

State of Kansas

Natural Gas
Pipeline Safety Regulations
K.A.R. 82-11-1 et seq.
2007 Update

Kansas Pipeline Safety Regulations

- Kansas amended 34 paragraphs of Federal Code in 1989.
- Majority of changes resulted in more stringent regulations.

Kansas Pipeline Safety Regulations

- Hearing held with Commission on October 17, 2007
- ***NEW RULES EFFECTIVE WHEN PUBLISHED IN KANSAS REGISTER!!***
- Anticipated Date November 15, 2007

KAR vs. CFR

Significant Changes

192.307 “Jeeping” Coated Pipe

- CFR: Each length of pipe and each other component shall be visually inspected at the site of installation to ensure that it has not sustained any visually determinable damage that could impair its serviceability.

192.307 KAR Amended

- **“Jeeping” pipe that is coated AFTER installation is not required. Visual inspection is still required for all pipe.**
- KAR: Except for pipe with external coating applied after installation, each length of pipe that is externally coated shall be checked for defects in the coating using an instrument that is calibrated according to manufacturer’s specifications prior to lowering the pipe into the ditch.

192.311 Repair of Plastic Pipe

- CFR: Each imperfection or damage that would impair the serviceability of plastic pipe must be repaired or removed.

192.311 KAR as Amended

- *Go back to CFR and allow repairs.*
- CFR: Each imperfection or damage ... must be repaired or removed.
- *Repairs require a tested procedure; not every damage can be repaired. Procedure must address the potential for crack growth.*

Subpart I: Corrosion

- CFR: Incorporates new changes from SIRRC recommendations
- KAR: No new changes. Rearranges original Kansas changes to better align with federal rule.
- *New language in proposal aligns with federal language.*

CFR 192.465 Corrosion Monitoring

- If under CP, test once per year.
- Test short sections 10% per year.
- Reevaluate unprotected pipelines every 3 years with electrical surveys where practical.
- May use other means on all distribution lines and impractical transmission lines.

KAR Corrosion Monitoring

- **If under CP, test once per year.**
- **Test short sections 33% per year.**
- **Reevaluate ALL unprotected pipelines every 3 years with electrical surveys where practical.**
- **If impractical, must leak survey AND evaluate the results.**
- **Repair/replacement plan for unprotected transmission and mains.**

KAR Corrosion Monitoring

- **Unprotected steel service and yard lines must be electrical surveyed every 3 years or leak surveyed once per year**
- **Establish replacement plan of sector when 25% of sector have experienced corrosion leaks.**

192.517(a) Retention of Test Records

- CFR: (a) Each operator shall make, and retain for the useful life of the pipeline, a record of each test performed under §§ 192.505 and 192.507.
- (b) Each operator must maintain a record of each test required by § § 192.509, 192.511, and 192.513 for at least 5 years

192.517(b) KAR as Amended

- KAR: For any pipeline installed after May 1, 1989, each operator shall make, and retain for **the useful life of the pipeline**, a record of each test performed under §§ 192.509, 192.511 and 192.513.
- *Refers to tests for mains <100 psi & service and yard lines. Must keep test records for life of system.*

82-11-3

KAR New Definition

- **“Underground Leak Classification”**
- **A procedure that includes sampling the subsurface atmosphere for gas using a combustible gas indicator in a series of available openings or barholes over, or adjacent to, the gas facility. If applicable, the sampling pattern should include sample points which indicate sustained readings of 0% gas in air in the four cardinal directions.**

192.605(b) KAR as Amended

- CFR: the O&M manual...must include procedures for the following
- **KAR: add**
Classifying underground leaks.
Leak survey procedures.
Identifying conditions which require additional patrols.
- *Requires O&M to have a written procedure on pinpointing leaks.*
- *Move leak survey procedure requirements from 723 to 605(b).*

192.617 Failure Investigation

- CFR: Each operator shall establish procedures for analyzing accidents and failures... for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

