

Diesel Exhaust PM Risk (Potential Cancer Cases in A Million) for 550 HP Engines

Hours	EF = 0.01 g/bhp-hr											EF = 0.15 g/bhp-hr										
	Downwind Distance (m)											Downwind Distance (m)										
	30	50	69	100	200	300	400	500	800	1600	3200	30	50	69	100	200	300	400	500	800	1600	3200
10	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	
20	0	0	0	0	0	0	0	0	0	0	2	2	2	1	1	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0	3	3	3	2	1	0	0	0	0	0	0	
40	0	0	0	0	0	0	0	0	0	0	4	4	4	3	1	1	0	0	0	0	0	
50	0	0	0	0	0	0	0	0	0	0	4	4	4	4	1	1	1	0	0	0	0	
100	1	1	1	0	0	0	0	0	0	0	9	9	9	7	3	1	1	1	0	0	0	
150	1	1	1	1	0	0	0	0	0	0	13	13	13	11	4	2	2	1	1	0	0	
200	1	1	1	1	0	0	0	0	0	0	18	18	18	14	5	3	2	2	1	0	0	
300	2	2	2	1	1	0	0	0	0	0	27	27	27	21	8	4	3	2	1	1	0	
400	2	2	2	2	1	0	0	0	0	0	36	36	36	28	10	6	4	3	2	1	0	
500	3	3	3	2	1	0	0	0	0	0	45	45	45	35	13	7	5	4	2	1	1	
1000	6	6	6	5	2	1	1	1	0	0	89	89	89	70	26	15	10	8	5	2	1	

Hours	EF = 0.40 g/bhp-hr											EF = 0.55 g/bhp-hr										
	Downwind Distance (m)											Downwind Distance (m)										
	30	50	69	100	200	300	400	500	800	1600	3200	30	50	69	100	200	300	400	500	800	1600	3200
10	2	2	2	2	1	0	0	0	0	0	3	3	3	3	1	1	0	0	0	0	0	
20	5	5	5	4	1	1	1	0	0	0	7	7	7	5	2	1	1	1	0	0	0	
30	7	7	7	6	2	1	1	1	0	0	10	10	10	8	3	2	1	1	0	0	0	
40	9	9	9	7	3	2	1	1	0	0	13	13	13	10	4	2	2	1	1	0	0	
50	12	12	12	9	3	2	1	1	1	0	16	16	16	13	5	3	2	1	1	0	0	
100	24	24	24	19	7	4	3	2	1	1	33	33	33	26	10	5	4	3	2	1	0	
150	36	36	36	28	10	6	4	3	2	1	49	49	49	39	14	8	6	4	2	1	1	
200	47	47	47	37	14	8	5	4	2	1	65	65	65	51	19	11	8	6	3	2	1	
300	71	71	71	56	21	12	8	6	4	2	98	98	98	77	29	16	11	9	5	2	1	
400	95	95	95	75	28	16	11	8	5	2	131	131	131	103	38	22	15	11	7	3	2	
500	119	119	119	94	35	20	14	10	6	3	163	163	163	129	48	27	19	14	8	4	2	
1000	237	237	237	187	70	40	27	21	12	6	326	326	326	257	96	55	38	29	17	8	4	

Hours	EF = 1.00 g/bhp-hr										
	Downwind Distance (m)										
	30	50	69	100	200	300	400	500	800	1600	3200
10	6	6	6	5	2	1	1	1	0	0	
20	12	12	12	9	3	2	1	1	1	0	
30	18	18	18	14	5	3	2	2	1	0	
40	24	24	24	19	7	4	3	2	1	0	
50	30	30	30	23	9	5	3	3	2	0	
100	59	59	59	47	17	10	7	5	3	1	
150	89	89	89	70	26	15	10	8	5	2	
200	119	119	119	94	35	20	14	10	6	3	
300	178	178	178	140	52	30	21	16	9	4	
400	237	237	237	187	70	40	27	21	12	6	
500	297	297	297	234	87	50	34	26	15	7	
1000	593	593	593	468	175	99	69	52	30	14	

Assume: 75% load.

Model used: ISCST3; Meteorological Data: West Los Angeles (1981). Rural Option.

Stack Info: emission rate = 0.01389 g/s; stack diameter = 0.152 m; stack height = 3 m; stack temp = 622 K; stack velocity = 73.1 m/s.

The bold number indicates the downwind distance at the maximum risks.