

Table 6-17 (page 1 of 2). Pneumoconiotic agents: Percent of exposures exceeding designated occupational exposure limits by MSHA coal mine district and states, MSHA inspector and mine operator samples, 1979-1999

MSHA Coal Mine District	All Years				1979 - 1988		1989 - 1992		1993 - 1999			
	No. of Samples with PEL	% > PEL	No. of Samples with REL	% > REL	No. of Samples with PEL	% > PEL	No. of Samples with PEL	% > PEL	No. of Samples with PEL	% > PEL	No. of Samples with REL	% > REL
District 1 (Anthracite coal mining regions in Pennsylvania)	41,934	3.5	7,576	8.9	20,987	3.4	7,975	2.8	12,972	4.0	7,576	8.9
District 2 (Bituminous coal mining regions in Pennsylvania)	303,583	9.9	35,457	23.9	202,334	10.3	38,816	11.0	62,433	8.0	35,457	23.9
District 3	270,667	11.5	30,269	23.3	178,203	13.3	37,109	8.8	55,355	7.3	30,269	23.3
Maryland	10,579	11.0	2,323	32.3	5,405	13.9	1,179	8.7	3,995	7.7	2,323	32.3
Ohio	90,025	14.5	8,242	22.5	65,421	17.1	10,168	9.0	14,436	6.5	8,242	22.5
Northern West Virginia	170,063	9.9	19,704	22.5	107,377	10.9	25,762	8.7	36,924	7.6	19,704	22.5
District 4 (Southern West Virginia)	472,288	14.2	60,324	27.4	294,243	15.6	74,563	11.7	103,482	12.1	60,324	27.4
District 5 (Virginia)	301,610	10.1	36,399	20.7	181,204	10.4	52,466	9.9	67,940	9.4	36,399	20.7
District 6 (Eastern Kentucky)	281,960	8.8	49,022	22.4	144,798	7.8	49,971	9.1	87,191	10.1	49,022	22.4
District 7	279,339	8.8	47,325	21.2	133,482	8.3	57,363	8.6	88,494	9.6	47,325	21.2
Central Kentucky	231,417	9.0	42,746	21.4	103,604	8.7	47,796	8.6	80,017	9.8	42,746	21.4
North Carolina	9	0.0	0	-	2	0.0	7	0.0	0	-	0	-
South Carolina	0	-	0	-	0	-	0	-	0	-	0	-
Tennessee	47,884	7.6	4,579	19.2	29,847	7.1	9,560	8.2	8,477	8.5	4,579	19.2
Northern Georgia	29	0.0	0	-	29	0.0	0	-	0	-	0	-
District 8	153,812	15.3	17,574	50.5	95,380	15.3	25,822	14.0	32,610	16.5	17,574	50.5
Illinois	137,945	15.9	14,857	52.0	86,573	16.2	23,347	14.7	28,025	16.2	14,857	52.0
Indiana	14,075	10.7	2,696	42.8	7,312	6.9	2,298	7.5	4,465	18.5	2,696	42.8
Iowa	940	6.4	0	-	794	6.5	127	6.3	19	0.0	0	-
Michigan	0	-	0	-	0	-	0	-	0	-	0	-
Minnesota	0	-	0	-	0	-	0	-	0	-	0	-
Northern Missouri	852	3.3	21	0.0	701	3.0	50	0.0	101	6.9	21	0.0
Wisconsin	0	-	0	-	0	-	0	-	0	-	0	-

See footnotes at end of table.

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MSHA Coal Mine District	All Years				1979 - 1988		1989 - 1992		1993 - 1999			
	No. of Samples with PEL	% > PEL	No. of Samples with REL	% > REL	No. of Samples with PEL	% > PEL	No. of Samples with PEL	% > PEL	No. of Samples with PEL	% > PEL	No. of Samples with REL	% > REL
District 9	125,971	17.8	17,367	33.8	74,282	20.4	21,315	17.2	30,374	11.8	17,367	33.8
Alaska	258	5.8	14	0.0	179	7.3	54	3.7	25	0.0	14	0.0
Arizona	955	5.0	207	1.9	424	6.1	212	3.3	319	4.7	207	1.9
Arkansas	320	4.1	36	0.0	232	4.3	33	6.1	55	1.8	36	0.0
California	13	0.0	11	9.1	0	-	0	-	13	0.0	11	9.1
Colorado	39,718	21.2	4,937	40.7	24,351	24.8	6,438	19.0	8,929	12.6	4,937	40.7
Hawaii	0	-	0	-	0	-	0	-	0	-	0	-
Idaho	0	-	0	-	0	-	0	-	0	-	0	-
Kansas	534	3.4	73	1.4	368	4.3	70	0.0	96	2.1	73	1.4
Louisiana	115	0.0	44	0.0	12	0.0	23	0.0	80	0.0	44	0.0
Southern Missouri	689	3.8	114	7.0	439	4.3	59	1.7	191	3.1	114	7.0
Montana	1,817	7.2	391	5.6	1,087	8.6	160	5.6	570	4.9	391	5.6
Nebraska	0	-	0	-	0	-	0	-	0	-	0	-
Nevada	0	-	0	-	0	-	0	-	0	-	0	-
New Mexico	5,521	20.5	696	6.2	3,551	24.3	622	18.2	1,348	11.6	696	6.2
North Dakota	1,392	2.0	144	0.0	975	2.3	227	2.6	190	0.0	144	0.0
Oklahoma	5,239	9.1	799	9.8	2,835	10.0	1,025	10.7	1,379	6.0	799	9.8
Oregon	0	-	0	-	0	-	0	-	0	-	0	-
Texas	4,138	2.9	515	3.5	2,613	2.4	609	5.6	916	2.5	515	3.5
Utah	54,983	19.5	7,585	43.6	31,598	22.1	10,247	18.8	13,138	13.8	7,585	43.6
Washington	367	1.4	115	4.3	124	0.0	41	4.9	202	1.5	115	4.3
Wyoming	9,912	12.5	1,686	21.9	5,494	12.9	1,495	15.2	2,923	10.5	1,686	21.9
District 10 (Western Kentucky)	82,406	13.3	11,047	48.4	49,001	12.6	13,128	14.1	20,277	14.7	11,047	48.4
District 11	89,693	13.9	12,838	29.8	50,092	16.1	13,557	13.4	26,044	9.9	12,838	29.8
Alabama	89,693	13.9	12,838	29.8	50,092	16.1	13,557	13.4	26,044	9.9	12,838	29.8
Central and Southern Georgia	0	-	0	-	0	-	0	-	0	-	0	-
Florida	0	-	0	-	0	-	0	-	0	-	0	-
Mississippi	0	-	0	-	0	-	0	-	0	-	0	-
Puerto Rico	0	-	0	-	0	-	0	-	0	-	0	-
Virgin Islands	0	-	0	-	0	-	0	-	0	-	0	-
	0	-	0	-	0	-	0	-	0	-	0	-
TOTAL	2,403,263	11.6	325,198	26.2	1,424,006	12.4	392,085	10.7	587,172	10.3	325,198	26.2

- indicates incalculable field
 PEL - permissible exposure limit
 REL - recommended exposure limit
 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) coal mine inspector and mine operator dust and quartz data.