



Pipeline Safety- Final Rule

Safety of Gas Transmission Pipelines (RIN 1)



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

PHMSA: Your Safety is Our Mission



Brief History of Gas Rule

- Why was this rule updated needed?
- Major incidents that prompted rule making effort
- Post incident actions taken



September 9, 2010 -PG&E incident at San Bruno, CA

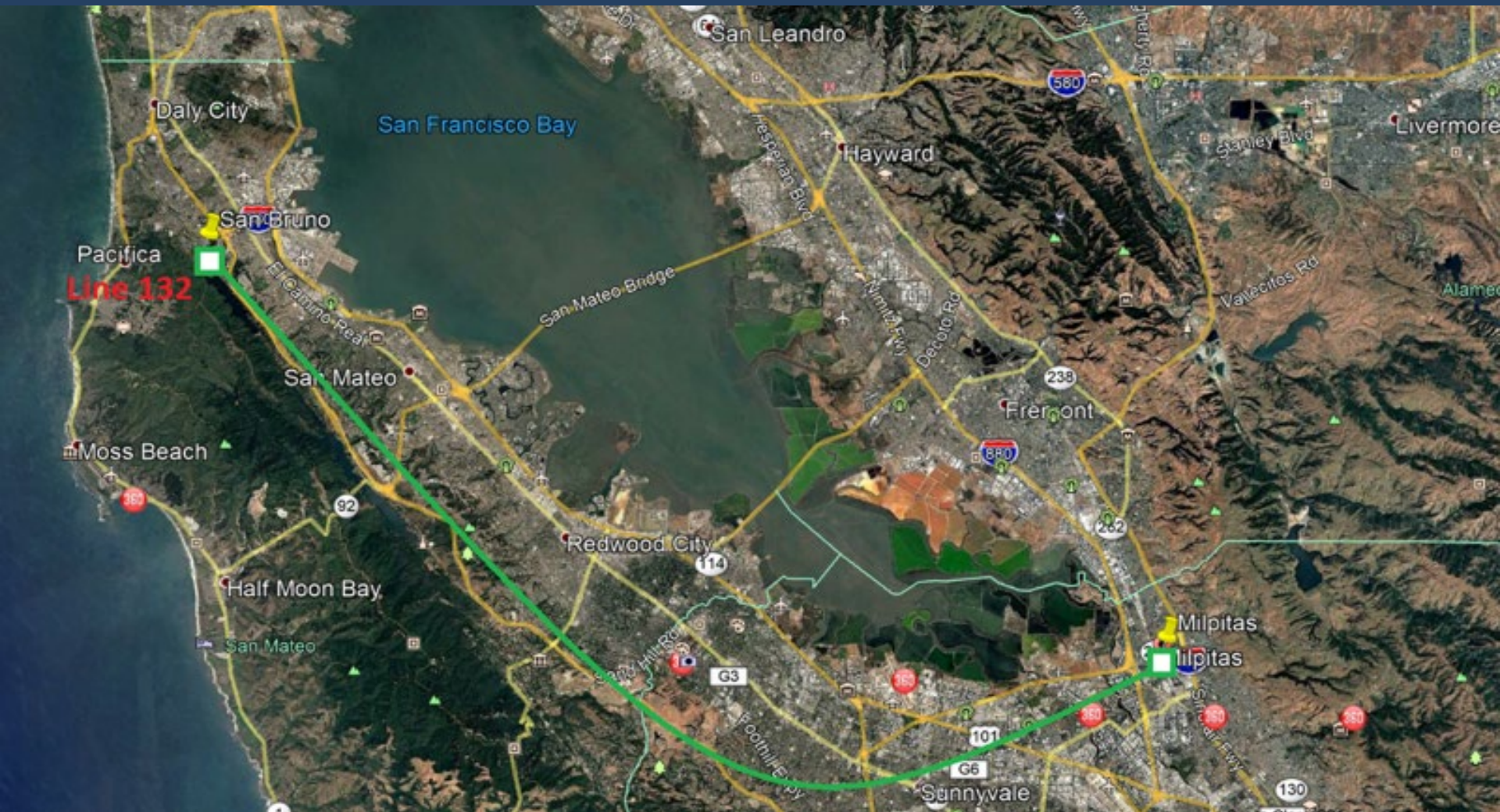


U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

PHMSA: Your Safety is Our Mission



PG&E incident at San Bruno, CA



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

PHMSA: Your Safety is Our Mission



PG&E incident at San Bruno, CA



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

PHMSA: Your Safety is Our Mission



Post incident San Bruno, CA

- Jan 3 - Sept 26, 2011-NTSB issues recommendations to PHMSA, CPUC, PG&E, AGA, and INGAA.
- August 25, 2011-PHMSA issues Gas ANPRM
- January 3, 2012- Pipeline Safety Act of 2011 issued
 - Included several mandates correlating to PG&E investigation findings

6



Dec.11, 2012 - Incident near Sissonville, WV

- Columbia Gas Transmission
- 20” natural gas transmission pipeline



December 11, 2012 - Incident near Sissonville, WV



Post incident Sissonville WV

- March 5, 2014 - NTSB issues 4 recommendations
- April 8, 2016 - PHMSA issues Gas NPRM



Amdt No. 192-125

MAOP Reconfirmation, Expansion Assessment Requirements, and Other Related Amendments.

Published Date. 10/1/2019

Effective Date 7-1-2020

-
1
0



Part 192 Major Areas Revised

- Verification of pipeline (§192.607)
- MAOP Reconfirmation (§192.624)
- Seismicity and Other IM clarifications (§192.917)
- 6-Month Grace Period (§192.939)
- ILI Launcher and Receiver Safety (§192.750)
- Strengthening Requirements for Assessment Methods (§§192.150, 192.493, 192.921, 192.937, Appendix F)
- Assessments outside HCAs (§§192.3, 192.710)

1
1



Verification of Pipeline Material...

- PHMSA added a new §192.607
 - (a) Applicable to Onshore Steel Transmission pipelines
