



**Part 1 Class- Basic Properties of Natural Gas**

<b>Training- 1 Day Session</b> .....	\$200/Person
<b>Testing ( 48 Hours after Training)- 1/2 Day Session</b> .....	\$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
- National Fuel Procedure Manual Sections Referring to Material Listed Above.

**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