U.S. DOT
Pipeline and Hazardous Materials Safety Administration

PHMSA Regulatory Changes and Rulemaking Update

2017 Western Regional Gas Conference

Tuesday, August 29, 2017

Priority Issues for 2017+

- Organizational Updates
- Leveraging Lessons from Prior Years
  - Congressional Mandates and Recommendations
  - Accident/Incident Trends
  - Rulemaking and Other Updates
- Safety Management Systems
- Executive Orders from incoming Administration
- Supporting the Transition

What PHMSA Regulates

Pipeline Facilities by System Type CY 2016 for Gas and CY 2015 for Liquid			
System Type	**Miles**	**% Miles**	**# Operators**
Hazardous Liquid	**208,616** **7,578 Tanks**	**< 8%**	**483**
Gas Transmission	**299,945**	**11%**	**1,009**
Gas Gathering	**17,478**	**< 1%**	**342**
Gas Distribution **(Mains & Services)**	**2,204,025**	**81%**	**1,263**
Total	**2,730,064**	**100%**	**2,555 unique OpIDs**
Liquefied Natural Gas	**153 Plants**	**228 Tanks**	**83**

data as-of 3/27/2017

Congress and the Public do NOT usually distinguish between different types of pipeline systems.

If one liquid or gas system fails, all have failed.

Pipeline companies are judged as an industry – the oil and gas industry.

Congressional Mandates and Recommendations

- **Reauthorizations**
  - Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011
  - Protecting Our Infrastructure of Pipelines and Enhancing Safety Act of 2016
- **NTSB Safety Recommendations**
  - 37 Open Acceptable Action
- **General Accountability Office (GAO) Audits – being addressed in HL and GT NPRMs**
  - GAO-14-667 Larger, high pressure gathering lines
  - GAO-13-577 Guidance on Risk Based Reassessment Intervals
  - GAO -13 -168 Data and Guidance on Incident Response
  - GAO-12-388 Data Collection Gathering Pipelines
- **Office of Inspector General (OIG) Report (AV-2012-140)**
  - #5 Update Integrity Management requirements for non-linear assets- R&D in progress
  - #8 Create database of physical characteristics, accidents and inspections - NPMS Information Collection expansion with OMB

Reauthorization: Protection Our Infrastructure of Pipelines and Enhancing Safety Act of 2016

- Signed June 22, 2016; reauthorizes OPS through FY 2019; Aggressive timetable
- Contains 19 mandates for OPS consisting of regulations, studies, and other actions including:
  - Convene working group to consider development of information sharing system
  - Make public the status of our final rules that meet specific criteria
  - Issue or update regulations for Underground Storage, LNG, Safety Data Sheets, Hazardous Materials Identification Numbers, Unusually Sensitive Areas
  - Conduct post-inspection briefing with the operator
  - Review staff resource management
  - Report on lost and unaccounted for gas
  - Permits OPS to issue emergency order without prior notice for unsafe condition and to withhold payments to underperforming States
  - Studies and Reports on Inspection Report Information, DP Technology, Pipeline Safety Regulatory Databases, Propane Gas, and Natural Gas Leak Reporting
  - Instructs audits of IM, workforce management, pipeline safety technical assistance grants, corrosion, research and development, and odorization

PHMSA Approaches to Promote Improved Performance

- Conduct physical and programmatic inspections
- Clarify expectations through range of public communications Facilitate/promote adoption of Safety Management Systems
- Participate in consensus standards development
- Promote public awareness, damage prevention programs and equip emergency responders
- Conduct accident and safety investigations
- Communicate directly with operators on their challenges

Executive Orders & Memos

Many relate to Pipeline Infrastructure

- Promoting Energy Independence and Economic Growth - immediately review existing regulations that potentially burden
  - "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources."
- Eliminate 2 regulations for every 1 new regulation
- Alleviate unnecessary regulatory burdens
- Streamline and expedite environmental reviews and approvals for all infrastructure projects in a manner consistent with law

Rulemaking and Initiatives

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Pipeline and Hazardous Materials Safety Administration

