Pipeline Safety
Topics of Discussion
2014

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Kansas
Corporation Commission

www.kcc.ks.gov

- 2010-2013 Presentations also available.
- Other presentations available from past years, but not on website.

Discussion of Current Topics Related to Pipeline Safety Regulations

GOALS

- ***Discuss questions derived from Staff field observations related to regulation.***
- ***Receive input from operators.***
- ***Official interpretations will be issued in writing.***
- ***Vetted through operators and PHMSA.***

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- **Update of Pipeline Safety Regulations**
  - **Customer Yardline Requirements**
- **Kansas Emergency Management Regulations**
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  - **Prioritization of curtailments and restorations.**

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  - **Evaluations**
  - **Locator Qualifications**

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- **Click on Pipeline Safety tab**
- **2013 Presentations**
- 2013 KCC Seminar-Emergency Response—Glenn McFann:; Dan Ostahowski:
- Controlling Static Electricity—KCC Pipeline Safety
- Damage Prevention Lessons Learned—Christie Knight & Robert Jackson:
- Establishing an Audit Trail Using Electronic Records—Kent Pribil & Doug Fundis:
- Preparing for a Pipeline Safety Inspection—Kent Pribil: KCC
- TGA Trenchless Technology for Gas—Eddie Ward: TT Technologies, Inc.
- Topics of Discussion 2013—Leo Haynos: KCC
- Using Social Media for Public Awareness—Rita Cassida: City of Louisburg

PHMSA Explanation of Concepts: Staff Manuals and Instructions Enforcement Guidance

- http://phmsa.dot.gov/foia/e-reading-room
  - O-M Enforcement Guidance Part 192 (12 7 2011)
  - Corrosion Enforcement Guidance Part 192 (12 9 2011)
  - Public Awareness Enforcement Guidance Part 195 (7 27 2011)
  - Gas IMP Protocols with Guidance
  - OQ Enforcement Guidance (7 6 2011)
  - And more….

PHMSA Explanation of Concepts: Policy Statements Pipeline Interpretations

- http://phmsa.dot.gov/foia/e-reading-room or
- http://phmsa.dot.gov/pipeline/regs/interps

- Allows searching by topic
- All interpretations prior to 2011
- Interesting searches:
  - Large volume customer; definition of transmission.
  - Wide variations; odorization (192.625(e))

PHMSA Online Data Entry

- http://phmsa.dot.gov/resources/e-forms
  - And follow links
  - Any questions or problems, call KCC staff and we can help you get proper contacts.

American Public Gas Assn. Security & Integrity Foundation APGA-SIF

- www.apgasif/org
  - SHRIMP Program for Distribution Integrity Management
  - Drug and Alcohol Program
  - Operations and Maintenance Procedures
  - Operator Qualification Training and Evaluations

Emergency Response Training

- 192.615(a)(8): Procedures must provide for:
  - **Coordinating with fire, police, and other public officials both planned responses and actual responses during an emergency**.
- 2014 Observations:
  - Operator not allowed to investigate for gas concentration because of suspected crime scene.
  - Furnace attempting to ignite with active leak and firefighters in basement.
  - Request use of trained dogs at explosion sites?

Emergency Response Training

- First Responder Training:
  - Incident Command: Who is in charge?
  - Awareness level vs. Action level training
    - Continuous Monitoring
    - Expectations for Dispatchers
    - Expectations of first responders (gas)
    - Expectations of first responders (fire fighers)
  - Develop scenarios of when leak response is changing the hierarchy of safety: customer, responder, property, leak repair.

Inside Leak Investigation (background)

- Part 192 Scope: Transportation of Gas through facilities consisting of pipelines, rights-of-way, and any equipment used in the transportation of gas.
- Kansas additions: full responsibility for maintenance of all pipelines from a gas main to the outside wall of ***residential premises***.
- Municipals with less than 2000 customers responsible for inspection but not maintenance.

Inside Leak Investigation (background)

- 192.605(a) Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.
- 192.13(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.
- 192.615 (a) Each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency. At a minimum, the procedures must provide for the following:
  - (5) Actions directed toward protecting people first and then property.
  - (7) Making safe any actual or potential hazard to life or property.
  - (9) Safely restoring any service outage.

Inside Leak Investigation (background)

- Summary:
  - Operators need procedures to maintain and respond to emergencies on pipelines.
  - Includes procedures for customer owned piping up to building wall for single family residences.
  - Inside piping is not jurisdictional to Pipeline Safety Regulations.

