



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

**NY**

**Training-** 2 Day Session..... (4 Hour Hands-On)16 Hours

**Testing** (48 Hours after Training)- 1/2 Day Session.....4 Hours

**PA**

**Training-** 1.5 Day Session..... (2 Hour Hands-On)12 Hours

**Testing** (12 Hours after Training)- 1/2 Day Session.....4 Hours

**NOTE:** NY will qualify in the **NFG HYB** series and PA will qualify in the **NFGPA** series. NFG Trainer will discuss the specifics/differences of each series during class.

**Classroom Training:**

- Class Overview
- Safety/PPE

**Covers Tasks:**

- 06A- Inspecting for Atmospheric Corrosion, Including Evaluation and Remediation
- 11/12/17- Basic Pipe Coatings (Paint and Wax Tape)
- 70- Properties of Natural Gas/Abnormal Operating Conditions
- 71- Excavation & Backfill
- 85- Meter Assembly Abnormal Operating Conditions
- NFG-18B/19B – Patrolling/Leakage Surveys (Inside portion when meter inside) (NFG Only)
- NFG- Hazardous/Potentially Atmospheres
- NFG-69B-Odorant Sniff Card
- National Fuel Procedure Manual Sections Referring to Material Listed Above.

**Hands-On Training:**

- Atmospheric Corrosion- Pipe Samples/Meter Samples
- Natural Gas Monitoring Equipment- CGI, MSA Monitor
- Safety – Fire Extinguishers
- Procedure Manual Training on Company Laptops

**Testing:**

- Written Test (WE) - 06A-Inspecting for Atmospheric Corrosion, Including Evaluation and Remediation
- WE-11/12/17A- Basic (Paint and Wax Tape)
- WE-70- Properties of Natural Gas and Abnormal Operating Conditions
- WE-71- Excavation & Backfill
- WE-85- Meter Assembly Abnormal Operating Conditions
- WE-18B/19B- Patrolling/Leakage Surveys – (Inside Portion When Meter Inside) (**NFG Only**)
- WE- 69B- Monitor Natural Gas Odorization Levels – Customer Service (Sniff Card)
- WE- Task 801- Part 1- Operating & Maintenance Procedures



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

**COVERED TASK #06A: Inspecting for Atmospheric Corrosion, Including Evaluation and Remediation**

1. Monitoring for Atmospheric Corrosion
  - a. Know where to check for atmospheric corrosion
  - b. Know the characteristics of atmospheric corrosion
  - c. Know how to recognize atmospheric corrosion
2. Evaluation of Atmospheric Corrosion
  - a. Know how to prepare pipe for evaluation of atmospheric corrosion
  - b. Know the tool used for evaluating atmospheric corrosion
3. Remediation of Atmospheric Corrosion
  - a. Know how to determine remedial action for atmospheric corrosion

**COVERED TASK #11/12/17 Basic: Applying Pipe Coatings in the Field**

1. Measurements
  - a. Knowledge of the measurement tools used
2. Coating Failures and Repairs
  - a. Knowledge of proper surface preparation
  - b. Know how to recognize and correct defects in coatings
3. Wax Tape Pipe Coatings
  - a. Knowledge of proper wax tape application methods
  - b. Knowledge of appropriate uses of wax tape pipe coatings
4. Paint Pipe Coatings (Spray and Brush)
  - a. Knowledge of proper paint pipe coating application methods
  - b. Knowledge of proper uses of paint pipe coatings



## **COVERED TASK #70: Properties of Natural Gas/ Abnormal Operating Conditions**

1. Knowledge Properties of Natural Gas
  - a. Knowledge of the chemical components of natural gas
    1. Toxicity
    2. Odor
    3. Color
    4. Compressibility
    5. Energy content
    6. 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

## **COVERED TASK #71: Excavation & Backfill**

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



## **COVERED TASK #85: Meter Assembly Abnormal Operating Conditions**

### **Meter Components**

1. Know how to identify the components of a residential, commercial and industrial meter
2. Inadequate Support Placing Stress on Meter Assembly
  - a. Know how to identify an indication of stress on the outlet piping of a meter
  - b. Know how to identify an indication of stress on the inlet piping / riser
  - c. Know how to identify inadequate support on non-rigid piping connections
  - d. Know how to identify an indication of stress on a meter
3. Structure Over a Gas Facility
  - a. Know how to identify structures over a gas facility
4. Incorrect Depth of Cover on a Gas Facility
  - a. Know how to identify unplanned exposed pipe
  - b. Know how to identify an unplanned buried facility
5. Potential Atmospheric Corrosion
  - a. Know how to identify indications of potential atmospheric corrosion
6. Improper Venting
  - a. Know how to identify an obstructed regulator vent
  - b. Know how to identify a regulator vent too close to a building opening
  - c. Know how to identify an improper regulator vent installation
7. Vehicle Barrier Protection
  - a. Know how to identify the potential need for vehicle protection
  - b. Know how to identify inadequate or damaged vehicle protection
8. Customer Owned Piping
  - a. Know how to identify unsafe customer buried pipe (e.g., atmospheric corrosion and unprotected steel going into the ground)
  - b. Know how to identify unsafe customer above ground piping (e.g., inadequate support and above ground plastic piping)
9. Inside Meter Location
  - a. Know how to identify an inadequately spaced meter from a heat source that may damage the meter
  - b. Know how to identify a meter which is not in a ventilated space



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## **COVERED TASK #85: Meter Assembly Abnormal Operating Conditions**

### **Meter Components (cont.)**

10. Abnormal Meter Operations
  - a. Know how to identify unusual meter sounds
  - b. Know how to identify rapid meter dial movement
11. Partially Open meter / riser Valve
  - a. Know how to identify a partially open riser valve
12. Pipe Plug Missing
  - a. Know how to identify a missing pipe plug
13. Conditions Requiring Immediate Action
  - a. Know how to identify and respond to conditions requiring immediate action

## **COVERED TASK NFG #18B/19B – Patrolling/Leakage Surveys – Inside Portion When Meter Inside**

### **1. Portable Combustible Gas Indicator (CGI)**

- a. Knowledge of equipment used in either interior jurisdictional piping leak surveys or purging interior piping into and out of service

### **2. Inspection for Atmospheric Corrosion & Point of Entry**

- a. Understand basic properties and characteristics of atmospheric corrosion
- b. Know where and how to check for atmospheric corrosion
- c. Know how to use tools (e.g., visual comparator) to evaluate the severity of atmospheric corrosion
- d. Know how to identify an improper or missing POE seal

### **3. Leak Survey of Interior Piping**

- a. Know where and how to survey interior piping for leaks
- b. Knowledge of survey practices, including how to react to an indication of a gas leak found during a leak survey
- c. Know how to react to restricted access into a building in connection with conducting a leak survey
- d. Knowledge of conducting an interior piping survey, including proper use of the survey equipment