A8.3. Minimum Ventilation Rates. Table I gives baseline criteria for ventilation rates. Some allowances for increased ventilation may be made for dusty abrasive materials (e.g., organic or friable materials) and high rates of delivery (e.g., a 1 –in diameter nozzle tends to create more dust than a 1/4-in nozzle). Without these allowances, increased clearance times are likely to be necessary during operation.

A8.4 Room Clearance. When the abrasive blasting has stopped, the combination of room ventilation (clearance rate) and the delay between cessation of blasting may maintain exposure levels below permissible exposure limits. Successful operation of blasting rooms, in which aluminum oxide is used on stone containing 30% quartz in which cross-draft ventilation rates have been reported, are based on three air changes per minute. However, leave the respirator on until after exiting the booth. Ultimately, the success of this combination can be proved only by obtaining air samples in the breathing zone of the operator and relating them to the permissible exposure limits.

TABLE A-1. Minimum Design Ventilation Air Volumes for Downdraft Blast-Cleaning Rooms and Ventilation Rates for Crossdraft Blast-Cleaning Rooms Occupied by Blasters[a]

Type of Abrasives	Downdraft Blast-Cleaning Rooms (acfm/sq. ft.[b] fornet floorspace [sq. ft.)[c]]				Crossdraft Blast-Cleaning Rooms (acfm/sq. ft[b] of cross-sectional area)
	0-100	100-200	200-300	>300	
1) Abrasives or material that may generate airborne asbestos fibers or free-silica-containing dusts, coatings containing dusts, coatings containing lead, chromates or other similarly toxic compounds having permissible exposure limits less than 1 mg/m^3.	90	70	60	60	100
2) Abrasives or coating having permissible exposure limits from 1 mg/m^3 to 5 mg/m^3.	60	50	40	35	80
3) Low toxicity materials (such as abrasives or steel or aluminum oxide) and contaminants (such as iron oxide scale) having permissible exposure limits of 5 mg/m^3 or greater.	40	35	30	20	60
4) Shot peening on clean metal with metal shot.	30	20	20	20	50

[a] Ventilation rates exceeding those in the table will depend on individual circumstances and should be determined so as to provide proper ventilation. Consideration should be given to higher rates when the composition of the workpiece is such that upon breakdown from the abrasive impact, toxic contaminants are released into the work area. Also, for crossdraft blast-cleaning rooms, use higher rates when one operator might be downwind of another. For zoned systems, base the air volumes on the area of the active zone(s).

[b] Denotes actual cubic feet per minute (acfm) per square foot (sq. ft.) and is also equivalent to the velocity of air past the operator.

[c] Square feet