Part 2 Class- Pipe Joining

Training- 4 Day Session………………………………………………………………………………$800/Person
Testing (48 Hours after Training)- 1 Day Session………………………………………………$200/Person

NOTE: Failed Hands-On Evaluations will be charged a retesting fee of $110/Student, and must be
done by a NGA evaluator (Minimum time is 48 Hours after a failed evaluation)

Classroom Training:
• Class Overview
• Safety/PPE

Covers Tasks:
• 31- Installation of Pipe
  o A-Storage and Handling
  o B-Installation of Pipe in a Ditch
  o C-Installation of Pipe- Directional Drilling
  o D-Installation of Pipe- Horizontal Boring
  o E-Installation of Pipe- Dead Insertion
• 40- Install/Replace Tracer Wire
• 49-Mechanical Joining of Pipe other than Plastic
  o Threaded/Flange/Compression
• 50- Joining of Plastic Pipe
  o Manual Butt Fusion
  o Hydraulic Butt Fusion
  o Saddle Electrofusion
  o Coupling Electrofusion
  o Compression
  o Nut Follower
  o Bolted
  o Stab
• 51- Install a Self Tapping Tee
• 52- Inspection of Pipe Fusion Joint
  o Socket Fusion
  o Saddle Fusion
• 71- Operating in the vicinity of a Pipeline
• National Fuel Procedure Manual Sections Referring to Material Listed Above.
Hands-On Training:

- Plastic Pipe (Print Line/Weak Links/Static Discharge)
- Tracer Wire (Connection/Line Markers)
- Pipe Joining (All Types- Using NFG Equipment)
- Tapping Tees (Steel/Plastic)

Testing:

- NGA-WE-31A-Installation of Pipe
- NGA-WE-31B-Installation of Pipe in a Ditch
- NGA-WE-31C-Installation of Pipe by Directional Drilling
- NGA-WE-31D-Installation of Pipe by Horizontal Boring
- NGA-WE-31E-Installation of Pipe by Dead Insertion
- NGA-WE-40-Install/Replace Tracer Wire
- NGA-WE-49-Mechanical Joining of Pipe other than Plastic
- NGA-WE-51-Install a Self-Tapping Tee
- NGA-WE-71-Excavation and Backfill
- NGA-WE-State Specific NY/PA
- NGA-WE-A-General Knowledge
- NGA-WE-B-Mechanical Couplings
- NGA-WE-C-Electrofusion
- NGA-WE-D-Hydraulic Butt Fusion
- NGA-WE-E-Manual Butt Fusion
- NFG-Task 800-Part 2 O&M Procedures
- HANDS-ON-Manual Butt Fusion-PJQ-01B
- HANDS-ON-Hydraulic Butt Fusion-PJQ-11
- HANDS-ON-Electro-Saddle-PJQ-04
- HANDS-ON-Electro-Coupling-PJQ-05
- HANDS-ON-Bolted-PJQ-06
- HANDS-ON-Stab-PJQ-07
- HANDS-ON-Compression-PJQ-08
- HANDS-ON-Nut Follower-PJQ-09
- HANDS-ON-Compression-49.3
Below is the Covered Tasks Listing the Domains and Elements that will be covered during Training Class.

TASK #31: Installation of Pipe

1. Transportation, Storage, and Handling of Pipe
   a. Understand pipe storage requirements
   b. Know how to move pipe without damaging it

2. Inspection of Pipe
   b. Knowledge of pipe inspection practices
   c. Know how to verify the correct pipe material
   d. AOC - Know how to respond to a damaged pipe

3. Pipe Depth
   a. Knowledge of the proper pipe depth requirements
   b. AOC – Know how to respond to insufficient pipe depth

4. Utility Separation
   a. Knowledge of separation requirements from other utilities and structures
   b. AOC - Know how to respond to insufficient utility clearance

5. Pipe Locating Material Installation
   a. Knowledge of the materials used to assist with pipe locating and the installation process
   b. AOC - Know how to respond to tracer wire failure

6. Documentation
   a. Knowledge of the documentation requirements
b. AOC - Know how to respond to an undocumented or improperly documented existing pipeline facility

7. Post-Installation Markings
   a. Knowledge of the locating and marking requirements

8. Weak Links
   a. Knowledge of weak link methods
   b. AOC - Know how to respond to weak link breaks

9. Installing Pipe in an Open Trench
   a. Know how to properly prepare a trench
   b. Know how to minimize plastic pipe stresses
   c. Knowledge of pipe lowering practices
   d. AOC - Know how to respond to rocks in a trench

