Inside Atmospheric Corrosion and Leak Survey
“Protecting Public Safety”

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Gas Mains - Means a distribution line that serves as a common source of supply for more than one service line.

Distribution Line – Means a pipeline other than a gathering or transmission line.

Includes both mains and services.
Service Line – Means a distribution line that transports gas from a common source of supply to

- A customer meter or the connection to a customers piping, whichever is farther downstream, or
- The Connection to a customer’s piping if there is no customer meter.
- Customer meter is the meter that measures the transfer of gas from an operator to a consumer.
Service Line Surveys

§192.723 Distribution systems: Leakage surveys

A leakage survey with leak detector equipment must be conducted outside business districts as frequently as necessary, but at least once every 5 calendar years at intervals not exceeding 63 months. However, for cathodically unprotected distribution lines subject to § 192.465(e) on which electrical surveys for corrosion are impractical, a leakage survey must be conducted at least once every 3 calendar years at intervals not exceeding 39 months.
Exposed Pipe – Atmospheric Corrosion Survey


Atmospheric corrosion control: Monitoring, states that each operator must inspect each onshore pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion at least once every 3 calendar years, but with intervals not exceeding 39 months.

- Must Inspect Exposed Pipe Regardless of location
  - Inside or Outside – Jurisdictional Piping
What to Inspect?

- Must inspect/leak survey all exposed pipe whether inside or out, code does not differentiate
- Leak Survey all jurisdictional Piping
  - (3) years bare steel / non-cathodically protected
  - (1) year for services in business districts
  - (5) years for cathodically protected or plastic
- Atmospheric Corrosion Every (3) Years not to exceed 39 Months
Pipeline and Hazardous Materials Safety Administration Waivers and Interpretations
Intermountain Gas Company – 2005

- Asked for a waiver of compliance with 49 CFR 192.481(a)
- The waiver would apply to residential meters only
- Waiver to perform atmospheric corrosion inspections at least once every (4) years not to exceed 51 months
- Increase time due to arid conditions
PHMSA’s Interpretation

PHMSA – Idaho Public Utilities Commission
- Commission approved a waiver for Intermountain Gas Company
  - Wanted to conduct corrosion inspections every 4 years with intervals not to exceed 51 months
- PHMSA – Stayed the Idaho Commissions Order

Why!
PHMSA’s Interpretation

- PHMSA – Intermountain Gas Company
  - Commission did not provide adequate justification
  - PHMSA’s judgment that operators should maintain their preventative measures to identify potential leaks by conducting visual inspections for atmospheric corrosion and find problem areas before leaks occur, rather than rely on discovering leaks after they occur.
  - PHMSA stayed the Commission’s order
States that corrosion on interior portions of residential service lines is a slow process that rarely results in leaks.
If a leak were to occur it would be microscopic and smelled by meter readers.
Leaks would be detected sooner through monthly visits by meter readers.
PHMSA’s Interpretation

- PHMSA – Consumer Energy Company
  - Commission approved a waiver for Consumer Energy Company
    - Wanted to conduct corrosion inspections every 5 years
  - PHMSA stayed the commissions order

Why!
PHMSA’s Interpretation

- It is PHMSA's judgment that operators should maintain their preventive measures to identify potential leaks by conducting visual inspections for atmospheric corrosion and find problem areas before leaks occur, rather than rely on discovering leaks after they occur.
- The purpose of § 192.481 is to require evaluation of the need for corrosion control before leakage occurs.
- Meter readers could be assigned to inspect for corrosion.
- Consumer Energy did not explain why they could not use meter readers to inspect for atmospheric corrosion.
PHMSA Waiver Requests

Northwest Natural Gas Company – October 1988

- Asked for waiver from 3 to 5 years for certain facilities
- Except coastal areas where atmospheric corrosion is known to be accelerated
- Area around Chemical Plant
PHMSA’s Interpretation

- PHMSA – Northwest Natural Gas Company
  - PUC of Oregon approved a waiver for Northwest Natural Gas Company
  - PHMSA stayed the commissions order
  - Company did not have adequate showing that compliance with regulations would be overly burdensome and safety NOT decreased
  - Evidence presented did not distinguish NNG from any other company.
PHMSA Waiver Requests

