Gas Detection For Life

Application Brief

PURGE / TEST PROCEDURE USING MODEL GX-2012

When new natural gas mains are installed or existing mains removed from service, crews must purge the mains with an inert gas to eliminate the potential hazard of a combustible mixture. The most commonly used and pre-ferred purge gas is nitrogen. After the purge is conducted an upstream valve is opened to allow natural gas to enter. A service valve on the line with a stand pipe or diffuser attached is cracked to allow venting gas or nitrogen to escape.

When measurements are taken at stand pipe or diffuser with service valve cracked, RKI recommends use of our "T" fitting adapter, p/n 17-4430RK-01 (as pictured below), for purge testing.

A standard confined space instrument will not adequately test for safe conditions during this process, as the high gas level will overwhelm or damage an LEL sensor, and the sensor will not function in an oxygen-depleted (inert) atmosphere. The RKI Model GX-2012 has been specifi-cally designed for this application, utilizing a robust ther-mal conductivity (TC) sensor that can measure high gas levels without damage, and does not require oxygen for accurate measurements.

Typical Diffuser

For existing main:

1. Purge line with N2. Use GX-2012 in % Vol only (purge) mode (also measures O2) to verify that O2 reading is 0.5 or less, and gas reading 2% or less, to verify purge.
2. Open line and perform service. This will introduce air into the main.
3. Purge again with N2. Use GX-2012 in % Vol only mode (also measures O2) to verify that O2 reading is 0.5% or less.
4. Open upstream valve to charge line with gas. Use GX-2012 in % Vol only mode (also measures O2) to verify that gas reading is 98% or more.

For new main:

1. Purge line with N2. Use GX-2012 in % Vol only mode (also measures O2) to verify that O2 reading is 0.5% or less, to verify purge of air from line.
2. Open upstream valve to charge line with gas. Use GX-2012 in % Vol only mode (also measures O2) to verify that gas reading is 98% or more.

All measurements taken at stand pipe or diffuser with ser-vice valve cracked. RKI recommends use of our "T" fitting adapter (p/n 17-4430RK-01) for purge testing.