

# Oil Pipeline Challenges

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# Association of Oil Pipe Lines

- AOPL represents U.S. interstate oil pipelines
- AOPL members account for about 80% of oil pipeline thruput in the U.S.
- About ½ of U.S. energy is derived from petroleum
- Over 95 % of transportation energy is supplied by petroleum

# Oil Pipelines – America's Supply Line

- Oil Pipelines provide 2/3 of the petroleum transportation in the U.S.
- For most markets, supplying the demand without pipelines would be impossible
- Continuity of oil pipeline service is a key to the smooth operation of the domestic economy

# Our vision is an oil pipeline industry that –

conducts operations safely and with respect for the environment;

respects the privilege to operate granted to it by the public; and

provides reliable transportation of the crude oil and refined petroleum products on which all Americans and the American economy.

# We seek to fulfill this vision by:

- supporting effective federal oversight of pipeline operations in cooperation with states and local communities;
- promoting cooperation among communities, public officials, employees and companies by sharing information on pipelines and pipeline safety;
- employing proven pipeline safety technologies and investing in new technologies to further improve performance; and
- achieving operational excellence through sound risk management approaches

# Oil Pipelines in R&D

- Eleven oil pipeline companies have joined Pipeline Research Council International: ExxonMobil, BP, Shell, TEPPCO, ConocoPhillips, Colonial, Buckeye, Enbridge, Marathon Ashland, ChevronTexaco and Explorer
- AOPL is an institutional member of PRCI representing the other oil pipeline companies

# Challenge: finding and appreciating the danger from defects in existing pipe

Un-detected or un-appreciated defects caused major incidents with major impacts -

- 1994 Edison – third party damage
- 1999 Bellingham – excavation damage
- 2000 Carlsbad – internal corrosion
- 2003 Tucson – stress corrosion cracking

# Challenge: monitoring an extended right-of-way to deter external damage

Many pipeline rights of way

- are thousands of miles in length
- Are not under full control of the pipeline operator
- Are under pressure from numerous sources of encroachment (home construction, farming, roads, development)



# Challenge: Detecting small slow leaks

- A typical oil pipeline transmits hundreds of thousands of gallons of fuel per hour
- A leak of a few gallons per hour is so small in relation to pipeline flow as to be practically undetectable with current methods
- But a few gallons per hour leaked not small in the environmental damage it can cause if not discovered for days and weeks

# Challenge: seeing underground to avoid digging into buried utilities

- One-call notifications systems are the first line of defense in preventing external damage to pipelines
- A Colorado study found that 61% of damages occurred even though the one-call system was used
- An internal industry study found a significant percentage of damages were caused by those who should know better – utilities and other pipeline operators

# Thank You

Questions or comments?

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