Distribution Integrity Management Programs (DIMP)

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DIMP Inspections

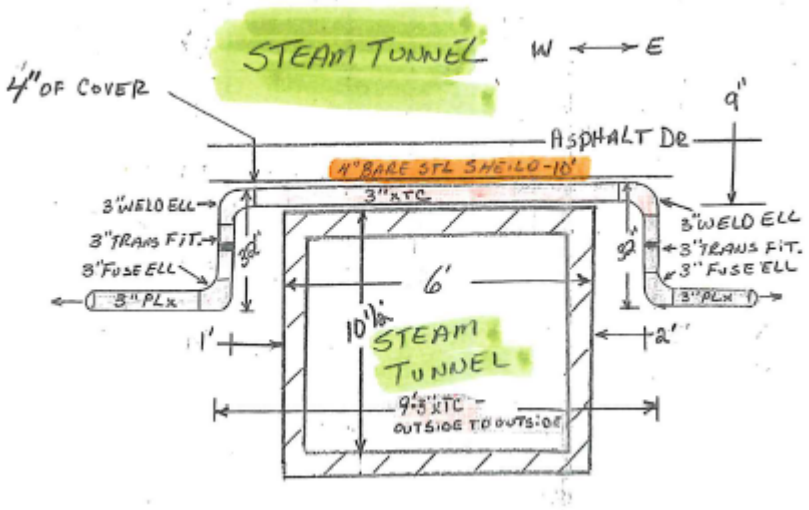
- Intrastate
  - Comprehensive every 4 years (plan & records)
    - 2016-2017
    - ~ 2020-2021
    - ~ Will eventually become risk based frequency
  - Field inspections annually (based on activity)

Hot Topics

- Incidents
- New Threats
- Rule Revisions
- Risk Model Upgrades
- Inspection Findings

Incidents => Threats

- Third-party damage during road demo.
  - Concrete saw cut through shallow pipe.



Incidents => Threats

- Cracked girth weld due to overloading.
  - 1950's vintage weld defects present.

Incidents => Threats

- House explosion with fire.
  - Inside meter destroyed.

Incidents => Threats

- Vehicular Damages

Incidents => Threats

- Third-party damages due to marking error.

Incidents => Threats

- Operator hit their own line during lowering project.

Incidents => Threats

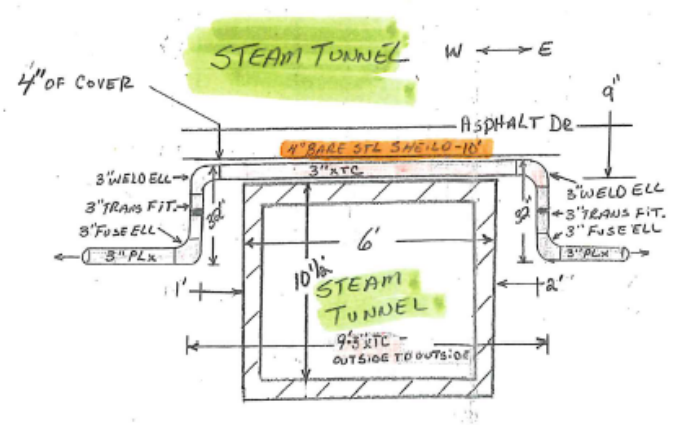
- Operator fused the same fitting twice causing pipe failure and ignition.

New Threats to Consider

- Never be 100% confident in your threat identification and risk analysis.
  - This process is meant to be ever evolving and improving.

New Threats to Consider

- Excavation damage
  - Known shallow pipe
  - Under pavement
  - Vintage pipe
  - Ability to mark
  - Confidence in records
  - Excavations practices



New Threats to Consider

- Outside Force
  - Vintage pipe
  - Loading conditions
  - Protection
  - Distance from road

New Threats to Consider

- Material or welds
  - Vintage pipe
  - Weld defects found
  - Fusion defect found

New Threats to Consider

- Incorrect Operations
  - Not following procedures
  - Potential training issues
  - Safety culture

New Threats to Consider

- Other Concerns
  - Inside meters
  - Ability to inspect inside meters
  - Vandalism

New Threats to Consider

- Recent PHMSA Advisory Bulletins:
  - Mechanical tapping tees
  - Securing pipelines from unauthorized access
  - Snow and ice buildup on meters
  - Flooding, scour, and river channel migration

New Threats to Consider

- How can these new threats be addressed in your risk assessment?
  - Think outside the box and use all information you have access to even if it doesn't fit well into your existing risk model.
  - Use "lessons learned" from other operators

Rule Revisions

- 192.455(g)

  Electrically isolated metal alloy fittings (in plastic systems) *installed after January 22, 2019, that do not meet the requirements of paragraph (f) must be cathodically protected, and must be maintained in accordance with the operator's integrity management plan.*

  *Nov 20, 2018 (Current MGSS adopted Part 192 as of Jan 3, 2019)

Rule Revisions

- 192.740

  (a) This section applies, except as provided in paragraph (c) of this section, to any service line directly connected to a production, gathering, or transmission pipeline that is not operated as part of a distribution system.

