



AD ASTRA PER ASPERA
Kansas

Corporation Commission

Pipeline Safety

Topics of Discussion

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Discussion of Current Topics Related to Pipeline Safety Regulations

- **GOALS**

- *Discuss questions related to regulation.*
- *Receive input from operators.*
- *“Official interpretations” will be issued in writing.*
- *Vetted through operators and PHMSA.*

Discussion of Current Topics Related to Pipeline Safety Regulations

- **Previous 3 years of topics available on website.**

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Definition of a Procedure

- *192.605(a) Each operator shall prepare and follow 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.*

Definition of a Procedure

- *Procedure means:*
 - *a fixed, step-by-step sequence of activities or course of action*
 - *with definite start and end points*
 - *that must be followed in the same order*
 - *to correctly perform a task.*

Definition of a Procedure

- *A procedure gives steps on HOW to do something. It's more than just a definition.*
- *Procedures must provide enough detail to be consistently applied by operating personnel.*
- *If there is no consistent application, the procedure may need to be rewritten.*
- *See www.apgasif.org for O&M procedures*

Definition of a Procedure

- *What types of procedures does DIMP require?*
 - *Developing and implementing the “elements”*
 - *Knowledge*
 - *Identify threats*
 - *Evaluate and rank risk*
 - *Identify and implement measures to address risks*
 - *Measure performance, evaluate effectiveness, report results*
- *Procedures must provide enough detail to be consistently applied by operating personnel.*

Definition of a Procedure

- *Procedures must provide enough detail to be consistently applied by operating personnel.*
- *SHRIMP provides generic procedures.... Must be tailored to fit your operations.*
- *Inspection form provides additional insight into what should be included in DIMP procedures.*

Definition of a Procedure

- **Does every task require a written procedure?**
 - *Depends on the complexity of the task.*
 - *If the task is not done correctly, probably needs a procedure.*
 - *If the task is complex –needs a procedure.*
 - *For example– tie-in and activation of pipelines.*
- **192.605(a) Each operator shall prepare and follow a manual of written procedures for conducting operations and maintenance activities and for emergency response.**

Patrolling & Automated Meter Reading

- **Is continuous surveillance requirement affected by AMR and fewer personnel observing the system?**
- ***§192.721 Distribution systems: Patrolling. [K.A.R. 82-11-4 (cc)]***
 - ***(a) The frequency with which mains are patrolled shall be determined by the severity of the conditions which could cause failure or leakage, and the consequent hazards to public safety.***
 - ***Mains outside of business districts: 18 months, but at least once each calendar year.***
 - ***(b) Service lines and yard lines shall be patrolled at least once every three calendar years at intervals not exceeding 42 months.***





Patrolling & Automated Meter Reading

- *192.605 (b) (15) The manual required by paragraph (a) of this section must include procedures for ...Identifying conditions which will require patrols of a distribution system at intervals shorter than the maximum intervals listed in K.A.R. 82-11-4 (cc).*
- *If this was not found on patrol, indicates a need for a better (and written) procedure.*
 - *See previous slides.*

Patrolling & Automated Meter Reading

- **Does AMR provide safety benefits that can be used to supplement DIMP?**
 - L&U calculations.
- *High L&U does not necessarily mean the system is leaking.....*
- *Low or zero L&U is a strong indication that no problems exist!!*

Special Leak Surveys

- **KCC requirement for procedure on when special surveys must be conducted.**
- *192.723(c)(2): (2) Outside business districts, the survey shall be made as frequently as necessary...*
- **Recent telecom activity in small towns.**
- **Abnormal weather conditions; dry or wet.**
- **Cast iron water line breaks.**
- **Cluttered or overgrown right-of-way.**

Special Leak Surveys

- *192.723(c)(2): (2) Outside business districts, the survey shall be made as frequently as necessary...*
- *Good indicators of “as frequently as necessary”...*
- *Recent telecom activity in small towns.*
- *Abnormal weather conditions; dry or wet.*
- *Cast iron water line breaks.*
- *Cluttered or overgrown right-of-way.*







Emergency Plans & NTSB Advisory notice.

- *PHMSA Advisory Bulletin 10-08*
 - *Share operator's emergency plan with emergency responders.*
 - *maintain an informed relationship with emergency responders in their jurisdiction.*
- *Providing emergency plans to emergency officials.*
 - *How much to provide?*
 - *How often to provide?*
 - *Centralized location?*

Emergency Plans & NTSB Advisory notice.