U.S. Department of Transportation

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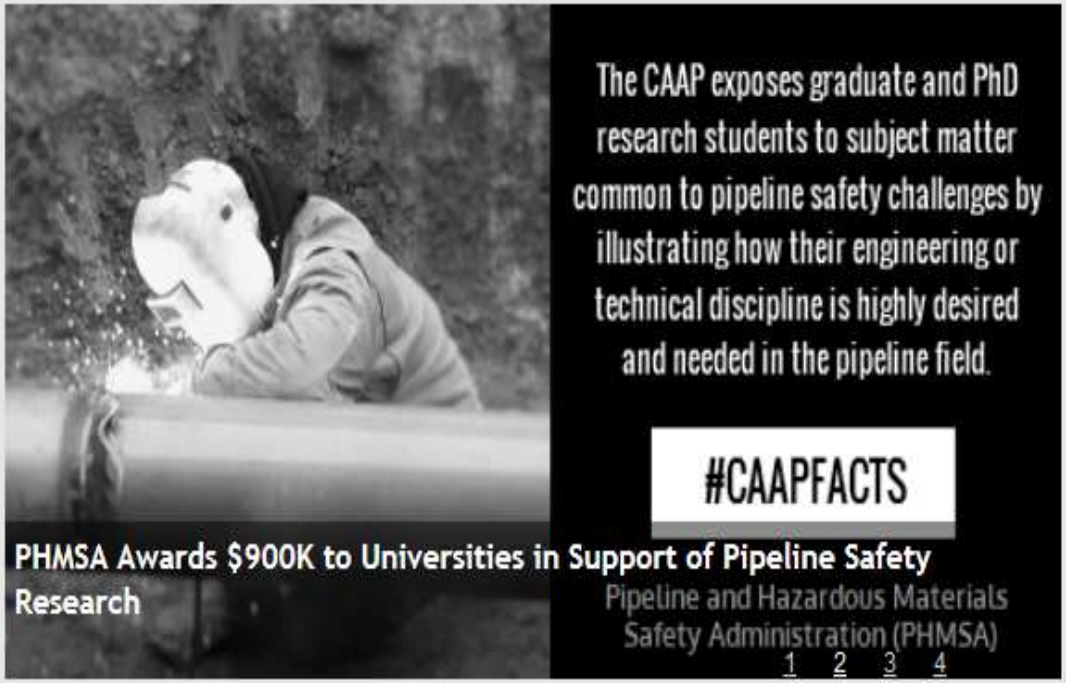

News & Updates

- Approval of Restart Plan - Platform Anna to Bruce Pipeline - CAO Item 5
- PHMSA Adjusts Maximum and Minimum Civil Penalties for Violations of Federal Pipeline Safety Regulations
- PHMSA Issues Advisory Bulletin on Deactivation of Threats to Pipeline Integrity (3/16/2017)
- Hilcorp Gas Leak - Cook Inlet, Alaska
- Notice of Proposed Safety Order -- Hilcorp Alaska
- PHMSA Final Rule Requires Faster

Find PHMSA Offices

PHMSA Resources

Recently Published Rules

- **Inflation Adjustment of Maximum Civil Penalties** IFR (6/30/2016)
- **Emergency Order Procedures** IFR (10/14/2016)
- **Excess Flow Valves** (10/14/2016)
- **Safety of Underground Natural Gas Storage Facilities** IFR (12/19/2016)
- **Operator Qualification, Cost Recovery, Accident and Incident Notification, and Other Pipeline Safety Changes** (1/23/2017)

Rulemaking Docket

- Safety of On-Shore Hazardous Liquid Pipelines (Notices/ HLPAC completed)
- Safety of Gas Transmission and Gathering Pipelines (Notices Completed – reviewing with GPAC)
- Plastic Pipe (NPRM)
- Rupture Detection and Mitigation (development stage)

Safety of Gas Transmission and Gathering Lines

- NPRM published 4/8/2016
  - Comment period closed 7/7/2016
  - Proposed rule being reviewed with GPAC (3rd Meeting in September)
- 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

Underground Storage Facilities for Natural Gas

(Interim Final Rule)

- Rule requires operators of underground storage facilities for natural gas to comply with minimum safety standards, including compliance with:
  - API RP 1171, Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs
  - API RP 1170, Design and Operation of Solution-mined Salt Caverns Used for Natural Gas Storage
  - Annual and Incident reporting requirements
- ~400 interstate and intrastate US underground natural gas storage facilities are operating with more than four trillion cubic feet of natural gas working capacity

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Safety Administration

Pipeline Technical Resources

Return to Pipeline Safety Community

Underground Natural Gas Storage

UNGS Menu

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This site is administered by the Pipeline and Hazardous Materials Safety Administration (PHMSA). It provides information concerning Safe Operations of Underground Gas Storage Facilities for Natural Gas.

