NGA PSMS Implementation Collaborative

2023 Gas Operations School
Integration PSMS Principles Into GOS Presentations

GOS Instructors Meeting
Bryant University, Smithfield, Rhode Island
April 13, 2023

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NGA PSMS Implementation Collaborative

Over 2,000 Engagements with Employees

25 Engagements with Executives

15 Gap Analyses, Road Maps & Reports

Over 50 Identified Leading Practices

Over 7,300 Employees in the 2022 NGA Gas Distribution Pipeline Safety Culture Assessment – Largest LDC Assessment Ever !

The Blacksmith Group / P-PIC

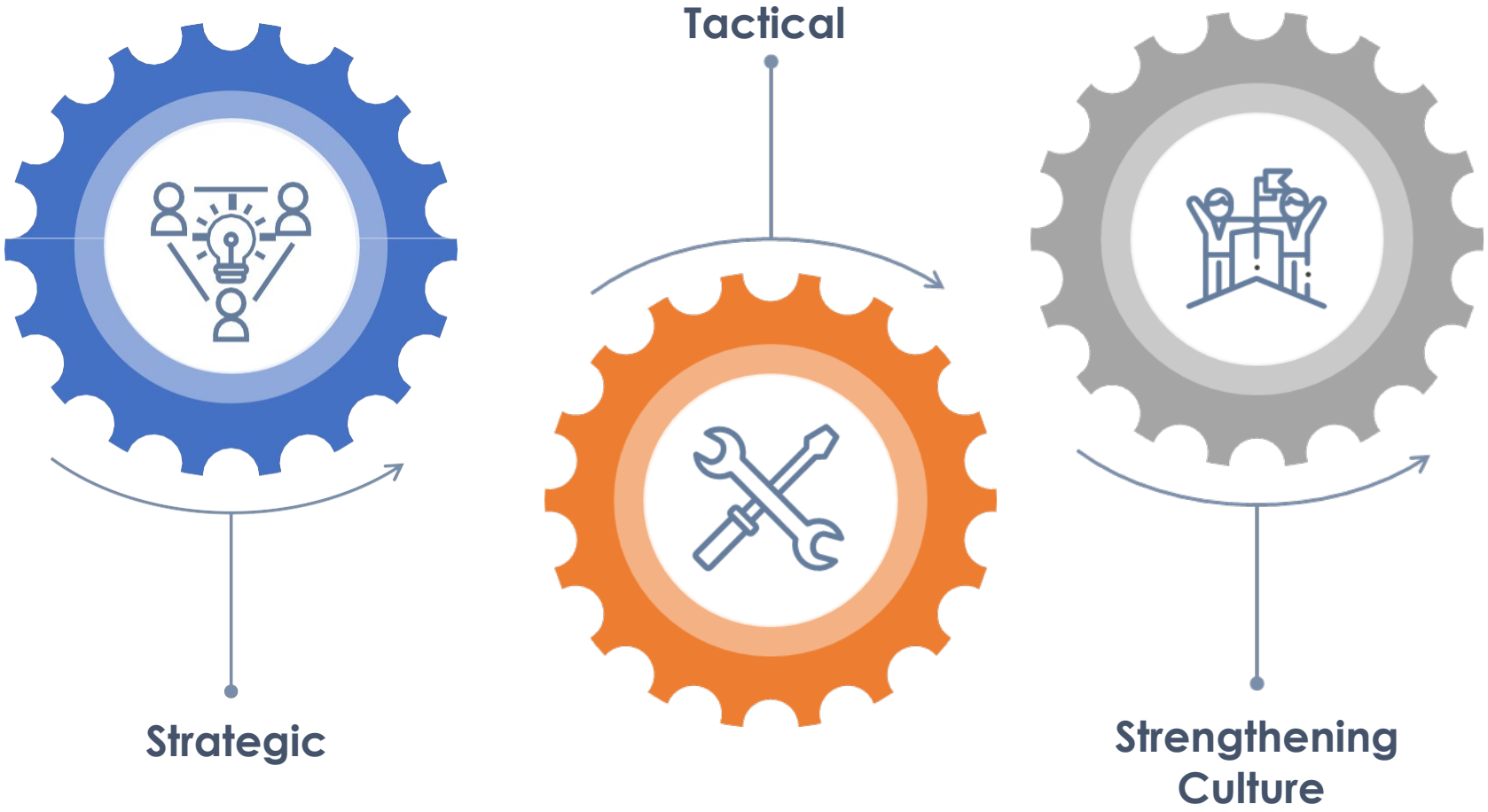
PSMS Committee Leadership: Co-Chairs Jay Jani, Con Ed & Pat Levesque, WG+E, Vice Chair – Shana Kane, VGS

