Part 5 Class- Stopping Gas Flow/Leak Repair

Training- 3 Day Session……(Hands-On- 8 Hours)……16 Hours
Testing (48 Hours after Training)- 1 Day Session…….6 Hours

NOTE: Failed Hands-On Evaluations will be charged a retesting fee, 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:

- 23/24 Inspect the Condition of Exposed Pipe
- 29/30A-Repairing a Plastic, Steel and Cast Iron Distribution Pipe
- 35- Stopping Gas Flow
- 36 & 47- Abandonment of Facilities
- 37- Tapping a Cast Iron, Steel , Plastic Pipe
- 39- Removing a Service Tee from a Steel and Cast Iron Main
- National Fuel Procedure Manual Sections Referring to Material Listed Above.

Hands-On Training:

- Pit Depth Gauge
- Bagging
- Stopping-Williamson
- Tapping- Williamson/Footage
- Squeezing- Manual/ Hydraulic
- Leak Repair- Live Steel/Plastic Leaks (Group Activity)Tapping
- Tapping- Steel Punch Tee
- Anaerobic Injection
- Encapsulation

Testing:

- NGA-WE-23/24-Inspecting the Condition of Exposed Pipe
- NGA-WE-29A/30A- Repairing a Plastic, Steel and Cast Iron Distribution Main
- NGA-WE-35A- Stopping Gas Flow (Valves, Bagging, Mechanical & Squeeze-off)
- NGA-WE-36/47- Abandonment of Facilities
- NGA-WE-37B-Tapping Cast Iron Pipe
- NGA-WE-37C-Tapping Steel Pipe
- NGA-WE-39A-Removing Service Tee from a Steel and Cast Iron Main
- NFG-WE-800-Part 5 Operating and Maintenance Procedures
- HANDS-ON- NGA-35.1- Squeeze-off
- HANDS-ON- NGA-35.2- Bagging
- HANDS-ON- NGA-35.3- Mechanical
- HANDS-ON- NGA-35.1- Squeeze-off
- HANDS-ON- NGA-37B.1/37C.1- Tapping Cast Iron and Steel

Below is the Covered Tasks Listing the Domains and Elements that will be covered during Training Class.

TASK #23/24: Inspecting the Condition of Exposed Pipe

1. Types of Pipe and Coating
   a. Knowledge of the different types of pipe materials
   b. Knowledge of the different types of coating materials

2. Inspecting for Pipe and Coating Damage
   a. Knowledge of external pipe inspection practices
   b. Know how to identify gouges, nicks and scratches
   c. Know how to identify actual or potential facility damage due to improper installation
   d. Know how to identify coating damage

3. Abnormal Operating Conditions Involving Exposed Pipe
   a. Know how to respond to damage found on exposed pipe

TASK #29/30: Repair Distribution Line Leaks

1. Assessment of Distribution Pipeline Damage
   a. Know how to determine the type of pipe and pipeline uncovered
   b. Know actions to take when pipeline damage is identified

2. Repair of Plastic Pipe
   a. Know how to identify gouges, kinks and scratches
   b. Knowledge of potential sources of ignition
   c. Knowledge of static electricity and steps to prevent it
   d. Knowledge of the repair clamp process
   e. Know when to replace vs. repair a segment of plastic pipe

3. Repair of Steel Pipe
   a. Know how to identify cause of damage
   b. Know how to select a repair method
   c. Knowledge of the clamp installation process
   d. Knowledge of the coupling installation process
   e. Knowledge of the split sleeve installation process
   f. Know when to replace vs. repair a segment of steel pipe

4. Repair of Cast Iron Pipe
   a. Know how to identify cause of damage
   b. Know how to select a repair method
   c. Knowledge of the joint clamp installation process
   d. Knowledge of the joint anaerobic sealing process
   e. Know when to replace vs. repair a segment of cast iron pipe

5. Abnormal Operating Conditions
   a. Know how to identify and respond to records discrepancies

TASK #35: Stopping Gas Flow

1. Stopping Gas Flow Fundamentals
   a. Knowledge of system flow and pressures
   b. Knowledge of system monitoring during stopping operations
   c. Knowledge of reasons for stopping gas flow

2. Stopping Gas Flow by Use of Valves
   a. Requisite – Inspect and Operate Valves
   b. Know how to identify and use valves for gas stopping work

3. Stopping Gas Flow by Squeeze-off
   a. Knowledge of squeeze-off tool selection, inspection and use
   b. Know how to verify pipe specifications
   c. Knowledge of where to squeeze off
   d. Knowledge of the plastic squeeze-off process
   e. Knowledge of steel pipe and hydraulic squeeze-off process
   f. Demonstrate squeeze-off and release process

4. Stopping Gas Flow by Bagging
   a. Knowledge of bag/diaphragm selection and inspection
   b. Knowledge of bagging process, including bag installation and removal
   c. Demonstrate bag installation and removal process

5. Stopping Gas Flow by Use of Stopping Equipment
   a. Knowledge of equipment and fitting selection
   b. Knowledge of stopping equipment installation and removal process
   c. Demonstrate equipment installation and use process

6. Abnormal Operating Conditions
   a. Know how to identify and respond to insufficient shutoff
   b. Know how to identify and respond to pipe damaged in stopping off gas
   c. Know how to respond to a missing coupon

TASK #36: Abandonment or Deactivation of Facilities

1. Fundamentals of Abandonment
   a. Know the differences between abandoned and inactive pipelines

2. Abandonment Process
   a. Knowledge of procedures for abandoning a pipeline
   b. Knowledge of appropriate locations for abandoning a pipeline
   c. Knowledge of abandoned end sealing process

3. Abandonment Documentation
   a. Knowledge of documentation requirements

TASK #37: Tapping Pipelines Under Pressure

1. Tapping a Plastic Pipeline with Specialized Equipment
   a. Knowledge of the fittings used for tapping
   b. Knowledge of the tapping process
   c. Know how to identify and respond to a tapping failure
   d. Know how respond to a dropped coupon

e. Demonstrate the tapping process

2. Tapping a Cast Iron / Ductile Pipeline with Specialized Equipment
   a. Knowledge of the fittings used for tapping
   b. Knowledge of the tapping process
   c. Know how to respond to a tapping failure
   d. Demonstrate the tapping process

3. Tapping a Steel Pipeline with Specialized Equipment
   a. Knowledge of the fittings used for tapping
   b. Knowledge of the tapping process
   c. Know how to identify and respond to a tapping failure
   d. Know how respond to a dropped coupon
   e. Know how to identify and respond to wall thickness irregularities
   f. Demonstrate the tapping process

TASK #39: <u>Removing Service Tee or Fitting from Steel and Cast Iron Pipe</u>

1. Distribution System
   a. Know-How and Why to Measure System Pressure
   b. Knowledge of Pipe Material and Fittings
   c. Know-the Importance of System Pipe Size

2. Fitting Removal Process
   a. Knowledge of the Process to Remove a Fitting on Cast Iron Pipe
   b. Knowledge of the Process to Remove a Fitting on Steel Pipe

3. Abnormal Operating Conditions
   a. Know How to Respond to a Cracked Cast Iron Pipe
   b. Know How to Respond to Corrosion on the Pipe Surface or Hole