
40 C.F.R. § 60.5406

What test methods and procedures must I use for my sweetening units affected facilities at onshore natural gas processing plants?

(a) In conducting the performance tests required in § 60.8, you must use the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in paragraph § 60.8(b).

(b) During a performance test required by § 60.8, you must determine the minimum required reduction efficiencies (Z) of SO₂ emissions as required in § 60.5405(a) and (b) as follows:

(1) The average sulfur feed rate (X) must be computed as follows:

$$X = KQ_aY$$

Where:

X = average sulfur feed rate, Mg/D (LT/D). Q_a = average volumetric flow rate of acid gas from sweetening unit, dscm/day (dscf/day). Y = average H₂S concentration in acid gas feed from sweetening unit, percent by volume, expressed as a decimal. K = (32 kg S/kg-mole)/((24.04 dscm/kg-mole)(1000 kg S/Mg)). = 1.331 × 10⁻³Mg/dscm, for metric units. = (32 lb S/lb-mole)/((385.36 dscf/lb-mole)(2240 lb S/long ton)). = 3.707 × 10⁻⁵ long ton/dscf, for English units.

(2) You must use the continuous readings from the process flowmeter to determine the average volumetric flow rate (Q_a) in dscm/day (dscf/day) of the acid gas from the sweetening unit for each run.

(3) You must use the Tutwiler procedure in § 60.5408 or a chromatographic procedure following ASTM E260-96 (incorporated by reference as specified in § 60.17) to determine the H₂S concentration in the acid gas feed from the sweetening unit (Y). At least one sample per hour (at equally spaced intervals) must be taken during each 4-hour run. The arithmetic mean of all samples must be the average H₂S concentration (Y) on a dry basis for the run. By multiplying the result from the Tutwiler procedure by 1.62 × 10⁻³, the units gr/100 scf are converted to volume percent.

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