T30S112.14(c)

Type of Facility	K
Primary Copper Smelter	0.50
Primary Lead Smelter (all processes except Sintering Machine, Discharge End, and Equipment Ventilation)	0.61
Metallurgical Sulfuric Acid Plant	0.61
Primary Zinc Smelter	0.61
Other Primary Smelters	0.90
Primary Lead Smelter Sintering Machine Discharge End and Equipment Ventilation	1.17
Secondary Metal Recovery Facilities	1.17

When two or more gas streams either wholly or in part are discharged through a single stack, the combined flow rate of all streams shall be used to determine the required standard effective stack height. If streams with different SO_2 concentration allowables, as determined in subsection (b) of this section, are combined into a single stream, the required effective stack height is determined as follows:

(1) Calculate a total combined stream SO_2 concentration allowable as follows:

$$PPMt = \frac{(PPM1)(SCFM1)+(PPM2)(SCFM2) + \ldots(PPMn)(SCFMn)}{(SCFM1 + SCFM2 + \ldots SCFMn)}$$

Where:

PPMt = Allowable SO_2 concentration in total combined stream, ppmv
PPM1 = Allowable SO_2 concentration in stream No.1, ppmv
PPM2 = Same as PPM1 except for stream No. 2
PPMn = Same as PPM1 except for Nth stream
SCFM1 = Effluent flow rate of stream No. 1, scfm
SCFM2 = Same as SCFM1 except for stream No. 2
SCFMn = Same as SCFM1 except for Nth stream

(2) Calculate interpolation constant (Kt) for the total combined stream as follows:

$$Kt = \frac{(PPMt-PPMx)(Kh-Kx)}{(PPMh-PPMx)} + K$$

Where:

Kt = Interpolation constant for use in the following standard effective stack height equation
PPMt = Allowable SO_2 concentration in total combined stream previously calculated and for the stated total ppmv, the other parameters are:

PPMt	PPMx	PPMh	Kx	Kh
650 to 1,000	650	1,000	0.50	0.61
1,000 to 2,500	1,000	2,500	0.61	0.90

>	2,500	2,500	3,500	0.90	1.17

(3) Calculate standard effective stack height for total combined stream as follows: