

S=the sulfur production rate in kilograms per hour (kg/hr) rounded to one decimal place.

X=the sulfur feed rate, i.e., the H₂S in the acid gas (expressed as sulfur) from the sweetening unit, expressed in long tons per day (LT/D) of sulfur rounded to one decimal place.

Y=the sulfur content of the acid gas from the sweetening unit, expressed as mole percent H₂S (dry basis) rounded to one decimal place.

Z=the minimum required sulfur dioxide (SO₂) emission reduction efficiency, expressed as percent carried to one decimal place. Z_i refers to the reduction efficiency required at the initial performance test. Z_c refers to the reduction efficiency required on a continuous basis after compliance with Z_i has been demonstrated.

§ 60.642 Standards for sulfur dioxide.

(a) During the initial performance test required by §60.8(b), each owner or operator shall achieve at a minimum, an SO₂ emission reduction efficiency (Z_i) to be determined from Table 1 based on the sulfur feed rate (X) and the sulfur content of the acid gas (Y) of the affected facility.

(b) After demonstrating compliance with the provisions of paragraph (a) of this section, the owner or operator shall achieve at a minimum, an SO₂ emission reduction efficiency (Z_c) to be determined from Table 2 based on the sulfur feed rate (X) and the sulfur content of the acid gas (Y) of the affected facility.

Table 1. REQUIRED MINIMUM INITIAL SO₂ EMISSION REDUCTION EFFICIENCY (Z_i)

H ₂ S content of acid gas (Y), %	Sulfur feed rate (X), LT/D			
	2.0 ≤ X ≤ 5.0	5.0 < X ≤ 15.0	15.0 < X ≤ 300.0	X > 300.0
Y ≥ 50	79.0	88.51X ^{0.0101} Y ^{0.0125} or 99.8, whichever is smaller		
20 ≤ Y < 50	79.0	88.51X ^{0.0101} Y ^{0.0125} or 97.9, whichever is smaller		97.9
10 ≤ Y < 20	79.0	88.51X ^{0.0101} Y ^{0.0125} or 93.5, whichever is smaller		93.5
Y < 10	79.0	79.0	79.0	79.0

Table 2. REQUIRED MINIMUM SO₂ EMISSION REDUCTION EFFICIENCY (Z_c)

H ₂ S content of acid gas (Y), %	Sulfur feed rate (X), LT/D			
	2.0 ≤ X ≤ 5.0	5.0 < X ≤ 15.0	15.0 < X ≤ 300.0	X > 300.0
Y ≥ 50	74.0	85.35X ^{0.0144} Y ^{0.0128} or 99.8, whichever is smaller		
20 ≤ Y < 50	74.0	85.35X ^{0.0144} Y ^{0.0128} or 97.5, whichever is smaller		97.5
10 ≤ Y < 20	74.0	85.35X ^{0.0144} Y ^{0.0128} or 90.8, whichever is smaller		90.8
Y < 10	74.0	74.0	74.0	74.0