

Pipeline and Hazardous Materials Safety Administration (PHMSA) perspective: API RP 1162 Rewrite and RP 1173 Impacts on Public Safety

**Utility Public Safety Alliance Annual Meeting
Weehawken, NJ
April 19, 2017**

**Karen Gentile
Community Liaison
Eastern Region**



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

*"To protect people and the environment by advancing the safe transportation of energy
and other hazardous materials that are essential to our daily lives."*



Presentation Overview



- **PHMSA Organization**
- **Public Awareness & API RP 1162**
- **Damage Prevention Efforts**
- **Safety Management Systems (SMS) & API RP 1173**
- **Available Resources & Link**



Who is PHMSA?

U. S. Department of Transportation (DOT)



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

"To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives."



Vision



PHMSA – The most innovative transportation safety organization in the world.

Mission

To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.



PHMSA Regional Offices

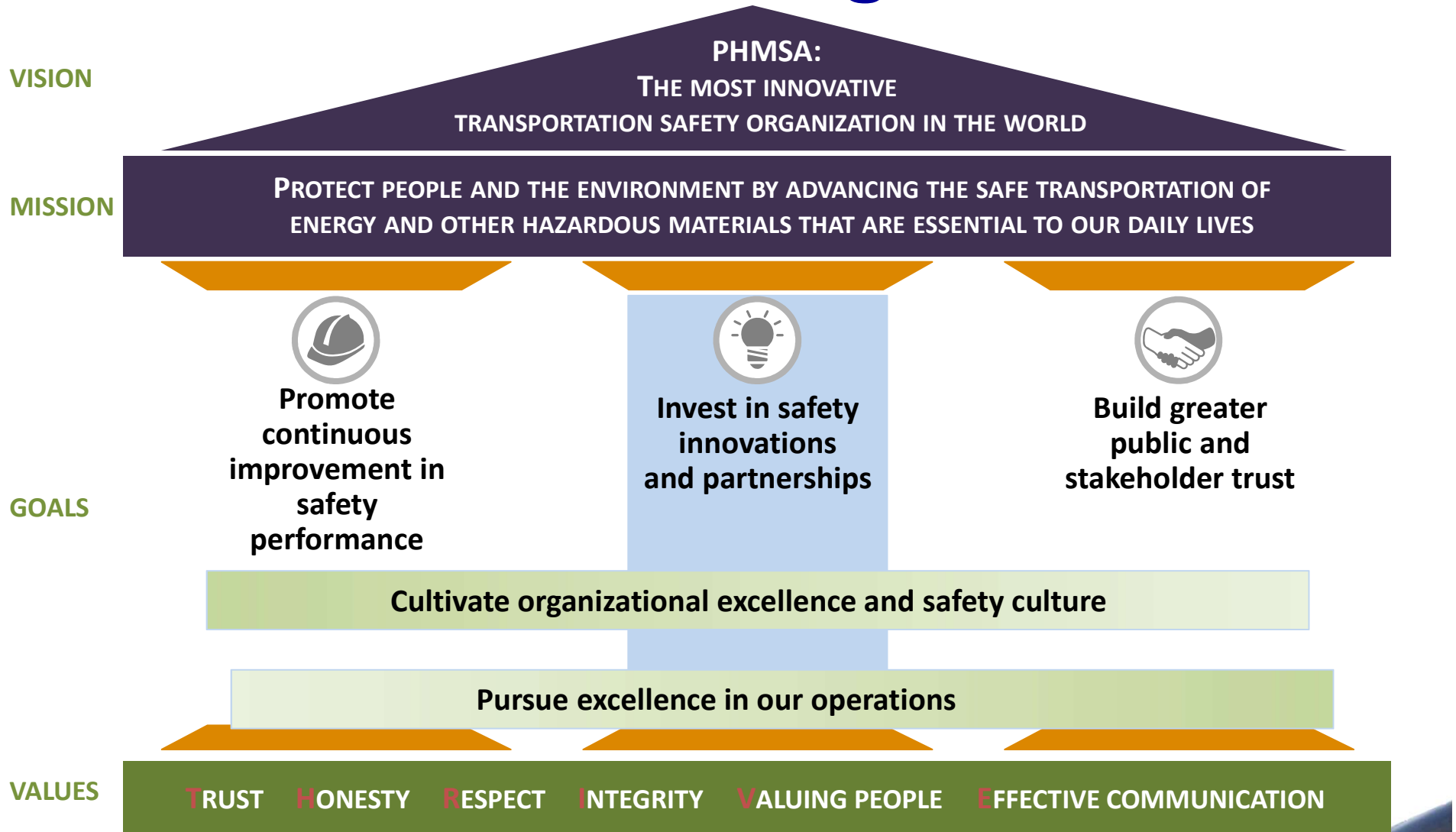


What We Regulate

| Pipeline Facilities by System Type – CY 2016* | | | |
|---|------------------------|-----------|---|
| data as of 4/1/2017 | | | |