PSMS IMPLEMENTATION

What, How and Why?

- **API RP 1173 designates "WHAT" is required**
  Contains 234 Shall statements
- **Pipeline Operator governs "HOW" they will conform**
  Link PSMS Elements within processes to create Operational Excellence
  Current Unitil discrete mandated programs and O&M are a great start
- **Leadership and Organizational Culture articulates the "WHY"**

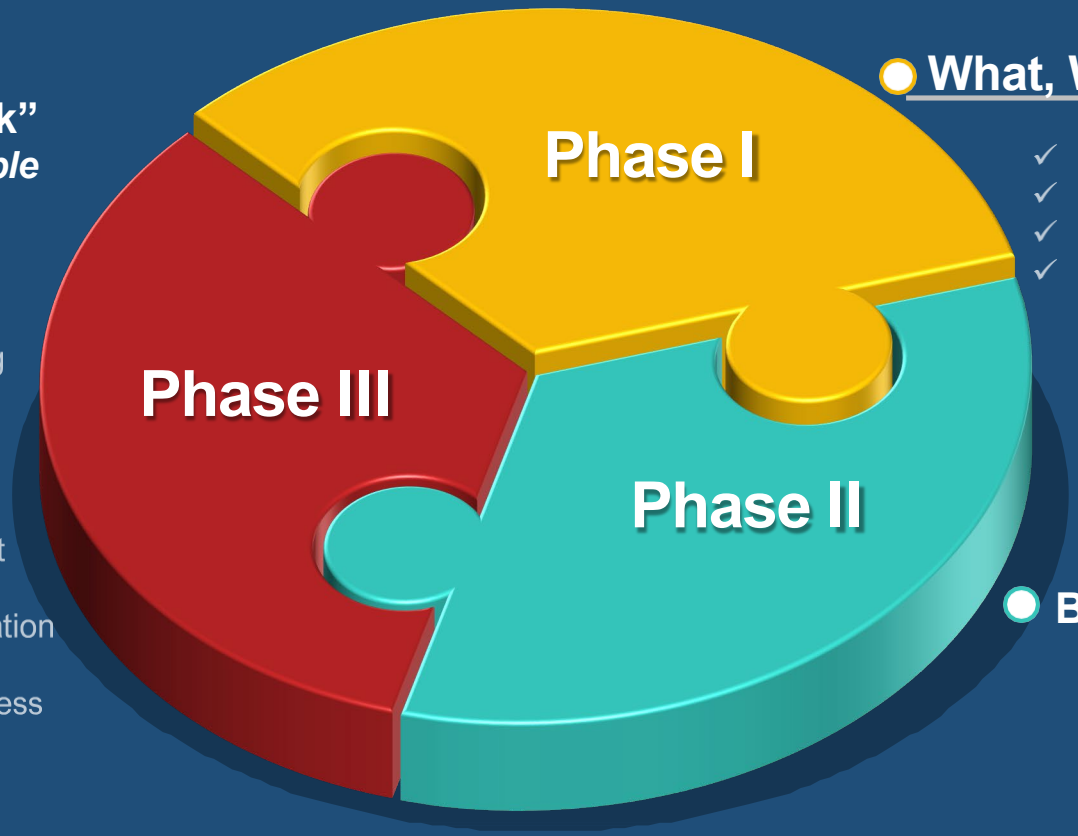
Operationalizing a Safety Management System



