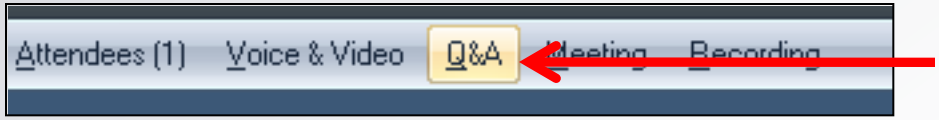
DIMP Implementation Webinar September 4th 11AM – 12:30 PM EDT

- Computer LiveMeeting Video Only
  - Support - http://support.microsoft.com/ph/925
- Teleconference for audio: Mute Your Phone
  - 888-363-4749
  - Participant code: 5125730
- Handouts can be downloaded by clicking on the handout icon
- Questions can be submitted by clicking on the Q&A menu in the LiveMeeting menu bar near the top of the screen:



DIMP IMPLEMENTATION

National Association of Pipeline Safety Representatives

US DOT PHMSA Office of Pipeline Safety

Topics Areas for Discussion

- Introduction and Overview
- DIMP, SMS, and Safety Culture
- A new DIMP Inspection Form for Field Observations and Records Review
- Findings from DIMP inspections Conducted to Date
- Mechanical Fitting Failure Reporting Data and Analyses
- Operator Perspective on Successes and Lessons Learned from Implementing DIMP
- Plastic Pipe Ad Hoc Committee (NAPSR and PHMSA Team) Activities and PPDC update
- Question & Answer Session

Underlying Principles

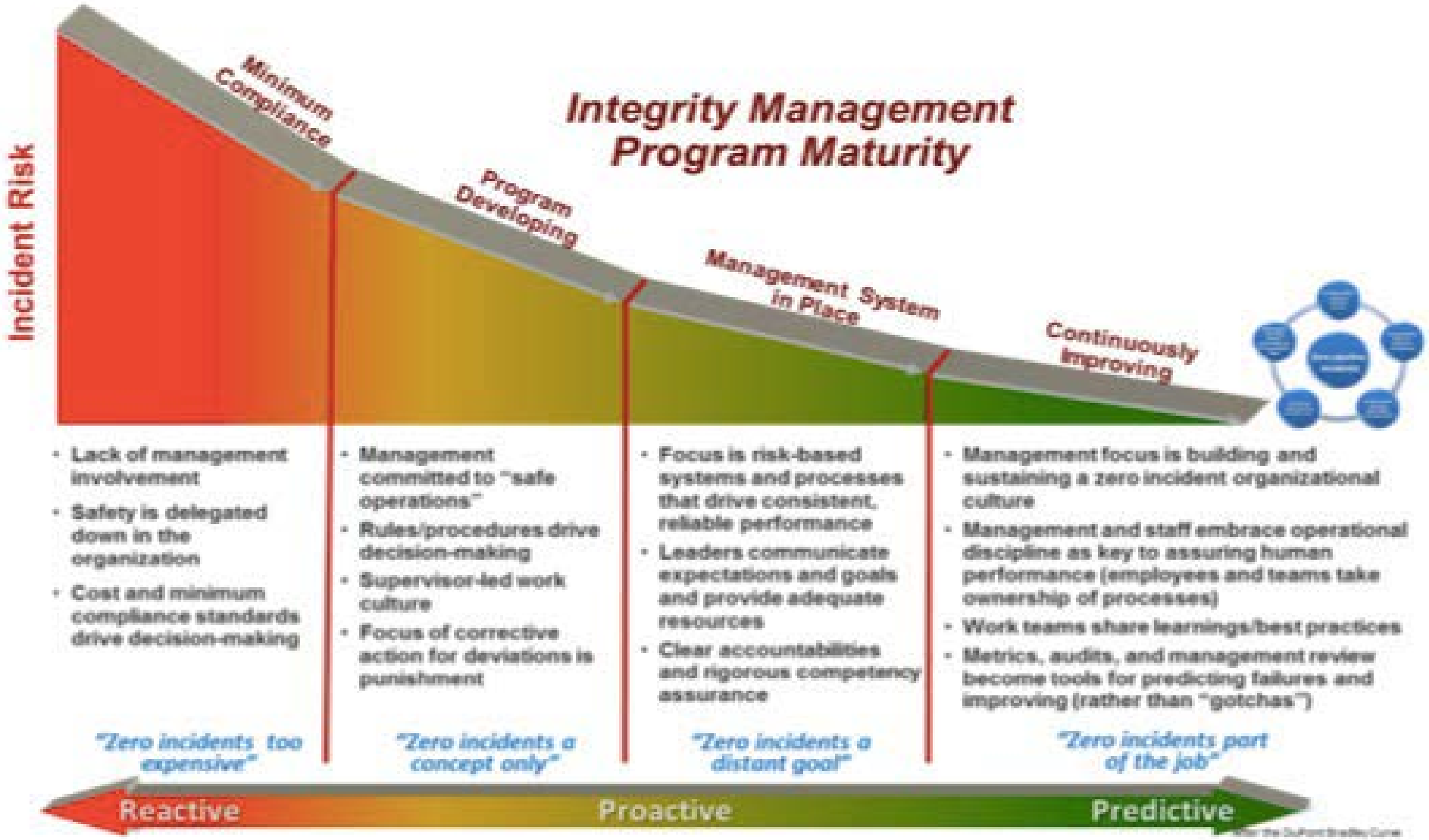
- Pipeline Operator Alone is Responsible for Safe Operations.
- Operators must understand and manage the risks associated with their pipeline systems.
- Regulators influence Safety Performance by establishing minimum safety standards and inspecting against them.
- More must be done by both the operator and regulator to ensure public safety
- Safety culture is a critical foundation for continually improving safety performance.
- All involved must understand and support the IM programs to realize improved safety and system reliability.

High Level Observations

- The DIMP Rule was designed to be flexible and allow operators to implement DIMP in the most effective and efficient manner to improve pipeline safety.
- Operators must focus on their DIMP on a continuous basis so that these programs mature quickly.

Reactive ⟶ *Proactive* ⟶ *Predictive*

Assessing Maturity



Moving from "Compliance" to "Choice"

- Must move from a "checkbox" mentality to understanding the health of the pipeline systems by analyzing and understanding quality data and information and promptly acting to reduce risks

NTSB Recommendations

- NTSB's Investigation of Enbridge Marshall, MI (2012) accident included a finding of probable cause:

"The rupture and prolonged release were made possible by pervasive organizational failures:

  - Deficient integrity management procedures
  - Inadequate training of control center personnel
  - Insufficient public awareness and education"

NTSB Recommendations

- API to facilitate the development of a safety management systems specific to pipeline industry.

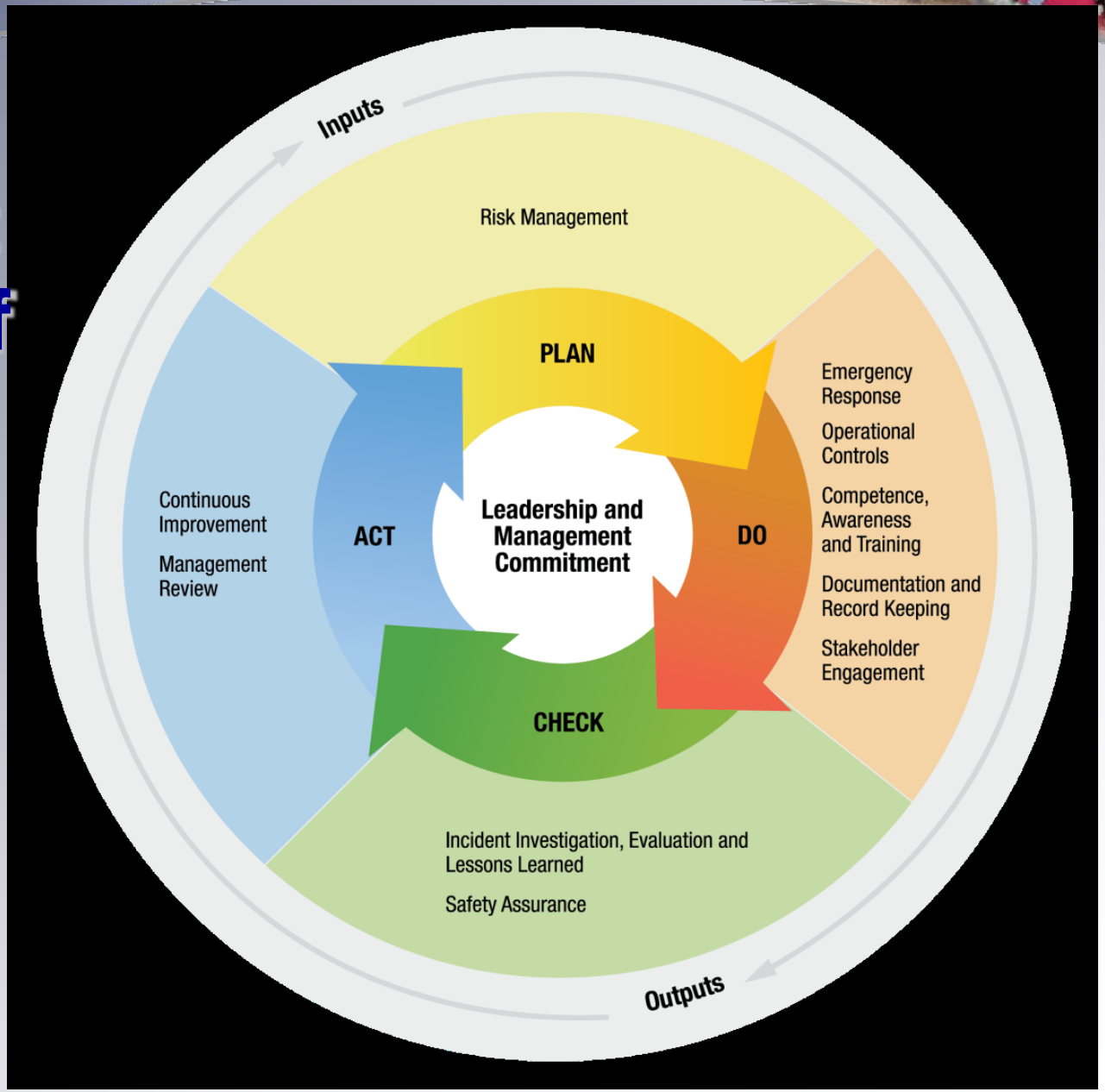
API RP 1173

Safety Management Systems (API RP 1173)

