

NATURAL GAS FIELD SKILLS TRAINING PROGRAM

Train your field workers for safe,
effective on-the-job performance
and meet regulatory requirements



RAISE THE SKILLS OF YOUR ORGANIZATION WITH GTI'S TAILORED TRAINING SOLUTIONS

IMPLEMENTATION SUCCESS STORY

To establish consistent intercompany business gas construction practices and training, Northeast Gas Association (NGA), GTI, and National Grid worked together to establish a regional collaborative pilot program. This 5-day/40-hour instructor-led training was a comprehensive program with Natural Gas Pipeline Construction Field Skills at the core.

NGA took a regional approach to establishing the training framework, building off of National Grid's vision to create an integrated, standardized approach to learning using state-of-the-art technology solutions. A quality assurance and quality control (QA/QC) audit protocol was put in place to ensure content was delivered as required, students were fully engaged, and a good balance of classroom and hands-on experience was maintained.



GTI created standardized content and provided proficient trainers to assist in delivering the learning experience as well as a "train the trainer" component to guide and ensure consistent delivery of the program by in-house company trainers.

A Field Tablet performance support tool was developed for workers in the field, containing information on company-specific procedures, standard drawings, and data on regulations. Use of the Field Tablet was integrated into the learning experience to enable access to company-specific procedures and regulatory guidance materials.

The program was piloted in early 2014, with Feeney Brothers, a National Grid contractor, who embraced the process. The experience was well-received by all and confirmed that the newly-developed "back to basics" gas pipeline construction content was specific enough to ensure safety, quality and efficiency.

Going forward, a focus on continuous improvement will be maintained, and the regional use of an "intercompany" tablet environment will be explored. National Grid will work with all of their contractors to integrate the program as part of their qualification requirements.



PROGRAM OVERVIEW

The GTI Natural Gas Field Skills Training Program is a series of modules designed for field workers involved in natural gas construction, operations and maintenance. The program helps prepare field workers for safe, effective on-the-job performance and meet regulatory requirements for operator qualification (OQ) assessments.

The program is a turn-key solution for the gas industry and can be adapted to meet specific operating procedures and requirements. The program is available as a base-program with generic field procedures and application, or it can be tailored to company-specific requirements.

We offer 77 modules in ten different topic areas; each module includes ready-to-use training materials for the classroom suited to both the internal company workforce as well as contracted utility field workers. Each module includes:

- Presentation—Colorful graphics, photos, and video.
- Leader Guide—Talking points for each slide and step-by-step guidelines for activities and discussions.
- Participant Guide—A helpful follow-along guide for trainees and valuable resource after class.
- Knowledge Assessment—Trainees must achieve at least an 80% score for successful completion.

“These are exciting and challenging times for our industry with the convergence of incredible growth, a keen focus on replacement of aging infrastructure and our dynamic regulatory environment. This collaborative program with NGA, GTI and National Grid will level the training and qualification playing field across the region and encourage regional “portability” of the contractor workforce while ensuring a consistent approach to ensuring safety, quality and compliance.” —**National Grid**

HOW IT WORKS

Whether you're looking for basic training, a refresher or need to enhance your skills in a specific area, GTI offers a variety of skill development opportunities for your workforce.

Select a training solution that meets your needs:

1 STANDARDIZED TRAINING

GTI offers a standardized training option perfect for quick turn-around basic field training for utility and contractor staff. GTI works directly with the utility, reviewing their Work Methods and Procedures, Construction Standards and other reference materials and ensuring that all the materials align with the required training topics.

2 CUSTOMIZED TRAINING

If your goal is to establish a customized training program specific to your work practices, procedures and standards, this is the best option for you! With GTI's customized training option, we will fully tailor and refine the modules to meet your company's specifications and OQ procedures, requirements, and process as well as provide extensive review and integration of company-specific materials.

Implement a program for your workforce:

The Natural Gas Field Skills Training Program, standardized or customized, can be offered as a packaged program for utility or contracted trainers under a license agreement. GTI will work with you to design and deliver a train-the-trainer program to effectively transfer the learning materials. We can also supply qualified trainers to deliver the requested modules.



Flexibility is built into the program, so you can train your workers online, in your classroom, or blend the two options to meet your needs.



Mobile Performance Support... There's An App For That!

Give your workforce the right information at just the right time. GTI's **Field Tablet** is a mobile performance support tool designed to deliver information to field workers at the time of need so they can quickly get back to the task at hand.

Workers can access guidance materials—such as work methods, technical drawings, and instructional videos—using iOS and Android-compatible tablets. The mobile platform is built within a customized app so there's no need for a wireless connection. Tablets can also be used in the classroom to reference documents and drawings.



