US EPA ARCHIVE DOCUMENT

TABLE A-9-8
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	1.00000	1.00000	1.00000	1.00000
0.5	1.00000	1.00011	0.99900	1.00054
1.0	1.00000	0.99958	1.00163	1.00281
1.5	1.00000	0.99016	0.99318	0.99259
2.0	1.00000	1.00117	1.00191	1.00293
2.5	1.00000	1.00689	1.00533	1.00650
3.0	1.00000	0.99150	0.99448	0.99323
3.5	1.00000	1.00879	1.01149	1.01183
4.0	1.00000	0.99401	0.99451	0.99501
4.5	1.00000	0.99931	0.99793	0.99836
5.0	1.00000	1.01047	1.00782	1.00819
5.5	1.00000	0.99702	0.99702	0.99751
6.0	1.00000	1.00015	1.00000	1.00015
6.5	1.00000	0.99017	0.99000	0.99117
7.0	1.00000	1.00112	1.00202	1.00224
7.5	1.00000	1.01323	1.01356	1.01323
8.0	1.00000	1.01479	1.01517	1.01517
8.5	1.00000	1.00604	1.00644	1.00644
9.0	1.00000	1.00396	1.00396	1.00396
9.5	1.00000	1.01154	1.01154	1.01154
10.0	1.00000	1.01520	1.01520	1.01520
10.5	1.00000	1.00627	1.00627	1.00564
11.0	1.00000	1.00550	1.00619	1.00619
11.5	1.00000	1.00448	1.00522	1.00448
12.0	1.00000	1.00158	1.00236	1.00236
12.5	1.00000	1.00086	1.00173	1.00259
13.0	1.00000	1.00095	1.00095	1.00095
13.5	1.00000	1.00206	1.00206	1.00206
14.0	1.00000	0.99781	0.99781	0.99781
14.5	1.00000	0.98630	0.98630	0.98516
15.0	1.00000	0.99506	0.99506	0.99506
15.5	1.00000	0.98500	0.98500	0.98750
16.0	1.00000	0.98465	0.98465	0.98465
16.5	1.00000	0.99851	1.00149	1.00149
17.0	1.00000	1.00000	1.00315	1.00158
17.5	1.00000	1.00170	1.00509	1.00509
18.0	1.00000	0.99650	0.99825	0.99825
18.5	1.00000	0.99813	0.99813	1.00000
19.0	1.00000	0.99038	0.99038	0.99038
19.5	1.00000	1.00000	1.00208	1.00000
20.0	1.00000	1.00665	1.00665	1.00665
20.5	1.00000	0.99549	0.99549	0.99549
21.0	1.00000	0.99523	0.99523	0.99523
21.5	1.00000	0.99267	0.99267	0.99267

TABLE A-9-8
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
22.0	1.00000	0.99237	0.99491	0.99237
22.5	1.00000	0.99728	0.99728	0.99728
23.0	1.00000	0.99720	0.99720	0.99720
23.5	1.00000	0.99703	1.00000	0.99703
24.0	1.00000	0.99686	1.00000	1.00000
24.5	1.00000	0.99679	0.99679	0.99679
25.0	1.00000	0.99666	0.99666	0.99666
25.5	1.00000	0.99655	1.00000	1.00000
26.0	1.00000	0.99638	1.00000	1.00000
26.5	1.00000	0.99620	0.99620	0.99620
27.0	1.00000	1.00000	1.00000	1.00000
27.5	1.00000	0.99602	0.99602	0.99602
28.0	1.00000	1.00000	1.00000	1.00000
28.5	1.00000	1.00000	1.00000	1.00000
29.0	1.00000	0.99552	0.99552	0.99552
29.5	1.00000	1.00000	1.00000	1.00000
30.0	1.00000	1.00000	1.00000	1.00000
30.5	1.00000	0.99510	1.00000	1.00000
31.0	1.00000	1.00000	1.00000	1.00000
31.5	1.00000	1.00000	1.00000	1.00000
32.0	1.00000	0.99457	0.99457	0.99457
32.5	1.00000	1.00000	0.99444	0.99444
33.0	1.00000	0.99432	0.99432	0.98864
33.5	1.00000	1.00000	0.99419	0.99419
34.0	1.00000	0.99390	0.99390	0.98780
34.5	1.00000	1.00000	1.00000	1.00000
35.0	1.00000	1.00000	1.00000	1.00000
35.5	1.00000	1.00000	1.00000	1.00000
36.0	1.00000	0.99333	0.99333	0.99333
36.5	1.00000	0.98639	0.98639	0.98639
37.0	1.00000	0.99286	0.99286	0.99286
37.5	1.00000	0.99259	1.00000	0.99259
38.0	1.00000	0.99259	1.00000	0.99259
38.5	1.00000	0.99237	0.99237	0.99237
39.0	1.00000	0.99213	0.98425	0.98425
39.5	1.00000	1.00000	1.00000	1.00000
40.0	1.00000	1.00000	1.00000	1.00000
40.5	1.00000	1.00000	1.00000	1.00000
41.0	1.00000	1.00000	1.00000	1.00000
41.5	1.00000	1.00000	1.00000	1.00000
42.0	1.00000	1.00000	1.00000	1.00000
42.5	1.00000	1.00000	1.00000	1.00000
43.0	1.00000	1.00000	1.00000	1.00000
43.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-8
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
44.0	1.00000	1.00000	1.00000	1.00000
44.5	1.00000	1.00000	1.00000	1.00000
45.0	1.00000	1.00000	1.00000	1.00000
45.5	1.00000	1.01042	1.01042	1.01042
46.0	1.00000	1.00000	1.00000	1.00000
46.5	1.00000	1.00000	1.00000	1.00000
47.0	1.00000	1.00000	1.01124	1.01124
47.5	1.00000	1.00000	1.00000	1.00000
48.0	1.00000	1.00000	1.00000	1.00000
48.5	1.00000	1.00000	1.00000	1.00000
49.0	1.00000	1.00000	1.00000	1.00000
49.5	1.00000	1.00000	1.00000	1.00000
50.0	1.00000	1.00000	1.01299	1.01299

Notes

Base Case: 500 meter spaced receptor grid, no terrain grid

Test Case 1: 500 meter spaced receptor grid, 500 meter spaced terrain grid

Test Case 2: 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3: 500 meter spaced receptor grid, 100 meter spaced terrain grid

TABLE A-9-9
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = $g/m^2/g/s$

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	0.00000	0.00000	0.00000	0.00000
0.5	0.36817	0.36820	0.36785	0.36834
1.0	0.16358	0.16352	0.16379	0.16396
1.5	0.08556	0.08486	0.08509	0.08505
2.0	0.05939	0.05944	0.05948	0.05953
2.5	0.04290	0.04312	0.04307	0.04311
3.0	0.03008	0.02988	0.02996	0.02992
3.5	0.03293	0.03314	0.03321	0.03322
4.0	0.01909	0.01900	0.01901	0.01902
4.5	0.02230	0.02229	0.02226	0.02227
5.0	0.01620	0.01632	0.01629	0.01629
5.5	0.01571	0.01568	0.01568	0.01569
6.0	0.01287	0.01286	0.01286	0.01287
6.5	0.01189	0.01181	0.01181	0.01182
7.0	0.00896	0.00897	0.00897	0.00898
7.5	0.00618	0.00624	0.00624	0.00624
8.0	0.00543	0.00548	0.00548	0.00548
8.5	0.00514	0.00516	0.00516	0.00516
9.0	0.00472	0.00474	0.00474	0.00474
9.5	0.00399	0.00402	0.00402	0.00402
10.0	0.00361	0.00364	0.00364	0.00364
10.5	0.00338	0.00339	0.00339	0.00339
11.0	0.00309	0.00310	0.00311	0.00311
11.5	0.00286	0.00287	0.00287	0.00287
12.0	0.00273	0.00273	0.00273	0.00273
12.5	0.00250	0.00250	0.00250	0.00250
13.0	0.00229	0.00229	0.00229	0.00229
13.5	0.00212	0.00213	0.00213	0.00213
14.0	0.00201	0.00200	0.00200	0.00201
14.5	0.00192	0.00191	0.00191	0.00191
15.0	0.00179	0.00179	0.00178	0.00179
15.5	0.00177	0.00176	0.00176	0.00176
16.0	0.00174	0.00172	0.00172	0.00172
16.5	0.00151	0.00151	0.00151	0.00151
17.0	0.00143	0.00143	0.00143	0.00143
17.5	0.00133	0.00134	0.00134	0.00134
18.0	0.00130	0.00130	0.00130	0.00130
18.5	0.00122	0.00122	0.00122	0.00122
19.0	0.00119	0.00118	0.00118	0.00118
19.5	0.00110	0.00110	0.00111	0.00110
20.0	0.00104	0.00104	0.00104	0.00105
20.5	0.00103	0.00102	0.00102	0.00102
21.0	0.00097	0.00097	0.00097	0.00097

TABLE A-9-9
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
21.5	0.00095	0.00095	0.00095	0.00095
22.0	0.00092	0.00092	0.00092	0.00092
22.5	0.00086	0.00086	0.00086	0.00086
23.0	0.00084	0.00084	0.00084	0.00084
23.5	0.00080	0.00080	0.00080	0.00080
24.0	0.00075	0.00075	0.00075	0.00075
24.5	0.00074	0.00074	0.00074	0.00074
25.0	0.00071	0.00071	0.00071	0.00071
25.5	0.00070	0.00069	0.00070	0.00070
26.0	0.00066	0.00066	0.00066	0.00066
26.5	0.00063	0.00063	0.00063	0.00063
27.0	0.00063	0.00063	0.00063	0.00063
27.5	0.00061	0.00061	0.00061	0.00061
28.0	0.00058	0.00058	0.00058	0.00058
28.5	0.00055	0.00055	0.00055	0.00055
29.0	0.00054	0.00054	0.00054	0.00054
29.5	0.00054	0.00054	0.00054	0.00054
30.0	0.00052	0.00052	0.00052	0.00052
30.5	0.00050	0.00050	0.00050	0.00050
31.0	0.00049	0.00049	0.00049	0.00049
31.5	0.00048	0.00048	0.00048	0.00048
32.0	0.00046	0.00045	0.00045	0.00045
32.5	0.00045	0.00045	0.00045	0.00045
33.0	0.00044	0.00044	0.00044	0.00044
33.5	0.00043	0.00043	0.00043	0.00043
34.0	0.00041	0.00041	0.00041	0.00041
34.5	0.00041	0.00041	0.00041	0.00041
35.0	0.00039	0.00039	0.00039	0.00039
35.5	0.00038	0.00038	0.00038	0.00038
36.0	0.00038	0.00038	0.00038	0.00038
36.5	0.00037	0.00037	0.00037	0.00037
37.0	0.00036	0.00036	0.00036	0.00036
37.5	0.00035	0.00034	0.00035	0.00034
38.0	0.00035	0.00035	0.00035	0.00035
38.5	0.00034	0.00034	0.00034	0.00034
39.0	0.00033	0.00033	0.00033	0.00033
39.5	0.00032	0.00032	0.00032	0.00032
40.0	0.00032	0.00032	0.00032	0.00032
40.5	0.00031	0.00031	0.00031	0.00031
41.0	0.00031	0.00030	0.00030	0.00030
41.5	0.00030	0.00030	0.00030	0.00030
42.0	0.00029	0.00029	0.00029	0.00029
42.5	0.00028	0.00028	0.00028	0.00028

TABLE A-9-9
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = $g/m^2/g/s$

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
43.0	0.00028	0.00028	0.00028	0.00028
43.5	0.00027	0.00027	0.00027	0.00027
44.0	0.00026	0.00026	0.00026	0.00026
44.5	0.00026	0.00026	0.00026	0.00026
45.0	0.00026	0.00026	0.00026	0.00026
45.5	0.00026	0.00026	0.00026	0.00026
46.0	0.00025	0.00025	0.00025	0.00025
46.5	0.00025	0.00025	0.00025	0.00025
47.0	0.00024	0.00024	0.00024	0.00024
47.5	0.00024	0.00024	0.00024	0.00024
48.0	0.00023	0.00023	0.00023	0.00023
48.5	0.00023	0.00023	0.00023	0.00023
49.0	0.00022	0.00022	0.00022	0.00022
49.5	0.00021	0.00021	0.00021	0.00021
50.0	0.00021	0.00021	0.00021	0.00021

Notes

Base Case: 500 meter spaced receptor grid, no terrain grid.

Test Case 1: 500 meter spaced receptor grid, 500 meter spaced terrain grid

Test Case 2: 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3. 500 meter spaced receptor grid, 100 meter spaced terrain grid.

TABLE A-9-10
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	1.00000	1.00000	1.00000	1.00000
0.5	1.00000	1.00008	0.99813	1.00046
1.0	1.00000	0.99963	1.00128	1.00232
1.5	1.00000	0.99182	0.99451	0.99404
2.0	1.00000	1.00084	1.00152	1.00236
2.5	1.00000	1.00513	1.00396	1.00490
3.0	1.00000	0.99335	0.99601	0.99468
3.5	1.00000	1.00638	1.00850	1.00881
4.0	1.00000	0.99529	0.99581	0.99633
4.5	1.00000	0.99955	0.99821	0.99865
5.0	1.00000	1.00741	1.00556	1.00556
5.5	1.00000	0.99809	0.99809	0.99873
6.0	1.00000	0.99922	0.99922	1.00000
6.5	1.00000	0.99327	0.99327	0.99411
7.0	1.00000	1.00112	1.00112	1.00223
7.5	1.00000	1.00971	1.00971	1.00971
8.0	1.00000	1.00921	1.00921	1.00921
8.5	1.00000	1.00389	1.00389	1.00389
9.0	1.00000	1.00424	1.00424	1.00424
9.5	1.00000	1.00752	1.00752	1.00752
10.0	1.00000	1.00831	1.00831	1.00831
10.5	1.00000	1.00296	1.00296	1.00296
11.0	1.00000	1.00324	1.00647	1.00647
11.5	1.00000	1.00350	1.00350	1.00350
12.0	1.00000	1.00000	1.00000	1.00000
12.5	1.00000	1.00000	1.00000	1.00000
13.0	1.00000	1.00000	1.00000	1.00000
13.5	1.00000	1.00472	1.00472	1.00472
14.0	1.00000	0.99502	0.99502	1.00000
14.5	1.00000	0.99479	0.99479	0.99479
15.0	1.00000	1.00000	0.99441	1.00000
15.5	1.00000	0.99435	0.99435	0.99435
16.0	1.00000	0.98851	0.98851	0.98851
16.5	1.00000	1.00000	1.00000	1.00000
17.0	1.00000	1.00000	1.00000	1.00000
17.5	1.00000	1.00752	1.00752	1.00752
18.0	1.00000	1.00000	1.00000	1.00000
18.5	1.00000	1.00000	1.00000	1.00000
19.0	1.00000	0.99160	0.99160	0.99160
19.5	1.00000	1.00000	1.00909	1.00000
20.0	1.00000	1.00000	1.00000	1.00962
20.5	1.00000	0.99029	0.99029	0.99029
21.0	1.00000	1.00000	1.00000	1.00000
21.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-10
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
22.0	1.00000	1.00000	1.00000	1.00000
22.5	1.00000	1.00000	1.00000	1.00000
23.0	1.00000	1.00000	1.00000	1.00000
23.5	1.00000	1.00000	1.00000	1.00000
24.0	1.00000	1.00000	1.00000	1.00000
24.5	1.00000	1.00000	1.00000	1.00000
25.0	1.00000	1.00000	1.00000	1.00000
25.5	1.00000	0.98571	1.00000	1.00000
26.0	1.00000	1.00000	1.00000	1.00000
26.5	1.00000	1.00000	1.00000	1.00000
27.0	1.00000	1.00000	1.00000	1.00000
27.5	1.00000	1.00000	1.00000	1.00000
28.0	1.00000	1.00000	1.00000	1.00000
28.5	1.00000	1.00000	1.00000	1.00000
29.0	1.00000	1.00000	1.00000	1.00000
29.5	1.00000	1.00000	1.00000	1.00000
30.0	1.00000	1.00000	1.00000	1.00000
30.5	1.00000	1.00000	1.00000	1.00000
31.0	1.00000	1.00000	1.00000	1.00000
31.5	1.00000	1.00000	1.00000	1.00000
32.0	1.00000	0.97826	0.97826	0.97826
32.5	1.00000	1.00000	1.00000	1.00000
33.0	1.00000	1.00000	1.00000	1.00000
33.5	1.00000	1.00000	1.00000	1.00000
34.0	1.00000	1.00000	1.00000	1.00000
34.5	1.00000	1.00000	1.00000	1.00000
35.0	1.00000	1.00000	1.00000	1.00000
35.5	1.00000	1.00000	1.00000	1.00000
36.0	1.00000	1.00000	1.00000	1.00000
36.5	1.00000	1.00000	1.00000	1.00000
37.0	1.00000	1.00000	1.00000	1.00000
37.5	1.00000	0.97143	1.00000	0.97143
38.0	1.00000	1.00000	1.00000	1.00000
38.5	1.00000	1.00000	1.00000	1.00000
39.0	1.00000	1.00000	1.00000	1.00000
39.5	1.00000	1.00000	1.00000	1.00000
40.0	1.00000	1.00000	1.00000	1.00000
40.5	1.00000	1.00000	1.00000	1.00000
41.0	1.00000	0.96774	0.96774	0.96774
41.5	1.00000	1.00000	1.00000	1.00000
42.0	1.00000	1.00000	1.00000	1.00000
42.5	1.00000	1.00000	1.00000	1.00000
43.0	1.00000	1.00000	1.00000	1.00000
43.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-10
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
44.0	1.00000	1.00000	1.00000	1.00000
44.5	1.00000	1.00000	1.00000	1.00000
45.0	1.00000	1.00000	1.00000	1.00000
45.5	1.00000	1.00000	1.00000	1.00000
46.0	1.00000	1.00000	1.00000	1.00000
46.5	1.00000	1.00000	1.00000	1.00000
47.0	1.00000	1.00000	1.00000	1.00000
47.5	1.00000	1.00000	1.00000	1.00000
48.0	1.00000	1.00000	1.00000	1.00000
48.5	1.00000	1.00000	1.00000	1.00000
49.0	1.00000	1.00000	1.00000	1.00000
49.5	1.00000	1.00000	1.00000	1.00000
50.0	1.00000	1.00000	1.00000	1.00000

Notes

Base Case 500 meter spaced receptor grid no terrain grid

Test Case 1. 500 meter spaced receptor grid, 500 meter spaced terrain grid.

Test Case 2 500 meter spaced receptor grid 250 meter spaced terrain grid.

