Pipeline and Hazardous Materials Safety Administration
Office of Pipeline Safety
Accident Investigation Division

API 1104 Committee Meetings
January 21-24, 2020
Fort Worth, TX
Objective

• Introduce PHMSA’s Accident Investigation Division
• Explain Federal and State Partner Relationship
• Discuss National Response Center Reporting, On-Scene Investigations & Incident Reporting
• Provide Information on Operator Resources
• Tell you about API 1104, 21st Edition
PHMSA Offices

- Headquarters – Washington, DC
- Training & Qualifications, State Programs and Accident Investigation Division – Oklahoma City, OK
- Field Operations – 5 Locations
PHMSA Divisions

• Engineering & Research
• Regulations (CFR 49 Parts 190-199)
• Enforcement
• Outreach & Education (Community Liaisons)
• Field Operations (Regions)
• State Programs
• Training & Qualifications
• Accident Investigation
National Pipeline Mapping System

PHMSA Jurisdiction
- Interstate Gas Transmission & Hazardous Liquid Pipelines

https://www.npms.phmsa.dot.gov

Investigate – Analyze – Prevent
To Protect People and the Environment From the Risks of Hazardous Materials Transportation
PHMSA/State Role - Investigation

• PHMSA has **no** response authority. PHMSA evaluates operators’ readiness and response effectiveness

• PHMSA investigation of interstate pipeline incidents (including LNG Facilities, Underground Natural Gas Storage Fields)

• States participating in Cooperative Pipeline Safety Programs:
  – Certification for gas distribution (All)
  – Agreements for gas distribution (VA for munis)
  – Interstate Agents for interstate gas transmission – AZ, CT, IA, MI, MN, NY, OH, WA
PHMSA Accident Investigation Division (AID) Responsibilities

• Evaluate NRC reports (30,000/year)
• Conduct Accident Investigations (PHMSA jurisdiction); Coordinate with State (State jurisdiction)
• Coordinate incident response with federal and state partners (e.g. NTSB, OSHA, EPA, BSEE, DEP)
• Develop Safety Orders with Regions; Region issue other enforcement actions and oversee workplans
• Review Root Cause Failure Analysis to determine causal and contributing factors
• Review Incident Reports (need good data for analysis!)
• Capture and share lessons learned, safety findings with internal and external stakeholders
• Evaluate and identify emerging safety trends
• Conduct education and outreach to advance pipeline safety
AID Incident Chronology
Telephonic Reporting Requirements

• NRC reporting requirements – Part 191.5
• Initial call (within 1 hour of confirmed discovery)
  • Gas distribution or Transmission Pipeline, LNG or underground natural gas storage facility
    – An event involving a release of gas
      » A death, or personal injury necessitating in-patient hospitalization
      » Greater than $50,000 estimated property damage
      » Unintentional estimated gas loss of 3 million cubic feet or more
    – An event that results in an emergency shutdown of an LNG facility or natural gas storage facility
    – An event that is characterized as significant by operator
  – 48-hour - Must provide an update to confirm/revise initial information reported.
  – NPIC toll-free: (888) 719-9033
  – Email: PHMSAAccidentInvestigationDivision@dot.gov
Telephonic Reporting – What to Expect

Operator or other party calls NRC. NRC emails report to AID; If State is the lead regulator, AID forwards the report to State and requests updates. State works with operator and investigates. Information AID may be seeking:

First update:
- Describe what occurred.
- Site Safety Status - Has site been made secure? Release shut off? Segment isolated? Customers affected?
- Impacts (fatalities, injuries, evacuations, property damage)
- Facilities involved (diameter, operating pressure, MAOP, material)
- Initial apparent cause
- Media presence

Subsequent Updates If PHMSA/State Does Not Deploy:
- Determine if Incident Reporting Requirements have been reached
- Repairs and service restoration timeline
- Root Cause Failure Analysis
- Remediation Plan
- PHMSA/State may request documents

