

Table 6-15a. Pneumoconiotic agents: Percent of exposures exceeding designated occupational exposure limits by type of mine, MSHA inspector and mine operator samples, 1979-1999

Major Industry	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Coal Mining SIC 11, 12																					
No. of samples with PEL	207,430	254,581	77,764	136,332	136,373	139,050	129,333	120,662	113,050	109,431	103,978	102,213	94,824	91,070	84,346	82,462	78,496	73,001	80,096	89,895	98,876
% > PEL	17.0	15.4	11.0	11.1	10.4	10.6	9.8	10.8	11.0	10.3	9.8	9.1	12.4	11.8	11.2	11.0	11.3	10.1	9.9	9.5	9.0
No. of samples with REL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,625	66,669	71,536	79,282	86,086
% > REL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28.4	27.7	26.7	24.4	25.6
Metal/Nonmetal Mining SIC 10, 14																					
No. of samples with PEL	9,953	6,988	7,474	3,153	7,075	8,008	6,996	7,279	6,761	7,722	8,990	11,304	13,100	12,707	11,038	17,199	13,611	19,207	8,636	4,889	5,382
% > PEL	11.5	10.7	11.0	10.5	12.0	11.6	12.4	10.9	8.9	17.7	14.9	11.1	9.4	9.0	7.1	5.4	5.2	5.4	6.1	6.5	7.8
No. of samples with REL	9,411	6,513	6,826	2,741	6,418	7,473	6,406	6,898	6,369	7,333	8,629	10,899	12,791	12,473	10,660	16,526	13,034	17,255	8,164	4,728	5,107
% > REL	18.3	19.6	19.0	18.1	16.7	15.1	15.2	16.2	11.2	25.9	21.5	16.4	14.1	14.5	11.1	8.4	8.1	8.8	10.0	12.4	15.5

- indicates incalculable field

PEL - permissible exposure limit

REL - recommended exposure limit

SIC - Standard Industrial Classification

NOTE: The NIOSH REL for respirable coal mine dust of 1.0 mg/m³ was adopted in September 1995. The MSHA respirable coal mine quartz exposure data and the NIOSH REL for respirable quartz cannot be compared to each other because they are based on different sampling criteria. See appendices for source description, methods, and agents.

SOURCE: Mine Safety and Health Administration (MSHA) metal/nonmetal mine data and coal mine inspector and mine operator dust and quartz data.