Enabling Operational Ownership

NGA PSMS Collaborative Journey

2023 & Beyond…. A Sustainable Approach to Implementation & Continuous Improvement



What, Why, How

- ✓ Leadership Engagement
- ✓ Gap / "Build-On Analysis,
- ✓ Roadmaps
- ✓ Developing "Tools" to Operationalize Strategy

Making It "Stick"

Driving Sustainable Behaviors

- ✓ Establish Quarterly PSMS Implementation Collaborative Engagement Meetings & Standing Agenda
- ✓ NGA Collaborative Individual Organization Technical Support Process
- ✓ PSMS Culture Survey Assessment Action Plans
- ✓ PSMS Tactical Guide / Implementation Tool Adoption
- ✓ Resource Center / VIS / Effectiveness Metrics Deployment
- ✓ PSMS Continuing Education

Building Implementation Tools

- ✓ Resource Center
- ✓ VIS System
- ✓ Tactical Guides
- ✓ Continuous Improvement Metrics
- ✓ Technical Guidelines
- ✓ PSMS Safety Culture Assessment

Encouraging Operational Ownership Through Engagement – Videos

Video 1

Video 2

Video 3

Unitil

API RP 1173 IMPLEMENTATION

Operational Excellence PSMS

Pipeline Safety Management System Roadmap

Year 4 Work To Mature

1. Benchmark Maturity Assessment Methods – CFATS, API Tools, Peer Operators
2. Continue Routine Management Reviews and Define Improvements

Year 3 Assess Implementation

1. Conduct Routine Management Reviews and Define Improvements
2. Undertake Coalition Building for Supervisors
3. Continue to Address Opportunities Within Programs and Elements
4. Benchmark Elements
5. Assess Implementation

Year 2 Project Close Out Begin Implementation

1. Conduct Routine Management Reviews and Define Improvements
2. Continue to Address Opportunities Within Programs and Through Elements
3. Evaluate and Improve Stakeholder Engagement
4. Refine PSMS Metrics

Second Six Months Project Phase

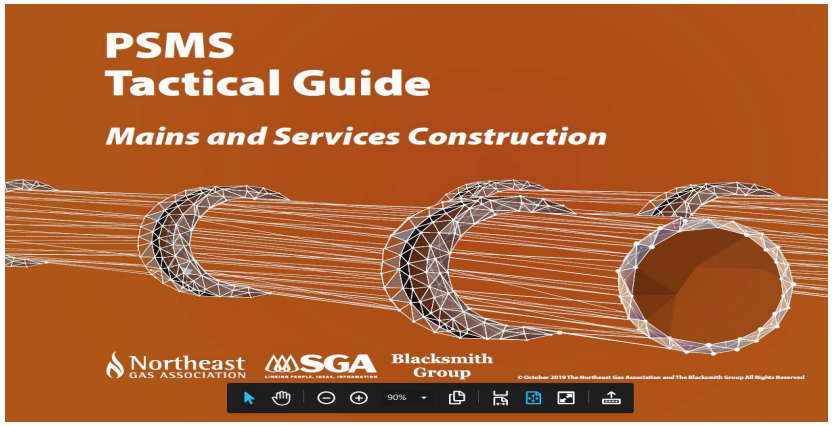
1. Define Opportunities to be Addressed Within Existing Programs
2. Define Element Owners to Address Short Term Opportunities
3. Undertake Coalition Building at Executive and Director Levels
4. Develop Routine Communication About PSMS
5. Formalize Management of Change
6. Participate in NGA Safety Culture Survey

