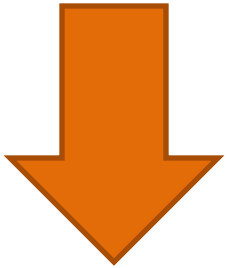
U.S. DOT
Pipeline and Hazardous Materials Safety Administration

PHMSA Rulemaking Update
Thursday, August 25, 2016
1:30-2:15 PM

2016 TGA / TRRC Pipeline Safety Conference

Gas NPRMs can be found here



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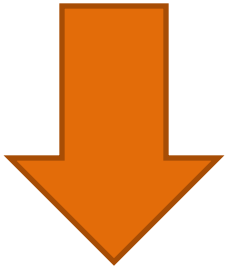

or linked on the PHMSA website

PHMSA Website Locations for Regulatory Status

Interpretations (Search by date or regulation)
http://www.phmsa.dot.gov/pipeline/regs/interps

Special Permits and State Waivers
http://www.phmsa.dot.gov/pipeline/regs/special-permits

Rulemakings (tabular with links to detail)
http://www.phmsa.dot.gov/pipeline/regs/rulemaking

Advisory Bulletins (tabular with links to detail)
http://www.phmsa.dot.gov/pipeline/regs/advisory-bulletin

And more ....

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PHMSA Resources

Rulemaking

The PHMSA Office of Pipeline Safety periodically issues rulemaking documents that propose or adopt changes to the regulations. You may participate in the rulemaking process by filing written comments on any rulemaking document that asks for comments, attending a public meeting, or by filing a petition for rulemaking that asks us to add, amend, or delete a regulation.

This section provides a list of recently published notices of proposed rulemaking, final rules, and a list of resources describing the rulemaking process. To view other regulatory actions, select one of the topics on the Mini-Menu to the right.

This site does not include all the documents associated with a particular rulemaking. If you want to review all the documents associated with a particular rulemaking or if you want to comment on a rule go on to http://www.regulations.gov.

Rulemakings

81 FR 20722	Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines	Apr 8, 2016
80 FR 61610	Pipeline Safety: Safety of Hazardous Liquid Pipelines.	Oct 13, 2015
80 FR 58633	Pipeline Safety: Miscellaneous Changes to Pipeline Safety Regulations: Response to Petitions for Reconsideration	Sep 30, 2015
80 CFR 43836	Pipeline Safety: Pipeline Damage Prevention Programs, Action: Final Rule	Jul 23, 2015
EFV NPRM PHMSA-2011-0009	Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences	Jul 15, 2015
80 FR 39916	Pipeline Safety: Operator Qualification, Cost Recovery, Accident and Incident Notification, and Other Pipeline Safety Proposed Changes	Jul 10, 2015
PHMSA NPRM - Accident Notification-OQ June 2015	Pipeline Safety: Operator Qualification, Cost Recovery, Accident and Incident	Jun 29, 2015

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PHMSA Technical Advisory Committee Meeting June, 2016

- http://www.phmsa.dot.gov/pipeline/june1-to-june3-2016-gas-liquid-and-joint-committee-meetings
- Key Gas Topics from Joint meeting included:
  - Plastic Pipe Proposed Rule
  - Operator Qualification Proposed Rule
  - Gas Transmission and Gas Gathering Proposed Rule

June 1-3, 2016 - Gas, Liquid and Joint Committee Meetings

Pipeline Safety: Meeting of the Gas Pipeline Safety Advisory Committee and the Liquid Pipeline Safety Advisory Committee

Register here: https://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=113

Meeting Details and Agenda

The Pipeline and Hazardous Materials Safety Administration will hold meetings of the GPAC and LPAC. The GPAC will be considering and voting on the notice of proposed rulemaking (NPRM) titled: Pipeline Safety: Plastic Pipe Rule (80 FR 29263; May 21, 2015), and in a joint meeting of the GPAC and LPAC, members will consider and vote on the NPRM titled: Pipeline Safety: Operator Qualification, Cost Recovery, Accident and Incident Notification, and Other Pipeline Safety Proposed Changes (80 FR 39916; July 10, 2015). Other topics of discussion will include the regulatory agenda and agency and stakeholder priorities. A briefing on the NPRM, titled: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines (81 FR 20722; April 8, 2016), will also be presented to both committees and the public.

The agenda will be published to include committee discussions and votes on the two rules mentioned above. PHMSA staff will also brief the committees on several regulatory and policy initiatives.

DATES: The committees will meet as follows:

- Wednesday, June 1, 2016, from 1:00 p.m. to 5:00 p.m., ET – GPAC only

Related Downloads

- Final Agenda - June 1-3, 2016 - Gas and Liquid Advisory Committee Meeting
- Member Portfolio - rosters, charters, NPRMs, RIAs, comment summaries and more
- Plastic Pipe Presentation
- Operator Qualification Presentation
- SMS Briefing
- Public Outreach - Bridging Divide
- NAS PBSR Study
- Gas Transmission NPRM

Current Rulemakings in Process

Safety of Gas Transmission and Gathering Lines (NPRM stage)

- NPRM published 4/8/2016
  - Comment period closed 7/7/2016
- Major Topics under consideration:
  - Expansion of assessments beyond HCA's – MCA's
  - Repair criteria for both HCA and non-HCA areas
  - Assessment methods
  - Corrosion control
  - Gas gathering; additional reporting and regulations
  - Assessment methods for GT Lines
  - Grandfathered pipe/pipe records/legacy - IVP

Gas IM NPRM Webinar – Be Informed

- Materials from the June 8th Webinar are posted at http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=117

PHMSA

PHMSA Public Meetings and Documents
Time: 05/26/2016 12:35 PM

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Safety of the Nation's Gas Transmission Pipelines - NPRM

Register Here...

WEBINAR: PLEASE REGISTER ASAP. CUT OFF DATE TBD.

Meeting Information	
Status	Scheduled
Starts	Jun 8, 2016 at 1:30 PM EDT
Ends	at 3:00 PM EDT
Virtual Information	This information will be posted 1 week before meeting.
On-Line Registration	Register Here...
Purpose & Summary	This public webinar is being hosted by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) to discuss the proposed rulemaking for the safety of the nation's gas transmission pipelines. learn more about the proposed rule on gas transmission pipelines by attending one of the two planned webinars. At the sessions, PHMSA senior staff will present factual information about the regulatory proposal and will answer clarifying questions intended to help you comment more knowledgeably. Among a number of topics in the rulemaking proposal, PHMSA is proposing to update integrity management (IM) requirements and to address issues related to non-IM requirements for natural gas transmission and gathering pipelines.

Additional Information

PHMSA is extending the comment period from June 7, 2016, to July 7, 2016. All members of the public can submit comments by any of the following methods referencing Docket No. PHMSA-2011-0023:
E-Gov Web Site: http://www.Regulations.gov. This site allows the public to enter comments on any Federal Register notice issued by any agency.
Fax: 1-202-493-2251.
Mail: DOT Docket Management System: U.S. DOT, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.
Hand Delivery: U.S. DOT Docket Management System; West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590-0001, between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.

Instructions: You should identify the Docket No. PHMSA-2011-0023 at the beginning of your comments. If you submit your comments by mail, please submit two copies. To receive confirmation that PHMSA received your comments, include a self-addressed stamped postcard. Internet users may submit comments to the Docket at http://www.regulations.gov.
Note: Comments are posted without changes or edits to http://www.regulations.gov, including any personal information provided.

Agenda

TBD

Register Here...

PHMSA Home | Pipeline Safety Website | Feedback | Privacy Policy | FOIA

Current Rulemakings in Process

EFV Expansion beyond Single Family Residences (NPRM stage)

- NPRM published 7/15/2015; Comment period ended 9/14/2015
- GPAC meeting 12/17/15
- *Major Topics*
  - *Rule proposes to require EFVs for:*
    - *branched service lines serving more than one single family residence*
    - *multi-family residential dwellings*
    - *commercial buildings*
- Final rule anticipated in the fall of 2016

Current Rulemakings in Process

Operator Qualification, Cost Recovery and Other Pipeline Safety Proposed Changes

(NPRM stage)

- NPRM published 7/10/15; comment period ended 9/8/2015
- This rule will address reauthorization issues related to:
  - Operator Qualification for new construction
  - Incident Reporting
  - Cost Recovery
  - Assessment methods for HL lines (NACE petition)
  - Renewal process for special permits
  - API 1104 and in-service welding
- PAC meeting June 1-3, 2016
- Final rule anticipated in the fall of 2016.