Interim Final Rule

On December 19, 2016, PHMSA published in the Federal Register an interim final rule (IFR) that revises the Federal pipeline safety regulations to address critical safety issues related to downhole facilities, including wells, wellbore tubing, and casing, at underground natural gas storage facilities. This IFR responds to Section 12 of the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016, which was enacted following the serious natural gas leak at the Aliso Canyon facility in California on October 23, 2015. This IFR incorporates by reference two American Petroleum Institute (API) Recommended Practices (RP): (1) API RP 1170, "Design and Operation of Solution-mined Salt Caverns used for Natural Gas Storage," issued in July 2015, and (2) API RP 1171, "Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs," issued in September 2015.

Open either of the links below for more detailed information or a pdf copy of the rule:

- https://www.federalregister.gov/documents/2016/12/19/2016-30045/pipeline-safety-safety-of-underground-

EFV Expansion beyond Single Family Residences

- Final rule October 14, 2016
- **Effective April 14, 2017**

– *The EFV final rule changed 49 CFR part 192 regulations regarding the use of Excess Flow Valves and manual service line shut-off valves on gas service lines*

- *branched service lines serving more than one single family residence*
- *multi-family residential dwellings*
- *commercial buildings*

Questions and Answers about EFVs and Curb Valves

- PHMSA participated in 2 AGA webinars regarding the changes to the EFV rule and has now provided answers to questions raised during the webinars.
- The questions and answers may be viewed on the Docket file https://www.regulations.gov/document?D=PHMSA-2011-0009-0053

Operator Qualification, Cost Recovery and Other Pipeline Safety Proposed Changes

- Final Rule published 01/23/2017–Effective March 24th
  - CRM training and qualification for supervisors
  - Incident Reporting within an hour
  - Cost Recovery for some new construction inspections
  - Farm Tap inspections
  - Assessment methods for HL lines
  - Renewal process for special permits
  - API 1104 and in-service welding procedures and qualification

Improving Quality Management Systems (QMS) for Pipeline Construction Activities

- QMS was Topic M in Gas IM ANPRM in 2011
- PHMSA sponsored a Construction Management R&D paper - used as basis for API RP 1177 https://primis.phmsa.dot.gov/matrix/PrjHome.rdm?prj=504
- API RP 1177 – Recommended Practice for Steel Pipeline Construction Quality Management Systems. Draft available for viewing at http://ballots.api.org/pipeline/ballots/docs/1177_PipelineConstructionQMS_1E_ballot_3916.pdf

