conEdison	LAST REVIEW DATE: 11/26/2025	REVIEW CYCLE:
	EFFECTIVE DATE: 12/01/2025	5 Years

SPECIFICATION: **G-8204-11d-IG**

★ **TITLE:** **PRESSURE TESTING REQUIREMENTS FOR GAS DISTRIBUTION MAINS AND SERVICES [INTERIM GUIDELINE]**

VOLUME: **2 (Section 8.0), 10, & Yellow Book**

COURSE ID: **GAS0219**

★ **REQUIRED TRAINING GROUP:** **Gas Construction, Emergency Response Force (ERF), Per Diem, GDS-Management, Construction Management – Gas, Construction Services, Gas Contractors, Major Projects, TLC Gas Instructors, Customer Connection Operations, Energy Services, Gas Quality Control, Gas Development Lab,**

Each group listed is responsible for its own training which may be specific to a title/individual and not to the group in its entirety. Please check with your local training coordinator/department.

Applicable Bulletin
B-24-07a - Changes to Pressure Testing on Services

B-25-02 – Pressure Test Witnessing

Interim Guideline Revisions:

11/26/2025:
Requirement information in G-8153 Revision 10 Section 4.4 regarding pressure testing against compression end caps removed and incorporated in this Interim Guideline specification Section 7.4 E

REVISIONS: (Continued)

Administrative Revisions:

Rev d (02/24/2025)
Cover Page - Added reference to Bulletin B-25-02d.

Rev c (10/31/2024)
Reformat Attachment D: Exhibit-B Gas Meter Piping Pressure Test Verification

Rev b (8/16/2024)
Cover Page - Added "Applicable Bulletin" box and included reference to Bulletin B-24-07a.

Rev a (8/05/2024)
Corrected numbering subsection 3.1 and 3.2

SUBSTANTIVE REVISIONS: (See ★)

1)	Cover Page	-	Title **changed** to "PRESSURE TESTING REQUIREMENTS FOR GAS DISTRIBUTION MAINS AND SERVICES"
2)	Cover Page	-	**Replaced** CORE GROUP and TARGET AUDIENCE with REQUIRED TRAINING GROUPS.
3)	Table Of Contents	-	**Removed** sections regarding Transmission information that are captured in new Specification G-8321 "Pressure Testing Requirements for Transmission Gas Mains and Services"
4)	Section 1.0 Scope	-	Scope **Changed** to include "Distribution"
5)	Section 3.0	-	**Deleted** former section 3.2 definition regarding Transmission Pressure Mains/Services **Added** definitions for SHV/HOS and Extension Service
6)	Sections 3.1, 3.2(new)	-	Included definitions for Service Head Valve (SHV)/ Head of Service (HOS) and Extension service
7)	Section 4.0	-	**Reworded** Operator Qualification to include Span of Control language
8)	Section 5.1(NEW)	-	**Included** new Job Site Analysis (JSA) language and renumbered subsequent sections
9)	Section 5.4	-	**Added** "area" to statement to **read "**All Company personnel, Per Diem, and Gas Contractors shall remain outside the excavation/area while the pressure test is initiated, except for personnel who are directly responsible for initiating the pressure test"
10)	Section 6.1	-	New Note **added: "**For PE mains, high volume tapping tees should be used at purge points"

REVISIONS: (Continued)

11) Section 6.4 - **Deleted** note regarding hydrostatic testing as this is captured in new Specification G-8321

12) Section 6.7(NOTE) - **Replaced** "PE plastic joint" with "PE Production joint"

Updated title for G-8121 in NOTE

13) Section 6.8(C)(**new**) - **Added** requirement for section of mains taken out of service for the purpose of tie-in to new main segments

14) Section 6.11 - **Reworded** to clarify signing of production joints prior to pressure for both mains and services. Included note regarding insertions

15) Section 7.1(E) - **Added** "when properly reinforced as per Section 7.4)

16) Section 8.1(D) 2 & 3 - **Included** Attachment A

17) Section 8.1 (D) - **Deleted** "Aboveground" pressure tests on greater than or equal to (≥) 6" diameter PE plastic pipe (straight and coiled) must be reviewed and approved by Gas Distribution Engineering".

Added "Aboveground pressure testing for >6" is not allowed."

18) Section 8.2(B) - **Included** Attachment A

19) Former Sections 8.2 C) 1) 8.2 C) 2) 8.2 C) 3) - **Deleted** former Sections and **replaced** with Section C **outlining** the testing requirements of segments of service line. Included new NOTE in regard to witness of Pressure Testing

20) Section 8.2 D) (new) - **Added** statement regarding replacing component item other than pipe don't have to be pressure tested.

21) Section 9.1(A) - **Included "**employee familiar with pressure testing**"**

22) Section 9.4(A)(1) - In regard to pressure test witness for distribution services**,** **reworded** to include Construction Oversight Representative **(**Management Employee, Construction Representative, Construction Inspector, Supplemental Inspectors)

23) Section 9.4(B)(1) - In regard to pressure test witness for Distribution Mains 10" and smaller, **reworded** to "Construction Oversight Representative (Management Employee, Construction Representative, Construction Inspector, Supplemental Inspectors)"

24) Section 10.0 - **Renumbered** Section 10.0 because Former Sections 10.0 and 11.0 that contained "Pressure Testing Requirements for Transmission Mains/Services" **and** "Witness Requirements for

REVISIONS: (Continued)

Pressure Testing Transmission Mains/Services" respectively were **deleted**

25) Section 10.1(C)new - **Included** pressure testing verification for extension service pipe

26) Section 10.2 - **Removed** note (7) regarding "elevation variations" and **renumbered** subsequent sections

27) Section 10.2 - **Included** new NOTE regarding pressure being left on main or service before energizing.

28) Reference Section 11.0 - **Deleted** Reference G-8218 "Gas Transmission Records Management and Retention"
Updated title for Specification G-8121 "Qualifications of Joiners and Inspectors of Polyethylene (PE) Plastic Pipe/Tubing and Fittings for Gas Mains and Services"
Updated Title for Specification G-8153 "Reinforcing Non-Restraining Compression Fittings"

Gas Operations Standards

TITLE: PRESSURE TESTING REQUIREMENTS FOR GAS DISTRIBUTION MAINS AND SERVICES

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	David Heron	Nickolas Hellen Chief Engineer Gas Distribution Engineering	11/26/2025	Construction Standards, O&M Manual	22 PAGES
	Paper copies of operating documents are uncontrolled and therefore may be outdated. Verify current version prior to use.				

TITLE: PRESSURE TESTING REQUIREMENTS FOR GAS DISTRIBUTION MAINS AND SERVICES

★ 1.0 SCOPE

This specification details the requirements for pressure testing new/replacement gas distribution mains, new/replacement and temporarily disconnected gas distribution services, including cured-in-place liners.

2.0 LEGAL REQUIREMENTS

Federal: 49 CFR Part 192, Sections 501-517, 725.

State: 16 NYCRR Part 255, Sections 503-517, 725,

Case 14-G-0201 and 14-G-0212

PSC Order dated 6/29/83 and PSC Correspondence dated 10/20/93 and 3/2/95 (Requirement that 10% of all pressure tests be randomly witnessed by a Company Supervisor)

3.0 DEFINITIONS

3.1 Distribution Pressure Main/Service – a gas main or service operating at less than (<) 125 psig

A) Low Pressure (LP) - Pressure up to and including (≤) 12" water column (WC)

B) Intermediate Pressure (IP)/Ossining System - Pressure greater than (>) 1 psig and up to and including (≤) 5 psig.

C) Medium Pressure (MP) - Pressure greater than (>) 2 psig and up to and including (≤) 15 psig.

D) High Pressure (HP) - Pressure greater than (>) 15 psig and up to but less than (<) 125 psig.

★ 3.2 Service Head Valve(SHV)/ Head of Service(HOS) - the first valve at an outside riser or the first valve at the inside foundation wall (see EO-16641-A and EO-16629-A)

★ 3.3 Extension service - The section of gas piping between the service head valve and the meter(s).

★ 4.0 OPERATOR QUALIFICATION

Span of Control means the ratio of nonqualified to qualified individuals allowed for a covered task to be performed. Nonqualified individual(s) may be directed and observed by a qualified individual when performing a single covered task.

The qualified individual must be able to effectively respond to errors or abnormal operating conditions that may occur during the performance of the task by the non-qualified individuals.

Tapping a pipeline, welding steel, and joining plastic pipe have a span of control of zero. Meaning, the Operator Qualified individual must perform the entire task. Certain other covered tasks also have a span of control of zero, and those are detailed in their applicable specifications and the OQ Written Plan.

All other covered tasks shall be completed by either Operator Qualified individuals or individuals under the direct observation of someone who is Operator Qualified. Direct observation means that the Operator Qualified individual remains in direct visual and verbal contact at all times with the individual performing the single covered task.

Both the nonqualified and qualified individuals should be identified on the applicable records being generated, for the work performed under span of control

5.0 ENVIRONMENT, HEALTH & SAFETY REQUIREMENTS

★ 5.1 Prior to starting any task pursuant to this Specification, Con Edison employees should be familiar with Con Edison's Job Safety Analysis (JSA) library. Any Con Edison employee preparing a job briefing for any task to be accomplished pursuant to this Specification should review the JSA library to determine if there is a JSA applicable to the task. Any relevant JSA found in the library should be discussed during the job briefing for the task. This provision is applicable to Con Edison employees.

5.2 See Gas Specifications G-8005, “General Specification for the Installation of Gas Distribution Mains” and G-8100, “General Specification for the Installation of Gas Distribution Services” for all gas distribution main and service EH&S requirements.

5.0 **ENVIRONMENT, HEALTH & SAFETY (EHS) REQUIREMENTS** (continued)

5.3 All pressure testing shall be performed with due diligence for the safety of Company employees, gas contractors, the public, and public property.

★ 5.4 All Company personnel, Per Diem, and Gas Contractors shall remain outside the excavation/area while the pressure test is initiated, except for personnel who are directly responsible for initiating the pressure test. Once the test pressure is reached, all personnel directly responsible for initiating the pressure test shall exit and remain outside the excavation.

NOTE: Excavation/area re-entry is allowed during a pressure test for leakage testing in accordance with section 6.3.

6.0 **GENERAL REQUIREMENTS**

6.1 Prior to beginning the pressure test, purge points should be placed at all ends of the line being tested, located as close to the end-caps as possible.

★ **NOTE**: For PE mains, high volume tapping tees shall be used at purge points

6.2 The minimum test pressure (after stabilization) for distribution pressure mains and below-grade services, including below-grade piping after the meter(s) (see Section 3.1) shall be as follows:

A) 90 psig for LP, IP, and MP, however, the maximum test pressure, shall not exceed 100 psig. However, for new installations of polyethylene or cathodically protected steel, the maximum test pressure shall not exceed 200 psig.

B) 150 psig for HP, however, the maximum test pressure shall not exceed 200 psig.

C) Take the necessary precautions to limit the temperature that the pipe reaches, particularly during extremely high temperatures, such as changing the pressure test to off-hours, keeping the pipe out of direct sunlight, or wetting the pipe to reduce its temperature.