MODULES

General

- 1.1 Introduction to Operator Qualification
- 1.2 Overview of the Gas Industry
- 1.3 Regulatory Audits
- 1.4 Distribution Integrity Management Program

Construction

- 2.1 Perform Construction Practices
- 2.2 Excavate Near a Gas Pipeline
- 2.3 Perform Vacuum Excavation
- 2.4 Perform Keyhole Technology
- 2.5 Backfill an Excavation
- 2.6 Install Shoring in an Excavation
- 2.7 Perform Horizontal Directional Drilling

Corrosion Control

- 3.1 Measure Pipe to Soil Potential
- 3.2 Install and Test Insulators
- 3.3 Conduct a Soil Resistivity Survey
- 3.4 Attach a Wire Using a Thermite Weld
- 3.5 Test for and Clearing of Shorts
- 3.6 Install an Anode and Test Station
- 3.7 Inspect and Maintain a Rectifier
- 3.8 Inspect for Atmospheric Corrosion
- 3.9 Conduct Interference Testing
- 3.10 Inspect for Internal Corrosion
- 3.11 Measure Internal and External Corrosion

Pipeline Installation

- 4.1 Inspect Condition of Pipe
- 4.2 Install Steel Pipe
- 4.3 Install Polyethylene (PE) Pipe
- 4.4 Install Tracer Wire

Pipe Joining

- 5.1 Join Polyethylene Pipe: Stab Fittings
- 5.2 Join Pipe: Compression Couplings

- 5.3 Join Polyethylene Pipe: Butt Heat Fusion—Manual Unit
- 5.4 Join Polyethylene Pipe: Butt Heat Fusion—Hydraulic Unit
- 5.5 Join Polyethylene Pipe: Sidewall Heat Fusion
- 5.6 Join Polyethylene Pipe: Electrofusion
- 5.7 Join Polyethylene Pipe: Socket Heat Fusion
- 5.8 Inspect a Polyethylene Pipe Fusion Joint
- 5.9 Weld Steel Pipe

Pipeline Operations and Maintenance

- 6.1 Inspect, Operate, and Maintain a Valve
- 6.2 Conduct a Pressure Test
- 6.3 Abandon a Pipeline Facility
- 6.4 Operate and Inspect a Pressure Recording Gauge
- 6.5 Perform Non-Destructive Testing (NDT)
- 6.6 Repair Cast Iron Pipe Joints
- 6.7 Apply External Pipe Coating
- 6.8 Perform Indirect Inspection Techniques
- 6.9 Install Mechanical Clamps and Repair Sleeves
- 6.10 Tap a Pipeline Under Pressure
- 6.11 Stop Flow In a Pipeline Under Pressure
- 6.12 Tie-in Service Pipe (from Main)
- 6.13 Perform a Hot Tap on Polyethylene Pipe
- 6.14 Squeeze-off a Pipeline
- 6.15 Operate and Maintain an Odorizer
- 6.16 Monitor Odorization By Periodic Sampling
- 6.17 Conduct an Inside Leak Investigation
- 6.18 Investigate and Classify an Outside Leak
- 6.19 Conduct a Walking Leak Survey
- 6.20 Perform a Mobile Leak Survey
- 6.21 Locate Underground Pipelines
- 6.22 Patrol and Maintain a Pipeline Right-of-way
- 6.23 Conduct a Purge on a Pipeline
- 6.24 Repair/Tie-in Polyethylene Pipe
- 6.25 Repair/Tie-in Steel Pipe
- 6.26 Repair/Tie-in Cast Iron Pipe

Gas Control and Pressure Regulation

- 7.1 Regulator Operation and Fundamentals
- 7.2 Update the Pressure on a Pipeline System
- 7.3 Operate and Test Overpressure Protection Equipment
- 7.4 Control/Monitor Gas Pressure and Flow
- 7.5 Inspect and Maintain a Regulator Station/Vault

Customer Service Operations

- 8.1 Activate/Terminate a Gas Service
- 8.2 Install a Meter and Regulator
- 8.3 Test Customer Piping
- 8.4 Investigate and Resolve a No Gas/Poor Supply Condition

Station Operation and Maintenance

- 9.1 Operate a Pipeline Compressor Station
- 9.2 Maintain a Pipeline Compressor Station

Emergency Preparedness

- 10.1 Identify the Properties and Characteristics of Natural Gas
- 10.2 Recognize and React to Abnormal Operating Conditions
- 10.3 Communicate Public Awareness
- 10.4 Investigate and Report an Incident
- 10.5 Respond to an Emergency

CONTACT US!

Get a quote or more information on our Natural Gas Field Skills Training Program by contacting Vanessa O'Neil, 847-768-0560, vanessa.oneil@gastechnology.org.

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