# Safety of Gas Transmission Pipelines

# MAOP Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments

## RIN 2137-AE72

## Gas Rule Public Meeting
## Sugar Land, TX
## February 27, 2020



# Safety Briefing



# Meeting Purpose

**Obtain feedback from the public on our regulatory guidance and let them know what PHMSA's tentative plans are for training and inspections.**



# Meeting Objectives

## Provide forum for information sharing

- Improve understanding of new rulemaking
- Discuss proposed guidance
- Learn how operators are implementing regulations
- Provide update on implementation efforts



# Topics of Discussion

- Overview of Final Rule
- Near-Term Implementation Dates
- New Annual/Incident Report Forms
- Operators' View of the rule-MCAs
- DOT Regulations on Agency Guidance
- Frequently Asked Questions Discussion
- Training Strategy
- Inspection Strategy



# Ground Rules

- **Foster a "shared reality" - focus on common ground**
- **Ideas not sides – Decouple comments from Identity**
- **Humility of Uncertainty – Possibility of being wrong (requires taking others' viewpoint)**
- **Don't press for answer today**

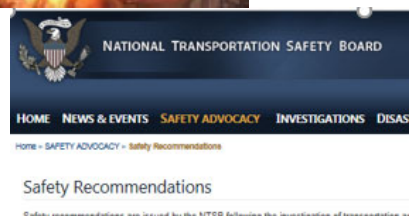



# Brief History

2010 | 2011 | 2012 | 2013 | 2014 | 2015

San Bruno, CA Incident 9/9/10 → NTSB Report 8/30/11

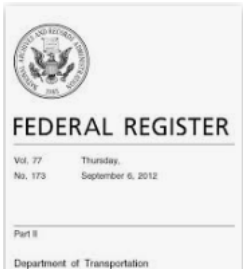
Sissonville, WV Incident 12/11/12 → NTSB Report 2/19/14




ANPRM 8/25/11

PSA of 2011 1/3/12

PIPES ACT



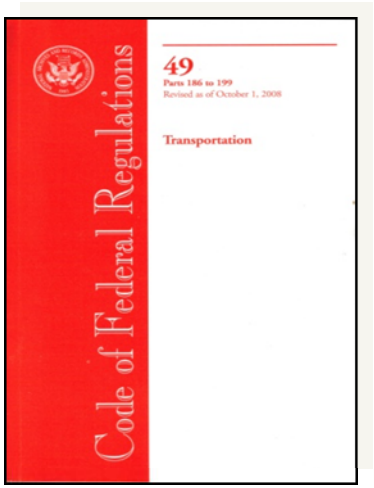

2016 | 2017 | 2018 | 2019 | 2020

NPRM 4/8/16

GPAC Meetings 1/2017 – 6/2019

Final Rule 10/1/19


# Gas Rule – Split Into Three Final Rules




- **RIN 1 – Safety of Gas Transmission Pipelines: MAOP Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments**
  - **Final Rule Published October 1, 2019**

- **RIN 2 – Repair Criteria, IM Improvements, Cathodic Protection, Management of Changes, and Other Related Amendments**
  - **Final Rule under development**

- **RIN 3 – Gas Gathering**
  - **Final Rule under development**



# Overview of Final Rule

Karen Gentile and Steve Nanney, PHMSA



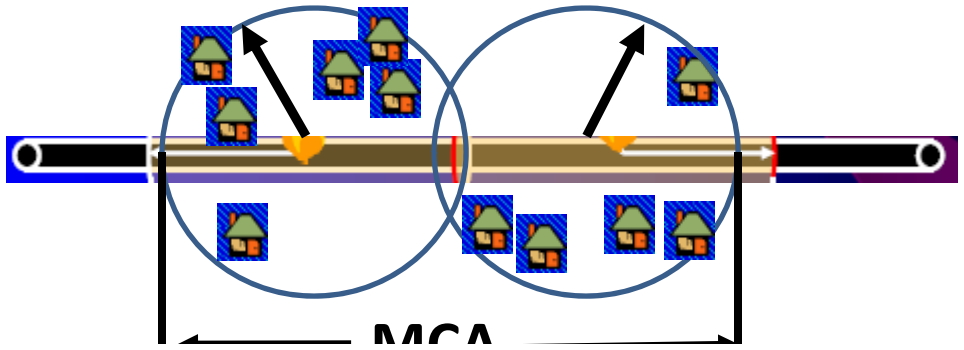
# New Definitions and Terminology

## Moderate Consequence Area (MCA)

- **Potential Impact Circle (PIC) contains 5 or more buildings intended for human occupancy or**

- **PIC contains any portion of paved surface of any designated interstate, other freeway, or expressway, as well as any other principal arterial roadway with 4 or more lanes**

- **MCA length extends axially along pipeline from outermost edge of first potential impact circle to outermost edge of last contiguous potential impact circle containing buildings/roads**



# New Definitions and Terminology

## Principal Arterial Roadway (or Other Principal Arterial)

- **Serve major centers of metropolitan areas and provide a high degree of mobility**
- **Provide mobility through rural areas**
- **Abutting land uses can be served directly (unlike interstates, freeways, and expressways)**



# New Definitions and Terminology

## Traceable, Verifiable, & Complete (TVC) Records

- **Traceable: Records that can be clearly linked to original information about pipeline segment or facility.**

  **Examples: pipe mill records, which include mechanical and chemical properties; purchase requisition; as-built documents indicating minimum pipe yield strength, seam type, wall thickness, and diameter.**



# New Definitions and Terminology

## Traceable, Verifiable, & Complete (TVC) Records

- **Verifiable: Records are those in which information is confirmed by other complementary, but separate documentation.**

  **Examples: pressure test of a segment complemented by pressure charts or field logs; purchase order to a pipe mill with pipe specifications verified by a metallurgical test of a coupon pulled from the same pipeline segment**



# New Definitions and Terminology

## Traceable, Verifiable, & Complete (TVC) Records

- **Complete: Records finalized as evidenced by a signature, date, or other appropriate marking such as a corporate stamp or seal.**

  **Example: Complete pressure testing record that identifies a specific segment of pipe, who conducted test, duration, medium, temperatures, accurate pressure readings, and elevation information, as applicable**



# New Definitions and Terminology

## Engineering Critical Assessment (ECA)

- **Analytical assessment procedure based on:**
  - **Fracture mechanics principles**
  - **Relevant material properties**
  - **Operating history and environment**
  - **In-service degradation**
  - **Failure mechanisms including initial and final defect sizes**
  - **Maximum defect sizes based upon MAOP**
- **ECA must be documented**



# New Definitions and Terminology

- **"Grandfathered" pipe**
  - **192.619(c) (*i.e.*, pipeline segments where the MAOP is based upon the highest actual operating pressure records from a 5-year interval between July 1, 1965, to July 1, 1970, when operators:**

- ✓ **do not have pressure test or**
- ✓ **do not have material property records or**
- ✓ **operate above 72% SMYS**



# Summary of Final Rule

- **MAOP Reconfirmation (§192.624):**

  **<u>Applies to</u>:**

  - **HCAs, Class 3 locations, and Class 4 locations without records necessary to establish MAOP in accordance with 192.619(a)(2); and**
  - **Grandfathered lines operating at ≥ 30% Specified Minimum Yield Strength (SMYS) in HCAs, Class 3 locations, Class 4 locations, or piggable MCAs.**



# Summary of Final Rule

- **MAOP Reconfirmation (§192.624):**
  - **Onshore pipelines to confirm MAOP using one of the following six methods:**
    1. **Pressure Test**
    2. **Pressure Reduction**
    3. **Engineering Critical Assessment (ECA) – using ILI Tools**
    4. **Pipe replacement**
    5. **Small Potential Impact Radius (PIR) Pressure Reduction**
    6. **Other Technology**



# Summary of Final Rule

- **MAOP Reconfirmation (§192.624) and Verification of Pipeline Material Properties and Attributes (§192.607)**
  - **Operator must have procedures which include:**
    - **Process for reconfirming MAOP**
    - **Performing spike test (§192.506) or material verification (§192.607)**
  - **Operators must document and verify material properties and attributes where explicitly referenced in Part 192 (i.e. §192.624)**

**cont.**

# Summary of Final Rule

- **MAOP Reconfirmation (§192.624) and Verification of Pipeline Material Properties and Attributes (§192.607)**
  - **For operators without TVC material property and attribute records, allows operators to develop and implement procedures to opportunistically verify material properties when excavations occur (i.e. repairs, maintenance, replacements/relocations)**



# Summary of Final Rule

- **MAOP Reconfirmation (§192.624) and Verification of Onshore Pipeline Material Properties and Attributes (§192.607)**
  - **For operators electing to pressure test lines to reconfirm MAOP, must follow Subpart J and §192.619(a)(2), and create material properties records if they are not already documented as TVC records at time of pressure test by testing pipe materials cut out at test manifold sites or any failed pipe from the test**

**cont.**



# Summary of Final Rule

- **MAOP Reconfirmation (§192.624) and Verification of Onshore Pipeline Material Properties and Attributes (§192.607)**
  - **For operators electing to use Engineering Critical Assessment (ECA) to reconfirm MAOP, must follow §192.632 and obtain TVC material property records needed to conduct an adequate ECA for a threat assessment**
    - **Note: Operators that need pipeline properties for integrity management functions (i.e. risk assessment, repairs) may use the procedure to verify material properties**



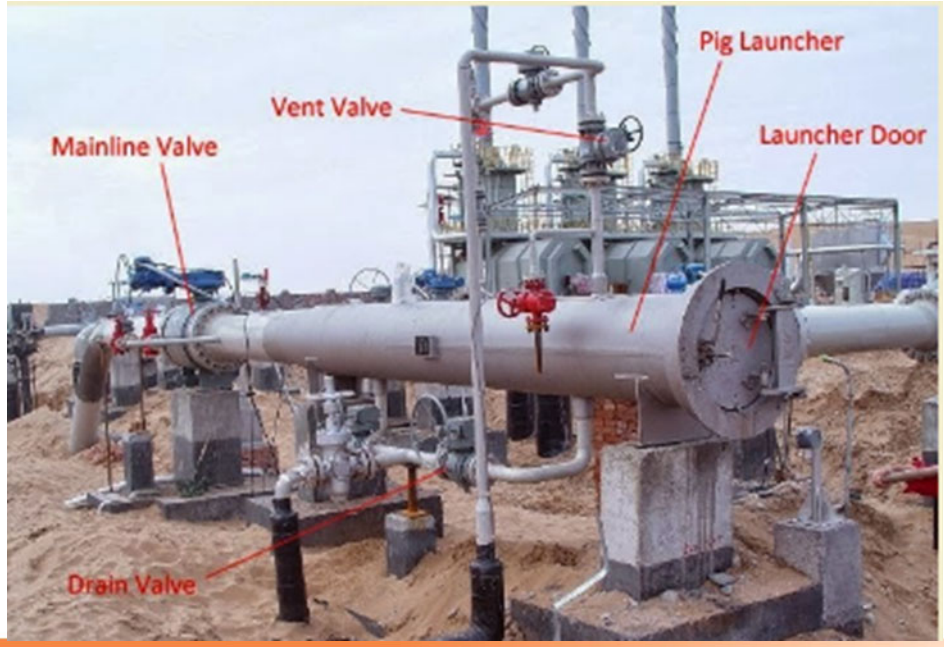
# Summary of Final Rule

- **Assessments Outside of HCA (§192.710)**
  - **Requires integrity assessment of steel gas transmission segments in Class 3/4 locations, and piggable MCAs operating at ≥ 30% SMYS**
  - **Complete initial assessment no later than July 3, 2034 and a recurring assessment at least once every 10 years thereafter**



# Summary of Final Rule

- **Launcher and Receiver Safety (§192.750)**
  - **Equipped with a suitable means to relieve pressure in barrel and**
  - **Equipped with means to indicate pressure or prevent opening if pressurized**






# Summary of Final Rule

- **Seismicity (§192.917, §192.935)**
  - **Operators must consider seismicity when identifying and evaluating threats**
  - **Include seismicity when evaluating outside force damage and for additional preventative and mitigative measures**

(a) before

(b) after

- **6-month Grace Period for 7-CY IM Reassessment Intervals with notice and justification (§192.939)**



