

**Pneumoconiotic agents: Percent of exposures exceeding designated occupational exposure limits by MSHA coal mine district and states, MSHA inspector and mine operator samples, 1979–2003 (page 1 of 2)**

	All years			1979–1988			1989–1992			1993–2003		
	No. of Samples with PEL	%> PEL	No. of Samples with REL	%> PEL	No. of Samples with PEL	%> PEL	No. of Samples with PEL	%> PEL	No. of Samples with PEL	%> PEL	No. of Samples with REL	%> REL
<b>MSHA Coal Mine District</b>												
District 1 (Anthracite coal mining regions in Pennsylvania)	49,722	3.4	14,480	9.6	20,949	3.3	7,954	2.7	20,819	3.9	14,480	9.6
District 2 (Bituminous coal mining regions in Pennsylvania)	332,828	9.3	62,327	22.3	201,889	10.2	38,140	10.6	92,799	6.6	62,327	22.3
District 3	294,167	10.9	52,610	24.3	177,148	13.3	35,996	8.5	81,023	6.6	52,610	24.3
Maryland	12,667	9.8	4,085	30.0	5,385	13.9	1,176	8.7	6,106	6.3	4,085	30.0
Ohio	97,527	13.7	14,884	23.6	65,280	17.1	9,974	8.6	22,273	6.1	14,884	23.6
Northern West Virginia	183,973	9.4	33,641	23.9	106,483	10.9	24,846	8.5	52,644	6.9	33,641	23.9
District 4 (Southern West Virginia)	533,393	13.3	113,657	25.0	294,499	15.5	74,425	11.2	164,469	10.3	113,657	25.0
District 5 (Virginia)	337,929	9.2	69,913	18.8	180,870	10.3	51,439	9.2	105,620	7.2	69,913	18.8
District 6 (Eastern Kentucky)	339,688	8.0	99,642	19.5	144,650	7.8	49,965	8.8	145,073	8.0	99,642	19.5
District 7	318,519	8.0	84,366	20.1	133,009	8.2	55,562	7.9	129,948	7.8	84,366	20.1
Northern Georgia	29	0	0	-	29	0	0	-	0	-	0	-
Central Kentucky	267,128	8.1	76,461	20.4	103,180	8.5	46,154	8.0	117,794	7.9	76,461	20.4
North Carolina	9	0	0	-	2	0	7	0	0	-	0	-
South Carolina	0	-	0	-	0	-	0	-	0	-	0	-
Tennessee	51,348	7.1	7,900	16.8	29,798	7.1	9,401	7.6	12,149	6.8	7,900	16.8
District 8	173,167	15.1	34,787	49.5	95,203	15.3	25,540	13.8	52,424	15.5	34,787	49.5
Illinois	151,869	15.5	27,279	50.5	86,421	16.2	23,089	14.5	42,359	14.9	27,279	50.5
Indiana	19,511	12.7	7,487	45.8	7,292	6.8	2,274	7.1	9,945	18.4	7,487	45.8
Iowa	940	6.4	0	-	794	6.5	127	6.3	19	0	0	-
Michigan	0	-	0	-	0	-	0	-	0	-	0	-
Minnesota	0	-	0	-	0	-	0	-	0	-	0	-
Northern Missouri	847	3.3	21	0	696	3.0	50	0	101	6.9	21	0
Wisconsin	0	-	0	-	0	-	0	-	0	-	0	-

See footnotes at end of table.

**Pneumoconiotic agents: Percent of exposures exceeding designated occupational exposure limits by MSHA coal mine district and states, MSHA inspector and mine operator samples, 1979–2003 (page 2 of 2)**