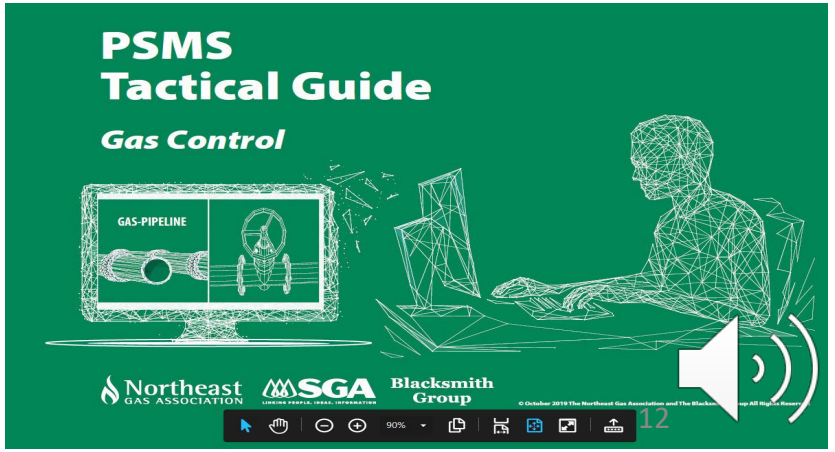
First Six Months Project Phase

1. Establish a PSMS Steering Committee
2. Define PSMS Governance Structure
3. Develop a PSMS Description Document
4. Deploy Initial Project Team
5. Combine Existing Selected Management Reviews Making PSMS Management Reviews Routine

Tactical Guides…. *Bridging the Strategy Implementation Gap*

- Pressure Regulation, Control & Odorization
- Mains & Services Construction
- Gas Control
- Distribution System Maintenance
- Damage Prevention
- Engineering Design & Integrity Management
- Pipeline Safety Stakeholder Engagement
- LNG Operations
- Emergency Preparedness & Response