6.3 The source of the pressure shall be isolated, and the proper pressure stabilized before the required duration of the pressure test can commence.

★ 6.4 When testing with air or nitrogen, after the test pressure is reached and stabilized for at least 15 minutes, all exposed fittings and joints shall be checked for leakage with a leak detecting solution. The person checking for leakage shall stay out of the "line of fire", in case of failure of the pipe or fittings. If leakage is found, the pressure shall be taken off the facility prior to tightening or repairing.

6.5 Prior to pressure testing PE plastic pipe/tubing and fittings joined by heat fusion (e.g., butt fusion or saddle fusion) or electrofusion, the joints must be allowed sufficient time to properly cool. (See Gas Specification G-8123, "Heat Fusion Joining of Polyethylene (PE) Plastic Pipe/Tubing and Fittings for Gas Mains and Services")

6.6 During the pressure test of PE plastic pipe/tubing and fittings, the temperature of the PE material may not be more than 100°F.

6.7 If any pressure test does not indicate a sound, gas-tight piping system, corrective measures shall be taken to eliminate potential testing errors, and then another pressure test shall be conducted.

NOTE:
★ If a main or service pressure test fails at any PE production joint, the joiner is **immediately disqualified** from that method of joining PE plastic pipe, and appropriate notifications shall commence. (See Gas Specification G-8121, "Qualification of Joiners and Inspectors of Polyethylene (PE) Plastic Pipe/Tubing and Fittings for Gas Mains and Services")

6.8 The following are the instances when pressure testing is not required:

(A) Gas mains or services where the flow of gas is interrupted (but not physically disconnected) due to water main breaks, contractor damage to a main (not service), human error or some other unplanned works do **not** require a pressure test prior to reinstating the flow of gas.

At a minimum, a leak survey (using a DPIR or similar sensitive equipment) of the affected gas mains and services shall be performed and documented after reinstating the flow of gas. The respective Gas Operations organization should review the cause and extent of the outage as well as the number and age of gas services affected to determine if additional leak surveys are to be performed.

(B) An existing main which is disconnected due to a contractor damage or other unforeseen incidents does not require a pressure test to be performed prior to reenergizing. If the repair requires a new section of main to be installed, the new section of main SHALL be pressure tested. If no pressure test is conducted on the existing main, a leak survey must be conducted after energizing.

★ (C) A section of gas main that is temporarily de-energized or taken out of service that is not exposed for the purpose of a tie-in to new constructed segment(s), does not require a pressure test prior to re-energizing. At a minimum, a leakage survey of that section of main shall be performed and documented after re-energizing.

6.9 The test medium must be relatively free of sedimentary materials.

6.10 Circulators installed on distribution mains shall be pressure tested in accordance with section 8.1. Circulators installed on distribution services shall be tested in accordance with section 8.2

NOTE:	However, Circulators that will remain visible, accessible in an open excavation, and under direct supervision do not require a pressure test and shall be soap tested at operating pressure when being placed into service.

6.11 Prior to introducing the pressure test medium, the following job characteristics must be verified:

- All valves on pipe run are verified to be in the fully open position.
- All ends are exposed and verified to be closed, with purge points located as close to the end-caps as possible.
- ★ **PE Mains:** Joiner and Second Inspector **must** sign production joints prior to pressure test.

  Exception: For tees on mains (e.g. spa saddles, tees for bypass and gauges), Joiner **must** sign prior to pressure test. Second Inspector may sign after the pressure test but **must sign prior** to tapping the main.

- **PE Services:** Joiner **must** sign production joints prior to pressure test. Second Inspector may sign after the pressure test but **must sign prior** to gas being introduce on the line.

  NOTE: Prior to insertions (for both mains and services), all production joints **must** be signed by Joiner and Second Inspector.
- All mechanical end caps are blocked.
- All personnel are outside of the excavation.

7.0 APPROVED END CLOSURES FOR PRESSURE TESTING DISTRIBUTION MAINS/SERVICES

7.1 Approved End Closures for Pressure Testing Steel Distribution Mains/Services

A) Welded line (end) cap: all sizes.

B) Blind flange: all sizes.

C) Threaded line (end) cap only sizes up to and including 4”.

D) Restraining type compression line (end) cap: ¾” through 12”, except for 10”.

★ E) Non-restraining type compression line (end) cap when properly reinforced as per Section 7.4: all sizes.

7.2 Approved End Closures for Pressure Testing Polyethylene (PE) Plastic Distribution Mains/Services

A) Fused PE plastic end cap: all IPS sizes.

B) Service head or stab end adapter with stiffener and with an end closure (threaded end cap or valve): sizes up to and including 2” IPS.

C) MetFit: sizes up to and including 1 ¼” CTS.

D) McElroy Test Caps: sizes up to and including 2” IPS.

E) Restraining type compression end cap: IPS sizes up to and including 12”, except for 10”.

7.3 Approved End Closures for Pressure Testing Copper Distribution Services

A) Restraining type compression end cap (IPS size) with gasket adapter for CTS: sizes 1" and 1 ¼".

B) Service head or stab end adapter (for copper only) with an end closure (threaded end cap or valve): sizes up to 1 ¼" CTS.

C) Restraining type compression coupling (for copper to IPS), with a PE plastic pipe and compression line (end) cap. The coupling is not restraining on the copper size.

7.4 Compression Line (End) Caps

A) All **restraining type** compression line (end) caps **shall be braced** to prevent movement or pullout during the pressure test. See ~~Gas Specification~~ G-8153, ~~"Reinforcing Non-Restraining Compression Fittings."~~ See Section 7.4 (E)

NOTE:	The reuse of a **restraining type compression line** (end) cap is permissible, provided that the cap is inspected for wear, tear, and damage ***before*** *each reuse.* The cap shall be replaced if there are any worn/damaged parts (e.g., gasket, grip ring, back up ring, bolts, etc.).