192.617 KAR as Amended

- Add: (a) Each operator shall establish procedures for analyzing accidents and failures, including (1) **The maintenance of records that contain information for each failure including the type of pipe and the reason for failure.**
- *Provides records for trend analysis in continuing surveillance, (613), and for DIMP.*

192.721 Patrolling

- CFR: a) The frequency of patrolling **mains** must be determined by the severity of the conditions which could cause failure ... and the ... hazards to public safety.
- (b) **Mains** in places or on structures where *anticipated physical movement* ... could cause failure or leakage must be patrolled -
 - (1) In business districts, ... at least four times each calendar year; and
 - (2) Outside business districts ... at least twice each calendar year.

192.721KAR as Amended

- KAR: The frequency at which **the distribution system** is patrolled shall not be longer than:

Location	Mains in places that could move	mains in other locations
In bus. dist.	4 times per year	Twice per year
Out of bus. dist.	Twice per year	Once per year

- **Service Lines and Yard Lines to be patrolled once every 3 years.**

Amended KAR Impact

- *Business district patrols aligned with CFR.*
- *Not all highway or RR crossings must be patrolled if no moving or loading is anticipated.*
- *Outside of anticipated movement area and outside of a business district, patrols are reduced to once per year.*
- *Service lines must be patrolled on same frequency as atmospheric corrosion inspections.*

192.723(a): Leak Surveys

- **CFR:** Each operator of a distribution system shall conduct periodic leakage surveys in accordance with this section.

192.723(a) KAR as Amended

- Each operator of a distribution system shall conduct periodic leakage surveys using leak detection equipment in accordance with this section. The leak detection equipment used for this survey shall **utilize a continuously sampling technology.**
- *Clarifies type of equipment that can be used for surveys.*

192.723(b): Main Survey Frequency

- CFR: as frequently as necessary, but at least...
 - in business districts, ... at least once each calendar year.
 - outside business districts; once every 5 calendar years.
 - unprotected steel on which electrical surveys for corrosion are impractical; once every 3 calendar years.

192.723(b): As Amended Main Survey Frequency

- Inside business districts; once per year.
- Outside business districts, as frequently as necessary, but at least...
 - **Unprotected steel and ductile iron in Class 2, 3, or 4: once per year.**
 - **Unprotected steel in Class 1, Protected BARE steel, cast iron, and PVC mains: once every three years.**
 - **Protected Coated steel and PE mains: once every 5 years.**

192.723(b): as Amended

Main Survey Frequency

Impact

- *Focus “safety dollars” on areas that have greatest safety impact.*
- *Incentive for replacing “Grandfathered” pipe, (unprotected steel, cast iron, Protected bare steel), in Class 2-4 areas.*

192.723(b): Service/Yard Lines

Survey Frequency

- CFR: Service lines: As frequently as necessary, but at least...
 - in business districts, ... at least once each calendar year.
 - outside business districts; once every 5 calendar years.
 - unprotected on which electrical surveys for corrosion are impractical; once every 3 calendar years.
- No Survey Required on Yard Lines

As Amended KAR: Service/Yard Lines Survey Frequency

- As frequently as necessary, but at least...
- Outside business districts;
 - **Unprotected steel, cast iron, and PVC once every year.**
 - **Protected bare steel once every three years.**
 - **CP coated steel and PE once every five years.**
 - **First 300 feet for long yard lines if less than 10 psig.**

192.755: Cast Iron Sampling Program

- CFR: Not Addressed

192.755: As Amended Cast Iron Sampling Program

- KAR:
 - Collect a coupon each time a leak in the body of a cast iron pipe is discovered.
- *Not for joint leaks.*
- *No coupon necessary every time pipe is uncovered.*

192.755: As Amended Cast Iron Replacement Program

- CFR: Not Addressed
- KAR:
 - Replace 500 feet of pipe within 4 months if samples show graphitization.
 - Trigger by: 25% of 2"; 60% of 3-4"; 75% of 6-8"; 90% of ≥ 10 "
- **Replace all Cast Iron of diameter 3 inches and less by the year 2011.**

Update on:
Kansas Underground Utility
Damage Prevention

KUUDPA

Legislative Initiatives

- SB 20: to remove exemption for water and sewer utilities. – Failed.
- Legislation this year proposes to require water and sewer systems to update/develop maps of their facilities.