Test Case 3 500 meter spaced receptor grid 100 meter spaced terrain grid

TABLE A-9-11
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	0.00000	0.00000	0.00000	0.00000
0.5	0.27030	0.27031	0.27018	0.27037
1.0	0.09977	0.09975	0.09987	0.09993
1.5	0.05420	0.05391	0.05397	0.05396
2.0	0.03416	0.03418	0.03419	0.03421
2.5	0.02362	0.02370	0.02368	0.02370
3.0	0.01749	0.01743	0.01744	0.01744
3.5	0.01630	0.01635	0.01635	0.01636
4.0	0.01063	0.01060	0.01060	0.01061
4.5	0.01084	0.01083	0.01083	0.01083
5.0	0.00782	0.00784	0.00784	0.00784
5.5	0.00756	0.00756	0.00756	0.00756
6.0	0.00623	0.00623	0.00623	0.00623
6.5	0.00567	0.00565	0.00565	0.00566
7.0	0.00423	0.00424	0.00424	0.00424
7.5	0.00308	0.00309	0.00309	0.00309
8.0	0.00273	0.00274	0.00274	0.00274
8.5	0.00252	0.00252	0.00252	0.00252
9.0	0.00227	0.00227	0.00227	0.00227
9.5	0.00198	0.00199	0.00199	0.00199
10.0	0.00180	0.00180	0.00180	0.00180
10.5	0.00165	0.00165	0.00165	0.00165
11.0	0.00151	0.00151	0.00151	0.00151
11.5	0.00138	0.00139	0.00139	0.00139
12.0	0.00131	0.00131	0.00131	0.00131
12.5	0.00118	0.00118	0.00118	0.00118
13.0	0.00109	0.00109	0.00109	0.00110
13.5	0.00102	0.00102	0.00102	0.00102
14.0	0.00095	0.00095	0.00095	0.00095
14.5	0.00089	0.00089	0.00089	0.00089
15.0	0.00083	0.00083	0.00083	0.00083
15.5	0.00081	0.00081	0.00081	0.00081
16.0	0.00076	0.00076	0.00076	0.00076
16.5	0.00069	0.00069	0.00069	0.00069
17.0	0.00065	0.00065	0.00065	0.00065
17.5	0.00061	0.00061	0.00061	0.00061
18.0	0.00058	0.00058	0.00058	0.00058
18.5	0.00055	0.00055	0.00055	0.00055
19.0	0.00052	0.00052	0.00052	0.00052
19.5	0.00049	0.00049	0.00049	0.00049
20.0	0.00047	0.00047	0.00047	0.00047
20.5	0.00045	0.00045	0.00045	0.00045
21.0	0.00042	0.00042	0.00042	0.00042

TABLE A-9-11
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
21.5	0.00041	0.00041	0.00041	0.00041
22.0	0.00039	0.00039	0.00039	0.00039
22.5	0.00037	0.00037	0.00037	0.00037
23.0	0.00035	0.00035	0.00035	0.00035
23.5	0.00034	0.00034	0.00034	0.00034
24.0	0.00032	0.00032	0.00032	0.00032
24.5	0.00031	0.00031	0.00031	0.00031
25.0	0.00030	0.00030	0.00030	0.00030
25.5	0.00029	0.00029	0.00029	0.00029
26.0	0.00027	0.00027	0.00027	0.00027
26.5	0.00026	0.00026	0.00026	0.00026
27.0	0.00025	0.00025	0.00025	0.00025
27.5	0.00025	0.00025	0.00025	0.00025
28.0	0.00024	0.00024	0.00024	0.00024
28.5	0.00023	0.00023	0.00023	0.00023
29.0	0.00022	0.00022	0.00022	0.00022
29.5	0.00021	0.00021	0.00021	0.00021
30.0	0.00020	0.00020	0.00020	0.00020
30.5	0.00020	0.00020	0.00020	0.00020
31.0	0.00019	0.00019	0.00019	0.00019
31.5	0.00018	0.00018	0.00018	0.00018
32.0	0.00018	0.00018	0.00018	0.00018
32.5	0.00017	0.00017	0.00017	0.00017
33.0	0.00017	0.00017	0.00017	0.00017
33.5	0.00016	0.00016	0.00016	0.00016
34.0	0.00016	0.00016	0.00016	0.00016
34.5	0.00015	0.00015	0.00015	0.00015
35.0	0.00015	0.00015	0.00015	0.00015
35.5	0.00014	0.00014	0.00014	0.00014
36.0	0.00014	0.00014	0.00014	0.00014
36.5	0.00014	0.00014	0.00014	0.00014
37.0	0.00013	0.00013	0.00013	0.00013
37.5	0.00013	0.00013	0.00013	0.00013
38.0	0.00012	0.00012	0.00012	0.00012
38.5	0.00012	0.00012	0.00012	0.00012
39.0	0.00012	0.00012	0.00012	0.00012
39.5	0.00011	0.00011	0.00011	0.00011
40.0	0.00011	0.00011	0.00011	0.00011
40.5	0.00011	0.00011	0.00011	0.00011
41.0	0.00011	0.00011	0.00011	0.00011
41.5	0.00010	0.00010	0.00010	0.00010
42.0	0.00010	0.00010	0.00010	0.00010
42.5	0.00010	0.00010	0.00010	0.00010

TABLE A-9-11
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m^2/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
43.0	0.00010	0.00010	0.00010	0.00010
43.5	0.00009	0.00009	0.00009	0.00009
44.0	0.00009	0.00009	0.00009	0.00009
44.5	0.00009	0.00009	0.00009	0.00009
45.0	0.00009	0.00009	0.00009	0.00009
45.5	0.00008	0.00008	0.00008	0.00008
46.0	0.00008	0.00008	0.00008	0.00008
46.5	0.00008	0.00008	0.00008	0.00008
47.0	0.00008	0.00008	0.00008	0.00008
47.5	0.00008	0.00008	0.00008	0.00008
48.0	0.00008	0.00008	0.00008	0.00008
48.5	0.00007	0.00007	0.00007	0.00007
49.0	0.00007	0.00007	0.00007	0.00007
49.5	0.00007	0.00007	0.00007	0.00007
50.0	0.00007	0.00007	0.00007	0.00007

Notes.

Base Case: 500 meter spaced receptor grid, no terrain grid

Test Case 1. 500 meter spaced receptor grid, 500 meter spaced terrain grid

Test Case 2. 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3. 500 meter spaced receptor grid, 100 meter spaced terrain grid

TABLE A-9-12
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	1.00000	1.00000	1.00000	1.00000
0.5	1.00000	1.00004	0.99956	1.00026
1.0	1.00000	0.99980	1.00100	1.00160
1.5	1.00000	0.99465	0.99576	0.99557
2.0	1.00000	1.00059	1.00088	1.00146
2.5	1.00000	1.00339	1.00254	1.00339
3.0	1.00000	0.99657	0.99714	0.99714
3.5	1.00000	1.00307	1.00307	1.00368
4.0	1.00000	0.99718	0.99718	0.99812
4.5	1.00000	0.99908	0.99908	0.99908
5.0	1.00000	1.00256	1.00256	1.00256
5.5	1.00000	1.00000	1.00000	1.00000
6.0	1.00000	1.00000	1.00000	1.00000
6.5	1.00000	0.99647	0.99647	0.99824
7.0	1.00000	1.00236	1.00236	1.00236
7.5	1.00000	1.00325	1.00325	1.00325
8.0	1.00000	1.00366	1.00366	1.00366
8.5	1.00000	1.00000	1.00000	1.00000
9.0	1.00000	1.00000	1.00000	1.00000
9.5	1.00000	1.00505	1.00505	1.00505
10.0	1.00000	1.00000	1.00000	1.00000
10.5	1.00000	1.00000	1.00000	1.00000
11.0	1.00000	1.00000	1.00000	1.00000
11.5	1.00000	1.00725	1.00725	1.00725
12.0	1.00000	1.00000	1.00000	1.00000
12.5	1.00000	1.00000	1.00000	1.00000
13.0	1.00000	1.00000	1.00000	1.00917
13.5	1.00000	1.00000	1.00000	1.00000
14.0	1.00000	1.00000	1.00000	1.00000
14.5	1.00000	1.00000	1.00000	1.00000
15.0	1.00000	1.00000	1.00000	1.00000
15.5	1.00000	1.00000	1.00000	1.00000
16.0	1.00000	1.00000	1.00000	1.00000
16.5	1.00000	1.00000	1.00000	1.00000
17.0	1.00000	1.00000	1.00000	1.00000
17.5	1.00000	1.00000	1.00000	1.00000
18.0	1.00000	1.00000	1.00000	1.00000
18.5	1.00000	1.00000	1.00000	1.00000
19.0	1.00000	1.00000	1.00000	1.00000
19.5	1.00000	1.00000	1.00000	1.00000
20.0	1.00000	1.00000	1.00000	1.00000
20.5	1.00000	1.00000	1.00000	1.00000
21.0	1.00000	1.00000	1.00000	1.00000
21.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-12
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
22.0	1.00000	1.00000	1.00000	1.00000
22.5	1.00000	1.00000	1.00000	1.00000
23.0	1.00000	1.00000	1.00000	1.00000
23.5	1.00000	1.00000	1.00000	1.00000
24.0	1.00000	1.00000	1.00000	1.00000
24.5	1.00000	1.00000	1.00000	1.00000
25.0	1.00000	1.00000	1.00000	1.00000
25.5	1.00000	1.00000	1.00000	1.00000
26.0	1.00000	1.00000	1.00000	1.00000
26.5	1.00000	1.00000	1.00000	1.00000
27.0	1.00000	1.00000	1.00000	1.00000
27.5	1.00000	1.00000	1.00000	1.00000
28.0	1.00000	1.00000	1.00000	1.00000
28.5	1.00000	1.00000	1.00000	1.00000
29.0	1.00000	1.00000	1.00000	1.00000
29.5	1.00000	1.00000	1.00000	1.00000
30.0	1.00000	1.00000	1.00000	1.00000
30.5	1.00000	1.00000	1.00000	1.00000
31.0	1.00000	1.00000	1.00000	1.00000
31.5	1.00000	1.00000	1.00000	1.00000
32.0	1.00000	1.00000	1.00000	1.00000
32.5	1.00000	1.00000	1.00000	1.00000
33.0	1.00000	1.00000	1.00000	1.00000
33.5	1.00000	1.00000	1.00000	1.00000
34.0	1.00000	1.00000	1.00000	1.00000
34.5	1.00000	1.00000	1.00000	1.00000
35.0	1.00000	1.00000	1.00000	1.00000
35.5	1.00000	1.00000	1.00000	1.00000
36.0	1.00000	1.00000	1.00000	1.00000
36.5	1.00000	1.00000	1.00000	1.00000
37.0	1.00000	1.00000	1.00000	1.00000
37.5	1.00000	1.00000	1.00000	1.00000
38.0	1.00000	1.00000	1.00000	1.00000
38.5	1.00000	1.00000	1.00000	1.00000
39.0	1.00000	1.00000	1.00000	1.00000
39.5	1.00000	1.00000	1.00000	1.00000
40.0	1.00000	1.00000	1.00000	1.00000
40.5	1.00000	1.00000	1.00000	1.00000
41.0	1.00000	1.00000	1.00000	1.00000
41.5	1.00000	1.00000	1.00000	1.00000
42.0	1.00000	1.00000	1.00000	1.00000
42.5	1.00000	1.00000	1.00000	1.00000
43.0	1.00000	1.00000	1.00000	1.00000
43.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-12
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
44.0	1.00000	1.00000	1.00000	1.00000
44.5	1.00000	1.00000	1.00000	1.00000
45.0	1.00000	1.00000	1.00000	1.00000
45.5	1.00000	1.00000	1.00000	1.00000
46.0	1.00000	1.00000	1.00000	1.00000
46.5	1.00000	1.00000	1.00000	1.00000
47.0	1.00000	1.00000	1.00000	1.00000
47.5	1.00000	1.00000	1.00000	1.00000
48.0	1.00000	1.00000	1.00000	1.00000
48.5	1.00000	1.00000	1.00000	1.00000
49.0	1.00000	1.00000	1.00000	1.00000
49.5	1.00000	1.00000	1.00000	1.00000
50.0	1.00000	1.00000	1.00000	1.00000

Notes

Base Case. 500 meter spaced receptor grid, no terrain grid

Test Case 1. 500 meter spaced receptor grid, 500 meter spaced terrain grid

Test Case 2: 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3: 500 meter spaced receptor grid, 100 meter spaced terrain grid

TABLE A-9-13
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	0.00000	0.00000	0.00000	0.00000
0.5	0.14132	0.14132	0.14130	0.14133
1.0	0.05790	0.05790	0.05792	0.05793
1.5	0.03330	0.03325	0.03326	0.03326
2.0	0.02208	0.02208	0.02208	0.02209
2.5	0.01592	0.01594	0.01593	0.01594
3.0	0.01216	0.01215	0.01215	0.01215
3.5	0.01193	0.01194	0.01194	0.01194
4.0	0.00788	0.00787	0.00787	0.00788
4.5	0.00836	0.00836	0.00836	0.00836
5.0	0.00620	0.00620	0.00620	0.00621
5.5	0.00616	0.00616	0.00616	0.00616
6.0	0.00522	0.00522	0.00522	0.00522
6.5	0.00481	0.00481	0.00481	0.00481
7.0	0.00364	0.00364	0.00364	0.00364
7.5	0.00272	0.00272	0.00272	0.00272
8.0	0.00245	0.00245	0.00245	0.00245
8.5	0.00227	0.00227	0.00227	0.00227
9.0	0.00207	0.00207	0.00207	0.00207
9.5	0.00186	0.00186	0.00186	0.00186
10.0	0.00171	0.00171	0.00171	0.00171
10.5	0.00159	0.00159	0.00159	0.00159
11.0	0.00147	0.00147	0.00147	0.00147
11.5	0.00137	0.00137	0.00137	0.00137
12.0	0.00129	0.00129	0.00129	0.00129
12.5	0.00119	0.00119	0.00119	0.00119
13.0	0.00111	0.00111	0.00111	0.00111
13.5	0.00105	0.00105	0.00105	0.00105
14.0	0.00098	0.00098	0.00098	0.00098
14.5	0.00093	0.00093	0.00093	0.00093
15.0	0.00088	0.00088	0.00088	0.00088
15.5	0.00085	0.00085	0.00085	0.00085
16.0	0.00080	0.00080	0.00080	0.00080
16.5	0.00074	0.00074	0.00074	0.00074
17.0	0.00071	0.00071	0.00071	0.00071
17.5	0.00067	0.00067	0.00067	0.00067
18.0	0.00064	0.00064	0.00064	0.00064
18.5	0.00061	0.00061	0.00061	0.00061
19.0	0.00058	0.00058	0.00058	0.00058
19.5	0.00056	0.00056	0.00056	0.00056
20.0	0.00053	0.00053	0.00053	0.00053
20.5	0.00051	0.00051	0.00051	0.00051
21.0	0.00049	0.00049	0.00049	0.00049

TABLE A-9-13
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
21.5	0.00047	0.00047	0.00047	0.00047
22.0	0.00045	0.00045	0.00045	0.00045
22.5	0.00043	0.00043	0.00043	0.00043
23.0	0.00042	0.00042	0.00042	0.00042
23.5	0.00040	0.00040	0.00040	0.00040
24.0	0.00038	0.00038	0.00038	0.00038
24.5	0.00037	0.00037	0.00037	0.00037
25.0	0.00036	0.00036	0.00036	0.00036
25.5	0.00034	0.00034	0.00034	0.00034
26.0	0.00033	0.00033	0.00033	0.00033
26.5	0.00032	0.00032	0.00032	0.00032
27.0	0.00031	0.00031	0.00031	0.00031
27.5	0.00030	0.00030	0.00030	0.00030
28.0	0.00029	0.00029	0.00029	0.00029
28.5	0.00028	0.00028	0.00028	0.00028
29.0	0.00027	0.00027	0.00027	0.00027
29.5	0.00026	0.00026	0.00026	0.00026
30.0	0.00026	0.00026	0.00026	0.00026
30.5	0.00025	0.00025	0.00025	0.00025
31.0	0.00024	0.00024	0.00024	0.00024
31.5	0.00023	0.00023	0.00023	0.00023
32.0	0.00023	0.00023	0.00023	0.00023
32.5	0.00022	0.00022	0.00022	0.00022
33.0	0.00021	0.00021	0.00021	0.00021
33.5	0.00021	0.00021	0.00021	0.00021
34.0	0.00020	0.00020	0.00020	0.00020
34.5	0.00020	0.00020	0.00020	0.00020
35.0	0.00019	0.00019	0.00019	0.00019
35.5	0.00019	0.00019	0.00019	0.00019
36.0	0.00018	0.00018	0.00018	0.00018
36.5	0.00018	0.00018	0.00018	0.00018
37.0	0.00017	0.00017	0.00017	0.00017
37.5	0.00017	0.00017	0.00017	0.00017
38.0	0.00016	0.00016	0.00016	0.00016
38.5	0.00016	0.00016	0.00016	0.00016
39.0	0.00016	0.00016	0.00016	0.00016
39.5	0.00015	0.00015	0.00015	0.00015
40.0	0.00015	0.00015	0.00015	0.00015
40.5	0.00014	0.00014	0.00014	0.00014
41.0	0.00014	0.00014	0.00014	0.00014
41.5	0.00014	0.00014	0.00014	0.00014
42.0	0.00013	0.00013	0.00013	0.00013
42.5	0.00013	0.00013	0.00013	0.00013

TABLE A-9-13
TERRAIN GRID SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
43.0	0.00013	0.00013	0.00013	0.00013
43.5	0.00013	0.00013	0.00013	0.00013
44.0	0.00012	0.00012	0.00012	0.00012
44.5	0.00012	0.00012	0.00012	0.00012
45.0	0.00012	0.00012	0.00012	0.00012
45.5	0.00012	0.00012	0.00012	0.00012
46.0	0.00011	0.00011	0.00011	0.00011
46.5	0.00011	0.00011	0.00011	0.00011
47.0	0.00011	0.00011	0.00011	0.00011
47.5	0.00011	0.00011	0.00011	0.00011
48.0	0.00010	0.00010	0.00010	0.00010
48.5	0.00010	0.00010	0.00010	0.00010
49.0	0.00010	0.00010	0.00010	0.00010
49.5	0.00010	0.00010	0.00010	0.00010
50.0	0.00010	0.00010	0.00010	0.00010

Notes

Base Case. 500 meter spaced receptor grid, no terrain grid

Test Case 1. 500 meter spaced receptor grid, 500 meter spaced terrain grid

Test Case 2. 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3. 500 meter spaced receptor grid, 100 meter spaced terrain grid

