

COVERED TASK 86: Conducting Interior Jurisdictional Piping Safety Inspections

A. Task Description

Conduct interior jurisdictional piping safety inspections, including identification of abnormal operating conditions (AOCs), inspecting for atmospheric corrosion, and performing leak surveys. This task combines elements of other tasks (i.e., Tasks 6, 18, 31-G, 70, 72, 85, and 88) to enable performance of mandated safety inspections of visibly accessible interior jurisdictional gas distribution piping by the following: (1) in NYC, by operator-qualified Licensed Master Plumbers (LMPs), operator-qualified technicians working under LMPs, or operator-qualified utility personnel or operator-qualified utility subcontractor personnel, and (2) outside NYC, by equivalent operator-qualified licensed plumbing professionals, or operator-qualified utility contractor personnel, or operator-qualified utility subcontractor personnel.

B. Applicable Code References: 49 CFR 192.481, 192.605, 192.723, and 192.803

C. Discussion

For purposes of this task, jurisdictional piping is defined as all visibly accessible interior building piping, fittings, and appurtenances (meters, pressure regulators, filters, meter bars, and transition piping) regulated by the federal Department of Transportation (DOT)—from the point-of-entry (POE/wall penetration) through the outlet of the meter.

Note: In New York State, *jurisdictional exterior piping* includes all above ground/exposed exterior piping, including piping downstream of the meter, up to the point where the piping enters the building.

Safety inspections include visual inspection of piping and appurtenances for atmospheric corrosion, inspection of the point-of-entry foundation wall seal and illegal or improper piping connections, including any indications of theft and/or diversion of service. The safety inspection also includes conducting leak surveys using an approved portable combustible gas indicator to monitor the atmosphere in the vicinity of the pipe and appurtenances being visually inspected.

Note: NYC LL 152 requires owners of commercial and multifamily (3-family or more) buildings to conduct interior gas piping safety inspections of visibly accessible piping from the POE to the point of end use (appliances, boilers, water heaters, etc.) when access is available.

D. Subsequent Qualification Interval: Within 3 years

E. Span of Control: 1 to 1

F. Abnormal Operating Conditions

1. Unintentional ignition of natural gas
2. Explosion involving natural gas
3. Inadequate or excess pressure
4. Damage to interior jurisdictional piping
5. Inadequate support placing stress on interior piping and/or meter assembly

6. Improper interior piping or piping connections, including indications of theft and/or diversion of service
7. Improper inside meter/regulator installation and/or location, including improper grounding/bonding to meter assembly
8. Improper inside regulator venting
9. Excessive wall loss due to atmospheric corrosion
10. Inadequate gas odor
11. Odor of gas inside a building
12. Gas leak indication found during a leak survey
13. Below-grade service line point-of-entry (POE) into a building not properly sealed at foundation wall or floor to prevent gas leakage into the building
14. Below-grade service line point-of-entry (POE) into a building not properly protected from corrosion and settlement
15. Service line point-of-entry (POE) into a building under a slab or foundation not properly vented and sealed

G. Evaluation Method(s)

1. Written Examination (WE)
2. Performance Examination (PE)

H. Domains and Elements

1. Properties of Natural Gas
 - a. Knowledge of chemical components and physical properties of natural gas
 - b. Knowledge of natural gas ignition sources
 - c. Knowledge of the combustible range for natural gas
 - d. Understand “fading” and “masking” of odor in odorized natural gas
2. Abnormal Operating Conditions Related to Jurisdictional Piping
 - a. Know how to recognize/respond to unintentional ignition of natural gas or an explosion involving natural gas
 - b. Know how to recognize/respond to inadequate or excess pressure—pressure that falls below normal operating requirements or exceeds operating limits and could affect performance of interior piping, pressure regulator, meter, and end-use equipment
 - c. Know how to recognize/respond to improper interior piping or piping connections (e.g., flex connectors, valves, and unions; inappropriate branch connections; or conditions indicating theft and/or diversion of service), damage to interior jurisdictional piping, and inadequate support placing stress on interior piping or meter assembly
 - d. Know how to recognize/respond to improper inside meter or regulator installation and/or location, including improper grounding/bonding to a meter assembly and improper regulator venting
 - e. Know how to recognize/respond to excessive wall loss due to atmospheric corrosion
 - f. Know how to recognize/respond to abnormal conditions involving gas odor, including odor identified upon entering a building and inadequate or lack of odor in the case of a known leak
 - g. Know how to recognize/respond to an indication of a gas leak found during a leak survey
 - h. Know how to recognize/respond to an improper or missing POE foundation wall seal, and an improperly vented and sealed POE entering a building from under a slab or foundation