B) For 90 psig pressure test, **non-restraining type** compression line (end) caps shall be secured as follows:

1) Line cap sizes ¾" to 2" shall be **braced**.

2) Line cap sizes 3" to 30" and greater shall be **reinforced per Gas** Drawing EO-16031-B, "Reinforcement of Non-Restraining Type Compression Line Caps on 3" to 30" Dia. Steel Gas Mains and Services."

C) For 150 psig pressure test, **non-restraining type** compression line (end) caps shall be secured as follows:

1) Line cap sizes ¾" to 1 ¼" shall be **braced**.

2) Line cap sizes 1 ½" and greater shall be **reinforced** per Gas Drawing EO-16031-B.

D) See ~~Gas Specifications G-8153 "Reinforcing Non-Restraining Compression Fittings" and~~ G-100,285, "Compression End

Couplings, Tees, Elbows, Line Caps, and Riser Tees for Gas Pipe and Tubing" for approved compression couplings, caps, and fittings.

E) Compression End Caps

A compression end cap used as a closure for a pressure test, shall be secured according to the matrix below. For additional information, refer to Section 4.1 (C) and (D) of this specification, and G-8204.

MATRIX FOR SECURING END CAPS DURING PRESSURE TEST

TEST PRESSURE	TYPE OF FITTING	END CAP SIZE					
		¾"	1"	1-1/4"	1-1/2"	2"	★ 3" and Greater
90 PSIG	Restraining (See Note)	BRACED					
	Non-Restraining	BRACED					REINFORCED (As per EO-16031-B)
150 PSIG	Restraining (See Note)	BRACED					
	Non-Restraining	BRACED					REINFORCED (As per EO-16031-B)

NOTE: Always check the tag or label on the end cap, and the directions packaged with the fitting to verify the 150 PSIG pressure rating of the fitting.

★ A) Compression Fittings

1) **Exposed non-restraining compression fittings on steel pipelines included in a pressure test, shall be reinforced per Drawing EO-16880-B, ~~Section 8.0 (Attached.)~~**

NOTE: Restraining type compression fittings do not require reinforcement. However, if the reinforcement used for an existing compression fitting, coupling and / or line cap is damaged or does not have sufficient bracing in accordance with EO-15185-A R.6; EO-

16031-B or EO-16880-B, Gas Engineering – Major Projects must be consulted.

2) When **buried** non-restraining type compression fittings will be included in a pressure test; the embedment calculation shall be performed per requirements ~~of Section 5.0~~ of G-8153 to determine if reinforcement is required. For **newly backfilled pipelines**, the minimum embedment distance shown in Table III of ~~Section 7.0~~ **shall be doubled** in the embedment calculations found in G-8153.

7.5 Compression Fittings

A) Exposed **non-restraining type** compression fittings (couplings, tees, elbows, and riser tees) to be included in a pressure test shall first **be reinforced** per Gas Drawing EO-16880-B, "Reinforcement of Non-Restraining Compression Couplings for 2" to 24" Dia. Mains."

B) Exposed **restraining type** compression fittings do not require reinforcement.

C) When Company M&S plates or layouts indicate that **buried (non-exposed) non-restraining type** compression fittings will be included in a pressure test, the embedment calculation shall be performed to determine if reinforcement is required. See Gas Specification G-8153.

8.0 PRESSURE TESTING REQUIREMENTS FOR DISTRIBUTION MAINS/SERVICES

8.1 Distribution Mains

A) Tie-in Joint/Weld

1) Each tie-in joint (e.g., mechanical coupling, electrofusion coupling) or weld used to tie-in a tested segment of distribution main shall be given a leakage test (i.e., soap tested) at operating pressure when placed into service.

B) New and Replacement Sections of Steel or PE Plastic Main Less than or Equal to (≤) 1000'

1) The test medium shall be air or an inert gas. Water shall be used only when directed by Gas Transmission Engineering or Gas Distribution Engineering.

2) The test pressure must be maintained at or above the test pressure for at least one (1) hour after stabilization. A calibrated pressure gauge that will indicate two (2) psig increments or less shall be used for testing (Class & Stock #459-7050). (See Section 6.2).

C) New and Replacement Sections of Steel or PE Plastic Main Greater Than (>) 1000'

1) The test medium shall be air or an inert gas. Water shall be used only when directed by Gas Transmission Engineering or Gas Distribution Engineering.

2) The test pressure must be maintained at or above the test pressure for at least two (2) hours after stabilization. A calibrated pressure gauge that will indicate two (2) psig increments or less shall be used for testing (Class & Stock #459-7050). (See Section 6.2)

D) PE Plastic Main Insertions

1) A calibrated pressure gauge that will indicate two (2) psig increments or less shall be used for testing (Class & Stock #459-7050). (See Section 6.2)

★ 2) For insertions 1000' or less, the test pressure must be maintained at or above the test pressure for a minimum of one (1) hour. (See Section 6.2 and Attachment A)

Alternatively, the test duration may be **30 minutes prior to insertion**, followed by a **30 minute test after insertion** and a visible inspection of the PE plastic pipe for damage (i.e., gauges, scrapes, dents) per Gas Specification G-8005 "General Specification For The Installation Of Gas Distribution Mains"

★ 3) For insertions greater than (>) 1000', the test pressure must be maintained at or above the test pressure for a minimum of two (2) hours. (See Section 6.2 and Attachment A)

Alternatively, for insertions greater than (>) 1000' and ≤ 1500' the test duration may be **1 ½ hours prior to insertion**, followed by a **30 minute test after insertion** and a visible inspection of the PE plastic pipe for damage (i.e., gauges, scrapes, dents) per Gas Specification G-8005.