- The comment period on the RP just ended.
- Well publicized
- Received comments on Draft RP
- Two public meetings
- https://primis.phmsa.dot.gov/meetings

Plan, Do, Check, Act The core of the RP

Continuous Improvement is the Goal of the RP



Leadership is the Heart of PDCA

- Top Management- accountable for continuous improvement, regular review of safety performance and communications about safety
- Management- ensure effective process, procedures and training to meet objectives; assess, evaluate and adjust as needed to meet objectives; foster continuous improvement
- Employees– identify improvements, reveal risks
  - Stop work for safety of employees and public
  - Bring rigor of employee safety to pipeline asset protection

Safety Management Systems

- SMS requires:
  - Intentional and systematic actions
  - Diligence and oversight
  - Involvement at all levels - communications
  - “Go and Check” attitude
- The Rewards of a properly implemented SMS are:
  - Enhanced pipeline safety
  - Increased process efficiencies
  - Increased system reliability
  - Reduced Costs

Safety Culture

"The collective set of attitudes, values, norms and beliefs that an operator's employees and contractors personnel share with respect to risk and safety.

A positive safety culture is essential to safety performance regardless of operators' size or sophistication.

Safety Culture

Maintaining a positive safety culture requires continual diligence throughout the organization to notice and address issues including:

- Complacency
- Normalization of deviance
- Production Pressure
- Fear of Reprisal
- Over Confidence
- Tolerance of inadequate systems and resources

Safety Culture

Indicators of a positive safety culture…

The Pipeline Company / Operator:

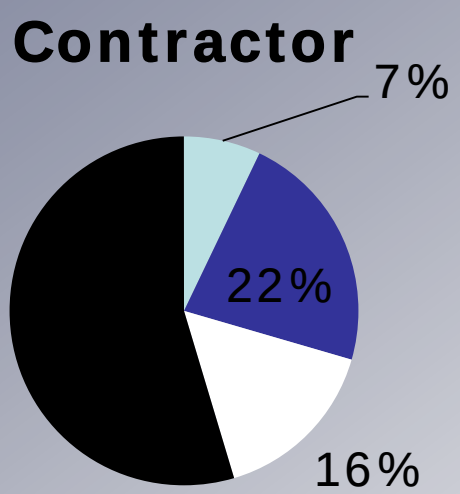
- Embraces safety (personnel, public and asset) as core value,
- Ensures everyone understands the organization's safety goals,
- Fosters systematic consideration of risk, including what can go wrong,
- Inspires, enables, and nurtures change when necessary,
- Allocates adequate resources to ensure individuals can successfully accomplish their PSMS responsibilities,
- Encourages employee engagement and ownership,
- Fosters mutual trust at all levels, with open and honest communication,
- Promotes a questioning and learning environment,
- Reinforces positive behaviors and why they are important,
- Encourages two-way conversations about learnings and commits to apply them throughout the organization, and
- Encourages non-punitive reporting and ensures timely response to reported issues.

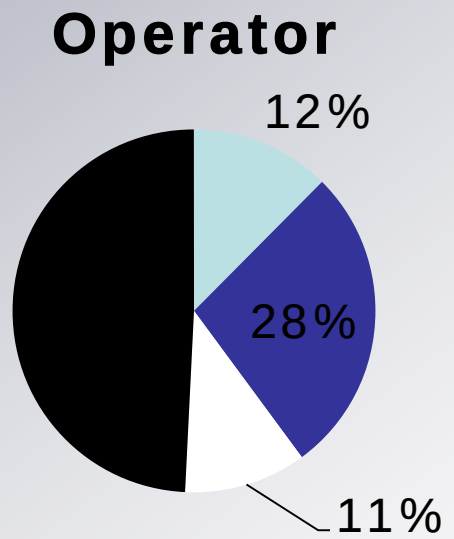
Evaluation of Safety Culture

- Perception
  - Questionnaires (surveys)
  - Interviews
  - Focus Groups
- Effectiveness of Safety Culture Foundation
  - Observations
  - Audits

An Example of Surveys to Assess Safety Culture/Climate

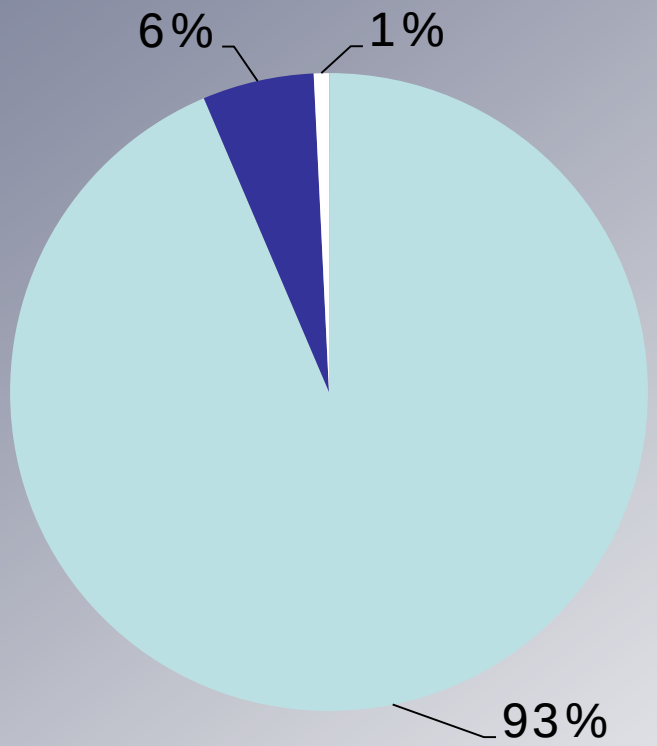
Question 1: Why do you believe that the types of issues discussed during today's presentations occur?



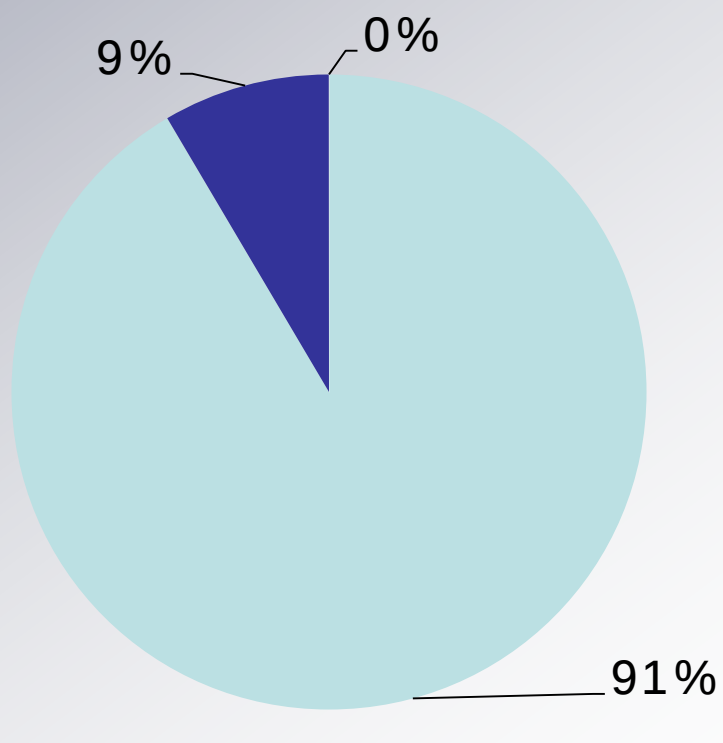


Question 3: What are your thoughts relative to procedures, rules and regulations? They are:

Contractor

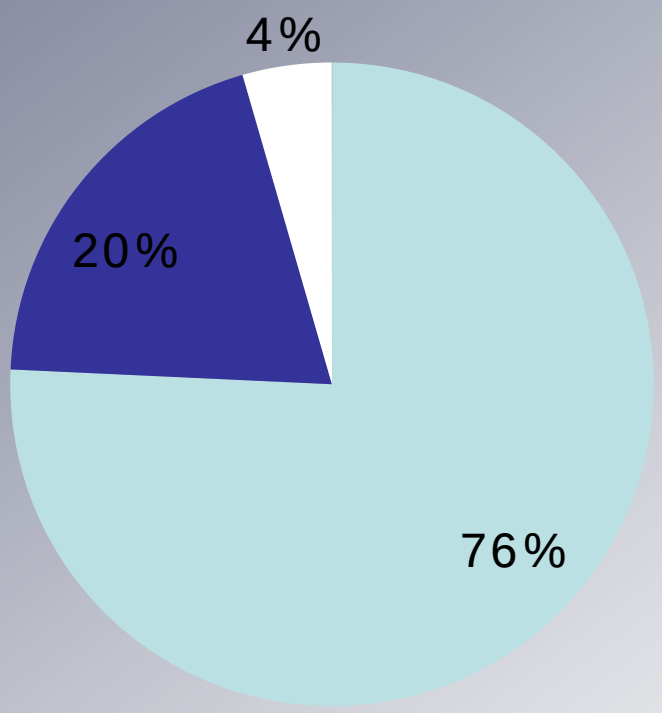


Operator

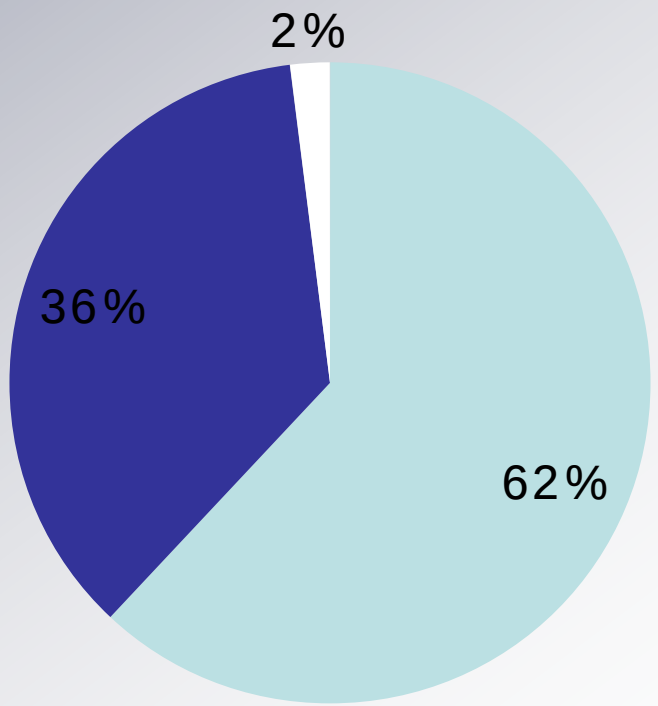


Question 4: Would you report an issue (not following procedures, rules, regulations) or near miss to your supervisor?

Contractor

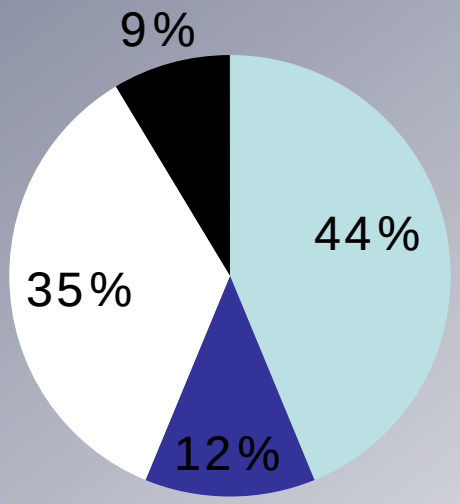


Operator

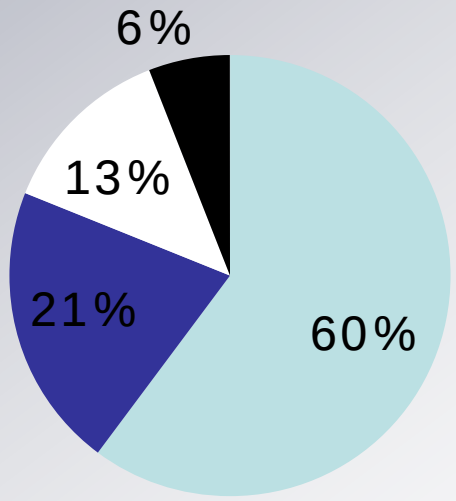


Question 5: Why do you think someone would choose not to report an issue (not following procedures, rules, regulations)?