3. 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
 - b. Demonstrate proper start-up and operation of a CGI
4. Inspection for Atmospheric Corrosion
 - a. Understand basic properties and characteristics of atmospheric corrosion
 - b. Know where and how to check for atmospheric corrosion
 - c. Demonstrate ability to use tools (e.g., visual comparator) to evaluate the severity of atmospheric corrosion
5. Leak Survey of Interior Piping
 - a. Know where and how to survey interior piping for leaks
 - b. Know how to react to restricted access into a building in connection with conducting a leak survey
 - c. Demonstrate ability to conduct an interior piping survey, including proper use of the survey equipment

I. Task Structure

Task Code	Qualification Option(s)	Examination(s)
NGA-CT-86-PV*	Interior Jurisdictional Piping Safety Inspections (Plumbers Version)	NGA-WE-86-PV NGA-WE-86/87-PV NGA-PE-86/87-PV
NGA-CT-86*	Interior Jurisdictional Piping Safety Inspections	NGA-WE-86 NGA-WE-86/87 NGA-PE-86/87

* There is a Plumbers Version and Non-Plumbers Version of this task. The Plumbers Version (PV) incorporates a training prerequisite that must be satisfied in addition to the three examinations indicated in the table above.

J. Content of Qualification Exams

Exam Code	Examination Name	Content Limits
NGA-WE-86-PV	Interior Jurisdictional Piping Safety Inspections (Plumbers Version)	Domains 4a–4b and 5a–5b
NGA-WE-86/87-PV	Jurisdictional Piping: General Knowledge (Plumbers Version)	Domains 1 and 3a
NGA-PE-86/87-PV	Interior Jurisdictional Piping Safety Inspections (Plumbers Version)	Domains 2, 3b, 4c, 5a, and 5c
NGA-WE-86	Interior Jurisdictional Piping Safety Inspections	See WE-86-PV
NGA-WE-86/87	Jurisdictional Piping: General Knowledge	See WE-86/87-PV
NGA-PE-86/87	Interior Jurisdictional Piping Safety Inspections	See PE-86/87-PV

COVERED TASK 87: Conducting Interior Jurisdictional Piping Construction and Maintenance Activities

A. Task Description

Interior jurisdictional piping construction and maintenance activities conducted by the following: (1) in NYC, by operator-qualified Licensed Master Plumbers (LMPs), operator-qualified technicians working under LMPs, or operator-qualified utility personnel, and (2) outside NYC, by equivalent operator-qualified licensed plumbing professionals, or operator-qualified utility personnel or operator-qualified utility subcontractor personnel. This task combines elements of other tasks (i.e., Tasks 11, 12, 17, 31-G, 32, 33, 41, 49, 70, 72, 85, 88) to cover requirements for LMPs and others to construct new interior piping; connect deenergized piping to isolated, energized piping; install meter and regulator piping connections and systems; make a repair to an inadequate point-of-entry (POE) wall penetration seal; and isolate and repair existing piping systems, including purging, pipe tightness testing, and applying or repairing paint pipe coatings.

B. Applicable Code References: 49 CFR 192.361, 192.461, 192.481, 192.605, 192.629, 192.723, 192.749, and 192.803

C. Discussion

For purposes of this task, *jurisdictional piping* is defined as all visibly accessible interior building piping, fittings, and appurtenances regulated by the federal Department of Transportation (DOT)—from the point-of-entry (POE/wall penetration) through the outlet of the meter.

Note: In New York State, *jurisdictional exterior piping* includes all above ground/exposed exterior piping, including piping downstream of the meter, up to the point where the piping enters the building.

Construction and maintenance functions covered by this task include isolation of piping systems (with approval from the Operator); purging of interior piping systems; making piping connections between interior deenergized piping systems and isolated, energized piping systems; installing or repairing point-of-entry foundation wall penetration seals and constructing meter header assemblies, meter bars, and pressure regulator vent piping assemblies—in accordance with Operator requirements, applicable local, state, and federal code requirements, and accepted industry practices.

In addition to the exams noted in the chart below, this task requires plumbing professionals to provide documentation affirming that they meet the Full Gas Work Qualification requirements of the New York City Department of Buildings (NYCBOD), or an equivalent affirmation from the LMP sponsoring the individual technician seeking Operator Qualification.