| System Type | Miles | % Miles | # Operators |
| Hazardous Liquid (* CY2015) | 208,616 7,578 Tanks | 8% | 483 |
| Gas Transmission | 300,136 | 11% | 1,019 |
| Gas Gathering | 17,516 | 1% | 350 |
| Gas Distribution (Mains & Services) | 2,206,391 | 80% | 1,285 |
| Total | 2,732,659 | 100% | Some Operators have multiple System Types |
| Liquefied Natural Gas | 154 Plants | 229 Tanks | 84 |



PHMSA 2021—Strategic Framework



Four Key Initiatives to Enable PHMSA 2021

PHMSA – The most innovative transportation safety organization in the world

To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.



Organizational assessment

Assess PHMSA's operating model, org structure, capabilities, processes, and culture



Data assessment and strategy

Understand how PHMSA can better collect, analyze, and communicate data to support its mission



Agency Safety Action Plan (ASAP)

Anticipate safety challenges, invest in innovative solutions, and address emerging safety concerns



SMS Framework

Establish framework for implementation of SMS in PHMSA and within our regulated communities

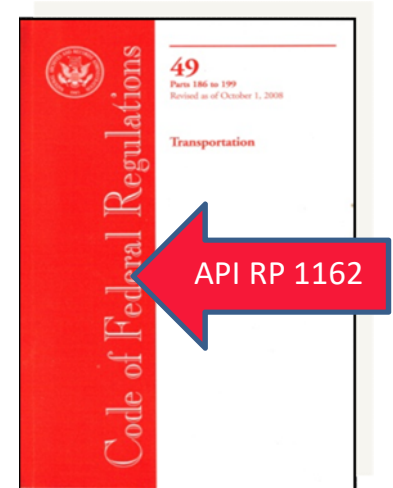


Public Awareness Regulatory Requirements

§192.616 Public Awareness (Natural Gas or Other Gas)

§195.440 Public Awareness (Hazardous Liquids)

