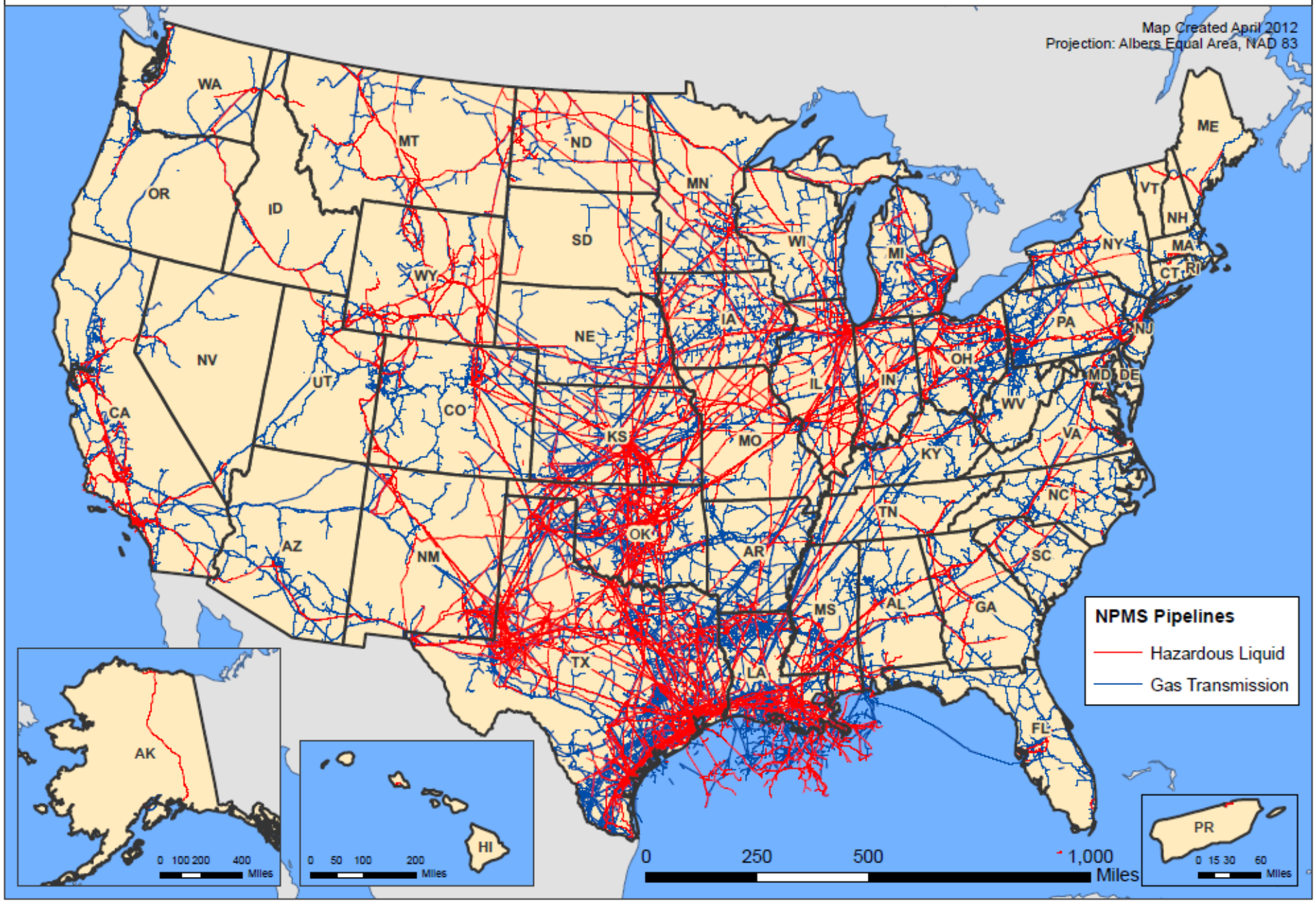
REGULATORY PERSPECTIVE: KEY CHALLENGES

Gov/Industry Pipeline R&D Forum
Crowne Plaza Hotel
Rosemont, IL
August 6-7, 2014

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

Gas Transmission And Hazardous Liquid Pipelines

Pipelines as of 4/10/2012



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

Pipeline Incidents

Carmichael, MS

San Bruno, CA

Allentown, PA

Marshall, MI

PHMSA: Unique Position

- **Oversight of the national pipeline safety program, includes:**
  - **Educating stakeholders of significant pipeline issues & challenges**
  - **Research program to advance pipeline safety**

Heavy Workload

- **Regulates/Inspects/Enforces with States:**
  - Over 2.6M miles of pipelines
  - Over 2,600 pipeline operators
  - Over 100 LNG facilities
- **Congressional mandates**
- **NTSB, GAO and IG Recommendations**

Key Organizational Challenges

- **Increasing our inspection/enforcement workforce**
- **Workforce retention/planning**
- **Synergies with all stakeholders**
- **Safety Management System and Culture**

Pipeline Safety RD&T Mission

To sponsor projects focused on near-term solutions to improve the safety, reduce environmental impact, and enhance the reliability of the Nation's pipeline transportation system.