★ 4) All "aboveground" pressure testing shall be performed with due diligence to secure the pipe during the pressure test for the safety of employees, contractors, and the public.

"Aboveground" pressure tests shall be limited to less than or equal to (≤) 4" diameter PE plastic pipe (straight and coiled).

Aboveground pressure testing for all pipe type ≥6" is not allowed.

8.2 **New, Replacement, and Temporarily Disconnected Distribution Services**

A) The test medium shall be air, or inert gas. The test indicator must be such that any loss of pressure can be readily detected.

★ B) The test pressure must be maintained at or above the test pressure for the following minimum times. (See Section 6.2 and Attachment A)

1) 2" diameter and smaller - **15 minutes**

2) Greater than 2" diameter - **30 minutes**

★ C) The limits of the pressure test shall be as follows as stated in **Table 1: Service Line Pressure Test**. The service connection to the main need not be included in these tests if it is not feasible to do so. However, it must be given a leakage test (i.e., soap tested) at operating pressure and documented as part of the pressure test when placed into service (See Section 10.0).

NOTE
If a pressure test is conducted by a customer's contractor that is not Operator Qualified, the task must be overseen by Operator Qualified personnel (See ATTACHMENT E: Process Flow Chart: Pressure Test for Jurisdictional Piping)

★ Table 1: Service Line Pressure Test Requirements

Main to Regulator Pressure	Segment Pressure or Outlet of Regulator Pressure (if present)	Testing Points Start to End	Testing to be Performed on Service	Length of time for test
Low Pressure	N/A	Main to HOS	Main* to HOS** @ 90 psig	2" and smaller @ 15 mins Greater than 2" @ 30 mins
Medium / Intermediate Pressure	<1 psig	Main to Regulator	Main* to Regulator @ 90 psig	2" and smaller @ 15 mins Greater than 2" @ 30 mins
	≥ 1 psig and < 40 psig	Main to Meter	Main* to Regulator @ 90 psig -AND- Regulator to meter @ 50 psig	
High Pressure	< 1psig	Main to Regulator	Main* to regulator @ 150 psig	2" and smaller @ 15 mins Greater than 2" @ 30 mins
	≥1psig and <40 psig	Main to Meter	Main* to regulator @ 150 psig -AND- Regulator to meter @ 50 psig	
	≥40 psig	Main to Meter	Main* to meter @ 150 psig	

* Main for new installation or any disconnection point for replacement and/or repair where gas is removed downstream of

** For Inside Meter: HOS is first fitting inside customer wall; for Outside Meter: HOS is Meter Riser Valve

The pressure test shall include the connection from the main to the service, however if not feasible, must be leak tested at operating pressure

See ATTACHMENT C: Service Line Pressure Test Flowchart

NOTE:
1) If provisions are made to maintain continuous service (e.g., installation of a bypass), any part of the original service line used to maintain continuous service need ***not*** be tested.

2) The piping downstream of the meter(s) shall be tested as per the requirements of the authority having jurisdiction (e.g. New York City Department of Buildings).

★ D) If a component other than pipe is the **only** item being replaced or added to a pipeline, a pressure test after installation is not required if the component was tested to at least the pressure required for the pipeline to which it is being added.
Refer to:
G-100,285 "Compression End Coupling, Tees, Elbows, Line Caps and Riser Tees for Gas Pipe & Tubing
G- 100,287 "Forged Carbon Steel Flanges"

E) Steel services temporarily disconnected shall be maintained or replaced per Gas Specification G-8149, "Responsibility for Maintenance and Replacement of Gas Services."

8.3 PE Plastic and Welded Metallic Tapping Fittings

The test pressure for PE plastic heat fusion or electrofusion fittings (i.e., electrofusion tapping tees, SPA saddles) or welded metallic fittings used for stopper, purge, and bypass connections must be maintained at or above the following test pressures for a minimum of 15 minutes prior to drilling and/or tapping:

1) 90 psig for LP, IP, and MP

2) 150 psig for HP.

8.4 Mechanical Metallic Tapping Fittings

The test pressure for metallic reinforcement tapping sleeves (e.g., Style 50, Style 80, green sleeve) must be maintained at or above the following test pressures for a minimum of 15 minutes prior to drilling and/or tapping:

1) 5 psig for LP

2) 20 psig for IP and MP.

3) 150 psig for HP.

NOTE:	Threaded service connections at the main must be given a leakage test at the operating pressure when placed in service (i.e. soap test).

8.5 **Cured-In-Place (CIP) Liners**

A) The test pressure for cast iron or steel mains and services with Cured-In-Place (CIP) liners must be maintained at or above the following test pressures for a minimum of two (2) hours:

1) 10 psig for LP.

2) 90 psig for IP and MP.

3) 150 psig for HP.

F) For pressure testing mains/ services with cured in place liners, all buried non-restraining compression couplings or joints must be reinforced per Gas Specification G-8153. Reinforcement welding on pipe or couplings shall be completed prior to insertion of the CIP liner. If impractical to reinforce the compression couplings or joints, **the end of the pipe must be anchored or braced to prevent movement or pullout during the pressure test.** Contact Gas Distribution Engineering to design the required anchoring or blocking the ends of the pipe.