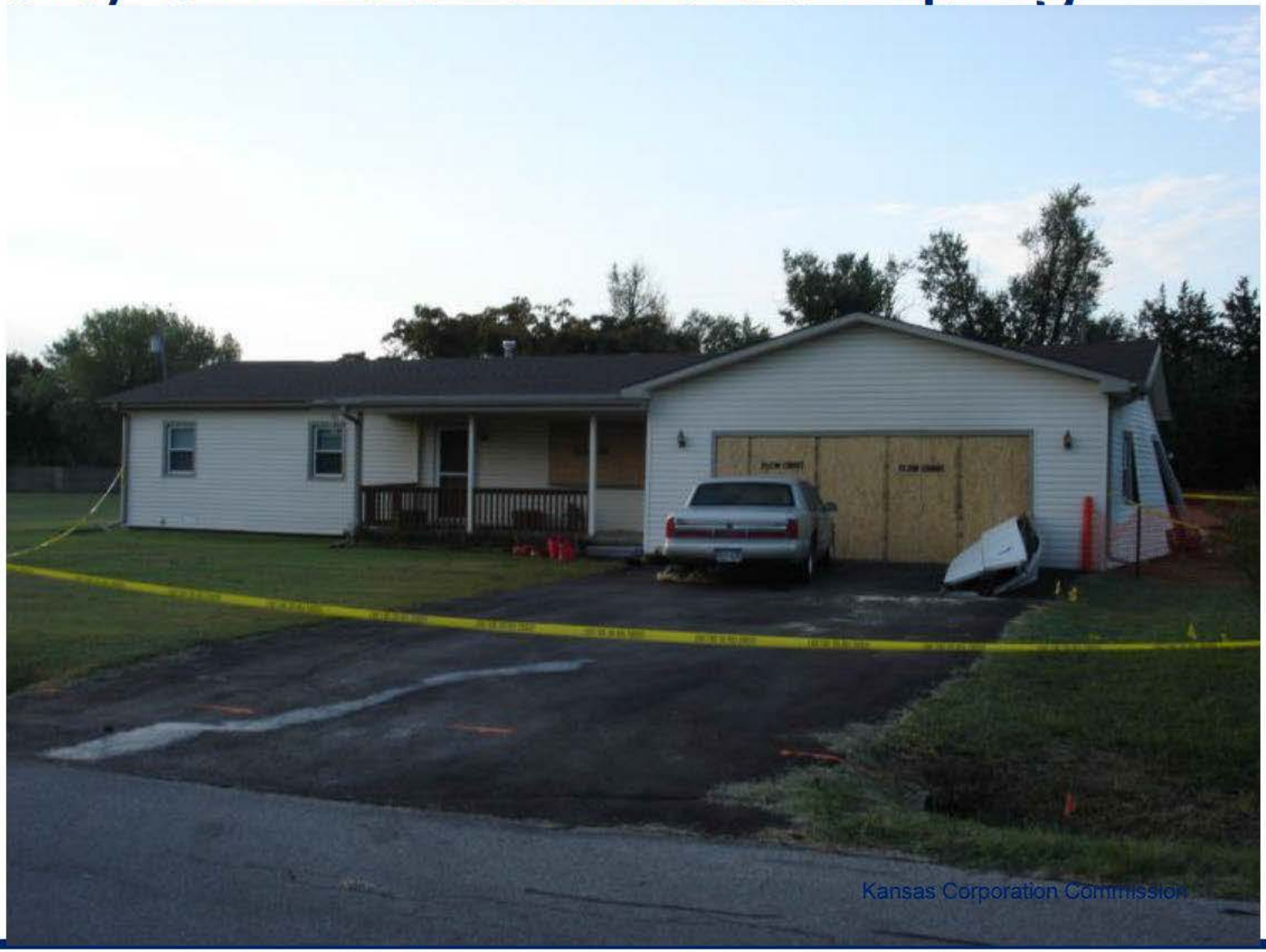
Inside Leak Investigation (the dilemma)

- Regulations only apply to jurisdictional piping.
- No clear means of protecting people first and then property, making safe hazards to life or property, and safely restoring any service outage that does not involve inside leak investigation or disconnecting gas service.