Current Rulemakings in Process

Plastic Pipe
(NPRM stage)

- ❑ NPRM published May 21, 2015; Comment period ended 7/31/2015
- ❑ Address the following plastic pipe topics:
  - Authorized use of PA12
  - AGA petition to raise D.F. from 0.32 to 0.40 for PE pipe
  - Tracking and traceability
  - Miscellaneous revisions for PE and PA11 pipelines
  - Additional provisions for fittings used on plastic pipe
- GPAC meeting for June 1-3, 2016

- Final rule anticipated in the fall of 2016

Current Rulemakings in Process

Rupture Detection and Valve Rule (NPRM stage)

- This rule would establish and define rupture detection and response time metrics including the integration of Automatic Shutoff Valves (ASV) and Remote Control Valve (RCV) placement as necessary, with the objective of improving overall incident response
- This rule responds to requirements of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (The Act):
  - Section 4: ASV/RCV or equivalent technology be installed on newly constructed or entirely replaced natural gas and hazardous liquid transmission pipelines 2 years after the act was issued
  - Section 8: Require operators of hazardous liquid pipeline facilities to use leak detection systems and establish standards for their use.
  - The Act also mandated two studies of leak detection and response, one by the GAO, and one by PHMSA.
- Also - Two NTSB Recommendations related to valves and leak detection

Rupture Detection and Mitigation Rule

Projected Date for NPRM Publication-Fall 2016

- Require Valve installation and Minimum Rupture Detection Standards
- Overall intent is that rupture detection metrics will be integrated with ASV and RCV placement with the objective of improving overall incident response
- Propose installation of automatic shutoff valves, remote controlled valves, or equivalent technology and establish performance based meaningful metrics for rupture detection for gas and liquid transmission pipelines

Workshop on U/G Natural Gas Storage

- Solicit input and obtain background information concerning U/G natural gas storage safety.
- The public workshop held on July 14, 2016 in Broomfield, Colorado - http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=115
- Currently, throughout the US, approximately 400 interstate and intrastate underground natural gas storage facilities are operating with more than four trillion cubic feet of natural gas working capacity
- API RP 1170 & 1171 are standards in place that cover design, operation, and mechanical integrity topics on U/G salt cavern storage and depleted reservoirs

Current Rulemakings in Process

Underground Storage Facilities for Natural Gas (NPRM/IFR stage)

- This rule would require operators of underground storage facilities for natural gas to comply with minimum safety standards, including compliance with:
  - API RP 1170, Design and Operation of Solution-mined Salt Caverns Used for Natural Gas Storage
  - API RP 1171, Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs
  - Annual and Incident reporting requirements
- PHMSA is considering adopting the non-mandatory provisions of the RPs in a manner that would make them mandatory, except that operators would be permitted to deviate from the RPs if they provide justification.

Current Rulemakings in Process

Inflation Adjustment of Maximum Civil Penalties (IFR Stage)

- Interim Final Rule Published 6/30/2016
- Revise references in its regulations to the maximum civil penalties for violations of the Federal Pipeline Safety Laws, or any PHMSA regulation or order issued thereunder.
- Under the "Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015," which further amended the "Federal Civil Penalties Inflation Adjustment Act of 1990," federal agencies are required to adjust their civil monetary penalties effective August 1, 2016, and then annually thereafter, to account for changes in inflation.
- PHMSA found good cause to amend the regulation related to civil penalties without notice and opportunity for public comment.