TABLE A-9-14
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	1.00000	1.00000	1.00000	1.00000
0.5	1.00000	1.00000	0.99986	1.00007
1.0	1.00000	1.00000	1.00035	1.00052
1.5	1.00000	0.99850	0.99880	0.99880
2.0	1.00000	1.00000	1.00000	1.00045
2.5	1.00000	1.00126	1.00063	1.00126
3.0	1.00000	0.99918	0.99918	0.99918
3.5	1.00000	1.00084	1.00084	1.00084
4.0	1.00000	0.99873	0.99873	1.00000
4.5	1.00000	1.00000	1.00000	1.00000
5.0	1.00000	1.00000	1.00000	1.00161
5.5	1.00000	1.00000	1.00000	1.00000
6.0	1.00000	1.00000	1.00000	1.00000
6.5	1.00000	1.00000	1.00000	1.00000
7.0	1.00000	1.00000	1.00000	1.00000
7.5	1.00000	1.00000	1.00000	1.00000
8.0	1.00000	1.00000	1.00000	1.00000
8.5	1.00000	1.00000	1.00000	1.00000
9.0	1.00000	1.00000	1.00000	1.00000
9.5	1.00000	1.00000	1.00000	1.00000
10.0	1.00000	1.00000	1.00000	1.00000
10.5	1.00000	1.00000	1.00000	1.00000
11.0	1.00000	1.00000	1.00000	1.00000
11.5	1.00000	1.00000	1.00000	1.00000
12.0	1.00000	1.00000	1.00000	1.00000
12.5	1.00000	1.00000	1.00000	1.00000
13.0	1.00000	1.00000	1.00000	1.00000
13.5	1.00000	1.00000	1.00000	1.00000
14.0	1.00000	1.00000	1.00000	1.00000
14.5	1.00000	1.00000	1.00000	1.00000
15.0	1.00000	1.00000	1.00000	1.00000
15.5	1.00000	1.00000	1.00000	1.00000
16.0	1.00000	1.00000	1.00000	1.00000
16.5	1.00000	1.00000	1.00000	1.00000
17.0	1.00000	1.00000	1.00000	1.00000
17.5	1.00000	1.00000	1.00000	1.00000
18.0	1.00000	1.00000	1.00000	1.00000
18.5	1.00000	1.00000	1.00000	1.00000
19.0	1.00000	1.00000	1.00000	1.00000
19.5	1.00000	1.00000	1.00000	1.00000
20.0	1.00000	1.00000	1.00000	1.00000
20.5	1.00000	1.00000	1.00000	1.00000
21.0	1.00000	1.00000	1.00000	1.00000
21.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-14
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
22.0	1.00000	1.00000	1.00000	1.00000
22.5	1.00000	1.00000	1.00000	1.00000
23.0	1.00000	1.00000	1.00000	1.00000
23.5	1.00000	1.00000	1.00000	1.00000
24.0	1.00000	1.00000	1.00000	1.00000
24.5	1.00000	1.00000	1.00000	1.00000
25.0	1.00000	1.00000	1.00000	1.00000
25.5	1.00000	1.00000	1.00000	1.00000
26.0	1.00000	1.00000	1.00000	1.00000
26.5	1.00000	1.00000	1.00000	1.00000
27.0	1.00000	1.00000	1.00000	1.00000
27.5	1.00000	1.00000	1.00000	1.00000
28.0	1.00000	1.00000	1.00000	1.00000
28.5	1.00000	1.00000	1.00000	1.00000
29.0	1.00000	1.00000	1.00000	1.00000
29.5	1.00000	1.00000	1.00000	1.00000
30.0	1.00000	1.00000	1.00000	1.00000
30.5	1.00000	1.00000	1.00000	1.00000
31.0	1.00000	1.00000	1.00000	1.00000
31.5	1.00000	1.00000	1.00000	1.00000
32.0	1.00000	1.00000	1.00000	1.00000
32.5	1.00000	1.00000	1.00000	1.00000
33.0	1.00000	1.00000	1.00000	1.00000
33.5	1.00000	1.00000	1.00000	1.00000
34.0	1.00000	1.00000	1.00000	1.00000
34.5	1.00000	1.00000	1.00000	1.00000
35.0	1.00000	1.00000	1.00000	1.00000
35.5	1.00000	1.00000	1.00000	1.00000
36.0	1.00000	1.00000	1.00000	1.00000
36.5	1.00000	1.00000	1.00000	1.00000
37.0	1.00000	1.00000	1.00000	1.00000
37.5	1.00000	1.00000	1.00000	1.00000
38.0	1.00000	1.00000	1.00000	1.00000
38.5	1.00000	1.00000	1.00000	1.00000
39.0	1.00000	1.00000	1.00000	1.00000
39.5	1.00000	1.00000	1.00000	1.00000
40.0	1.00000	1.00000	1.00000	1.00000
40.5	1.00000	1.00000	1.00000	1.00000
41.0	1.00000	1.00000	1.00000	1.00000
41.5	1.00000	1.00000	1.00000	1.00000
42.0	1.00000	1.00000	1.00000	1.00000
42.5	1.00000	1.00000	1.00000	1.00000
43.0	1.00000	1.00000	1.00000	1.00000
43.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-14
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
44.0	1.00000	1.00000	1.00000	1.00000
44.5	1.00000	1.00000	1.00000	1.00000
45.0	1.00000	1.00000	1.00000	1.00000
45.5	1.00000	1.00000	1.00000	1.00000
46.0	1.00000	1.00000	1.00000	1.00000
46.5	1.00000	1.00000	1.00000	1.00000
47.0	1.00000	1.00000	1.00000	1.00000
47.5	1.00000	1.00000	1.00000	1.00000
48.0	1.00000	1.00000	1.00000	1.00000
48.5	1.00000	1.00000	1.00000	1.00000
49.0	1.00000	1.00000	1.00000	1.00000
49.5	1.00000	1.00000	1.00000	1.00000
50.0	1.00000	1.00000	1.00000	1.00000

Notes.

Base Case: 500 meter spaced receptor grid, no terrain grid.

Test Case 1: 500 meter spaced receptor grid, 500 meter spaced terrain grid

Test Case 2: 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3: 500 meter spaced receptor grid, 100 meter spaced terrain grid

TABLE A-9-15
TERRAIN GRID SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	0.00000	0.00000	0.00000	0.00000
0.5	0.21614	0.21614	0.21614	0.21614
1.0	0.08470	0.08470	0.08470	0.08470
1.5	0.04761	0.04761	0.04761	0.04761
2.0	0.03155	0.03155	0.03155	0.03155
2.5	0.02292	0.02292	0.02292	0.02292
3.0	0.01763	0.01763	0.01763	0.01763
3.5	0.01748	0.01748	0.01748	0.01748
4.0	0.01157	0.01157	0.01157	0.01157
4.5	0.01224	0.01224	0.01224	0.01224
5.0	0.00894	0.00894	0.00894	0.00894
5.5	0.00892	0.00892	0.00892	0.00892
6.0	0.00746	0.00746	0.00746	0.00746
6.5	0.00689	0.00689	0.00689	0.00689
7.0	0.00511	0.00511	0.00511	0.00511
7.5	0.00382	0.00382	0.00382	0.00382
8.0	0.00342	0.00342	0.00342	0.00342
8.5	0.00315	0.00315	0.00315	0.00315
9.0	0.00286	0.00286	0.00286	0.00286
9.5	0.00255	0.00255	0.00255	0.00255
10.0	0.00233	0.00233	0.00233	0.00233
10.5	0.00215	0.00215	0.00215	0.00215
11.0	0.00198	0.00198	0.00198	0.00198
11.5	0.00183	0.00183	0.00183	0.00183
12.0	0.00173	0.00173	0.00173	0.00173
12.5	0.00158	0.00158	0.00158	0.00158
13.0	0.00147	0.00147	0.00147	0.00147
13.5	0.00137	0.00137	0.00137	0.00137
14.0	0.00128	0.00128	0.00128	0.00128
14.5	0.00120	0.00120	0.00120	0.00120
15.0	0.00113	0.00113	0.00113	0.00113
15.5	0.00110	0.00110	0.00110	0.00110
16.0	0.00103	0.00103	0.00103	0.00103
16.5	0.00095	0.00095	0.00095	0.00095
17.0	0.00090	0.00090	0.00090	0.00090
17.5	0.00085	0.00085	0.00085	0.00085
18.0	0.00080	0.00080	0.00080	0.00080
18.5	0.00076	0.00076	0.00076	0.00076
19.0	0.00073	0.00073	0.00073	0.00073
19.5	0.00069	0.00069	0.00069	0.00069
20.0	0.00066	0.00066	0.00066	0.00066
20.5	0.00063	0.00063	0.00063	0.00063
21.0	0.00060	0.00060	0.00060	0.00060

TABLE A-9-15
TERRAIN GRID SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = $g/m^2/g/s$

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
21.5	0.00057	0.00057	0.00057	0.00057
22.0	0.00055	0.00055	0.00055	0.00055
22.5	0.00052	0.00052	0.00052	0.00052
23.0	0.00050	0.00050	0.00050	0.00050
23.5	0.00048	0.00048	0.00048	0.00048
24.0	0.00046	0.00046	0.00046	0.00046
24.5	0.00044	0.00044	0.00044	0.00044
25.0	0.00043	0.00043	0.00043	0.00043
25.5	0.00041	0.00041	0.00041	0.00041
26.0	0.00039	0.00039	0.00039	0.00039
26.5	0.00038	0.00038	0.00038	0.00038
27.0	0.00037	0.00037	0.00037	0.00037
27.5	0.00035	0.00035	0.00035	0.00035
28.0	0.00034	0.00034	0.00034	0.00034
28.5	0.00033	0.00033	0.00033	0.00033
29.0	0.00032	0.00032	0.00032	0.00032
29.5	0.00031	0.00031	0.00031	0.00031
30.0	0.00030	0.00030	0.00030	0.00030
30.5	0.00029	0.00029	0.00029	0.00029
31.0	0.00028	0.00028	0.00028	0.00028
31.5	0.00027	0.00027	0.00027	0.00027
32.0	0.00026	0.00026	0.00026	0.00026
32.5	0.00025	0.00025	0.00025	0.00025
33.0	0.00024	0.00024	0.00024	0.00024
33.5	0.00024	0.00024	0.00024	0.00024
34.0	0.00023	0.00023	0.00023	0.00023
34.5	0.00022	0.00022	0.00022	0.00022
35.0	0.00022	0.00022	0.00022	0.00022
35.5	0.00021	0.00021	0.00021	0.00021
36.0	0.00020	0.00020	0.00020	0.00020
36.5	0.00020	0.00020	0.00020	0.00020
37.0	0.00019	0.00019	0.00019	0.00019
37.5	0.00019	0.00019	0.00019	0.00019
38.0	0.00018	0.00018	0.00018	0.00018
38.5	0.00018	0.00018	0.00018	0.00018
39.0	0.00017	0.00017	0.00017	0.00017
39.5	0.00017	0.00017	0.00017	0.00017
40.0	0.00016	0.00016	0.00016	0.00016
40.5	0.00016	0.00016	0.00016	0.00016
41.0	0.00015	0.00015	0.00015	0.00015
41.5	0.00015	0.00015	0.00015	0.00015
42.0	0.00015	0.00015	0.00015	0.00015
42.5	0.00014	0.00014	0.00014	0.00014

TABLE A-8-15
TERRAIN GRID SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
43.0	0.00014	0.00014	0.00014	0.00014
43.5	0.00014	0.00014	0.00014	0.00014
44.0	0.00013	0.00013	0.00013	0.00013
44.5	0.00013	0.00013	0.00013	0.00013
45.0	0.00013	0.00013	0.00013	0.00013
45.5	0.00012	0.00012	0.00012	0.00012
46.0	0.00012	0.00012	0.00012	0.00012
46.5	0.00012	0.00012	0.00012	0.00012
47.0	0.00012	0.00012	0.00012	0.00012
47.5	0.00011	0.00011	0.00011	0.00011
48.0	0.00011	0.00011	0.00011	0.00011
48.5	0.00011	0.00011	0.00011	0.00011
49.0	0.00011	0.00011	0.00011	0.00011
49.5	0.00010	0.00010	0.00010	0.00010
50.0	0.00010	0.00010	0.00010	0.00010

Notes

Base Case: 500 meter spaced receptor grid, no terrain grid.

Test Case 1: 500 meter spaced receptor grid, 500 meter spaced terrain grid

Test Case 2: 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3: 500 meter spaced receptor grid, 100 meter spaced terrain grid

TABLE A-9-16
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
0.0	1.00000	1.00000	1.00000	1.00000
0.5	1.00000	1.00000	1.00000	1.00000
1.0	1.00000	1.00000	1.00000	1.00000
1.5	1.00000	1.00000	1.00000	1.00000
2.0	1.00000	1.00000	1.00000	1.00000
2.5	1.00000	1.00000	1.00000	1.00000
3.0	1.00000	1.00000	1.00000	1.00000
3.5	1.00000	1.00000	1.00000	1.00000
4.0	1.00000	1.00000	1.00000	1.00000
4.5	1.00000	1.00000	1.00000	1.00000
5.0	1.00000	1.00000	1.00000	1.00000
5.5	1.00000	1.00000	1.00000	1.00000
6.0	1.00000	1.00000	1.00000	1.00000
6.5	1.00000	1.00000	1.00000	1.00000
7.0	1.00000	1.00000	1.00000	1.00000
7.5	1.00000	1.00000	1.00000	1.00000
8.0	1.00000	1.00000	1.00000	1.00000
8.5	1.00000	1.00000	1.00000	1.00000
9.0	1.00000	1.00000	1.00000	1.00000
9.5	1.00000	1.00000	1.00000	1.00000
10.0	1.00000	1.00000	1.00000	1.00000
10.5	1.00000	1.00000	1.00000	1.00000
11.0	1.00000	1.00000	1.00000	1.00000
11.5	1.00000	1.00000	1.00000	1.00000
12.0	1.00000	1.00000	1.00000	1.00000
12.5	1.00000	1.00000	1.00000	1.00000
13.0	1.00000	1.00000	1.00000	1.00000
13.5	1.00000	1.00000	1.00000	1.00000
14.0	1.00000	1.00000	1.00000	1.00000
14.5	1.00000	1.00000	1.00000	1.00000
15.0	1.00000	1.00000	1.00000	1.00000
15.5	1.00000	1.00000	1.00000	1.00000
16.0	1.00000	1.00000	1.00000	1.00000
16.5	1.00000	1.00000	1.00000	1.00000
17.0	1.00000	1.00000	1.00000	1.00000
17.5	1.00000	1.00000	1.00000	1.00000
18.0	1.00000	1.00000	1.00000	1.00000
18.5	1.00000	1.00000	1.00000	1.00000
19.0	1.00000	1.00000	1.00000	1.00000
19.5	1.00000	1.00000	1.00000	1.00000
20.0	1.00000	1.00000	1.00000	1.00000
20.5	1.00000	1.00000	1.00000	1.00000
21.0	1.00000	1.00000	1.00000	1.00000
21.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-16
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
22.0	1.00000	1.00000	1.00000	1.00000
22.5	1.00000	1.00000	1.00000	1.00000
23.0	1.00000	1.00000	1.00000	1.00000
23.5	1.00000	1.00000	1.00000	1.00000
24.0	1.00000	1.00000	1.00000	1.00000
24.5	1.00000	1.00000	1.00000	1.00000
25.0	1.00000	1.00000	1.00000	1.00000
25.5	1.00000	1.00000	1.00000	1.00000
26.0	1.00000	1.00000	1.00000	1.00000
26.5	1.00000	1.00000	1.00000	1.00000
27.0	1.00000	1.00000	1.00000	1.00000
27.5	1.00000	1.00000	1.00000	1.00000
28.0	1.00000	1.00000	1.00000	1.00000
28.5	1.00000	1.00000	1.00000	1.00000
29.0	1.00000	1.00000	1.00000	1.00000
29.5	1.00000	1.00000	1.00000	1.00000
30.0	1.00000	1.00000	1.00000	1.00000
30.5	1.00000	1.00000	1.00000	1.00000
31.0	1.00000	1.00000	1.00000	1.00000
31.5	1.00000	1.00000	1.00000	1.00000
32.0	1.00000	1.00000	1.00000	1.00000
32.5	1.00000	1.00000	1.00000	1.00000
33.0	1.00000	1.00000	1.00000	1.00000
33.5	1.00000	1.00000	1.00000	1.00000
34.0	1.00000	1.00000	1.00000	1.00000
34.5	1.00000	1.00000	1.00000	1.00000
35.0	1.00000	1.00000	1.00000	1.00000
35.5	1.00000	1.00000	1.00000	1.00000
36.0	1.00000	1.00000	1.00000	1.00000
36.5	1.00000	1.00000	1.00000	1.00000
37.0	1.00000	1.00000	1.00000	1.00000
37.5	1.00000	1.00000	1.00000	1.00000
38.0	1.00000	1.00000	1.00000	1.00000
38.5	1.00000	1.00000	1.00000	1.00000
39.0	1.00000	1.00000	1.00000	1.00000
39.5	1.00000	1.00000	1.00000	1.00000
40.0	1.00000	1.00000	1.00000	1.00000
40.5	1.00000	1.00000	1.00000	1.00000
41.0	1.00000	1.00000	1.00000	1.00000
41.5	1.00000	1.00000	1.00000	1.00000
42.0	1.00000	1.00000	1.00000	1.00000
42.5	1.00000	1.00000	1.00000	1.00000
43.0	1.00000	1.00000	1.00000	1.00000
43.5	1.00000	1.00000	1.00000	1.00000

TABLE A-9-16
TERRAIN GRID SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Kilometers)	Base Case	500 Meter Spaced Terrain Grid	250 Meter Spaced Terrain Grid	100 Meter Spaced Terrain Grid
44.0	1.00000	1.00000	1.00000	1.00000
44.5	1.00000	1.00000	1.00000	1.00000
45.0	1.00000	1.00000	1.00000	1.00000
45.5	1.00000	1.00000	1.00000	1.00000
46.0	1.00000	1.00000	1.00000	1.00000
46.5	1.00000	1.00000	1.00000	1.00000
47.0	1.00000	1.00000	1.00000	1.00000
47.5	1.00000	1.00000	1.00000	1.00000
48.0	1.00000	1.00000	1.00000	1.00000
48.5	1.00000	1.00000	1.00000	1.00000
49.0	1.00000	1.00000	1.00000	1.00000
49.5	1.00000	1.00000	1.00000	1.00000
50.0	1.00000	1.00000	1.00000	1.00000

Notes:

Base Case: 500 meter spaced receptor grid, no terrain grid

Test Case 1: 500 meter spaced receptor grid, 500 meter spaced terrain grid.

Test Case 2: 500 meter spaced receptor grid, 250 meter spaced terrain grid

Test Case 3: 500 meter spaced receptor grid, 100 meter spaced terrain grid

TABLE A-10-1
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
PARTICLE PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	3.18194	3.18190	3.18194
0.20	2.90439	2.90406	2.90440
0.30	1.90309	1.90233	1.90317
0.40	1.34217	1.34091	1.34231
0.50	1.00332	1.00176	1.00352
0.60	0.78070	0.77895	0.78094
0.70	0.62460	0.62224	0.62500
0.80	0.51115	0.50824	0.51167
0.90	0.42692	0.42394	0.42746
1.00	0.36237	0.35942	0.36291
1.25	0.25422	0.25146	0.25474
1.50	0.18933	0.18684	0.18980
1.75	0.14728	0.14507	0.14771
2.00	0.11844	0.11646	0.11882
2.25	0.09774	0.09597	0.09808
2.50	0.08234	0.08075	0.08266
3.00	0.06131	0.06000	0.06158
3.50	0.04787	0.04676	0.04810
4.00	0.03871	0.03777	0.03891
4.50	0.03215	0.03133	0.03233
5.00	0.02728	0.02655	0.02743
6.00	0.02061	0.02002	0.02073
7.00	0.01632	0.01584	0.01642
8.00	0.01337	0.01297	0.01346
9.00	0.01125	0.01090	0.01132
10.00	0.00965	0.00935	0.00972
15.00	0.00545	0.00527	0.00549
20.00	0.00368	0.00356	0.00371
25.00	0.00273	0.00265	0.00275
30.00	0.00215	0.00208	0.00217
35.00	0.00176	0.00170	0.00177
40.00	0.00148	0.00143	0.00149
45.00	0.00127	0.00123	0.00128
50.00	0.00111	0.00108	0.00112

Notes

Base Case. Minimum Monin Obukhov Length = 50 meters

Test Case 1 Minimum Monin Obukhov Length = 150 meters

Test Case 2. Minimum Monin Obukhov Length = 2 meters

TABLE A-10-2
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE CONCENTRATION

Distance (Km)	Min. M-O Length = 50m	Min M-O Length = 150m	Min M-O Length = 2m
0.10	1.00000	0.99999	1.00000
0.20	1.00000	0.99989	1.00000
0.30	1.00000	0.99960	1.00004
0.40	1.00000	0.99906	1.00010
0.50	1.00000	0.99845	1.00020
0.60	1.00000	0.99776	1.00031
0.70	1.00000	0.99622	1.00064
0.80	1.00000	0.99431	1.00102
0.90	1.00000	0.99302	1.00126
1.00	1.00000	0.99186	1.00149
1.25	1.00000	0.98914	1.00205
1.50	1.00000	0.98685	1.00248
1.75	1.00000	0.98499	1.00292
2.00	1.00000	0.98328	1.00321
2.25	1.00000	0.98189	1.00348
2.50	1.00000	0.98069	1.00389
3.00	1.00000	0.97863	1.00440
3.50	1.00000	0.97681	1.00480
4.00	1.00000	0.97572	1.00517
4.50	1.00000	0.97449	1.00560
5.00	1.00000	0.97324	1.00550
6.00	1.00000	0.97137	1.00582
7.00	1.00000	0.97059	1.00613
8.00	1.00000	0.97008	1.00673
9.00	1.00000	0.96889	1.00622
10.00	1.00000	0.96891	1.00725
15.00	1.00000	0.96697	1.00734
20.00	1.00000	0.96739	1.00815
25.00	1.00000	0.97070	1.00733
30.00	1.00000	0.96744	1.00930
35.00	1.00000	0.96591	1.00568
40.00	1.00000	0.96622	1.00676
45.00	1.00000	0.96850	1.00787
50.00	1.00000	0.97297	1.00901

