Notice of Proposed Rulemaking

Safety of Gas Transmission and Gathering Pipelines

Docket No. PHMSA-2011-0023

Rulemaking Process

- **ANPRM** – Advance Notice of Proposed Rulemaking
  - Used to gather information (non-mandatory)
- **NPRM** – Notice of Proposed Rulemaking
  - Defines intent and scope, something required from operator
- **SNPRM** – Supplemental Notice of Proposed Rulemaking

Rulemaking Process

- **FR** – Final Rule
  - Effective day – 30 – 90 days depending on the significance of the regulation
  - Implementation date – depends on impact of the regulation
- **DFR** – Direct Final Rule
  - Used for non-controversial issues

- Advanced Notice of Proposed rulemaking
  - August 25, 2011 (76 FR 5308)
- Notice of Proposed Rulemaking
  - April 8, 2016 (FR 81, No 68 20722 – 20856)
  - Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines
  - Comments due by July 7, 2016
    - Over 300 comments, and 1600 pages of comments from Industry organizations

Gathering Pipelines

Gathering Pipelines

- Natural Gas Safety Act of 1968
  - Established Office of Pipeline Safety as regulatory agency
  - "Transportation of gas" means the gathering, transmission or distribution of gas by pipeline or its storage in or affecting interstate or foreign commerce
  - Control of gathering since act, but not enforced

Gathering Pipelines

- Original 2006 gathering line rule designed for small diameter, low energy pipelines
  - Relied on API RP 80
  - Operator misuse of ambiguous language
  - PHMSA created Types A and B pipelines, depending on population adjacent to the pipeline (class locations) and operating pressures

Gathering Pipelines

- Shale development doesn't fit risk analysis
  - Large diameter (8 – 30")
  - Transmission type pressures (MAOP's up to 1480 pisg)
  - Multiple wells on single site
- Continued incidents on gathering pipelines in Class 1 areas

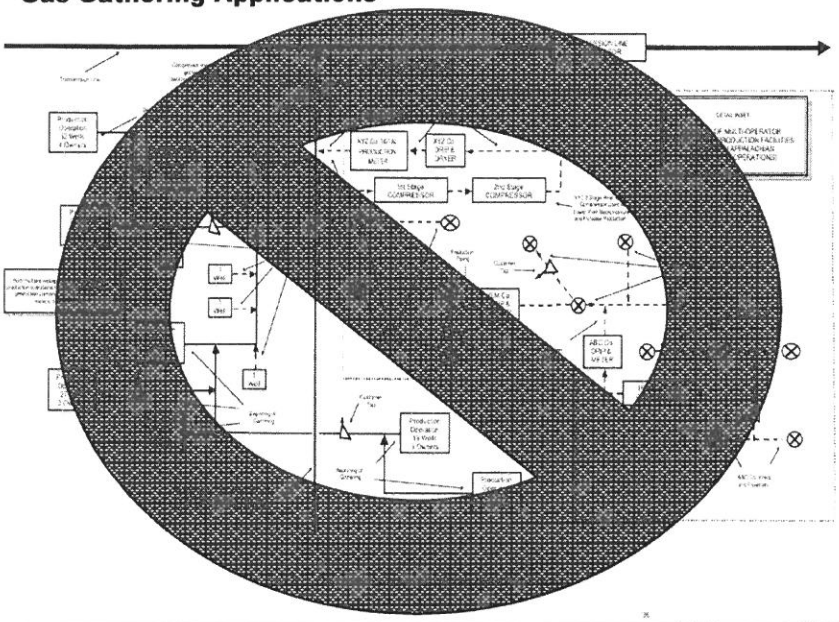
Gathering Pipelines

- NPRM designed to address:
  - Shale development
  - Regulatory ambiguities and oversights
  - NTSB concerns
  - NAPSR concerns

Gathering Pipelines

- Will modify regulations for onshore gas gathering pipelines
  - Repeal use of API RP80
  - Redefine gathering pipelines
  - Extend regulations for pipelines ≥ 8 inches in Class 1 locations
  - Extend reporting requirements for regulated gathering pipelines

