US DOT
Pipeline and Hazardous Materials Safety Administration (PHMSA)

Pipeline Safety Indicators & Transparency Forum

Pipeline Safety Trust (PST) and Canadian Energy Pipeline Association (CEPA)
Calgary, Alberta

811
Know what's below.
Call before you dig.

May 19, 2016
Blaine Keener

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

PHMSA Data & Statistics

- 49 CFR Parts 191, 192, 194, and 195 require pipeline operators to submit reports to PHMSA:
  - Gas Distribution
  - Gas Gathering – PHMSA regulates about 5%
  - Gas Transmission
  - Hazardous Liquid and Liquefied Carbon Dioxide
- Annual reports include infrastructure and integrity management performance measures
- Incident report criteria are different for Gas and Liquid
- Annual, Incident, and other data available at http://www.phmsa.dot.gov/pipeline/library/data-stats

Gas Data Quality and Analysis Team

- Formed late in 2013 to develop meaningful analysis of data submitted to PHMSA by pipeline operators
- Team Members
  - American Gas Association ***co-chair***
  - Interstate Natural Gas Association of America (INGAA)
  - American Public Gas Association (APGA)
  - PHMSA/Office of Pipeline Safety (OPS) ***co-chair***
  - Pipeline Safety Trust (PST)
  - State Pipeline Safety Agencies – 2 out of 51
- Published Gas Performance Measures late in 2015

Gas Distribution Performance Measures

http://www.phmsa.dot.gov/pipeline/library/data-stats/performance-measures

Serious Incident per Mile trend & cause pie

Significant Incident per Mile 3 trends

Leaks per Mile 3 trends & 2 cause pies

Excavation Damage 2 trends

Cast and Wrought Iron 2 trends

Steel Miles – Bare and Unprotected 3 trends

Miles by Decade Installed 6 trends

Gas Transmission Performance Measures

http://www.phmsa.dot.gov/pipeline/library/data-stats/performance-measures

Serious Incident per Mile trend & cause pie

Onshore Significant Incident per Mile 3 trends, also ***HCA and non-HCA*** trends & cause pies

HCA Immediate Repair per Mile trend

HCA Leaks & ILI Detectability 2 trends & cause pies

Steel Miles – Bare and Unprotected 2 trends

Miles by Decade Installed 5 trends

Onshore Pipeline Significant Incident Rates per Decade rate chart and cause chart

Pipeline Performance Measure Anatomy

Title & Date

Gas Transmission Onshore Significant Incidents per 1,000 Miles

Time run: 11/12/2015 4:48:30 PM

Data Source: US DOT Pipeline and Hazardous Materials Safety Administration
Data as of **11/11/2015**

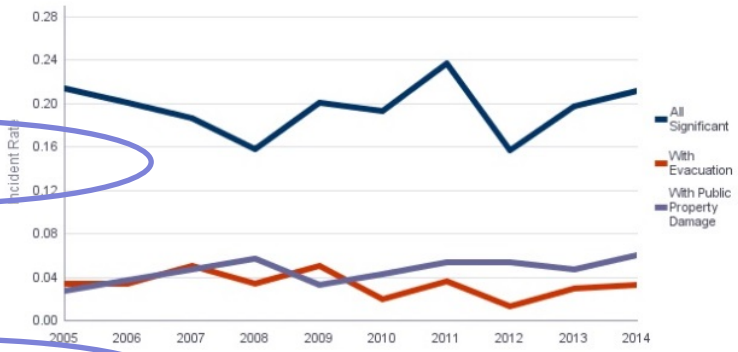
Analysis

The gas transmission **Significant Incident** per 1,000 mile rate has fluctuated since 2005 and remained flat overall.

People have been evacuated from buildings near the incident in only 17% of the **Significant Incidents**. The rate of Significant Incidents with evacuation has remained flat since 2005.

Property not owned by the pipeline operator is damaged in about one quarter of the **Significant Incidents**. The rate of Significant Incidents with public property damage has doubled since 2005.

Chart



Safety Program View

Report Details

Operator View

Report Details **Operator View** **IM Safety Program View**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Significant Incidents	63	59	55	47	60	58	71	47	59	63
Onshore Miles	294,800	293,706	294,939	297,267	298,977	299,358	299,730	298,571	298,287	297,892
Significant Incidents with Evacuation	10	10	15	10	15	6	11	4	9	10
Significant Incidents with Public Property Damage	8	11	14	17	10	13	16	16	14	18

Numerator & Denominator

Significant Incidents include a fatality, or an injury requiring overnight, in-patient hospitalization, or $50,000 or more in total costs, measured in 1984 dollars.