D. Subsequent Qualification Interval: Within 3 years

E. Span of Control: 1 to 2

F. Abnormal Operating Conditions

1. Unintentional ignition of natural gas
2. Explosion involving natural gas

3. Inadequate or excess pressure
4. Damage to interior jurisdictional piping
5. Inadequate support placing stress on interior piping and/or meter assembly
6. Improper interior piping or piping connections, including indications of theft and/or diversion of service
7. Improper inside meter/regulator installation and/or location, including improper grounding/bonding to meter assembly
8. Improper inside regulator venting
9. Excessive wall loss due to atmospheric corrosion
10. Inadequate gas odor
11. Odor of gas inside a building
12. Gas leak found during a pipe tightness test
13. Below-grade service line point-of-entry (POE) into a building not properly sealed at foundation wall or floor to prevent gas leakage into the building
14. Inability to achieve purging end-points
15. Inoperable valve
16. Service valve not secured/locked

G. Evaluation Method(s)

1. Written Examination (WE)
2. Performance Evaluation (PE)

H. Domains and Elements

1. Properties of Natural Gas
 - a. Knowledge of chemical components and physical properties of natural gas
 - b. Knowledge of natural gas ignition sources
 - c. Knowledge of the combustible range for natural gas
2. Abnormal Operating Conditions Related to Jurisdictional Piping
 - a. Know how to recognize/respond to unintentional ignition of natural gas or an explosion involving natural gas
 - b. Know how to recognize/respond to inadequate or excess pressure—pressure that falls below normal operating requirements or exceeds operating limits and could affect performance of interior piping, pressure regulator, meter, and end-use equipment
 - c. Know how to recognize/respond to improper interior piping or piping connections (e.g., flex connectors, valves, and unions; inappropriate branch connections; or conditions indicating theft and/or diversion of service), damage to interior jurisdictional piping, and inadequate support placing stress on interior piping or meter assembly
 - d. Know how to recognize/respond to improper inside meter or regulator installation and/or location, including improper grounding/bonding to a meter assembly and improper regulator venting
 - e. Know how to recognize/respond to excessive wall loss due to atmospheric corrosion
 - f. Know how to recognize/respond to abnormal conditions involving gas odor, including odor identified upon entering a building and inadequate or lack of odor in the case of a known leak
 - g. Know how to recognize/respond to inoperable valves and unsecured/unlocked service valves
 - h. Know how to recognize/respond to an improper or missing POE foundation wall seal
 - i. Know how to recognize/respond to an incomplete purge

- j. Know how to recognize/respond to a gas leak found during a pipe tightness test (failed leak or soap test)
3. 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
 - b. Demonstrate proper start-up and operation of a CGI
 4. Purging Interior Piping
 - a. Knowledge of the purging process, including requirements for purging interior pipe into or out of service
 - b. Know how to confirm that a purge into or out of service is complete
 5. Construction and Repair of Interior/Exterior Above-Ground Exposed Jurisdictional Piping
 - a. Know how to mechanically join steel pipe, including use of threaded and flanged connections, in the construction or repair of interior jurisdictional piping or in making connections to energized valves
 - b. Know how to install a regulator in a typical residential or small commercial installation
 - c. Know how to conduct pipe system tightness testing
 - d. Know how to prepare pipe surfaces and apply a single coating paint system
 - e. Know requirements for sealing a below-grade point-of-entry (POE) to prevent gas leakage into a building
 6. Valves
 - a. Know how to identify types of valves used in isolating and restoring service
 - b. Know how to identify the operating position of a valve
 - c. Know how to operate valves to shut off a customer's service

I. Task Structure

Task Code	Qualification Option(s)	Examination(s)
NGA-CT-87-PV	Interior Jurisdictional Piping Construction and Maintenance Activities (Plumbers Version)	NGA-WE-86/87PV NGA-WE-87-PV NGA-PE-86/87-PV NGA-CERT-87

J. Content of Qualification Exams

Exam Code	Examination Name	Content Limits
NGA-WE-87-PV	Interior Jurisdictional Piping Construction and Maintenance Activities (Plumbers Version)	Domains 4–6
NGA-WE-86/87-PV	Jurisdictional Piping: General Knowledge (Plumbers Version)	Domains 1 and 3a
NGA-PE-86/87-PV	Interior Jurisdictional Piping Safety Inspections (Plumbers Version)	Domains 2 and 3b
NGA-CERT-87	Valid LMP License, OR, Affidavit by an LMP attesting to experience and training of sponsored technician OR in NYC, Proof of Journeyman Registration or Full Gas Work Qualification	—