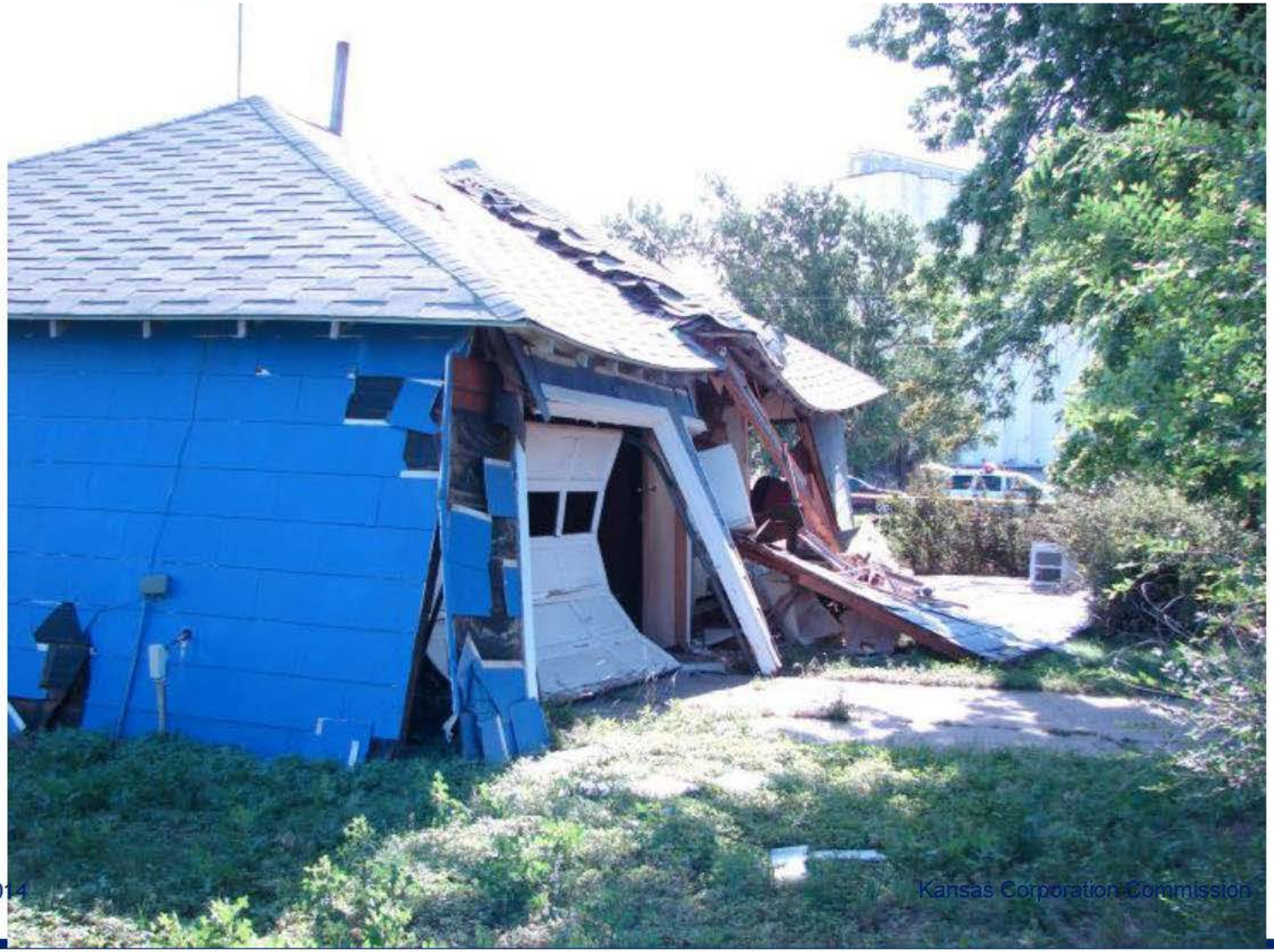
Inside Leak Investigation (the solution?)

- Respond to odor complaints, assure safety of people and jurisdictional piping, and continue inside leak investigations.
- Respond to odor complaints, assure safety of people and jurisdictional piping, shut off meter and advise customer to seek services of plumber.
- “Redtagging” appliances or entire house piping by shutting off the meter is an acceptable means of reponse.

City of Andover-Inside Piping



City of Ford- Inside Piping



Plymell Community- Inside Piping

Public Awareness & Odor Complaints

- New customer messages?
  - Depending on date of last mailing, customer may not receive message for six months.
- Assuring landlord forwards message to tenants.

Updated Kansas Pipeline Safety Regulations

- Update expected to be completed in 2014
- Adopts Part 192 as of October 1, 2013
- Changes definition of "Yardline"
- (p) "Yard line" means the buried, customer-owned piping between the outlet of the meter and the outside wall of a residential premise that is individually metered ~~building wall~~.

Kansas Emergency Management Regulations

- KCC authority under K.S.A. 74-616 and 74-620
  - Applies to all “suppliers” of gas or electric energy.
- Requires the supplier/operator to have an emergency plan, review the plan, and send an annual attestation to the KCC stating the the plan has been reviewed and is complete.
- Suppliers with less than 25,000 customers are exempt from the regulation if they participate in a mutual aid program.

