Estimating Distances for Concentrations Using Diffusion Reduction Factor Table

Figure 13-10: Distance Ratio for a Given Reduction Factor (RF) and Stability Class

TABLE 13-10 DISTANCE RATIO FOR A GIVEN REDUCTION FACTOR (RF) AND STABILITY CLASS

			C	D	E	F	REDUCTION FACTOR	A	B	C			
			1.0	1.0	1.0	1.0	51	4.8	7.1	8.9			
			1.5	1.6	1.6	1.7	52	4.9	7.2	9.0			
			1.8	2.1	2.2	2.3	53	4.9	7.3	9.1			
			2.2	2.5	2.7	2.9	54	4.9	7.4	9.2			
		2.2	2.5	2.9	3.2	3.5	55	5.0	7.4	9.3			
		2.5	2.7	3.3	3.6	4.0	56	5.0	7.5	9.4	15		
7	2.2	2.7	3.0	3.7	4.0	4.5	57	5.0	7.6	9.5	15	18	22
8	2.3	2.8	3.2	4.0	4.4	5.0	58	5.1	7.6	9.5	15	18	22
9	2.4	3.0	3.4	4.3	4.8	5.4	59	5.1	7.7	9.6	15	18	23
10	2.5	3.2	3.6	4.6	5.2	5.9	60	5.1	7.8	9.7	15	19	23
11	2.6	3.3	3.8	5.0	5.5	6.3	61	5.2	7.8	9.8	16	19	23
12	2.7	3.5	4.0	5.2	5.9	6.8	62	5.2	7.9	9.9	16	19	23
13	2.8	3.6	4.2	5.5	6.3	7.2	63	5.2	7.9	10	16	19	24
14	2.9	3.7	4.3	5.8	6.6	7.6	64	5.3	8.0	10	16	20	24
15	3.0	3.9	4.5	6.1	6.9	8.0	65	5.3	8.1	10	16	20	24
16	3.0	4.0	4.7	6.4	7.3	8.4	66	5.3	8.1	10	16	20	25
17	3.1	4.1	4.8	6.6	7.6	8.8	67	5.4	8.2	10	17	20	25
18	3.2	4.2	5.0	6.9	7.9	9.2	68	5.4	8.3	10	17	20	25
19	3.3	4.4	5.1	7.1	8.2	9.6	69	5.4	8.3	11	17	21	25
20	3.3	4.5	5.3	7.4	8.5	10	70	5.5	8.4	11	17	21	26
21	3.4	4.6	5.4	7.6	8.8	10	71	5.5	8.4	11	17	21	26
22	3.4	4.7	5.6	7.9	9.1	11	72	5.5	8.5	11	17	21	26
23	3.5	4.8	5.7	8.1	9.4	11	73	5.6	8.5	11	17	21	27
24	3.6	4.9	5.8	8.3	9.7	12	74	5.6	8.6	11	18	22	27
25	3.6	5.0	6.0	8.6	10	12	75	5.6	8.7	11	18	22	27
26	3.7	5.1	6.1	8.8	10	12	76	5.7	8.7	11	18	22	27
27	3.7	5.2	6.2	9.0	11	13	77	5.7	8.8	11	18	22	28
28	3.8	5.3	6.4	9.2	11	13	78	5.7	8.8	11	18	22	28
29	3.9	5.4	6.5	9.4	11	13	79	5.7	8.9	11	18	23	28
30	3.9	5.5	6.6	9.7	11	14	80	5.8	8.9	11	19	23	29
31	4.0	5.6	6.7	9.9	12	14	81	5.8	9.0	11	19	23	29
32	4.0	5.7	6.9	10	12	14	82	5.8	9.1	12	19	23	29
33	4.1	5.7	7.0	10	12	15	83	5.9	9.1	12	19	23	29
34	4.1	5.8	7.1	11	12	15	84	5.9	9.2	12	19	24	30
35	4.2	5.9	7.2	11	13	15	85	5.9	9.2	12	19	24	30
36	4.2	6.0	7.3	11	13	16	86	5.9	9.3	12	19	24	30
37	4.2	6.1	7.4	11	13	16	87	6.0	9.3	12	20	24	31
38	4.3	6.2	7.5	11	13	16	88	6.0	9.4	12	20	24	31
39	4.3	6.2	7.7	12	14	17	89	6.0	9.4	12	20	25	31
40	4.4	6.3	7.8	12	14	17	90	6.1	9.5	12	20	25	32
41	4.4	6.4	7.9	12	14	17	91	6.1	9.5	12	20	25	32
42	4.5	6.5	8.0	12	14	18	92	6.1	9.6	12	20	25	32
43	4.5	6.6	8.1	12	15	18	93	6.1	9.6	12	21	25	32
44	4.5	6.6	8.2	12	15	18	94	6.2	9.7	12	21	26	32
45	4.6	6.7	8.3	13	15	19	95	6.2	9.8	13	21	26	33
46	4.6	6.8	8.4	13	15	19	96	6.2	9.8	13	21	26	33
47	4.7	6.9	8.5	13	16	19	97	6.2	9.9	13	21	26	33
48	4.7	6.9	8.6	13	16	20	98	6.3	9.9	13	21	26	34
49	4.7	7.0	8.7	13	16	20	99	6.3	10	13	21	27	34
50	4.8	7.1	8.8	14	16	20	100	6.3	10	13	22	27	34

Figure 13-10 Distance Ratio for a Given Reduction Factor (RF) and Stability Class is used to estimate distances at which specified concentrations or doses can be found for ground level releases with no inversion lid. To find the distance ratio, follow the row heading with the correct Reduction Factor to the left to the correct stability class column. The table's data is as follows:

RF	Stability Class						RF	Stability Class					
	A	**B**	**C**	**D**	**E**	**F**		**A**	**B**	**C**	**D**	**E**	**F**
1	1.0	1.0	1.0	1.0	1.0	1.0	**51**	4.8	7.1	8.9	14	17	20
2	1.3	1.4	1.5	1.6	1.6	1.7	**52**	4.9	7.2	9.0	14	17	20
3	1.6	1.7	1.8	2.1	2.2	2.3	**53**	4.9	7.3	9.1	14	17	21
4	1.7	2.0	2.2	2.5	2.7	2.9	**54**	4.9	7.4	9.2	14	17	21
5	1.9	2.2	2.5	2.9	3.2	3.5	**55**	5.0	7.4	9.3	14	18	21
6	2.1	2.5	2.7	3.3	3.6	4.0	**56**	5.0	7.5	9.4	15	18	22
7	2.2	2.7	3.0	3.7	4.0	4.5	**57**	5.0	7.6	9.5	15	18	22
8	2.3	2.8	3.2	4.0	4.4	5.0	**58**	5.1	7.6	9.5	15	18	22
9	2.4	3.0	3.4	4.3	4.8	5.4	**59**	5.1	7.7	9.6	15	18	23
10	2.5	3.2	3.6	4.6	5.2	5.9	**60**	5.1	7.8	9.7	15	19	23
11	2.6	3.3	3.8	5.0	5.5	6.3	**61**	5.2	7.8	9.8	16	19	23
12	2.7	3.5	4.0	5.2	5.9	6.8	**62**	5.2	7.9	9.9	16	19	23
13	2.8	3.6	4.2	5.5	6.3	7.2	**63**	5.2	7.9	10	16	19	24
14	2.9	3.7	4.3	5.8	6.6	7.6	**64**	5.3	8.0	10	16	20	24
15	3.0	3.9	4.5	6.1	6.9	8.0	**65**	5.3	8.1	10	16	20	24
16	3.0	4.0	4.7	6.4	7.3	8.4	**66**	5.3	8.1	10	16	20	25
17	3.1	4.1	4.8	6.6	7.6	8.8	**67**	5.4	8.2	10	17	20	25
18	3.2	4.2	5.0	6.9	7.9	9.2	**68**	5.4	8.3	10	17	20	25
19	3.3	4.4	5.1	7.1	8.2	9.6	**69**	5.4	8.3	11	17	21	25
20	3.3	4.5	5.3	7.4	8.5	10	**70**	5.5	8.4	11	17	21	26
21	3.4	4.6	5.4	7.6	8.8	10	**71**	5.5	8.4	11	17	21	26
22	3.4	4.7	5.6	7.9	9.1	11	**72**	5.5	8.5	11	17	21	26
23	3.5	4.8	5.7	8.1	9.4	11	**73**	5.6	8.5	11	17	21	27
24	3.6	4.9	5.8	8.3	9.7	12	**74**	5.6	8.6	11	18	22	27
25	3.6	5.0	6.0	8.6	10	12	**75**	5.6	8.7	11	18	22	27
26	3.7	5.1	6.1	8.8	10	12	**76**	5.7	8.7	11	18	22	27
27	3.7	5.2	6.2	9.0	11	13	**77**	5.7	8.8	11	18	22	28
28	3.8	5.3	6.4	9.2	11	13	**78**	5.7	8.8	11	18	22	28
29	3.9	5.4	6.5	9.4	11	13	**79**	5.7	8.9	11	18	23	28
30	3.9	5.5	6.6	9.7	11	14	**80**	5.8	8.9	11	19	23	29
31	4.0	5.6	6.7	9.9	12	14	**81**	5.8	9.0	11	19	23	29
32	4.0	5.7	6.9	10	12	14	**82**	5.8	9.1	12	19	23	29
33	4.1	5.7	7.0	10	12	15	**83**	5.9	9.1	12	19	23	29
34	4.1	5.8	7.1	11	12	15	**84**	5.9	9.2	12	19	24	30
35	4.2	5.9	7.2	11	13	15	**85**	5.9	9.2	12	19	24	30
36	4.2	6.0	7.3	11	13	16	**86**	5.9	9.3	12	19	24	30
37	4.2	6.1	7.4	11	13	16	**87**	6.0	9.3	12	20	24	31
38	4.3	6.2	7.5	11	13	16	**88**	6.0	9.4	12	20	24	31
39	4.3	6.2	7.7	12	14	17	**89**	6.0	9.4	12	20	25	31
40	4.4	6.3	7.8	12	14	17	**90**	6.1	9.5	12	20	25	32
41	4.4	6.4	7.9	12	14	17	**91**	6.1	9.5	12	20	25	32
42	4.5	6.5	8.0	12	14	18	**92**	6.1	9.6	12	20	25	32
43	4.5	6.6	8.1	12	15	18	**93**	6.1	9.6	12	21	25	32
44	4.5	6.6	8.2	12	15	18	**94**	6.2	9.7	12	21	26	32
45	4.6	6.7	8.3	13	15	19	**95**	6.2	9.8	13	21	26	33
46	4.6	6.8	8.4	13	15	19	**96**	6.2	9.8	13	21	26	33
47	4.7	6.9	8.5	13	16	19	**97**	6.2	9.9	13	21	26	33
48	4.7	6.9	8.6	13	16	20	**98**	6.3	9.9	13	21	26	34
49	4.7	7.0	8.7	13	16	20	**99**	6.3	10	13	21	27	34
50	4.8	7.1	8.8	14	16	20	**100**	6.3	10	13	22	27	34