective (damages per thousand locates)
• Review incident investigations and lessons learned. Any patterns?

• Ex: for this operator, the most common cause of a dig-in is: Locating practices not sufficient -> Facility marking or location not sufficient
  • Further investigation shows the leading cause is that when a locate is done by contractors, no one is informing the excavator when a locate is untoneable.
ACT
Determine how your plan can be improved, and fix it

• Old Way – yell at your contractors
• SMS Way – review your procedures and contract, identify exactly what is going wrong
Questions?