 - (b) Documentation of Material...
 - Records must be Traceable, Verifiable & Complete (TVC)
 - Records must be kept for life of the pipeline
 - (c) Verification of Material...
 - Operators who do not have TVC records must develop and implement procedures...

1
2



Verification of Pipeline Material...

...For conducting nondestructive and destructive tests to verify material properties...

- Need procedures for aboveground pipe and buried pipe

(d) Special requirements for nondestructive methods

- Lists three requirements for procedures developed in accordance with par (c) for nondestructive methods

(e) Sampling Multiple Segments of pipe

- For a population of comparable segments of pipe without TVC records
- Operators may use a Sampling program...

1
3



Verification of Pipeline Material...

- ...in accordance with the five specific requirements listed under this paragraph

(f) Components

- For mainline pipeline components other than pipe
- Must develop procedures for establishing & documenting ANSI rating or pressure rating (in accordance with ASME/ANSI B16.5)



Verification of Pipeline Material...

(g) Uprating

- Cannot use properties determined by destructive or nondestructive testing to raise the Grade or specification of the material,
- Unless the original grade is unknown and MAOP is Based on an assumed yield strength or 24,000 psi in accordance with §192.107(b)(2)



MAOP Reconfirmation

- PHMSA added a new §192.624

- (a) Applicability

- Operators of onshore steel pipelines Must reconfirm MAOP if either of the following conditions exist...
 1. Do not have TVC records for establishing MAOP per §192.619 (a)(2) and pipeline is in an HCA or class 3 or 4 location
 2. MAOP was established per §192.619(c), and is 30% or more of SMYS and pipeline is in one of the following areas: HCA, MCA or class 3 or 4 location



MAOP Reconfirmation

(b) Procedures and completion dates. Operators Of pipelines subject to this section had to have procedures developed and documented by July 1st, 2021.

