

# PIPELINES 101: BASIC PRINCIPLES OF ONSHORE PIPELINES

January 14-15, 2019  
Houston Marriott West Loop by The Galleria  
Houston, TX

RELATED EVENT:

**PIPELINES 102: PART 192  
REGULATORY REQUIREMENTS FOR  
NATURAL GAS PIPELINES**

January 16-17, 2019 | Houston, TX

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*“Pipelines 101 will increase your understanding and knowledge so quickly, you will want to schedule Pipelines 102 before you leave.”*

Account Manager, Shawcor



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

# 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 to provide participants with the basics of pipelines and their functions, and to be able to apply the information learned when they return to their jobs. The instructors both have years of experience in pipelines and will share their knowledge and experience with the participants.

This course is intended for support staff who may have limited knowledge and/or experience of pipelines to better understand and effectively interface with their business development, engineering, marketing and operating colleagues. This course would also be of value to local government agencies that have an interest in pipelines being built or located in their areas of responsibility.

**Note: There will be some content overlap between Pipelines 101 and Pipelines Operations and Maintenance**

# 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
- 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



*“Industry personal, government, come one come all and learn.”*

Realty Specialist, BLM



*“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

# AGENDA

MONDAY, JANUARY 14, 2019

**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

### 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

### Introduction to Pipeline Facility Engineering, Design, and Construction

- Route selection and route survey
  - Traditional and emerging methods
- Right-of-way/easement negotiations
- Pipeline construction (Pictorial Display)
- Other pre-construction actions

### Pipeline Equipment and Facilities

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

### Introduction to SCADA, Communication, and Controls

- Basic vocabulary
- Overview of the control scheme

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

Civil Engineer II, Hatch Mott MacDonald

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*“Thanks for a great course. Very effective as a beginner’s overview.”*

Director Energy Markets, EagleView Technologies

# AGENDA

MONDAY, JANUARY 14, 2019 (CONTINUED)

## Introduction to Pipeline Regulation

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

TUESDAY, JANUARY 15, 2019

**8:00 – 8:30 am**      **Continental Breakfast**

**8:30 am – 5:00 pm**      **Course Timing**

**12:00 – 1:00 pm**      **Group Luncheon**

## Operations and Maintenance Activities

- Cathodic protection (natural gas and liquid)
- Odorization (natural gas)
- Leak survey (natural gas)
- Patrolling (natural gas and liquid)
- Continuing surveillance (natural gas)
- Line markers & signs (natural gas and liquids)
- Pump stations (liquid)
- Compressor stations (natural gas)
- Regulator stations (natural gas)
- Valve maintenance (natural gas and liquid)
- Fences and station security (natural gas and liquid)
- Pipeline pigging (natural gas and liquid)
- Breakout tanks

## Pipeline Integrity Management

- Natural Gas Transmission Integrity Management
- Natural Gas Distribution Integrity Management
- Liquid Petroleum Pipeline Integrity Management

## Pipeline Construction, Maintenance and Repair

- Welding procedures & welder qualifications
- Joining plastic pipe
- Mechanical joints
- Pipeline repair



*"I am brand new to the industry and was very appreciative to see an organization as a learning resource so easily available!"*

Marketing Manager, EagleView Technologies

# AGENDA

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TUESDAY, JANUARY 15, 2019 (CONTINUED)

**Pipeline Control Room Management & Gathering Line Jurisdiction**

- Control room management
- Control of pipelines
- Gathering line jurisdiction

**Customer Service & Emergency Response**

- Pressure testing pipelines
- Natural gas customer service
- Emergency response

**Q & A, Course Assessment, and Adjournment**

## COURSE INSTRUCTORS

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### 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 Qualifications (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.

## INSTRUCTIONAL METHODS

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PowerPoint presentations and discussion will be used in this course.

## REQUIREMENTS FOR SUCCESSFUL COMPLETION

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

## EVENT LOCATION

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A room block has been reserved at the Houston Marriott West Loop by The Galleria , 1750 W Loop S, Houston, TX 77027, for the nights of January 14-16, 2019. Room rates are \$159 plus applicable tax. Call **1-713-960-0111** for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is December 14, 2018 but as there are a limited number of rooms available at this rate, the room block may close sooner. ***Please make your reservations early.***

## IACET CREDITS

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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**

## REGISTER 3, SEND THE 4TH FREE

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Any organization wishing to send multiple attendees to this course may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.



***“Program is perfect for an executive with pipeline operations as part of their responsibilities.”***

VP, Glencore Ltd.



Please make checks payable to "PMA"



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## PLEASE SELECT

- BOTH PIPELINES 101 – BASIC PRINCIPLES OF ONSHORE PIPELINES AND PIPELINES 102: PART 192 REGULATORY REQUIREMENTS FOR NATURAL GAS PIPELINES**  
**COURSES:** JANUARY 14-17, 2019 : US \$2595  
 EARLY BIRD on or before JANUARY 4, 2019: US \$2395
- PIPELINES 101 – BASIC PRINCIPLES OF ONSHORE PIPELINES COURSE ONLY:** JANUARY 14-15, 2019: US \$1495  
 EARLY BIRD on or before JANUARY 4, 2019: US \$1295

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

Print Name

Job Title

Company

What name do you prefer on your name badge?

Address

City

State/Province

Zip/Postal Code

Country

Phone

Email

List any dietary or accessibility needs here

### CREDIT CARD INFORMATION

Name on Card

Billing Address

Account Number

Billing City

Billing State

Exp. Date

Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

Billing Zip Code/Postal Code

**OR** Enclosed is a check for \$ \_\_\_\_\_ to cover \_\_\_\_\_ registrations.

### 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 December 14, 2018 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 (201) 871-0474