OVERVIEW

This is an introductory course to pipelines. The history of pipelines, definitions and terminology, and how pipelines work will be included in the discussion on the first morning. The focus will then move to natural gas and crude oil pipelines from the planning, design, and construction to the operation, safety, and maintenance of the pipelines.

The intent of this course is that participants will be able to apply the information learned when they return to their jobs. The instructors all have years of experience in pipelines. This course will also allow support staff to better understand and effectively interface with their business development, engineering, marketing and operating colleagues.

LEARNING OUTCOMES

• Compare the major differences in the types of pipelines
• Verbalize the vernacular related to pipeline terms of design, construction and operation
• Summarize how pipelines work
• Describe the route selection process
• Articulate the right of way acquisition process
• Recognize the types of pipeline equipment
• Explain the types of pipeline facilities
• Review the requirements for proper maintenance activities
• Discuss safety practices that need to be put in place
• Describe SCADA
• Demonstrate familiarity with the major codes and standards as well as pipeline regulatory agencies

“After being in the industry for 4 years it was nice to have a course that put all the information together in one place. It was an informative general overview and was great for someone in my position.”

Risk Analyst, Kinder Morgan

“The course provided a great foundation for professionals new to the pipeline industry.”

Field Engineer, COP

“Great course for someone who is just entering the pipeline industry.”

Civil Engineer II, Hatch Mott MacDonald
AGENDA

TUESDAY, JULY 11, 2017

8:00 – 8:30 am  Registration and Continental Breakfast

8:30 am – 5:00 pm  Course Timing

12:00 – 1:00 pm  Group Luncheon

History of Pipelines

Pipeline Definitions and Distinguishing Differences
• Crude oil pipelines
• Natural gas pipelines
• Refined product pipelines
• Petrochemical and NGL pipelines
• Gathering lines
• Distribution lines
• Water, sewer and other types of pipelines

How Do Pipelines Work?
• Physics of fluid flow
• Friction losses
• Pipe lengths
• Elevation gain/losses
• Flow rates
• Hydraulic properties of hydrocarbon fluids

Basic Pipeline Design Requirements
• Design factors and class locations
• Pipeline sizing
• Road and water body crossings
• Terrain considerations
• Permitting requirements

Introduction to Pipeline Facility Engineering, Design, and Construction
• Route selection and route survey
  o Traditional and emerging methods
• Right-of-way/easement negotiations
• Pipeline construction (Pictorial Display)
• Other pre-construction actions
TUESDAY, JULY 11, 2017 (CONTINUED)

Pipeline Equipment and Facilities
- Pipeline equipment
  - Mainline valves
  - Pig launchers
  - Pig receivers
- Pipeline facilities
  - Meter stations
  - Pump stations
  - Compressor stations
  - Separation and dehydration
  - Processing equipment

WEDNESDAY, JULY 12, 2017

8:00 – 8:30 am  Continental Breakfast

8:30 am – 5:00 pm  Course Timing

12:00 – 1:00 pm  Group Luncheon

Pipeline Maintenance and Safety
- Operations and maintenance activities
  - Cathodic protection (natural gas and liquid)
  - Leak survey (natural gas)
  - Patrolling (natural gas and liquid)
  - Continuing surveillance (natural gas)
  - Breakout tanks (liquid)
  - Regulator stations (natural gas)
  - Pump stations (liquid)
  - Compressor stations (natural gas)
  - Valve maintenance (natural gas and liquid)
  - Line markers & signs (natural gas and liquids)
  - Fences and station security (natural gas and liquid)
  - Smart pigging (natural gas and liquid)
  - Integrity management-IMP (natural gas and liquid)
  - Distribution integrity management-DIMP (natural gas)
  - Odorization (natural gas)
  - Pipeline repair and reconditioning (natural gas and liquid)
  - Welding (natural gas and liquid)
  - Plastic pipe (natural gas and liquid)
  - Control room management (natural gas and liquid)
  - Gathering line operation & maintenance (natural gas and liquid)
  - Other DOT required tasks
- Safety practices
  - Communication with public, other utilities, county & local governments
  - Codes & regulatory standards
    - PHMSA regulations
    - Integrity management
  - Operator driven
AGENDA

WEDNESDAY, JULY 12, 2017 (CONTINUED)

Introduction to SCADA, Communication, and Controls
- Basic vocabulary
- Overview of the control scheme

Introduction to Pipeline Regulation
- Environmental permitting
  - US Army Corps of Engineers
  - US Fish and Wildlife Service
  - Migratory Bird Treaty Act
  - National Historic Preservation Act – Section 106 compliance
  - Pipelines on Tribal lands
  - Federal land management agencies (BLM, USFS, BOR)
  - NEPA compliance
- Introduction to the FERC process and compliance
- State regulations
- Environmental compliance during construction

Q & A, Course Assessment, and Adjournment

COURSE INSTRUCTORS

Thomas Lael
Formerly with ConocoPhillips Pipeline Company

Mr. Lael has been involved with the pipeline industry for over 45 years. He has worked for various State Pipeline Regulatory agencies (Illinois, Connecticut, and California) and the Federal government (Transportation Safety Institute, now known as Training and Qualification’s (T&Q)). More recently Mr. Lael has worked for major petroleum pipeline operators as a code compliance officer, and Operator Qualifications Administrator. He has been responsible for determining the operator’s compliance with Federal and State pipeline safety regulations and determining the intent of current and proposed PHMSA regulations.

Mr. Lael spent ten years working with ConocoPhillips as the OQ administrator for the company OQ program. His employment with ConocoPhillips evolved from his initial employment with Tosco Corporation starting in 1999, merged into Phillips Pipeline Company in 2001 and finally into ConocoPhillips in 2002. He was responsible for the OQ qualifications for approximately 950 employees and over 1,500 contract individuals.

Mr. Lael has worked as an expert witness on legal cases concerning pipeline safety and accident/incident investigations. Mr. Lael has investigated numerous natural gas and petroleum pipeline explosion and fires.

Don McCoy
Formerly with PHMSA’s Office of Pipeline Safety

Don is a native of Georgia and a graduate of Georgia Tech with a bachelor’s degree in aerospace engineering. After several years in the aerospace industry, Don changed careers to the natural gas industry and pipeline safety, including regulatory stints with the Georgia Public Service Commission and the U.S. Department of Transportation’s Pipeline & Hazardous Materials Safety Administration – Office of Pipeline Safety. Don’s pipeline industry experience included 40+ years at Oklahoma-based companies Mustang Fuel Corporation, Enogex Inc., Chesapeake Energy, Chesapeake Midstream, and Access Midstream.
REQUIREMENTS FOR SUCCESSFUL COMPLETION OF PROGRAM

Participants must sign in/out each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

INSTRUCTIONAL METHODS

PowerPoint presentations and discussion will be used in this course.

IACET CREDITS

EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

EUCI is authorized by IACET to offer 1.5 CEUs for the course.

EVENT LOCATION

EUCI Offices
4601 DTC Blvd.
Denver, CO 80237

NEARBY HOTELS

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PLEASE REGISTER

PIPPLES 101 – BASIC PRINCIPLES OF ONSHORE PIPELINES COURSE
July 11-12, 2017 | Denver, CO: US $1495
Early bird on or before June 23, 2017: US $1295

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

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Substitutions & Cancellations
Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before June 9, 2017 in order to be refunded and will be subject to a US $195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at 303-770-8800. EUCI reserves the right to alter this program without prior notice.