
40 C.F.R. § 60.5406a

What test methods and procedures must I use for my sweetening unit affected facilities?

- (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 § 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 § 60.5405a(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. $K = (32 \text{ kg S/kg-mole}) / ((24.04 \text{ dscm/kg-mole})(1000 \text{ kg S/Mg})) = 1.331 \times 10^{-3} \text{ Mg/dscm}$, for metric units. $= (32 \text{ lb S/lb-mole}) / ((385.36 \text{ dscf/lb-mole})(2240 \text{ lb S/long ton})) = 3.707 \times 10^{-5} \text{ long ton/dscf}$, 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 § 60.5408a 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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