Terms & Definitions

Pipeline Performance Measure Anatomy

Title & Date

Data generally refreshed each business day

Gas Transmission Onshore Significant Incidents per 1,000 Miles

Time run: 11/12/2015 4:48:30 PM

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Data as of **11/11/2015**

Pipeline Performance Measure Anatomy
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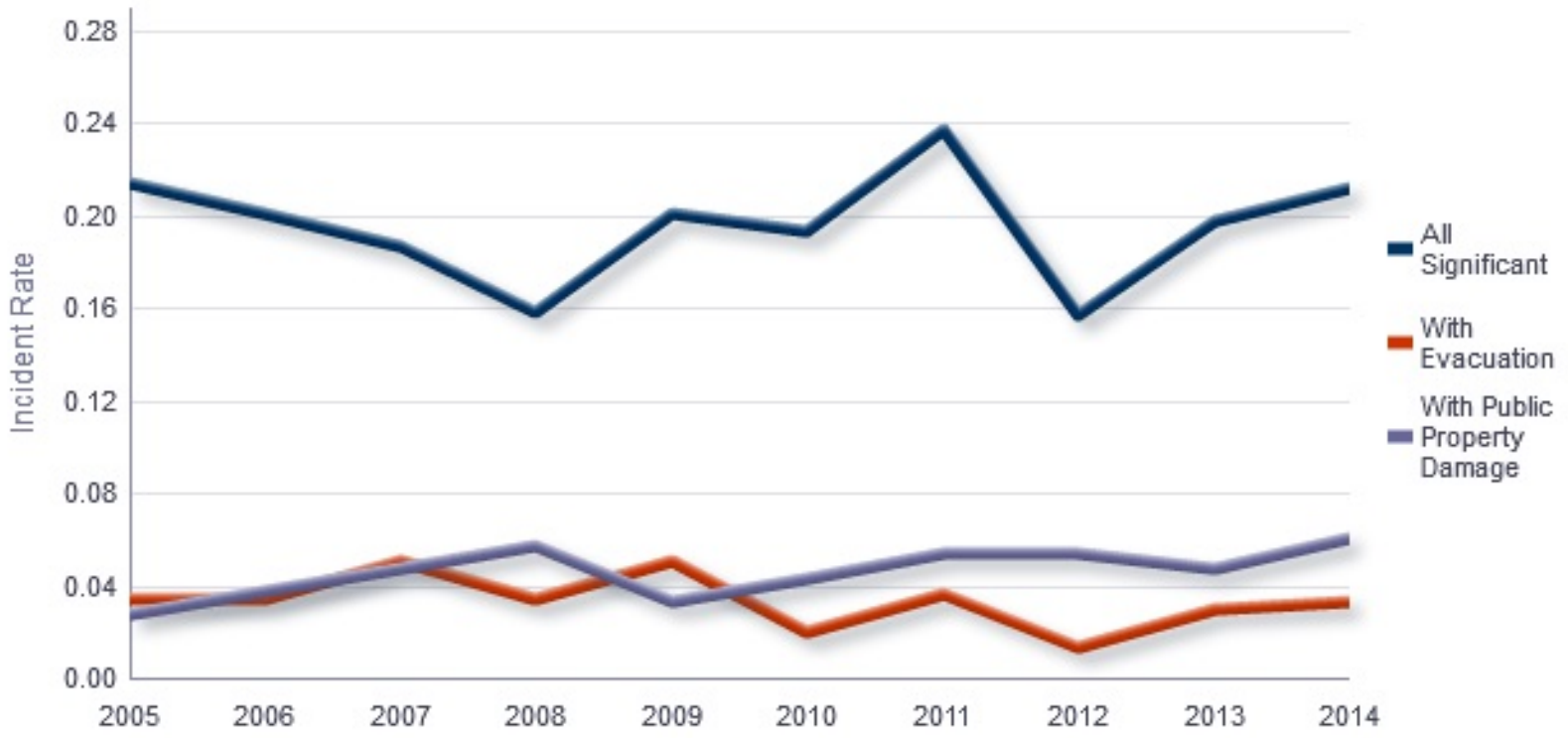
Pipeline Performance Measure Anatomy
Chart

Line, bar, or pie



Pipeline Performance Measure Anatomy
Numerator & Denominator

When the measure includes a rate per mile, the numerator and denominator are displayed below the chart

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Pipeline Performance Measure Anatomy
Terms & Definitions

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Pipeline Performance Measure Anatomy "Report Details" Link

When the measure includes incidents, this link load a report with incident details and link to Pdf of the entire report

Gas Transmission Onshore Significant Incidents 2005 - 2014

Time run: 11/12/2015 5:51:09 PM

Data Source: US DOT Pipeline and Hazardous Materials Safety Administration
Data as of **11/11/2015**

Notes:
IM is Integrity Management

Pdf	Operator ID	Operator Name	Incident Year	Incident Date	Incident County	Incident State	Report ID	Serious?	Significant?	In In
Pdf	22655	WBI ENERGY TRANSMISSION, INC.	2014	12/30/2014	GOLDEN VALLEY	NORTH DAKOTA	20150011	No	Yes	IN
Pdf	15007	PACIFIC GAS & ELECTRIC CO	2014	12/23/2014	BUTTE	CALIFORNIA	20150010	No	Yes	IN

Pipeline Performance Measure Anatomy "Operator View" Link

Loads a report of the measure ranking individual operators

Gas Transmission Onshore Significant Incidents per 1,000 Miles – Operators with 100 or more onshore miles

Time run: 11/12/2015 5:47:40 PM

Data Source: US DOT Pipeline and Hazardous Materials Safety Administration
Data as of: 11/11/2015