API RP 80 figure B-11 Typical Appalachian Production and Gas Gathering Applications



Gathering Pipelines

- §191.1 – Scope for Reporting Requirements
  - This part prescribes requirements for the reporting of incidents, safety-related conditions, exceedances of maximum allowable operating pressure (MAOP), annual pipeline summary data, National Operator Registry information, and other miscellaneous conditions …
  - This part applies to offshore gathering lines and to onshore gathering lines, whether **designated as "regulated onshore gathering lines" or not** (as determined in § 192.8).

Gathering Pipelines

- §191.23 – Safety Related Conditions
  (5) Any malfunction or operating error that causes the pressure of a distribution or gathering pipeline … to rise above its maximum allowable operating pressure plus the margin (build-up) allowed for operation of pressure limiting or control devices.

Gathering Pipelines

- §191.29 – National Pipeline Mapping System
  (c) This section does not apply to gathering lines.

§192.3 - Definitions

Dry gas or dry natural gas means gas with less than 7 pounds of water per million (MM) cubic feet and not subject to excessive upsets allowing electrolytes into the gas stream.

§192.3 – Definitions

Gas processing plant means a natural gas processing operation, other than production processing, operated for the purpose of extracting entrained natural gas liquids and other associated non-entrained liquids from the gas stream and does not include a natural gas processing plant located on a transmission line, commonly referred to as a straddle plant.

§192.3 – Definitions

Gas treatment facility means one or a series of gas treatment operations, operated for the purpose of removing impurities (e.g., water, solids, basic sediment and water, sulfur compounds, carbon dioxide, etc.) that is not associated with a processing plant or compressor station and is not on a transmission line.

§192.3 – Definitions

Gathering line (Onshore) means a pipeline, or a connected series of pipelines, and equipment used to collect gas from the endpoint of a production facility/operation and transport it to the furthermost point downstream of the following endpoints:

§192.3 – Definitions

Gathering line (definition)

(1) The inlet of 1st gas processing plant, unless the operator submits a request for approval to the Associate Administrator of Pipeline Safety that demonstrates, using sound engineering principles, that gathering extends to a further downstream plant other than a plant located on a transmission line and the Associate Administrator of Pipeline Safety approves such request;

§192.3 – Definitions

Gathering line (definition)

(2) The outlet of gas treatment facility that is not associated with a processing plant or compressor station;

(3) Outlet of the furthermost downstream compressor used to facilitate delivery into a pipeline, other than another gathering line; or

§192.3 – Definitions

Gathering line (definition)

(4) The point where separate production fields are commingled, provided the distance between the interconnection of the fields does not exceed 50 miles, unless the Associate Administrator of Pipeline Safety finds a longer separation distance is justified in a particular case (see § 190.9).

§192.3 – Definitions

Gathering line (definition)

Gathering may continue beyond the above endpoints to the point gas is delivered into another pipeline, provided that it only does the following:

(i) It delivers gas into another gathering line;

(A) It does not leave the operator's facility surface property (owned or leased, not necessarily the fence line);

(B) It does not leave an adjacent property owned or leased by another pipeline operator's property—where custody transfer takes place; or

(C) It does not exceed a length of one mile, and it does not cross a state or federal highway or an active railroad; or

§192.3 – Definitions

Gathering line (definition)

(ii) It transports gas to production or gathering facilities for use as fuel, gas lift, or gas injection gas.

Pipelines that serve residential, commercial, or industrial customers that originate at a tap on gathering lines are not gathering lines; they are service lines and are commonly referred to as farm taps.

§192.3 – Definitions

Gathering line (definition)

Pipelines that serve residential, commercial, or industrial customers that originate at a tap on gathering lines are not gathering lines; they are service lines and are commonly referred to as farm taps.