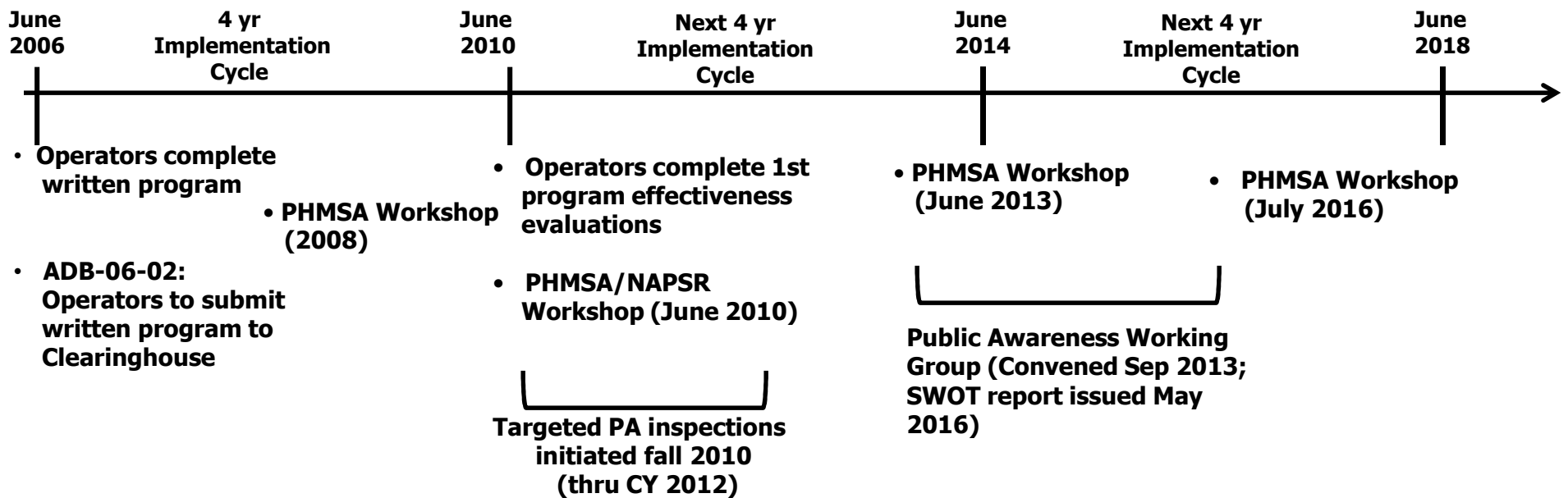
API RP 1162, “Public Awareness Programs for Pipeline Operators”, 1st Edition, December 2003,
Incorporated by Reference (§192.7 and §195.3)



“...each pipeline operator must develop and implement a written continuing public education program that follows the guidance provided in the American Petroleum Institute's (API) Recommended Practice (RP) 1162.”



Public Awareness A Continuing Timeline



Public Awareness Inspections

- Ongoing inspections since 2006, starting with Clearinghouse review (not an approval)
- Initially higher level inspections
 - Focus on 5 main messages
 - Most didn't drill down into API RP 1162 requirements
- Targeted Public Awareness Program Effectiveness Inspections focus on program details
 - Written program includes the 5 W's (who, what, when, where, why) and verify implementation
 - API RP 1162 requirements met
 - Annual Program Implementation Review procedures and records
 - Effectiveness Evaluation procedures and records



Inspection Findings & Enforcement

- Overall Program Administration & Development Shortfalls
- Lack of Consideration for Unique Attributes
- Stakeholder Identification Shortfalls
- Messaging Shortfalls
- Implementation & Effectiveness Evaluation Review Shortfalls



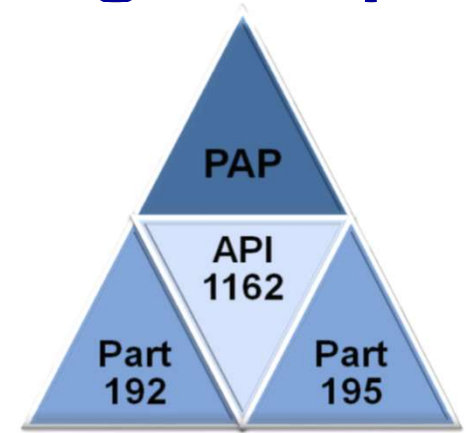
General Observations

- Most operators putting forth effort and improving programs with creative approaches
- Program documentation needs improvement
 - More detailed procedures
 - Include decisions and supporting rationale
- A “one-size-fits-all” Public Awareness program typically doesn’t work
 - differences in pipeline types, consequences, population, property development, excavation activities, HCA, results of evaluations, etc.
 - Some stakeholders need more detail (i.e. emergency responders)
- Balancing information overload with specific messages
- Operator not taking credit for all the good things they’re doing...need to document



