Oklahoma Pipeline Safety Natural Gas Conference

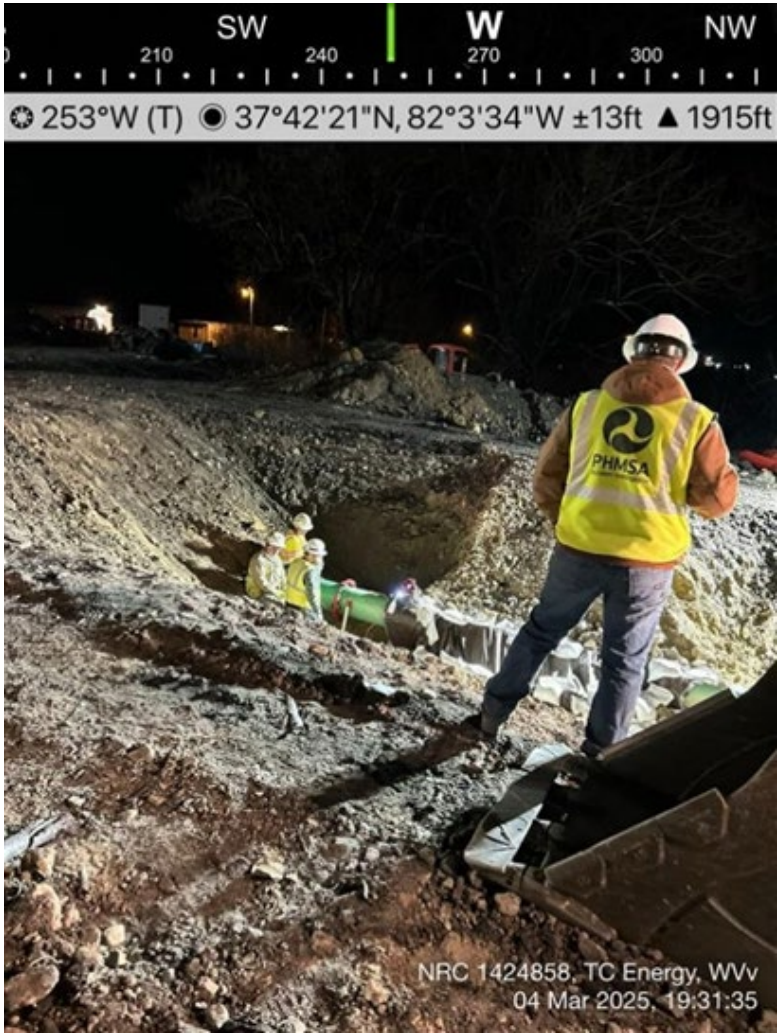
May 13-14, 2025

Hutchinson, Kansas
2025

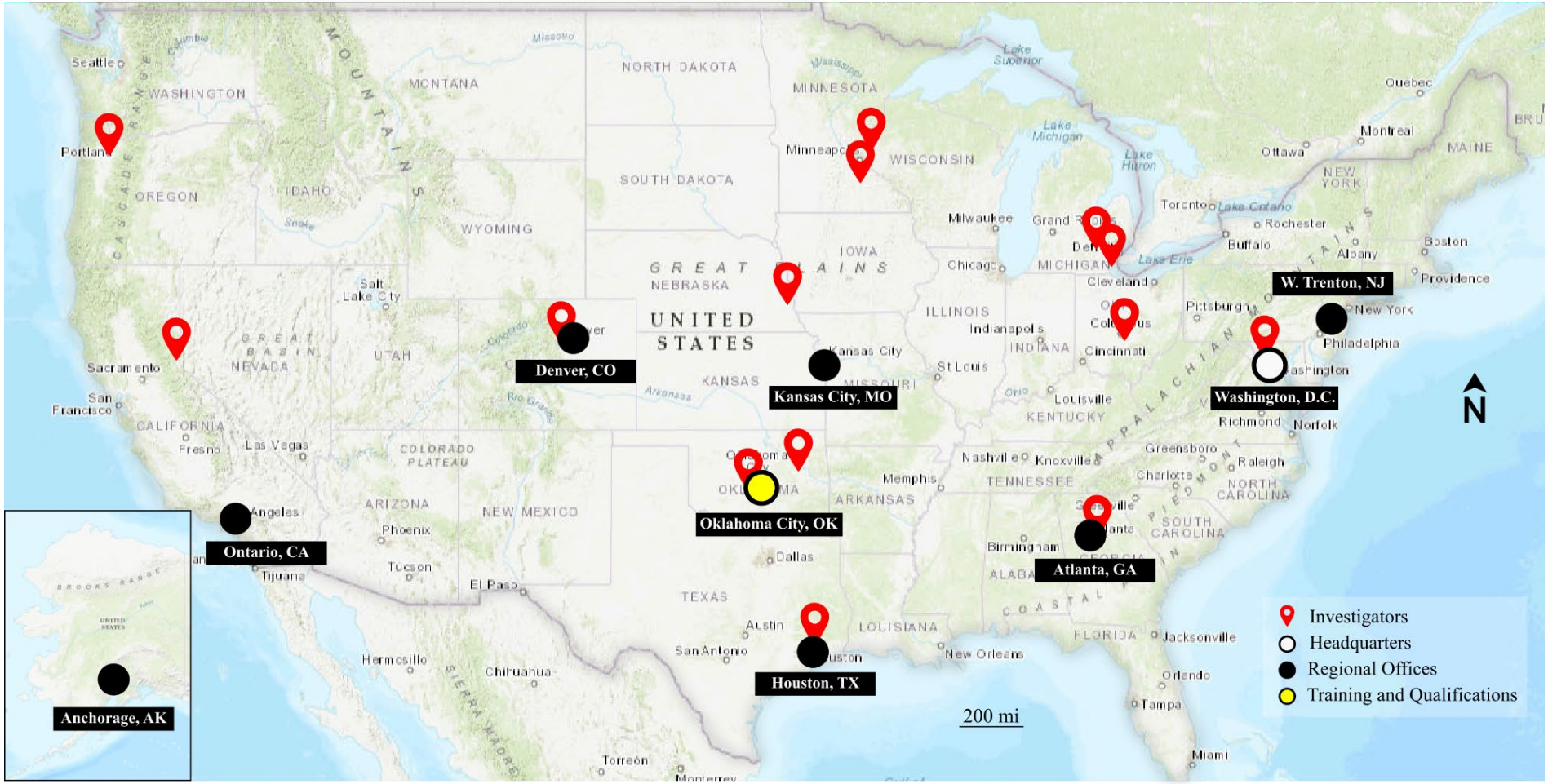
NG Discussion Topics

- Introduction to AID
- NPIC
- 30-Day Reports
- Deployments
- AID Update
- Statistics
- Case Study

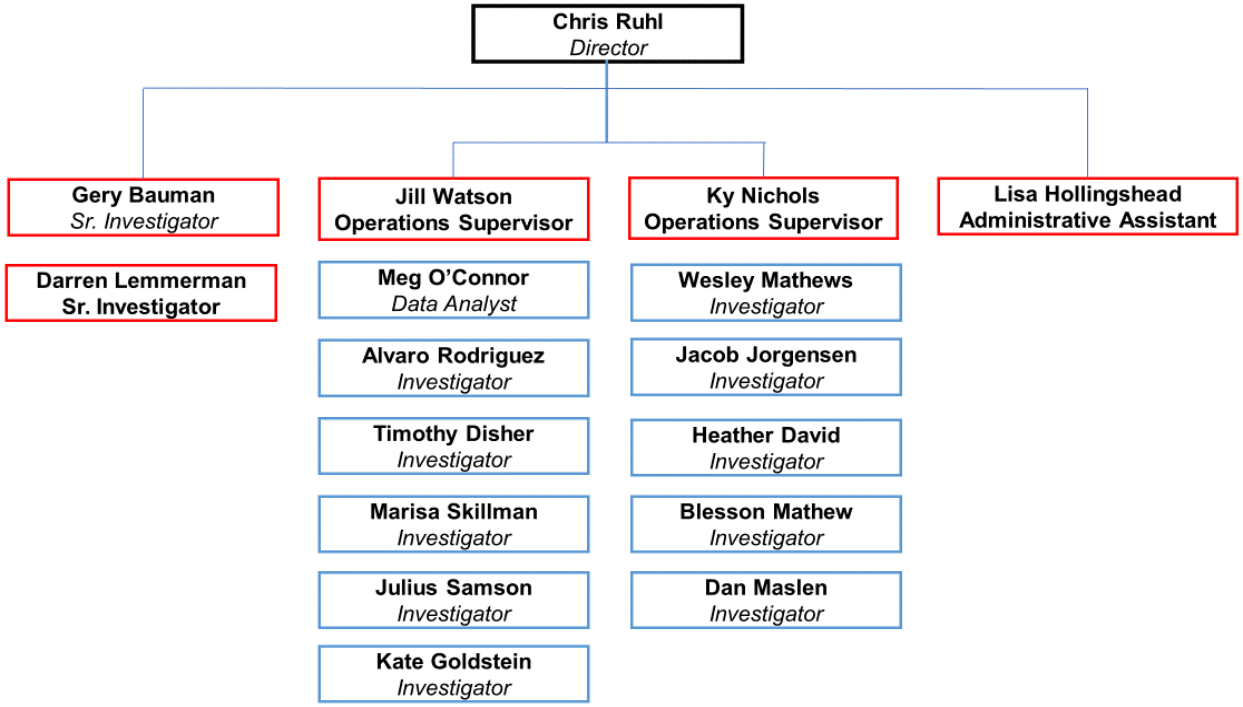
Introduction to AID



Introduction to AID: Where Are We?



Introduction to AID: Who Are We?



Introduction to AID: What Do We Do?

- Review, Evaluate, and Disseminate NRC Notifications
- Manage Investigation from Initial Notification through Cause Determination
- Conduct Onsite Accident Investigations: Support State Investigations
- Oversee Operator 30-Day Reports
- Analyze Data to Identify Emerging Trends
- **Report Findings**

National Pipeline Incident Coordinator (NPIC)

From Tuesday 8:00 to Tuesday 8:00 Central Time

- Monitors/Evaluates/Coordinates all ongoing incidents and accidents
- Single point of contact for Operators, State Partners, and Agencies

NPIC Hotline: 888-719-9033

AID Email: phmsaaccidentinvestigationdivision@dot.gov

NPIC: Responsibilities

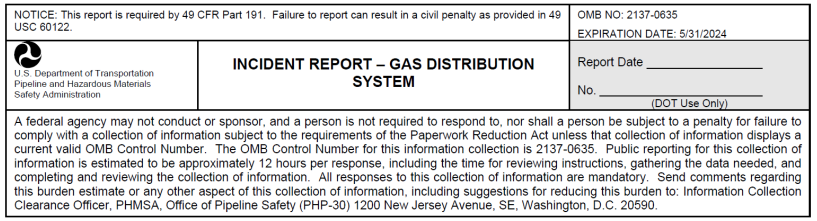
- Evaluates NRC reports to determine jurisdiction and determine appropriate PHMSA response
- For State regulated events, forwards NRC notice to state
- For OPS regulated events, contacts operator and begins an investigation
- Serves as PHMSA distribution point
- Serves as the lead investigator, unless there is an AID deployment

NPIC: PHMSA Reporting Requirements, NG

- **Initial Report** (within earliest practical moment following discovery but **no later than 1 hour**
  - A death, or personal injury necessitating in-patient hospitalization.
  - Greater than $145,400 in damage including loss to the operator and others, or both, but excluding the cost of gas lost.
  - Unintentional release >= 3MMcf of gas.
  - Event resulting in ESD of LNG facility or UNGSF.
  - An event that is characterized as significant by operator.
- **48-Hour Update** 191.5(c) - Within 48 hours after the confirmed discovery of an incident an operator must revise or confirm:
  - The estimated amount of product released.
  - An estimate of the number of fatalities and injuries.
  - All other significant facts that are known by the operator that are relevant to the cause of the incident or extent of damages. If there are no changes or revisions to the initial report, the operator must confirm the estimates in its initial report.