KUUDPA Regulations

- Effective January 2007
- Regulation/Statute requirements on KCC website

One Call Regulation *highlights*

- Reasonable Care is Defined
 - **Provide proper support and backfill.**
 - **Expose as necessary to avoid conflicts.**
 - **Maintain visibility of marks thru-out excavation.**

One Call Regulation *highlights*

- **Mark the location of facility, and...**
- **Identify the name of the operator.**

One Call Regulation *highlights*

- **Marking Requirements**
 - **Mark size of line if > 8” OD**
 - **Name of operator on markings**
 - **Keep records of any whitelining requests.**

One Call Regulation *highlights*

- Rules Established for “Meet on Site”
 - **All meetings must be documented by party requesting the meet.**
 - **Document must describe what was agreed to at meeting.**
 - **Party requesting meet must keep records for 3 years.**

Meet on Site Documentation

- **Name of meet attendees**
- **Date, Time, Location of meeting.**
- **Date, Time excavation will start.**
- **Written directions given to locator.**
- **Sketch of what is to be located**
- **Signatures from both parties.**

One Call Regulation *highlights*

- **Trenchless Excavation Operating Guidelines.**
Operator must establish Training program that includes:
 - **the use of “potholing” techniques.**
 - **Calibration of locator and sonde.**
 - **Monitoring Backreaming**
 - **Maintaining appropriate clearance.**

Trenchless Excavation Defined

- **any excavation performed in a manner that does not allow the excavator to visually observe the placement of the new facility.**
- **This term shall include underground boring, tunneling, horizontal auguring, directional drilling, plowing, and geoprobing.**

One Call Regulation *highlights*

- **Damage Reporting**
 - **Required to report damages if you receive more than 2,000 requests per year.**
 - **Report damages semi-annually.**
 - **Applies to only 5-6 natural gas operators.**