9.0 WITNESS REQUIREMENTS FOR PRESSURE TESTING DISTRIBUTION MAINS/SERVICES

9.1 Pressure tests performed by Company crews and Per Diem on all **distribution mains (10" diameter and less) and services** shall be witnessed and documented (including employee name and number or ITS number) by any of the following:

★ A) Company management employee that is familiar with pressure testing (e.g., Gas Operations Gas Supervisor, Gas Planner, Construction Management Chief Construction Inspector, Project Specialist, Construction Services Supervisor)

B) Company Operator Qualified (OQ) Gas Mechanic

C) Per Diem OQ Gas Mechanic

9.2 A Company management employee must witness and document (including employee name and number or ITS number) at least **fifty percent (50%)** of all pressure tests on distribution services performed by Company crews, Per Diem, and Gas Contractors managed by Gas

Operations. This fifty percent (50%) shall be randomly selected without prior notification to the person performing the actual construction and gassing-in of the service line.

9.3 Pressure tests performed by Company crews and Per Diem on all **distribution mains 12" and larger** shall be witnessed and documented (including employee name and number or ITS number) by a Company Operator Qualified (OQ) management employee.

9.4 Pressure tests performed by all OQ Gas Contractors on all **distribution mains and services** shall be witnessed and documented (including employee name and number or ITS number) as follows:

A) Distribution Services (all sizes)

★ 1) Construction Oversight Representative (Management Employee, Construction Representative, Construction Inspector, Supplemental Contractor Inspectors) shall witness and document **at least fifty percent (50%)** of all OQ Gas Contractor performed pressure tests on services. (See Section 8.2)

2) The **remaining fifty percent (50%)** shall be witnessed and documented by an OQ Gas Contractor Mechanic

★ B) Distribution Mains (10" and smaller)

Construction Oversight Representative (Management Employee, Construction Representative, Construction Inspector, Supplemental Contractor Inspectors) shall witness and document **one hundred percent (100%)** of OQ Gas Contractor performed pressure tests on distribution mains 10" and less in diameter.

C) Distribution Mains (12" and larger)

Company Operator Qualified (OQ) management employee shall witness and document **one hundred percent (100%)** of OQ Gas Contractor performed pressure test on mains 12" and larger in diameter.

10.0 RECORDS AND RETENTION

10.1 Distribution Services

A) A record of **distribution service** pressure tests shall be made and shall contain at least all of the following information:

1) Name and employee number of Company Operator Qualified gas mechanic, or name and ITS # of Operator Qualified gas contractor mechanic performing the pressure test.

2) Name and employee number of Company employee, or name and ITS # of gas contractor mechanic who witnesses the pressure test (as required per Section 9.0).

3) Test medium used

4) Test pressure

5) Test duration

6) Location and date of test

7) Length, diameter, material, and line pressure (e.g., LP, IP, MP, or HP) of the service tested

8) Limits of the service pressure test indicating if the service connection to the main was included in the pressure test. (See Section 8.2.C)

B) Pressure test results for installed, replaced, inserted**,** or reconnected **distribution services** shall be recorded on the "As Constructed/ Emergency Sketch" drawing.

★ C) For customer contractors doing the task of pressure testing on extension service piping see ATTACMENT D for documentation.

D) The respective Area Gas Operations organization where the distribution service is installed shall retain the pressure test records for distribution services in accordance with CI-870-1.

10.0 **RECORDS AND RETENTION** (Continued)

10.2 Distribution Mains

A) A record of **distribution main** pressure tests shall be made and shall contain at least all of the following information:

1) Name and employee number of Company Operator Qualified gas mechanic, or name and ITS # of Operator Qualified gas contractor mechanic performing the pressure test.

2) Name and employee number of Company employee, or name and ITS # of gas contractor mechanic who witnesses the pressure test (as required per Section 9.0).

3) Test medium used

4) Test pressure

5) Test duration

6) Pressure recording charts, or other record of pressure readings (e.g., “As-Constructed/Emergency Sketch”)

7) Location and date of test

8) Length, diameter, material, and line pressure (e.g., LP, IP, MP, or HP) of the main tested

9) Leaks and failures notes and their disposition.

B) Pressure test results for installed, replaced, inserted, or reconnected **distribution mains** shall be recorded on the "As Constructed/ Emergency Sketch” drawing.

C) The respective Area Gas Operations organization where the distribution main is installed shall retain the pressure test records in accordance with CI-870-1.

★ **NOTE:**
If the pipe is not going to be energized by the end of the day of pressure testing, minimum 20 psi maximum 22 psi of stabilized air pressure is required to be left on the pipe and documented. If there is any pressure drop before energizing, the pipe shall be inspected and pressure tested again as required and documented.

10.3 Records Management

Any records generated in the course of performing work in accordance with this specification shall be maintained as required by Corporate Instruction CI-870-1 "Records Management". Guidance on the retention of Company Gas Operations records can also be found on the Records Management intranet site.

11.0 REFERENCES

	CI-870-1	Records Management
	G-8005	General Specification for the Installation of Gas Distribution Mains
	G-8100	General Specification for the Installation of Gas Services
★	G-8121	Qualifications of Joiners and Inspectors of Polyethylene (PE) Plastic Pipe/Tubing and Fittings for Gas Mains and Services
	G-8123	Heat Fusion Joining of Polyethylene (PE) Plastic Pipe/Tubing and Fittings for Gas Mains and Services
	G-8149	Responsibility for Maintenance and Replacement of Gas Services
★	G-8153	Reinforcing Non-Restraining Compression Fittings
	G-100,285	Compression End Couplings, Tees, Elbows, Line Caps, and Riser Tees for Gas Pipe and Tubing
	CEHSP E02.04	Wastewater Discharges To Publicly Owned Sewer Systems or On-Site Septic Disposal Systems

PSC Case 15686, order dated 6/29/83 and issued 7/11/83 – Order directing Con Edison to revise its construction standards to require a Company Supervisor to witness and endorse the record of each service line pressure test.