NG 30-Day Reports

- PHMSA-required, operator submitted reports (7100-1, 7100-2, 7100-2-2)
- AID's information collection begins upon notification of an incident
- For State Regulated incidents, AID relies on state partners
- When initial 30-day report is received, it is included in the following month's SMARS/MARS reports



NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty as provided in 49 USC 60122.

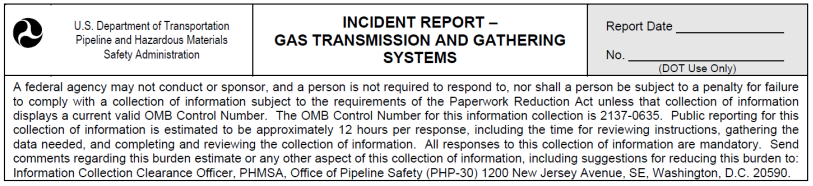
OMB NO: 2137-0635
EXPIRATION DATE: 5/31/2024

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

INCIDENT REPORT – GAS DISTRIBUTION SYSTEM

Report Date _____
No. _____ (DOT Use Only)

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0635. Public reporting for this collection of information is estimated to be approximately 12 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.



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

INCIDENT REPORT – GAS TRANSMISSION AND GATHERING SYSTEMS

Report Date _____
No. _____ (DOT Use Only)

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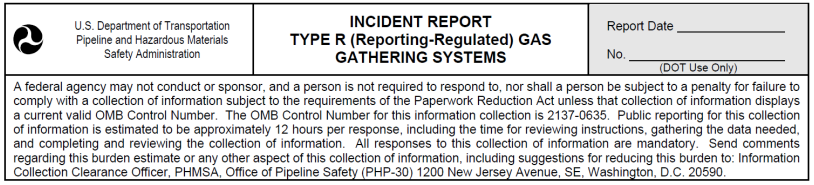

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Pipeline and Hazardous Materials
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INCIDENT REPORT TYPE R (Reporting-Regulated) GAS GATHERING SYSTEMS

Report Date _____
No. _____ (DOT Use Only)

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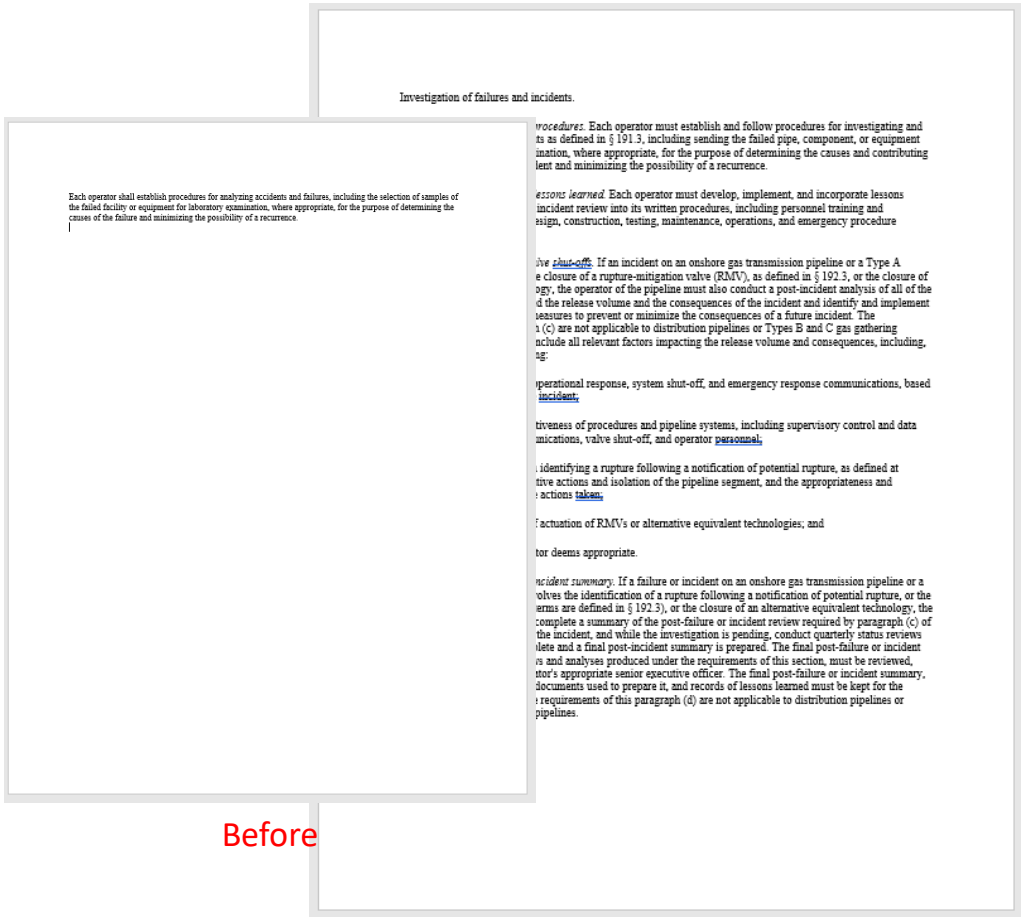
Deployments

AID and/or PHMSA regional personnel may deploy if there is a release of product and one or more of the following:

- ✓ Death
- ✓ Injuries
- ✓ Large hazardous liquid spill, or spill reaches water
- ✓ Major transportation impact - highway, airport, rail
- ✓ Major supply impact
- ✓ Pipeline system/operator of interest
- ✓ Toxic release – Anhydrous Ammonia, CO_2
- ✓ NTSB deploys
- ✓ Politically sensitive/high media interest
- ✓ State request

Deployments: Investigation of failures - 192.617, 195.402(c)



Each operator shall establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

Investigation of failures and incidents.

rocedures. Each operator must establish and follow procedures for investigating and
ts as defined in § 191.3, including sending the failed pipe, component, or equipment
ination, where appropriate, for the purpose of determining the causes and contributing
lent and minimizing the possibility of a recurrence.