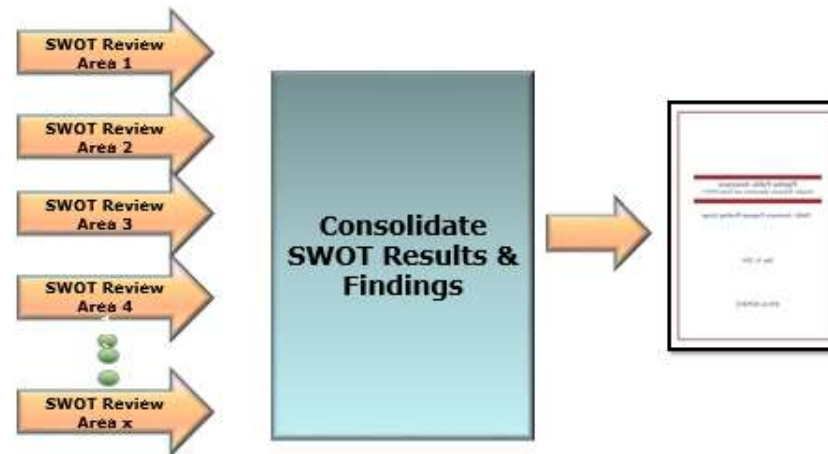
Public Awareness Program Working Group (PAWG)

- Convened in 2013
- Participants included public, public officials, emergency response officials, operators, regulators
- Objective of the PAPWG:
 - Share diverse “perspectives” on current state of public awareness
 - Develop a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Report of key findings to strengthen public awareness outreach efforts and requirements



SWOT Report

- Published on PHMSA website (May 2016)
- Not to prescribe recommendations, requirements, or mandates



<http://primis.phmsa.dot.gov/comm/publicawareness/docs/PAPWG%20SWOT%20Analysis%20Report-FINAL%2005-16-16.pdf>



API RP 1162 - 3rd Edition

- API forming groups to work effort
 - Task Group to rewrite
 - Reading Group to review and provide comments on drafts
 - Voting Group to review/comment and approve document when ready for ballot
- PHMSA and NAPSR participation
- Development will follow API Standards Program
 - Use ANSI-approve API procedures for standards development, www.api.org/products-and-services/standards
 - Developed by consensus



API RP 1162 – Additional Information



- View API Standards through: <http://publications.api.org>
 - Provide information for “account”
 - Allows government-cited or safety related standards to be viewed for free (API RP 1162 available under “Pipeline Transportation” Browse Read-Only Documents)
 - Printed hardcopies and PDF versions available for purchase
- API Contact: John Buflod, API Standards Development, Pipeline, buflodj@api.org



For More on Public Awareness

Public Awareness Stakeholder Communications

<https://primis.phmsa.dot.gov/comm/PublicAwareness/PublicAwareness.htm?nocache=8541>

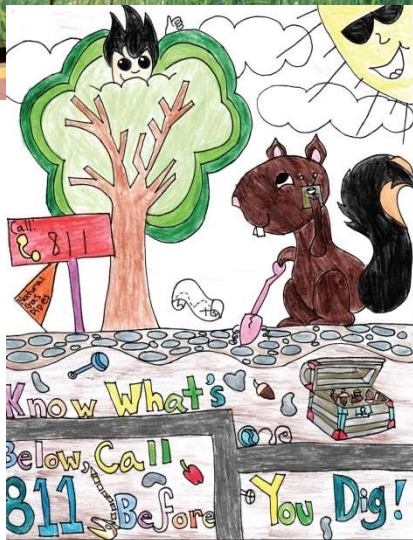


Includes information on:

- Regulatory Requirements
- API RP 1162
- Public Awareness Workshops
- Public Awareness Working Group
- Frequently Asked Questions
- Strengths, Weaknesses, Opportunities, and Threats (SWOT) Report



Amplifying Damage Prevention Focus



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

"To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives."



Excavation Enforcement Rule

- PHMSA's goal: to encourage states to enforce their own damage prevention laws
- 49 CFR 198.51 – 198.63 (evaluation of state damage prevention law enforcement programs)
 - Seven (7) criteria
- 49 CFR 196 (protection of underground pipelines from excavation activity)
 - The federal safety standard applicable to excavators
- PHMSA has enforcement authority over excavators only in states with inadequate enforcement programs



Federal Standards for Excavators

- Call 811 before excavating
- Wait for pipeline operators to establish and mark the location of underground pipelines before excavating
- Excavate with proper regard for the marks, take all practicable steps to prevent excavation damage
- Make additional use of one-call as necessary
- Any contact with pipelines must be reported to operator at earliest practical moment
- If there is a release, excavator must call 911

NOTES: There are no exemptions in the final rule. PHMSA will be considerate of exemptions in State laws when undertaking federal enforcement action.