# Summary of Final Rule

- **MAOP Exceedance Reporting (§191.23)**
  - **Report each exceedance of MAOP that exceeds margin (build-up) allowed for operation of pressure-limiting or control devices**
  - **file MAOP exceedance report w/in 5 calendar days**



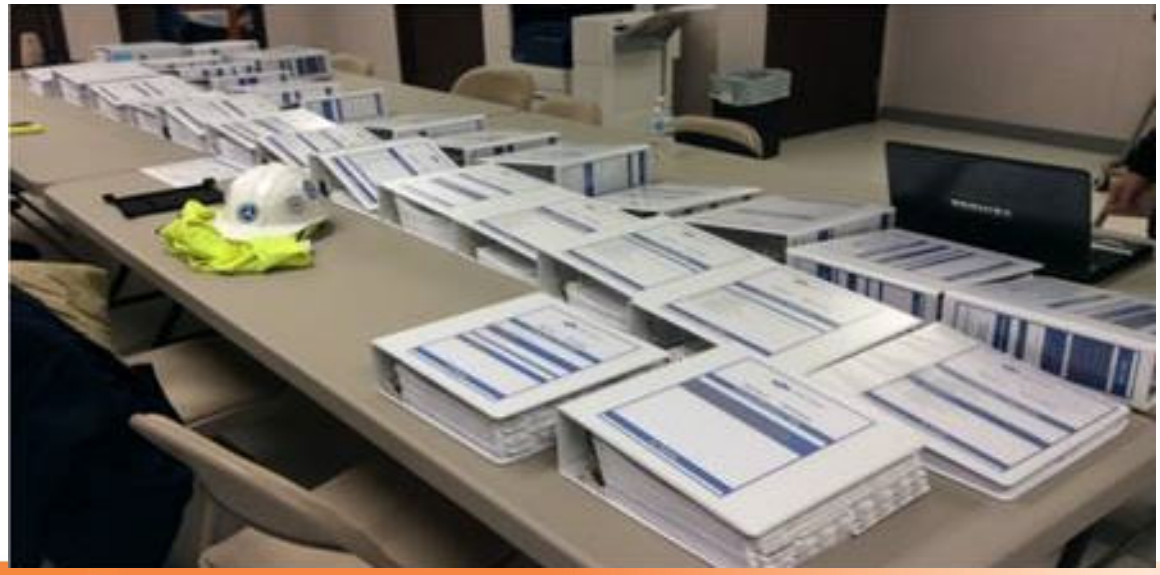
# Summary of Final Rule

- **Strengthening Assessment Requirements (IBR §192.7, §192.150, §192.493, §192.921)**
  - **Incorporates 3 industry standards for ILI**
  - **Expands or defines allowable assessment methods**
    - **Spike hydrostatic pressure test (§192.506)**
    - **Excavation and in situ direct examination (§192.921(a)(4))**
    - **Guided Wave Ultrasonic Testing (§192.921(a)(5))**
  - **Limits allowable use of Direct Assessment**



# Summary of Final Rule

- **Imposes related recordkeeping requirements for pipeline materials and components. Examples include:**
  - **records of tests and inspections**
  - **physical characteristics**
  - **mechanical and chemical composition**
  - **standard in effect at time of manufacturing**
  - **welder/joiner qualifications**





# Near-Term Implementation Dates

Chris Hoidal, PHMSA



# Near-Term Implementation Dates

- **By July 1, 2020 (Effective Date of Rule)**
  - **Report pressure exceedances (§191.23(a)(10), §191.25(b))**
  - **Maintain records to document class locations, including determination methods (§192.5)**
  - **Follow IBR documents**
  - **Identify, prioritize, and perform assessments (§192.710) outside HCAs**
  - **Implement procedures addressing regulations without timeframes explicitly defined in final rule**



# Near-Term Implementation Dates

- **July 1, 2021**
  - **Begin to use new Incident Report (Form PHMSA F 7100.2); current form posted to Docket PHMSA-2011-0023 on 10/24/2019**
  - **Operators subject to §192.624, develop and document procedures for completing all actions required for MAOP reconfirmation by this date**
  - **For GT pipe and components, have and begin to implement procedures for material properties and attributes verification**



# Near-Term Implementation Dates

- **July 1, 2021**
  - **For GT pipe installed after this date, retain welder and/or plastic joiner qualification records for minimum of 5 years following construction**
  - **Any launchers/receivers used after this date must meet conditions of §192.750**



# Near-Term Implementation Dates

- **March 15, 2022 – Annual Report Due (Form PHMSA F 7100.2-1)**
  - **Report on <u>all</u> MCAs and MAOP reconfirmation for pipeline segments operational as of December 31, 2021**



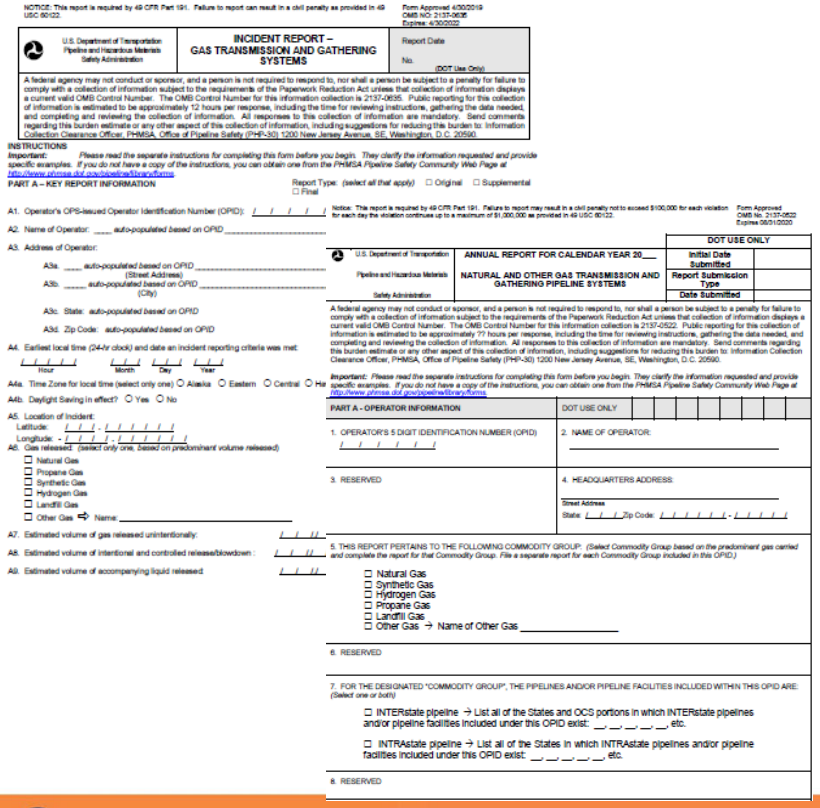
# New Annual/Incident Report Forms

John Gale, PHMSA



# Reporting Forms Status

- **Annual and Incident Report Forms approved by OMB**
- **Approved forms posted to Docket PHMSA-2011-0023 on 10/24/2019**



NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty as provided in 49 USC 60122.

Form Approved 4/30/2019
OMB NO. 2137-0635
Expires: 4/30/2022

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

**INCIDENT REPORT – GAS TRANSMISSION AND GATHERING SYSTEMS**

Report Date
No.
(DOT Use Only)

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0635. Public reporting for this collection of information is estimated to be approximately 12 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

INSTRUCTIONS

*Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at* http://www.phmsa.dot.gov/pipeline/library/forms

PART A – KEY REPORT INFORMATION

Report Type: *(select all that apply)* ☐ Original ☐ Supplemental ☐ Final

A1. Operator's OPS-issued Operator Identification Number (OPID): _____

A2. Name of Operator: ____ *auto-populated based on OPID* _____

A3. Address of Operator:

A3a. ____ *auto-populated based on OPID* _____ (Street Address)

A3b. ____ *auto-populated based on OPID* _____ (City)

A3c. State: *auto-populated based on OPID*

A3d. Zip Code: *auto-populated based on OPID*

A4. Earliest local time *(24-hr clock)* and date an incident reporting criteria was met:

Hour / Month / Day / Year

A4a. Time Zone for local time (select only one) ☐ Alaska ☐ Eastern ☐ Central ☐ Hawaii

A4b. Daylight Saving in effect? ☐ Yes ☐ No

A5. Location of Incident:

Latitude: _____

Longitude: - _____

A6. Gas released: *(select only one, based on predominant volume released)*

☐ Natural Gas
☐ Propane Gas
☐ Synthetic Gas
☐ Hydrogen Gas
☐ Landfill Gas
☐ Other Gas → Name: _____

A7. Estimated volume of gas released unintentionally: _____

A8. Estimated volume of intentional and controlled release/blowdown: _____

A9. Estimated volume of accompanying liquid released: _____

Notice: This report is required by 49 CFR Part 191. Failure to report may result in a civil penalty not to exceed $100,000 for each violation for each day the violation continues up to a maximum of $1,000,000 as provided in 49 USC 60122.

Form Approved
OMB No. 2137-0522
Expires 06/01/2020

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

**ANNUAL REPORT FOR CALENDAR YEAR 20___**

**NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS**

DOT USE ONLY
Initial Date Submitted
Report Submission Type
Date Submitted

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0522. Public reporting for this collection of information is estimated to be approximately ?? hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

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PART A - OPERATOR INFORMATION

DOT USE ONLY

1. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER (OPID): _____

2. NAME OF OPERATOR: _____

3. RESERVED

4. HEADQUARTERS ADDRESS: _____
Street Address
State: ___ Zip Code: _____-_____

5. THIS REPORT PERTAINS TO THE FOLLOWING COMMODITY GROUP: *(Select Commodity Group based on the predominant gas carried and complete the report for that Commodity Group. File a separate report for each Commodity Group included in this OPID.)*

☐ Natural Gas
☐ Synthetic Gas
☐ Hydrogen Gas
☐ Propane Gas
☐ Landfill Gas
☐ Other Gas → Name of Other Gas _____

6. RESERVED

7. FOR THE DESIGNATED "COMMODITY GROUP", THE PIPELINES AND/OR PIPELINE FACILITIES INCLUDED WITHIN THIS OPID ARE: *(Select one or both)*

☐ INTERstate pipeline → List all of the States and OCS portions in which INTERstate pipelines and/or pipeline facilities included under this OPID exist: __, __, __, __, __, etc.

☐ INTRAstate pipeline → List all of the States in which INTRAstate pipelines and/or pipeline facilities included under this OPID exist: __, __, __, __, __, etc.

8. RESERVED

- **Incident Report – Gas Transmission and Gathering Systems (Form PHMSA F 7100.2)**
- **Annual Report - Natural and Other Gas Transmission and Gathering Pipeline Systems (Form PHMSA F 7100.2-1)**



# Form Revisions and the PRA Process

In accordance with the Paperwork Reduction Act, PHMSA is required to provide members of the public an opportunity to provide input on information collection requests. PHMSA does this by publishing Federal register notices to request comments.

- 60 Day Federal Register Notice – Comments are submitted to PHMSA for consideration
- 30 Day Federal Register Notice – Comments are submitted to OMB for consideration
- OMB Review/Approval – OMB has 60 days, at their discretion, to review the information collection request and make a determination of approval.

Note 1: PHMSA does not routinely publish a notice announcing OMB's decision. This information can be found at www.reginfo.gov

Note 2: PHMSA will follow the process detailed above to request input on subsequent revisions to an approved form.



