



Office of Pipeline Safety

Pipeline and Hazardous Materials Safety Administration

Accident Investigation Division



November 9, 2018
Tulsa, OK



Investigate – Analyze – Prevent

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





Objective



- Thank you for what you do!
- Introduce PHMSA
- Introduce PHMSA's Accident Investigation Team
- Discuss recent events & trends

National Pipeline Incident Coordinator (NPIC)

– NPIC toll-free: (888) 719-9033

- **811**



Investigate – Analyze – Prevent

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





Who is the U. S. Department of Transportation (DOT)



- **National Highway Traffic Safety Administration (NHTSA)**
- **Federal Aviation Administration (FAA)**
- **Office of Inspector General (OIG)**
- **Federal Highway Administration (FHWA)**
- **Federal Motor Carrier Safety Administration (FMCSA)**
- **Federal Railroad Administration (FRA)**
- **Saint Lawrence Seaway Development Corporation (SLSDC)**
- **Federal Transit Administration (FTA)**
- **Maritime Administration (MARAD)**

- **Pipeline and Hazardous Materials Safety Administration (PHMSA)**
 - **Office of Hazardous Materials**
 - **Office of Pipeline Safety**



Hazardous Liquid Pipeline

212,635 miles

7,864 b.o.tanks

514 pipeline operators

Gas Transmission Pipeline

300,324 miles

1033 pipeline operators

Gas Gathering Pipeline

17,605 miles

367 pipeline operators

Gas Distribution Pipeline

Mains and Services

2,210,066 miles

1,361 pipeline operators

Liquefied Natural Gas

152 plants

223 tanks

84 operators

Pipeline Facilities by System Type – CY 2016
PDM's data as-of 11/1/2017

Regulated Facilities, Entities and Commodities



PHMSA Regional Offices





Did you know....



- Have agreements and partners with States to implement rules
- Made up of primarily field staff
 - Highly technical
 - Engineers and Transportation Specialist
- Call if you have questions
- ZEN - What is the answer to the unasked question?
- The only silly question is one that is not asked!





PHMSA Reporting requirements



- PHMSA has NRC reporting requirements for pipeline systems
 - Initial (within earliest practical moment following discovery but no later than 1 hour
 - Gas
 - 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**
 - Hazardous Liquids
 - An event involving the release of a liquid
 - » A death, or personal injury necessitating in-patient hospitalization
 - » Incident involved a fire or explosion
 - » Greater than \$50,000 property damage including the cost of the cleanup, value of product
 - » Resulted in pollution of any stream, river, lake, reservoir or similar body of water
 - » **An event that is characterized as significant by operator**
 - **48-hour**
 - **Must provide an update to confirm/revise initial information reported.**





PHMSA Accident Investigation Division (AID)



Motto: Investigate – Analyze – Prevent

Established April 1, 2017





PHMSA Accident Investigation Division



- **PURPOSE**

- Evaluates all reports of incidents/accidents
 - Investigates all PHMSA regulated pipeline incidents
 - Consider details of report
- Conducts Accident Investigations
- Conducts Root Cause Determinations to determine causal and contributing factors to pipeline and liquefied natural gas facility incidents
- Captures and actively shares lessons learned safety finding with internal and external stakeholders.
- Conducts education and outreach to help advance pipeline safety
- Evaluates and identify emerging safety trends
- Coordinates incidents with state and federal partners





How Do I contact the AID?



National Pipeline Incident Coordinator (NPIC)

- NPIC toll-free: (888) 719-9033
- PHMSAAccidentInvestigationDivision@dot.gov



Investigate – Analyze – Prevent

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





AID Priorities



- Readiness and Deployments
- National Pipeline Incident Coordinator (NPIC)
 - NRC Reports
 - Deployment Coordination
- 30-Day Reports
- Internal and External Outreach
- Data Analysis
- Report Generation



Investigate – Analyze – Prevent

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





30-Day Report Update

(thru August 2018)



- 307 New Incident/Accidents Reports
 - Over 60% are already closed
- 727 Modified reports
- 583 Reports closed
- 268 Open Reports remain in ODES

☑ We are very close to steady-state operations





30-Day Report Update

(continued)



- Every report has/does receive a detailed review.
- Review, validation, and reporting requirements are applied consistently.
- Quick review of submitted reports.
 - Majority within a day.
 - Dramatic reduction in the time to finalize.
- Data is current, accurate, and consistent.