Operator ID	Operator Name	10 Year Average (incidents per 1,000 miles)	5 Year Average (incidents per 1,000 miles)	10 Year Significant Incident Count	5 Year Significant Incident Count	2014 Miles
32262	PAA NATURAL GAS STORAGE, LLC	1.15	2.30	2	2	174
12350	CENTERPOINT ENERGY RESOURCES CORP., DBA CENTERPOINT ENERGY MINNESOTA GAS	1.15	2.29	2	2	157
2596	COLUMBIA GAS OF OHIO INC	0.77	1.54	1	1	130
32113	ENLINK NORTH TEXAS PIPELINE, LP	0.74	1.47	1	1	136

Pipeline Performance Measure Anatomy "Safety Program View" Link

Loads a report of the measure ranking safety programs

Gas Transmission Onshore Significant Incidents per 1,000 Miles – IM Safety Program with 100 or more onshore miles

Time run: 11/12/2015 5:49:49 PM

Data Source: US DOT Pipeline and Hazardous Materials Safety Administration
Data as of: 11/11/2015

IM Safety Program Name	2012 and Forward (incidents per 1,000 miles)	2012 and Forward Significant Incident Count	2014 Onshore Miles
PLAINS	3.83	2	174
COLUMBIA GAS OF OHIO INC	2.57	1	130
CENTERPOINT ENERGY RESOURCES CORP., DBA CENTERPOINT ENERGY MINNESOTA GAS	2.12	1	157
VIRGINIA NATURAL GAS	1.74	1	191
LACLEDE GAS CO	1.44	1	231
TARGA	1.08	1	219

Gas Pipeline Performance Measures Next Steps

- Establish ***performance targets*** for 2016 and beyond
- Monitor and ***report on performance*** for each measure as time marches on
- Discuss improvements to measures or additional measures, including new data needed for additional measures

DRAFT
Hazardous Liquid, excluding CO_2, Performance Measures

Serious Incident, Fatalities, Injuries 3 trends

Pipeline Right-of-Way Accidents Impacting People or Environment 2 trends

Integrity Inspection Targets for Pipeline Right-of-Way Accidents Impacting People or Environment 2 trends

Operations and Maintenance Targets for Pipeline Right-of-Way Accidents Impacting People or Environment 2 trends

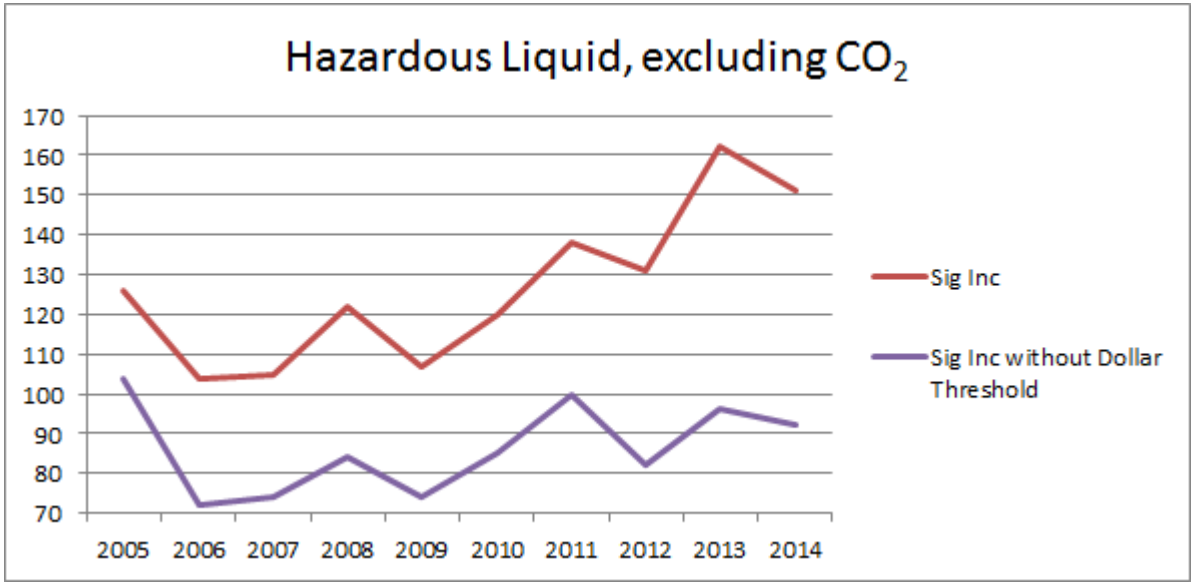
Miles Inspected 7 trends

Hazardous Liquid (HL) Significant Incidents

Accident reports including any of the following:

1. Fatality or injury requiring in-patient hospitalization
2. ***$50,000 or more in total costs, measured in 1984 dollars***
3. Highly volatile liquid (HVL) releases of 5 barrels or more
4. Non-HVL liquid releases of 50 barrels or more
5. Liquid releases resulting in an unintentional fire or explosion

Is "$50k in 1984 dollars" meaningful for safety?



Questions?

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