essons learned. Each operator must develop, implement, and incorporate lessons
incident review into its written procedures, including personnel training and
esign, construction, testing, maintenance, operations, and emergency procedure

ve shut-off. If an incident on an onshore gas transmission pipeline or a Type A
e closure of a rupture-mitigation valve (RMV), as defined in § 192.3, or the closure of
ogy, the operator of the pipeline must also conduct a post-incident analysis of all of the
d the release volume and the consequences of the incident and identify and implement
easures to prevent or minimize the consequences of a future incident. The
1 (c) are not applicable to distribution pipelines or Types B and C gas gathering
nclude all relevant factors impacting the release volume and consequences, including,
ng:

perational response, system shut-off, and emergency response communications, based
incident;

tiveness of procedures and pipeline systems, including supervisory control and data
nications, valve shut-off, and operator personnel;

identifying a rupture following a notification of potential rupture, as defined at
tive actions and isolation of the pipeline segment, and the appropriateness and
actions taken;

actuation of RMVs or alternative equivalent technologies; and

tor deems appropriate.

ncident summary. If a failure or incident on an onshore gas transmission pipeline or a
olves the identification of a rupture following a notification of potential rupture, or the
erms are defined in § 192.3), or the closure of an alternative equivalent technology, the
complete a summary of the post-failure or incident review required by paragraph (c) of
the incident, and while the investigation is pending, conduct quarterly status reviews
lete and a final post-incident summary is prepared. The final post-failure or incident
s and analyses produced under the requirements of this section, must be reviewed,
ator's appropriate senior executive officer. The final post-failure or incident summary,
documents used to prepare it, and records of lessons learned must be kept for the
requirements of this paragraph (d) are not applicable to distribution pipelines or
pipelines.

Before

After

Deployments: 195.402(c)(5)

Post-failure and accident procedures

- Must establish and follow procedures for investigating failures and incidents
  - Includes sending failed specimen to lab to determine cause and contributing factors
- Post-failure and -accident lesson learned
  - Must develop, implement and incorporate lessons learned
- Analysis of rupture and valve shut-offs
  - When incidents cause the closure of RMV, operator must conduct a post incident analysis
- Rupture post-failure and accident summary
  - Required within 90 days of incident with quarterly status reviews until complete

Deployments: Metallurgical Examination Protocol

Guidance metallurgical laboratory failure examination protocol

- Includes background information, evidence collection & preservation, chain of custody, material testing
- Revised March 2019 – Available on PHMSA AID's website

www.phmsa.dot.gov/incident-reporting/accident-investigation-division/metallurgical-laboratory-failure-examination-protocol-pdf

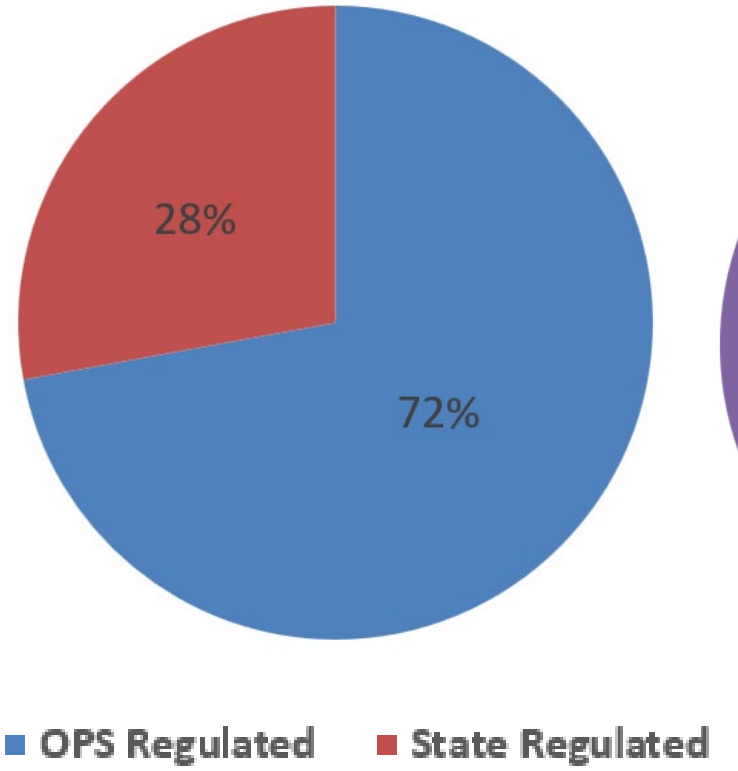
Oklahoma PHMSA Reported Incidents, HL

March 2022 through March 2025

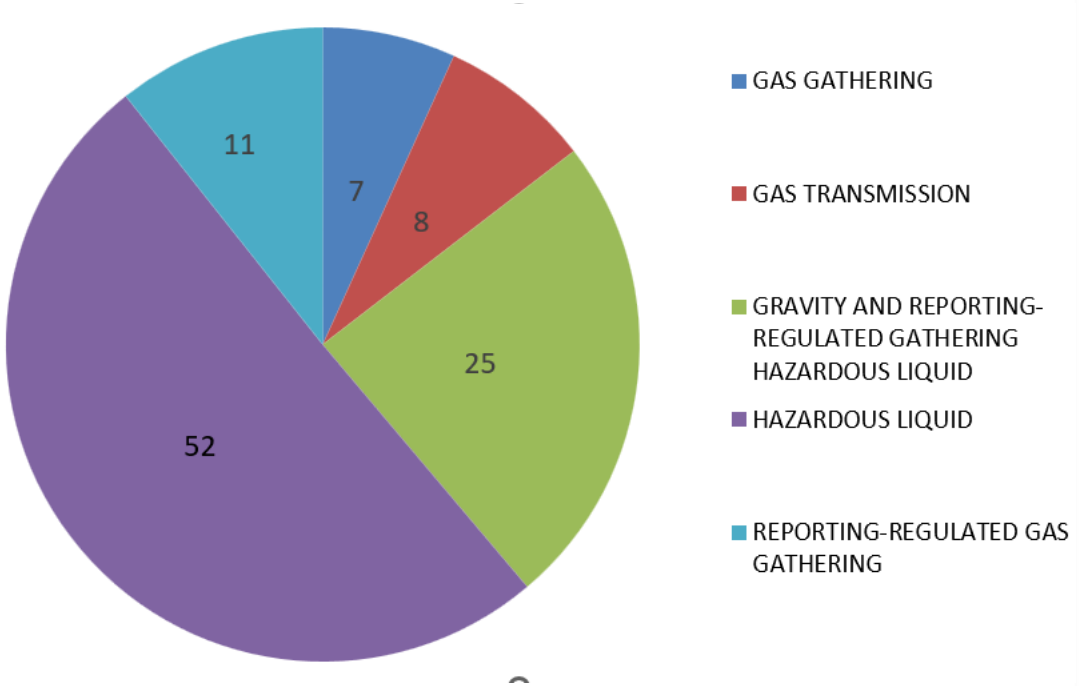
- 103 total events requiring 30-Day Reports
  - 53 were Hazardous Liquid-Related (51%)
  - 25 were GRR Hazardous Liquid (24%)