PHMSA/State Deploys....
PHMSA On-Scene Investigation

• PHMSA Oversees the Operator’s Investigation and may:
  – Document and oversee evidence preservation (Metallurgical Laboratory Failure Examination Protocol).
  – Photograph the incident scene.
  – Interview employees and contract employees involved in activities potentially pertaining to the incident.
  – Obtain documents related to the tasks being performed around the time of the incident, including work plans, site safety plans, hazard analyses, and job safety analyses.
  – Obtain SCADA, construction, maintenance, operations, and inspection records thought to be relevant to the investigation.
  – Review the effectiveness of emergency response to the incident including evacuation efforts.
PHMSA Post-Scene Investigation

• May issue Corrective Action Orders, Safety Orders, work plans, RCFA, pressure reductions, metallurgical Investigation.

• PHMSA will publish a public Failure Investigation Report on: https://www.phmsa.dot.gov/safety-reports/pipeline-failure-investigation-reports

• AID has developed a Metallurgical Protocol available at: https://www.phmsa.dot.gov/incident-reporting/accident-investigation-division/metallurgical-laboratory-failure-examination-protocol-pdf
Recent AID Deployments
• Long seam opened up and crude migrated onto a small agricultural pond
• 1,100-barrels out
• PHMSA report is pending
Gas Distribution Main – 12/19/2019

- Cast iron main installed in 1900
- 2 fatalities
- AID assisted PA-PUC in their investigation
Tank Farm – 1/15/2020

• Leak from mixer assembly
• 6,031-barrels of crude leaked into secondary containment
• Still under investigation
30-day Report Review Process

• PHMSA receives reports, adds comments, and forwards to States. Reports can be Original, Supplemental and Final.
• State works with Operator.
• When Final report submitted, PHMSA reviews and recommends for State to close. After review and any needed changes, the State informs PHMSA the report can be closed.
• More detail about the event is better. Looking for more information about cause and contributing factors. Check for accuracy!
Objectives

Investigate – Analyze – Prevent

- Improving accuracy & relevance of PHMSA data collection efforts
- Establishing root cause-based accident investigation
- Identifying emerging risks & recommending agency action (e.g. outreach & engagement, workshops, advisory bulletins, rulemaking)
- Developing safety recommendations
- Enhancing risk-analysis through data-driven, innovative tracking of emerging trends and near misses
- Sharing accident data recommendations & lessons learned with internal & external stakeholders, including DOT modal partners

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

• **Failure Investigation Reports**
  

• **Community Technical Assistance Grants** (some funding has been used for local pipeline emergency response capabilities)

• **R&D Program Awards** – PHMSA sponsors projects focused improving pipeline safety and enhance the reliability of pipelines
  

• **Community Liaison Services** – engage with pipeline stakeholders
National Pipeline Incident Coordinator (NPIC)

– NPIC toll-free: (888) 719-9033
– Email: PHMSAAccidentInvestigationDivision@dot.gov
– Staff Mobile Numbers:
  • Peter Katchmar (Director): 303-807-8458
  • Chris Ruhl (Operations Supervisor): 405-590-3625
  • Julie Halliday (Investigator): 202-389-2039
  • Brian Pierzina (Investigator): 816-589-8293
  • Gery Bauman (Investigator): 440-725-7043
  • Darren Lemmerman (Investigator): 816-807-2606
  • Wesley Mathews (Investigator): 405-435-1519
  • Ashley Horton (Investigator): 405-403-0546
  • Curtis Huff (Investigator): 405-423-0571
  • Alvaro Rodriguez (Investigator): 405-482-8440
– Email: firstname.lastname@dot.gov
What I know: API 1104 21st Edition

• In 60-90 days, PHMSA hopes to publish a Notice of Proposed Rule Making (NPRM) addressing adopting the 21st Edition
• Late 2020 would be the earliest estimate