

City of Colleyville Texas Medical Gas Systems Inspection-Verification Requirements

Medical gas systems (med-gas, vacuum, med-air etc) are to be installed, inspected, and verified by licensed/certified professionals in accordance to state and local laws (e.g. State Plumbing Law, Texas Department of Health, NFPA 99, International Fire Code Section 3006, International Plumbing Code Chapter 12, etc). According to NFPA 99 Health Care Facilities Code, there are a series of tests, confirmations, and verifications that must be performed by the licensed med-gas installer and a third party certified inspector/verifier (ASSE 6020, 6030 Medical Gas Inspector- Verifier). There is also a state of Texas requirement that a licensed plumbing inspector with a med-gas endorsement inspect the plumbing sections of the system. According to NFPA Medical Gas and Vacuum Systems Installation Handbook (2012 edition) there are multiple tests that each the installer and inspector/verifier must perform before the system can be safely used. The City will need both your med-gas installer and your med-gas inspector-verifier to provide written compliance of those tests/confirmations/verifications. We would be happy to send you more test requirement details (Supplement 3; copies) from the aforementioned NFPA handbook if you need them but in short the following are the inspection-verification types we need confirmed (in writing) and by which professional prior to the City's final approval:

Licensed Med-Gas Installer:

1. Copy of state plumbing license with med-gas endorsement (and ASSE certification if applicable).
2. Initial blow-down.
3. Initial pressure test (min. 150 psig).
4. Joint leak detector test.
5. Cross connection test.
6. Final purge; white cloth test.
7. Standing pressure test for a minimum of 24-hours (20% above normal operation pressure and a minimum of 12" mercury on vacuum system).

Certified Third Party Inspector-Verifier:

1. Copies if ASSE 6020 & 6030 certifications.
2. Verifier to validate leak test (full system for minimum 10 minutes, at normal system pressure or vacuum).
3. Verifier to repeat cross-connection test.
4. Verifier to confirm which valves control which outlets.
5. Verifier to confirm that valves seal when closed.
6. Verifier to test proper alarms.
7. Verifier to perform a quick purge on each outlet.
8. Verifier to perform a purging-particulate test on a minimum of 25% of all zones (randomly selected).
This test involves a microbalance and the use of very fine preweighed filters to detect very small quantities of particulates.
9. Verifier to perform a test at the source and one at the furthest outlet to validate no halogenated hydrocarbons, hydrocarbons or water is remaining in the system.
10. Verifier to perform dew point test.
11. Verifier to perform an operational pressure test (flow test of outlets).
12. Verifier to perform instantaneous flow test in critical care areas (where applicable).
13. Verifier to perform percent purity test. Confirm if additional laboratory testing is performed verses on site testing; need detailed test method.
14. Verifier to confirm all labeling is complete, accurate, and correct.

State Licensed Plumbing Inspector Required:

1. The State of Texas Plumbing Examiner's requires the plumbing portion of medical gas system to be inspected by a state licensed plumbing inspector with a medical gas endorsement.