

## PROCEDURES

### PRESSURE TESTING

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#### 3.0 PURPOSE

The purpose of this section is to establish minimum procedures for the leak and strength testing of gas pipeline facilities.

#### 3.1 PRESSURE TESTING

Pressure testing plastic mains and service lines, and steel mains and service lines operating at or below 60 psig shall be tested as outlined below:

A. Lines Smaller Than 2" IPS

- |                  |            |
|------------------|------------|
| 1. 0 – 500 ft    | 10 minutes |
| 2. 500 – 1000 ft | 30 minutes |
| 3. Over 1000 ft  | 1 hour     |

B. 2" Lines and Larger

- |                   |            |
|-------------------|------------|
| 1. 0 - 125 ft     | 10 minutes |
| 2. 126 - 1000 ft  | 1 hours    |
| 3. 1000 - 3000 ft | 2 hours    |
| 4. Over 3000 ft   | 7 hours    |

C. All above pressure test shall be performed at a minimum of one and one half times the desired MAOP or a minimum of 90 psig.

D. Test duration for plastic pipe shall not exceed 8 hours per manufacturer's specifications.

E. Pressure recording charts shall be used to record the data on any tests two hours or longer.

F. When pressure testing both mainline and service line facilities both shall be included in determining total distance.

G. When pressure testing facilities with pipe sizes in both above groups, the total distance of all pipe shall be included in the higher group.

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- H. For single components, pre-fabricated assemblies and short sections (less than 125 ft of pipe) mixing of test mediums is permissible. (such as nitrogen to top of water).
- I. Prefabricated assemblies shall have a pressure stand-up test.
- J. Pipeline facilities to operate above 60 psig shall be tested in accordance with DOT Pipeline Safety Standards.

#### 3.2 LOCATING MINOR LEAKS FOUND DURING PRESSURE TESTING

When a pressure test has been completed and there are indications of a minor leak which was not located during the test, the line may be filled with natural gas by means of a temporary connection at a pressure less than the Maximum Allowable Operating Pressure (MAOP). A flame ionization unit may then be used to search for the leak. After the leak has been found and repaired, retest the line as outlined in this section after purging.

**NOTE:** This procedure will only be used with supervisory approval.

#### 3.3 SOAP TEST

- A. If a pipeline component, other than pipe is installed, pressure testing is not required if manufacturer's testing can be verified.
- B. Tie-in points shall be leak tested at operating pressure, using liquid leak detector.
- C. Relocation, replacement or prefabricated piping shall be pressure tested in accordance with H-3.1. Soap test all pipeline connections and tie-ins.
- D. Soap test each squeeze point after squeeze is released.
- E. Soap test each meter and MSA after performing any work or repair.
- F. If leakage is found (indicated by the presence of soap bubbles) replace or repair the component or pipe.

#### 3.4 REINSTATING FACILITIES

All facilities to be reinstated shall be tested as if newly installed. Conduct stand-up pressure test in accordance with this procedure before service is reinstated.

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#### 3.5 TESTING TIE-INS

All tie-ins points and repairs, which cannot be pressure tested shall be soap tested.

#### 3.6 PRE-TESTING PIPE

##### A. General

When impractical to pressure test pipe after installation, it must be pre-tested. If this option is chosen, the following procedure will be followed. Pre-testing is normally handled by two methods.

##### 1. Job Site Test/Short Pipe Segments

A stand-up test will be conducted prior to installation per H-3.1 of this section. The test pressure, media used, and duration of test will be documented including the signature of the employee/contractor who performed or witnessed the test.

##### 2. Yard Test

Pressure tests will be at a pressure, and time duration appropriate for its intended use as stated in Paragraph 3.1 of this section.

All tests will be documented and will include the pipe manufacturer, manufacturer's lot number, date and start/stop time of test. The chart will be filed for future reference in a specific file for pre-tested documentation.

The tested pipe must be marked or tagged with the test date and the reference number, which is attached to the pressure chart.

When field personnel use the pre-tested pipe, the test date and reference number must be recorded on the appropriate field installation form(s).

**NOTE:** Any qualified pipe joiner who produces any plastic pipe joint that is found to be unacceptable by pressure testing will not

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<b>Issue Date:</b>	<b>07/06/07</b>
<b>Superseded Date:</b>	<b>03/02/07</b>

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be allowed to perform further production pipe joining in that process until successfully retested and re-qualified in that process.

**NOTE:** See **H-7** for minimum gauge standards for pressure gauges used for pressure stand up testing.