AMEREN – September 2005

- Company will inspect every 4 years no greater than 51 months
  - Includes all cathodically protected and non protected pipe
- Inside Business Districts – every calendar year
- Will inspect known “hot spots” more frequently than every 3 calendar years
PHMSA’s Interpretation

**PHMSA – AMEREN**
- Illinois Commission approved a partial waiver for AMEREN
- PHMSA originally stayed the commissions order
  - Due to lack of information
- AMEREN agreed to increase frequency of all leak surveys and atmospheric corrosion outside business districts, protected and unprotected pipe
- AMEREN performed analysis on “hot spots”
  - Agreed to increase frequency of inspections for these

**Bottom Line – Public Safety was not Jeopardized**
PHMSA’s Interpretation

- Letter from PHMSA to KN Energy
  - Customer meter sets are part of service lines
  - The meter sets are subject to the same inspection requirements as service lines
  - Includes monitoring for atmospheric corrosion under 192.481 and periodic leakage surveys under 192.723

Response letter by Cesar De Leon to Mr. Gerald Classen KN Energy – Office of Pipeline Safety, July 15, 1993
What are the requirements for inside jurisdictional piping?

“what does this mean for inside pipes and meters”

The Federal Code makes no distinction between inside meter sets and outside meter sets.
Unitil’s Program Prior to 2005
Program Overview...

- Service Line Leak surveys except Business Districts were done on a 3 year cycle
- Inside Atmospheric Corrosion Inspection
  - We tried to gain access, left door hangers
- Required all Meter and Service Techs to perform inspection for most work orders
  - Documented on hard copy work order
Problems...

- This documentation was never linked to our Compliance Management System (CMS)
- We had no way to know how many had been completed.
- Admins would close the work orders and no inspection information would get entered
  - We would need to search for the W/O
- We had no tracking mechanism for all the inspections we were doing.
Problems...

- Left a single door tag
  - Was this good enough to cover the code
    - Answer was NO

- No Formal Program
  - No way to audit these surveys to determine compliance

- Prior to 2005 this approach satisfied expectations set by Mass DPU
Internal Review of Compliance in 2005

- We were meeting verbal expectations of DPU
  - Did not meet PHMSAs Interpretation
- Received formal notification on PHMSA Interpretation
- We Revamped our program
- Embarked on a program that would put us in compliance within 3 years.
Unitil’s Program After 2005
Revamped Program in late 2005, implemented in 2006 with the goal of being in compliance by 2009
  - Put a program together that would put us in compliance within three years.

Tied our systems together
  - Techs inspections fed CMS

Started making return visits to customers
  - Tracked door tags
2010

Performing audit of the last three years program

- By 2010 we were much better but...
- Still not in compliance
- Not because of our attempts – access issues
  - Customers refusing to let us in, no one home
  - Vacant buildings on the increase
What Legal Recourse did we have?

- Met with DPU – explained our situation (access Issues)
- DPU – Service shall not be terminated for any reason other than failure to pay a bill.
  - Unless the Department has a hearing.
- Our intention was to start terminating services
  - Received some push back from MADPU
- DPU in conjunction with Consumer Division gave us pushback
What Were Our Options...