Readiness

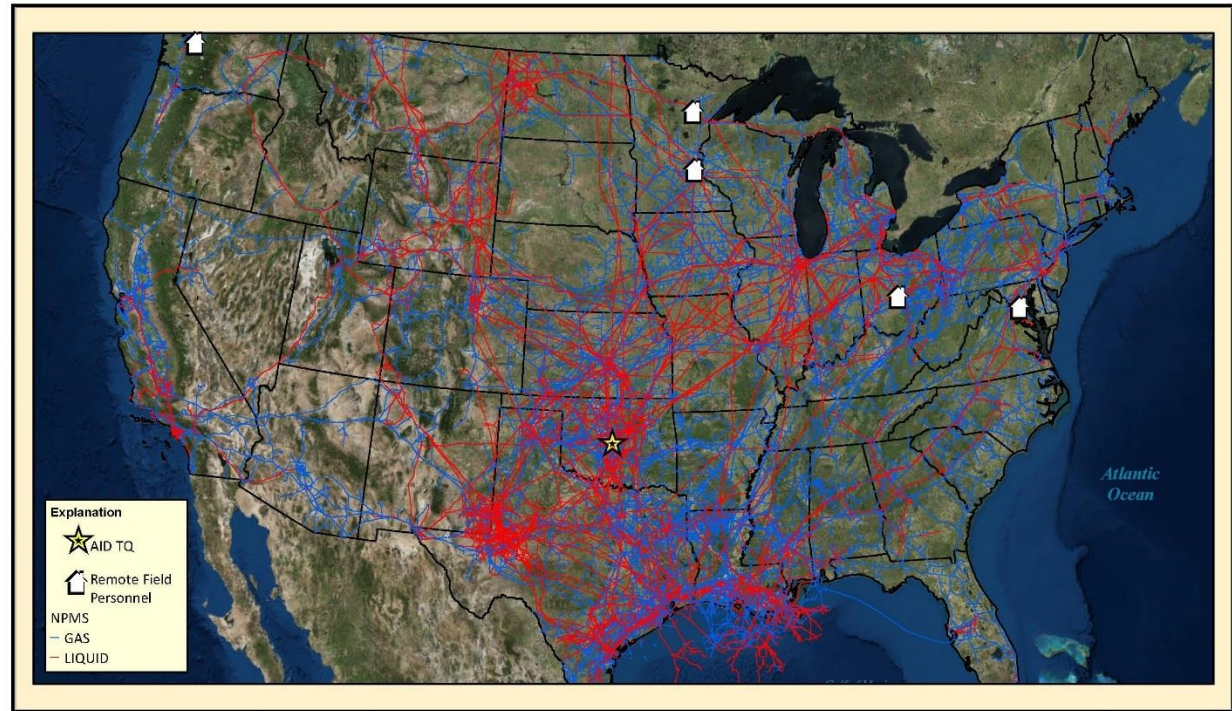


- 8 Accident Investigators
 - 3 located in OKC
 - 2 located in Minnesota
 - 1 located in Ohio
 - 1 located in Washington DC
 - 1 located in Washington State
- PHMSA SMEs in Accident Investigation: Tanks, Welding, Propane, Corrosion and LNG
- Cold weather response gear
- Training program
 - Includes TQ and Hazmat Training
 - Includes outside training
 - Latent Cause
 - Leadership, Conflict Resolution and Emotional Intelligence
 - Crisis communication
 - NTSB courses
 - OSHA HAZWOPER 40 HR trained
 - Incident Command



AID Deployment Considerations

- Availability
- Location
- Expertise
- Complexity
- Severity
- Likely Duration
- Recent History with Line/Operator
- All PHMSA & States could be the 1st to respond.