# Gas Transmission and Gathering Annual and Incident Report Changes

- Status
  - OMB approved on 1/22/2020.
  - Annual report changes: PHMSA will adopt the annual report changes with the **March 2022 submission (2021 data)**
  - Incident Report changes: **July 2021**
  - Additional changes coming to annual report 2020/2021
  - Public comments on GT annual report changes based on GT Final Rule
  - Goal to have any additional changes in place by the March 2022 submission



# Gas Transmission and Gathering Incident Report Changes

- PHMSA revised the Gas Transmission and Gathering Incident Report to collect data on whether a reportable incident occurred within a Moderate Consequence Area (MCA).
- Operators will identify whether the area had 5 or more buildings intended for human occupancy or whether it was a paved surface for a designated interstate freeway.
- Not required until July 2021



# Gas Transmission and Gathering Annual Report Changes

- **Part F Integrity Inspections and Actions Taken**
  - Added data collection/differentiation for MCA, and non-MCA/HCA areas
  - Added Section 3.1 -3.3 – Separating out pressure testing inspections based on pressure test (<=1.39 MAOP; >1.39-<1.50 MAOP; =>1.50 MAOP)
  - Mileage inspected by Guided Wave
- **Part L Miles of Pipe by Class Location**
  - Added references to MCA and Non-MCA areas
- **Part M Failures, Leaks and Repairs**
  - Added references to MCA's



# Gas Transmission and Gathering Annual Report Changes

- **Part Q Gas Transmission Miles by MAOP Determination Method**
  - Added reference to §192.624 MAOP reconfirmation methods
  - Added references to MCA's
  - Incomplete record columns now have to be filled out for Class 1 & 2, non-HCA areas



# Gas Transmission and Gathering Annual Report Changes

- **Part R – GT Miles by Pressure Test Range and Internal Inspection**
  - Added additional pressure test ranges (1.39>PT>=1.25; 1.5 MAOP >=1.39; PT>=1.50)
  - Added references to MCA
- **Part S – GT Verification of Materials (§192.607)**
  - New section where operators report the number of miles for which pipe material was verified as described in §192.607.
  - Report miles by Class Location, and HCA/MCA/neither.
  - Report the number of test locations by Class Location and HCA/MCA/neither



# Questions ?



# Operators' View of the Rule - MCAs

Mary Bartholomew, Southwest Gas

Andrew Marshall, Atmos Energy



# Managing Moderate Consequence Areas

SOUTHWEST GAS

Mary Bartholomew, Manager/Engineering Staff

AGA Transmission Rule Workshop– November 19, 2019

# Outline

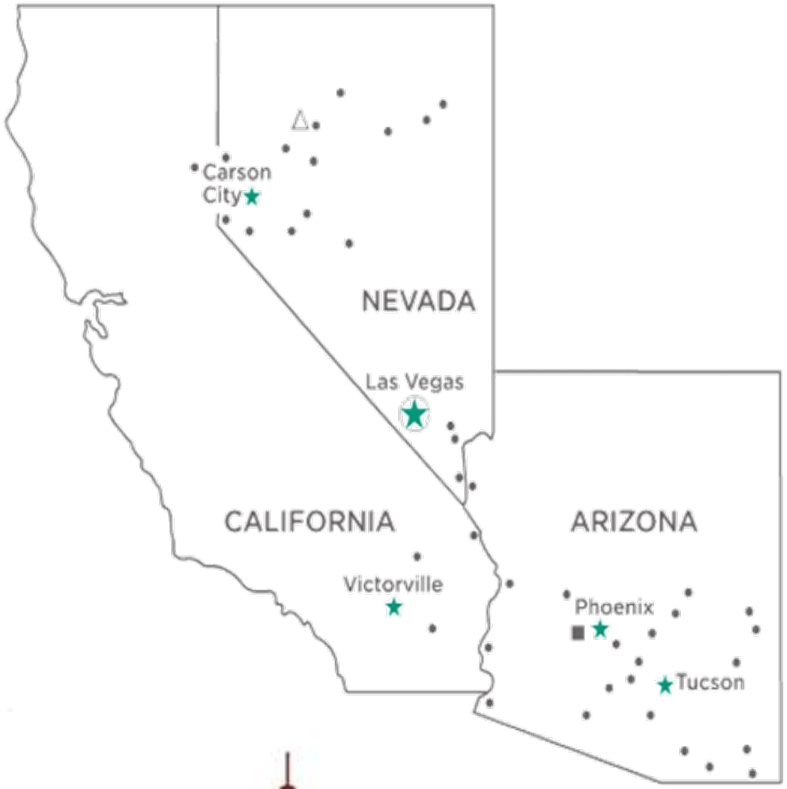
SOUTHWEST GAS

- Company Information
- MCA Overview
- Existing HCA Process
- Process Update/Modifications
- Future Challenges
- Summary

# Southwest Gas Corporation

SOUTHWEST GAS

- Arizona, California and Nevada
- 2.06 million customers
- 1,458 miles gas transmission pipelines
- 31,495 miles gas distribution main
- 1.91 million gas distribution services



# MCA Overview

SOUTHWEST GAS

**From the Federal Register:**

**"Moderate consequence area** means: An onshore area that is within a potential impact circle, as defined in § 192.903, containing either:

(i) Five or more buildings intended for human occupancy; or

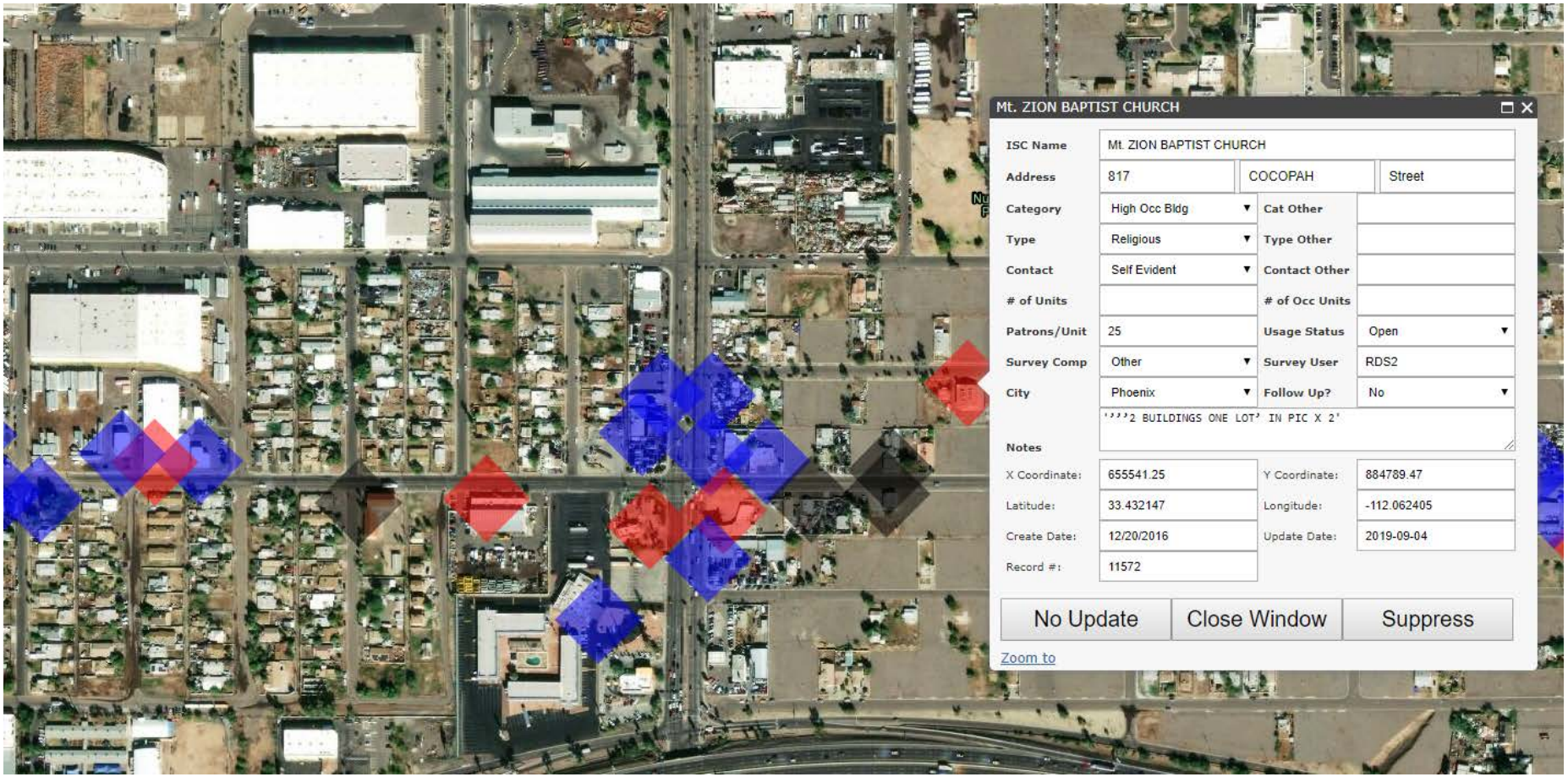
(ii) Any portion of the paved surface, including shoulders, of a designated interstate, other freeway, or expressway, as well as any other principal arterial roadway with 4 or more lanes, as defined in the Federal Highway Administration's Highway Functional Classification Concepts, Criteria and Procedures, Section … and that does not meet the definition of high consequence area, as defined in § 192.903."

# Existing HCA Process

SOUTHWEST GAS

- Linear Reference Model Update
- Field Survey
  - GPS Data Collection
  - Identified Site Questionnaire
- Verification of all New and Current HCAs in Existing Database


Natural Gas for Vehicles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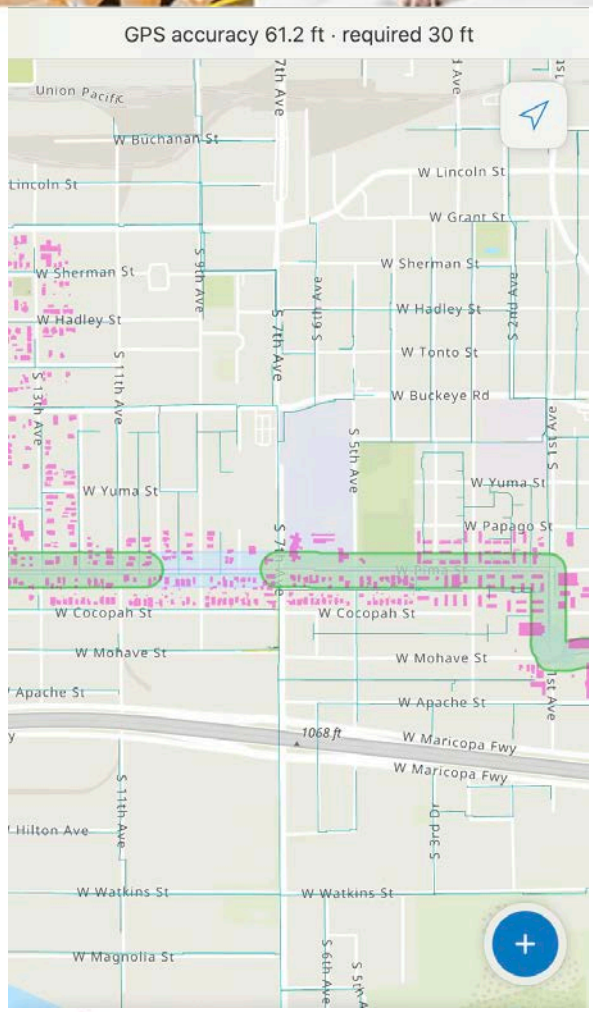
ISC Name
Mt. ZION BAPTIST CHURCH
Address
817
COCOPAH
Street
Category
High Occ Bldg
Cat Other
Type
Religious
Type Other
Contact
Self Evident
Contact Other
# of Units
# of Occ Units
Patrons/Unit
25
Usage Status
Open
Survey Comp
Other
Survey User
RDS2
City
Phoenix
Follow Up?
No
Notes
''''2 BUILDINGS ONE LOT' IN PIC X 2'
X Coordinate:
655541.25
Y Coordinate:
884789.47
Latitude:
33.432147
Longitude:
-112.062405
Create Date:
12/20/2016
Update Date:
2019-09-04
Record #:
11572
No Update
Close Window
Suppress
Zoom to