  (b) Each pressure regulating or limiting device, relief device (except rupture discs), automatic shutoff device, and associated equipment must be inspected and tested at least once every 3 calendar years, not exceeding 39 months, to determine that it is…

*Jan 23, 2017 (Current MGSS adopted Part 192 as of Jan 3, 2019)

Rule Revisions

- 192.1003

  (b) Exceptions. This subpart does not apply to an individual service line directly connected to a transmission, gathering, or production pipeline.

  *Jan 23, 2017 (Current MGSS adopted Part 192 as of Jan 3, 2019)

Risk Model Upgrades

- Many operators are realizing that their existing risk models need to be improved.
  - Data integration and risk model needs to pull data from many sources and in many formats.
  - Automation is much less labor intensive and faster.
  - Risk methodologies have gotten better and some of the older ones have proven to be incorrectly assessing risk.
  - Probabilistic models better represent the risk of the pipelines.

Risk Model Upgrades

- Questions to ask:
  - Is there data that does not currently feed into the model?
    - How do GIS based risk models use data that can't be entered as an attribute?
    - What about data on forms (paper or electronic)?
    - CP data, patrolling observations, non-leaking corrosion, depth of cover obtained from excavations, lessons learned from incidents?
  - How does the model apply the data to like/similar pipe?
    - Failures due to corrosion / natural forces / excavation damage / outside force / material / construction / equipment / incorrect operations / overpressures / other
  - Can the segment be falsely higher or lower risk by how information is applied?
    - How are unknowns handled?
    - How does segment length affect overall risk?

Inspection Findings

- 192.1007: Inadequate procedures.
  - Prescriptiveness is required.
  - What data sources are used specific to your company?
  - How is information collected where gaps exist?
  - How are other threats considered?
  - How is risk used in P&M Measure determination?
  - How are baselines established for performance measures?
  - What needs to be covered in effectivness and DIMP evaluation?

Inspection Findings

- 192.1007(a): Not receiving data on known corrosion.
  - Forms sent to TIMP group that end up being distribution pipe.
  - (3) Not sampling liquids / solids when discovered.
  - (5) Not documenting all pipe attributes for new construction or replacements.

Inspection Findings

- 192.1007(b): Not considering all applicable threats.
  - Corrosion
    - Multiple-year cathodically-unprotected pipeline segments
    - Internal and external corrosion identified by exposed pipe inspections not directly related to a leak
    - Shorted casings
  - Material or Welds
    - Pre-1940 oxy-acetylene girth welds
    - Mechanical couplings
    - Unknown plastic pipe materials
  - Equipment Failure
    - Inside meters and associated equipment
  - Other Concerns
    - Leaks pending to be repaired
    - Interacting threats

Inspection Findings

- 192.1007(c): Risk Model Issues
  - EFV presence not affecting risk.
  - Risk only driven by leak data.
  - GIS not accurate due to lack of maintenance or delayed mapping of as-builts.
    - Affects annual report data
    - CP records / maps
    - O&M records / maps per 192.605(b)(3)
    - DP marking
    - Emergency plans
    - Patrolling / leak survey
    - Valve inspections

Inspection Findings

- 192.1007(d): Preventative & Mitigative Measures.
  - No link between the risk model and the pipe replacement program
  - Not following PHMSA advisory bulletin for more frequent leak survey on systems that have exhibited brittle-like cracking failures of known susceptible materials (Aldyl-A).

Inspection Findings

- 192.1007(e): Performance Measures and Effectiveness Evaluation.
  - Not using the performance measures in a documented effectiveness evaluation.
  - Not establishing baselines for the measures or benchmarking to evaluate effectiveness.

Inspection Findings

- 192.1007(f): DIMP Evaluation and Improvement.
  - Not performing a program wide evaluation not-to-exceed 5 years.
  - Not demonstrating the threats and risks were re-evaluated during this process.

Inspection Findings

- 192.1011: Not retaining records
  - SME input records
    - Data collection
    - Threat identification
    - Risk analysis
    - Pipe replacement prioritization

Questions?

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