Management Systems in an Operator's Strategic Plan

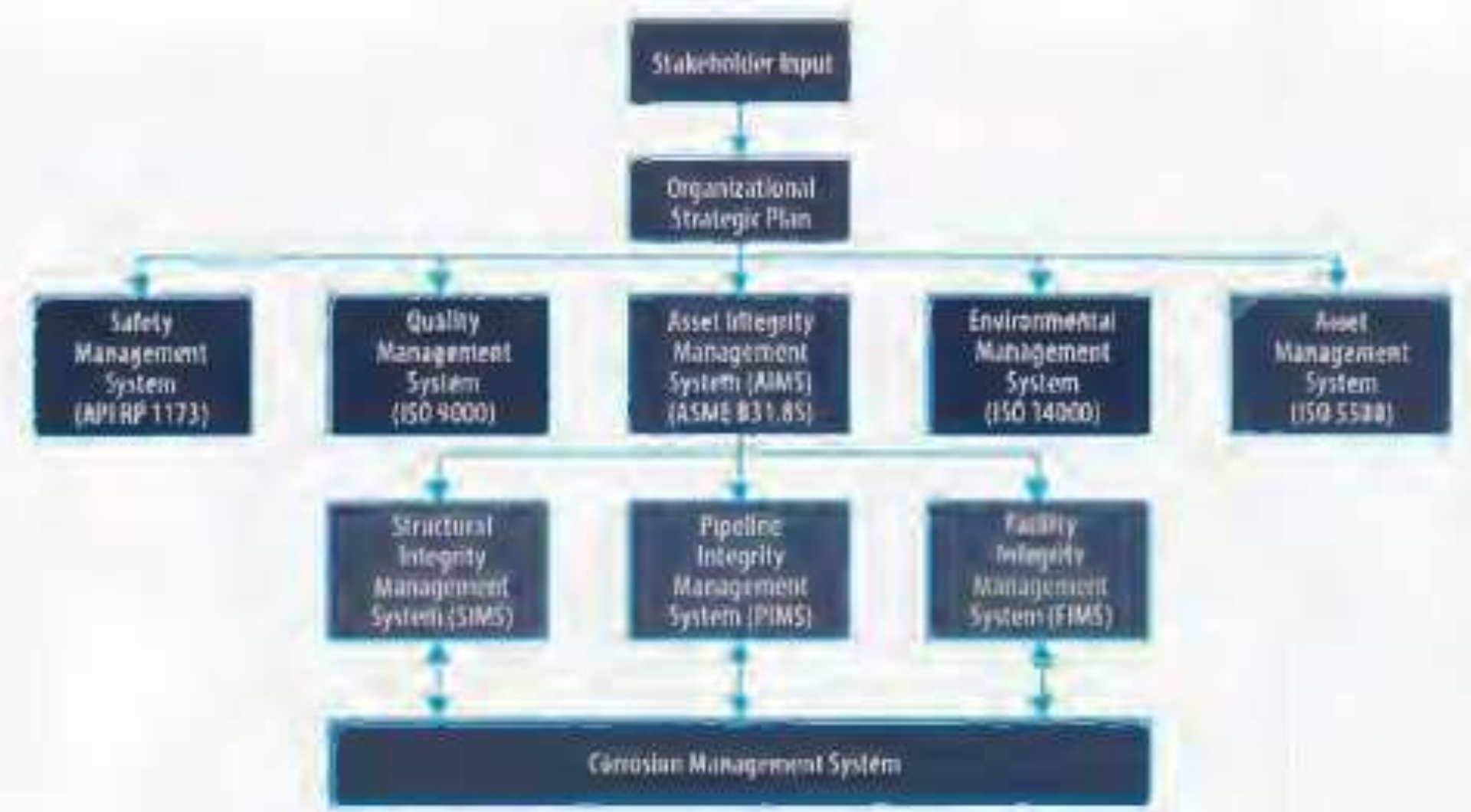


Figure 1. Interrelation of an organisation management system – pipeline example.

Safety Management Systems

SMS is the formal business approach to managing safety risk, which includes:

- A systemic approach to managing safety,
- The necessary management commitment,
- Organizational structures, accountabilities, policies and procedures.

SMS is a better way of doing our traditional business that includes continuous improvement.

Recent Example of posting "In this webinar, you will learn:"

- The proactive risk management approach for HSEQ
- How to leverage people, processes and innovative technologies to encourage proactive risk management
- How leading indicators and analytics can help monitor and assess an organization's safety management system and safety culture
- The ROI of taking a proactive risk management approach
- Business cases for how proactive risk management can transform an organization to achieve operational excellence

Safety Management Systems
- API RP 1173 -

- PHMSA SMS Working Group of Pipeline Advisory Committee
- PHMSA Internal Implementation
- PHMSA External Evaluation Team
- Industry Activities and Workshops

Safety Culture is the glue that holds SMS together

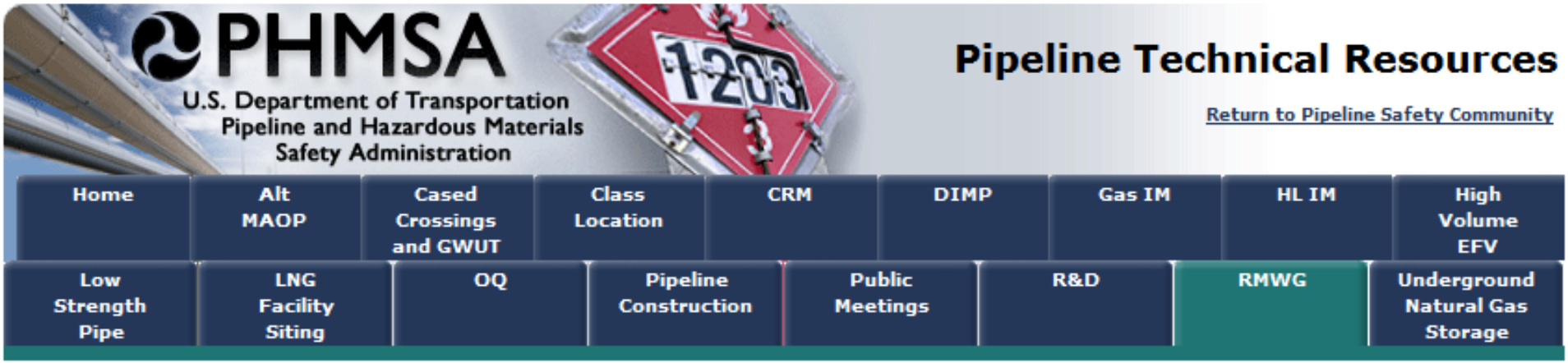
A STRONG SAFETY CULTURE IS...

