This workshop provides operations and maintenance engineers and field technicians in pipeline companies with the knowledge to establish and manage an intelligent pigging program that contributes optimum value toward improved pipeline integrity.

**Cost:** The registration fee of $1295 ($1,495 non-member) includes breaks, continental breakfast and lunch each day, and all workshop materials.

Second and subsequent registrations from the same company may register at the reduced rate of $1,095 ($1,295 non-member).

**Who Should Attend:** Operations and maintenance engineers and technicians who participate in in-line inspections using intelligent pigs.

**Hotel:** Hampton Inn & Suites Tulsa Hills,
7004 S. Olympia Ave. West, Tulsa, OK, 74132

Room Rates: $94 Double Queens, $99 Kings, $109 King Studios
Complementary continental breakfast.

Reservations: Please make reservations with hotel directly by April 15, 2017.

• Call hotel direct at 918-340-5000 - be sure to mention date of arrival and group name (SGA / Southern Gas Association).

For additional information: [www.southerngas.org](http://www.southerngas.org); click on “Event Calendar”. Or contact Fraser Farmer 972-620-4016 ffarmer@southerngas.org.
AGENDA

Day One
TDW Technology Center, 6801 South 65th West Avenue, Tulsa, OK 74131-2444

7:30  Shuttle bus to TDW from hotel  12:00 – 1:00  Lunch
(provided)  (provided)

8:00 – 9:00  1. An Introduction to the Workshop and to Intelligent Pigging
Bruce Nestleroth, Kiefner Associates
• The Workshop presentations
• Overview - kinds of pigs
• Historical development
• Class introduction

9:00 – 12:00  2. Pigging Field Operations Success Factors
Rusty Jackson, Quest Integrity Group
• Pipeline piggability evaluation
• Line cleanliness requirements
• When to use gauging, caliper, and dummy pigs
• Bends, fittings and other restrictions
• Modeling/simulation/verification
• Pig launching, propelling, tracking, and receiving
• Defect locating – marker systems, GPS coordination
• What pigging vendors expect from pipeline companies

1:00 – 2:00  3. Chemical Cleaning of Pipelines
Randy Roberts, N-Spec Pipeline Services
• Use of chemicals, handling same and disposal
• How to optimize a cleaning program
• How to tell if the line is clean

2:00 - 3:30  4. Principles of Operation of Geometry & Mapping ILI Tools
Dane Burden, TDW
• Geometry deformation tools
• XYZ mapping tools

3:30 – 5:00  5. Principles of Operation of Metal Loss ILI Tools
Bruce Nestleroth, Kiefner Associates
• MFL tools
  o Overview of basic principles: magnets, sensors, resolution
  o Operational limitations: velocity, bends, thick pipe
  o Detection of defects and pipeline features
  o Metal loss corrosion sizing
7:00 Dinner
Hosted by Randy Roberts, N-Spec Pipeline Services
Transportation provided
Day Two

TDW Technology Center, 6801 South 65th West Avenue, Tulsa, OK 74131-2444

7:30  Shuttle bus to TDW from hotel  12:00 – 1:00  Lunch  
(provided)  (provided)

8:00 – 10:00  5. Principles of Operation of Metal Loss ILI Tools  (continued)  
Bruce Nestleroth, Kiefner Associates
• More about MFL tools
• Ultrasonic tools

10:00 – 12:00  6. Data Analysis Demonstration  
Dane Burden, TDW

12:00 – 1:00  Lunch (provided)

1:00 – 1:15  Transfer to Test Loop

1:15 – 3:00  7. MFL Signal Scavenger Hunt (TDW Test Loop Facility)  
Bruce Nestleroth, Kiefner Associates; Chuck Harris, TDW
• During this session participants will put into practice what they have learned in the training so far. Participants will try to locate defects given data collected during an intelligent pig test run.

3:00 – 5:00  8. Field Defect Measurements (TDW Test Loop Facility)  
Greg Donikowski and Jeremy Clark, TDW
• In this hands-on demonstration, in-the-ditch measurement of corrosion will be performed using various methods from low tech to high tech. After a short introduction to measurement methods, participants will measure pits using pit gauges and bridging bars and compare labor time and accuracy of high resolution laser scan.

6:30  Dinner  
Hosted by Chuck Harris, TDW  Transportation provided
Day Three

TDW Technology Center, 6801 South 65th West Avenue, Tulsa, OK 74131-2444

7:30 Shuttle bus to TDW from hotel  12:00 – 1:00 Lunch (provided)

8:00 – 9:00  9. Tour ILI Service Center
John Morrow, TDW

9:00 – 9:15  Transfer to TDW Test Loop

9:15 – 11:30  10. Safety Orientation, Introduction and Demonstrations
John Morrow, TDW
  • Line Locating
  • AGM Site Selection
  • Pig Launching/Receiving
  • Pig Tracking (Pig Passages & Locating a Stuck Pig)

11:30 – 12:00  11. Transfer to Technology Center – Review Test Loop ILI Data
Dane Burden, TDW

12:00 – 1:00 Lunch (provided)

1:00 – 2:00  12. Tool Performance Specifications Determination and Validation with Field Results
Dane Burden, TDW

2:00 – 4:00  13. Pigging Standardization
Bryce Brown, ROSEN USA
  • The pipeline industry has worked together with all related stakeholders over the years to put into practice applicable standards and recommended practices. These documents provide guidance and understanding (and a means to communicate effectively) in order that the pipeline operator can make informed decisions about the proper implementation and utilization of in-line inspection systems and technologies for their applicable threats. During this session, the audience will learn about some of the more important aspects of these standards and recommended practices.
    • Pipeline Operators Forum Standard
    • NACE Pigging Recommended Practice
    • API ILI Equipment Standard
    • ASNT Personnel qualification standard

4:00  Workshop Adjourns