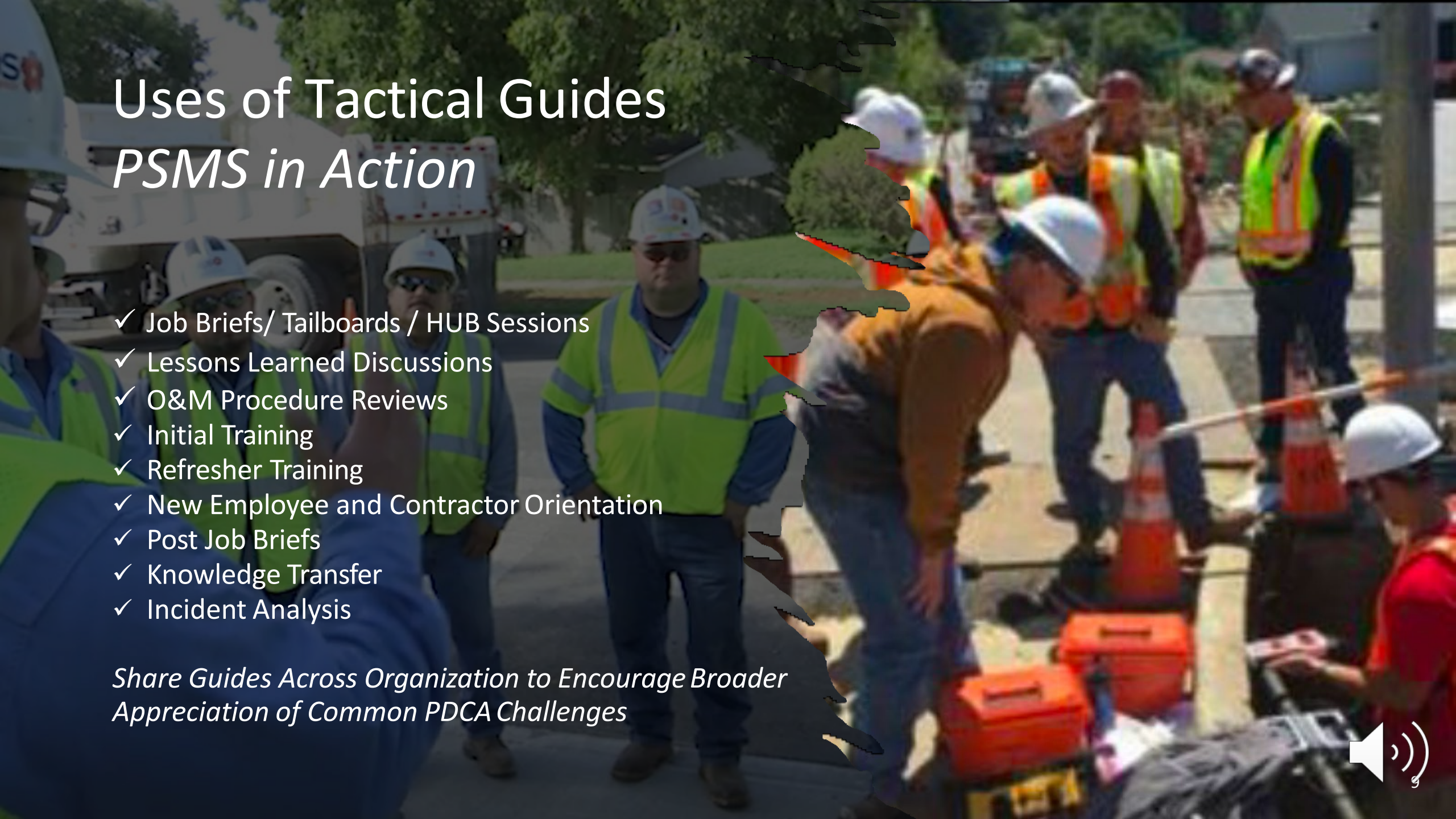




Page added to address Emissions Reduction and Minimization – PIPES ACT Section 113 and 114 by **embedding an emissions mitigation focus**

- Have you considered how emissions occur during design, construction, and integrity management-related work ?
- Catalog potential emission sources ?
- Have you considered how to reduce or minimize emissions from venting during inspection/maintenance/construction procedures ?
  - ✓ Purging or drawing down pressure in system
  - ✓ Recompression and reinjection downstream in a pipe segment
  - ✓ Main segment isolation practices
- Have you considered establishing a baseline and trending mitigation performance to demonstrate improvements ?
- Have you considered establishing emission rates/ factors for specific types of equipment or releases, to help ensure consistency in estimating emission rates ?
- Have you considered emerging technologies, including methods for estimating rates of emissions? Including NYSEARCH and GTI, among others ?
- Have you considered turning off equipment when not in use ?

Uses of Tactical Guides
PSMS in Action



- ✓ Job Briefs/ Tailboards / HUB Sessions
- ✓ Lessons Learned Discussions
- ✓ O&M Procedure Reviews
- ✓ Initial Training
- ✓ Refresher Training
- ✓ New Employee and Contractor Orientation
- ✓ Post Job Briefs
- ✓ Knowledge Transfer
- ✓ Incident Analysis

Share Guides Across Organization to Encourage Broader Appreciation of Common PDCA Challenges

How Do I Use The Guides ????

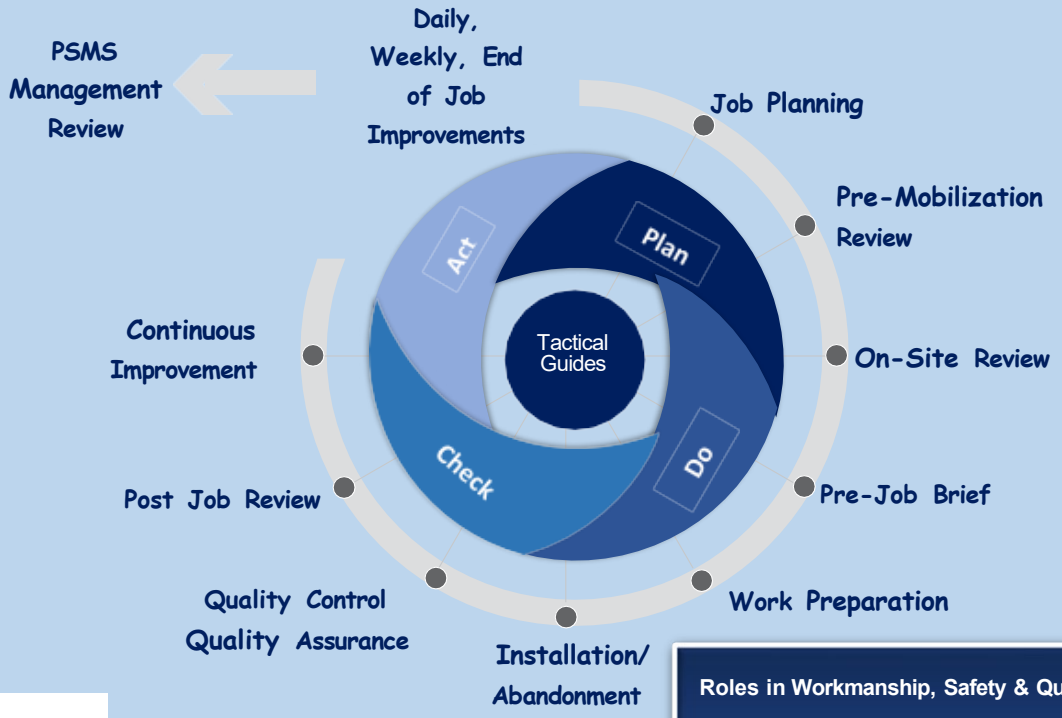
Integrate LDC Functionally Specific Guide Concepts Into Your Company Specific:

- ✓ Integrate into Tailboard / HUB Sessions……
  Establish "The Good, The Bad, The Ugly" Discussion …..
  Components with Linkages back to Guide Content …….
- ✓ Design Review PSMS "Checklist"……
- ✓ Integrate into O&M Procedure Reviews …….
- ✓ Integrate "Considerations" and Checklists into
  Formal Training ……
- ✓ Share Guides Across Organizations to Encourage Broader
  Appreciation of Common PDCA Challenages

Use the Guide Material to Create "Impressionable" PSMS Connectivity Moments……..

PSMS- Safety, Workmanship & Quality Ownership

PDCA Framework



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Roles in Workmanship, Safety & Quality Ownership

- Supervisor – Safety and Workmanship coaching and quality control
- Foreman – Safety and Workmanship coaching
- Foreman and crew – Safety and Quality control
- Inspectors – Safety and Quality assurance
- QA teams – Safety and Quality assurance
- Internal audit - Audit/ Evaluation
- External audit - Audit/ Evaluation

Consider the Following PDCA Guiding Principles with Every Decision & Action

Pre-job-briefs - Identify and eliminate safety risks in your work environment

- ✓ Understand the "*What, Why, How & Who*"
- ✓ Consider what could go wrong – "*What If's*"
- ✓ Recognize, discuss and react to "*Job-Specific AOC's*"

- Follow all O&M procedures – avoid, identify & correct "*Work-Arounds*"
- Walk the job down & maintain *Situational Awareness*
- **Stop** the job if you believe there is a safety risk, or you don't understand the procedure
- Always use *approved* materials & equipment
- Ensure you are *properly trained & qualified* to perform work functions
- Always maintain a "*Questioning Attitude*"
- Consider Management of Change (MOC) – Identify, report and seek approval for ANY changes in work scope, procedures, tooling or materials.
- Learning from each other – share "*near misses/close calls/good catches*" with others

PSMS is Personal Safety – Public Safety – Pipeline Safety

NGA PSMS Resource Center

- Drew upon INGAA Foundation Lessons Learned Repository – 2012
- Experience on PHMSA Advisory Committee on Voluntary Information Sharing – Commissioner Burman, NY PSC, Chair, Mark Hereth and Jason Cradit
- Developed a pilot resource center as part of NGA PSMS Collaborative Phase 1
- Authorized standing up of working site in Phase II
- Continuous Improvement / System Population via User Group Phase III

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NGA PSMS Resource Center – VIS & Lessons Learned Repository – Additional Operational Focus Areas ?

1. Overpressure and/or Unintended Loss of Pressure
2. Uprates
3. Damage Prevention
4. Pipe Joining and Fusion Workmanship
5. Materials, Equipment and Tools
6. Work Zone and Excavation Safety
7. Excavation Safety
8. Corrosion Control
9. Customer Meter / Regulator Installation and Inspection
10. Valve Operations and Maintenance
11. Gate/ Regulator Station Operation and Maintenance
12. Leak Detection

Questions and Discussion