Oklahoma Reportable Events

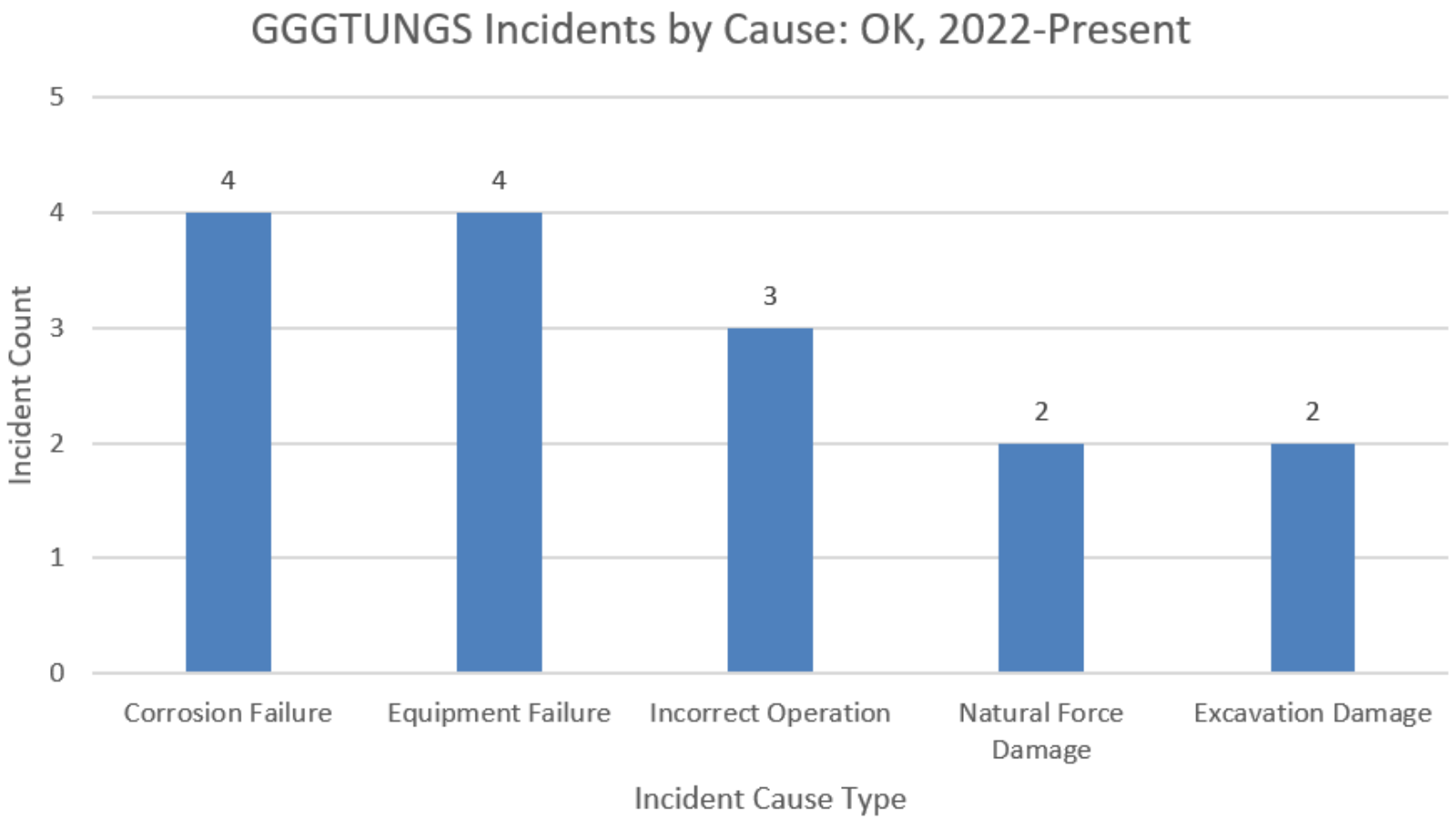
Incident/Accident Jurisdiction



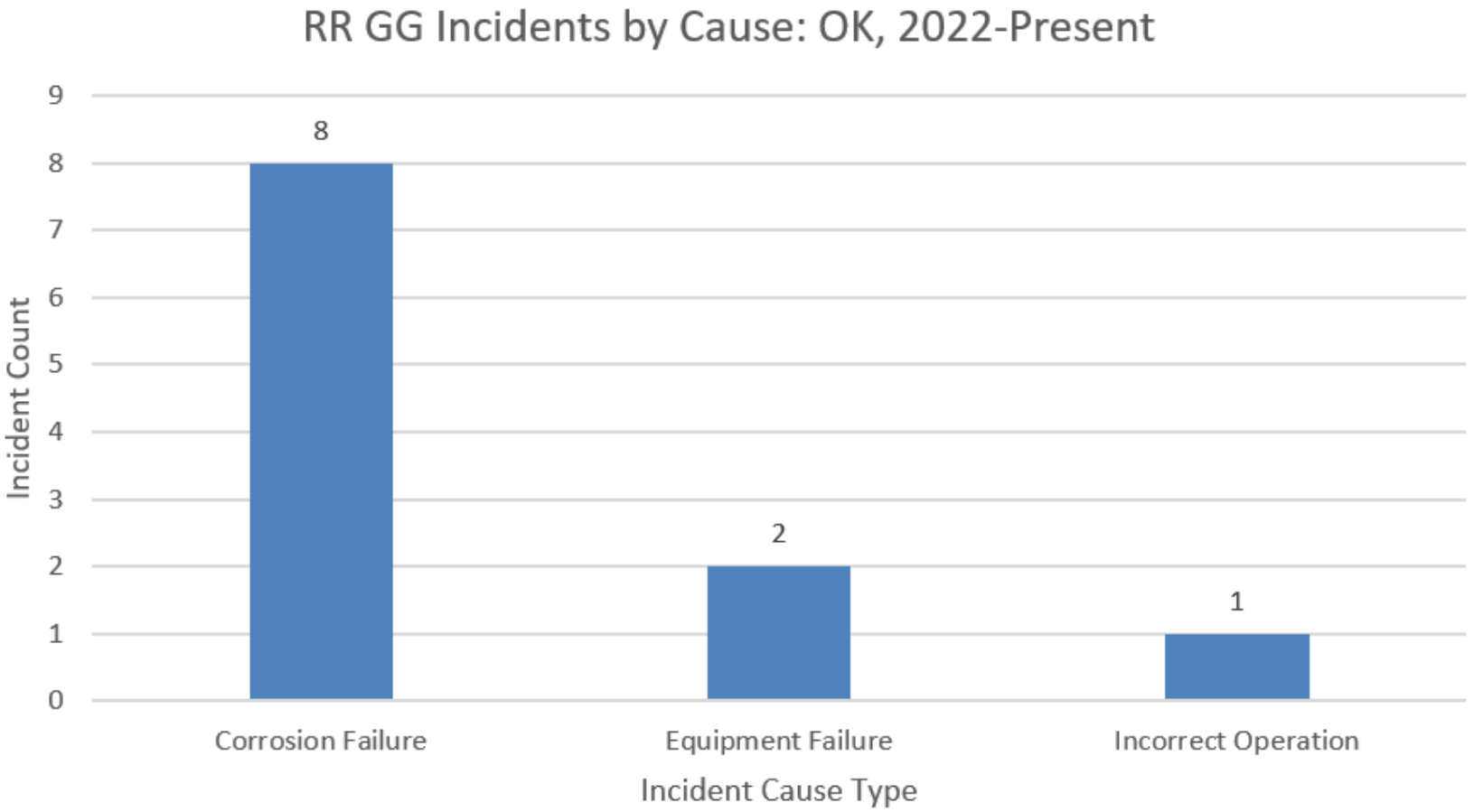
Incident/Accident System Type