MSHA Coal Mine District	All years			1979–1988			1989–1992			1993–2003		
	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
<b>District 9</b>	<b>142,601</b>	<b>16.1</b>	<b>32,585</b>	<b>30.3</b>	<b>74,099</b>	<b>20.3</b>	<b>21,045</b>	<b>16.9</b>	<b>47,457</b>	<b>9.2</b>	<b>32,585</b>	<b>30.3</b>
Alaska	280	5.4	35	2.9	179	7.3	54	3.7	47	0	35	2.9
Arizona	1,075	4.5	322	1.2	424	6.1	208	2.9	443	3.6	322	1.2
Arkansas	461	3.5	167	6.0	232	4.3	33	6.1	196	2.0	167	6.0
California	13	0	11	9.1	0	-	0	-	13	0	11	9.1
Colorado	45,127	19.2	9,878	37.7	24,305	24.8	6,353	18.7	14,469	10.1	9,878	37.7
Hawaii	0	-	0	-	0	-	0	-	0	-	0	-
Idaho	0	-	0	-	0	-	0	-	0	-	0	-
Kansas	587	3.1	120	0.8	366	4.4	69	0	152	1.3	120	0.8
Louisiana	205	0	117	4.3	12	0	23	0	170	0	117	4.3
Southern Missouri	801	3.0	210	7.6	436	3.7	59	1.7	306	2.3	210	7.6
Montana	2,151	6.5	689	4.9	1,084	8.5	155	5.8	912	4.3	689	4.9
Nebraska	0	-	0	-	0	-	0	-	0	-	0	-
Nevada	0	-	0	-	0	-	0	-	0	-	0	-
New Mexico	6,656	17.4	1,719	8.7	3,543	24.4	612	18.1	2,501	7.3	1,719	8.7
North Dakota	1,572	1.8	316	0.9	972	2.2	225	2.2	375	0.5	316	0.9
Oklahoma	5,752	8.0	1,306	11.3	2,810	9.6	983	10.0	1,959	4.6	1,306	11.3
Oregon	0	-	0	-	0	-	0	-	0	-	0	-
Texas	4,722	2.5	1,073	2.5	2,608	2.3	607	5.6	1,507	1.7	1,073	2.5
Utah	61,540	17.9	13,607	38.7	31,524	22.1	10,141	18.6	19,875	11.0	13,607	38.7
Washington	417	1.2	163	3.1	124	0	41	4.9	252	1.2	163	3.1
Wyoming	11,242	11.5	2,852	16.9	5,480	12.8	1,482	14.9	4,280	8.6	2,852	16.9
<b>District 10 (Western Kentucky)</b>	<b>93,859</b>	<b>12.7</b>	<b>20,122</b>	<b>48.3</b>	<b>48,971</b>	<b>12.6</b>	<b>13,037</b>	<b>13.9</b>	<b>31,851</b>	<b>12.5</b>	<b>20,122</b>	<b>48.3</b>
<b>District 11</b>	<b>102,623</b>	<b>12.6</b>	<b>24,771</b>	<b>28.0</b>	<b>50,008</b>	<b>16.0</b>	<b>13,256</b>	<b>12.7</b>	<b>39,359</b>	<b>8.3</b>	<b>24,771</b>	<b>28.0</b>
Alabama	102,574	12.6	24,722	28.0	50,008	16.0	13,256	12.7	39,310	8.3	24,722	28.0
Central and Southern Georgia	0	-	0	-	0	-	0	-	0	-	0	-
Florida	0	-	0	-	0	-	0	-	0	-	0	-
Mississippi	46	0	46	0	0	-	0	-	46	0	46	0
Puerto Rico	0	-	0	-	0	-	0	-	0	-	0	-
Virgin Islands	0	-	0	-	0	-	0	-	0	-	0	-
<b>TOTAL</b>	<b>2,718,496</b>	<b>10.8</b>	<b>609,260</b>	<b>24.6</b>	<b>1,421,295</b>	<b>12.3</b>	<b>386,359</b>	<b>10.3</b>	<b>910,842</b>	<b>8.6</b>	<b>609,260</b>	<b>24.6</b>

- indicates incalculable field. PEL - permissible exposure limit REL - recommended exposure limit MSHA - Mine Safety and Health Administration  
 NOTE: The NIOSH REL for respirable coal mine dust of 1.0 mg/m<sup>3</sup> 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: MSHA coal mine inspector and mine operator dust and quartz data.