Contractor

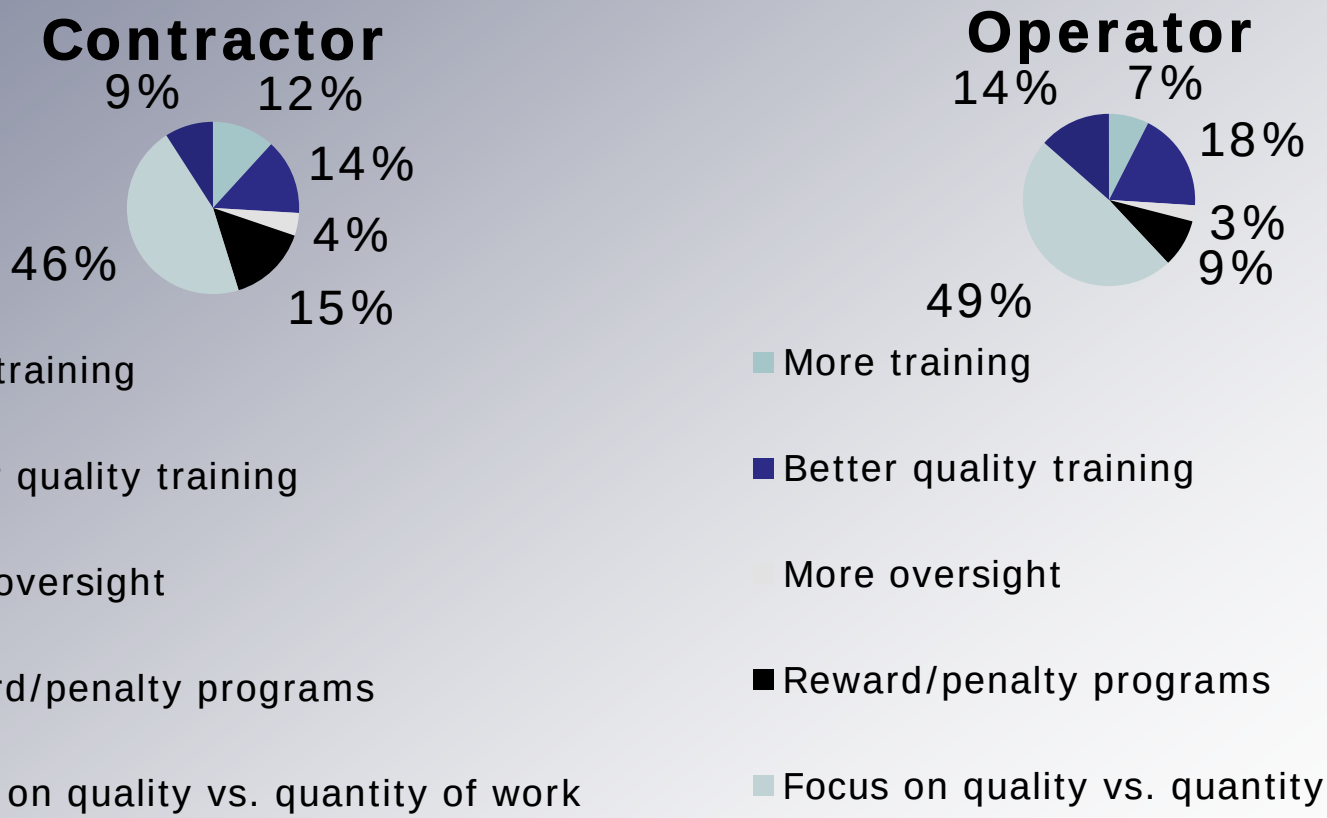


Operator

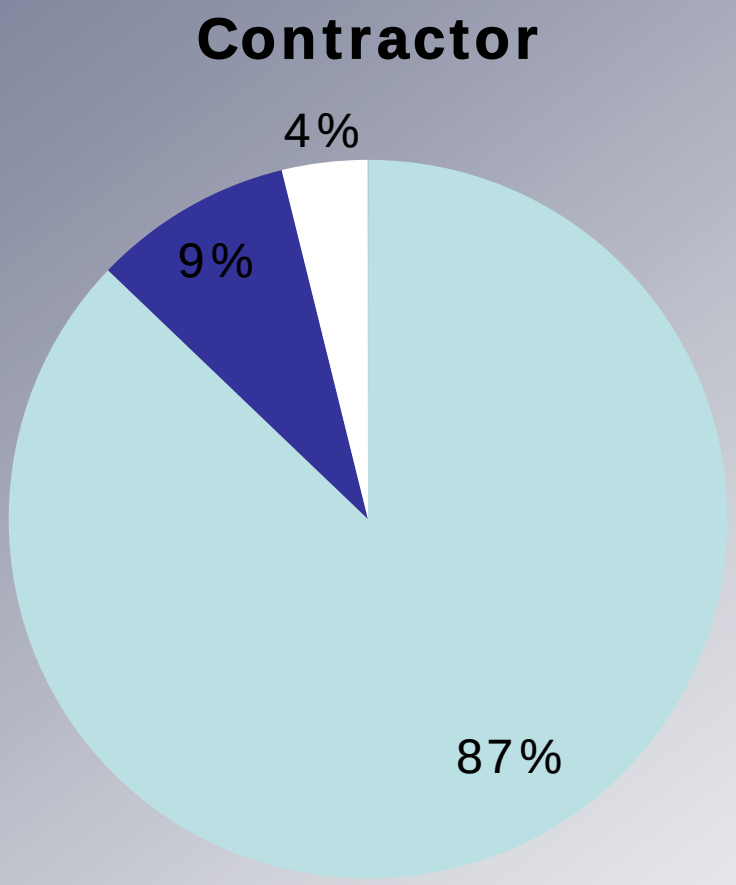


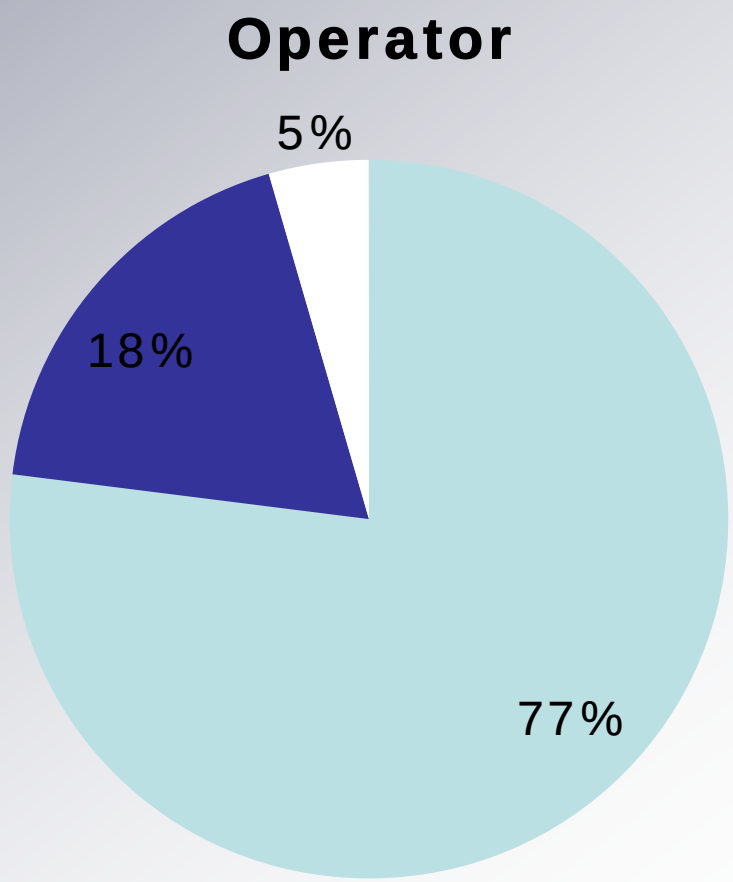
- Negative impact to coworkers (whistle blowing...
- Management would not take action to correct
- Fear of actions by regulatory agencies
- None of my business

Question 8: How can we improve the "safety culture" relative to pipeline construction activities in your area of responsibility?



Question 11: Do you believe you have the authority to stop work if pipeline safety is compromised?

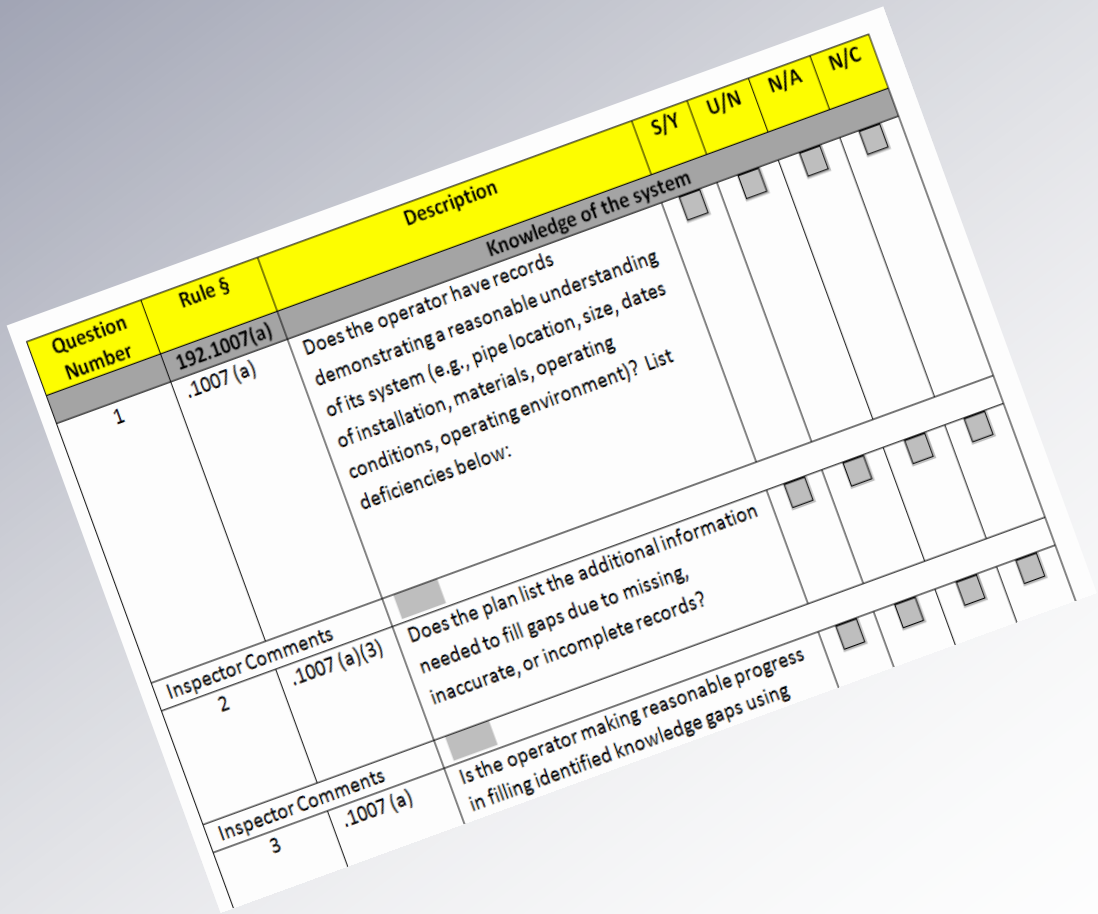




"A positive safety culture can exist with a formal PSMS, but an effective PSMS cannot exist without a positive safety culture."

New Record and Field Inspection Form

- PHMSA Form 24 has been posted for use



Question Number	Rule §	Description	S/Y	U/N	N/A	N/C
		Knowledge of the system				
1	192.1007(a) .1007 (a)	Does the operator have records demonstrating a reasonable understanding of its system (e.g., pipe location, size, dates of installation, materials, operating conditions, operating environment)? List deficiencies below:				
Inspector Comments						
2	.1007 (a)(3)	Does the plan list the additional information needed to fill gaps due to missing, inaccurate, or incomplete records?				
Inspector Comments						
3	.1007 (a)	Is the operator making reasonable progress in filling identified knowledge gaps using				

PHMSA Form 24

- PHMSA Form 24 Supplements DIMP Plan inspection Forms (Forms 22 & 23)
- PHMSA Form 24 is intended for the evaluation of an operator's implementation of its DIMP through a review of records and actions performed on pipeline facilities.
- The form asks inspectors to review records and perform field observations regarding the implementation of the DIMP.

DIMP Plan Comments

- Regulators are expecting to see plans that include procedures for how the Operators are implementing the elements of their DIMP.
- The Plan should culminate in:
  - List of risks that are ranked/prioritized
  - Actions identified to reduce these risks
  - Performance measures to demonstrate the effectiveness of risk reduction activities.
- Vacancies created by an aging workforce (and turn-over) have created voids in operating knowledge of pipeline systems. This creates its own Risk!!
- Training and succession planning should be considered in the DIMP.

Knowledge - § 192.1007(a)

- Actions to improve Data Quality must be implemented. These actions may include:
  - Historical Data cleanup/scrubbing completed
  - Revised data collection Forms implemented
  - QA/QC checks should be implemented to ensure the incoming data is accurate
  - Training of personnel on DIMP requirements for data gathering should be completed
- Missing information to fill knowledge gaps must be collected and input into the DIMP

Threat Identification - § 192.1007(b)

- DIMP must provide adequate details and specificity to identify potential and existing threats for the Operator's unique operating environment.
- Consideration must be given to applicable operating and environmental factors affecting consequence of failure (e.g., paved areas, business districts, hard to evacuate) when evaluating risk.
- Operators must obtain and evaluate data from external sources that are reasonably available to identify existing and potential threats to their system.

Potential Threats

- Some operators struggle with potential threats:
  - Threats the Operator has not previously experienced (from industry or PHMSA information)
  - Threats from aging infrastructure and materials with identified performance issues
  - Threats that endangered facilities but have not resulted in a failure (e.g., exposed pipe, near misses).
  - Non-leak events (e.g., overpressure, outside force)
  - Manufacturing and Construction Threats
  - Maintenance history

Identified Potential Threats

Examples of potential threats commonly not being considered by operators:

- Over pressurization events
- Regulator malfunction or freeze-up
- Cross-bores into sewer lines
- Materials, Equipment, Practices, etc. with identified performance issues
- Vehicular or Industrial activities
- Incorrect maintenance procedures or faulty components
- Near-miss events
- Other potential threats specific to the operator's unique operating environment (e.g., tree roots, rodents, earthquakes)

Interactive Potential Threats

- Examples of interacting threats include:
  - Slow crack growth in older plastics where pipeline was pinched during operational event or where over-squeeze occurred due to improper tools or procedure
  - Slow crack growth in older plastics where non-modern construction practices were used
  - Areas of possible soil washouts and subsidence with cast iron mains
  - Installation of mechanical fittings without restraint (category 2 & 3) in soils or conditions (excavation damage) that cause pipe to pull out of fitting

Evaluate and Rank Risks - §192.1007(c)

- Operators must consider non-leak failures in analyzing risk and address non-leak events as existing or potential threats.
- Sufficient system subdivision must be considered for the evaluation and ranking of risks present in the operator's unique operating environment.
  - Adequate to identify a predominate threat (e.g., vintage plastics with higher failure rates than an operator's overall plastic pipe failure rate)
  - Adequate treatment of consequences to account for higher population densities.