Notes

Base Case: Minimum Monin Obukhov Length = 50 meters

Test Case 1: Minimum Monin Obukhov Length = 150 meters

Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-10-3
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
PARTICLE BOUND PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Min M-O Length = 50m	Min M-O Length = 150m	Min M-O Length = 2m
0.10	3.21890	3.21889	3.21890
0.20	2.95647	2.95641	2.95647
0.30	1.94692	1.94679	1.94693
0.40	1.38122	1.38100	1.38124
0.50	1.03652	1.03625	1.03655
0.60	0.80906	0.80877	0.80910
0.70	0.65027	0.64986	0.65032
0.80	0.53488	0.53439	0.53496
0.90	0.44850	0.44799	0.44858
1.00	0.38208	0.38157	0.38215
1.25	0.27030	0.26982	0.27037
1.50	0.20279	0.20235	0.20286
1.75	0.15878	0.15839	0.15884
2.00	0.12842	0.12807	0.12847
2.25	0.10652	0.10620	0.10657
2.50	0.09016	0.08988	0.09021
3.00	0.06769	0.06745	0.06773
3.50	0.05324	0.05304	0.05328
4.00	0.04333	0.04316	0.04336
4.50	0.03620	0.03605	0.03623
5.00	0.03087	0.03073	0.03089
6.00	0.02353	0.02342	0.02355
7.00	0.01878	0.01869	0.01880
8.00	0.01550	0.01542	0.01551
9.00	0.01311	0.01304	0.01312
10.00	0.01131	0.01125	0.01132
15.00	0.00652	0.00649	0.00653
20.00	0.00448	0.00446	0.00448
25.00	0.00337	0.00335	0.00338
30.00	0.00268	0.00267	0.00269
35.00	0.00222	0.00221	0.00222
40.00	0.00188	0.00187	0.00188
45.00	0.00163	0.00162	0.00163
50.00	0.00144	0.00143	0.00144

Notes:
Base Case Minimum Monin Obukhov Length = 50 meters
Test Case 1 Minimum Monin Obukhov Length = 150 meters
Test Case 2 Minimum Monin Obukhov Length = 2 meters

TABLE A-10-4
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE CONCENTRATION

Distance (Km)	Min. M-O Length = 50m	Min M-O Length = 150m	Min M-O Length = 2m
0.10	1.00000	1.00000	1.00000
0.20	1.00000	0.99998	1.00000
0.30	1.00000	0.99993	1.00001
0.40	1.00000	0.99984	1.00001
0.50	1.00000	0.99974	1.00003
0.60	1.00000	0.99964	1.00005
0.70	1.00000	0.99937	1.00008
0.80	1.00000	0.99908	1.00015
0.90	1.00000	0.99886	1.00018
1.00	1.00000	0.99867	1.00016
1.25	1.00000	0.99822	1.00026
1.50	1.00000	0.99783	1.00035
1.75	1.00000	0.99754	1.00038
2.00	1.00000	0.99727	1.00039
2.25	1.00000	0.99700	1.00047
2.50	1.00000	0.99689	1.00055
3.00	1.00000	0.99645	1.00059
3.50	1.00000	0.99624	1.00075
4.00	1.00000	0.99608	1.00069
4.50	1.00000	0.99586	1.00083
5.00	1.00000	0.99546	1.00065
6.00	1.00000	0.99533	1.00085
7.00	1.00000	0.99521	1.00106
8.00	1.00000	0.99484	1.00065
9.00	1.00000	0.99466	1.00076
10.00	1.00000	0.99469	1.00088
15.00	1.00000	0.99540	1.00153
20.00	1.00000	0.99554	1.00000
25.00	1.00000	0.99407	1.00297
30.00	1.00000	0.99627	1.00373
35.00	1.00000	0.99550	1.00000
40.00	1.00000	0.99468	1.00000
45.00	1.00000	0.99387	1.00000
50.00	1.00000	0.99306	1.00000

Notes.

Base Case: Minimum Monin Obukhov Length = 50 meters

Test Case 1. Minimum Monin Obukhov Length = 150 meters

Test Case 2. Minimum Monin Obukhov Length = 2 meters

TABLE A-10-5
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
VAPOR PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	3.23188	3.23188	3.23188
0.20	2.97083	2.97083	2.97083
0.30	1.95782	1.95782	1.95782
0.40	1.39044	1.39044	1.39044
0.50	1.04413	1.04413	1.04413
0.60	0.81544	0.81544	0.81544
0.70	0.65591	0.65591	0.65591
0.80	0.54002	0.54002	0.54002
0.90	0.45312	0.45312	0.45312
1.00	0.38626	0.38626	0.38626
1.25	0.27366	0.27366	0.27366
1.50	0.20557	0.20557	0.20557
1.75	0.16114	0.16114	0.16114
2.00	0.13045	0.13045	0.13045
2.25	0.10831	0.10831	0.10831
2.50	0.09175	0.09175	0.09175
3.00	0.06898	0.06898	0.06898
3.50	0.05432	0.05432	0.05432
4.00	0.04426	0.04426	0.04426
4.50	0.03701	0.03701	0.03701
5.00	0.03159	0.03159	0.03159
6.00	0.02411	0.02411	0.02411
7.00	0.01926	0.01926	0.01926
8.00	0.01591	0.01591	0.01591
9.00	0.01348	0.01348	0.01348
10.00	0.01164	0.01164	0.01164
15.00	0.00674	0.00674	0.00674
20.00	0.00464	0.00464	0.00464
25.00	0.00350	0.00350	0.00350
30.00	0.00279	0.00279	0.00279
35.00	0.00231	0.00231	0.00231
40.00	0.00197	0.00197	0.00197
45.00	0.00171	0.00171	0.00171
50.00	0.00150	0.00150	0.00150

Notes

Base Case Minimum Monin Obukhov Length = 50 meters

Test Case 1. Minimum Monin Obukhov Length = 150 meters

Test Case 2. Minimum Monin Obukhov Length = 2 meters

TABLE A-10-8
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE CONCENTRATION

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes

Base Case: Minimum Monin Obukhov Length = 50 meters

Test Case 1: Minimum Monin Obukhov Length = 150 meters

Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-10-7
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
PARTICLE PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	33.64256	33.87828	33.62804
0.20	12.94575	13.33097	12.90086
0.30	7.41623	7.73571	7.37705
0.40	4.70821	4.95682	4.67627
0.50	3.24894	3.44748	3.22258
0.60	2.38116	2.54359	2.35906
0.70	1.81639	1.94731	1.79819
0.80	1.43004	1.53574	1.41497
0.90	1.15826	1.24675	1.14539
1.00	0.95819	1.03327	0.94706
1.25	0.63949	0.69121	0.63154
1.50	0.45855	0.49613	0.45260
1.75	0.34588	0.37429	0.34126
2.00	0.27106	0.29326	0.26738
2.25	0.21878	0.23655	0.21578
2.50	0.18076	0.19527	0.17827
3.00	0.13025	0.14042	0.12845
3.50	0.09887	0.10633	0.09752
4.00	0.07807	0.08378	0.07702
4.50	0.06348	0.06796	0.06264
5.00	0.05285	0.05644	0.05216
6.00	0.03871	0.04116	0.03823
7.00	0.02987	0.03163	0.02952
8.00	0.02392	0.02522	0.02365
9.00	0.01970	0.02070	0.01949
10.00	0.01660	0.01739	0.01643
15.00	0.00877	0.00908	0.00870
20.00	0.00563	0.00579	0.00559
25.00	0.00401	0.00411	0.00399
30.00	0.00304	0.00310	0.00302
35.00	0.00239	0.00243	0.00238
40.00	0.00193	0.00196	0.00193
45.00	0.00160	0.00162	0.00159
50.00	0.00134	0.00136	0.00134

Notes:
Base Case: Minimum Monin Obukhov Length = 50 meters
Test Case 1: Minimum Monin Obukhov Length = 150 meters
Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-10-8
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Km)	Min M-O Length = 50m	Min M-O Length = 150m	Min M-O Length = 2m
0.10	1.00000	1.00701	0.99957
0.20	1.00000	1.02976	0.99653
0.30	1.00000	1.04308	0.99472
0.40	1.00000	1.05280	0.99322
0.50	1.00000	1.06111	0.99189
0.60	1.00000	1.06921	0.99072
0.70	1.00000	1.07208	0.98998
0.80	1.00000	1.07391	0.98946
0.90	1.00000	1.07640	0.98889
1.00	1.00000	1.07836	0.98838
1.25	1.00000	1.08088	0.98757
1.50	1.00000	1.08195	0.98702
1.75	1.00000	1.08214	0.98664
2.00	1.00000	1.08190	0.98642
2.25	1.00000	1.08122	0.98629
2.50	1.00000	1.08027	0.98622
3.00	1.00000	1.07808	0.98618
3.50	1.00000	1.07545	0.98635
4.00	1.00000	1.07314	0.98655
4.50	1.00000	1.07057	0.98677
5.00	1.00000	1.06793	0.98694
6.00	1.00000	1.06329	0.98760
7.00	1.00000	1.05892	0.98828
8.00	1.00000	1.05435	0.98871
9.00	1.00000	1.05076	0.98934
10.00	1.00000	1.04759	0.98976
15.00	1.00000	1.03535	0.99202
20.00	1.00000	1.02842	0.99290
25.00	1.00000	1.02494	0.99501
30.00	1.00000	1.01974	0.99342
35.00	1.00000	1.01674	0.99582
40.00	1.00000	1.01554	1.00000
45.00	1.00000	1.01250	0.99375
50.00	1.00000	1.01493	1.00000

Notes.

Base Case. Minimum Monin Obukhov Length = 50 meters

Test Case 1 Minimum Monin Obukhov Length = 150 meters

Test Case 2 Minimum Monin Obukhov Length = 2 meters

TABLE A-10-9
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Min M-O Length = 50m	Min. M-O Length = 150m	Min M-O Length = 2m
0.10	6.41012	6.45166	6.40807
0.20	2.42726	2.49393	2.42093
0.30	1.38442	1.43980	1.37889
0.40	0.87801	0.92119	0.87350
0.50	0.60539	0.63995	0.60166
0.60	0.44341	0.47176	0.44029
0.70	0.33844	0.36149	0.33586
0.80	0.26678	0.28558	0.26462
0.90	0.21626	0.23209	0.21441
1.00	0.17907	0.19258	0.17747
1.25	0.11984	0.12928	0.11869
1.50	0.08619	0.09314	0.08532
1.75	0.06520	0.07052	0.06453
2.00	0.05124	0.05544	0.05070
2.25	0.04147	0.04486	0.04103
2.50	0.03435	0.03715	0.03398
3.00	0.02487	0.02686	0.02460
3.50	0.01897	0.02045	0.01876
4.00	0.01504	0.01618	0.01488
4.50	0.01227	0.01319	0.01215
5.00	0.01026	0.01100	0.01015
6.00	0.00756	0.00808	0.00749
7.00	0.00587	0.00625	0.00581
8.00	0.00473	0.00501	0.00468
9.00	0.00391	0.00414	0.00388
10.00	0.00331	0.00349	0.00329
15.00	0.00179	0.00186	0.00177
20.00	0.00117	0.00121	0.00116
25.00	0.00084	0.00087	0.00084
30.00	0.00065	0.00066	0.00064
35.00	0.00052	0.00053	0.00051
40.00	0.00042	0.00043	0.00042
45.00	0.00035	0.00036	0.00035
50.00	0.00030	0.00031	0.00030

Notes
Base Case: Minimum Monin Obukhov Length = 50 meters
Test Case 1: Minimum Monin Obukhov Length = 150 meters
Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-10-10
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Km)	Min. M-O Length = 50m	Min M-O Length = 150m	Min. M-O Length = 2m
0.10	1 00000	1 00648	0 99968
0.20	1 00000	1 02747	0 99739
0.30	1 00000	1 04000	0 99601
0.40	1 00000	1 04918	0.99486
0.50	1 00000	1.05709	0.99384
0 60	1 00000	1.06394	0.99296
0 70	1 00000	1.06811	0.99238
0.80	1.00000	1.07047	0 99190
0.90	1 00000	1 07320	0 99145
1.00	1 00000	1 07545	0 99106
1.25	1 00000	1.07877	0.99040
1.50	1 00000	1.08064	0.98991
1.75	1 00000	1.08160	0.98972
2.00	1.00000	1 08197	0 98946
2.25	1.00000	1.08175	0 98939
2.50	1.00000	1.08151	0 98923
3.00	1.00000	1 08002	0 98914
3.50	1 00000	1 07802	0 98893
4.00	1 00000	1.07580	0.98936
4 50	1 00000	1.07498	0.99022
5 00	1.00000	1.07212	0.98928
6 00	1.00000	1.06878	0.99074
7 00	1.00000	1.06474	0.98978
8 00	1.00000	1.05920	0.98943
9 00	1.00000	1.05882	0.99233
10 00	1.00000	1.05438	0.99396
15 00	1.00000	1.03911	0.98883
20 00	1.00000	1.03419	0.99145
25 00	1 00000	1.03571	1.00000
30 00	1.00000	1.01538	0.98462
35 00	1.00000	1.01923	0.98077
40 00	1.00000	1.02381	1.00000
45 00	1.00000	1.02857	1.00000
50 00	1.00000	1.03333	1.00000

Notes

Base Case Minimum Monin Obukhov Length = 50 meters

Test Case 1. Minimum Monin Obukhov Length = 150 meters

Test Case 2. Minimum Monin Obukhov Length = 2 meters

TABLE A-10-11
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Min. M-O Length = 50m	Min M-O Length = 150m	Min. M-O Length = 2m
0.10	2.91339	2.91328	2.91339
0.20	1.33487	1.33453	1.33488
0.30	0.82214	0.82174	0.82216
0.40	0.57331	0.57289	0.57333
0.50	0.42930	0.42889	0.42933
0.60	0.33680	0.33640	0.33682
0.70	0.27297	0.27260	0.27300
0.80	0.22667	0.22631	0.22670
0.90	0.19184	0.19151	0.19187
1.00	0.16498	0.16467	0.16501
1.25	0.11910	0.11883	0.11913
1.50	0.09068	0.09044	0.09070
1.75	0.07169	0.07148	0.07171
2.00	0.05830	0.05812	0.05831
2.25	0.04845	0.04828	0.04846
2.50	0.04098	0.04083	0.04099
3.00	0.03051	0.03039	0.03052
3.50	0.02364	0.02354	0.02365
4.00	0.01888	0.01879	0.01889
4.50	0.01544	0.01536	0.01544
5.00	0.01286	0.01280	0.01287
6.00	0.00931	0.00926	0.00931
7.00	0.00703	0.00700	0.00704
8.00	0.00549	0.00546	0.00549
9.00	0.00439	0.00437	0.00440
10.00	0.00359	0.00357	0.00359
15.00	0.00160	0.00159	0.00160
20.00	0.00087	0.00087	0.00087
25.00	0.00054	0.00053	0.00054
30.00	0.00036	0.00036	0.00036
35.00	0.00025	0.00025	0.00025
40.00	0.00018	0.00018	0.00018
45.00	0.00014	0.00014	0.00014
50.00	0.00011	0.00011	0.00011

Notes:
Base Case Minimum Monin Obukhov Length = 50 meters
Test Case 1: Minimum Monin Obukhov Length = 150 meters
Test Case 2 Minimum Monin Obukhov Length = 2 meters

TABLE A-10-12
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	1.00000	0.99996	1.00000
0.20	1.00000	0.99975	1.00001
0.30	1.00000	0.99951	1.00002
0.40	1.00000	0.99927	1.00003
0.50	1.00000	0.99904	1.00007
0.60	1.00000	0.99881	1.00006
0.70	1.00000	0.99864	1.00011
0.80	1.00000	0.99841	1.00013
0.90	1.00000	0.99828	1.00016
1.00	1.00000	0.99812	1.00018
1.25	1.00000	0.99773	1.00025
1.50	1.00000	0.99735	1.00022
1.75	1.00000	0.99707	1.00028
2.00	1.00000	0.99691	1.00017
2.25	1.00000	0.99649	1.00021
2.50	1.00000	0.99634	1.00024
3.00	1.00000	0.99607	1.00033
3.50	1.00000	0.99577	1.00042
4.00	1.00000	0.99523	1.00053
4.50	1.00000	0.99482	1.00000
5.00	1.00000	0.99533	1.00078
6.00	1.00000	0.99463	1.00000
7.00	1.00000	0.99573	1.00142
8.00	1.00000	0.99454	1.00000
9.00	1.00000	0.99544	1.00228
10.00	1.00000	0.99443	1.00000
15.00	1.00000	0.99375	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	0.98148	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes:
Base Case: Minimum Monin Obukhov Length = 50 meters
Test Case 1: Minimum Monin Obukhov Length = 150 meters
Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-10-13
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m^2/g/s

Distance (Km)	Min. M-O Length = 50m	Min M-O Length = 150m	Min. M-O Length = 2m
0.10	1.16890	1.16888	1.16890
0.20	0.56190	0.56185	0.56190
0.30	0.36119	0.36114	0.36120
0.40	0.26185	0.26179	0.26186
0.50	0.20308	0.20302	0.20308
0.60	0.16447	0.16441	0.16447
0.70	0.13727	0.13722	0.13728
0.80	0.11715	0.11709	0.11715
0.90	0.10170	0.10165	0.10170
1.00	0.08953	0.08948	0.08953
1.25	0.06807	0.06803	0.06807
1.50	0.05419	0.05415	0.05419
1.75	0.04454	0.04451	0.04454
2.00	0.03748	0.03746	0.03749
2.25	0.03212	0.03210	0.03212
2.50	0.02793	0.02791	0.02793
3.00	0.02182	0.02180	0.02182
3.50	0.01762	0.01761	0.01762
4.00	0.01458	0.01457	0.01458
4.50	0.01230	0.01229	0.01230
5.00	0.01053	0.01052	0.01053
6.00	0.00799	0.00798	0.00799
7.00	0.00628	0.00627	0.00628
8.00	0.00506	0.00506	0.00506
9.00	0.00417	0.00417	0.00417
10.00	0.00349	0.00349	0.00349
15.00	0.00170	0.00170	0.00170
20.00	0.00099	0.00099	0.00099
25.00	0.00064	0.00064	0.00064
30.00	0.00044	0.00044	0.00044
35.00	0.00032	0.00032	0.00032
40.00	0.00024	0.00024	0.00024
45.00	0.00019	0.00019	0.00019
50.00	0.00015	0.00015	0.00015

Notes:

Base Case: Minimum Monin Obukhov Length = 50 meters

Test Case 1: Minimum Monin Obukhov Length = 150 meters

Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-10-14
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	1.00000	0.99998	1.00000
0.20	1.00000	0.99991	1.00000
0.30	1.00000	0.99986	1.00003
0.40	1.00000	0.99977	1.00004
0.50	1.00000	0.99970	1.00000
0.60	1.00000	0.99964	1.00000
0.70	1.00000	0.99964	1.00007
0.80	1.00000	0.99949	1.00000
0.90	1.00000	0.99951	1.00000
1.00	1.00000	0.99944	1.00000
1.25	1.00000	0.99941	1.00000
1.50	1.00000	0.99926	1.00000
1.75	1.00000	0.99933	1.00000
2.00	1.00000	0.99947	1.00027
2.25	1.00000	0.99938	1.00000
2.50	1.00000	0.99928	1.00000
3.00	1.00000	0.99908	1.00000
3.50	1.00000	0.99943	1.00000
4.00	1.00000	0.99931	1.00000
4.50	1.00000	0.99919	1.00000
5.00	1.00000	0.99905	1.00000
6.00	1.00000	0.99875	1.00000
7.00	1.00000	0.99841	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes

Base Case: Minimum Monin Obukhov Length = 50 meters

Test Case 1: Minimum Monin Obukhov Length = 150 meters

Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-10-15
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	1.76394	1.76394	1.76394
0.20	0.86346	0.86346	0.86346
0.30	0.56259	0.56259	0.56259
0.40	0.41205	0.41205	0.41205
0.50	0.32193	0.32193	0.32193
0.60	0.26207	0.26207	0.26207
0.70	0.21952	0.21952	0.21952
0.80	0.18776	0.18776	0.18776
0.90	0.16321	0.16321	0.16321
1.00	0.14370	0.14370	0.14370
1.25	0.10898	0.10898	0.10898
1.50	0.08628	0.08628	0.08628
1.75	0.07040	0.07040	0.07040
2.00	0.05876	0.05876	0.05876
2.25	0.04990	0.04990	0.04990
2.50	0.04299	0.04299	0.04299
3.00	0.03297	0.03297	0.03297
3.50	0.02615	0.02615	0.02615
4.00	0.02128	0.02128	0.02128
4.50	0.01766	0.01766	0.01766
5.00	0.01490	0.01490	0.01490
6.00	0.01102	0.01102	0.01102
7.00	0.00847	0.00847	0.00847
8.00	0.00671	0.00671	0.00671
9.00	0.00543	0.00543	0.00543
10.00	0.00448	0.00448	0.00448
15.00	0.00206	0.00206	0.00206
20.00	0.00115	0.00115	0.00115
25.00	0.00071	0.00071	0.00071
30.00	0.00048	0.00048	0.00048
35.00	0.00034	0.00034	0.00034
40.00	0.00025	0.00025	0.00025
45.00	0.00020	0.00020	0.00020
50.00	0.00015	0.00015	0.00015

Notes

Base Case Minimum Monin Obukhov Length = 50 meters

Test Case 1 Minimum Monin Obukhov Length = 150 meters

Test Case 2 Minimum Monin Obukhov Length = 2 meters

TABLE A-10-16
MONIN OBUKHOV LENGTH SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Km)	Min. M-O Length = 50m	Min. M-O Length = 150m	Min. M-O Length = 2m
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes:

Base Case: Minimum Monin Obukhov Length = 50 meters

Test Case 1: Minimum Monin Obukhov Length = 150 meters

Test Case 2: Minimum Monin Obukhov Length = 2 meters

TABLE A-11-1
SURFACE ROUGHNESS AT MEASUREMENT SITE
PARTICLE PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Surface Roughness = 0 10	Surface Roughness = 0 13	Surface Roughness = 0 001
0 10	0.02717	0.02658	0 02745
0.20	0 52539	0.50571	0 53491
0.30	0.93734	0.89127	0 96001
0.40	1.05378	0 99262	1.08432
0.50	1.02759	0.96044	1.06156
0.60	0.94724	0.87946	0.9819
0 70	0.85506	0.78928	0.88897
0 80	0 76683	0.70423	0.79933
0.90	0 68782	0.62879	0.71864
1.00	0.61889	0.56347	0.64793
1.25	0.48600	0.43892	0.51087
1.50	0.39450	0.35386	0.4161
1.75	0.32645	0.29294	0 34743
2.00	0.27896	0.24761	0 29578
2.25	0.24019	0.21228	0 25521
2.50	0.20954	0.18450	0 22307
3.00	0 16449	0 14390	0.17572
3.50	0.13358	0 11623	0.14311
4 00	0.11118	0 09631	0.11942
4 50	0.09440	0 08145	0.10162
5 00	0.08143	0.07002	0.08763
6 00	0.06286	0.05375	0 06803
7 00	0.05036	0.04287	0 05466
8 00	0.04150	0.03519	0 04515
9.00	0.03494	0.02954	0.0381
10.00	0 02994	0.02526	0.03271
15.00	0 01660	0.01390	0.01825
20.00	0 01092	0.00911	0.01205
25.00	0 00793	0.00660	0.00876
30 00	0 00610	0.00508	0.00675
35 00	0 00491	0.00409	0.00544
40.00	0.00407	0.00339	0.00451
45.00	0.00346	0.00289	0 00383
50.00	0.00297	0.00249	0.00328

Notes:

Base Case: Surface Roughness at Measurement Site = 0.1

Test Case 1 Surface Roughness at Measurement Site = 1.3

Test Case 2 Surface Roughness at Measurement Site = 0.001

TABLE A-11-2
SURFACE ROUGHNESS AT MEASUREMENT SITE
NORMALIZED PARTICLE PHASE CONCENTRATION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.00000	0.97828	1.01031
0.20	1.00000	0.96254	1.01812
0.30	1.00000	0.95085	1.02419
0.40	1.00000	0.94196	1.02898
0.50	1.00000	0.93465	1.03306
0.60	1.00000	0.92844	1.03659
0.70	1.00000	0.92307	1.03966
0.80	1.00000	0.91837	1.04238
0.90	1.00000	0.91418	1.04481
1.00	1.00000	0.91045	1.04692
1.25	1.00000	0.90313	1.05117
1.50	1.00000	0.89698	1.05475
1.75	1.00000	0.89189	1.05779
2.00	1.00000	0.88762	1.06030
2.25	1.00000	0.88380	1.06253
2.50	1.00000	0.88050	1.06457
3.00	1.00000	0.87483	1.06827
3.50	1.00000	0.87012	1.07134
4.00	1.00000	0.86625	1.07411
4.50	1.00000	0.86282	1.07648
5.00	1.00000	0.85988	1.07860
6.00	1.00000	0.85507	1.08225
7.00	1.00000	0.85127	1.08539
8.00	1.00000	0.84795	1.08795
9.00	1.00000	0.84545	1.09044
10.00	1.00000	0.84369	1.09252
15.00	1.00000	0.83735	1.09940
20.00	1.00000	0.83425	1.10348
25.00	1.00000	0.83228	1.10467
30.00	1.00000	0.83279	1.10656
35.00	1.00000	0.83299	1.10794
40.00	1.00000	0.83292	1.10811
45.00	1.00000	0.83526	1.10694
50.00	1.00000	0.83838	1.10438

Notes:

Base Case: Surface Roughness at Measurement Site = 0.1

Test Case 1: Surface Roughness at Measurement Site = 1.3

Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-11-3
SURFACE ROUGHNESS AT MEASUREMENT SITE
PARTICLE-BOUND PHASE CONCENTRATION
UNITS = $\mu g/m^3/g/s$

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	0.02736	0.02723	0.02741
0.20	0.53598	0.53145	0.53765
0.30	0.96577	0.95497	0.96978
0.40	1.09422	1.07986	1.09961
0.50	1.07412	1.05836	1.08009
0.60	0.99583	0.97993	1.00190
0.70	0.90336	0.88795	0.90928
0.80	0.81362	0.79897	0.81929
0.90	0.73255	0.71875	0.73790
1.00	0.66125	0.64831	0.66629
1.25	0.52241	0.51144	0.52672
1.50	0.42619	0.41673	0.42993
1.75	0.35637	0.34811	0.35965
2.00	0.30373	0.29645	0.30664
2.25	0.26236	0.25589	0.26496
2.50	0.22956	0.22375	0.23190
3.00	0.18121	0.17642	0.18315
3.50	0.14789	0.14384	0.14954
4.00	0.12365	0.12017	0.12509
4.50	0.10541	0.10237	0.10667
5.00	0.09127	0.08858	0.09239
6.00	0.07094	0.06878	0.07185
7.00	0.05719	0.05540	0.05795
8.00	0.04739	0.04587	0.04804
9.00	0.04011	0.03881	0.04068
10.00	0.03454	0.03339	0.03503
15.00	0.01953	0.01885	0.01983
20.00	0.01304	0.01257	0.01325
25.00	0.00958	0.00923	0.00974
30.00	0.00745	0.00717	0.00758
35.00	0.00605	0.00582	0.00616
40.00	0.00506	0.00487	0.00515
45.00	0.00433	0.00416	0.00441
50.00	0.00377	0.00362	0.00383

Notes:

Base Case Surface Roughness at Measurement Site = 0.1

Test Case 1 Surface Roughness at Measurement Site = 1.3

Test Case 2 Surface Roughness at Measurement Site = 0.001

TABLE A-11-4
SURFACE ROUGHNESS AT MEASUREMENT SITE
NORMALIZED PARTICLE-BOUND PHASE CONCENTRATION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.00000	0.99525	1.00183
0.20	1.00000	0.99155	1.00312
0.30	1.00000	0.98882	1.00415
0.40	1.00000	0.98688	1.00493
0.50	1.00000	0.98533	1.00556
0.60	1.00000	0.98403	1.00610
0.70	1.00000	0.98294	1.00655
0.80	1.00000	0.98199	1.00697
0.90	1.00000	0.98116	1.00730
1.00	1.00000	0.98043	1.00762
1.25	1.00000	0.97900	1.00825
1.50	1.00000	0.97780	1.00878
1.75	1.00000	0.97682	1.00920
2.00	1.00000	0.97603	1.00958
2.25	1.00000	0.97534	1.00991
2.50	1.00000	0.97469	1.01019
3.00	1.00000	0.97357	1.01071
3.50	1.00000	0.97261	1.01116
4.00	1.00000	0.97186	1.01165
4.50	1.00000	0.97116	1.01195
5.00	1.00000	0.97053	1.01227
6.00	1.00000	0.96955	1.01283
7.00	1.00000	0.96870	1.01329
8.00	1.00000	0.96793	1.01372
9.00	1.00000	0.96759	1.01421
10.00	1.00000	0.96671	1.01419
15.00	1.00000	0.96518	1.01536
20.00	1.00000	0.96396	1.01610
25.00	1.00000	0.96347	1.01670
30.00	1.00000	0.96242	1.01745
35.00	1.00000	0.96198	1.01818
40.00	1.00000	0.96245	1.01779
45.00	1.00000	0.96074	1.01848
50.00	1.00000	0.96021	1.01592

Notes

Base Case: Surface Roughness at Measurement Site = 0.1

Test Case 1: Surface Roughness at Measurement Site = 1.3

Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-11-5
SURFACE ROUGHNESS AT MEASUREMENT SITE
VAPOR PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1 3	Surface Roughness = 0.001
0 10	0.02743	0.02743	0 02743
0 20	0.53865	0.53865	0 53865
0 30	0.97222	0 97222	0.97222
0 40	1 10287	1.10287	1.10287
0 50	1.08367	1.08367	1.08367
0 60	1.00551	1.00551	1.00551
0 70	0.91278	0.91278	0 91278
0 80	0.82261	0.82261	0 82261
0.90	0.74103	0 74103	0.74103
1.00	0.66921	0 66921	0.66921
1 25	0.52914	0 52914	0.52914
1 50	0.43199	0 43199	0 43199
1 75	0.36145	0.36145	0.36145
2 00	0 30823	0.30823	0.30823
2 25	0.26638	0.26638	0.26638
2 50	0 23319	0.23319	0.23319
3 00	0 18424	0.18424	0.18424
3 50	0 15050	0.1505	0.1505
4 00	0 12594	0.12594	0.12594
4 50	0 10744	0.10744	0.10744
5 00	0.09309	0.09309	0.09309
6.00	0.07246	0.07246	0 07246
7.00	0.05849	0.05849	0 05849
8.00	0.04853	0.04853	0 04853
9 00	0.04113	0.04113	0.04113
10 00	0.03545	0.03545	0.03545
15 00	0.02015	0.02015	0 02015
20 00	0.01351	0.01351	0 01351
25.00	0.00996	0.00996	0 00996
30.00	0.00777	0.00777	0 00777
35.00	0.00634	0.00634	0 00634
40 00	0.00531	0.00531	0 00531
45 00	0.00456	0.00456	0.00456
50.00	0.00398	0.00398	0 00398

Notes:

Base Case Surface Roughness at Measurement Site = 0.1

Test Case 1: Surface Roughness at Measurement Site = 1 3

Test Case 2: Surface Roughness at Measurement Site = 0 001

TABLE A-11-8
SURFACE ROUGHNESS AT MEASUREMENT SITE
NORMALIZED VAPOR PHASE CONCENTRATION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes:

Base Case: Surface Roughness at Measurement Site = 0.1

Test Case 1: Surface Roughness at Measurement Site = 1.3

Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-11-7
SURFACE ROUGHNESS AT MEASUREMENT SITE
PARTICLE PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Surface Roughness = 0 10	Surface Roughness = 1 3	Surface Roughness = 0 001
0.10	0 08968	0 17082	0.05163
0.20	1 36840	2 60651	0.77297
0.30	2.24341	4.24609	1.25954
0.40	2 34887	4 41165	1.31630
0 50	2 15502	4 01479	1.20842
0 60	1 88344	3 47998	1.05862
0 70	1 62008	2 96966	0 91356
0 80	1.39045	2.52945	0.78698
0 90	1.19742	2.16274	0 68042
1 00	1.03767	1.86187	0 59195
1 25	0.75775	1.34025	0 43641
1 50	0.57660	1.00646	0 33527
1 75	0.45378	0.78303	0 26630
2 00	0.36724	0.62713	0 21738
2 25	0.30313	0 51239	0 18092
2.50	0.25450	0.42617	0 15308
3.00	0.18652	0.30680	0.11393
3.50	0.14307	0.23160	0.08862
4.00	0.11344	0.18105	0.07118
4.50	0.09227	0.14530	0.05859
5.00	0.07655	0 11904	0.04914
6.00	0.05517	0 08390	0.03612
7.00	0.04164	0 06206	0.02776
8.00	0.03253	0.04763	0.02205
9.00	0 02614	0.03765	0.01799
10.00	0.02148	0.03048	0.01498
15.00	0.01011	0.01352	0.00744
20.00	0.00588	0.00753	0.00451
25.00	0.00387	0.00479	0.00306
30 00	0.00274	0.00330	0.00222
35 00	0.00205	0.00241	0.00170
40.00	0.00159	0.00184	0.00135
45.00	0.00126	0.00145	0.00110
50 00	0.00100	0.00113	0 00088

Notes:

Base Case Surface Roughness at Measurement Site = 0 1

Test Case 1: Surface Roughness at Measurement Site = 1 3

Test Case 2 Surface Roughness at Measurement Site = 0 001

TABLE A-11-8
SURFACE ROUGHNESS AT MEASUREMENT SITE
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.00000	1.90477	0.57571
0.20	1.00000	1.90479	0.56487
0.30	1.00000	1.89269	0.56144
0.40	1.00000	1.87820	0.56040
0.50	1.00000	1.86299	0.56075
0.60	1.00000	1.84767	0.56207
0.70	1.00000	1.83303	0.56390
0.80	1.00000	1.81916	0.56599
0.90	1.00000	1.80617	0.56824
1.00	1.00000	1.79428	0.57046
1.25	1.00000	1.76872	0.57593
1.50	1.00000	1.74551	0.58146
1.75	1.00000	1.72557	0.58685
2.00	1.00000	1.70768	0.59193
2.25	1.00000	1.69033	0.59684
2.50	1.00000	1.67454	0.60149
3.00	1.00000	1.64486	0.61082
3.50	1.00000	1.61879	0.61942
4.00	1.00000	1.59600	0.62747
4.50	1.00000	1.57473	0.63498
5.00	1.00000	1.55506	0.64193
6.00	1.00000	1.52075	0.65470
7.00	1.00000	1.49039	0.66667
8.00	1.00000	1.46419	0.67784
9.00	1.00000	1.44032	0.68822
10.00	1.00000	1.41899	0.69739
15.00	1.00000	1.33729	0.73591
20.00	1.00000	1.28061	0.76701
25.00	1.00000	1.23773	0.79070
30.00	1.00000	1.20438	0.81022
35.00	1.00000	1.17561	0.82927
40.00	1.00000	1.15723	0.84906
45.00	1.00000	1.13281	0.85938
50.00	1.00000	1.13000	0.88000

Notes:

Base Case. Surface Roughness at Measurement Site = 0.1

Test Case 1 Surface Roughness at Measurement Site = 1.3

Test Case 2 Surface Roughness at Measurement Site = 0.001

TABLE A-11-9
SURFACE ROUGHNESS AT MEASUREMENT SITE
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = g/m^2/g/s

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	0.01555	0.03550	0.00840
0.20	0.23579	0.53901	0.12571
0.30	0.38738	0.88153	0.20587
0.40	0.40600	0.91535	0.21649
0.50	0.37312	0.83262	0.20007
0.60	0.32682	0.72180	0.17641
0.70	0.28184	0.61628	0.15319
0.80	0.24253	0.52532	0.13274
0.90	0.20944	0.44963	0.11541
1.00	0.18198	0.38745	0.10094
1.25	0.13371	0.27982	0.07519
1.50	0.10236	0.21087	0.05831
1.75	0.08104	0.16472	0.04671
2.00	0.06593	0.13242	0.03841
2.25	0.05470	0.10861	0.03217
2.50	0.04614	0.09066	0.02739
3.00	0.03414	0.06576	0.02061
3.50	0.02642	0.05004	0.01619
4.00	0.02112	0.03942	0.01311
4.50	0.01731	0.03187	0.01088
5.00	0.01446	0.02629	0.00919
6.00	0.01056	0.01878	0.00684
7.00	0.00807	0.01407	0.00532
8.00	0.00638	0.01094	0.00427
9.00	0.00519	0.00875	0.00352
10.00	0.00431	0.00716	0.00296
15.00	0.00212	0.00334	0.00153
20.00	0.00128	0.00194	0.00095
25.00	0.00087	0.00128	0.00066
30.00	0.00064	0.00092	0.00049
35.00	0.00049	0.00069	0.00039
40.00	0.00039	0.00054	0.00031
45.00	0.00032	0.00044	0.00026
50.00	0.00026	0.00036	0.00022

Notes

Base Case: Surface Roughness at Measurement Site = 0.1

Test Case 1: Surface Roughness at Measurement Site = 1.3

Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-11-10
SURFACE ROUGHNESS AT MEASUREMENT SITE
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1 3	Surface Roughness = 0 001
0.10	1 00000	2 28296	0.54019
0.20	1.00000	2 28597	0.53314
0.30	1.00000	2.27562	0.53144
0.40	1.00000	2.25456	0.53323
0.50	1.00000	2.23151	0.53621
0.60	1.00000	2 20856	0 53978
0.70	1 00000	2 18663	0.54354
0.80	1 00000	2 16600	0.54731
0.90	1.00000	2 14682	0.55104
1.00	1.00000	2.12908	0.55468
1 25	1 00000	2 09274	0.56234
1 50	1 00000	2.06008	0.56966
1 75	1 00000	2 03258	0.57638
2 00	1 00000	2 00849	0.58259
2 25	1 00000	1.98556	0.58812
2 50	1 00000	1.96489	0.59363
3.00	1.00000	1.92619	0.60369
3.50	1.00000	1.89402	0.61279
4.00	1.00000	1.86648	0.62074
4.50	1.00000	1.84113	0.62854
5 00	1.00000	1.81812	0.63555
6 00	1.00000	1.77841	0.64773
7 00	1.00000	1.74349	0.65923
8.00	1.00000	1.71473	0.66928
9.00	1.00000	1.68593	0.67823
10.00	1.00000	1.66125	0.68677
15.00	1.00000	1.57547	0.72170
20.00	1.00000	1.51563	0.74219
25.00	1.00000	1.47126	0.75862
30.00	1.00000	1.43750	0.76563
35.00	1.00000	1.40816	0.79592
40.00	1.00000	1.38462	0.79487
45.00	1.00000	1.37500	0.81250
50.00	1.00000	1.38462	0.84615

Notes:

Base Case Surface Roughness at Measurement Site = 0 1

Test Case 1: Surface Roughness at Measurement Site = 1 3

Test Case 2: Surface Roughness at Measurement Site = 0 001

TABLE A-11-11
SURFACE ROUGHNESS AT MEASUREMENT SITE
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	3.61053	3.61053	3.61053
0.20	1.68001	1.67974	1.68015
0.30	1.03968	1.03849	1.04032
0.40	0.72250	0.72016	0.72377
0.50	0.53703	0.53371	0.53884
0.60	0.41737	0.41335	0.41956
0.70	0.33499	0.33053	0.33742
0.80	0.27555	0.27085	0.27811
0.90	0.23112	0.22634	0.23372
1.00	0.19693	0.19218	0.19953
1.25	0.13919	0.13471	0.14164
1.50	0.10400	0.09990	0.10625
1.75	0.08088	0.07717	0.08291
2.00	0.06482	0.06149	0.06665
2.25	0.05319	0.05024	0.05483
2.50	0.04446	0.04160	0.04594
3.00	0.03244	0.03026	0.03365
3.50	0.02471	0.02290	0.02573
4.00	0.01945	0.01793	0.02031
4.50	0.01570	0.01441	0.01644
5.00	0.01293	0.01182	0.01357
6.00	0.00920	0.00835	0.00969
7.00	0.00686	0.00620	0.00725
8.00	0.00531	0.00478	0.00562
9.00	0.00422	0.00378	0.00448
10.00	0.00343	0.00307	0.00365
15.00	0.00153	0.00135	0.00163
20.00	0.00085	0.00075	0.00091
25.00	0.00053	0.00047	0.00057
30.00	0.00036	0.00032	0.00039
35.00	0.00026	0.00023	0.00028
40.00	0.00019	0.00017	0.00021
45.00	0.00015	0.00013	0.00016
50.00	0.00012	0.00010	0.00013

Notes
Base Case: Surface Roughness at Measurement Site = 0.1
Test Case 1: Surface Roughness at Measurement Site = 1.3
Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-11-12
SURFACE ROUGHNESS AT MEASUREMENT SITE
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.00000	1.00000	1.00000
0.20	1.00000	0.99984	1.00008
0.30	1.00000	0.99886	1.00062
0.40	1.00000	0.99676	1.00176
0.50	1.00000	0.99382	1.00337
0.60	1.00000	0.99037	1.00525
0.70	1.00000	0.98669	1.00725
0.80	1.00000	0.98294	1.00929
0.90	1.00000	0.97932	1.01125
1.00	1.00000	0.97588	1.01320
1.25	1.00000	0.96781	1.01760
1.50	1.00000	0.96058	1.02163
1.75	1.00000	0.95413	1.02510
2.00	1.00000	0.94863	1.02823
2.25	1.00000	0.94454	1.03083
2.50	1.00000	0.94017	1.03329
3.00	1.00000	0.93280	1.03730
3.50	1.00000	0.92675	1.04128
4.00	1.00000	0.92185	1.04422
4.50	1.00000	0.91783	1.04713
5.00	1.00000	0.91415	1.04950
6.00	1.00000	0.90761	1.05326
7.00	1.00000	0.90379	1.05685
8.00	1.00000	0.90019	1.05838
9.00	1.00000	0.89573	1.06161
10.00	1.00000	0.89504	1.06414
15.00	1.00000	0.88235	1.06536
20.00	1.00000	0.88235	1.07059
25.00	1.00000	0.88679	1.07547
30.00	1.00000	0.88889	1.08333
35.00	1.00000	0.88462	1.07692
40.00	1.00000	0.89474	1.10526
45.00	1.00000	0.86667	1.06667
50.00	1.00000	0.83333	1.08333

Notes.