Key Points

- We employ a collaborative approach to address mutual challenges
- We help remove technical barriers on a given challenge
- We measure our research results/impacts
- We are transparent - http://primis.phmsa.dot.gov/rd/

Pipeline Safety Improvement Act of 2002 established our modern program

Program Objectives

Developing Technology	Strengthening Consensus Standards	Promoting Knowledge
Fostering the development of new technologies so that pipeline operators can improve safety performance and more effectively address regulatory requirements.	Targeting and feeding new knowledge into the process of keeping standards relevant to their purpose.	Generating and promoting general knowledge to decision makers.

Key Technical Challenges

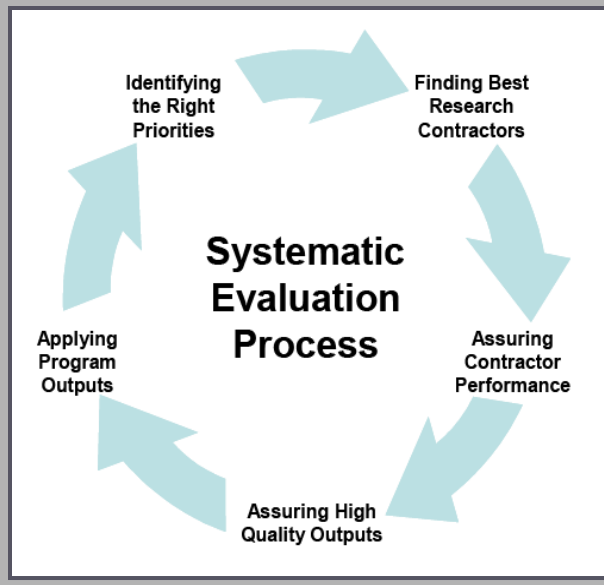
- **Excavation damage**
- **Corrosion**
- **Crack detection**
- **Vintage/legacy materials**
- **Construction quality**

Key Technical Challenges

- **Risk assessment / management**
- **Defect detection & characterization**
- **Leak & rupture detection & location**
- **Fugitive methane**

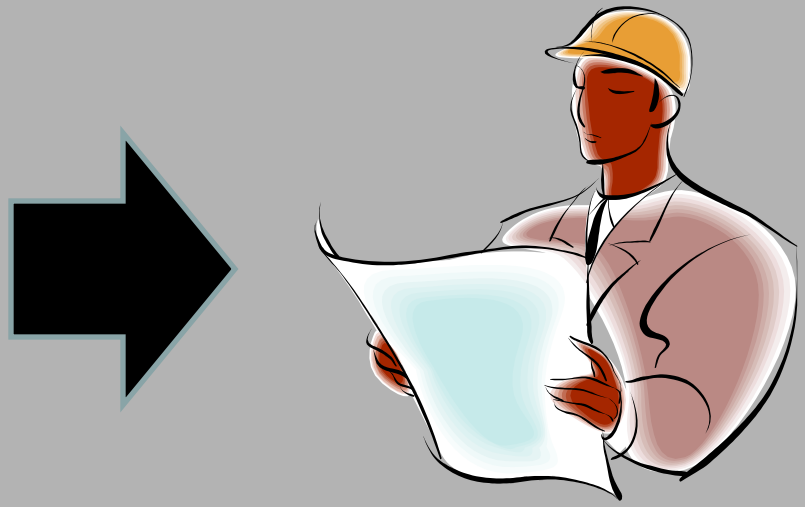
Research Challenges

- **PHMSA strives to create a collaborative National research agenda that is:**
  - Inclusive
  - Transparent
  - Independent
- **Finding the best research teams to maximize chance of market success**
- **Success with limited resources**



Research Challenges

- **Balancing research investments in longer term vs. just short term solutions**



R&D Successes

- **PHMSA Program handout at registration desk**
- **Success stories slides during breaks**
- **Research partnerships are bringing marketable solutions**

Thank You!

Kenneth Lee

Director of Engineering and Research

Office of Pipeline Safety

DOT/PHMSA