<u>Service lines are regulated distribution pipelines</u>

§192.3 – Definitions

- ***Onshore production facility* or *onshore production operation*** means wellbores, equipment, piping, and associated appurtenances confined to the physical acts of extraction or recovery of gas from the earth and the initial preparation for transportation. Preparation for transportation does not necessarily mean the gas will meet "pipeline quality" specifications as may be commonly understood or contained in many contractual agreements. Piping as used in this definition may include individual well flow lines, equipment piping, and transfer lines between production operation equipment components. Production facilities terminate at the furthermost downstream point where: 1) measurement for the purposes of calculating minerals severance occurs; or 2) there is commingling of the flow stream from two or more wells.

§192.3 – Definitions

- ***Onshore production facility* or *onshore production operation***

…Production facilities terminate at the furthermost downstream point where:

1) measurement for the purposes of calculating minerals severance occurs; or

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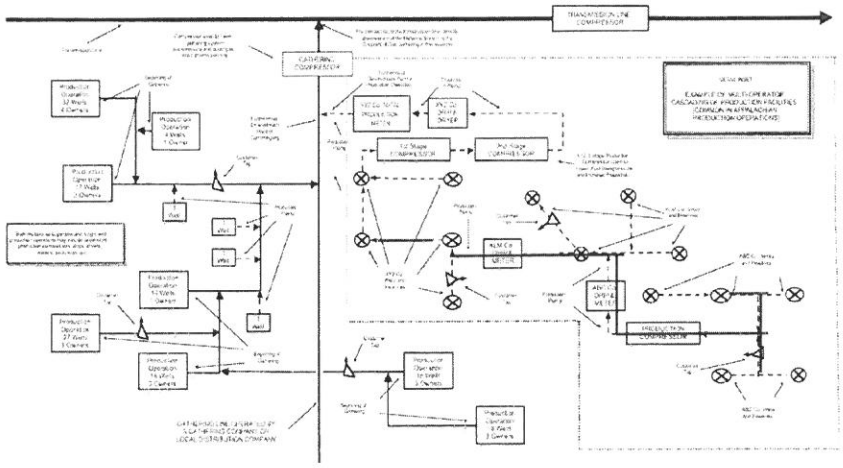
API RP 80 figure B-11 Typical Appalachian Production and Gas Gathering Applications



Gathering Pipelines

§192.8 – How are onshore gathering lines and regulated onshore gathering lines determined?

(a) Each operator must determine and maintain records documenting the beginning and endpoints of each gathering line it operates using the definitions of onshore production facility (or onshore production operation), gas processing facility, gas treatment facility, and onshore gathering line as defined in §192.3…

Gathering Pipelines

§192.8 – How are onshore gathering lines and regulated onshore gathering lines determined?

(b) Each operator must determine and maintain records documenting the beginning and endpoints of each regulated onshore gathering line it operates as determined in § 192.8(c)…

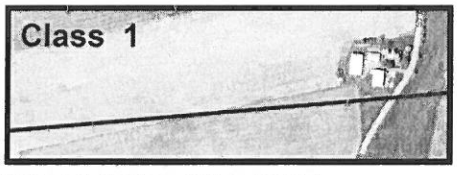
§192.8(c)

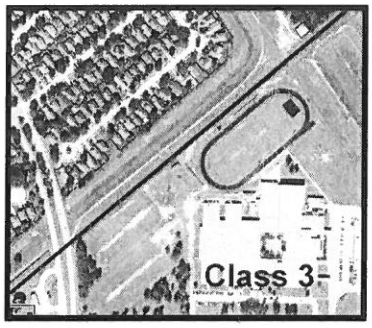
Type	Feature	Area	Safety Buffer
A	- Metallic and the MAOP produces a hoop stress of 20 % or more of SMYS. - Non-metallic and the MAOP >125 psi	Area 1. Class 2, 3, or 4 locations (see §192.5). **Area 2. Class 1 location with a nominal diameter of 8 inches or greater**	None.

