the Energy to Lead

Industry Threat Database and Guidelines

PHMSA R&D Forum
Threat Prevention Working Group #1
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Threat Identification & Info Sharing

> **Identified needs**:

- A formal process for identifying potential threats was repeatedly identified as a need at the recent PHMSA DIMP Workshop.

- Recent GAO report:

  > Collecting Data and Sharing Information on Federally Unregulated Gathering Pipelines Could Help Enhance Safety

- Subpart O:

  > An operator must identify and evaluate all potential threats to each covered pipeline segment.

Threat Identification & Info Sharing

> Need for an industry data collection effort to create a database of threats for Integrity Management compliance, threat identification, and risk assessment.

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A Few Current Programs

> **Vintage Piping Identification/Analysis**
  - Analysis and understanding risk/life of various aged assets.
  - Collect information on material and identify threats.

> **Interactive Threat Model**
  - Provide a methodology for calculating the risk associated with a superimposed set of threats (21 threats).

> **Continuous Threat Identification Program**
  - New program to collect potential threat information from operators and regulators.
  - Provide information on existing and emerging threats to operators for their use in identifying and assessing risks.
  - Limited to surveys of OTD member utilities.

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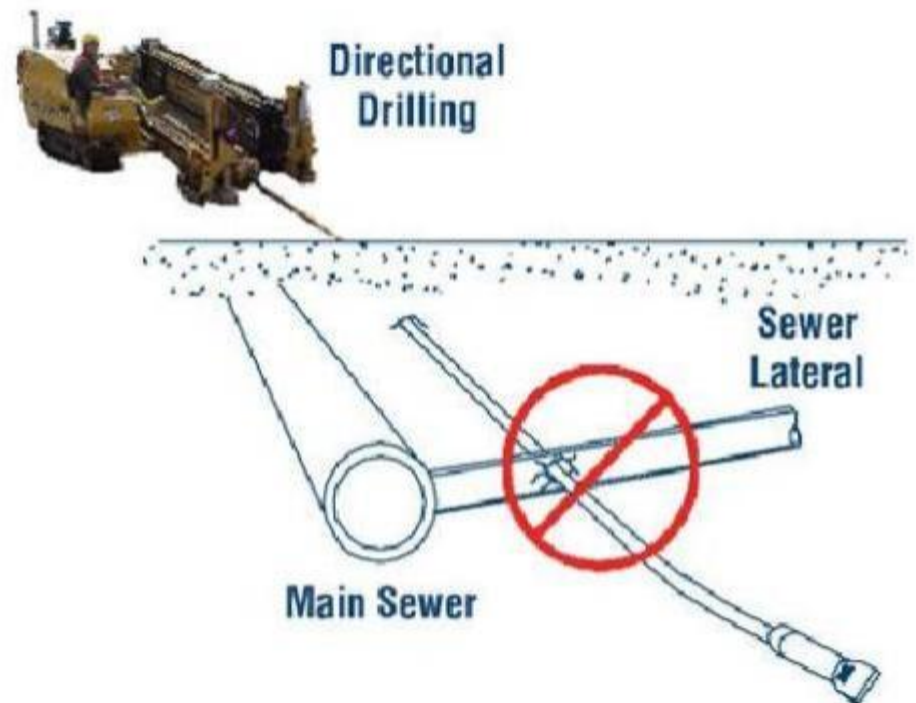# Cross Bore Programs

> **Cross Bore Best Practices**
  – Assembled a series of best practices to:
    > Identify legacy cross bores
    > Eliminate future cross bores

> **Cross Bore Database**
  – Database & Risk Model

> **Education & Outreach**
  – Share the knowledge

Asset Tracking and Traceability Program

> Developed a unique identifier for gas components

– 16 digit base-62 encoding system

1234AsD89j4567

> Developed technologies, processes, and standards to facilitate the tracking of assets throughout their lifecycle

– Provide "Point and Click" GIS that attached operational data to assets

> Standardized PE fusion data capture and operator qualification

> Next Steps

– Expand to transmission

TTN: 129NH7487X
Warehouse: Lot ABC
Received: 12-4-1995
Asset: Main
Material:
Pressure: 10 psi
Diameter: 6"
Location: GPS Coordinate
Depth: 3.5'
Installation Date: 1-5-1996
Installation Technique: HDD
Installation Contractor: Good Guys
Joint Type: Butt Fusion
Soil Type: Ottawa Sand
Squeeze: 8-23-2007
Leak: 8-22-2007
Leak Cause: Rock Impingement
Repair Type: Cut-out

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Excavation Damage Threats

> **Status**

– Virginia DOT RFID Marker Ball Program

– GPS-Based Excavation Encroachment Notification demonstrations in Virginia and New York

– and others . . .

> **Need**

– Implementation support for new damage prevention technologies

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Distribution Systems

> **Additional Research Needs**

— Develop criteria for eliminating or including threats in risk assessments.

— Collect additional information on new and emerging threats to allow incorporation into risk models.

— Develop guidelines for appropriate mitigation techniques for specific threats.

— Outreach programs/platforms to share information on emerging threats and assessing risk.

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Transmission Systems

> **Additional Research Needs**
>
> — Dedicated data collection program to fill gaps
>> Vintage system specific threats
>> Construction method specific threats
>> Non-reportable incidents (root causes, frequency, etc)
>> Data from ILI and DA inspections (false negatives/positives and validation success rates)

Gathering Systems

>**Need**

— New integrity regulations require a body of knowledge for threats specific to gathering systems.

— GAO issued a report identifying the need for improved data collection for gathering lines.

>**Additional Research Needs**

— Threat data collection program specific for gathering systems.

— Provide data to operators to assess risk and take action.

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Identifying - Documenting - Sharing

> **Additional Research Needs**
>   — More encompassing programs to identify existing and emerging threats to our industry (knowledge).
>   — Platforms and outreach programs to disseminate knowledge.

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