State laws may have additional and/or more stringent requirements.



Excavation Enforcement Rule Implementation

- All state one-call law enforcement programs evaluated in calendar year 2016
- Most 2016 state evaluation notifications complete (states have 30 days to contest PHMSA's findings)
- Enforcement programs will be evaluated on an annual basis
- 2017 evaluations begin this month



For Additional Information... Just Search “Excavation Enforcement Rule”

The screenshot shows the PHMSA website header with the logo and navigation links. The main content area is titled 'Safety Awareness and Outreach' and features a section for 'About Excavation Enforcement Final Rule'. The text describes the rule's purpose and lists key points. A sidebar on the right contains a table of contents for the rule page.

PHMSA
Pipeline and Hazardous Materials
Safety Administration

U.S. Department of Transportation

Home » Pipeline Safety Community » Safety Awareness and Outreach » Excavation Enforcement Final Rule

Safety Awareness and Outreach

About Excavation Enforcement Final Rule

On July 13, 2015, the U.S. Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) announced the issuance of a final rule to establish the process for evaluating State excavation damage prevention law enforcement programs and enforcing minimum Federal damage prevention standards in States where damage prevention law enforcement is deemed inadequate or does not exist.

This final rule amends the Federal pipeline safety regulations to establish the following:

- Criteria and procedures PHMSA will use to determine the adequacy of State pipeline excavation damage prevention law enforcement programs;
- The administrative process PHMSA will use in determining the adequacy of State excavation damage prevention law enforcement programs;
- The Federal requirements PHMSA will enforce in States with inadequate excavation damage prevention law enforcement programs; and

ABOUT EXCAVATION ENFORCEMENT FINAL RULE

- Excavation Damage 80 FR 43836-Final Rule (Federal Register)
- PHMSA Issues Pipeline Damage Prevention Programs Final Rule (Press Release)
- FREQUENTLY ASKED QUESTIONS (FAQS)
- STATE EVALUATION SCHEDULE
- DETERMINATIONS OF ADEQUACY
- RESOURCES
- CONTACT US
- NOTIFY PHMSA OF EXCAVATION DAMAGE



What is SMS?

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

- a systemic approach to managing safety,
- the necessary management commitment,
- including organizational structures, accountabilities, policies and procedures.

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



Where will SMS take us?

Reactive → **Proactive** → **Predictive**

01 REACTIVE

Develops strategies that respond to past incidents and accidents



PAST

PRESENT



02 PROACTIVE

Actively collects data to identify and address current hazardous conditions

03 PREDICTIVE

Systematically analyzes safety risk data and performs forward-looking data analytics to identify potential/future problems



FUTURE



SMS is NOT...

- Something that will go away with the change of Administration.
- Something that is spoken, SMS is something that is practiced.
- Something that can be successful without individual accountability and safety leadership at all levels (Executive as well as front line).
- Something that you do after an issue (accident/trend) is identified...it needs to happen long before that.



SMS Isn't New

- 1990's – Risk Management Demonstration and Systems Integration Initiative
- 2000's – Integrity Management Systems
- 2011 – Gas Transmission & Gathering ANPRM included Quality Management Systems (QMS)
- 2011 – Gas Distribution Pipeline Integrity Management
- 2012 – NTSB recommended API develop a pipeline industry standard for SMS



API Recommended Practice 1173

Pipeline Safety Management System

- API RP 1173 Committee
 - Public, Regulators, Industry
 - Common Goals – Improved Safety, Zero Accidents
- API RP 1173, “Pipeline Safety Management Systems”, First Edition, July 2015
- Framework of recommended practices for pipeline safety and integrity procedures
- Key components
 - How top management develops processes to reveal and mitigate safety threats
 - Provide for continuous improvement
 - Make compliance and risk reduction routine