Measures to Address Risks - §192.1007(d)

- The Plan must contain or reference an effective leak management plan unless all leaks are repaired when found.
- Regulators are expecting to see the entire LEAKS acronym implemented in an operator's plan.
  - The "S" or self-assessment piece is commonly missing from DIMPs
- The Plan must provide for a link between the specific risk (either a threat or consequence) and the measure to reduce risk that has been identified and implemented.

Measure to Address Risks (Threats)

- Table 1 in PHMSA DIMP Inspection Forms 22 & 23 provides a quick overview of risk reduction and monitoring methods

	Primary Threat Category	Threat Subcategory, as appropriate	Measure to Reduce Risk	Performance Measure
1	Corrosion	External Corrosion on Copper Service Lines	Replace approximately 100 copper service lines each calendar year	Track number of leaks caused by external corrosion per 1000 copper service lines annually
2	Excavation Damage	Third Party Damage	Conduct pre-construction meetings or Monitor locate for life of ticket	Track frequency of failures per 1000 excavation tickets annually
3	Equipment Failure	Mechanical Fittings, Couplings or Caps/Seals	Repair or replace problem materials as found	Track frequency of failures by equipment type annually

Performance Measurement- §192.1007(e)

- A DIMP must include established baselines for Performance Measures from which to trend performance and evaluate the effectiveness of the program.
- The results of the operator's monitoring and trending of the performance measures and any actions taken to address poor performance will be reviewed through use of Form 24.

Performance Measurement- §192.1007(e)

- While Performance Measures 192.1007(e)(v) & (vi) are not required to be reported on annual reports, they must be monitored by the operator and the data and analyses maintained for inspections.
- Some operators are failing to collect and analyze these performance measures that address hazardous leaks eliminated or repaired categorized by material ((e)(v)) and performance measures implemented to monitor actions taken to control identified threats and reduce risks ((e)(vi)).

Periodic Evaluation and Improvement - §192.1007(f)

- Detailed procedures for conducting periodic evaluations as well as documentation of the evaluations conducted will be reviewed.
- Documentation for notifying affected operator personnel of changes and improvements made to the plan or plan requirements must be kept.
- Pipe replacement programs must be tracked in the DIMP as the future risk results will be affected by the removal of vintage pipeline facilities.

Mechanical Fitting Failures
Reporting and Data Analysis

- The MFFR instructions are being revised to better communicate that Operators are to report all failures involving mechanical fittings and compression type couplings, regardless of material, that result in a hazardous leak.
- Failures resulting from a construction or installation defect should be identified with the “Incorrect Operations” leak cause and not the “Material or Welds/Fusions” leak cause category (as is described in PHMSA F 7100.1-2 and the Instructions).
- ***Avoid entering “Unknown” if possible***

Specify the Mechanical Fitting Involved

Stab Type

Nut Follower

Bolt Type

Other(s)

MFFR Data Analysis

- Communication of Performance Data is through the DIMP web page. To view MFFR data, go to:
- **http://primis.phmsa.dot.gov/dimp/perfmeasures.htm**
- Total Report Submitted Numbers *(08/02/2014)*:
  - MFFRs submitted in 2011 – 8355
  - MFFRs submitted in 2012 – 7562
  - MFFRs submitted in 2013 – 9378
- Data submitted for 2013 shows similar trends to previous 2 years of data collection.

MFFR Data Analysis

- The majority of mechanical fitting failures resulting in a hazardous leak involve nut-follower, coupling type fittings.
- Valves are involved in 14% of reported failures.
- Equipment failure is the leading reported cause of leaks (41%), and Natural forces is second (17%).
- The majority of leaks occur outside (98%), belowground (87%) involving service-to-service connections (60%).
- Steel fittings (62%) are involved the majority of reports, and plastic fittings are second (26%).

DIMP Enforcement Guidance

- DIMP Enforcement Guidance is posted and publicly available on PHMSA's website with the other Enforcement Guidance documents at http://www.phmsa.dot.gov/foia/e-reading-room
- This posting allows Operators to understand Regulators' expectations with regards to the DIMP Regulation
- The DIMP website is an excellent source of information at http://primis.phmsa.dot.gov/dimp/index.htm

Operator Discussion on Successes and Lessons Learned from Implementing DIMP

Jim Roberts

DIMP Manager

NiSource Gas Distribution

Distribution Integrity Management

NiSource Gas Distribution Companies

Successes & Lessons Learned

Jim Roberts, Manager
Distribution Integrity Management

September 4, 2014

NiSource®

NiSource Gas Distribution

- Six (6) gas distribution companies operating in the Mid-Atlantic and New England regions
- Significant differences in size of systems, pipe material inventory, and environmental conditions
- All companies have received initial audits of DIM plans from state regulators, 2 follow-up audits

Columbia Gas of Pennsylvania
A NiSource Company

Columbia Gas of Ohio
A NiSource Company

Columbia Gas of Maryland
A NiSource Company

Columbia Gas of Kentucky
A NiSource Company

Columbia Gas of Virginia
A NiSource Company

Columbia Gas of Massachusetts
A NiSource Company

NiSource®

Lesson 1: Put the right people in the right roles

- Separation of Plan Ownership and Plan Implementation Roles
  - Pipeline Safety Staff (Integrity Engineer, Senior Data Analyst)
  - State Steering Teams (multi -disciplinary)
    - Frequency of meetings has increased

Benefits:

- Strong controls on the plan contents, supporting documents and improved discipline on defined DIM processes.
- Clear accountability on implementation actions.
- Transparent sharing of information across Columbia companies.

Lesson 2: Create a “bread-crumb trail”

- Document clearly your DIMP procedures
  - Process mapping for administration of the plan
    - Review and approval for plan updates,
    - Review and approval for Subject Matter Expert involvement
    - Threat identification, potential threat investigation
    - Capturing of documents
    - Sources of data used
  - Process mapping for Knowledge Enhancement initiatives
  - Defined procedures for calculating performance metrics

Benefits:

- As new people plug into DIMP roles, it is clear how to maintain consistency.
- Clear accountability for actions.
- Meets regulators expectations to see detailed procedures.

Lesson 3: Commit to relentless pursuit of system knowledge

- Revisiting Current Records
  - The same records are often in different formats
  - Data elements may need reviewed
  - Integration of data is harder than we thought
  - Hidden clues

- Smart Solutions for records we don't have
  - Legacy systems vs. New Systems
    - ***Don't wait for the perfect system***
  - Field forms need to be designed to help accuracy as well as new data points
  - Engage experienced employees
  - Design new data capture solutions with Integrity Management in mind

Benefits:

- Future traceability assures prompt response/proactive mitigation strategies.
- Helps move from reaction to predictive strategies.

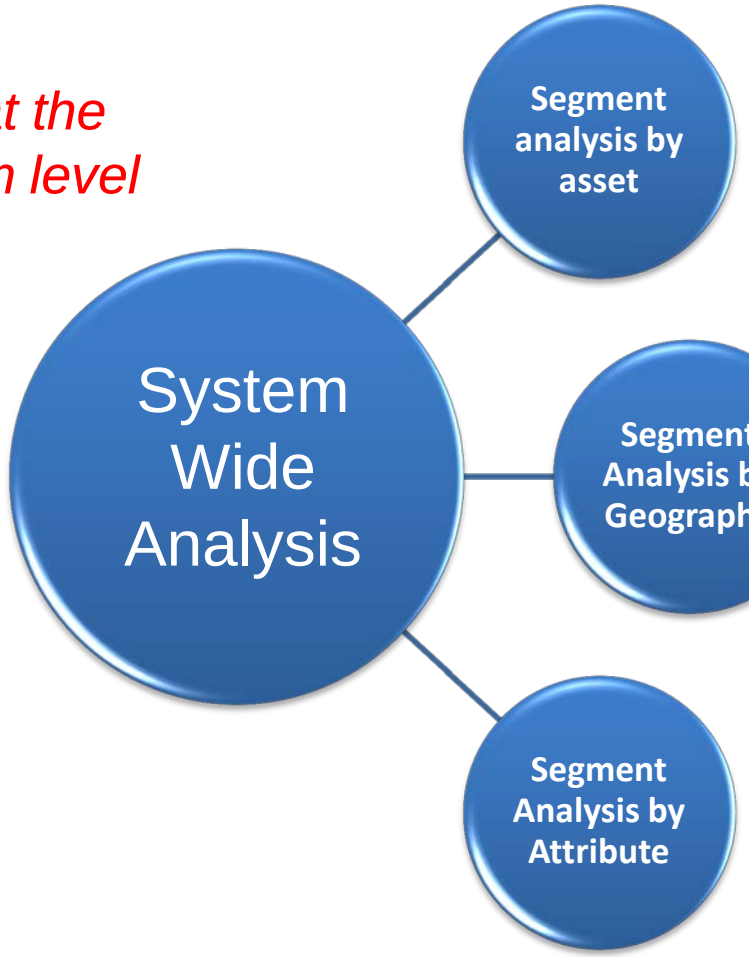
Lesson 4: Keep challenging your risk models

- Drive for a Data driven/SME Validated approach
  - Requires clean data
  - Where there is incomplete data, document the reasoning for the scoring/ranking
  - Use proven statistical principles to validate

- Use deductive reasoning for multiple levels of modeling

Core Risk Modeling Philosophy

Start at the system level first…



- Mains
- Services
- Regulator Stations

- By Op Center
- By neighborhood

- Steel, Plastic, etc..
- Manufacturer
- Installation method

…which helps us decide where to explore more detailed segment level analysis next.