Base Case. Surface Roughness at Measurement Site = 0.1

Test Case 1 Surface Roughness at Measurement Site = 1.3

Test Case 2. Surface Roughness at Measurement Site = 0.001

TABLE A-11-13
SURFACE ROUGHNESS AT MEASUREMENT SITE
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.43996	1.43996	1.43996
0.20	0.70064	0.70058	0.70067
0.30	0.45262	0.45236	0.45273
0.40	0.32746	0.32696	0.32768
0.50	0.25273	0.25203	0.25304
0.60	0.20343	0.20258	0.20380
0.70	0.16869	0.16775	0.16910
0.80	0.14303	0.14203	0.14347
0.90	0.12339	0.12238	0.12383
1.00	0.10794	0.10692	0.10837
1.25	0.08085	0.07988	0.08126
1.50	0.06348	0.06258	0.06386
1.75	0.05152	0.05070	0.05187
2.00	0.04286	0.04212	0.04317
2.25	0.03634	0.03568	0.03662
2.50	0.03128	0.03068	0.03154
3.00	0.02401	0.02351	0.02422
3.50	0.01909	0.01866	0.01927
4.00	0.01558	0.01522	0.01573
4.50	0.01298	0.01267	0.01311
5.00	0.01099	0.01072	0.01111
6.00	0.00819	0.00798	0.00828
7.00	0.00635	0.00618	0.00642
8.00	0.00507	0.00493	0.00513
9.00	0.00414	0.00403	0.00419
10.00	0.00345	0.00335	0.00349
15.00	0.00167	0.00162	0.00169
20.00	0.00098	0.00095	0.00099
25.00	0.00064	0.00062	0.00065
30.00	0.00045	0.00044	0.00046
35.00	0.00033	0.00032	0.00034
40.00	0.00025	0.00025	0.00026
45.00	0.00020	0.00019	0.00020
50.00	0.00016	0.00016	0.00016

Notes

Base Case: Surface Roughness at Measurement Site = 0.1

Test Case 1: Surface Roughness at Measurement Site = 1.3

Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-11-14
SURFACE ROUGHNE55 AT MEASUREMENT SITE
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.00000	1.00000	1.00000
0.20	1.00000	0.99991	1.00004
0.30	1.00000	0.99943	1.00024
0.40	1.00000	0.99847	1.00067
0.50	1.00000	0.99723	1.00123
0.60	1.00000	0.99582	1.00182
0.70	1.00000	0.99443	1.00243
0.80	1.00000	0.99301	1.00308
0.90	1.00000	0.99181	1.00357
1.00	1.00000	0.99055	1.00398
1.25	1.00000	0.98800	1.00507
1.50	1.00000	0.98582	1.00599
1.75	1.00000	0.98408	1.00679
2.00	1.00000	0.98273	1.00723
2.25	1.00000	0.98184	1.00771
2.50	1.00000	0.98082	1.00831
3.00	1.00000	0.97918	1.00875
3.50	1.00000	0.97748	1.00943
4.00	1.00000	0.97689	1.00963
4.50	1.00000	0.97612	1.01002
5.00	1.00000	0.97543	1.01092
6.00	1.00000	0.97436	1.01099
7.00	1.00000	0.97323	1.01102
8.00	1.00000	0.97239	1.01183
9.00	1.00000	0.97343	1.01208
10.00	1.00000	0.97101	1.01159
15.00	1.00000	0.97006	1.01198
20.00	1.00000	0.96939	1.01020
25.00	1.00000	0.96875	1.01563
30.00	1.00000	0.97778	1.02222
35.00	1.00000	0.96970	1.03030
40.00	1.00000	1.00000	1.04000
45.00	1.00000	0.95000	1.00000
50.00	1.00000	1.00000	1.00000

Notes

Base Case: Surface Roughness at Measurement Site = 0.1

Test Case 1: Surface Roughness at Measurement Site = 1.3

Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-11-15
SURFACE ROUGHNESS AT MEASUREMENT SITE
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	2.15817	2.15817	2.15817
0.20	1.06510	1.06510	1.06510
0.30	0.69588	0.69588	0.69588
0.40	0.50780	0.50780	0.50780
0.50	0.39440	0.39440	0.39440
0.60	0.31885	0.31885	0.31885
0.70	0.26511	0.26511	0.26511
0.80	0.22506	0.22506	0.22506
0.90	0.19417	0.19417	0.19417
1.00	0.16968	0.16968	0.16968
1.25	0.12638	0.12638	0.12638
1.50	0.09837	0.09837	0.09837
1.75	0.07901	0.07901	0.07901
2.00	0.06499	0.06499	0.06499
2.25	0.05447	0.05447	0.05447
2.50	0.04635	0.04635	0.04635
3.00	0.03480	0.03480	0.03480
3.50	0.02713	0.02713	0.02713
4.00	0.02175	0.02175	0.02175
4.50	0.01784	0.01784	0.01784
5.00	0.01491	0.01491	0.01491
6.00	0.01086	0.01086	0.01086
7.00	0.00827	0.00827	0.00827
8.00	0.00651	0.00651	0.00651
9.00	0.00525	0.00525	0.00525
10.00	0.00432	0.00432	0.00432
15.00	0.00199	0.00199	0.00199
20.00	0.00112	0.00112	0.00112
25.00	0.00071	0.00071	0.00071
30.00	0.00049	0.00049	0.00049
35.00	0.00035	0.00035	0.00035
40.00	0.00027	0.00027	0.00027
45.00	0.00021	0.00021	0.00021
50.00	0.00017	0.00017	0.00017

Notes

Base Case Surface Roughness at Measurement Site = 0.1

Test Case 1. Surface Roughness at Measurement Site = 1.3

Test Case 2. Surface Roughness at Measurement Site = 0.001

TABLE A-11-16
SURFACE ROUGHNESS AT MEASUREMENT SITE
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Km)	Surface Roughness = 0.10	Surface Roughness = 1.3	Surface Roughness = 0.001
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes.
Base Case: Surface Roughness at Measurement Site = 0.1
Test Case 1: Surface Roughness at Measurement Site = 1.3
Test Case 2: Surface Roughness at Measurement Site = 0.001

TABLE A-12-1
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
PARTICLE PHASE CONCENTRATION
UNITS = μg/m³/g/s

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	0.02717	0.02716	0.02721
0.20	0.52539	0.52521	0.52649
0.30	0.93734	0.93702	0.93934
0.40	1.05378	1.05340	1.05610
0.50	1.02759	1.02721	1.02993
0.60	0.94724	0.94688	0.94946
0.70	0.85506	0.85472	0.85711
0.80	0.76683	0.76652	0.76872
0.90	0.68782	0.68754	0.68955
1.00	0.61889	0.61863	0.62046
1.25	0.48600	0.48579	0.48726
1.50	0.39450	0.39433	0.39554
1.75	0.32845	0.32831	0.32933
2.00	0.27896	0.27884	0.27971
2.25	0.24019	0.24008	0.24083
2.50	0.20954	0.20945	0.21010
3.00	0.16449	0.16442	0.16493
3.50	0.13358	0.13352	0.13394
4.00	0.11118	0.11113	0.11149
4.50	0.09440	0.09436	0.09466
5.00	0.08143	0.08139	0.08165
6.00	0.06286	0.06283	0.06303
7.00	0.05036	0.05034	0.05050
8.00	0.04150	0.04148	0.04161
9.00	0.03494	0.03493	0.03504
10.00	0.02994	0.02993	0.03003
15.00	0.01660	0.01660	0.01665
20.00	0.01092	0.01092	0.01096
25.00	0.00793	0.00792	0.00795
30.00	0.00610	0.00610	0.00612
35.00	0.00491	0.00491	0.00493
40.00	0.00407	0.00407	0.00408
45.00	0.00346	0.00346	0.00347
50.00	0.00297	0.00297	0.00298

Notes:
Base Case. Noon-Time Albedo = 0.18
Test Case 1 Noon-Time Albedo = 0.10
Test Case 2. Noon-Time Albedo = 0.60

TABLE A-12-2
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE CONCENTRATION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	0.99963	1.00147
0.20	1.00000	0.99966	1.00209
0.30	1.00000	0.99966	1.00213
0.40	1.00000	0.99964	1.00220
0.50	1.00000	0.99963	1.00228
0.60	1.00000	0.99962	1.00234
0.70	1.00000	0.99960	1.00240
0.80	1.00000	0.99960	1.00246
0.90	1.00000	0.99959	1.00252
1.00	1.00000	0.99958	1.00254
1.25	1.00000	0.99957	1.00259
1.50	1.00000	0.99957	1.00264
1.75	1.00000	0.99957	1.00268
2.00	1.00000	0.99957	1.00269
2.25	1.00000	0.99954	1.00266
2.50	1.00000	0.99957	1.00267
3.00	1.00000	0.99957	1.00267
3.50	1.00000	0.99955	1.00270
4.00	1.00000	0.99955	1.00279
4.50	1.00000	0.99958	1.00275
5.00	1.00000	0.99951	1.00270
6.00	1.00000	0.99952	1.00270
7.00	1.00000	0.99960	1.00278
8.00	1.00000	0.99952	1.00265
9.00	1.00000	0.99971	1.00286
10.00	1.00000	0.99967	1.00301
15.00	1.00000	1.00000	1.00301
20.00	1.00000	1.00000	1.00366
25.00	1.00000	0.99874	1.00252
30.00	1.00000	1.00000	1.00328
35.00	1.00000	1.00000	1.00407
40.00	1.00000	1.00000	1.00246
45.00	1.00000	1.00000	1.00289
50.00	1.00000	1.00000	1.00337

Notes
Base Case. Noon-Time Albedo = 0.18
Test Case 1. Noon-Time Albedo = 0.10
Test Case 2. Noon-Time Albedo = 0.60

TABLE A-12-3
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
PARTICLE BOUND PHASE CONCENTRATION
UNITS = μg/m³/g/s

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	0.02736	0.02736	0.02737
0.20	0.53598	0.53596	0.53616
0.30	0.96577	0.96572	0.96610
0.40	1.09422	1.09416	1.09460
0.50	1.07412	1.07406	1.07451
0.60	0.99583	0.99577	0.99620
0.70	0.90336	0.90330	0.90370
0.80	0.81362	0.81357	0.81394
0.90	0.73255	0.73250	0.73283
1.00	0.66125	0.66120	0.66151
1.25	0.52241	0.52237	0.52262
1.50	0.42619	0.42616	0.42637
1.75	0.35637	0.35634	0.35651
2.00	0.30373	0.30371	0.30386
2.25	0.26236	0.26234	0.26247
2.50	0.22956	0.22955	0.22966
3.00	0.18121	0.18119	0.18128
3.50	0.14789	0.14788	0.14795
4.00	0.12365	0.12365	0.12371
4.50	0.10541	0.10541	0.10546
5.00	0.09127	0.09126	0.09131
6.00	0.07094	0.07093	0.07097
7.00	0.05719	0.05719	0.05722
8.00	0.04739	0.04739	0.04741
9.00	0.04011	0.04011	0.04013
10.00	0.03454	0.03454	0.03455
15.00	0.01953	0.01953	0.01954
20.00	0.01304	0.01304	0.01305
25.00	0.00958	0.00958	0.00958
30.00	0.00745	0.00745	0.00745
35.00	0.00605	0.00605	0.00606
40.00	0.00506	0.00506	0.00506
45.00	0.00433	0.00433	0.00433
50.00	0.00377	0.00377	0.00377

Notes

Base Case. Noon-Time Albedo = 0.18

Test Case 1. Noon-Time Albedo = 0.10

Test Case 2. Noon-Time Albedo = 0.60

TABLE A-12-4
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE BOUND PHASE CONCENTRATION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	1.00000	1.00037
0.20	1.00000	0.99996	1.00034
0.30	1.00000	0.99995	1.00034
0.40	1.00000	0.99995	1.00035
0.50	1.00000	0.99994	1.00036
0.60	1.00000	0.99994	1.00037
0.70	1.00000	0.99993	1.00038
0.80	1.00000	0.99994	1.00039
0.90	1.00000	0.99993	1.00038
1.00	1.00000	0.99992	1.00039
1.25	1.00000	0.99992	1.00040
1.50	1.00000	0.99993	1.00042
1.75	1.00000	0.99992	1.00039
2.00	1.00000	0.99993	1.00043
2.25	1.00000	0.99992	1.00042
2.50	1.00000	0.99996	1.00044
3.00	1.00000	0.99989	1.00039
3.50	1.00000	0.99993	1.00041
4.00	1.00000	1.00000	1.00049
4.50	1.00000	1.00000	1.00047
5.00	1.00000	0.99989	1.00044
6.00	1.00000	0.99986	1.00042
7.00	1.00000	1.00000	1.00052
8.00	1.00000	1.00000	1.00042
9.00	1.00000	1.00000	1.00050
10.00	1.00000	1.00000	1.00029
15.00	1.00000	1.00000	1.00051
20.00	1.00000	1.00000	1.00077
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00165
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes
Base Case: Noon-Time Albedo = 0.18
Test Case 1: Noon-Time Albedo = 0.10
Test Case 2: Noon-Time Albedo = 0.60

TABLE A-12-5
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
VAPOR PHASE CONCENTRATION
UNITS = $\mu g/m^3/g/s$

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	0.02743	0.02743	0.02743
0.20	0.53865	0.53865	0.53865
0.30	0.97222	0.97222	0.97222
0.40	1.10287	1.10287	1.10287
0.50	1.08367	1.08367	1.08367
0.60	1.00551	1.00551	1.00551
0.70	0.91278	0.91278	0.91278
0.80	0.82261	0.82261	0.82261
0.90	0.74103	0.74103	0.74103
1.00	0.66921	0.66921	0.66921
1.25	0.52914	0.52914	0.52914
1.50	0.43199	0.43199	0.43199
1.75	0.36145	0.36145	0.36145
2.00	0.30823	0.30823	0.30823
2.25	0.26638	0.26638	0.26638
2.50	0.23319	0.23319	0.23319
3.00	0.18424	0.18424	0.18424
3.50	0.15050	0.15050	0.15050
4.00	0.12594	0.12594	0.12594
4.50	0.10744	0.10744	0.10744
5.00	0.09309	0.09309	0.09309
6.00	0.07246	0.07246	0.07246
7.00	0.05849	0.05849	0.05849
8.00	0.04853	0.04853	0.04853
9.00	0.04113	0.04113	0.04113
10.00	0.03545	0.03545	0.03545
15.00	0.02015	0.02015	0.02015
20.00	0.01351	0.01351	0.01351
25.00	0.00996	0.00996	0.00996
30.00	0.00777	0.00777	0.00777
35.00	0.00634	0.00634	0.00634
40.00	0.00531	0.00531	0.00531
45.00	0.00456	0.00456	0.00456
50.00	0.00398	0.00398	0.00398

Notes:
Base Case: Noon-Time Albedo = 0.18
Test Case 1: Noon-Time Albedo = 0.10
Test Case 2: Noon-Time Albedo = 0.60

TABLE A-12-6
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE CONCENTRATION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes

Base Case. Noon-Time Albedo = 0.18

Test Case 1: Noon-Time Albedo = 0.10

Test Case 2: Noon-Time Albedo = 0.60

TABLE A-12-7
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
PARTICLE PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	0.08968	0.09048	0.08470
0.20	1.36840	1.37746	1.31205
0.30	2.24341	2.25535	2.16976
0.40	2.34887	2.36003	2.28068
0.50	2.15502	2.16452	2.09738
0.60	1.88344	1.89131	1.83591
0.70	1.62008	1.62657	1.58096
0.80	1.39045	1.39584	1.35806
0.90	1.19742	1.20192	1.17038
1.00	1.03767	1.04146	1.01487
1.25	0.75775	0.76036	0.74210
1.50	0.57660	0.57849	0.56529
1.75	0.45378	0.45520	0.44526
2.00	0.36724	0.36834	0.36061
2.25	0.30313	0.30401	0.29786
2.50	0.25450	0.25521	0.25021
3.00	0.18652	0.18701	0.18355
3.50	0.14307	0.14343	0.14089
4.00	0.11344	0.11372	0.11178
4.50	0.09227	0.09248	0.09097
5.00	0.07655	0.07672	0.07550
6.00	0.05517	0.05528	0.05445
7.00	0.04164	0.04172	0.04112
8.00	0.03253	0.03260	0.03215
9.00	0.02614	0.02619	0.02584
10.00	0.02148	0.02151	0.02123
15.00	0.01011	0.01013	0.01001
20.00	0.00588	0.00589	0.00582
25.00	0.00387	0.00387	0.00383
30.00	0.00274	0.00274	0.00271
35.00	0.00205	0.00205	0.00203
40.00	0.00159	0.00159	0.00158
45.00	0.00128	0.00128	0.00127
50.00	0.00100	0.00100	0.00100

Notes

Base Case Noon-Time Albedo = 0.18

Test Case 1. Noon-Time Albedo = 0.10

Test Case 2. Noon-Time Albedo = 0.60

TABLE A-12-8
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	1.00892	0.94447
0.20	1.00000	1.00662	0.95682
0.30	1.00000	1.00532	0.96717
0.40	1.00000	1.00475	0.97097
0.50	1.00000	1.00441	0.97325
0.60	1.00000	1.00418	0.97476
0.70	1.00000	1.00401	0.97585
0.80	1.00000	1.00388	0.97671
0.90	1.00000	1.00376	0.97742
1.00	1.00000	1.00365	0.97803
1.25	1.00000	1.00344	0.97935
1.50	1.00000	1.00328	0.98039
1.75	1.00000	1.00313	0.98122
2.00	1.00000	1.00300	0.98195
2.25	1.00000	1.00290	0.98261
2.50	1.00000	1.00279	0.98314
3.00	1.00000	1.00263	0.98408
3.50	1.00000	1.00252	0.98476
4.00	1.00000	1.00247	0.98537
4.50	1.00000	1.00228	0.98591
5.00	1.00000	1.00222	0.98628
6.00	1.00000	1.00199	0.98695
7.00	1.00000	1.00192	0.98751
8.00	1.00000	1.00215	0.98832
9.00	1.00000	1.00191	0.98852
10.00	1.00000	1.00140	0.98836
15.00	1.00000	1.00198	0.99011
20.00	1.00000	1.00170	0.98980
25.00	1.00000	1.00000	0.98966
30.00	1.00000	1.00000	0.98905
35.00	1.00000	1.00000	0.99024
40.00	1.00000	1.00000	0.99371
45.00	1.00000	1.00000	0.99219
50.00	1.00000	1.00000	1.00000