Current Rulemakings in Process

Standards Update
(NPRM stage)

- Major Topics:
  - Addresses the set of IBR standards throughout PHMSA's part 192, Part 193 and Part 195 code with updated revisions of standards from all standard organization bodies.
  - This NPRM would impact approx. 20 of the 60+ standards that we currently IBR.
  - Per recent statute (Section 24, revised) all IBR standards pertaining to PSR must be available for free to the public. (Most SDOs comply)
    - ANSI IBR portal – ibr.ansi.org
  - Miscellaneous amendments to PSR
    - **GPTC petitions**
    - Agency initiative

Current Rulemakings in Process

State Certification (NPRM stage)

- Rulemaking would amend 49 CFR Part 198 by incorporating into PHMSA's regulations existing statutory procedures in the Federal pipeline safety laws regarding the certification of State authorities to regulate intrastate gas and hazardous liquid pipelines
- Address the process by which PHMSA and State authorities may enter into interstate-agent and other agreements for State authorities to assist PHMSA in the regulation and inspection of both interstate and intrastate pipelines.
- The proposed rule also establishes more formal procedures for suspending, modifying, or rejecting both the certification of State authorities to regulate intrastate pipelines and for terminating interstate-agent and other agreements between PHMSA

Current Rulemakings in Process

PIIPES ACT of 2016

- Signed by the President on June 22, 2016
- Contains a number of mandates - those related to rulemakings are:
  - Emergency Orders
  - Underground Storage
  - LNG – siting of small scale
  - Changes in HL HCA definition
  - 12 month assessments of certain HL lines
  - Reporting requirement for unfinished mandates

Report on DOT Significant Rulemakings

- https://www.transportation.gov/regulations/report-on-significant-rulemakings
- The Significant Rulemakings Report provides a summary and the status for all significant rulemakings that DOT currently has pending or has issued recently.

Final Rules

Damage Prevention Final Rule

Pipeline Damage Prevention Programs

- Effective January 1, 2016
- Affects 49 CFR Parts 196 and 198
  - Sets criteria for State damage prevention laws
  - If States can't or don't meet criteria PHMSA can take over jurisdiction
  - Exceptions are possible, however they must be approved and justified

Damage Prevention Final Rule

"For the reasons discussed above, PHMSA is not considering alternatives 1 and 3. Under alternative 2, PHMSA will enforce a minimum Federal safety requirement against any excavator who violates applicable damage prevention requirements in a State with an excavation damage prevention enforcement program determined to be inadequate."

Update to Miscellaneous Final Rule

Postponed!

§ 192.305 Inspection: General.

- Each transmission line and main must be inspected to ensure that it is constructed in accordance with this subpart. An operator must not use operator personnel to perform a required inspection if the operator personnel performed the construction task requiring inspection. Nothing in this section prohibits the operator from inspecting construction tasks with operator personnel who are involved in other construction tasks.

Update to Miscellaneous Final Rule

Construction Inspection (Cont'd)

Postponed!

Responsibility to Conduct Construction Inspections § § 192.305 and 195.204

- PHMSA proposed to revise § 192.305 to specify that a transmission pipeline or main cannot be inspected by someone who participated in its construction. i.e., the individual who performed the construction task that requires inspection

Update to Miscellaneous Final Rule

Postponed!

Construction Inspection (Cont'd)

- PHMSA believes that allowing individuals to inspect their own work defeats, in part, the measure of safety garnered from such inspections.
- PHMSA was **not intending** to require third-party inspections or **attempting to prohibit** any person from a company to inspect the work of another person from the same company.

Advisory Bulletins

ADB-2016-05

- Subject: Clarification of Terms Relating to Pipeline Operational Status
- PHMSA regulations do not recognize an “idle” status for a hazardous liquid or gas pipelines. The regulations consider pipelines to be either active and fully subject to all parts of the safety regulations or abandoned.

ADB-2016-05

- The process and requirements for pipeline abandonment are captured in §§ 192.727 and 195.402(c)(10) for gas and hazardous liquid pipelines, respectively. Pipelines abandoned after the effective date of the regulations must comply with requirements to purge all combustibles and seal any facilities left in place.
- The last owner or operator of abandoned offshore facilities and abandoned onshore facilities that cross over, under, or through commercially navigable waterways must file a report with PHMSA.
- PHMSA regulations define the term “abandoned” to mean permanently removed from service.

ADB–2016–04

- Subject - Ineffective Protection, Detection, and Mitigation of Corrosion Resulting From Insulated Coatings on Buried Pipelines
- PHMSA' failure investigation of the Plains Pipeline May 19, 2015, accident in Santa Barbara, CA
- Operators are reminded to review their pipeline operations to ensure that pipeline segments that are both buried and insulated have effective coating and corrosion-control systems to protect against cathodic protection shielding, conduct in-line inspections for all threats, and ensure in-line inspection tool findings are accurate, verified, and conducted for all pipeline threats.