- *Recommend filing with Kansas Department of Emergency Management.*
 - *Indicate Counties in which you operate.*
 - *Inform LEPC and fire depts. They can access plan through website.*
 - *Only update one plan for all emergency responders.*
 - *Should revise plan filed with KDEM to reflect information that is relevant to emergency responders.*

Emergency Plans & NTSB Advisory notice.

- Emergency responders recognize different operations within gas system.

NTSB P-11-3?: require operators of transmission and distribution systems to provide system-specific information about their pipeline systems to the emergency response agencies. This information should include:

- *pipe diameter,*
- *operating pressure,*
- *product transported, and*
- *potential impact radius*

Emergency Plans & NTSB Advisory notice.

- Gas operator should call 9-1-1 to report a gas emergency.
- *NTSB P-11-3: Require your control room operators to notify, immediately and directly, the 911 emergency call center(s) ...when a possible rupture of any pipeline is indicated.*
 - *Call 911 when gas operator hits a pipeline.*
 - *Notify 911 when gas lines over 60 psi are ruptured.*

Emergency Plans & NTSB Advisory notice.

- **Preservation of evidence by emergency officials.**
- *192.615 addresses requirements for preparing emergency responders for a gas emergency.*
- *Recent incident demonstrates a need to educate responders on protecting evidence during recovery phase.*







Continuity of Operations & Curtailment Plans

- *192.605(b)(1) The O&M manual must include procedures for*
 - *(1) Operating, maintaining, and repairing the pipeline.*
- *192.615 (a) Each operator shall establish written procedures ...for the following:*
 - *(4) The availability of personnel, equipment, tools, and materials, as needed at the scene of an emergency.*

Continuity of Operations & Curtailment Plans

- *Procedures must address who provides back up for small system operator...*
 - *Fire department; mutual assistance? council?*
 - *Copy of records, maps, and O&M kept in two places?*
- *Are fundamental procedures clear enough that another person could keep system running? Or get the necessary help.*

Continuity of Operations & Curtailment Plans

- *K.S.A. 74-620: The KCC shall adopt regulations establishing a system of priorities for the allocation of available natural gas or for the curtailment of the consumption of gas during an activation of an emergency proclaimed by the governor.. Such regulations shall apply to all suppliers and consumers of natural gas...*

Continuity of Operations & Curtailment Plans

- *192.623 (b) No person may operate ... a distribution system at a pressure lower than the minimum pressure at which the safe and continuing operation of any connected and properly adjusted low-pressure gas burning equipment can be assured.*

Continuity of Operations & Curtailment Plans

- **Each operator needs a Plan to establish which customers will be curtailed if supply is lost.**
 - **Who is shut off from service first.**
 - **Relight Plan– Who gets service restored first.**

Farm taps and odorization

- 192.3:
 - *Gathering Line means a pipeline that transports gas from a current production facility to a transmission line or main.*
 - *Transmission line means a pipeline, other than a gathering line, that:*
 - *(a) Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not down-stream from a distribution center; (b) operates at a hoop stress of 20 percent or more of SMYS; or (c) transports gas within a storage field.*

Farm taps and odorization

- **192.3:**
 - *Distribution Line means a pipeline other than a gathering or transmission line.*
- **Conclusion: Farm tap piping is Distribution piping.**
- **Where does “distribution” begin?**
 - *KCC Staff Proposal: At first valve beyond the pipeline tap provided the valve is within 15 feet of the tap.*
 - *Otherwise, Distribution begins at the tap.*

Farm taps and odorization

- Is service to irrigation motors distribution piping?
- *Yes.*
- *All jurisdictional piping must meet all requirements for distribution systems.*
 - *Odorization; Cathodic Protection; patrolling; leak surveys; appropriate pressure regulation.*
 - *DISTRIBUTION INTEGRITY MANAGEMENT.*

Farm taps and odorization

- **At what point is the pipe no longer jurisdictional to pipeline safety?**
 - **When the gas is no longer in transportation.**
- **Supplemental public awareness messages for farm tap customers?**

Farm taps and odorization

- Supplemental public awareness messages for farm tap customers?
- *Possibly:*
 - *Use of unprocessed gas.*
 - *Piping downstream of meter the responsibility of the owner of the piping.*
 - *Gas in transportation may be subject to Pipeline safety rules?*

Public Awareness Supplemental Notices

- **Review of standard assessments for stakeholder groups.**
- **What unusual circumstances require supplemental notice?**
- **How can operator assess if there is a need for supplemental notice?**

Supplier border stations: Point of operator transfer

- **Point of transition from transmission pipe operator to distribution pipe operator not clearly defined.**
- **Need clear definition in writing of the extent of responsibilities between the operators for emergency response and maintenance.**