Essential Pipeline Safety Management System Elements

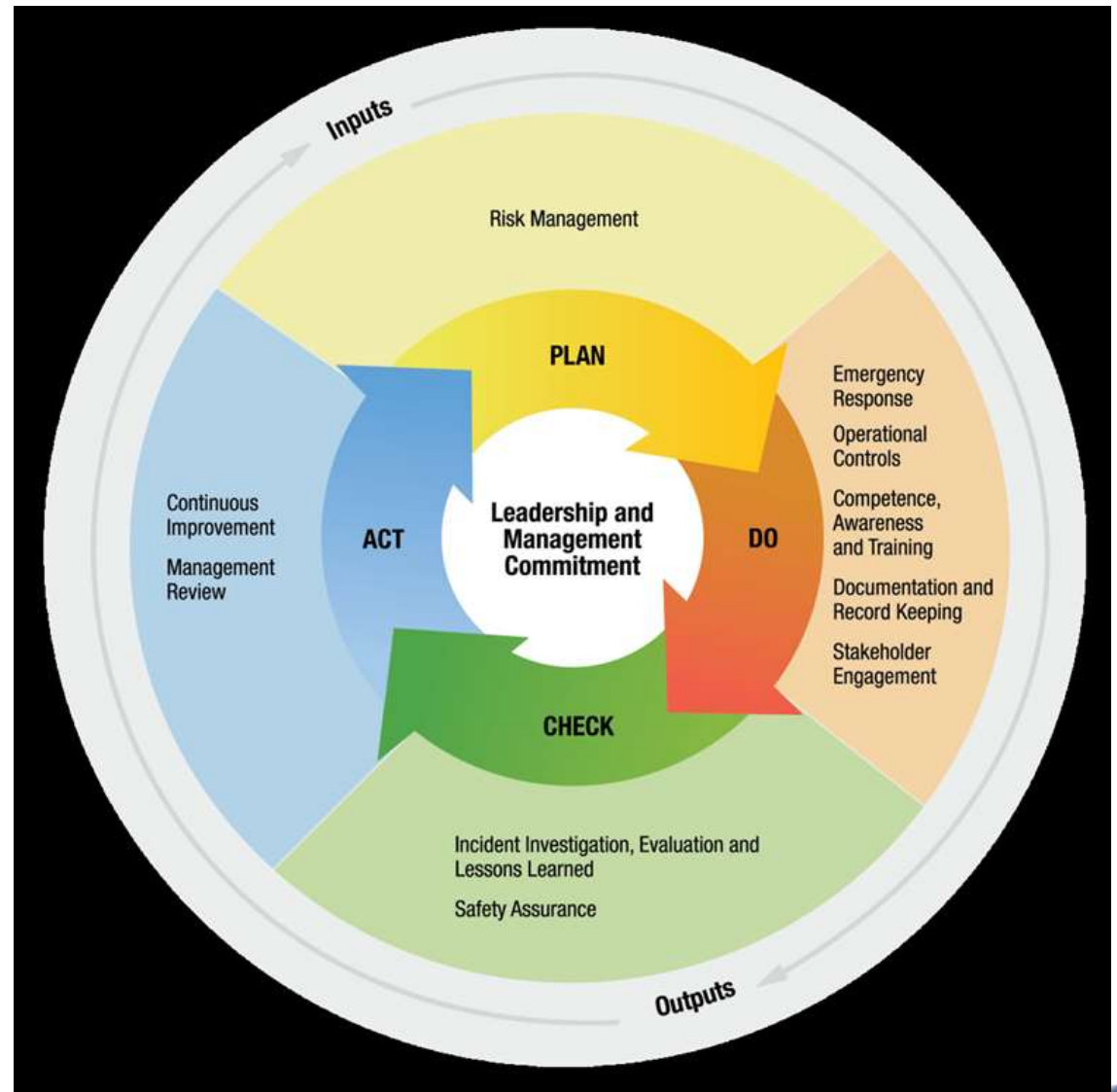
- Leadership and Management Commitment
- Stakeholder Engagement
- Risk Management
- Operational Controls
- Incident Investigation, Evaluation, and Lessons Learned
- Safety Assurance
- Management Review and Continuous Improvement
- Emergency Preparedness and Response
- Competence, Awareness, and Training
- Documentation and Record Keeping