System Level Risk Model

SME Model (2011-12)
- Simple Counts of leaks
- Data incorporated intuitively
- Risk scores were assigned
- Ranked only top 10 actual risks where leakage occurred

Data Model (2013)
- Initial use of leak rates
- Expansion of sub-threat categories
- Risk scores defined in ranges
- Ranked all actual risks where leakage occurred

Statistical Model (2014)
- Complex statistical formulas used
- Ranges of scores eliminated
- Data scrubbing implemented
- Ranked all actual and potential risks

Segment Level Risk Model

Version 1 Segment Model (2011-12)
- Optimain® for Cast Iron and Bare Steel Mains only

Version 2 Segment Model (2013)
- Optimain® update on GIS platform
- Added plastic material/mains
- Initial use of manual Regulator Station Model

Version 3 Segment Model (2014 - 2015)
- Expansion of Optimain® underway to add service lines
- Expansion of Regulator Station model

NiSource®

Lesson 5: Talk about DIMP all of the time…listen about DIMP all of the time

- Develop a solid communication plan
  - What are your key messages?
  - Who are your internal & external audiences?
  - Who are the best “ambassadors” for sharing the messages?

- Invite input on improving the plan and implementation
  - Continuous improvement approach
  - Discussions with regulators and collaboration with industry

Benefits :

- Builds trust.
- Improves the flow of new information.
- Anchors a strong safety culture, setting expectations.
- Enables the identification & development of resources.

Positive Progress with NGD DIMP

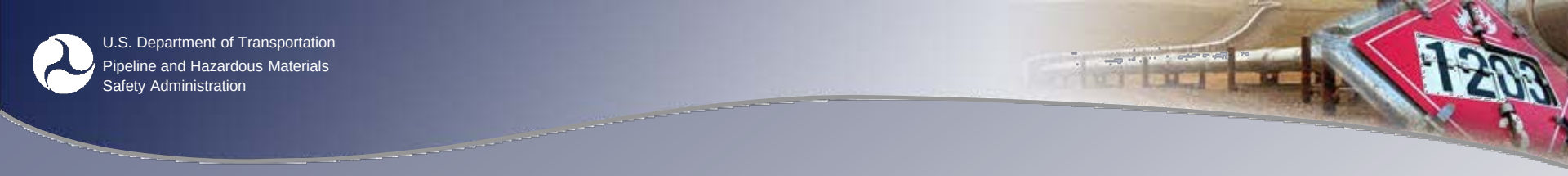
- More discipline on DIMP Processes
- Clearer focus on data quality
- DIMP mindset is much more than “pipe replacement”
- Improved field-level awareness
- Regulatory knowledge (internally & externally) of DIMP has increased
- Clear indicators of a mindset shift from “compliance” to “risk management”
- Improved interaction of stakeholders that engage DIMP (facility failure investigators, damage prevention, engineering, etc.)

NiSource Gas Distribution DIMP Experience

- Successes
  - Structure
  - Data Quality
  - Risk Assessment Improvements
  - Connecting all departments
  - Defining procedures

- Lessons Learned
  - Get the right people in the right roles
  - Map your procedures
  - Relentlessly pursue knowledge enhancement
  - Challenge your risk modeling
  - Develop a 2-way communication plan

NiSource®



Plastic Pipe Ad Hoc Committee (PPAHC) Activities
- A NAPSR and PHMSA Team -

Max Kieba

PHMSA Pipeline Engineering & Research

PPAHC Lead

PPAHC background

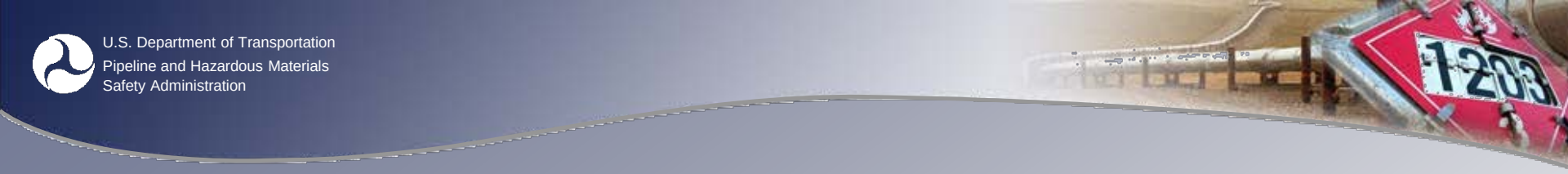
- Formed as a means for PHMSA and NAPSR to discuss plastic piping systems issues we see in the field and measures needed to address
- Currently consists of 5 PHMSA reps and 7 NAPSR reps
- Pre-dates DIMP
- Not just distribution

Examples of things we got done

- General dissemination of information and lessons learned on issues to others in PHMSA and NAPSR. Some of these directly or indirectly influence actions by others
  - Through the NAPSR members on the team, helped with NAPSR resolution that ultimately encouraged the Gov't/Industry PPDC to release more information on operators submitting data
  - When PHMSA became aware of Drisco 8000 degradation issues, helped reached out to other States and operators to confirm that a number of users had not heard of the issues from the manufacturer. Helped PHMSA decide to launch advisory

Current Focus

- Continue to discuss issues, but also avoid duplicating any efforts with DIMP, PPDC, etc.
- Latest concept is to become a meta-analysis group
  - If become aware of an issue or issue that's still occurring put together a white paper describing the issue that can be disseminated to others
    - If based on actual data or references (advisories, incidents, etc.) will include
    - If based more on anecdotal information that's not quite to the level of advisory, but still worthy of informing others will publish as well
  - Example is a cross-bore white paper (coming soon)



Plastic Pipe Database Committee

Max Kieba

PHMSA, PPDC co-chair

What is the PPDC

- Formed to create, maintain and review a voluntary database of in-service plastic piping system leaks/failures.
- Initially created in response to the NTSB Special Investigation Report, *Brittle-Like Cracking in Plastic Pipe for Gas Service* and NTSB Recommendation P-98-2
- Status reports provide analysis of PPDC data related to historically known plastic piping issues including through PHMSA advisories (ADB-07-01; ADB-02-07)
- In more recent years the focus of the committee has shifted to provide information that may assist operators and regulators in the context of DIMP.
- Consists of reps/liaisons from AGA, APGA, PPI, NARUC, NAPSR, PHMSA, NTSB

Limitations

- The PPDC database is a volunteer database with inherent properties pertaining to the accuracy that come with volunteer surveillance data.
- Although data continues to be actively reviewed by PPDC, it cannot be directly correlated to quantities that may be in service across the U.S.
- Based on the charter that governs PPDC, reports are not associated with operators; therefore, analysis cannot be performed by operator or by location.
  - We do publish a list of active submitters

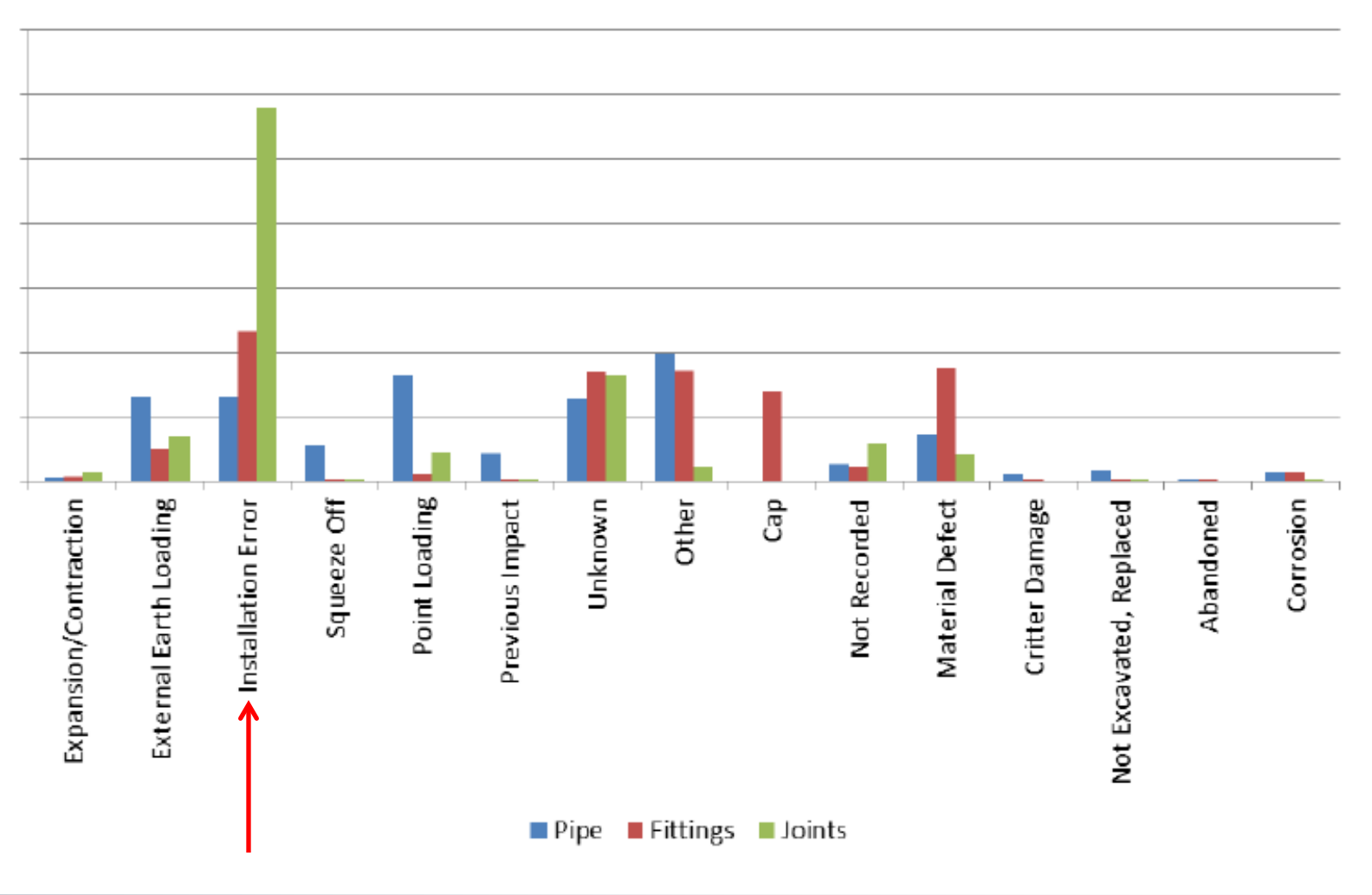
Historically known issues from PHMSA Advisory Bulletins