10. Installing Pipe by Horizontal Directional Drill
    a. Knowledge of reaming and pull back process
    b. Knowledge of acceptable bend radius and factors affecting bend radius
    c. Know when and in what situations to inspect
    d. AOC - Know how to respond to unanticipated pipe resistance
    e. AOC - Know how to respond to an improper bend radius
    f. AOC - Know how to respond to an improper reamer size

11. Installing Pipe by Horizontal Boring (Piercing Tools)
    a. Knowledge of pipe and piercing tool selection
    b. Knowledge of the boring process

12. Installing Pipe by Vibratory Plow (Planting and Plow)
    a. Knowledge of blade tool, pipe selection and length of pipe
    b. Knowledge of plowing process

13. Installing Pipe by Insertion
    a. Know how to protect pipe during insertion process
    b. Knowledge of the insertion process

TASK #40: Installing/Replacing Tracer Wire

1. Pipe Locating Material Installation
   a. Knowledge of the materials used to assist with pipe locating and the installation process
   b. AOC - Know how to respond to tracer wire failure
**TASK #49: Mechanical Joining of Pipe Other Than Plastic**

1. Pipe Preparation
   a. Know how to prepare pipe for fitting installation

1. Compression Fitting
   a. Knowledge of fitting types
   b. Knowledge of fitting installation
   c. Demonstrate fitting installation process

2. Flange Fitting
   a. Knowledge of fitting types
   b. Knowledge of fitting installation

3. Threaded Fitting
   a. Knowledge of fitting types
   b. Knowledge of fitting installation

4. Abnormal Operating Conditions
   a. Know how to recognize and respond to a failed soap or leak test

**TASK #50: Joining Plastic Pipe**

1. Static Electricity on Plastic Pipe
   a. Knowledge of the causes of static electricity on plastic pipe
   b. Knowledge of the hazards of static electricity and related safety procedures
   c. Know how to eliminate static electricity on plastic pipe

2. Fundamentals of Butt Fusion
   a. Knowledge of job set-up and pipe preparation for butt fusion
   b. Know how to visually inspect a butt fusion joint

3. Manual Butt Fusion
   a. Knowledge of the manual butt fusion process
   b. Demonstrate manual butt fusion process

4. Hydraulic Butt Fusion
   a. Knowledge of the Hydraulic Butt Fusion Process
   b. Demonstrate Hydraulic Butt Fusion Process

5. Socket Fusion
   a. Knowledge of the Pipe Preparation Process
   b. Knowledge of the Socket Fusion Process
b. Know what to Visually Inspect for on a Socket Fusion Joint
  c. Demonstrate Socket Fusion Process

5. Saddle Fusion
   a. Knowledge of the Pipe Preparation Process
   b. Knowledge of the Saddle Fusion Process
   c. Know how to Visually Inspect a Saddle Fusion Joint
   d. Demonstrate Saddle Fusion Process

6. Electrofusion
   a. Knowledge of the Pipe Preparation Process
   b. Knowledge of the Electrofusion Process
   c. Know what to Visually Inspect an Electrofusion Joint
   d. Demonstrate Electrofusion Coupling Process
   e. Demonstrate Electrofusion Tee Process

7. Mechanical Joining of Plastic Pipe
   a. Knowledge of the Pipe Preparation Process
   b. Knowledge of Mechanical Fittings Installation Process
   c. Demonstrate Installation of a Stab Fitting
   d. Demonstrate Installation of a Compression Fitting
   e. Demonstrate Installation of a Bolted Fitting

8. Abnormal Operating Conditions
   a. Know how to recognize and respond to material defects
   b. Know how to recognize and respond to equipment malfunctions
   c. Know how to recognize and respond to improper fusions

**TASK #51: Install Tapping Tee on Pipe**

1. General Knowledge of Self-Tapping Tees
   a. Knowledge of the fittings used for tapping
   b. Know how to inspect, install, and test self-tapping tees
   c. Know how to respond to a pressure test failure

2. Tapping Using Plastic Self-Tapping Tees
   a. Knowledge of the tapping process using self-tapping plastic tees
   b. Know how to ensure serviceability of plastic tees before installation
   c. Demonstrate the tapping process using a self-taping tee

3. Tapping Using Steel Self-Tapping Tees
   a. Knowledge of the tapping process using self-tapping steel tees
   b. Demonstrate the tapping process using a self-taping tee

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TASK #52: Inspect Plastic Pipe Joint
   a. Socket/Saddle Heat Fusion