Deployment Criteria



A release of product and one or more of the following:

- Death
- Personal injury necessitating hospitalization
- Property damage exceeding \$500K
- Hazardous liquid spill of 500 or more barrels
- Fire or explosion
- Major spill into a body of water
- Pipeline systems with recent failure history
- Significant media attention
- Release impacted:
 - an HCA
 - High Population Area
 - Other Populated Areas
 - Commercially navigable waterway, or major waterbody
 - Unusually Sensitive Area (USA) - (drinking water resource, ecological, threatened species)





2018 Deployments Since January 1, 2018



| Date | Operator | City, State | Summary |
|---------|---|------------------|--|
| 1/23/18 | Tennessee Natural Gas | Batesville, MS | Wrinkle bend crack; SR Assist |
| 1/23/18 | Cheniere LNG | Cameron, LA | LNG leaking storage tank(s) SWR Assist |
| 2/18/18 | Centurion Pipeline | Oklahoma City | 3300 BBLs crude oil spill – 2 nd Party Damage |
| 2/23/18 | ATMOS Energy | Dallas, TX | NTSB, Fatality house explosion (TX-RRC) |
| 4/3/18 | Andeavor Pipeline (Formerly Tesoro) | Twin Falls, ID | 160 BBLs of diesel WR led; rock impingement |
| 5/14/18 | Magellan Pipeline | Independence, KS | 600 BBLs gasoline spill - The release was found to be in a girth weld. |
| 7/3/18 | Southern Star Natural Gas | Hesston, KS | Natural gas release and fire (probable Environmental Cracking) |
| 6/6/18 | Columbia Gas Natural Gas – 36” Leech Xpress | Moundsville, WV | Began operation in 2018; Subsidence/Land Movement/Extreme Rain |
| 6/10/18 | Dominion Energy | Cleveland, OH | House explosion & Fatality; not regulated piping |
| 6/26/18 | Sunoco Pipeline | Essington, PA | Multi agency response; crack in a bend (PA-PUC Assist) |
| 7/23/18 | Buckeye Pipeline Jet Fuel | Miami, FL | FL-PSC assisted; 3 rd Party Damage - incorrect alignment sheets & Marking |
| 7/27/18 | Targa Natural Gas | Monahans, TX | Non PHMSA regulated; 1 Fatality; OSHA and TXRRC investigated (Sphere Injector Malfunctioned – Contractor Opened Valve) |
| 8/1/18 | El Paso Natural Gas | Midland, TX | Non-regulated gathering line initiated event; PHMSA regulated GT line failed second - 1 fatality, 6 injured, multi-agency investigations (TX-RRC Assist) |
| 8/6/18 | BP Breakout Tank | Peosta, IA | 1450 BBLs diesel release; tank recently brought back into service issues with tank repair and containment |
| 8/8/18 | Southern Star | Buffalo, OK | 100’ of pipe ejected from ground; Unknown Cause |



Investigate – Analyze – Prevent

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





Internal and External Outreach

- Internal outreach
 - Cross-Divisional/Regional outreach
 - State Program Quarterly Meeting
 - TQ training
 - Other opportunities?
 - Quarterly Roundtables, VTC w/inspectors, Brown bags
- External outreach
 - Industry Conferences
 - Regional Response Team meetings
 - NACE conferences
 - Standards Development





Identified Trends



- OQ Opportunities
- 1st & 2nd Party Damage
- Injuries/Fatalities post release/During ER



Investigate – Analyze – Prevent

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





NGL Hit – Bullet Dodged



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

Investigate – Analyze – Prevent

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





What Could Have Been



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

Investigate – Analyze – Prevent

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





1 Week after Recommissioning



Investigate – Analyze – Prevent

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





Repair out of Specifications?



Investigate – Analyze – Prevent

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





Construction Damage



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

Investigate – Analyze – Prevent

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





Booby Trap? 85 Years to spring it!



Investigate – Analyze – Prevent

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





Shut down a major airport for 6 days. Had to truck jet fuel from a terminal ~2 hours away.



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

Investigate – Analyze – Prevent

“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

Emergency Contact Information

AID NPIC toll-free: (888) 719-9033

PHMSAAccidentInvestigationDivision@dot.gov

Investigate – Analyze – Prevent