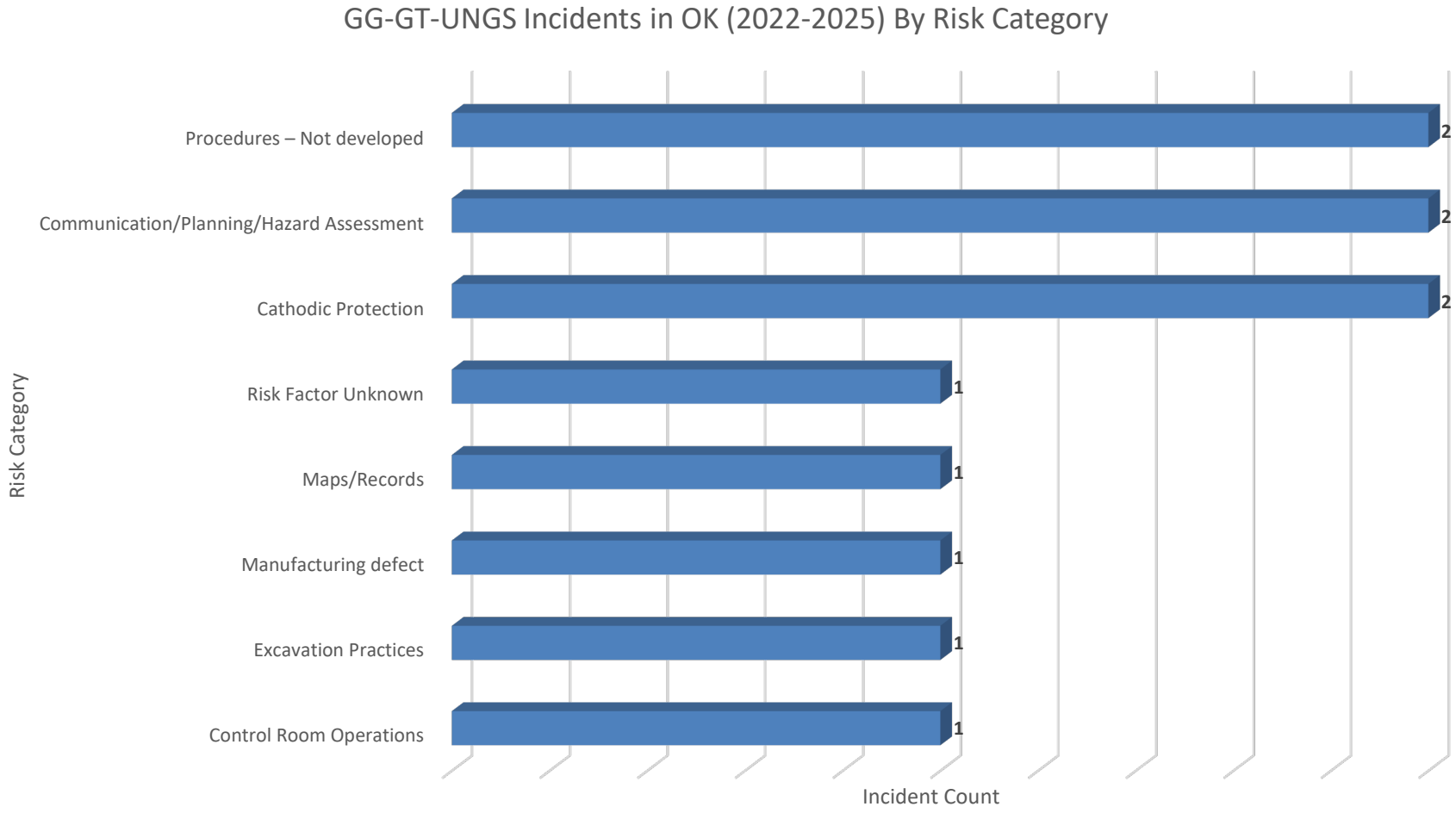
Oklahoma Reported Events



Oklahoma Reported Events



Oklahoma Reportable Events