The Plan

- Incorporates the requirements of 192.615
- Adds requirements for planning and prioritizing curtailments
- Adds requirements for planning for and prioritizing service restorations
- Includes the concepts of “critical customer” and “critical infrastructure”

Prioritizing Curtailments

- Curtail service based on the type of service:
  - (A) Interruptible customers;
  - (B) non-interruptible customers purchasing energy for resale;
  - (C) customers that volunteer to reduce energy consumption;
  - (D) commercial and industrial customers; and
  - (E) residential customers.

Prioritizing Service Restoration

- Service Restoration priorities *when practicable*:
  - (A) customers requiring immediate service to aid in the elimination of hazardous conditions;
  - (B) critical infrastructure without an operable alternative power source;
  - (C) the greatest number of remaining customers capable of being restored in the shortest time; and
  - (D) critical customers

Critical Customers

- Any customer who has provided the energy supplier with documentation of the necessity of a life-support system for which any interruption in energy service would be immediately life-threatening.
  - Mostly affects electric utilities;
  - Back up power generators fueled by gas?
  - Heat source for institutions with no mobility (prisons)?

Critical Infrastructure

- Energy facilities vital for responding to emergencies.
  - Wholesale customers serving retail critical customers.
  - Example of municipal systems that rely on gas or electricity from larger utilities.

Pipeline Safety Field Inspection Observations

- Quality Assurance of Records
- Electronic Records
  - Need review process to assure records are accurate
  - Look for errors in “exception reports”
  - Look beyond the assigned task; (billing vs. operations; pressure regulators vs. cathodic protection)
- Monitor performance of contractors
  - Following O&M procedures?
  - Following OQ requirements?

Pipeline Safety Field Inspection Observations

- Quality Assurance of Records
- Consider techniques in Safety Management Systems
  - “Records serve to demonstrate the level of commitment to providing for safety in all aspects of an operator’s responsibility”
  - Documentation and recordkeeping leads to greater certainty that the pipeline system will perform as expected. This element is an opportunity to demonstrate commitment and discipline.
  - If it is not written down it doesn’t exist.

Pipeline Safety Field Inspection Observations: (Operator Qualifications)

- Review your task list.
- Review your procedures.
  - Are they adequate?
  - Do they describe what you do?
- Review your evaluations.
  - Do they provide a reasonable evaluation of the task at hand?
- Review frequency of the evaluations.
- Document all of the above.

Pipeline Safety Field Inspection Observations: (Pipe Locating)

- Maintenance of residential yardlines is a Kansas requirement.
- Locating is an O&M task under 192.614
- Yardlines must be included on records filed with the call center.

Pipeline Safety Field Inspection Observations: (Pipe Locating)

- What if locating not possible?
  - No construction records;
  - No tracer wire;
- Prevention vs. Mitigation
  - Shut off gas line for excavator?
  - Assist excavator in making best guess of location?
  - Have necessary repair materials on hand?

Pipeline Safety Field Inspection Observations: (Locator Qualifications)

- 50% of damages investigated by KCC that occur after locates requested are operator's fault.
- Locating is a covered task under OQ.
- Locator Evaluations
  - Command of the locating instrument.
  - Use of utility records and prints.
  - Ability to "read" the construction site.
  - Ability to recognize errors in facility records.
    - Records match instrument results?

Pipeline Safety Field Inspection Observations: (Damage Prevention Program)

- Locator Program Review
  - Turnover in locating staff?
    - What is the cost of attrition?
  - Outside pressure for locate production?
  - Predicting staffing levels?
  - Performance of in-house vs. contract locators?

Pipeline Safety Field Inspection Observations: (Damage Prevention Program)

- Map Accuracy
  - Inaccurate locates generally caused by poor quality maps.
  - Map accuracy depends on ***permanent*** reference points.
    - If line moves, need to update map.
    - If curb moves, street widened, need to update map.
  - Map accuracy requires monitoring public works projects to determine impact.

Pipeline Safety Field Inspection Observations: (Damage Prevention Program

- 192.614(c) (6) Provide as follows for inspection of pipelines that an operator has reason to believe could be damaged by excavation activities:
  - (i) The inspection must be done as frequently as necessary during and after the activities to verify the integrity of the pipeline;
- Accurate maps affect the integrity of the pipeline.
- Accurate maps are a requirement of 192.605(b)(3)

Pipeline Safety Field Inspection Observations: (Damage Prevention Program

- 192.614(c) (6) Provide as follows for inspection of pipelines that an operator has reason to believe could be damaged by excavation activities:
  - (i) The inspection must be done as frequently as necessary during and after the activities to verify the integrity of the pipeline;
- "As Necessary" depends on:
  - History of damages on the job
  - Susceptibility of pipe (cast iron; Aldyl A; PVC)
  - Consequences of damage (business district)

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