PSC Case 03-G-1507, order dated 5/14/04 and issued 6/3/04 – Order granting New York members of the Northeast Gas Association a waiver of the requirements of 16 NYCRR 255.756 and 255.757 to conduct a pilot program to allow limited application of cured-in-place (CIP) cast iron pipe liners in lieu of replacement of sections of cast iron mains affected by excavation activities

PHMSA 49 CFR Part 192, Sections 513 Interpretation Letter dated September 16, 1992.

PSC Case 94-G-0650, AVP Mr. V. Richard Conforti letter dated 10/20/93 to the Honorable John J. Kelliher, Secretary, State of New York, Public Service Commission (Letter petitions relief from 100% service witness by Company Supervisor)

PSC Recommendation at the Session of 2/22/95. Issued and effective 3/2/95 Recommendation reduces 100% service pressure test witness by Company Supervisor to 10% random witness.

In January 2003, Construction Management Best Practices Committee recommended the pressure test witnessing be increased as discussed in Section 9.0.

ASME B31.8 (2014)

As-Constructed Emergency Sketch forms

12.0 ATTACHMENTS

	ATTACHMENT A	Pressure Testing Requirements
	ATTACHMENT B	Witness Requirements for Pressure Testing
★	ATTACHMENT C	Service Pressure Test Flow Chart
★	ATTACHMENT D	Gas Meter Piping Pressure Test Verification
★	ATTACHMENT E	Process Flow Chart

ATTACHMENT A

Pressure Testing Requirements for New and Replacement Steel and Direct Buried PE Plastic Distribution Mains

MATERIAL	LENGTH	TEST METHOD	TEST PRESSURE	PRESSURE DURATION after stabilization
Steel & PE Plastic Mains	Tie-In Section	Soap test all joints/welds used at tie-in locations (e.g., welds, mechanical couplings & electrofusion couplings) when placed into service	Line Pressure	N/A
Steel & PE Plastic Mains	≤ 1000’	Pressure test with air or inert gas	90 psig for LP, IP, & MP 150 psig for HP *	One (1) hour
Steel & PE Plastic Mains	> 1000’	Pressure test with air or inert gas	90 psig for LP, IP, & MP 150 psig for HP *	Two (2) hours

Pressure Testing Requirements for New and Replacement PE Plastic Distribution Main Insertion

MATERIAL	LENGTH	TEST METHOD	TEST PRESSURE	PRESSURE DURATION (after stabilization)
PE Plastic Main Insertion	Tie-In Section	Soap test all joints/welds used at tie-in locations (e.g., welds, mechanical couplings & electrofusion couplings)	Line Pressure	N/A
PE Plastic Main Insertion	≤ 1000’	Pressure test with air or inert gas	90 psig for LP, IP, & MP 150 psig for HP *	One (1) hour **OR** 30 minutes prior to insertion **AND** 30 minutes after insertion
PE Plastic Main Insertion	> 1000’ to ≤ 1500’	Pressure test with air, or inert gas	90 psig for LP, IP, & MP 150 psig for HP *	Two (2) hours **OR** 1 ½ hours prior to insertion **AND** 30 minutes after insertion
PE Plastic Main Insertion	> 1500’	Pressure test with air, or inert gas	90 psig for LP, IP, & MP 150 psig for HP *	Two (2) hours

Pressure Testing Requirements for New, Replacement, and Temporarily Disconnected Distribution Services

MATERIAL	Service Size	TEST METHOD	TEST PRESSURE	PRESSURE DURATION (after stabilization)
PE Plastic or Steel	≤ 2”	Pressure test with air, or inert gas	90 psig for LP, IP, & MP 150 psig for HP *	15 minutes
Copper	≤ 2”	Pressure test with air, or inert gas	90 psig for LP, IP, & MP *	15 minutes
PE Plastic or Steel	> 2”	Pressure test with air, or inert gas	90 psig for LP, IP, & MP 150 psig for HP *	30 minutes
At line pressure, soap test service connection to main.				