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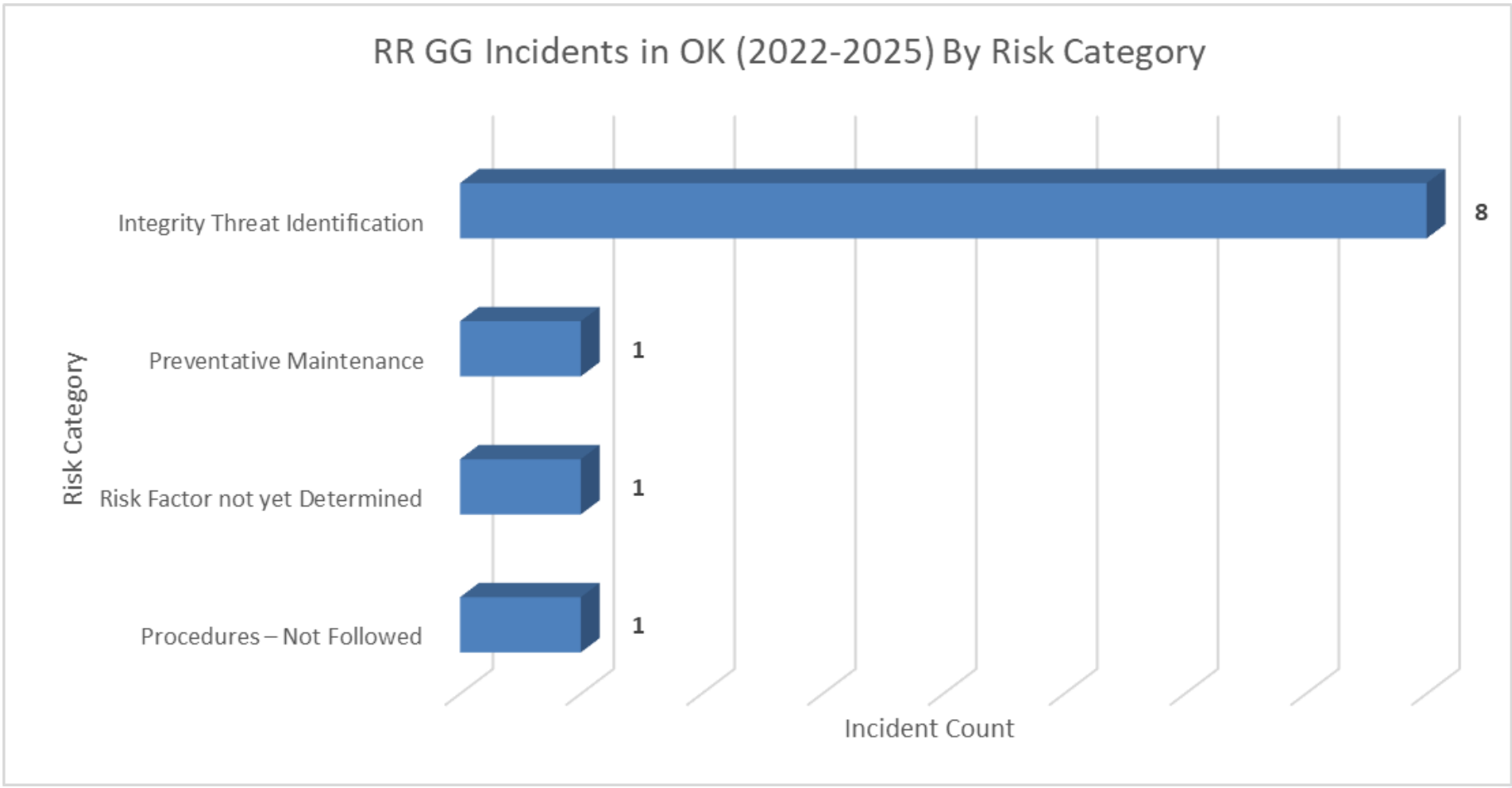
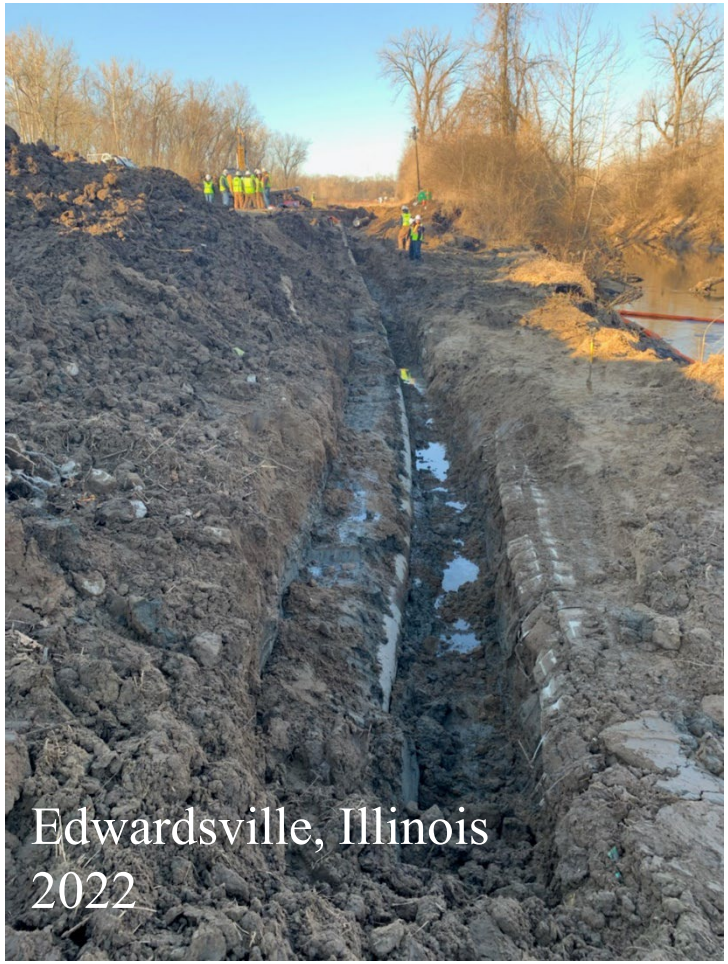
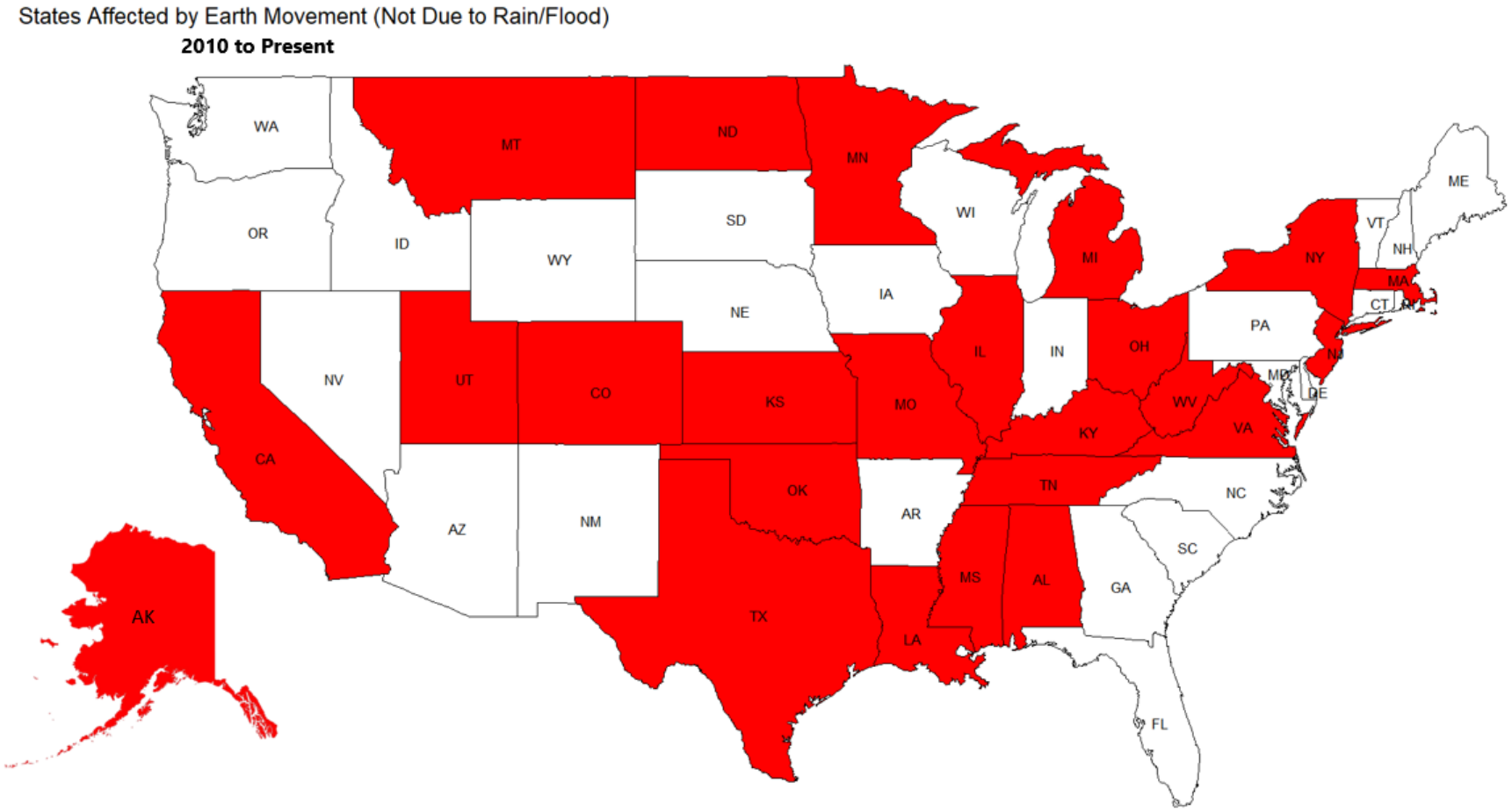


Earth Movement



Earth Movement: What are the Signs?

Earth Movement: States with Accidents



Earth Movement: NG Case Study, Moundsville Incident

- 36-inch GT
- Installed in 2017
- API-5L X70M, 0.515-inch wall thickness
- 160 miles long
- Connects Marcellus and Utica Shale natural gas producers in Ohio, Pennsylvania, and West Virginia with markets and natural gas storage facilities

Earth Movement: NG Case Study, Moundsville Incident

June 2018

- Rupture occurred 157 days after in-service date
- Historical rain totals for this West Virginia were at all-time highs for the year just prior to the pipeline failure
- Low-Res Geometry tool run post-construction
- MFL, Hi-Res Geometry and IMU tools run in-service
- 165 MMcf released

Photo provided by Marshall County Homeland Security & Emergency Management

Earth Movement: NG Case Study, Moundsville Incident

- AID and Region investigated onsite
- Failure attributed to land movement
- Incident Cost >$20M in 2018, or about $38M in March 2025 money

Earth Movement: HL/NG Case Study

2022 Advisory Bulletin

- Potential for damage to pipeline facilities caused by earth movement in variable, steep, and rugged terrain and terrain with varied or changing subsurface geological conditions.
- Changing weather patterns due to climate change, including increased rainfall and higher temperatures, that may impact soil stability in areas that have historically been stable.
- Owners and operators should consider monitoring geological and environmental conditions, including changing weather patterns, in proximity to their facilities.

Thank You

NPIC Hotline: 888-719-9033

AID Email:
phmsaaccidentinvestigationdivision@dot.gov