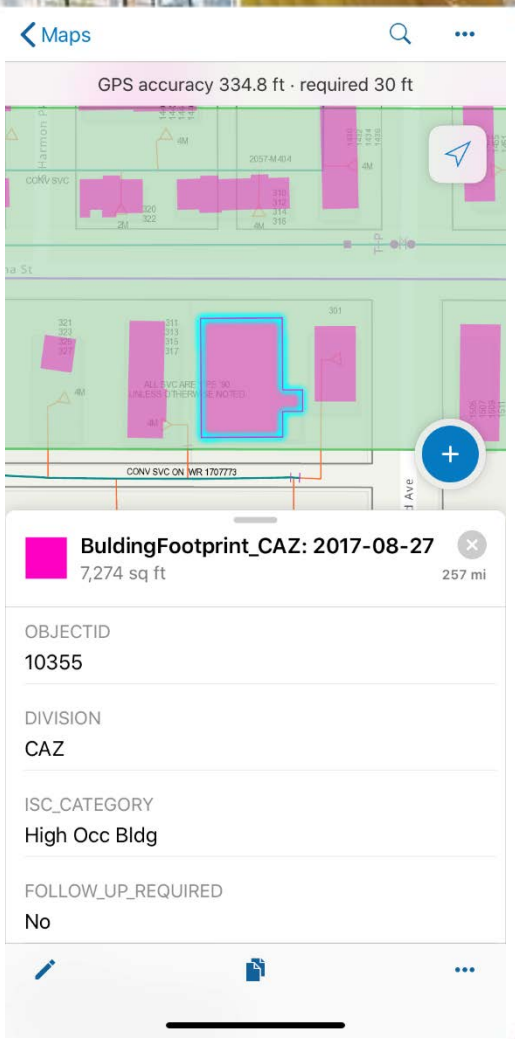
# Process Update/Modifications

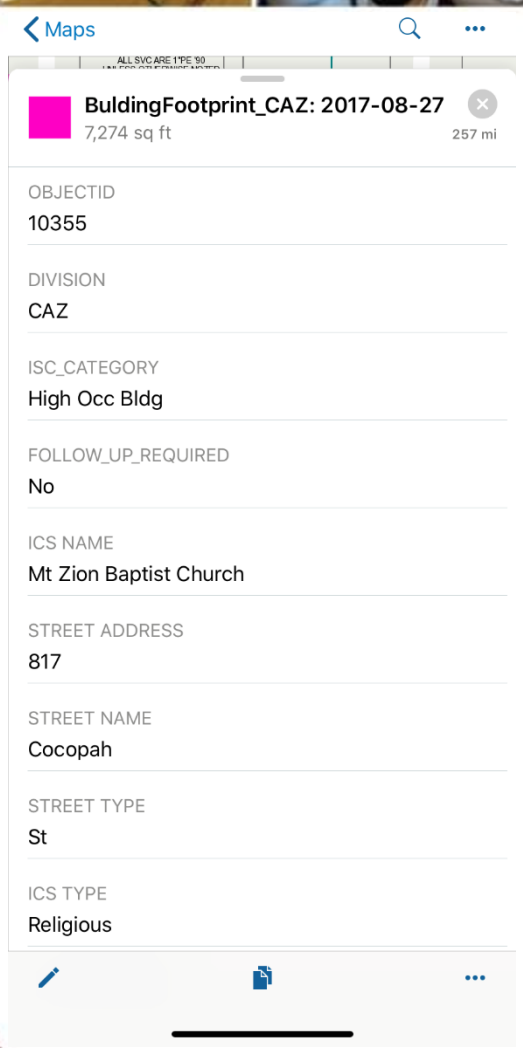
SOUTHWEST GAS

- GIS Update with Building Outlines
- Field Survey Modifications
  - Questionnaire Tied to Building Outline
  - Data Collection More Comprehensive
  - More GIS-centric


Natural Gas for Vehicles


GPS accuracy 61.2 ft · required 30 ft
Union Pacific
W Buchanan St
Lincoln St
W Lincoln St
W Grant St
W Sherman St
W Hadley St
W Tonto St
W Buckeye Rd
W Yuma St
W Papago St
W Cocopah St
W Mohave St
W Apache St
W Maricopa Fwy
Hilton Ave
W Watkins St
W Magnolia St
1068 ft


Maps
GPS accuracy 334.8 ft · required 30 ft
CONV SVC ON WR 1707773
BuldingFootprint_CAZ: 2017-08-27
7,274 sq ft
257 mi
OBJECTID
10355
DIVISION
CAZ
ISC_CATEGORY
High Occ Bldg
FOLLOW_UP_REQUIRED
No


Maps
BuldingFootprint_CAZ: 2017-08-27
7,274 sq ft
257 mi
OBJECTID
10355
DIVISION
CAZ
ISC_CATEGORY
High Occ Bldg
FOLLOW_UP_REQUIRED
No
ICS NAME
Mt Zion Baptist Church
STREET ADDRESS
817
STREET NAME
Cocopah
STREET TYPE
St
ICS TYPE
Religious

# Future Challenges

SOUTHWEST GAS

- Availability of Roadway Data
- Tracking of MCA/Assessment Data
  - Class 3/4 Locations
  - Differentiation from HCA
- Reassessment Timelines

# Summary

SOUTHWEST GAS

- Existing HCA process still valid
- Modifications necessary to manage new assessment activities outside HCA including MCAs
- Verifying roadway data provides a challenge
- Managing assessment timelines tricky


# Questions?

# MCA Analysis Methodologies

## PHMSA Gas Rule Public Meeting

*Andrew Marshall, Engineering Manager*

*February 27, 2020*

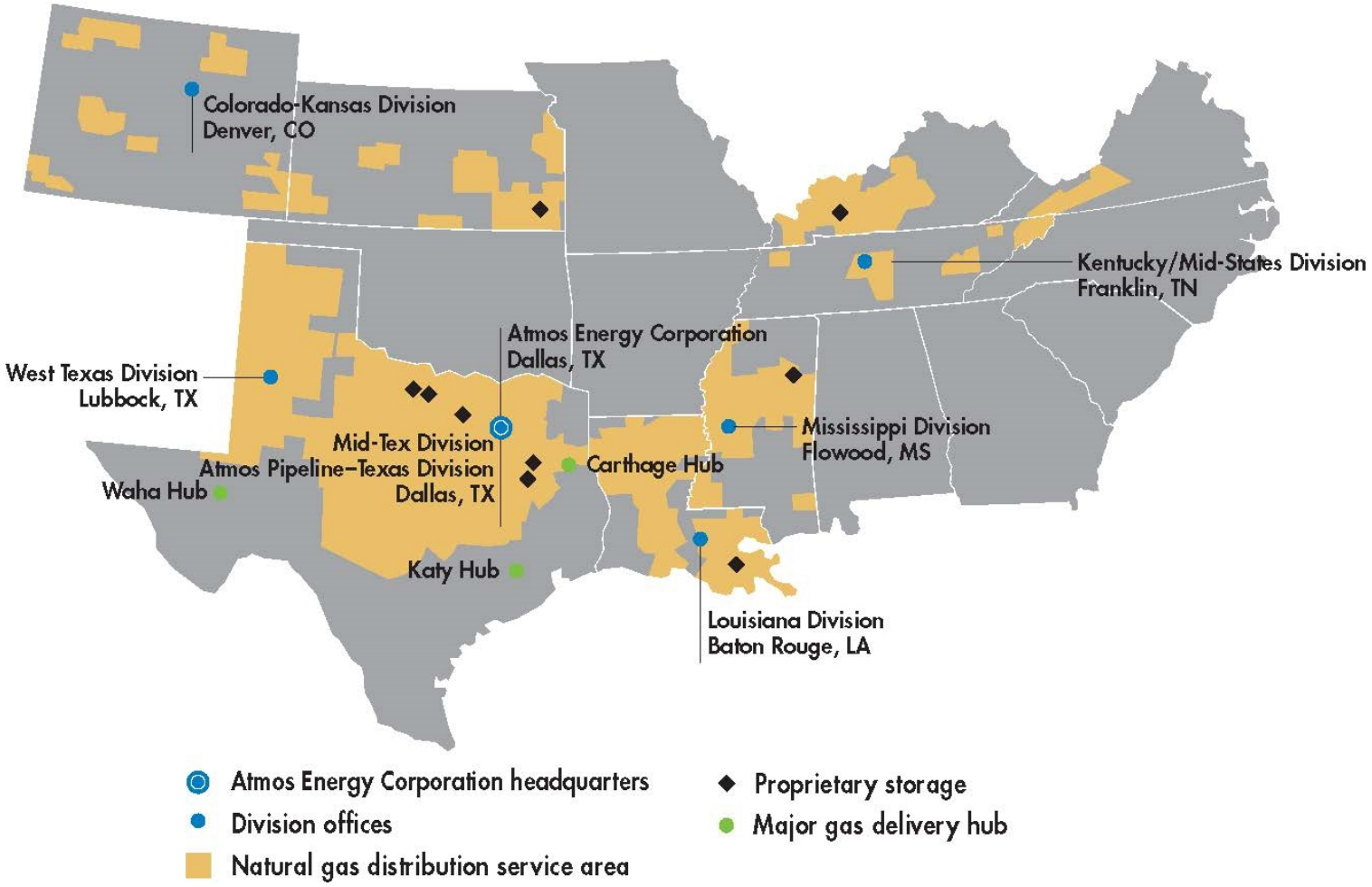
# Cautionary Statement

**This presentation involves the interpretation of a federal law that has not yet gone into effect. The information contained herein is intended for discussion purposes only and should not be relied on without independent investigation and verification. Statements regarding the tools, methods, data sources, and analyses described herein may change based on the final implementation and/or future interpretation of the law. Atmos Energy assumes no responsibility or liability for the accuracy of any information contained in the this presentation or any party's reliance thereon.**

# About Atmos Energy

- Over 3 million customers
- 6 operating divisions
- 8 States, 1,400 communities
- 76,000+ miles of pipeline
  - 70,000 miles of distribution (56% in Texas)
  - 6,700 miles of transmission (90% in Texas)
  - 375 miles of HCA (85% in Texas)
- $1.5+ billion annual capital investment

# About Atmos Energy



# Moderate Consequence Area

## Definition of an MCA (§192.3) (*effective July 1, 2020*)

## Transmission Pipelines

Onshore area within a potential impact circle containing either:

i. Five or more buildings intended for human occupancy; or

ii. Any portion of the paved surface, including shoulders, of a designated interstate, other freeway, or expressway, as well as any other principal arterial roadway with 4 or more lanes, as defined in the Federal Highway Administration's Highway Functional Classification Concepts, Criteria and Procedures, Section 3.1.

*AND*

Does not meet the definition of a High Consequence Area.

# Moderate Consequence Area

## Required Assessments of MCAs (*effective July 1, 2020*)

Operators will be required to perform integrity assessments on transmission lines operating at greater than or equal to 30% SMYS in certain locations

- In Class 3 or Class 4 locations
- In Moderate Consequence Areas that can accommodate ILI devices
- Not already in an HCA

*Ref. §192.710 - Transmission Lines: Assessments outside of high consequence areas*

