

# INTRODUCTION TO THE PIPELINE AND WATERBODY RISK ASSESSMENT

*Performance-Based Approach to Managing Risk  
in New and Existing Pipelines*

**August 14, 2017**  
**Royal Sonesta Houston**  
**Houston, TX**

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# OVERVIEW

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With over 2.5 million miles of natural gas and liquid pipelines and a growing number of pipeline incidents causing death, injury and environmental damage, both Congress and the Pipeline & Hazardous Materials Safety Administration (PHMSA) want pipeline companies to pay special attention to pipeline integrity issues at waterbody crossings.

Pipeline operators and integrity specialists understand the problem, but PHMSA has only provided general guidelines for the industry. The Pipeline and Waterbody Risk Assessment (PWRA) discussed in this course is a new tool that can be used for compliance purposes, but more importantly, it can reduce the risk of an incident at a pipeline waterbody crossing in the first place. By assessing pipeline risks at waterbodies, the PWRA allows pipeline companies to take corrective actions before a pipeline incident (pipeline exposure, damage to pipeline, or unanticipated release of product), rather than react to an actual leak or catastrophic event. Based on engineering, hydrology and geoscience, the PWRA should give pipeline operators and federal and state regulators responsible for protecting public safety, water quality, and coastal resources, more confidence in a pipeline company's ability to reduce risks at waterbodies for both existing and proposed pipeline projects.

# LEARNING OUTCOMES

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- Provide an overview of pipeline and waterbody risk assessment (PWRA)
- Discuss business and regulatory drivers, including increased risks, insurance, and litigation, as well as PHMSA and ASME Code B31.8
- Describe stream and river channel natural processes
- Address static and dynamic risks to pipelines
- Review solutions and future problems regarding pipelines around water
- Evaluate PWRA as a tool to understand risk
- Participate in an exercise focused on pipeline and waterbody risk assessment

# WHO SHOULD ATTEND

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- Operators/managers in charge of managing pipeline risk and integrity management plans.
- Engineers involved in design, routing, or exposure mitigation.
- Managers/staff involved in permitting proposed pipelines or regulatory compliance relating to risk management
- Federal and State regulators responsible for Safety, Clean Water Act and Coastal Zone Management Act determinations
- Pipeline Integrity Managers
- Pipeline Project Managers
- Pipeline Operations Managers
- Emergency Management Advisors
- Pipeline Construction Managers
- Environmental Specialists
- Environmental Compliance Managers

# COURSE TIMING

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MONDAY, AUGUST 14, 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**

# PROGRAM AGENDA

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- Pipeline & Waterbody Risk Assessment
  - An approach and tool to manage pipeline integrity and reduce incidents
  - Building a case for pipeline stability at waterbody crossings
  - What it is and how was it developed
  - Benefits
  
- Business and Regulatory Drivers
  - Increasing opposition to new pipeline proposals because of rising incidents
  - Increased risks, insurance and litigation
  - FERC and other Federal/State agencies involved in permitting
  - PHMSA and ASME Code B31.8
  
- Stream and River Channel Natural Processes
  - Fluvial what?
  - Overview of sediment transport
  - Lateral migration and vertical scour
  - Timescales
  - Non-geomorphic risks
  
- Risk Factors
  - Static and dynamic risks to pipelines
  - Landscape scale
  - Local scale
    - Exercise: Site Evaluation
  - Non-geomorphic risks
  - Pipeline and Waterbody Risk Assessment: Understanding the risks
  
- Solutions (and Future Problems?)
  - Traditional vs. “natural” channel design methods
  - The future
    - Unintended consequences
    - Uncertainty at waterbodies
    - Increased development in the watershed

# AGENDA

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MONDAY, AUGUST 14, 2017 (CONTINUED)

- PWRA as a Tool to Understand Risk
  - o PWRA Phase I: Desktop analysis
    - Data inputs
    - Key components of the analysis
    - Example
    - Risk ranking at waterbody crossings
  - o PWRA Phase II: Verification of risk
    - Field visit
    - Data collection and analysis
    - Example
    - Outcomes of PWRA Phase II
  
- Review Exercise: Build It Wider, Bury It Deeper, or Re-Route It?
  - o Group Q&A

# INSTRUCTORS

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**Tyler Kreider**  
**Ecological Engineer, Kleinschmidt Group**

Tyler Kreider serves as an Ecological Engineer for Kleinschmidt Group. He has an M.S. in Biological Systems Engineering from Virginia Polytechnic Institute and State University and a B.S. in Environmental Resource Engineering from SUNY College of Environmental Science and Forestry. He's a Licensed Professional Engineer in Pennsylvania.



**Tom Russo**  
**Principal, Russo on Energy LLC**

Tom Russo is a Certified Information Systems Security Professional (CISSP) who specializes in physical security and resiliency of natural gas, oil and NGL pipelines and facilities.

Prior to founding Russo on Energy LLC in May 2015, Mr. Russo worked for over 30 years as a Manager and Sr. Energy Industry Analyst at the Federal Energy Regulatory Commission (FERC). During that time, he worked on natural gas and crude oil infrastructure and markets, NEPA environmental impact assessment and hydropower matters. He also assisted FERC's new Energy Infrastructure Security Office with understanding physical and cybersecurity threats and vulnerabilities to natural gas, oil and gas-fired power projects.

Mr. Russo is a native of Brooklyn, New York, graduated with a MBA in Finance from the George Washington University and a MS in Biology from the University of Alabama.

## INSTRUCTIONAL METHODS

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Case studies, PowerPoint presentations and group discussion will be used at 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.

## 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 0.8 CEUs for the course.**

## EVENT LOCATION

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A room block has been reserved at the Royal Sonesta Houston, 2222 West Loop S, Houston, TX 77027, for the nights of August 13-14, 2017. Room rates are \$129 USD, plus applicable tax. Call **1-713-627-7600** for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is July 13, 2017 but as there are a limited number of rooms available at this rate, the room block may close sooner. ***Please make your reservations early.***

**REGISTRATION**  
*to register [CLICK HERE](#) or*

**Call: 201 871 0474**  
**fax: 253 663 7224**  
**email: [register@pmaconference.com](mailto:register@pmaconference.com)**  
**web: <http://pmaconference.com/>**  
**Mail: POB 2303 Falls Church Va 22042**

Please make checks payable to: "PMA"

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## PLEASE REGISTER

- INTRODUCTION TO THE PIPELINE AND WATERBODY RISK ASSESSMENT COURSE:**  
 AUGUST 14, 2017 | HOUSTON, TX US \$995  
 Early bird on or before July 28, 2017: US \$895

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 July 14, 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 (201) 871-0474.