Notes

Base Case Noon-Time Albedo = 0.18

Test Case 1. Noon-Time Albedo = 0.10

Test Case 2. Noon-Time Albedo = 0.60

TABLE A-12-9
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
PARTICLE BOUND PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	0.01555	0.01569	0.01472
0.20	0.23579	0.23733	0.22631
0.30	0.38738	0.38943	0.37484
0.40	0.40600	0.40793	0.39431
0.50	0.37312	0.37477	0.36318
0.60	0.32682	0.32820	0.31860
0.70	0.28184	0.28298	0.27505
0.80	0.24253	0.24348	0.23689
0.90	0.20944	0.21023	0.20472
1.00	0.18198	0.18265	0.17799
1.25	0.13371	0.13417	0.13095
1.50	0.10236	0.10270	0.10036
1.75	0.08104	0.08129	0.07952
2.00	0.06593	0.06613	0.06474
2.25	0.05470	0.05486	0.05374
2.50	0.04614	0.04627	0.04536
3.00	0.03414	0.03423	0.03359
3.50	0.02642	0.02648	0.02601
4.00	0.02112	0.02117	0.02081
4.50	0.01731	0.01735	0.01706
5.00	0.01446	0.01450	0.01426
6.00	0.01056	0.01059	0.01042
7.00	0.00807	0.00809	0.00797
8.00	0.00638	0.00640	0.00631
9.00	0.00519	0.00520	0.00512
10.00	0.00431	0.00431	0.00426
15.00	0.00212	0.00212	0.00210
20.00	0.00128	0.00128	0.00127
25.00	0.00087	0.00087	0.00086
30.00	0.00064	0.00064	0.00063
35.00	0.00049	0.00049	0.00049
40.00	0.00039	0.00039	0.00039
45.00	0.00032	0.00032	0.00032
50.00	0.00026	0.00026	0.00026

Notes
Base Case. Noon-Time Albedo = 0.18
Test Case 1. Noon-Time Albedo = 0.10
Test Case 2. Noon-Time Albedo = 0.60

TABLE A-12-10
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	1.00900	0.94662
0.20	1.00000	1.00653	0.95979
0.30	1.00000	1.00528	0.96763
0.40	1.00000	1.00475	0.97121
0.50	1.00000	1.00442	0.97336
0.60	1.00000	1.00422	0.97485
0.70	1.00000	1.00404	0.97591
0.80	1.00000	1.00392	0.97675
0.90	1.00000	1.00377	0.97746
1.00	1.00000	1.00368	0.97807
1.25	1.00000	1.00344	0.97936
1.50	1.00000	1.00332	0.98046
1.75	1.00000	1.00308	0.98124
2.00	1.00000	1.00303	0.98195
2.25	1.00000	1.00293	0.98245
2.50	1.00000	1.00282	0.98309
3.00	1.00000	1.00264	0.98389
3.50	1.00000	1.00227	0.98448
4.00	1.00000	1.00237	0.98532
4.50	1.00000	1.00231	0.98556
5.00	1.00000	1.00277	0.98617
6.00	1.00000	1.00284	0.98674
7.00	1.00000	1.00248	0.98761
8.00	1.00000	1.00313	0.98903
9.00	1.00000	1.00193	0.98651
10.00	1.00000	1.00000	0.98840
15.00	1.00000	1.00000	0.99057
20.00	1.00000	1.00000	0.99219
25.00	1.00000	1.00000	0.98851
30.00	1.00000	1.00000	0.98438
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes.
Base Case Noon-Time Albedo = 0.18
Test Case 1. Noon-Time Albedo = 0.10
Test Case 2. Noon-Time Albedo = 0.60

TABLE A-12-11
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Noon-Time Albedo = 0 18	Noon-Time Albedo = 0 10	Noon-Time Albedo = 0 60
0 10	3 61053	3 61053	3 61053
0 20	1 68001	1 68001	1 68001
0.30	1 03968	1.03968	1 03970
0.40	0 72250	0.72250	0.72254
0.50	0.53703	0.53703	0.53709
0.60	0.41737	0.41736	0.41744
0.70	0 33499	0.33498	0 33507
0.80	0 27555	0.27553	0 27563
0 90	0.23112	0.23110	0 23120
1.00	0.19693	0.19692	0.19702
1.25	0.13919	0.13917	0.13927
1 50	0.10400	0.10399	0.10408
1 75	0.08088	0.08086	0.08094
2 00	0.06482	0.06480	0.06488
2.25	0.05319	0.05318	0.05324
2.50	0.04446	0.04445	0.04451
3.00	0.03244	0 03243	0.03248
3.50	0.02471	0 02471	0.02474
4.00	0.01945	0 01945	0.01948
4.50	0.01570	0 01570	0.01572
5.00	0.01293	0.01293	0.01295
6.00	0 00920	0 00920	0.00921
7.00	0 00686	0 00686	0.00687
8.00	0 00531	0.00531	0 00531
9.00	0 00422	0.00422	0 00423
10.00	0.00343	0.00343	0.00344
15.00	0.00153	0.00153	0.00153
20.00	0.00085	0.00085	0.00085
25.00	0.00053	0.00053	0.00053
30.00	0.00036	0.00036	0.00036
35 00	0.00026	0.00026	0.00026
40 00	0.00019	0.00019	0.00019
45 00	0.00015	0.00015	0.00015
50 00	0.00012	0.00012	0 00012

Notes

Base Case Noon-Time Albedo = 0 18

Test Case 1: Noon-Time Albedo = 0 10

Test Case 2: Noon-Time Albedo = 0 60

TABLE A-12-12
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00002
0.40	1.00000	1.00000	1.00006
0.50	1.00000	1.00000	1.00011
0.60	1.00000	0.99998	1.00017
0.70	1.00000	0.99997	1.00024
0.80	1.00000	0.99993	1.00029
0.90	1.00000	0.99991	1.00035
1.00	1.00000	0.99995	1.00046
1.25	1.00000	0.99986	1.00057
1.50	1.00000	0.99990	1.00077
1.75	1.00000	0.99975	1.00074
2.00	1.00000	0.99969	1.00093
2.25	1.00000	0.99981	1.00094
2.50	1.00000	0.99978	1.00112
3.00	1.00000	0.99969	1.00123
3.50	1.00000	1.00000	1.00121
4.00	1.00000	1.00000	1.00154
4.50	1.00000	1.00000	1.00127
5.00	1.00000	1.00000	1.00155
6.00	1.00000	1.00000	1.00109
7.00	1.00000	1.00000	1.00146
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00237
10.00	1.00000	1.00000	1.00292
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes
Base Case: Noon-Time Albedo = 0.18
Test Case 1: Noon-Time Albedo = 0.10
Test Case 2: Noon-Time Albedo = 0.60

TABLE A-12-13
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.43996	1.43996	1.43996
0.20	0.70064	0.70064	0.70064
0.30	0.45262	0.45262	0.45262
0.40	0.32746	0.32746	0.32746
0.50	0.25273	0.25273	0.25274
0.60	0.20343	0.20343	0.20344
0.70	0.16869	0.16869	0.16871
0.80	0.14303	0.14303	0.14305
0.90	0.12339	0.12339	0.12341
1.00	0.10794	0.10793	0.10795
1.25	0.08085	0.08084	0.08086
1.50	0.06348	0.06347	0.06349
1.75	0.05152	0.05152	0.05153
2.00	0.04286	0.04286	0.04287
2.25	0.03634	0.03634	0.03635
2.50	0.03128	0.03128	0.03129
3.00	0.02401	0.02401	0.02401
3.50	0.01909	0.01908	0.01909
4.00	0.01558	0.01558	0.01558
4.50	0.01298	0.01298	0.01298
5.00	0.01099	0.01099	0.01099
6.00	0.00819	0.00819	0.00819
7.00	0.00635	0.00635	0.00635
8.00	0.00507	0.00507	0.00507
9.00	0.00414	0.00414	0.00414
10.00	0.00345	0.00345	0.00345
15.00	0.00167	0.00167	0.00167
20.00	0.00098	0.00098	0.00098
25.00	0.00064	0.00064	0.00064
30.00	0.00045	0.00045	0.00045
35.00	0.00033	0.00033	0.00033
40.00	0.00025	0.00025	0.00025
45.00	0.00020	0.00020	0.00020
50.00	0.00016	0.00016	0.00016

Notes:
Base Case: Noon-Time Albedo = 0.18
Test Case 1: Noon-Time Albedo = 0.10
Test Case 2: Noon-Time Albedo = 0.60

TABLE A-12-14
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00004
0.60	1.00000	1.00000	1.00005
0.70	1.00000	1.00000	1.00012
0.80	1.00000	1.00000	1.00014
0.90	1.00000	1.00000	1.00016
1.00	1.00000	0.99991	1.00009
1.25	1.00000	0.99988	1.00012
1.50	1.00000	0.99984	1.00016
1.75	1.00000	1.00000	1.00019
2.00	1.00000	1.00000	1.00023
2.25	1.00000	1.00000	1.00028
2.50	1.00000	1.00000	1.00032
3.00	1.00000	1.00000	1.00000
3.50	1.00000	0.99948	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes

Base Case: Noon-Time Albedo = 0.18

Test Case 1: Noon-Time Albedo = 0.10

Test Case 2: Noon-Time Albedo = 0.60

TABLE A-12-15
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	2.15817	2.15817	2.15817
0.20	1.06510	1.06510	1.06510
0.30	0.69588	0.69588	0.69588
0.40	0.50780	0.50780	0.50780
0.50	0.39440	0.39440	0.39440
0.60	0.31885	0.31885	0.31885
0.70	0.26511	0.26511	0.26511
0.80	0.22506	0.22506	0.22506
0.90	0.19417	0.19417	0.19417
1.00	0.16968	0.16968	0.16968
1.25	0.12638	0.12638	0.12638
1.50	0.09837	0.09837	0.09837
1.75	0.07901	0.07901	0.07901
2.00	0.06499	0.06499	0.06499
2.25	0.05447	0.05447	0.05447
2.50	0.04635	0.04635	0.04635
3.00	0.03480	0.03480	0.03480
3.50	0.02713	0.02713	0.02713
4.00	0.02175	0.02175	0.02175
4.50	0.01784	0.01784	0.01784
5.00	0.01491	0.01491	0.01491
6.00	0.01086	0.01086	0.01086
7.00	0.00827	0.00827	0.00827
8.00	0.00651	0.00651	0.00651
9.00	0.00525	0.00525	0.00525
10.00	0.00432	0.00432	0.00432
15.00	0.00199	0.00199	0.00199
20.00	0.00112	0.00112	0.00112
25.00	0.00071	0.00071	0.00071
30.00	0.00049	0.00049	0.00049
35.00	0.00035	0.00035	0.00035
40.00	0.00027	0.00027	0.00027
45.00	0.00021	0.00021	0.00021
50.00	0.00017	0.00017	0.00017

Notes.
Base Case: Noon-Time Albedo = 0.18
Test Case 1 Noon-Time Albedo = 0.10
Test Case 2: Noon-Time Albedo = 0.60

TABLE A-12-16
NOON-TIME ALBEDO SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Km)	Noon-Time Albedo = 0.18	Noon-Time Albedo = 0.10	Noon-Time Albedo = 0.60
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes.
Base Case. Noon-Time Albedo = 0.18
Test Case 1 Noon-Time Albedo = 0.10
Test Case 2 Noon-Time Albedo = 0.60

TABLE A-13-1
BOWEN RATIO SENSITIVITY ANALYSIS
PARTICLE PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	0.02717	0.02711	0.02724
0.20	0.52539	0.52411	0.52693
0.30	0.93734	0.93513	0.93999
0.40	1.05378	1.05129	1.05673
0.50	1.02759	1.02514	1.03048
0.60	0.94724	0.94496	0.94993
0.70	0.85506	0.85298	0.85750
0.80	0.76683	0.76495	0.76905
0.90	0.68782	0.68612	0.68983
1.00	0.61889	0.61735	0.62070
1.25	0.48600	0.48479	0.48743
1.50	0.39450	0.39352	0.39566
1.75	0.32845	0.32764	0.32942
2.00	0.27896	0.27828	0.27978
2.25	0.24019	0.23960	0.24089
2.50	0.20954	0.20903	0.21015
3.00	0.16449	0.16409	0.16497
3.50	0.13358	0.13326	0.13396
4.00	0.11118	0.11092	0.11150
4.50	0.09440	0.09418	0.09467
5.00	0.08143	0.08123	0.08166
6.00	0.06286	0.06271	0.06304
7.00	0.05036	0.05024	0.05051
8.00	0.04150	0.04140	0.04161
9.00	0.03494	0.03486	0.03504
10.00	0.02994	0.02987	0.03003
15.00	0.01660	0.01656	0.01665
20.00	0.01092	0.01090	0.01096
25.00	0.00793	0.00791	0.00795
30.00	0.00610	0.00608	0.00612
35.00	0.00491	0.00490	0.00493
40.00	0.00407	0.00406	0.00408
45.00	0.00346	0.00345	0.00347
50.00	0.00297	0.00296	0.00298

Notes:
Base Case: Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-2
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE CONCENTRATION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	0.99779	1.00258
0.20	1.00000	0.99756	1.00293
0.30	1.00000	0.99764	1.00283
0.40	1.00000	0.99764	1.00280
0.50	1.00000	0.99762	1.00281
0.60	1.00000	0.99759	1.00284
0.70	1.00000	0.99757	1.00285
0.80	1.00000	0.99755	1.00290
0.90	1.00000	0.99753	1.00292
1.00	1.00000	0.99751	1.00292
1.25	1.00000	0.99751	1.00294
1.50	1.00000	0.99752	1.00294
1.75	1.00000	0.99753	1.00295
2.00	1.00000	0.99756	1.00294
2.25	1.00000	0.99754	1.00291
2.50	1.00000	0.99757	1.00291
3.00	1.00000	0.99757	1.00292
3.50	1.00000	0.99760	1.00284
4.00	1.00000	0.99766	1.00288
4.50	1.00000	0.99767	1.00286
5.00	1.00000	0.99754	1.00282
6.00	1.00000	0.99761	1.00286
7.00	1.00000	0.99762	1.00298
8.00	1.00000	0.99759	1.00265
9.00	1.00000	0.99771	1.00286
10.00	1.00000	0.99766	1.00301
15.00	1.00000	0.99759	1.00301
20.00	1.00000	0.99817	1.00366
25.00	1.00000	0.99748	1.00252
30.00	1.00000	0.99672	1.00328
35.00	1.00000	0.99796	1.00407
40.00	1.00000	0.99754	1.00246
45.00	1.00000	0.99711	1.00289
50.00	1.00000	0.99663	1.00337

Notes
Base Case Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2 Bowen Ratio = 0.1

TABLE A-11-3
BOWEN RATIO SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	0.02736	0.02735	0.02737
0.20	0.53598	0.53577	0.53623
0.30	0.96577	0.96540	0.96620
0.40	1.09422	1.09380	1.09470
0.50	1.07412	1.07371	1.07460
0.60	0.99583	0.99544	0.99627
0.70	0.90336	0.90300	0.90376
0.80	0.81362	0.81330	0.81399
0.90	0.73255	0.73225	0.73288
1.00	0.66125	0.66098	0.66155
1.25	0.52241	0.52220	0.52265
1.50	0.42619	0.42602	0.42639
1.75	0.35637	0.35622	0.35653
2.00	0.30373	0.30361	0.30387
2.25	0.26236	0.26226	0.26248
2.50	0.22956	0.22947	0.22967
3.00	0.18121	0.18114	0.18129
3.50	0.14789	0.14783	0.14796
4.00	0.12365	0.12361	0.12371
4.50	0.10541	0.10537	0.10546
5.00	0.09127	0.09123	0.09131
6.00	0.07094	0.07091	0.07097
7.00	0.05719	0.05717	0.05722
8.00	0.04739	0.04737	0.04741
9.00	0.04011	0.04010	0.04013
10.00	0.03454	0.03452	0.03455
15.00	0.01953	0.01952	0.01954
20.00	0.01304	0.01304	0.01305
25.00	0.00958	0.00958	0.00958
30.00	0.00745	0.00745	0.00745
35.00	0.00605	0.00605	0.00606
40.00	0.00506	0.00506	0.00506
45.00	0.00433	0.00433	0.00433
50.00	0.00377	0.00376	0.00377

Notes.
Base Case. Bowen Ratio = 0.7
Test Case 1. Bowen Ratio = 4.0
Test Case 2. Bowen Ratio = 0.1

TABLE A-13-4
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE CONCENTRATION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	0.99963	1.00037
0.20	1.00000	0.99961	1.00047
0.30	1.00000	0.99962	1.00045
0.40	1.00000	0.99962	1.00044
0.50	1.00000	0.99962	1.00045
0.60	1.00000	0.99961	1.00044
0.70	1.00000	0.99960	1.00044
0.80	1.00000	0.99961	1.00045
0.90	1.00000	0.99959	1.00045
1.00	1.00000	0.99959	1.00045
1.25	1.00000	0.99960	1.00046
1.50	1.00000	0.99960	1.00047
1.75	1.00000	0.99958	1.00045
2.00	1.00000	0.99960	1.00046
2.25	1.00000	0.99962	1.00046
2.50	1.00000	0.99961	1.00048
3.00	1.00000	0.99961	1.00044
3.50	1.00000	0.99959	1.00047
4.00	1.00000	0.99968	1.00049
4.50	1.00000	0.99962	1.00047
5.00	1.00000	0.99956	1.00044
6.00	1.00000	0.99958	1.00042
7.00	1.00000	0.99965	1.00052
8.00	1.00000	0.99958	1.00042
9.00	1.00000	0.99975	1.00050
10.00	1.00000	0.99942	1.00029
15.00	1.00000	0.99949	1.00051
20.00	1.00000	1.00000	1.00077
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00165
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	0.99735	1.00000

Notes

Base Case. Bowen Ratio = 0.7

Test Case 1. Bowen Ratio = 4.0

Test Case 2. Bowen Ratio = 0.1

TABLE A-13-6
BOWEN RATIO SENSITIVITY ANALYSIS
VAPOR PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	0.02743	0.02743	0.02743
0.20	0.53865	0.53865	0.53865
0.30	0.97222	0.97222	0.97222
0.40	1.10287	1.10287	1.10287
0.50	1.08367	1.08367	1.08367
0.60	1.00551	1.00551	1.00551
0.70	0.91278	0.91278	0.91278
0.80	0.82261	0.82261	0.82261
0.90	0.74103	0.74103	0.74103
1.00	0.66921	0.66921	0.66921
1.25	0.52914	0.52914	0.52914
1.50	0.43199	0.43199	0.43199
1.75	0.36145	0.36145	0.36145
2.00	0.30823	0.30823	0.30823
2.25	0.26638	0.26638	0.26638
2.50	0.23319	0.23319	0.23319
3.00	0.18424	0.18424	0.18424
3.50	0.15050	0.15050	0.15050
4.00	0.12594	0.12594	0.12594
4.50	0.10744	0.10744	0.10744
5.00	0.09309	0.09309	0.09309
6.00	0.07246	0.07246	0.07246
7.00	0.05849	0.05849	0.05849
8.00	0.04853	0.04853	0.04853
9.00	0.04113	0.04113	0.04113
10.00	0.03545	0.03545	0.03545
15.00	0.02015	0.02015	0.02015
20.00	0.01351	0.01351	0.01351
25.00	0.00996	0.00996	0.00996
30.00	0.00777	0.00777	0.00777
35.00	0.00634	0.00634	0.00634
40.00	0.00531	0.00531	0.00531
45.00	0.00456	0.00456	0.00456
50.00	0.00398	0.00398	0.00398

