

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

PART 10. INTERMITTENT TESTING AND SAMPLING

R 336.2005 Reference test methods for state-requested tests of delivery vessels.

Rule 1005. The following reference test method shall be used to detect gasoline vapor leaks by a combustible gas detector:

(a) Principle. A combustible gas detector is used to indicate any incidence of leakage from gasoline delivery vessel tanks and vapor control systems. This qualitative monitoring procedure is an enforcement tool to confirm the continuing existence of leak-tight conditions.

(b) Applicability. This method is applicable to determining leak-tightness of gasoline delivery vessel tanks during loading without taking the delivery vessel tank out of service. The method is applicable only if the vapor control system does not create back pressure in excess of the pressure limits of the delivery vessel tank compliance leak test. For vapor control systems, this method is applicable to determining leak-tightness at any time.

(c) Apparatus and specifications. The following apparatus shall be used:

(i) Manometer. Liquid manometer, or equivalent, capable of measuring up to 0.9 pounds per square inch (24.9 inches of water) gauge pressure within 0.003 pounds per square inch (0.1 inches of water) precision.

(ii) Combustible gas detector. A portable hydrocarbon gas analyzer with associated sampling line and probe which complies with all of the following provisions:

(A) Safety. The device is certified as safe for operation in explosive atmospheres.

(B) Range. The device shall have a minimum range of 0 to 100% of the lower explosive limit (LEL) as propane.

(C) Probe diameter. The sampling probe shall have an internal diameter of 0.625 centimeters (1/4 inch).

(D) Probe length. The probe sampling line shall be of sufficient length for easy maneuverability during testing.

(E) Response time. The response time for full-scale deflection shall be less than 8 seconds for a detector with a sampling line and probe attached.

(d) Test procedure. The following test procedure shall be complied with:

(i) Pressure. Place a pressure tap in the terminal, plant, or service station vapor control system as close as possible to the connection with the delivery vessel tank. Record the pressure periodically during testing.

(ii) Calibration. Calibrate the combustible gas detector with 2.2% propane, by volume, in air for 100% lower explosive limit response.

(iii) Monitoring procedure. During loading or unloading, check the periphery of all potential sources of leakage of the delivery vessel tank and of the terminal, plant, or service station vapor collection system with a combustible gas detector. The check shall comply with the following procedure:

(A) Probe distance. The probe inlet shall be 2.5 centimeters from the potential leak source.

(B) Probe movement. Move the probe slowly (2.0 centimeters per second). If there is any meter deflection at a potential leak source, move the probe to locate the point of highest meter response.

(C) Probe position. As much as possible, the probe inlet shall be positioned in the path of (parallel to) the vapor flow from a leak.

(D) Wind. Attempt, as much as possible, to block the wind from the area being monitored.

(iv) Recording. Record the highest detector reading and location for each incidence of leakage.

History: 1979 ACS 7, Eff. Aug. 22, 1981; 1989 MR 4, Eff. Apr. 20, 1989; 2002 MR 5, Eff. Mar. 19, 2002; 2006 MR 4, Eff. Feb. 22, 2006.