- Historically known issues
  - Century Utility Products polyethylene (PE) pipe produced from 1970 through 1974
  - DuPont Aldyl® A low ductile inner wall PE pipe manufactured from 1970 through 1972
  - PE pipe manufactured from PE 3306 resin such as Swanson, Orangeburg and Yardley
  - DuPont Aldyl® service punch tee with a white Delrin® polyacetal threaded insert
  - Plexco service tee with Celcon® polyacetal threaded cap

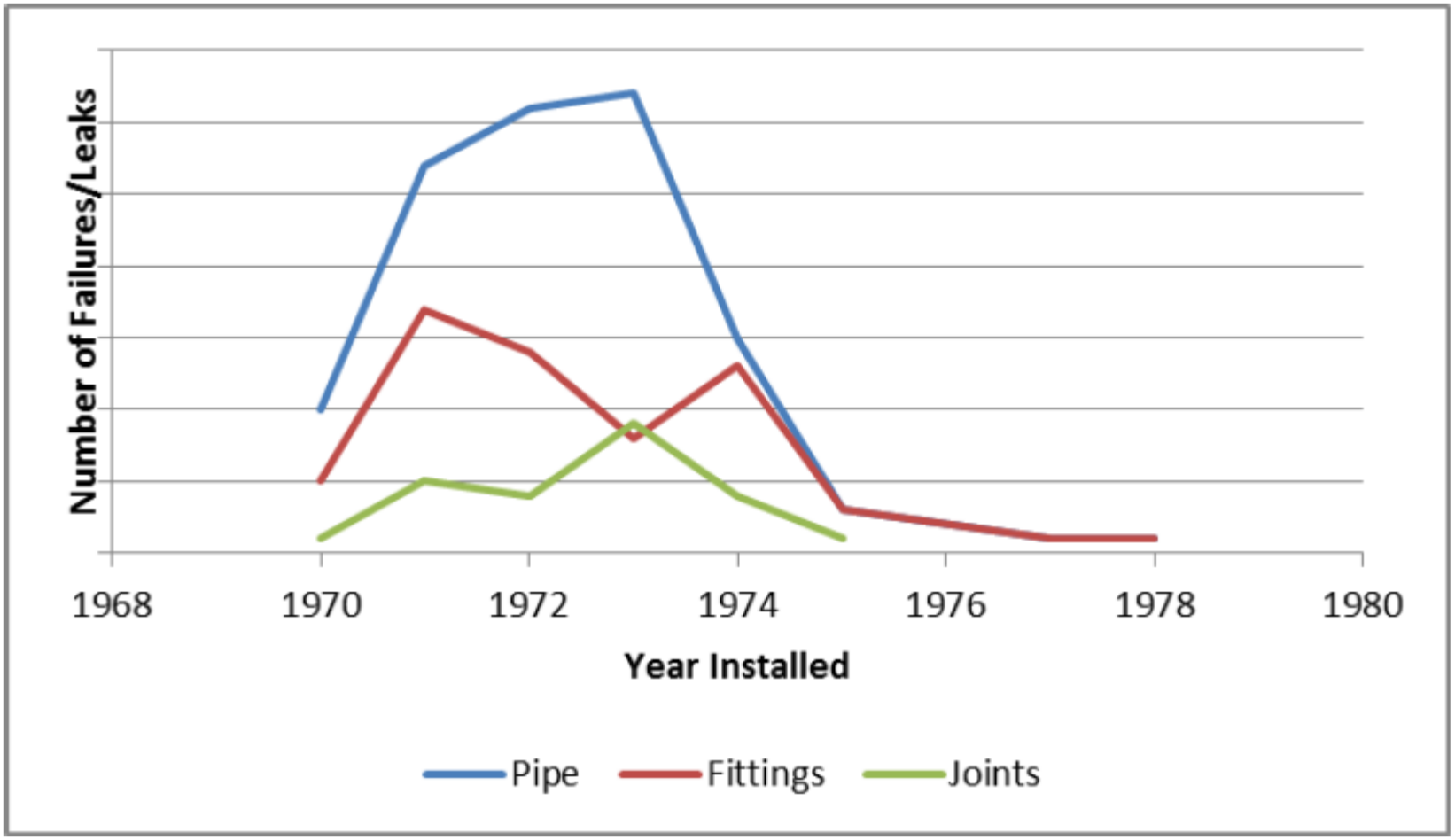
Examples of PPDC Analysis

- Failure Causes for Pipe, Fittings, and Joints
- More detailed analysis on known issues:
  - Century Utility Products, which includes the first item previous slide, is shown in Appendix C of March report (examples next slides)
  - All Aldyl pipe and fittings manufactured by DuPont and Uponor, which includes items 2 and 4 previous slide is shown in Appendix D of March report (examples next slides)
  - PE 3306, which includes the third item on previous slide, is shown in Appendix E of March report
- Questions from Stakeholders