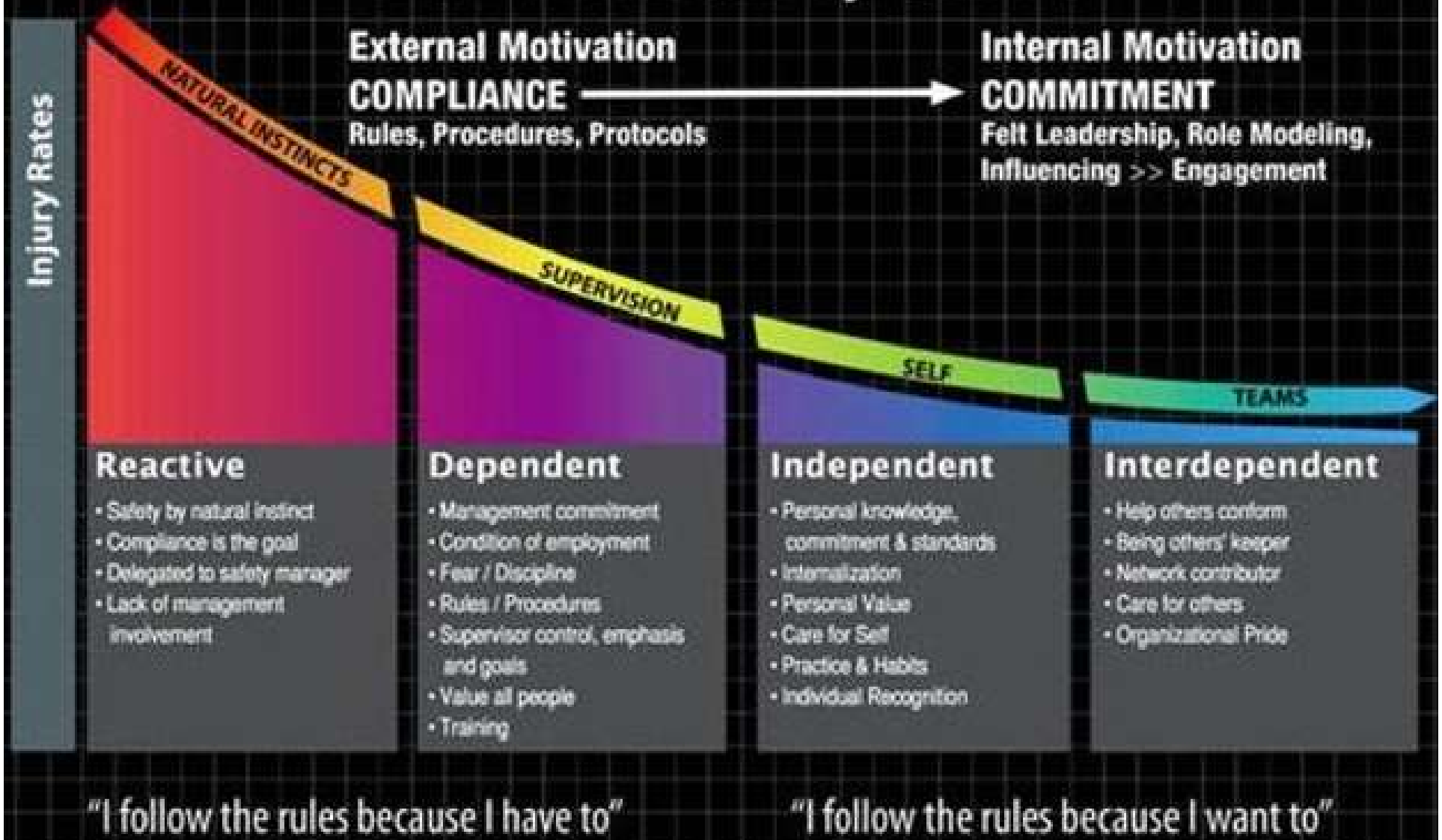
API RP 1173

The core of the standard...
Plan, Do, Check, Act

The goal of the standard...
Continuous Improvement



DuPont Bradley Curve



© 2014 E.I. duPont de Nemours. All rights reserved. The DuPont oval logo, DuPont™ and the miracles of science™ are registered trademarks of DuPont.