# Potential MCA Information

1. Pipelines
   - ✓ Centerlines
   - ✓ Potential Impact Radius
   - ✓ Existing High Consequence Areas

   } Pipeline GIS

2. Roadways
   - Edge of pavement
   - FHWA functional classifications
3. Structures
   - Building footprints

   } External Sources

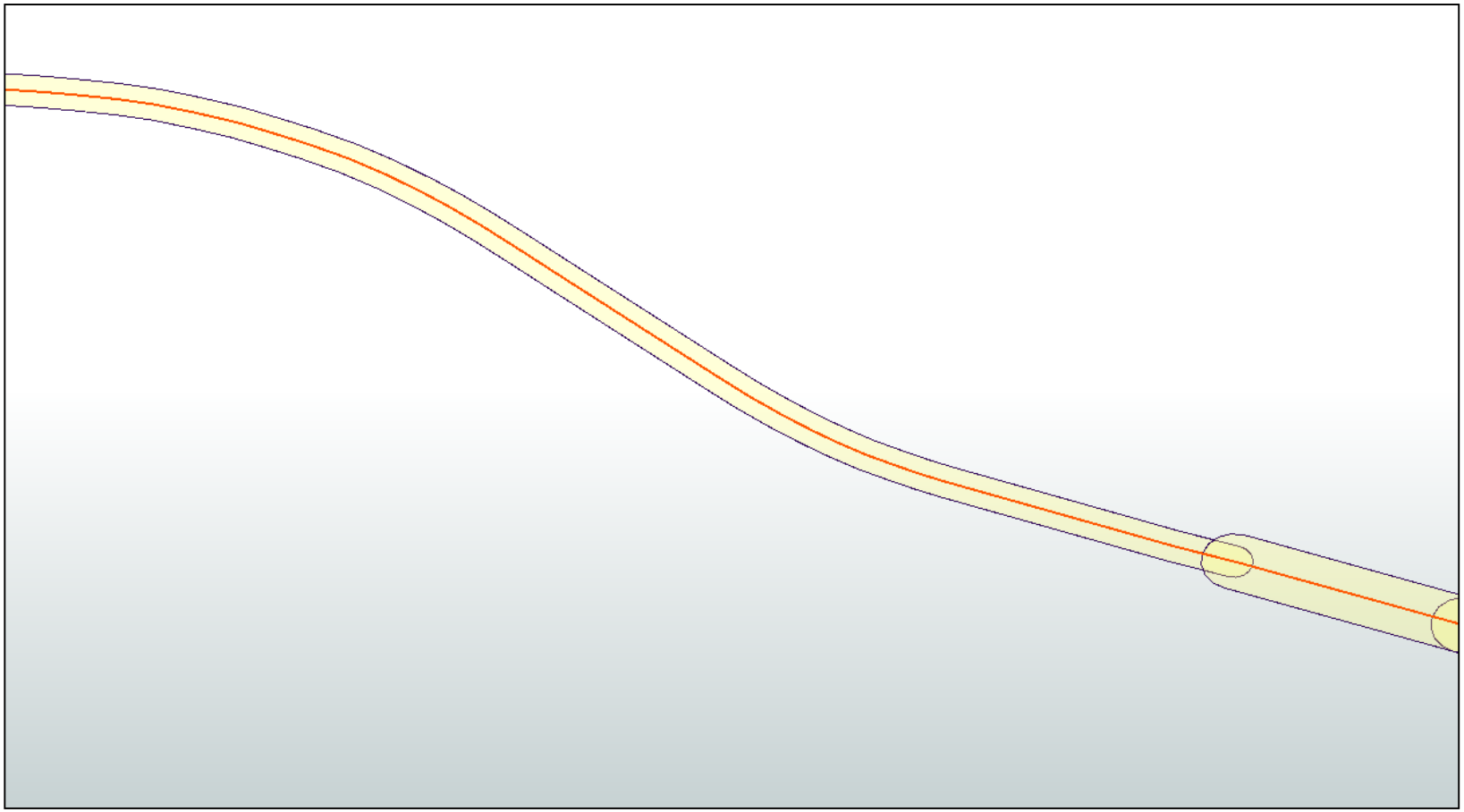
# Potential External Information

1. **Roadways**
   - Federal Highway Administration (FHWA)
   - State transportation authority (i.e. Texas Department of Transportation)
   - Commercially available data and information

2. **Structures**
   - Commercially available data and information or internally managed
   - Satellite imagery, parcels, building footprints

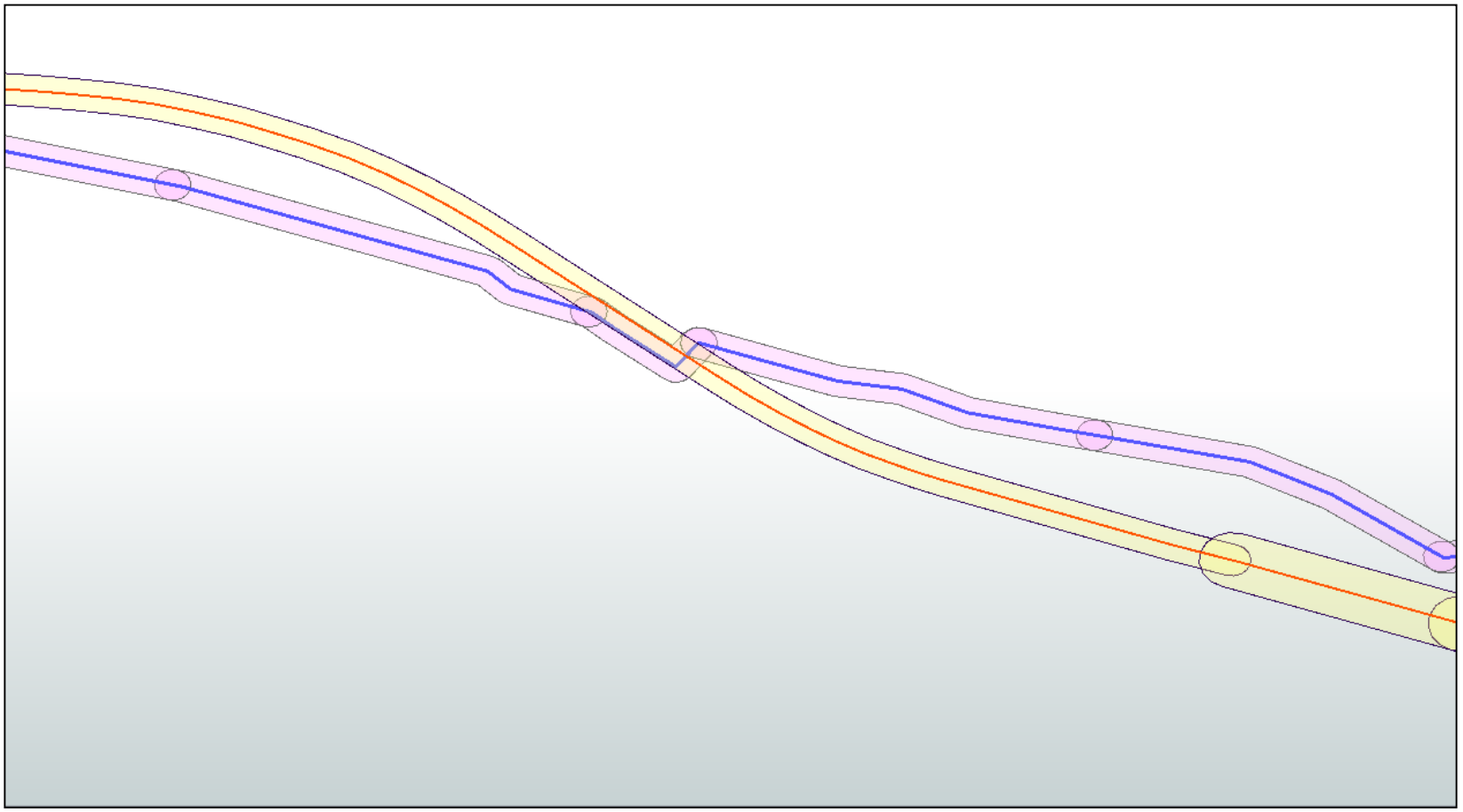
# Potential Analysis

Consider roadway centerlines meeting classification and a representation of the pavement width extending from centerline



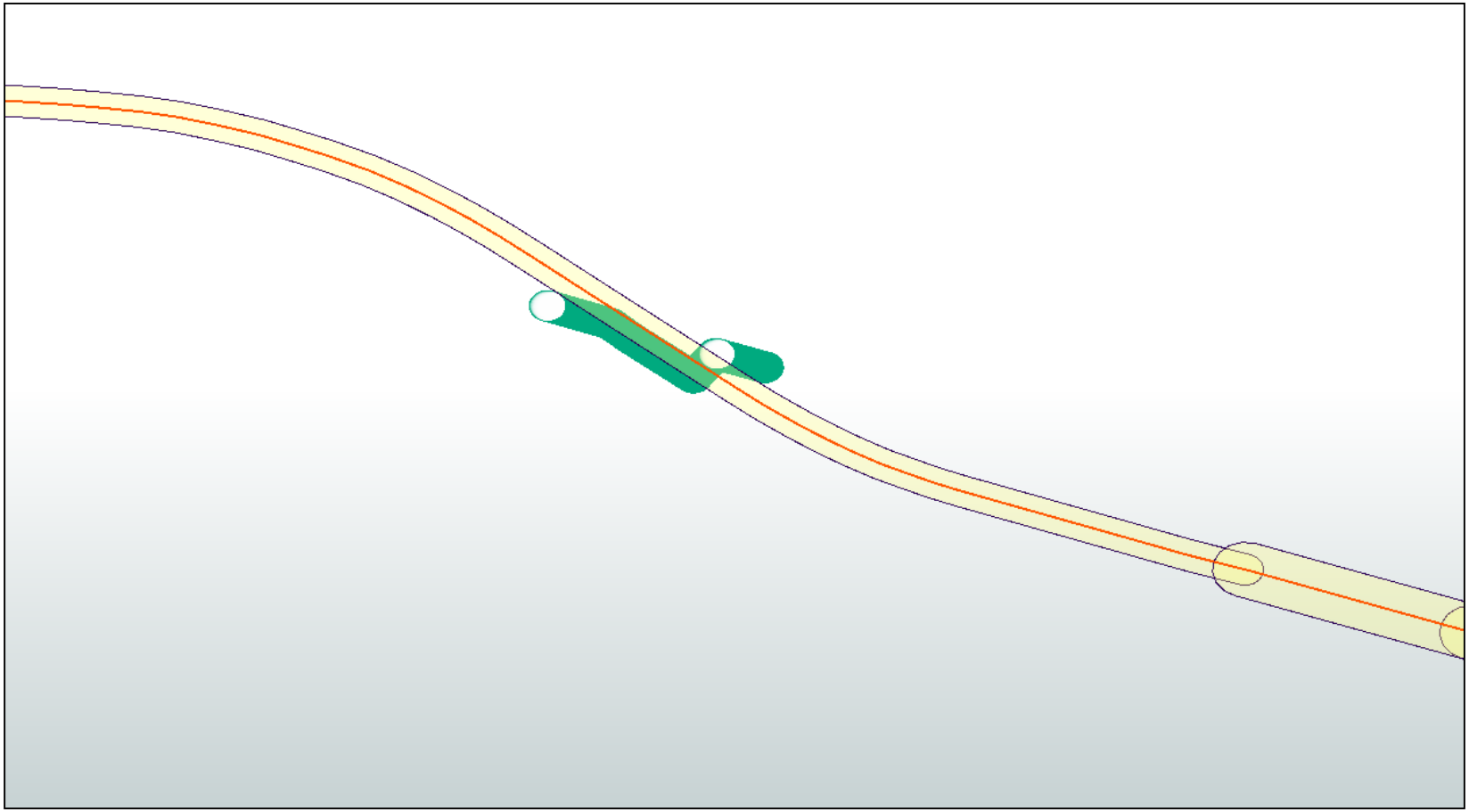
# Potential Analysis

Consider the pipeline and a representation of the Potential Impact Radius (PIR), excluding pipe that is already in an HCA