DIRT Tool

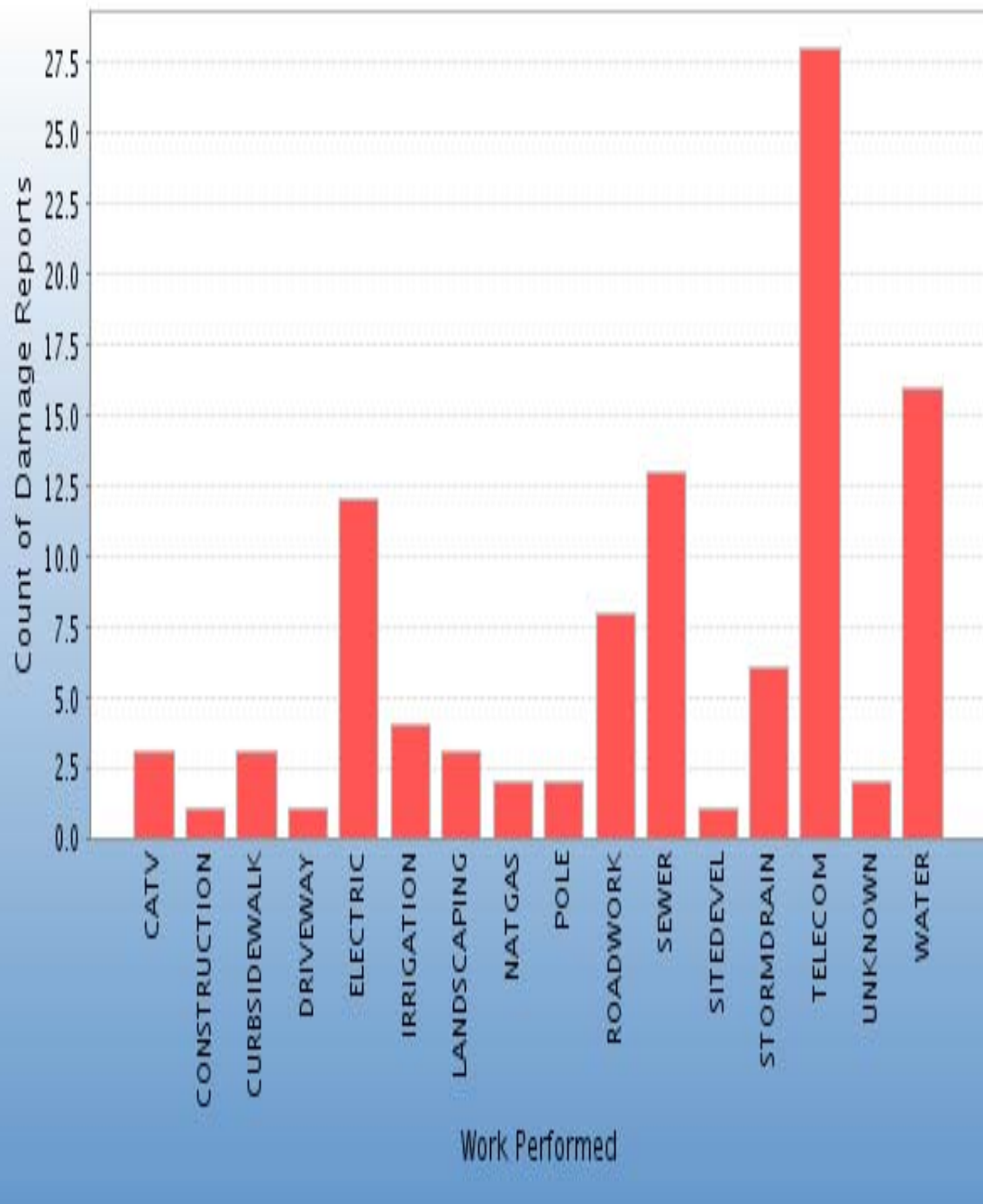
- **DIRT tool is free for using.**
- **<https://www.cga-dirt.com/dr/control/registration.do>**
- **Requires a user name and password.**

