Part 1 Class- Basic Properties of Natural Gas

**Training**: 1 Day Session..........................................................$200/Person
**Testing** (48 Hours after Training)- 1/2 Day Session....................$50/Person

**Classroom Training:**
- Class Overview
- Safety/PPE

**Covers Tasks:**
- 6A- Inspecting for Atmospheric Corrosion
- 11/12/17H- Paint
- 70- Properties of Natural Gas/Abnormal Operating Conditions
- 85- Meter Assembly Abnormal Operating Conditions
- NFG-18B- Conducting Gas Leak Surveys (Inside Meter Set)
- NFG-19B- Patrolling and Inspecting Meters (Inside Meter Sets)
- NFG-69B- Odorant Sniff Card
- NFG-RS124-Portable Fire Extinguishers

**Hands-On Training:**
- Natural Gas Monitoring Equipment- CGI, F.I Unit, EX1000, MSA Monitor
- Fire Extinguisher Training- Live Meter Set Fire Training

**Testing:**
- NGA-WE-6A- Inspecting for Atmospheric Corrosion
- NGA-WE-11/12/17H-Paint
- NGA-WE-70-Properties of Natural Gas and Abnormal Operating Conditions
- NGA-WE-85-Meter Assembly Abnormal Operating Conditions
- NFG-18B- Conducting Gas Leak Surveys (Inside Meter Set)
- NFG-19B- Patrolling and Inspecting Meters (Inside Meter Sets)
- NFG-69B- Sniff Card (Sniff Card Only)
- NFG-RS124-Portable Fire Extinguishers (Attendance Only)
- NFG-Task 800- Part 1- O & M Procedures
Below is the Covered Tasks Listing the Domains and Elements that will be covered during Training Class.

Task 70- Properties of Natural Gas/ Abnormal Operating Conditions
1. Properties of Natural Gas
   a. Knowledge of the chemical components of natural gas
   b. Knowledge of the properties of natural gas
      i. Toxicity
      ii. Odor
      iii. Color
      iv. Compressibility
      v. Energy content
      vi. Specific gravity
   c. Knowledge of natural gas ignition sources
   d. Knowledge of the combustion range for natural gas

2. Abnormal Operating Conditions
   a. Know how to recognize and respond to an over pressure condition
   b. Know how to recognize and respond to an inadequate pressure condition
   c. Know how to recognize and respond to unintentional ignition
   d. Know how to respond to an explosion
   e. Know how to respond to a component failure
   f. Know how to recognize and respond to damage to a facility
   g. Know how to recognize and respond to improper odorization
   h. Know how to recognize and respond to escaping gas
   i. Know how to recognize and respond to unplanned exposed facilities
   j. Know how to respond to unmarked facilities

Task 85- Meter Assembly Abnormal Operating Conditions
   Meter Components
   Know how to identify the components of a residential, commercial and industrial meter

   Inadequate Support Placing Stress on Meter Assembly
   Know how to identify an indication of stress on the outlet piping of a meter
   Know how to identify an indication of stress on the inlet piping / riser
   Know how to identify inadequate support on non-rigid piping connections
   Know how to identify an indication of stress on a meter

   Structure Over a Gas Facility
   Know how to identify structures over a gas facility

   Incorrect Depth of Cover on a Gas Facility
   Know how to identify unplanned exposed pipe
Know how to identify an unplanned buried facility

Potential Atmospheric Corrosion
Know how to identify indications of potential atmospheric corrosion

Improper Venting
Know how to identify an obstructed regulator vent
Know how to identify a regulator vent too close to a building opening
Know how to identify an improper regulator vent installation

Vehicle Barrier Protection
Know how to identify the potential need for vehicle protection
Know how to identify inadequate or damaged vehicle protection

Customer Owned Piping
Know how to identify unsafe customer buried pipe (e.g., atmospheric corrosion and unprotected steel going into the ground)
Know how to identify unsafe customer above ground piping (e.g., inadequate support and above ground plastic piping)

Inside Meter Location
Know how to identify an inadequately spaced meter from a heat source that may damage the meter
Know how to identify a meter which is not in a ventilated space

Abnormal Meter Operations
Know how to identify unusual meter sounds
Know how to identify rapid meter dial movement

Partially Open meter / riser Valve
Know how to identify a partially open riser valve

Pipe Plug Missing
Know how to identify a missing pipe plug

Conditions Requiring Immediate Action
Know how to identify and respond to conditions requiring immediate action

Task 71- Operator Excavation in the Vicinity of a Pipeline
1. Excavation
   a. Knowledge of Facility Marking Colors
   b. Understand the Need to Protect and Support Underground Lines

2. Backfilling
   a. Knowledge of Backfilling Materials
   b. Knowledge of the Compaction Process
3. Abnormal Operating Conditions
   a. Know How to Respond to Facility Marking Issues
   b. Know How to Respond to Improper Soil Conditions
   c. Know How to Respond to an Unknown Facility

**NFG #18B: Conducting Gas Leakage Surveys (When Meter is inside)**
- Walking Surveys
- Knowledge of service survey practices
- Knowledge of business district survey practices
- Procedure for performing a walking survey

  **Leak Classification**
  - Know how to classify grade 1 leaks
  - Know how to classify grade 2 leaks
  - Know how to classify grade 3 leaks

  **Hazard Identification**
  - Abnormal Operating Conditions
  - Know how to react to restricted access into a building or area

**NFG #19B: Patrolling and Inspecting Pipelines (Inside Meter)**
- Pipeline Right-of-Way Inspections
- Knowledge of right-of-way surface conditions indicating a potential leak
- Exposed / Above Ground Mains
- Knowledge of facility inspection requirements