- **A reporting culture:** Employees are encouraged to report safety issues without fear of retribution.
- **An informed culture:** Employees are encouraged to take ownership of safety. Identifying, analyzing, and correcting safety problems is valued.
- **A learning culture:** As a result of safety trends or incidents, processes are changed and outstanding safety issues are resolved.
- **A just culture:** Employees are held accountable for reckless or deliberate actions, but they are not overly punished for unintentional errors. The organization makes full use of its employees' potential and actively involves them to develop shared values and a culture of trust, openness and empowerment.

Risk Modeling Work Group

- The PHMSA Pipeline Risk Modeling Work Group was formed as a follow up to the September 2015 Pipeline Risk Modeling Methodologies Public Workshop.
- The purpose of the group is to provide technical, integrity management and operational input to PHMSA to aid in the development of a pipeline system risk modeling technical guidance document.

https://primis.phmsa.dot.gov/rmwg/index.htm



Risk Modeling Work Group

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PHMSA is seeking a wide range of input and consensus as part of the development of this technical guidance, both from within, and from applicable stakeholders. This work group provides a forum to obtain the combined perspective of industry, regulators, public, and risk services providers, and will also provide a mechanism for eventual public input/comment.

Note: The scope of the work group is specifically limited to risk modeling. This effort is not intended to address the broader topic of overall risk management of pipeline operations, such as safety management systems (SMS) or comprehensive integrity management programs, that are separately covered by other Industry developed standards and recommended practices.

Addressing Risks to Improve Safety

- **§192.603(c) Abnormal operation. (4)** Periodically reviewing the response of operator personnel to determine the effectiveness of the procedures controlling abnormal operation and taking **corrective action where deficiencies are found**.
- **192.613 Continuing surveillance** (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. …
- **192.617 Investigation of failures** Each operator shall establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, **for the purpose of** determining the causes of the failure and **minimizing the possibility of a recurrence**.

PHMSA Safety Advisory Bulletins
(Of interest here)
2016 – 2017 (so far)

Advisory Bulletins

- Potential for Damage Caused by Severe Flooding (1/19/2016)
- Underground Storage Facilities for Natural Gas (2/5/2016)
- Corrosion Protection Under Insulation (06/21/2016)
- Clarification of Terms Relating to Pipeline Operational Status (08/16/2016)
- Safeguarding and Securing Pipelines from Unauthorized Access (12/09/2016)
- HCA Identification Methods for GT Pipelines (12/13/2016)
- Deactivation of Threats in IMP (3/16/2017)
- Guidance on Training and Qualifications for IMP (4/10/2017)

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–2016–02

- 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, I & ER activities to ensure the integrity of underground storage facilities are properly maintained

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-2016-05

- 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–2016–06

- PHMSA issued this ADB in coordination with TSA to remind all pipeline owners and operators of the importance of safeguarding and securing their pipeline facilities and monitoring their SCADA systems for abnormal operations and/or indications of unauthorized access or interference with safe pipeline operations.
- Additionally, this Advisory Bulletin is to remind the public of the dangers associated with tampering with pipeline system facilities.

ADB-2016-07

- Subject: High Consequence Area Identification Methods
- Inform owners and operators of gas transmission pipelines that PHMSA has developed guidance on the identification and periodic verification of HCAs, including the application of a buffer zone to the PIR, and information regarding the accuracy of class locations
- This advisory bulletin addresses NTSB Recommendation P-15-06

ADB 2017-01

- Subject: Deactivation of Threats in IMP
- ADB to inform owners and operators of gas transmission pipelines that PHMSA has developed guidance on
  - threat identification and
  - establishment of minimum criteria for deactivation of threats.
- Provides guidance regarding documenting their rationale of
  - analyses, justifications, determinations, and decisions
  - related to threat deactivation.
- This Advisory Bulletin addresses NTSB Recommendation P-15-9.

ADB 2017-02

- Subject: Guidance on Training and Qualifications for IM Programs
- PHMSA published the gas transmission pipeline integrity management (IM) rule on 12/15/2003
- Established requirements for supervisory and other personnel with IM program functions in § 192.915.
- PHMSA recognized inconsistencies in how the requirements of § 192.915 have been implemented by operators and issued ADB 2017-02 to remind operators of their responsibility to include the training and qualification requirements for IM personnel as required by § 192.915 and ASME B31.8S.
- This Advisory Bulletin addresses NTSB Recommendation P-15-14.

Any Questions??
Any Comments??