Reasons for DIRT Tool

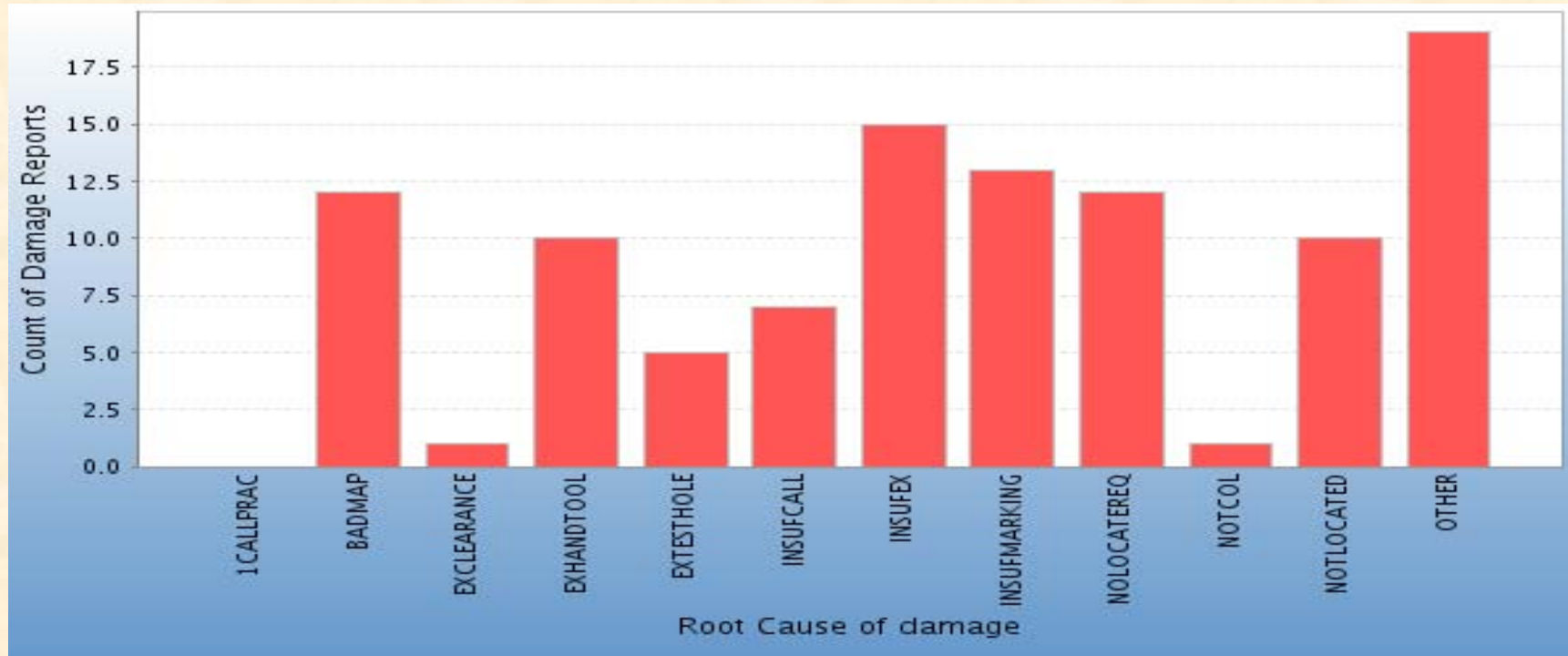
Even if less than 2000 Tickets

- **Allows easy way to keep records of past hits.**
- **Demonstrate success for PAP and DIMP.**
- **Combine results for trend analysis.**

**Damage Information Reporting
Tool Results
2006**



ABBR	WORK_PERFORMED	COUNT	PERCENT
CATV	Cable TV	3	2.85
CONSTRUCTION	Bldg. Construction	1	0.95
CURBSIDEWALK	Curb/Sidewalk	3	2.85
DRIVEWAY	Driveway	1	0.95
ELECTRIC	Electric	12	11.42
IRRIGATION	Irrigation	4	3.80
LANDSCAPING	Landscaping	3	2.85
NATGAS	Natural Gas	2	1.90
POLE	Pole	2	1.90
ROADWORK	Road Work	8	7.61
SEWER	Sewer (Sanitary/Storm)	13	12.38
SITEDEVEL	Site Development	1	0.95
STORMDRAIN	Storm Drain/Culvert	6	5.71
TELECOM	Telecommunications	28	26.66
UNKNOWN	Unknown/Other	2	1.90
WATER	Water	16	15.23



ABBR	DAMAGE_CAUSE	COUNT	PERCENT
1CALLPRAC	One Call notification practices not sufficient	0	0.00
BADMAP	- - Incorrect facility records/maps	12	11.42
EXCLEARANCE	- - Failure to maintain clearance	1	0.95
EXHANDTOOL	- - Failure to use hand tools where required	10	9.52
EXTETHOLE	- - Failure to verify location by test-hole (pot-holing)	5	4.76
INSUFCALL	- - Notification to one-call center made but not sufficient	7	6.66
INSUFEX	Excavation practices not sufficient	15	14.28
INSUFMARKING	- - Facility marking or location not sufficient	13	12.38
NOLOCATEREQ	- - No notification made to the one-call center	12	11.42
NOTCOL	Data Not Collected	1	0.95
NOTLOCATED	- - Facility was not located or marked	10	9.52
OTHER	Other	19	18.09