*** LP = low pressure, IP = intermediate pressure, MP = medium pressure, HP = high pressure**

ATTACHMENT B

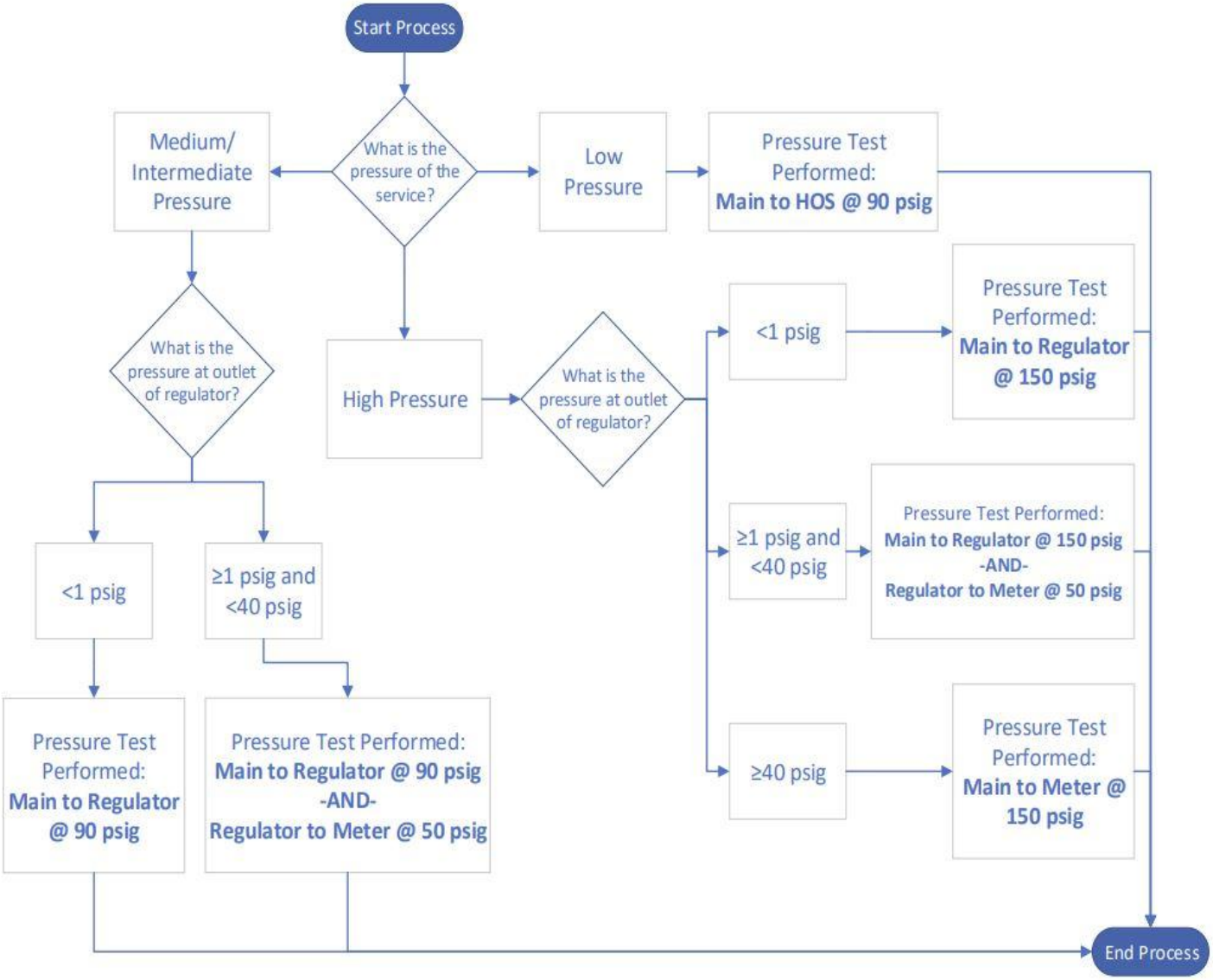
Witness Requirements for Pressure Testing Distribution Mains/Services

PRESSURE TEST PERFORMED BY	SERVICES	MAINS ≤ 10”	MAINS ≥12”
Company Personnel	≥ 50% random witness by Company management Remainder by Company OQ Gas Mechanic	100% by Company management **OR** Company OQ Gas Mechanic	100% by Company OQ management
Per Diem	≥ 50% random witness by Company management Remainder by Per Diem OQ Gas Mechanic	100% by Company management **OR** Per Diem OQ Gas Mechanic	100% by Company OQ management
Gas Contractors Managed by Gas Ops	≥ 50% random witness by Company management Remainder by Contractor OQ Gas Mechanic	100% by Company management	100% by Company OQ management
★ Gas Contractors Managed by Construction Management	≥ 50% random witness by Company CR, CI, SCI **OR** management Remainder by Contractor OQ Gas Mechanic	100% by Company CR, CI, SCI **OR** management	100% by Company OQ management

OQ = Operator Qualified, CR = Construction Representative, CI = Construction Inspector, SCI – Supplemental Contractor Inspector

★ **ATTACHMENT C**

Service Pressure Test Flow Chart



★ **ATTACHMENT D**

Gas Meter Piping Pressure Test Verification

Exhibit-B: Gas Meter Piping Pressure Test Verification

Certification Statement: This document certifies that the gas meter piping from the gas head of service (HOS) valve to the gas meter connection has undergone a pressure test as per Con Edison's Yellow Book and Gas Specification G-8204.

****IMPORTANT**: Please fill out all applicable sections with the required information. For any inquiries regarding this form, contact your case representative.**

Location Details:

Address:	
MC #:	

Owner:	

Pressure Test Results:

Section 1: Low Pressure Service:

*Has successfully passed a pressure test for 30 minutes at a pressure of 3 psig on _____ from HOS to meter.
(Date)

Section 2: Medium/Intermediate/High Pressure Service.

(A) HOS to the Regulator (Refer to G-8204 for requirements):

*Has successfully passed a pressure test for _____ minutes at a pressure of _____ psig on _____ from HOS to regulator.
(Date)

Regulator to Meter - Delivery from Regulator < 1psi:

*Has successfully passed a pressure test for 30 minutes at a pressure of 3 psig on _____ from regulator to meter.
(Date)

(B) Regulator to Meter - Delivery from Regulator ≥ 1psi (Refer to G-8204 for requirements):

*Has successfully passed a pressure test for _____ minutes at a pressure of _____ psig on _____ from regulator to meter.
(Date)

TEST Performed By _____ _____
(Name) (License #, ITS #)

Section 3: Span of Control (For Pressure Testing in Section 2A and/or B - Requiring an Op Qual Witness in CT-34-A):

OQ Witness Name & Company:	
OQ Witness Signature:	
ITS#:	
Test Performed By (Plumbers Name):	
Plumber's Signature:	
License No.:	
ITS No.:	
Contractor:	

Section 4: Inside Service Line Inspection:

Confirms that a visual inspection and necessary corrections have been made for any repair or modification on the jurisdictional pipe up to the inside meter outlet. Access for Con Edison's full service line inspection will be provided on the turn-on day.

OQ-ed Plumber's Name/ITS#:	
Plumber's Signature:	
License No.:	

★ **ATTACHMENT E**

Process Flow Chart: Pressure Test for Jurisdictional Piping