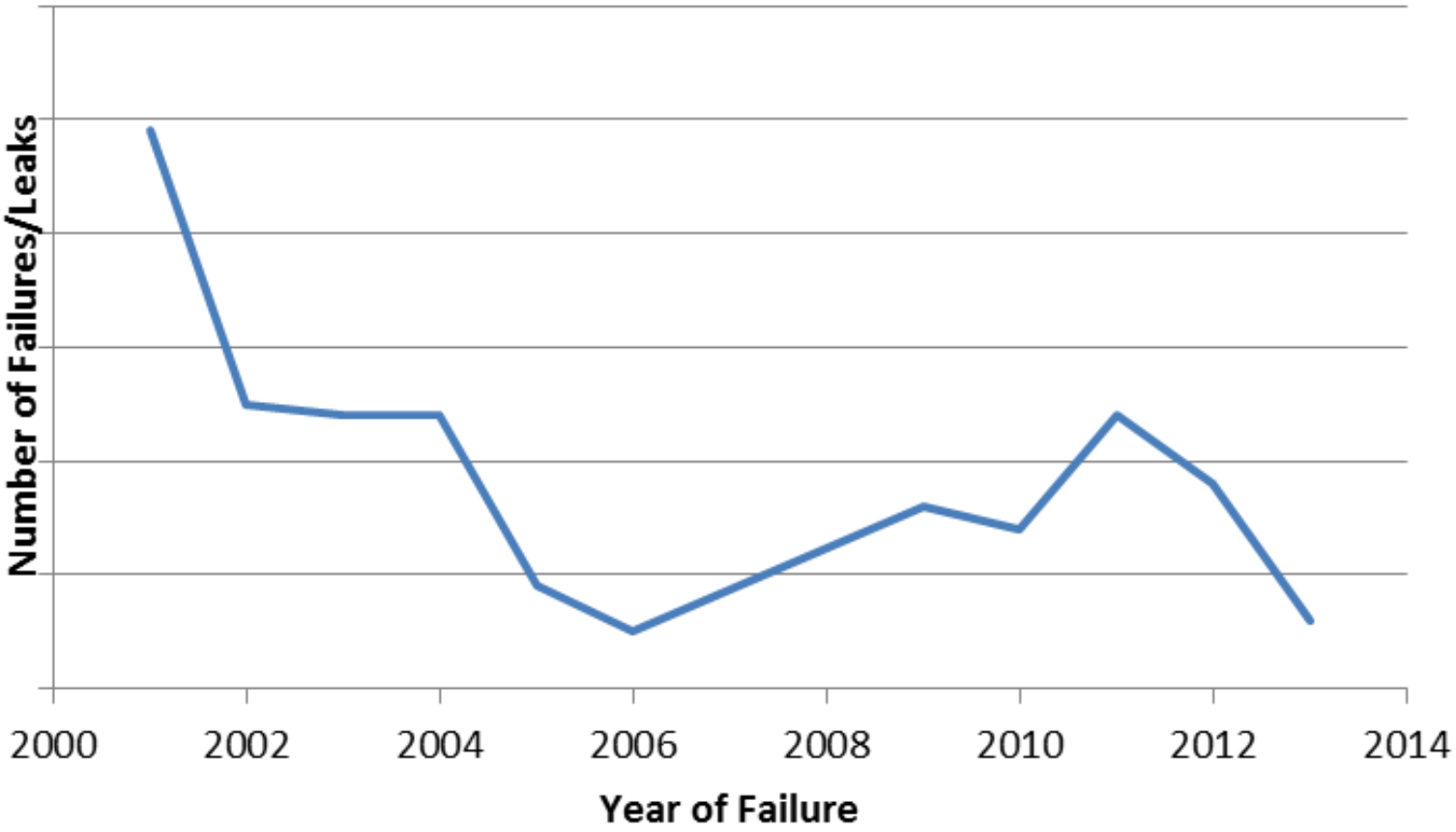
Failure Causes: Pipe,Fittings,Joints

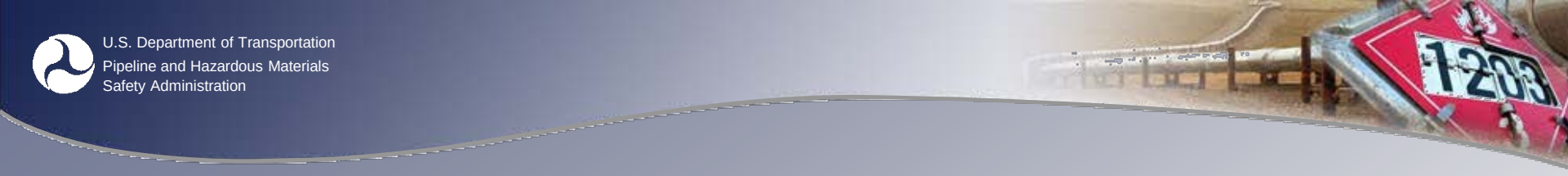


Century Failures by Year Installed



Century Year of Failure



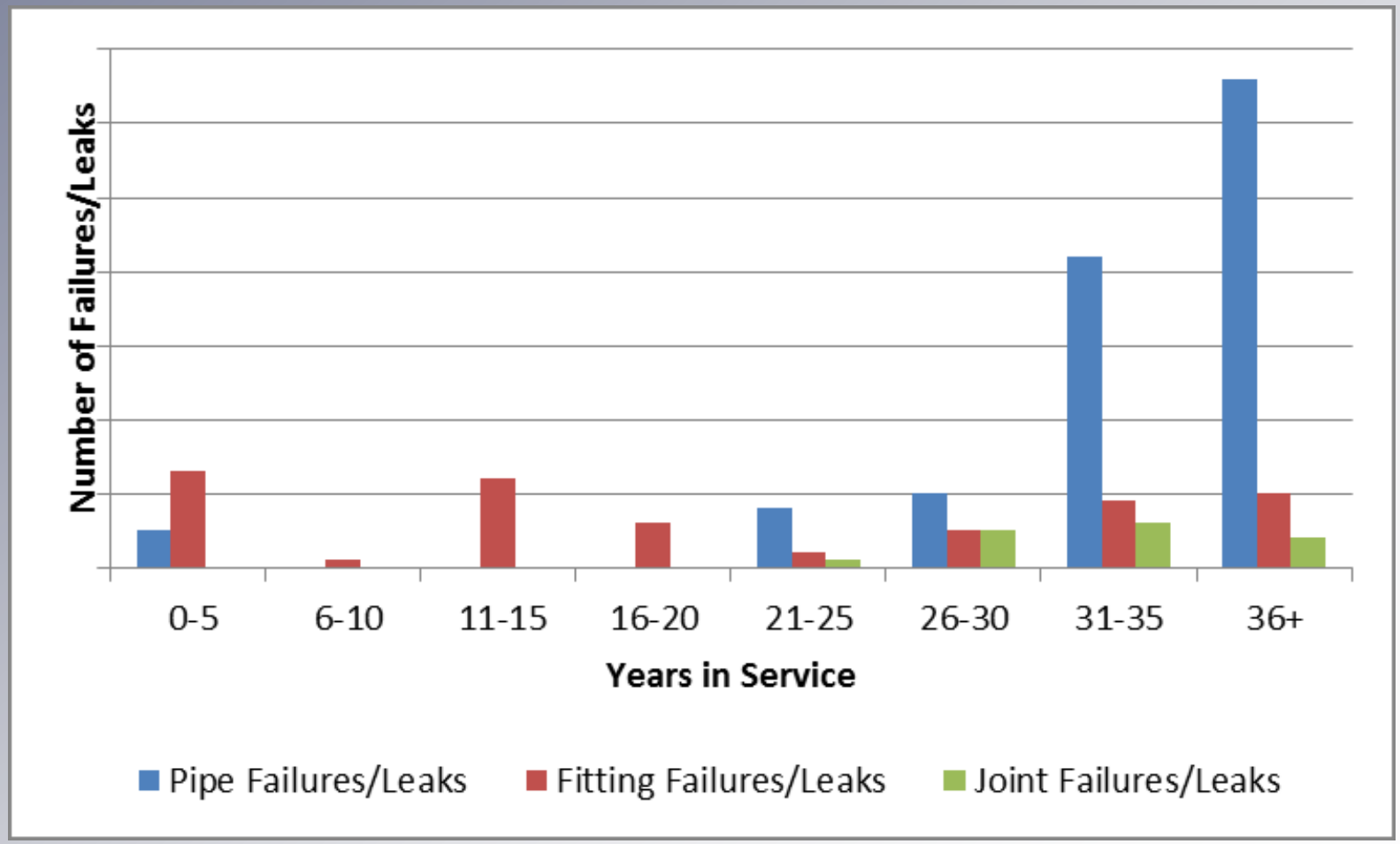


Century Failures by Cause

Cause	% of Total Century Failures/Leaks	% of Century Pipe Failures/ Leaks	% of Century Fitting Failures/Leaks	% of Century Joint Failures/Leaks
Excessive Expansion/Contraction	0.0%	0.0%	0.0%	0.0%
Excessive External Earth Loading	0.5%	0.8%	0.0%	0.0%
Installation Error	20.6%	10.7%	28.1%	46.2%
Squeeze Off	0.0%	0.0%	0.0%	0.0%
Point Loading	1.4%	2.5%	0.0%	0.0%
Previous Impact	0.5%	0.8%	0.0%	0.0%
Unknown	6.1%	5.8%	7.8%	0.0%
Other	19.6%	28.1%	6.3%	15.4%
Cap	0.9%	0.0%	3.1%	0.0%
Not Recorded	0.9%	0.0%	3.1%	0.0%
Material Defect	49.5%	51.2%	51.6%	38.5%
Gopher/rodent/worm damage	0.0%	0.0%	0.0%	0.0%
Unknown - Not Excavated, Replaced	0.0%	0.0%	0.0%	0.0%
Unknown - Abandoned	0.0%	0.0%	0.0%	0.0%
Corrosion	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

Dupont & Uponor, Aldyl A Failures by Years in Service

PE 3306 Years in Service, 5 year intervals



Questions From Stakeholders

- **Question from PHMSA:** What does the PPDC data reflect regarding failures due to squeeze-off? For all plastic pipe? For plastic that has been known to be susceptible to brittle-like cracking? For pipe installed through the early 1980s? Are there any trends of squeeze-off failures over time for the any/all of the categories above?
- **Response from the PPDC:** Squeeze off represents approximately 2 % of all the data submitted. When considering pipe only, squeeze off represents approximately 6%. Failures/Leaks due to squeeze off for certain pipe materials known to be susceptible to brittle-like cracking (Century, Aldyl A and PE3306) are included in other appendices in this status report. For pipe installed prior to and including 1983, squeeze offs represent approximately 9% of all data reported. Failures/leaks due to squeeze offs are trending down in all categories requested.

How can operators use the info

- Operators can use the data to help with their DIMP plans. A specific example is if an operator has Aldyl piping in their system.
  - Based on PPDC data, peak for these failures/leaks is approximately 25 years in service.
  - Operators can look at the fitting types and compare to what has been used in their system
  - This information can then help refine their plans and develop long term plans

Publicly owned (APGA) Systems

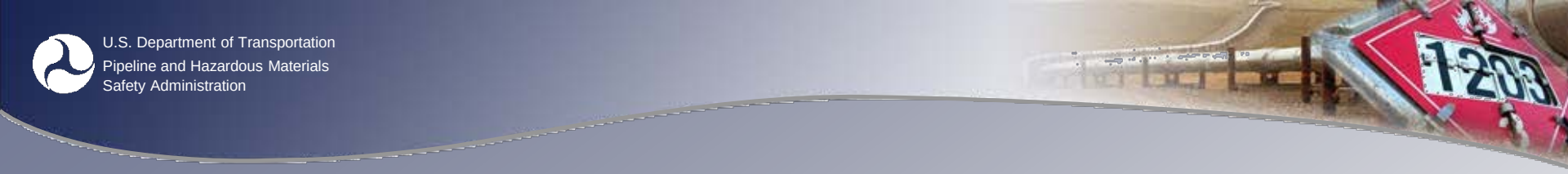
- Many public gas systems use SHRIMP (Simple Handy Risk-based Integrity Management Plan) in developing their DIM Programs.
- SHRIMP uses PPDC published information as part of its risk determination model. APGA SIF looks at the data as SHRIMP continues to develop.
- For individual systems, PPDC information can indicate potential areas to examine in evaluating risks as part of a Distribution Integrity Management Program. Some of these are: material failure trends, years in service trends, cause and failure location.

How might States use the info

- States might use the list of active submitters to see which companies in their state are or are not participating
- States might use the PPDC analysis publicly available to inquire whether those issues are relevant to a certain operator, and if so, what is being done about it in the context of DIMP
- Responses to questions may also aid in determining what issues to expect

Other information from PPDC

- Manufacturer's Database
- Plastic Pipe Timeline
- For more info on PPDC
  - Via DIMP Website/Resources
  - Directly via AGA/PPDC website: http://www.aga.org/Kc/OperationsEngineering/ppdc/Pages/default.aspx
  - Kate Miller at (202) 824-7342 or kmiller@aga.org
  - Your stakeholder representative(s) (particularly feedback on report form, additional analysis or data queries)



Questions and Answers

DIMP Website

Please regularly use PHMSA websites as they are a primary form of communication with Stakeholders

PHMSA Office of Pipeline safety

http://phmsa.dot.gov/pipeline

DIMP Home Page

http://primis.phmsa.dot.gov/dimp/index.htm

Pipeline Safety Stakeholder Communications

http://primis.phmsa.dot.gov/comm/

Pipeline Replacement Updates

http://opsweb.phmsa.dot.gov/pipeline_replacement/