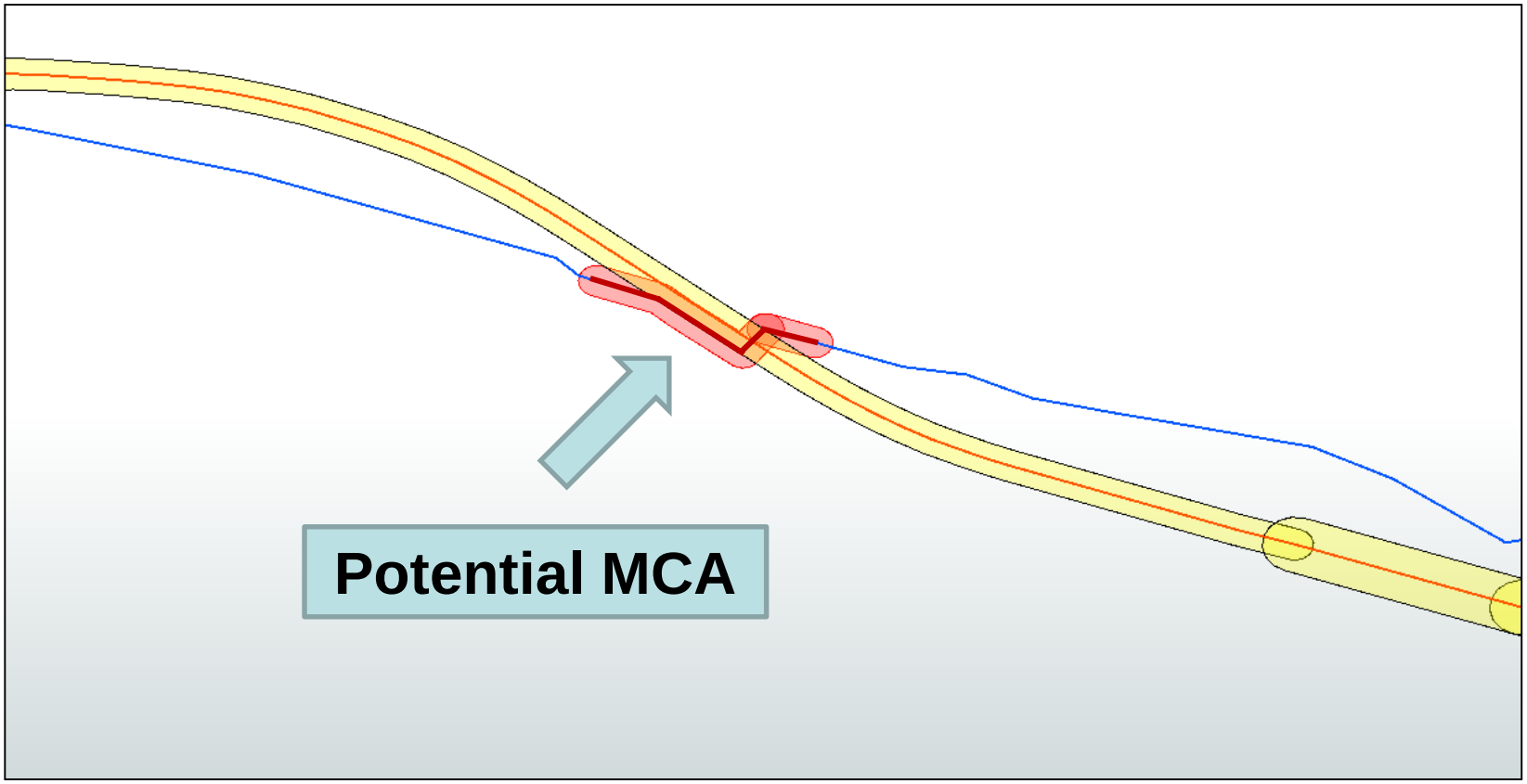
# Potential Analysis

Consider representative Potential Impact Circles (PICs) with diameter equivalent to the pipeline PIR that intersect roadway pavement



# Potential Analysis

Consider the combination of the interacting PICs to identify the From/To station plusses for potential MCAs



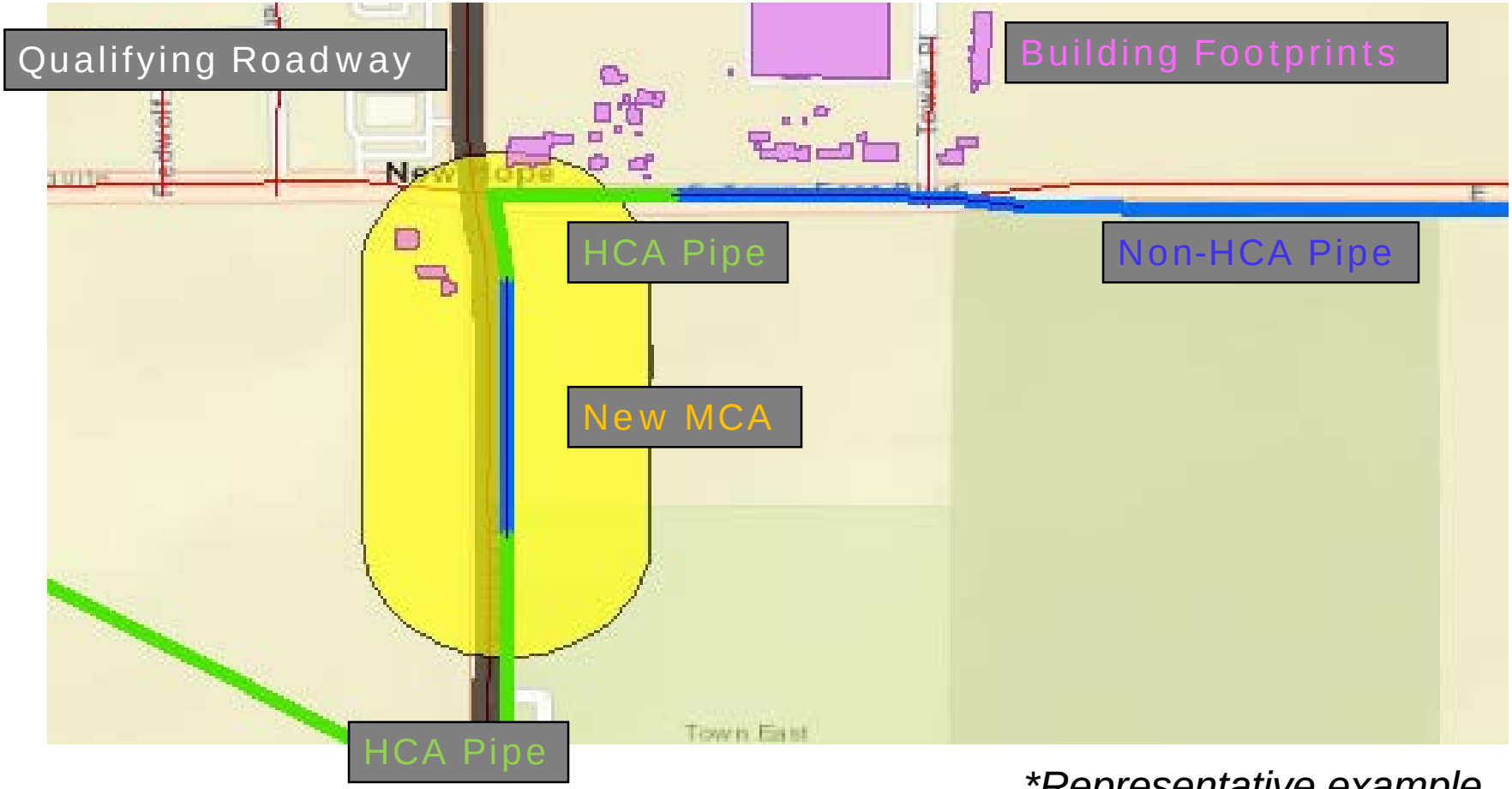
# Texas RRC Pipeline Integrity

## 16 TAC §8.101 - Pipeline Integrity Assessment and Management Plans for Natural Gas and Hazardous Liquids Pipelines

*Operators elect a risk-based or prescriptive plan to prioritize integrity assessments. For reference, the prescriptive schedule is shown below.*

| GAS TRANSMISSION LINES | | | | |
|---|---|---|---|---|
| **Size** | **Pressure** | **Class 2, 3, 4** | **Class 1** | **Offshore** |
| Less than or equal to 8 inches | Less than 100 psig | n/a | n/a | Intervals prescribed by operator |
| | Greater than 100 psig and less than 20% SMYS | 10 year intervals | n/a | Intervals prescribed by operator |
| | Greater than 20% SMYS | 5 year intervals | n/a | Intervals prescribed by operator |
| Greater than 8 inches | Less than 100 psig | n/a | n/a | Intervals prescribed by operator |
| | Greater than 100 psig and less than 20% SMYS | 5 year intervals | n/a | Intervals prescribed by operator |
| | Greater than 20% SMYS | 5 year intervals | 10 year intervals | Intervals prescribed by operator |

# “Sandwiched” MCA




*Representative example

# Roadway Considerations

## Data sources that include pavement width are not readily available for all jurisdictions.

- For estimating and screening purposes right-of-way width could be used as a proxy for pavement width.

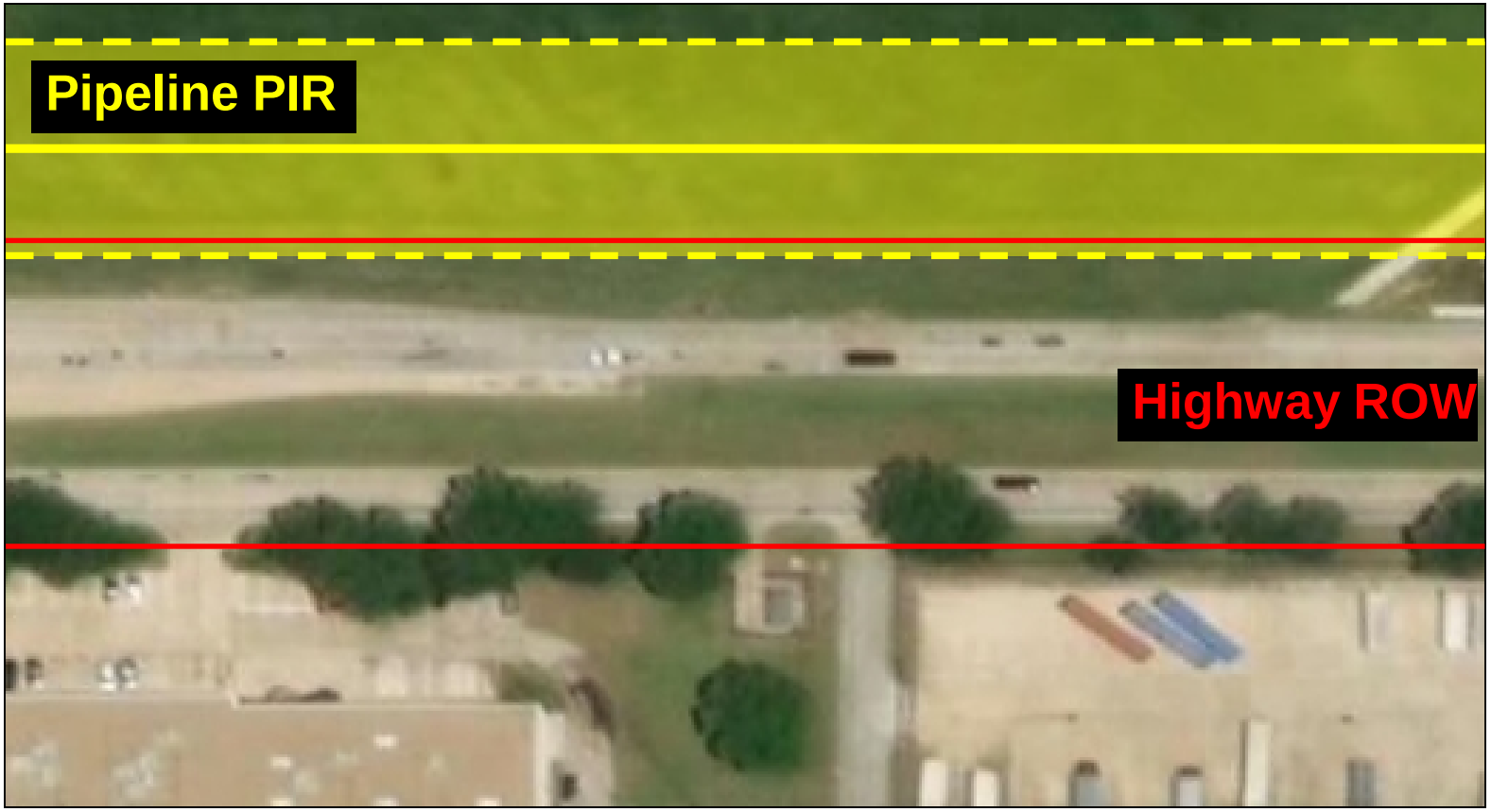
- Using right-of-way width has the potential to result in the inclusion of MCA mileage not subject to the requirements of the rule.

- Refinement through field survey, review of satellite imagery, alternative investigations and analyses could realize a pavement width based result that is more consistent with the rule language.

# Roadway Considerations

**Representative example of the potential inclusion of MCA mileage not subject to the requirements of the rule.**

Pipeline PIR interacts with the highway right-of-way but not pavement.



