Assessment of Latent Damages

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Outline

- Operating Regions
- Background
- Approach
- Action Plan
- Sample spatial Analysis for KEDLI
- Challenges
- Questions
Operating Regions

Boston Gas
533,838 Svc
7,187 mi Mains

Colonial Gas
186,163 Svc
3,834 mi Mains

Narassangett Gas
192,931 Svc
3,179 mi Mains

Keyspan Gas
528,494 Svc
7,892 mi Mains

Brooklyn Gas
569,054 Svc
4,135 mi Mains

Niagara Mohawk
552,688 Svc
8,594 mi Mains
Background

- **NY PSC Order**
  
  “…take certain steps…to make a special assessment of the extent to which the safety of their gas facilities have been compromised by third-party excavations…” as a result of an explosion at 198 Joseph Street in Horseheads (NYSEG territory). “…all LDCs identify and assess the risks associated with excavations made in the past near or adjacent to their gas facilities…”

- **Incident Details**
  
  - Sewer and water mains were installed below existing gas service and the backfill was found to be atypical (including chunks of Asphalt) leading to the failure of 1.25” medium pressure coated service (installed 1955)
  
  - Metallurgical testing revealed the cause of failure to be stress corrosion crack
  
  - Black tape wrapping at the fracture point indicated a prior coating repair but had no record of the same
  
  - Tape was not applied correctly thereby allowing moisture to be held that eventually aggravated the corrosion
  
  - Excavation of other gas services in the same town revealed numerous instances of coating damages over service pipe
Approach

- Regional assessment based on history and past practices
  - Risk based on operating region
    - KEDNY low risk
    - KEDLI medium risk
    - NMPC high risk
  - Underground constructions regulations & inspections
- Targeted risk based approach
  - Risk based on “service materials”
    - Plastic low risk
    - Copper medium risk
    - Steel rated high risk
Action Plan

- Current – Multi phase study
  - Geographically plot all service leaks caused by corrosion, excavation damage, natural force and other outside forces in the past 10 year
  - Identify hot spots where significant leak activity has occurred
  - Contact municipalities for construction records water
  - Identify areas where the water/sewer lines installed after gas
  - Select random statistically acceptable excavation locations and assess the gas facility condition

- Future – LMS Update
  - Excavation damage will have subtype “Recent” or “Latent”
Sample of Spatial Analysis – KEDLI
Challenges

- Although rear in gas distribution system, incident due to latent damage is possible, and extremely difficult to detect
- Large number of sewer and water utilities/municipalities
- Liability concerns and cost impact municipalities response
- Paper records, difficult to access and use
- Data integrity
- Cost, resources and efficacy are concern
Questions?

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