- We had made multiple attempts
- We Planned to Terminate Service
- DPU Felt we could not based on law
  - How far should we go to gain access
  - Do we abandon services at the main if no access
  - Do we break in with locksmiths
Asked the regulators: Consumer Affairs
- Confirmed the underlying issue is safety related
- DPU Hearings for each case would do no good
- 220 CMR 25.02 (3)(D): Billing and Termination Procedure for Residential Customers
  - “Nothing in 220 CMR 25.00 shall be construed to prevent termination for reasons of safety, health, cooperation with civil authorities or any other reason for which termination power is specifically granted in the Massachusetts General Laws.”
An officer or servant of a gas or electric company who is duly authorized in writing by the president, treasurer, agent or secretary or municipal lighting plant manager of said company and who displays on his outer garment a suitable badge bearing his photograph, issued to him by his employer, identifying him as such officer or servant, may at any reasonable time enter any premises supplied with gas or electricity by such company for the purpose of examining or removing the meters, pipes, wires, fittings and works for supplying or regulating the supply of gas or electricity and of ascertaining the quantity of gas or electricity consumed or supplied; and if any person, directly or indirectly, prevents or hinders such officer or servant from so entering such premises or from making such examination or removal, the gas or electric company employing such officer or servant may make complaint to any court or magistrate authorized to issue criminal process, who may thereupon issue a warrant directed to the sheriff or to any of his deputies, or to a constable of the town where such company is located, commanding him to take sufficient aid and repair to said premises accompanied by a duly authorized officer or servant, who shall examine such meters, pipes, wires, fittings and works for supplying or regulating the supply of gas or electricity, and ascertain the quantity of gas or electricity consumed or supplied therein, and shall, if required, remove any meters, pipes, wires, fittings and works belonging to said company. A gas or electric company may direct a duly authorized employee to restore meters, pipes, wires, fittings, works or service, consistent with the local bargaining agreement entered into by the company and the local bargaining unit to which the employee belongs.
Final Opinion

Consumer Division Agreed with our Assessment

- Moved Forward with program
- “Nothing in 220 CMR 25.00 shall be construed to prevent termination for reasons of safety, health, cooperation with civil authorities or any other reason for which termination power is specifically granted in the Massachusetts General Laws.”

- With this in mind we embarked on our program
Unitil’s Program Now
A Comprehensive Program

- All services other than business districts
  - Surveyed on a (3) year cycle – includes exposed pipe survey and serviceline survey
  - Techs are required to perform inspection for any work order
  - Automated link between our Mobile Dispatch System and CMS
  - Automated link between CIS and CMS
  - Have Leak Survey Techs performing inspections
A Comprehensive Program

- Actively manage the program
  - Between April and Sept – cannot begin until April 1st
- Make three attempts (leave door tags)

SORRY! WE MISSED YOU

Our representative was here today to conduct a safety inspection of your gas meter and associated piping. This routine inspection will be performed at no cost to you and without interruption of service. Please call our customer service office at 1-888-301-7700 to schedule an appointment. Thank you.

Unitil
Fitchburg Gas and Electric Light Company
In 2011 we performed Inspections to be complete within a calendar year.

2012 we structured inspections to be done quarterly, beginning April through September.

Want to work towards 39 month compliance goal.

Writs of Entry to go out throughout the year.

Using iPads to Capture Data Real Time.
A Comprehensive Program

- Now have the capability to track door tags

- After a 3rd attempt the address goes on a list
  - One attempt being after hours or weekend
  - Send a termination letter
Termination Letter

- Termination letter gives customer 30 days to respond – sent registered mail
- Letter states we will be requesting Writs of Entry per MGL
  - Customer will be billed for this expense
  - Explains we may opt to terminate service
- We offer extended hours M-F and Saturdays
  - No Customers can claim hardship with extended hours
After 30 Days

- We apply for Writ of Entry
  - Visit Court Magistrate
  - Time Consuming
  - Paperwork Intensive
  - Need to show proof to Magistrate
- Schedule Sheriffs Department for Detail
- Coordinate with locksmith
- May abandon service at the main
Our Results
Results

- We received complaints from local politicians
  - Legally we followed all procedures
- Received an increase in appointments due to letter
  - Strong Language in letter had an effect
- Out of 50 Writs Actioned, found 5 Grade I Leaks
- Out of 432 Compliance Issues
  - 18 remain
- Extended Hours Helped
Out of 300 Letters, 48% responded

Cleaned up inactive services

Database is getting better
  Attaching proper meters to services

Plan to be in compliance by Dec 2012
Have We Succeeded
Have we Succeeded

- Systems are in place and talk to each other
- Data Entry to be minimalized with technology
- Termination Letters Work
- Writs of Entry are a good tool
  - Costly but results are worth the cost
- Cleans Up Our Data

Public Safety has Increased!
Questions/Discussion