

Environmental Standards

Emission

EMISSION REGULATIONS FOR RAYON INDUSTRY

a. Existing Plants

Estimation of Uncontrolled Emission Quantity (EQ) of CS₂

For VSF,

EQ = 125 kg of CS₂/t of fibre

For VFY,

EQ = 225 kg of CS₂/t of fibre

	Stack Height (H) requirement, m	Remarks
H = $Q^{0.41} - 3$	3Vs.D u	A minimum of 80% of total emission shall pass through stack. If the calculated stack height is less than 30 m, a minimum of height 30 m shall be provided.

where

Q = CS₂ emission rate, kg/hr

Vs = stack exit velocity, m/sec.

D = diameter of stack, m

u = annual average wind speed at top of stack, m/sec.

Multiple Stacks

1. If there are more than one stack existing in the plant, the required height of all stacks shall be based on the maximum emission rate in any of the stacks. In other words, all the stacks carrying CS₂ emission shall be of same heights (based on the maximum emission rate).
2. Number of stacks shall not be increased from the existing number. However, the number of stacks may be reduced. The existing stacks may be rebuilt and if stacks are to be relocated, condition 3 below applies.
3. Spacing among the stacks (x) at the minimum shall be 3.0 H (in m). If distance, x, between two stacks is less than 3.0 H (in m), emission shall be considered as single point source and height of both the stacks shall be calculated considering all emission is going through one stack.

b. Ambient Air Quality Monitoring

The industry shall install three air quality monitoring stations for CS₂ and H₂S measurements in consultation with the State Pollution Control Board (SPCB) to ensure attainment of WHO recommended ambient air quality norms (CS₂ = 100 µg/m³ and H₂S = 150 µg/m³, 24- hr average).

c. For new plants/expansion projects being commissioned on or after 1-6-1999

Permissible emission limits are :

CS₂ = 21 kg/t of fibre

H₂S = 6.3 kg/t of fibre

(Note : a and b above also apply to new plants/expansion projects).

Source : EPA, 1986
[GSR 7, dated Dec. 22, 1998]