# Roadway Considerations

**Roadways are included per the rule subject to their designation.**

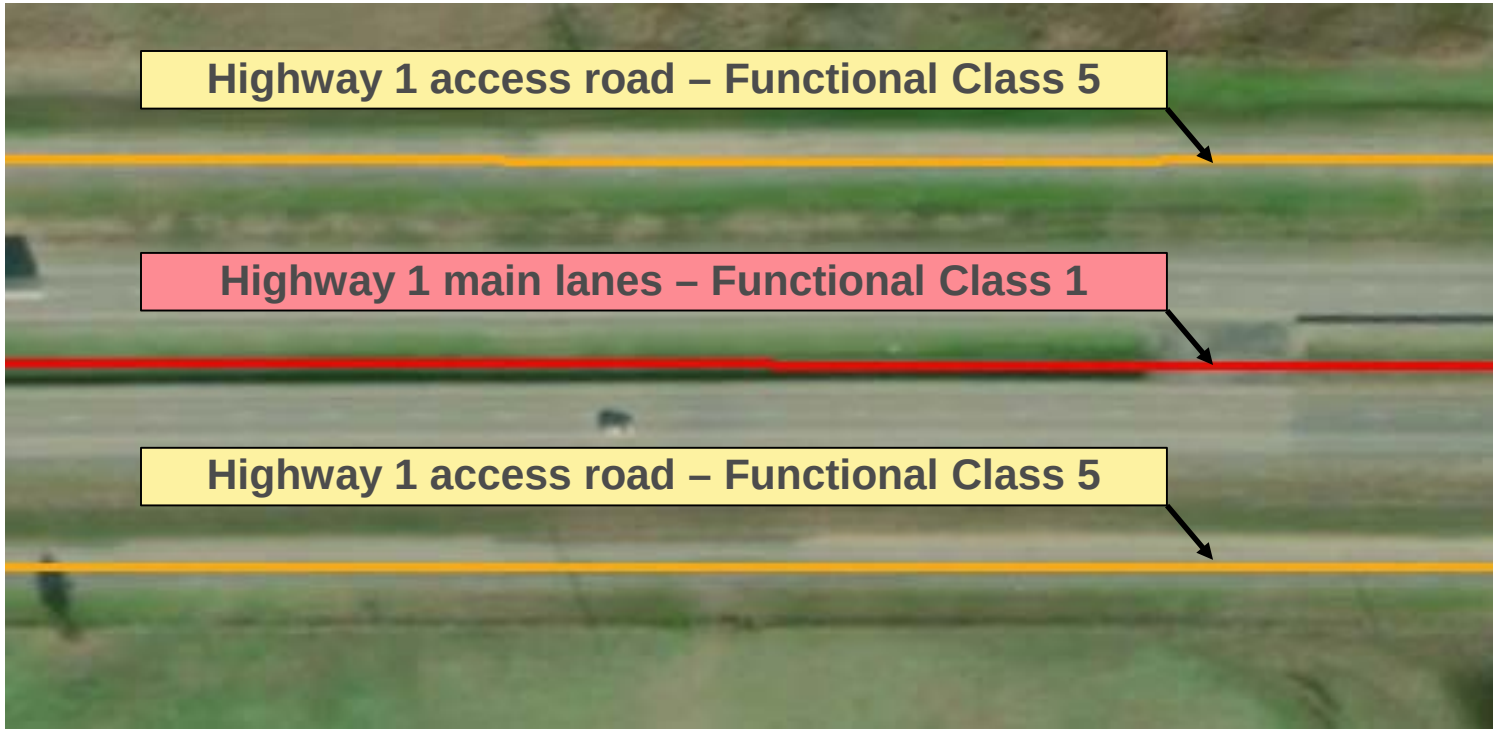
Any portion of the paved surface, including shoulders, of a designated interstate, other freeway, or expressway, as well as any other principal arterial roadway with 4 or more lanes, as defined in the Federal Highway Administration's Highway Functional Classification Concepts, Criteria and Procedures, Section 3.1.

**Access roads and onramps may have different designations than the associated principal roadway main lanes that are included.**

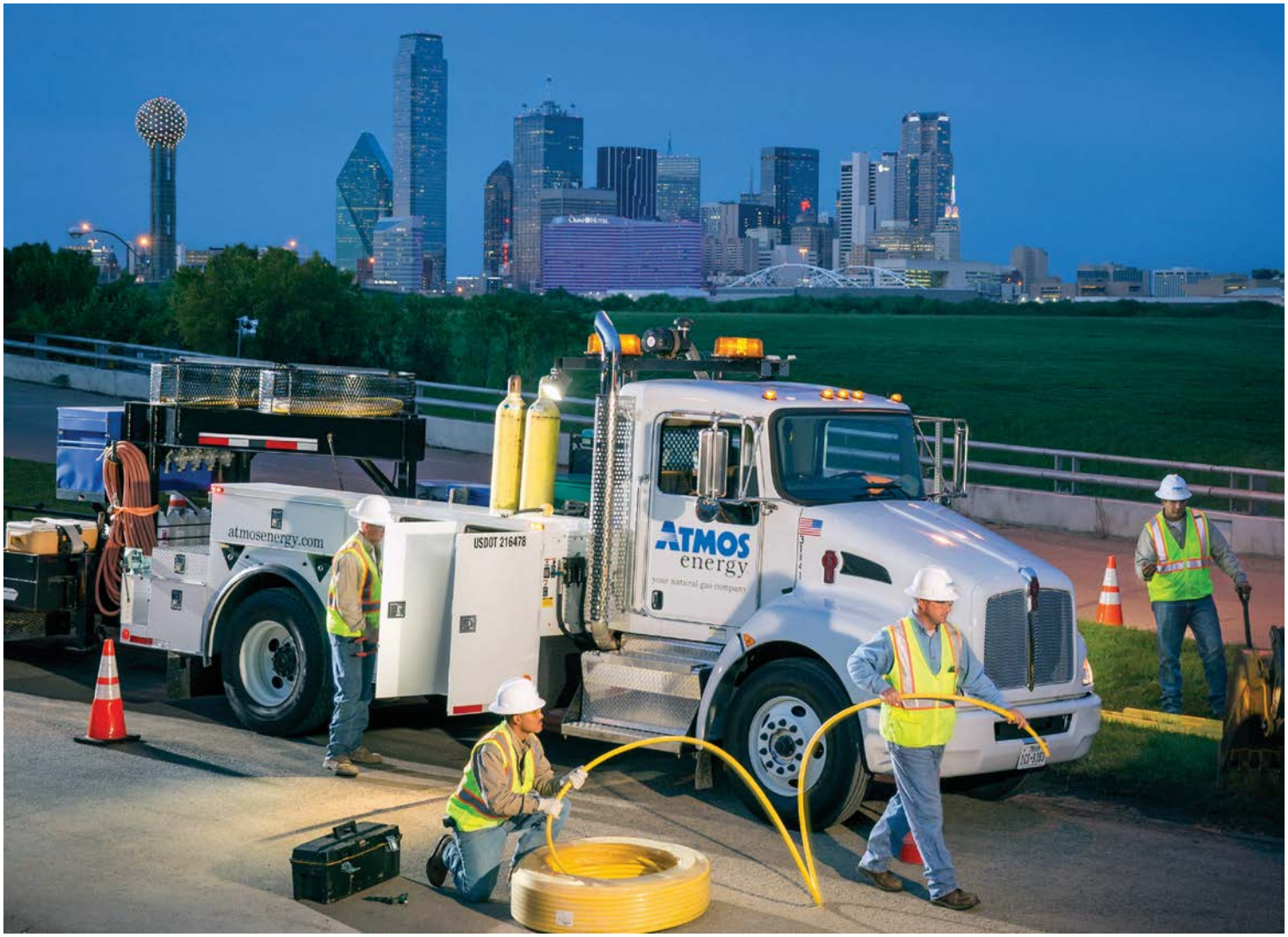
# Roadway Considerations

**Representative example of highway with access roads of differing designation.**

- Access roads are associated with “Highway 1” but have a separate, distinct designation



# Questions & Comments



# Questions ?



# DOT Regulations on Agency Guidance

Ajoke Agboola, PHMSA



# Recent Developments in Agency Guidance

- **General Counsel memorandum, "Review and Clearance of Guidance Documents" (December 20, 2018)**
- **Executive Order 13891- Promoting the Rule of Law Through Improved Agency Guidance Documents (October 9, 2019)**
- **DOT Administrative Rulemaking, Guidance and Enforcement Procedures - 49 CFR Part 5 (84 FR 71714, December 27, 2019)**

# DOT Administrative Rule

- **What is a guidance document?**
  - **General applicability**
  - **Future effect**
  - **Not intended to have the force or effect of law**
- **Examples include:**
  - **Advisory Bulletins**
  - **Circulars**
  - **FAQs**

# DOT Administrative Rule

- **Codifies procedures from General Counsel Guidance Memo:**
  - **Attorney Review**
  - **Elements (e.g., disclaimer)**
  - **Web availability**
  - **Significant/Otherwise of importance to the Department's Interest**

- **New procedures to implement EO 13891:**
  - **Comment period**
  - **Petitions**

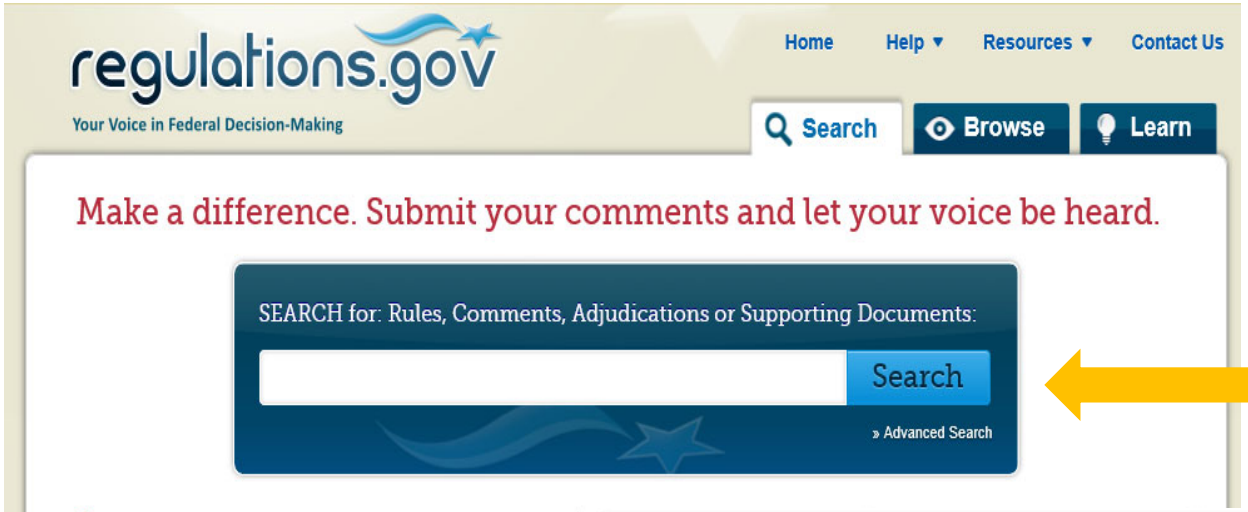


# PHMSA Docket Overview

Chris Hoidal, PHMSA

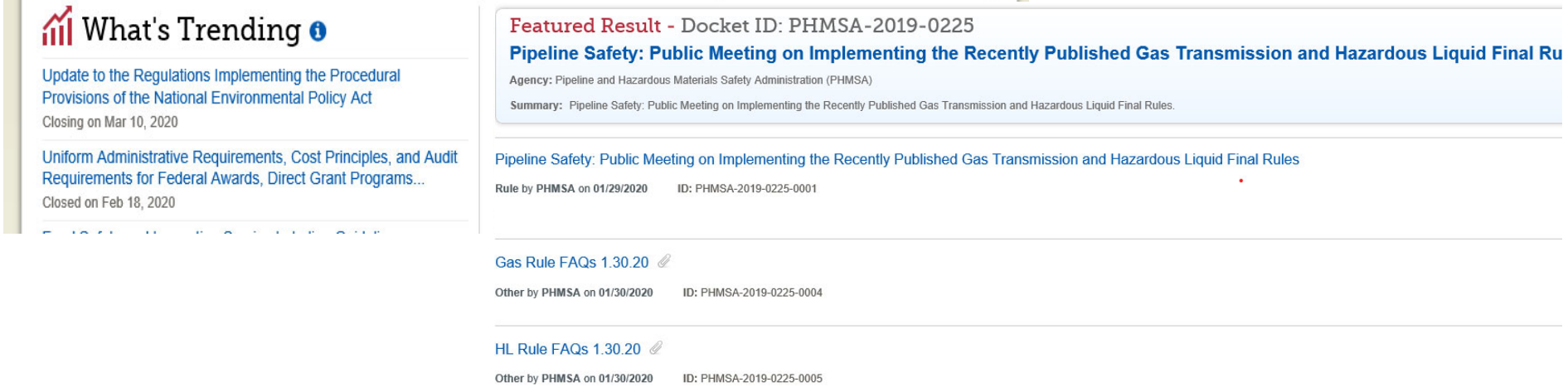


# Accessing the Docket




Insert Docket Here

**PHMSA-2019-0225**




# www.regulations.gov



# What PHMSA's Working On

- **Formed Gas Rule Implementation Team (GRIT)**
  - **Frequently Asked Questions (FAQs) and Answers**
  - **Enforcement Guidance**
  - **Inspector Training Strategy**
  - **Inspection Implementation (Strategy, Questions/Inspection Assistant Update, Pilot Inspections, etc.)**
- **Responding to Joint Industry Rulemaking Petition; preliminary response sent December 20, 2019**
- **Public Meeting – February 27, 2020**