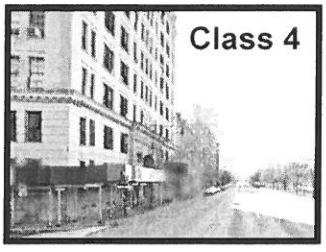
§192.8(c)

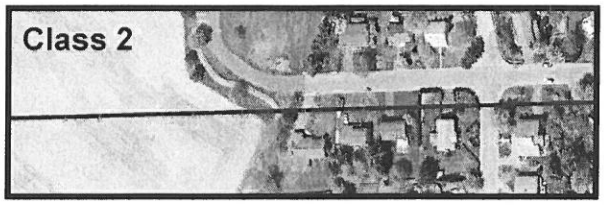
Type	Feature	Area	Safety Buffer
B	- Metallic and the MAOP produces a hoop stress of less than 20% SMYS -Non-metallic and the MAOP is 125 psig or less	Area 1. Class 3 or 4 location Area 2. An areas within Class 2 location that the operator determines by using any of the following 3 methods: (a) A class 2 location (b) An area extending 150 feet on each side of the centerline of any continuous 1 mile of pipeline and including more than 10 but fewer than 46 dwellings (c) An area extending 150 feet on each side of the centerline of any continuous 100 feet of pipeline and including 5 or more dwellings.	None If the gathering line is in Area 2(b) or 2(c), the additional lengths of line extend upstream and downstream from the area to a point where the line is at least 150 feet (45.7 m) from the nearest dwelling in the area. However, if a cluster of dwellings in Area 2 (b) or 2(c) qualifies a line as Type B, the Type B classification ends 150 feet (45.7 m) from the nearest dwelling in the cluster.

Class Locations 1 to 4





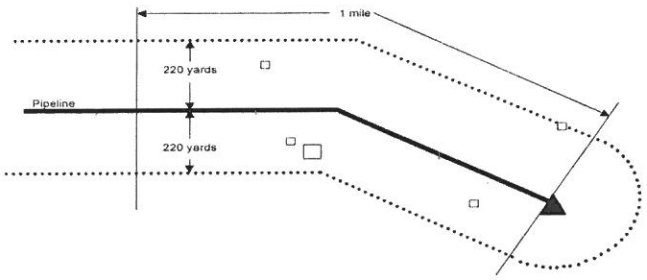




- 32 -

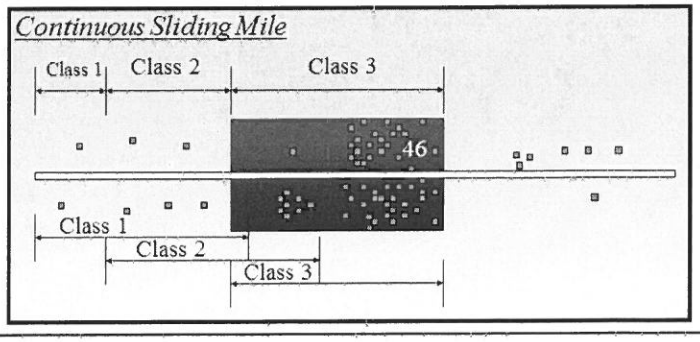
Class Location Definition §192.5

The *class location unit* is an onshore area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline.



Class Location Definition §192.5

- determined by the buildings suitable for human occupancy in the *class location unit*.
- each separate dwelling unit in a multiple dwelling building is counted as a separate building intended for human occupancy.



Class Location Definition §192.5

- **Class 1** - 10 or less buildings intended for human occupancy or an offshore area.
- **Class 2** - Greater that 10 but less than 46 buildings intended for human occupancy.

Class Location Definition §192.5

- **Class 3 –**
  - 46 or more buildings intended for human occupancy; or
  - where the pipeline lies within 100 yards of either a building or a small, well-defined outside area
    - Playground or Recreation Area
    - Outdoor Theater
    - Other place of pubic assembly
  - Occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period

Class Location Definition §192.5

- Class 4 - where buildings with four or more stories aboveground are prevalent.