ADB–2016–04

- The need for coatings and CP systems to be designed, installed, and maintained so as not to foster an environment of shielding and moisture that can lead to excessive external corrosion growth rates and pipe steel cracking such as stress corrosion cracking
- Coatings for buried, insulated pipelines that may result in cathodic protection “shielding” yet still comply with 49 CFR Part 192, Subpart I or 49 CFR Part 195, Subpart H. Inadequate corrosion prevention may be addressed through any one or more methods, or a combination of methods described in ADB–2016–04

ADB–2016–04

- Employ ILI data analysis techniques to account for the potential growth of Corrosion Under Insulation, including interaction criteria for anomaly assessment
- ILI data, subsequent analysis of the data, and pipeline excavations should:
  - Confirm the accuracy of the ILI data to characterize the extent and depth of the external corrosion and ILI tolerances and unity charts
  - Follow the ILI guidelines of API Standard 1163
  - Use additional or more frequent reassessment intervals and confirmations
  - Assess and mitigate operational and environmental conditions in shielded and insulated coatings that lead to excessive corrosion growth rates, pipe steel cracking, and all other threats.

ADB-2016-03

- Owners and Operators of Petroleum Gas and Natural Gas Facilities in Areas Subject to Heavy Snowfall or Abnormally Icy Weather
- Subject: Dangers of Abnormal Snow and Ice Build-up on Gas Distribution Systems
- To remind owners and operators of the need to (1) monitor the potential impact of excessive snow and ice on these facilities; and (2) inform the public about possible hazards from snow and ice accumulation on regulators and other pipeline facilities

ADB-2016-03

- Notify customers and other entities of the need for caution associated with excessive accumulation and removal of snow and ice
- Pay attention to snow and ice related situations that may cause operational problems for pressure control and other equipment
- Monitor the accumulation of moisture in equipment and snow or ice blocking regulator or relief valve vents which could prevent regulators and relief valves from functioning properly

ADB-2016-03

- The piping on service regulator sets is susceptible to damage that could result in failure if caution is not exercised in cleaning snow from around the equipment
- Remind the public to contact the gas company or designated emergency response officials if there is an odor of gas present or if gas appliances are not functioning properly

ADB–2016–02

- Subject: To Owners and Operators of Underground Pipeline and Storage Facilities regarding the Safe Operation of Underground Storage Facilities for Natural Gas
- Operators of underground storage facilities used for the storage of natural gas, as defined in 49 CFR Part 192, should review their O,M & ER activities to ensure the integrity of underground storage facilities are properly maintained

ADB–2016–02

- In addition, operator's O&M processes and procedures should be reviewed and updated at least annually, unless operational inspections for integrity warrant shorter review periods.
- O&M processes and procedures should include data collection and integration, risk assessments, monitoring, operational limits, mitigation measures, and record keeping for any underground storage facility threat that could impact public safety, operating personnel, or the environment due to leakage, failure, or abnormal operating conditions whether above ground or underground.

ADB–2016–01

- Potential for Damage to Pipeline Facilities Caused by Severe Flooding.
- Similar to ADB-2015-01 as these events continue to occur – titled “Potential for Damage to Pipeline Facilities Caused by Flooding, River Scour, and River Channel Migration”
- Several ADBs on this topic, and please review them all if applicable to your operations

ADB 2016-01

Events referenced include:

- July 1, 2011, ExxonMobil Pipeline Company experienced a pipeline failure near Laurel, Montana 63,000 gallons of crude oil spilled into the Yellowstone River
- July 15, 2011, NuStar Pipeline Operating Partnership, L.P. reported a 4,200 gallon (100 barrels) anhydrous ammonia spill in the Missouri River in Nebraska
- August 13, 2011, Enterprise Products Operating, LLC discovered a release of 28,350 gallons (675 barrels) of natural gasoline in the Missouri River in Iowa
- January 17, 2015, a breach in the Bridger Pipeline Company's Poplar System resulted in another spill into the Yellowstone River near the town of Glendive, Montana, releasing an estimated 28,434 gallons of crude oil into the river and impacting local water supplies

ADB 2016-01

- ADB 2016-01 reiterates those actions that an operator should take prior to, during, and following abnormal events.
- As shown in these events, river bottom scour and channel migration may occur due to seasonal flooding, increased stream velocities, and manmade and natural river bank restrictions.
- Additionally, the safety of valves, regulators, relief sets, pressure sensors, and other facilities normally above ground or above water can be jeopardized when covered by water

§192.613(a)

- Each operator shall have a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.