- Complete all actions required on at least 50% of pipeline mileage by July 3rd, 2028
- Must have all actions on 100% of pipeline mileage complete by July 2nd, 2035 or as soon as practicable but not to exceed 4 years...
- Operators may petition for an extension of the completion deadline by up to one year, notification must be submitted in accordance with §192.18



MAOP Reconfirmation

(c) Maximum allowable operating pressure determination. Operators must reconfirm using one of the following methods:

Method 1: Pressure test

- Must verify material properties in accordance with §192.607

Method 2: Pressure Reduction.

- Highest actual operating pressure in previous 5 years from Oct 1, 2019

Method 3: Engineering Critical analysis (ECA)

- Conduct ECA in accordance with §192.632



MAOP Reconfirmation

(c) Maximum allowable operating pressure determination. Operators must reconfirm using one of the following methods (cont')

Method 4: Pipe replacement

- Replace pipe in accordance with this part

Method 5: Pressure reduction for Pipeline segments with small Potential impact radius(PIR)

- Specific instruction for establishing MAOP for pipelines with PIR of 150 feet or less

Method 6: Alternative Technology

- Must notify PHMSA in advance in accordance with §192.18 if planning to use alternative technology



MAOP Reconfirmation

(d) Records

- Operator must retain records of investigations, tests, analyses, assessments, repairs, replacements, alterations, and other actions taken in accordance with the requirements of this section for the life of the pipeline.



MAOP Reconfirmation

- PHMSA added a new §192.506
 - This new section was added to codify the minimum standards for performing spike hydrostatic tests when operators are required to, or elect to use this assessment method.



Seismicity and other IM clarifications

- PHMSA revised §192.917 (a)(3) & (e)(4) And added a new paragraph §192.917(e)(6)
 - (a)(3) was revised to include seismicity of the area in evaluating the threat of outside force damage.
 - (e)(4) Additional requirements were added for the assessment of low frequency ERW pipe with seam failures
 - (e)(6) was added to include specific IM requirements for addressing the threat of cracks and crack like defects.



6-Month Grace Period

- PHMSA revised §192.939
 - (a) Pipelines operating at or above 30% SMYS..... Operators may request a 6-month extension of the 7-calendar- year reassessment interval if the operator submits written notice to OPS, in accordance with §[192.18](#), with sufficient justification of the need for the extension.



ILI Launcher and Receiver Safety

- PHMSA added a new §192.750
 - Any launcher or receiver used after July 1, 2021, must be equipped with a device capable of safely relieving **pressure** in the barrel before removal or opening of the launcher or receiver barrel closure or flange and insertion or removal of in-line inspection tools...



Strengthening Assessment Requirements

- PHMSA added or revised §§192.150, 192.493, 192.921, 192.937, and Appendix F
 - Industry standards for ILI -§192.150 revised & 192.493 added
 - Expand Assessment methods allowed for IM -§§192.921(a) and 192.937(c)
 - Guided Wave Ultrasonic Testing- added Appendix F

-
2
5



Assessments Outside HCAs

- PHMSA revised §192.3 Introducing a new definition for Moderate consequence Area(MCA)
- Added new §192.710 requiring operators to assess areas outside of HCAs
 - Only applicable to Transmission pipelines operating at 30% or more of SMYS and located in class 3 or 4 location or an MCA as defined in §192.3



MAOP Exceedance Reporting Amdt. 191-26 & 192-125

- PHMSA revised §§191.23 & 191.25
 - §191.23 Paragraph (a)(6) was revised, paragraph (a) (10) was Added, and paragraph (b)(4) was revised.
 - §191.25 was revised to incorporate new filing requirements for the new SRC identified in §191.23





Steven W. Kirkland
PHMSA Training & Qualifications
Steven.Kirkland@dot.gov
405-423-1353