# Frequently Asked Questions (FAQs)
# &
# Answers


Clayton Bodell and Steve Nanney, PHMSA



# Frequently Asked Questions (FAQs) & Answers

- Solicited, and continue to solicit FAQs
  - Industry
  - State/Federal Regulators
  - Public


- Assist in implementation of final rule; provide
  - Clarity to existing requirements
  - Guidance
  - Information Sources

- Batched, draft FAQs posted in Federal Register to solicit public comment - Docket ID:  PHMSA-2019-0225



# FAQs & Answers – 1st Batch
# Gas Rule FAQs 1.30.20

- **44 draft FAQs and Answers**
- **Posted for public comment January 30, 2020; comment period open until March 27, 2020**
- **Topical Areas include:**

**- General**
**- Reporting**
**- Other Technology Notification**
**- Moderate Consequence Area**
**- MAOP Establishment and Reconfirmation**
**- Spike Hydrostatic Testing**
**- Material Verification**
**- Failure Mechanics**
**- Assessments Outside HCAs**



# Public Comments Regarding 1st Batch Gas Rule FAQs 1.30.20



# FAQs & Answers – 2nd Batch

- Under GRIT Team development
- Content include questions submitted by:
  - American Gas Association
  - American Petroleum Institute
  - American Public Gas Association
  - Interstate Natural Gas Association of America
- Anticipate posting to Federal Register Spring 2020
- Similar topical areas as 1st Batch



# Industry Joint Submittal

C.J. Osman, INGAA

Sonal Patni, AGA



# Additional FAQ Topics for Consideration

American Gas Association (AGA)
American Petroleum Institute (API)
American Public Gas Association (APGA)
Interstate Natural Gas Association of America (INGAA)

# Additional FAQ Topics for Consideration

1. Issue: The Final Rule does not establish a sampling frequency for components.
   - Suggestion: PHMSA should clarify that operators may use the sampling approach prescribed in § 192.607(e) for pipeline components.
2. Issue: The Final Rule is unclear as to whether and why minimum yield strength and ultimate tensile strength are individually needed for existing pipelines where an operator has a TVC record documenting the pipe grade.
   - Suggestion: PHMSA should clarify that a TVC grade record is sufficient for MAOP reconfirmation and evaluation of anomalies.
3. Issue: It is unclear whether § 192.624(a)(1) applies to grandfathered pipe.
   - Suggestion: PHMSA should clarify that § 192.624(a)(1) applies to non-grandfathered pipe and § 192.624(a)(2) applies to grandfathered pipe.

# Additional FAQ Topics for Consideration

4. Issue: § 192.624(a)(2) does not clarify whether operators must re-perform MAOP reconfirmation for grandfathered pipelines that have already been pressure tested in accordance with § 192.619.
   - Suggestion: PHMSA should confirm that no further action under § 192.624(a)(2) is required for grandfathered pipe if the pipeline segment has a TVC pressure test record in accordance with 192.619(a)(2).
5. Issue: PHMSA should provide additional clarity as to which pipeline segments are unable to "accommodate inspection by means of instrumented inline inspection tools."
   - Suggestion: PHMSA should confirm that a segment is not able to accommodate ILI if: (1) the segment cannot be inspected by free-swimming tools, (2) the segment cannot be inspected while in-service.

# Additional FAQ Topics for Consideration

6. Issue: § 192.710(c) does not state that ECDA can be used as an assessment method for the threat of third-party damage.
   - Suggestion: PHMSA should confirm that ECDA may be used to assess for the threat of third-party damage.
7. Issue: § 192.712(d)(2)(iii) does not clarify whether re-evaluation of remaining life calculations is required for pipeline segments not susceptible to fatigue.
   - Suggestion: PHMSA should confirm that re-evaluation of remaining life calculations under § 192.712(d)(2)(iii) is not required if a pipeline segment is not susceptible to fatigue. For pipeline segments not susceptible to fatigue, integrity assessments for crack threats should be based on the frequency established in accordance with § 192.710, and remaining life would be re-calculated following those assessment intervals.

# Public Comments Regarding 2nd Batch Gas Rule FAQs



# Public Comments Regarding New FAQ Topics



# FAQ Comments & Additional Questions

- **Propose new FAQs:**

  **Submit additional questions/clarifications/hypothetical scenarios to docket PHMSA-2019-0225, at https://www.regulations.gov/docket?D=PHMSA-2019-0225**

- **Provide comments on posted FAQs and answers**

  **Submit comments to docket, PHMSA-2019-0225, at https://www.regulations.gov/docket?D=PHMSA-2019-0225**

- **View public comments received on FAQs and draft answers posted to docket, PHMSA-2019-0225, at https://www.regulations.gov/docket?D=PHMSA-2019-0225**



# Training Strategy for State & Federal Inspectors

Sam Hollenbaugh




# Inspector Training


- To provide a solid foundation for inspectors for consistent implementation
- Developed based on regulatory requirements
- Other resources and guidance materials used to support training
  - Final Rule, including preamble
  - FAQs
  - Enforcement Guidance
  - Case studies/Enforcement cases
- Phased training approach



# Training Strategy


- **Gas Rule Overview and Implementation Plan**
  - **Delivered to Federal/State regulators**
  - **Provided by GRIT Team members**
    - **Regional Staff Meetings (February – April 2020)**
    - **NAPSR Regional and National Meetings (April – September 2020)**
    - **State Seminars (Starting late 2020)**



# Training Strategy


- **Gas Rule Specialized Inspection Team Training**
  - **Delivered to "select" State/Federal inspectors to support specialized inspections**
  - **Provided by GRIT Team members**
  - **Timeframe:  January – July 2021**



# Training Strategy


- **State/Federal Inspector Training**
  - **Delivered to all Federal/State inspectors**
    - **Addition to existing training classes for new employees**
    - **Webinar and/or WBT for current inspectors**
  - **Provided by PHMSA Office of Inspector Training & Qualifications**
  - **Timeframe:  Starting January 2022**



# Inspection Strategy

Joseph Klesin, PHMSA



# Inspection Strategy

- **Pilots Inspections (Late 2020 – June 2021)**
- **Specialized Inspections (July 2021 – July 2028)**
- **Integrated Inspections (TBD)**




# Pilot Inspections

- Used to align PHMSA and pipeline operator
  - Expectations
  - Guidance
  - Compliance criteria
- Target Operator Inspection System
- Focused on nearer term requirements
  - Class location confirmation
  - MCA identification
  - Material verification
  - MAOP reconfirmation



# Pilot Inspections

- **Performed by GRIT Team Members plus regional SMEs (4-6)**
- **Utilize draft inspection questions and guidance material**
- **No enforcement**
- **Timeframe:  Starting Fall/Winter 2020 (1 week)**



# Specialized Inspections

- Conducted on Pipeline Systems
- Selected by PHMSA risk modeling
- Focused on nearer term requirements
  - Class location confirmation
  - Completion of MCA identification
  - Completion of material verification procedures
  - Completion of MAOP reconfirmation procedures
  - Review risk-based prioritization schedule for performing assessments and completed assessments



# Specialized Inspections

- **Performed by State/Federal Joint Inspection Team**
- **Utilize Inspection Assistant and guidance materials**
- **Enforcement done by regions/states**
- **Timeframe: Beginning in July 2021**



# Integrated Inspections

- Conducted as part of integrated inspection; selected by PHMSA risk modeling
  - Procedures conducted at the operator level
  - Records/Implementation done at the system level
- Focused on Part 191/192 requirements
- Performed by State/Federal Inspectors
- Utilize Inspection Assistant and Guidance Materials
- Enforcement done by regions/states
- Timeframe: TBD



# Wrap Up

Chris Hoidal, PHMSA



# What Operators Can Do In the Near Term

- **Read Federal Register Final Rule, including preamble, published October 1, 2019**
- **Develop procedures used for carrying out this regulation; each operator shall prepare and follow a manual of written procedures… (§192.605)**
- **Verify records that document current class location of each pipeline segment and how determined in accordance with §192.5 (Due July 1, 2020)**
- **Complete MCA analysis (Due NLT July 1, 2021)**



# What Operators Can Do In the Near Term

- **Collect Traceable, Verifiable, and Complete (TVC) Records for Establishing MAOP**
- **Retain all records to establish MAOP and keep for life**
- **Develop and implement procedures to identify and assess MCAs, Class 3 locations, and Class 4 locations (prior to execution and before July 1, 2021)**
- **Develop and implement procedures for MAOP reconfirmation and verifying material properties and attributes (Due July 1, 2021)**

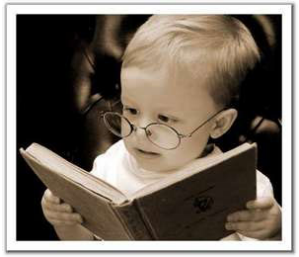


# What Operators Can Do In the Near Term

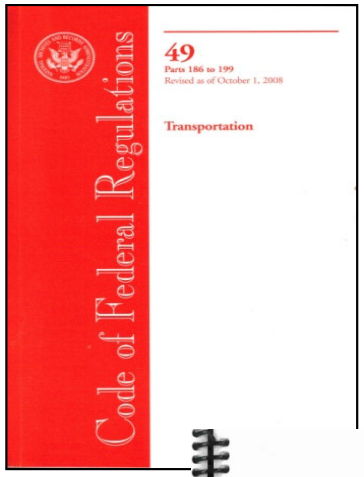
- **Submit to docket PHMSA-2019-0225:**
  - **Questions**
  - **Clarifications**
  - **Hypothetical scenarios**

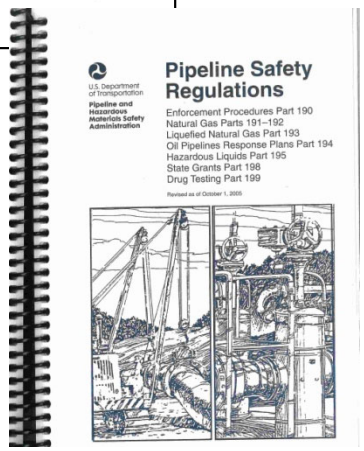

- **Submit requests for interpretation in accordance with §190.11**





# PHMSA Resources




- PHMSA Homepage, Office of Pipeline Safety
  - www.phmsa.dot.gov
- Standards & Rulemaking
  - http://www.phmsa.dot.gov/pipeline/regs
- PHMSA Technical Resources
  - https://www.phmsa.dot.gov/technical-resources/pipeline/pipeline-technical-resources-overview
  - GPAC Meeting slides for reference at "Public Meetings" tab (https://primis.phmsa.dot.gov/meetings/)
- PHMSA's Stakeholder Communications Site
  - http://primis.phmsa.dot.gov/comm
- For Federal Regulations (Official Version)
  - www.ecfr.gov





# Thank You!!

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