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

"To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives."



SMS Guiding Principles

PHMSA commits to a set of principles that will guide the implementation of SMS over time. An SMS approach asks PHMSA and its regulated industries to be a proactive learning organization that:

- Promotes a strong safety culture, from senior leadership to front-line employees, and demonstrates a commitment to safety as our top priority.
- Values, maintains and operates risk management processes, activities, and tools to identify, evaluate and mitigate safety risks.



SMS Guiding Principles

- Continuously assesses processes and procedures and validates systems to improve safety performance
- Establishes, measures and assesses safety performance indicators and targets.
- Leverages relevant information such as emerging trends, metrics, investigations and inspections to continuously improve safety.
- Empowers and invests in our people to advance our mission.
- Fosters a strong safety culture through internal and external collaboration and communication



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.

What We've Done... And Will Continue to Do

- Committed to implement SMS principles within PHMSA
- Hosted public workshops on SMS and API RP 1173
 - <https://www.youtube.com/user/PHMSADOT/videos>
 - <https://primis.phmsa.dot.gov/meetings/>
- Promoted SMS at PHMSA and other workshops, meetings, and seminars
- Continue to educate ourselves; internal training
- Continue to engage agency staff and stakeholders
- Support implementation of API RP 1173
- Advocate for industry adoption of SMS processes





Additional Important Links

- Federal Regulations:
<http://www.ecfr.gov>
- PHMSA, Office of Pipeline Safety:
<http://www.phmsa.dot.gov/pipeline>
- PHMSA Enforcement Website:
<http://www.phmsa.dot.gov/pipeline/enforcement>
- PHMSA Regulations Website
<http://www.phmsa.dot.gov/regulations>
Rulemakings, Notices, Safety Advisory Bulletins, Interpretations, and more...



Community Liaison Points of Contact

Headquarters (Washington, DC)

Karen Lynch, National CATS Coordinator: karen.lynch@dot.gov • Phone: (202) 366-6855

Southern Region (Atlanta, GA)

Alabama; Florida; Georgia; Kentucky; Mississippi; North Carolina; Puerto Rico; South Carolina; Tennessee

Arthur Buff, CATS Manager: arthur.buff@dot.gov • Phone: (770) 841-3483

James Kelly, CATS Manager: james.kelly@dot.gov • Phone: (404) 990-1848

Eastern Region (West Trenton, NJ)

Connecticut; Delaware; Maine; Maryland; Massachusetts; New Hampshire; New Jersey; New York; Ohio; Pennsylvania; Rhode Island; Vermont; Virginia; Washington, D.C.; West Virginia

Karen Gentile, CATS Manager: karen.gentile@dot.gov • Phone: (609) 433-6650

Ian Woods, CATS Manager: ian.woods@dot.gov • Phone: (609) 468-9478

Southwest Region (Houston, TX)

Arkansas; Louisiana; New Mexico; Oklahoma; Texas

Bill Lowry, CATS Manager: bill.lowry@dot.gov • Phone: (713) 272-2845

James ‘Jay’ Prothro, CATS Manager: james.prothro@dot.gov • Phone: (713) 272-2832

Western Region (Lakewood, CO)

Alaska; Arizona; California; Colorado; Hawaii; Idaho; Montana; Nevada; Oregon; Utah; Washington; Wyoming

Tom Finch, CATS Manager: thomas.finch@dot.gov • Phone: (720) 963-3175

Dave Mulligan, CATS Manager: david.mulligan@dot.gov • Phone: (720) 963-3193

Central Region (Kansas City, MO)

Illinois; Indiana; Iowa; Kansas; Michigan; Minnesota; Missouri; Nebraska; North Dakota; South Dakota; Wisconsin

Angela Pickett, CATS Manager: angela.pickett@dot.gov • Phone: (816) 329-3823

Sean Quinlan, CATS Manager: sean.quinlan@dot.gov • Phone: (816) 329-3800



April is National Safe Digging Month



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

"To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives."

38





Thank You!!

Karen Gentile

(609) 433-6650

Karen.Gentile@dot.gov

<http://phmsa.dot.gov/pipeline>



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

"To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives."

39