§192.613(b)

- (b) If a segment of pipeline is determined to be in unsatisfactory condition but no immediate hazard exists, the operator shall initiate a program to recondition or phase out the segment involved, or, if the segment cannot be reconditioned or phased out, reduce the maximum allowable operating pressure in accordance with §192.619(a) and (b).

Media and Public Perceptions

PIPELINES:

Number of leaks and spills continued to grow in 2015 (EnergyWire)

Mike Lee, E&E reporter

Published: Monday, August 22, 2016

The number of pipeline leaks and spills rose to a five-year high last year, although there was a decline in serious accidents.

Across all types of pipelines, there were 709 reportable incidents in 2015, up from 701 the previous year and a 20 percent increase over 2011, according to statistics from the Pipeline and Hazardous Materials Safety Administration. There were 326 breaches that involved injuries, deaths or sizable spills, which the Department of Transportation classifies as "significant incidents." That's also a five-year high and a 13 percent increase over 2011. PHMSA is part of DOT.

Significant incidents by pipeline type

Year	Oil/ liquids	Gas transmission	Gas gathering	Gas distribution	LNG	Total
2011	140	84	6	58	0	288
2012	132	62	7	52	0	253
2013	166	71	6	61	0	304
2014	153	76	9	63	2	303
2015	180	76	4	66	0	326

Media and Public Perceptions

Pipeline industry groups say they have gotten better at avoiding large spills and leaks and that more of the spills are being confined to their own property.

"Our primary safety efforts are addressing larger incidents impacting the public or environment," John Stoody, vice president of the Association of Oil Pipe Lines, said in an email.

Carl Weimer, executive director of the Pipeline Safety Trust, said the industry could improve its record. While the number of major spills is down, for instance, the amount of oil spilled hasn't fallen.

5-year incident trend, all pipeline types

Year	Total incidents	Significant incidents	Serious incidents	Deaths	Injuries
2011	592	288	32	14	56
2012	573	253	28	12	57
2013	619	304	24	9	44
2014	701	303	28	19	96
2015	709	326	28	12	49

Media and Public Perceptions

"While the industry loves to point out that 99.999 percent of product moves through pipelines safely, that means that, for instance in 2015, 4.3 million gallons of hazardous liquids spilled," Weimer said in an email.

Oil pipelines accounted for about two-thirds of the leaks and spills in 2015 but 55 percent of the significant incidents. Gas transmission lines — the high-pressure pipes that carry the fuel over long distances — accounted for 20 percent of the overall incidents but 23 percent of the significant incidents.

The Interstate Natural Gas Association of America, which represents the biggest gas lines, said the statistics can be misleading, since PHMSA includes both cross-country and purely intrastate systems together as transmission lines.

All incidents by pipeline type

Year	Oil/ liquids	Gas transmission	Gas gathering	Gas distribution	LNG	Total
2011	345	118	10	119	0	592
2012	366	104	12	90	1	573
2013	401	106	6	105	1	619
2014	445	132	9	112	3	701
2015	456	143	5	103	2	709

Source: PHMSA

Among INGAA's own members, "We've seen a virtual flat line in the number of PHMSA significant incidents," Cathy Landry, a spokeswoman for the association, said in an email. "We want drive those numbers down."

The increase in spills and leaks came as U.S. oil and gas production surged, increasing the use of pipelines. Oil output rose about two-thirds from 2011 to 2015, to about 9.4 million barrels a day, according to the U.S. Energy Information Administration. Gas output increased about one-fifth during the same time, to about 74 billion cubic feet a day.

PHMSA increased its enforcement activity in 2015, opening 197 cases. That's a turnaround from 2014, when the agency opened fewer cases and imposed fewer fines than the previous four years (*EnergyWire*, April 8, 2015).

Any Questions??