OO training requirement

- **192.805(h): Provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities.**
- **Difficult for small operators to self-train.**
- **KMU gas committee training sessions with KCC participation.**

OQ training requirement

- **KCC will be reviewing documentation that personnel are adequately trained for tasks they perform.**
 - **Emergency response.**
 - **Leak investigation.**

Quick Note on OQ and Construction

- Installing new Service lines by insertion
 - *192.361(a) Service lines in ROW 18” deep and 12” deep on private property.*
 - *Need to check depth across the service line to verify that it meets requirement.*
 - *Pothole, check with line locator.*
 - *Document insertion depth.*

Quick Note on OQ and Construction

- “Jeeping” over weld joints
 - *NACE RP0274 gives specifications for holiday detection.*
 - *Where coating is thicker across shrink sleeves or field applied coatings, the holiday detector needs to be set for the coating thickness you are inspecting.*

Pipe Replacement

- **The Media**
 - *“Fourteen people are dead, dozens injured and entire neighborhoods are gone in the wake of three massive pipeline explosions in San Bruno, Calif.; Philadelphia and Allentown, Pa., over the past six months.” - fox news.*
- **Secretary La Hood’s call to action.**
 - **Report to America on Pipeline Safety**

Report to America on Pipeline Safety

Section 3 Major Sub-Sections

- **Factors Affecting Pipeline Safety**
- **How old is the nation's pipeline infrastructure?**
- **Is pipeline age a factor in its safety?**
- **What standards were used for older pipelines?**
- **How safe are older pipelines?**

Report to America on Pipeline Safety

Section 4 Challenges & Ongoing Initiatives

Major Messages

- Improving pipeline safety requires that industry and regulators focus their energy and resources on understanding and managing a set of known risks.
- To drive accidents and safety impacts to zero, pipeline operators and regulators must address a broad array of factors that contribute to current incidents.
- Lessons from operating experience across the industry are one of the best sources of information to improve safety performance.

Report to America on Pipeline Safety

Section 2 Roles of Key Stakeholders

Major Messages

- Improving pipeline safety sometimes requires significant expenditures by pipeline operators.
- In addition to substantial efforts expended in operating and maintaining the pipelines in compliance with the regulations, typical operator efforts involve:
 - risk assessment and management of pipeline assets,
 - replacing and repairing pipelines,
 - applying new technologies to better control operations, and
 - understanding the fitness for service of pipelines.

Aging infrastructure in Kansas

- *State inventory indicates highest risk may be in bare steel service lines and bare steel yard lines.*
- *KGS statistics indicate life of bare steel service is 70 years?*
- *Municipals need to consider proactive replacement plans.*

Aging infrastructure in Kansas

- *Estimated Municipal Replacement Rate of Bare Steel Based on Decade of installation of Service Line.*
 - *Ranges from 6 years to 217 year for replacement of bare steel service lines.*
- *Annual leak surveys help control risk but replacement of bare steel is inevitable.*

Aging infrastructure in Kansas

- *K.A.R. 82-11-4 (i) requires replacement of trigger sector when 25% of service/yard lines in sector have had corrosion leaks.*
- *Regulation went into effect 20 years ago.*
- *Should trigger be reduced to 10%?? In order to remove higher risk pipe from the system?*
- *DIMP records will be used to evaluate the need for replacement plans.*

Pipe Replacement

- *Asset management concept for small systems.*
 - *Considers life cycle of assets; long term funding costs; critical assets.*
 - *Develop long range plan for replacement.*
- *Regulatory incentives toward pipe replacement.*
 - *Gas Safety Reliability Surcharge.*
 - *DIMP procedures for system improvement would qualify for GSRS.*

Confirmatory digs on piping

- **Required by transmission integrity management.**
- **For distribution imp, do bellholes give sufficient data on condition of pipe?**
- **Is there a need to perform digs if pipe condition is unknown?**
 - *Yard lines; service lines.*
- **Is operator expected to take advantage of public works projects to visually inspect piping?**

Confirmatory digs on piping

- **DIMP requires knowledge of the system.**
- **Plan required for obtaining the necessary knowledge.**
- **Consider visual inspection at more than just bell hole reports.**
 - **Include visual inspection of plastic piping.**
 - **Inspection of tracer wire when appropriate.**
 - **Inspection of anodes?**

Electronic probable noncompliances & responses

- **Interest in receiving PNCs by email and responding in like manner?**
- **Formal correspondence required to send to supervisor or manager of company.**
- ***Let us know if you wish to receive correspondence electronically. (and who to address it to)***