§192.9(c) Requirements

Type A, Area 1

- Comply with the requirements of this part applicable to transmission lines, except for requirements §§ 192.13 , 192.150, 192.319, 192.461(f), 192.465(f), 192.473(c), 192.478 , 192.710, 192.713 , and in subpart O (IM) of this part.
- Class 2 location compliance with Subpart N by describing process for OQ

Requirements

- Subpart L – Operations
  - O&M manual, emergency plans, odorization, MAOP, class changes, continuing surveillance, damage prevention (one-call), public awareness
- Subpart M – Maintenance
  - Patrols, valve inspections, OPP inspections, leak patrols, repairs, pipeline markers
- Subpart I – Corrosion Control
  - Cathodic protection readings, internal corrosion monitoring, examination of pipe when exposed
- Subpart N – Operator Qualification

Requirements

For new installations, repairs and replacements

- Subpart B – Materials
- Subpart C - Pipe Design
- Subpart D – Pipeline Components
- Subpart E – Welding
- Subpart F – Other Material Joining
- Subpart G – Construction
- Subpart J - Testing

§192.9(d) Requirements

Type A, Area 2, and Type B lines

(1) If a line is new, replaced, relocated, or otherwise changed, the design, installation, construction, initial inspection, and initial testing must be in accordance with requirements of this part applicable to transmission lines;

(2) If the pipeline is metallic, control corrosion according to requirements of subpart I of this part applicable to transmission lines;

§192.9(d) Requirements

Type A, Area 2, and Type B lines

(3) Carry out a damage prevention program under § 192.614;

(4) Establish a public education program under § 192.616;

(5) Establish the MAOP of the line under § 192.619;

(6) Install and maintain line markers according to the requirements for transmission lines in § 192.707;

§192.9(d) Requirements

Type A, Area 2, and Type B lines

(7) Conduct leakage surveys in accordance with § 192.706 using leak detection equipment and promptly repair hazardous leaks that are discovered in accordance with § 192.703(c); and

(8) For a Type A, Area 2 regulated onshore gathering line only, develop procedures, training, notifications, emergency plans and implement as described in §192.615.

§192.9(e) Requirements

If a regulated onshore gathering line was not previously subject to this part, operator has until (2 years) to comply with the applicable requirements of the section

§192.9(f) Requirements

If a change in class location or increase in dwelling density causes an onshore gathering line to be a regulated line, operator has:

1 year for Type A, Area 2

1 year for Type B

2 years for Type A, Area 1

To comply with this section

§192.452 - Corrosion

(b) *Regulated onshore gathering lines.* For any regulated onshore gathering line under §192.9 existing on ***(insert effective date of the rule)***, that was not previously subject to this part, and for any onshore gathering line that becomes a regulated onshore gathering line under §192.9 after April 14, 2006, because of a change in class location or increase in dwelling density:

§192.7 – Incorporated by Reference

Consensus standards adopted by PHMSA instead of writing own regulations

Added standards related to:

- In-lines inspection and qualification
- Stress corrosion cracking
- Internal corrosion direct assessment
- Seam and crack investigation documents

Removed API RP 80

So what do I do?

- Start collecting information about
  - Pipeline locations
  - Population adjacent to the pipeline
- Determine class locations
- Determine potentially jurisdictional areas under new definition

So what do I do?

- Obtain pressure charts on pipelines to use in determining MAOP
- Operations and maintenance manuals, emergency plans
- Damage prevention/WV811
- Operator Qualification
- Documentation for decisions

HB4218

- Effective June 12, 2016
- Recommendation by the West Virginia Commission on Oil and Natural Gas Industry Safety,
- Bill expands the definition of underground facility subject to One-Call membership
- …any underground production or gathering pipeline for gas, oil, or any hazardous substance with a nominal inside diameter in excess of four inches and that is not otherwise subject to one-call reporting requirements under federal or state law

SB445

- Effective June 11, 2016
- Require well operators and pipeline operators to report certain emergency incidents to the Division of Homeland Security and Emergency Management within fifteen minutes, unless exceptions apply.

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