Notes:
Base Case Bowen Ratio = 0.7
Test Case 1 Bowen Ratio = 4.0
Test Case 2 Bowen Ratio = 0.1

TABLE A-13-6
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE CONCENTRATION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes:
Base Case: Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-7
BOWEN RATIO SENSITIVITY ANALYSIS
PARTICLE PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	0.08968	0.09593	0.08223
0.20	1.36840	1.43477	1.28995
0.30	2.24341	2.32704	2.14576
0.40	2.34867	2.42430	2.26135
0.50	2.15502	2.21750	2.08275
0.60	1.88344	1.93412	1.82485
0.70	1.62008	1.66126	1.57245
0.80	1.39045	1.42419	1.35139
0.90	1.19742	1.22533	1.16505
1.00	1.03767	1.06100	1.01054
1.25	0.75776	0.77352	0.73935
1.50	0.57660	0.58786	0.56342
1.75	0.45376	0.46217	0.44392
2.00	0.36724	0.37369	0.35963
2.25	0.30313	0.30823	0.29710
2.50	0.25450	0.25861	0.24962
3.00	0.18652	0.18934	0.18316
3.50	0.14307	0.14510	0.14062
4.00	0.11344	0.11498	0.11158
4.50	0.09227	0.09346	0.09082
5.00	0.07655	0.07750	0.07539
6.00	0.05517	0.05581	0.05438
7.00	0.04164	0.04209	0.04107
8.00	0.03253	0.03288	0.03211
9.00	0.02614	0.02640	0.02580
10.00	0.02148	0.02169	0.02121
15.00	0.01011	0.01020	0.00999
20.00	0.00588	0.00593	0.00581
25.00	0.00387	0.00390	0.00382
30.00	0.00274	0.00276	0.00271
35.00	0.00205	0.00207	0.00203
40.00	0.00159	0.00160	0.00158
45.00	0.00128	0.00129	0.00126
50.00	0.00100	0.00101	0.00099

Notes:
Base Case: Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-8
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	1.06969	0.91693
0.20	1.00000	1.04850	0.94267
0.30	1.00000	1.03728	0.95647
0.40	1.00000	1.03211	0.96274
0.50	1.00000	1.02899	0.96646
0.60	1.00000	1.02691	0.96889
0.70	1.00000	1.02542	0.97060
0.80	1.00000	1.02427	0.97191
0.90	1.00000	1.02331	0.97297
1.00	1.00000	1.02248	0.97385
1.25	1.00000	1.02081	0.97572
1.50	1.00000	1.01953	0.97714
1.75	1.00000	1.01849	0.97827
2.00	1.00000	1.01756	0.97928
2.25	1.00000	1.01682	0.98011
2.50	1.00000	1.01615	0.98083
3.00	1.00000	1.01512	0.98199
3.50	1.00000	1.01419	0.98288
4.00	1.00000	1.01358	0.98360
4.50	1.00000	1.01290	0.98429
5.00	1.00000	1.01241	0.98465
6.00	1.00000	1.01160	0.98568
7.00	1.00000	1.01081	0.98631
8.00	1.00000	1.01076	0.98709
9.00	1.00000	1.00995	0.98699
10.00	1.00000	1.00978	0.98743
15.00	1.00000	1.00890	0.98813
20.00	1.00000	1.00850	0.98810
25.00	1.00000	1.00775	0.98708
30.00	1.00000	1.00730	0.98905
35.00	1.00000	1.00976	0.99024
40.00	1.00000	1.00629	0.99371
45.00	1.00000	1.00781	0.98438
50.00	1.00000	1.01000	0.99000

Notes:
Base Case: Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-9
BOWEN RATIO SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	0.01555	0.01662	0.01431
0.20	0.23579	0.24713	0.22272
0.30	0.38738	0.40184	0.37093
0.40	0.40600	0.41915	0.39115
0.50	0.37312	0.38407	0.36078
0.60	0.32682	0.33576	0.31677
0.70	0.28184	0.28913	0.27364
0.80	0.24253	0.24853	0.23578
0.90	0.20944	0.21442	0.20383
1.00	0.18198	0.18616	0.17726
1.25	0.13371	0.13656	0.13048
1.50	0.10236	0.10442	0.10004
1.75	0.08104	0.08258	0.07929
2.00	0.06593	0.06713	0.06457
2.25	0.05470	0.05565	0.05361
2.50	0.04614	0.04692	0.04526
3.00	0.03414	0.03467	0.03352
3.50	0.02642	0.02681	0.02596
4.00	0.02112	0.02142	0.02077
4.50	0.01731	0.01754	0.01703
5.00	0.01446	0.01465	0.01424
6.00	0.01056	0.01069	0.01041
7.00	0.00807	0.00817	0.00796
8.00	0.00638	0.00646	0.00630
9.00	0.00519	0.00524	0.00512
10.00	0.00431	0.00435	0.00425
15.00	0.00212	0.00214	0.00210
20.00	0.00128	0.00129	0.00127
25.00	0.00087	0.00088	0.00086
30.00	0.00064	0.00064	0.00063
35.00	0.00049	0.00049	0.00048
40.00	0.00039	0.00039	0.00039
45.00	0.00032	0.00032	0.00032
50.00	0.00026	0.00027	0.00026

Notes
Base Case Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-10
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	1.06681	0.92026
0.20	1.00000	1.04809	0.94457
0.30	1.00000	1.03733	0.95754
0.40	1.00000	1.03239	0.96342
0.50	1.00000	1.02935	0.96693
0.60	1.00000	1.02735	0.96925
0.70	1.00000	1.02587	0.97091
0.80	1.00000	1.02474	0.97217
0.90	1.00000	1.02378	0.97321
1.00	1.00000	1.02297	0.97406
1.25	1.00000	1.02131	0.97584
1.50	1.00000	1.02013	0.97733
1.75	1.00000	1.01900	0.97841
2.00	1.00000	1.01820	0.97937
2.25	1.00000	1.01737	0.98007
2.50	1.00000	1.01691	0.98093
3.00	1.00000	1.01552	0.98184
3.50	1.00000	1.01476	0.98259
4.00	1.00000	1.01420	0.98343
4.50	1.00000	1.01329	0.98382
5.00	1.00000	1.01314	0.98479
6.00	1.00000	1.01231	0.98580
7.00	1.00000	1.01239	0.98637
8.00	1.00000	1.01254	0.98746
9.00	1.00000	1.00963	0.98651
10.00	1.00000	1.00928	0.98608
15.00	1.00000	1.00943	0.99057
20.00	1.00000	1.00781	0.99219
25.00	1.00000	1.01149	0.98851
30.00	1.00000	1.00000	0.98438
35.00	1.00000	1.00000	0.97959
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.03846	1.00000

Notes.

Base Case. Bowen Ratio = 0.7

Test Case 1. Bowen Ratio = 4.0

Test Case 2. Bowen Ratio = 0.1

TABLE A-13-11
BOWEN RATIO SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	3.61053	3.61053	3.61053
0.20	1.68001	1.68001	1.68001
0.30	1.03968	1.03967	1.03970
0.40	0.72250	0.72247	0.72253
0.50	0.53703	0.53698	0.53709
0.60	0.41737	0.41731	0.41744
0.70	0.33499	0.33492	0.33507
0.80	0.27555	0.27547	0.27563
0.90	0.23112	0.23103	0.23120
1.00	0.19693	0.19685	0.19702
1.25	0.13919	0.13911	0.13927
1.50	0.10400	0.10393	0.10408
1.75	0.08088	0.08081	0.08095
2.00	0.06482	0.06476	0.06488
2.25	0.05319	0.05314	0.05324
2.50	0.04446	0.04442	0.04451
3.00	0.03244	0.03241	0.03248
3.50	0.02471	0.02469	0.02474
4.00	0.01945	0.01943	0.01948
4.50	0.01570	0.01568	0.01572
5.00	0.01293	0.01292	0.01295
6.00	0.00920	0.00919	0.00921
7.00	0.00686	0.00686	0.00687
8.00	0.00531	0.0053	0.00531
9.00	0.00422	0.00422	0.00423
10.00	0.00343	0.00343	0.00344
15.00	0.00153	0.00152	0.00153
20.00	0.00085	0.00085	0.00085
25.00	0.00053	0.00053	0.00053
30.00	0.00036	0.00036	0.00036
35.00	0.00026	0.00026	0.00026
40.00	0.00019	0.00019	0.00019
45.00	0.00015	0.00015	0.00015
50.00	0.00012	0.00012	0.00012

Notes.
Base Case: Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-12
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	0.99999	1.00002
0.40	1.00000	0.99996	1.00004
0.50	1.00000	0.99991	1.00011
0.60	1.00000	0.99986	1.00017
0.70	1.00000	0.99979	1.00024
0.80	1.00000	0.99971	1.00029
0.90	1.00000	0.99961	1.00035
1.00	1.00000	0.99959	1.00046
1.25	1.00000	0.99943	1.00057
1.50	1.00000	0.99933	1.00077
1.75	1.00000	0.99913	1.00087
2.00	1.00000	0.99907	1.00093
2.25	1.00000	0.99906	1.00094
2.50	1.00000	0.99910	1.00112
3.00	1.00000	0.99908	1.00123
3.50	1.00000	0.99919	1.00121
4.00	1.00000	0.99897	1.00154
4.50	1.00000	0.99873	1.00127
5.00	1.00000	0.99923	1.00155
6.00	1.00000	0.99891	1.00109
7.00	1.00000	1.00000	1.00146
8.00	1.00000	0.99812	1.00000
9.00	1.00000	1.00000	1.00237
10.00	1.00000	1.00000	1.00292
15.00	1.00000	0.99346	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes:
Base Case: Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-13
BOWEN RATIO SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Bowen Ratio = 0 7	Bowen Ratio = 4 0	Bowen Ratio = 0 1
0 10	1 43996	1 43996	1 43996
0.20	0 70064	0.70064	0.70064
0.30	0.45262	0.45262	0.45262
0.40	0.32746	0.32745	0 32746
0.50	0.25273	0.25272	0.25274
0.60	0.20343	0.20342	0 20344
0 70	0 16869	0 16868	0 16871
0 80	0 14303	0 14302	0 14305
0 90	0 12339	0.12338	0 12341
1 00	0.10794	0.10792	0.10795
1 25	0.08085	0.08083	0 08086
1 50	0.06348	0 06346	0 06349
1 75	0.05152	0.05151	0.05153
2 00	0.04286	0.04285	0 04287
2 25	0.03634	0.03633	0 03635
2 50	0.03128	0 03128	0.03129
3.00	0.02401	0.02400	0.02401
3.50	0.01909	0 01908	0.01909
4.00	0.01558	0 01557	0.01558
4.50	0.01298	0 01298	0.01298
5.00	0.01099	0 01099	0.01099
6.00	0 00819	0 00819	0.00819
7.00	0 00635	0.00635	0.00635
8.00	0 00507	0 00507	0.00507
9.00	0 00414	0.00414	0 00414
10 00	0 00345	0 00345	0 00345
15 00	0 00167	0 00167	0 00167
20 00	0.00098	0.00098	0 00098
25.00	0.00064	0.00064	0 00064
30.00	0.00045	0.00045	0 00045
35.00	0.00033	0.00033	0.00033
40.00	0.00025	0.00025	0.00025
45.00	0.00020	0.00020	0.00020
50 00	0.00016	0.00016	0.00016

Notes.
Base Case Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2. Bowen Ratio = 0.1

TABLE A-13-14
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	0.99997	1.00000
0.50	1.00000	0.99996	1.00004
0.60	1.00000	0.99995	1.00005
0.70	1.00000	0.99994	1.00012
0.80	1.00000	0.99993	1.00014
0.90	1.00000	0.99992	1.00016
1.00	1.00000	0.99981	1.00009
1.25	1.00000	0.99975	1.00012
1.50	1.00000	0.99968	1.00016
1.75	1.00000	0.99981	1.00019
2.00	1.00000	0.99977	1.00023
2.25	1.00000	0.99972	1.00028
2.50	1.00000	1.00000	1.00032
3.00	1.00000	0.99958	1.00000
3.50	1.00000	0.99948	1.00000
4.00	1.00000	0.99936	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes:
Base Case: Bowen Ratio = 0.7
Test Case 1: Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-15
BOWEN RATIO SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	2.15817	2.15817	2.15817
0.20	1.06510	1.06510	1.06510
0.30	0.69588	0.69588	0.69588
0.40	0.50780	0.50780	0.50780
0.50	0.39440	0.39440	0.39440
0.60	0.31885	0.31885	0.31885
0.70	0.26511	0.26511	0.26511
0.80	0.22506	0.22506	0.22506
0.90	0.19417	0.19417	0.19417
1.00	0.16968	0.16968	0.16968
1.25	0.12638	0.12638	0.12638
1.50	0.09837	0.09837	0.09837
1.75	0.07901	0.07901	0.07901
2.00	0.06499	0.06499	0.06499
2.25	0.05447	0.05447	0.05447
2.50	0.04635	0.04635	0.04635
3.00	0.03480	0.03480	0.03480
3.50	0.02713	0.02713	0.02713
4.00	0.02175	0.02175	0.02175
4.50	0.01784	0.01784	0.01784
5.00	0.01491	0.01491	0.01491
6.00	0.01086	0.01086	0.01086
7.00	0.00827	0.00827	0.00827
8.00	0.00651	0.00651	0.00651
9.00	0.00525	0.00525	0.00525
10.00	0.00432	0.00432	0.00432
15.00	0.00199	0.00199	0.00199
20.00	0.00112	0.00112	0.00112
25.00	0.00071	0.00071	0.00071
30.00	0.00049	0.00049	0.00049
35.00	0.00035	0.00035	0.00035
40.00	0.00027	0.00027	0.00027
45.00	0.00021	0.00021	0.00021
50.00	0.00017	0.00017	0.00017

Notes
Base Case Bowen Ratio = 0.7
Test Case 1. Bowen Ratio = 4.0
Test Case 2: Bowen Ratio = 0.1

TABLE A-13-16
BOWEN RATIO SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Km)	Bowen Ratio = 0.7	Bowen Ratio = 4.0	Bowen Ratio = 0.1
0.10	1.00000	1.00000	1.00000
0.20	1.00000	1.00000	1.00000
0.30	1.00000	1.00000	1.00000
0.40	1.00000	1.00000	1.00000
0.50	1.00000	1.00000	1.00000
0.60	1.00000	1.00000	1.00000
0.70	1.00000	1.00000	1.00000
0.80	1.00000	1.00000	1.00000
0.90	1.00000	1.00000	1.00000
1.00	1.00000	1.00000	1.00000
1.25	1.00000	1.00000	1.00000
1.50	1.00000	1.00000	1.00000
1.75	1.00000	1.00000	1.00000
2.00	1.00000	1.00000	1.00000
2.25	1.00000	1.00000	1.00000
2.50	1.00000	1.00000	1.00000
3.00	1.00000	1.00000	1.00000
3.50	1.00000	1.00000	1.00000
4.00	1.00000	1.00000	1.00000
4.50	1.00000	1.00000	1.00000
5.00	1.00000	1.00000	1.00000
6.00	1.00000	1.00000	1.00000
7.00	1.00000	1.00000	1.00000
8.00	1.00000	1.00000	1.00000
9.00	1.00000	1.00000	1.00000
10.00	1.00000	1.00000	1.00000
15.00	1.00000	1.00000	1.00000
20.00	1.00000	1.00000	1.00000
25.00	1.00000	1.00000	1.00000
30.00	1.00000	1.00000	1.00000
35.00	1.00000	1.00000	1.00000
40.00	1.00000	1.00000	1.00000
45.00	1.00000	1.00000	1.00000
50.00	1.00000	1.00000	1.00000

Notes.
Base Case. Bowen Ratio = 0.7
Test Case 1 Bowen Ratio = 4.0
Test Case 2 Bowen Ratio = 0.1

TABLE A-14-1
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
PARTICLE PHASE CONCENTRATION
UNITS = μg/m³/g/s

Distance (Km)	AHF = 20 0 Watts/m²	AHF = 198 Watts/m²
0.10	3 18194	3.17879
0 20	2 90439	2 89947
0 30	1 90309	1 89870
0 40	1.34217	1 33814
0 50	1.00332	0.99991
0.60	0.78070	0.77781
0 70	0.62460	0.62202
0 80	0.51115	0 50884
0 90	0 42692	0 42486
1 00	0.36237	0 36053
1 25	0.25422	0.25278
1.50	0.18933	0.18817
1.75	0.14728	0.14632
2.00	0.11844	0.11762
2.25	0.09774	0.09704
2.50	0.08234	0.08173
3 00	0 06131	0 06084
3.50	0 04787	0 04748
4.00	0 03871	0.03839
4.50	0 03215	0.03188
5.00	0 02728	0.02704
6 00	0 02061	0 02042
7 00	0 01632	0 01617
8 00	0 01337	0 01324
9.00	0 01125	0 01114
10.00	0.00965	0.00955
15.00	0.00545	0.00539
20.00	0.00368	0.00364
25 00	0.00273	0 00270
30 00	0.00215	0.00213
35 00	0.00176	0 00174
40 00	0 00148	0 00146
45 00	0.00127	0 00126
50.00	0.00111	0.00110

Notes.
Base Case. Anthropogenic Heat Flux = 20 watts/m2
Test Case 1 Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-2
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE CONCENTRATION

Distance (Km)	AHF = 20.0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1.00000	0.99901
0.20	1.00000	0.99831
0.30	1.00000	0.99769
0.40	1.00000	0.99700
0.50	1.00000	0.99660
0.60	1.00000	0.99630
0.70	1.00000	0.99587
0.80	1.00000	0.99548
0.90	1.00000	0.99517
1.00	1.00000	0.99492
1.25	1.00000	0.99434
1.50	1.00000	0.99387
1.75	1.00000	0.99348
2.00	1.00000	0.99308
2.25	1.00000	0.99284
2.50	1.00000	0.99259
3.00	1.00000	0.99233
3.50	1.00000	0.99185
4.00	1.00000	0.99173
4.50	1.00000	0.99160
5.00	1.00000	0.99120
6.00	1.00000	0.99078
7.00	1.00000	0.99081
8.00	1.00000	0.99028
9.00	1.00000	0.99022
10.00	1.00000	0.98964
15.00	1.00000	0.98899
20.00	1.00000	0.98913
25.00	1.00000	0.98901
30.00	1.00000	0.98870
35.00	1.00000	0.98864
40.00	1.00000	0.98649
45.00	1.00000	0.99213
50.00	1.00000	0.99099

Notes.

Base Case Anthropogenic Heat Flux = 20 watts/m2

Test Case 1. Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-3
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	AHF = 20.0 Watts/m²	AHF = 198 Watts/m²
0.10	3.21890	3.21826
0.20	2.95647	2.95552
0.30	1.94692	1.94610
0.40	1.38122	1.38047
0.50	1.03652	1.03589
0.60	0.80906	0.80853
0.70	0.65027	0.64979
0.80	0.53488	0.53446
0.90	0.44850	0.44812
1.00	0.38208	0.38174
1.25	0.27030	0.27003
1.50	0.20279	0.20258
1.75	0.15878	0.15860
2.00	0.12842	0.12827
2.25	0.10652	0.10639
2.50	0.09016	0.09005
3.00	0.06769	0.06760
3.50	0.05324	0.05317
4.00	0.04333	0.04327
4.50	0.03620	0.03615
5.00	0.03087	0.03083
6.00	0.02353	0.02349
7.00	0.01878	0.01875
8.00	0.01550	0.01547
9.00	0.01311	0.01309
10.00	0.01131	0.01129
15.00	0.00652	0.00651
20.00	0.00448	0.00447
25.00	0.00337	0.00337
30.00	0.00268	0.00268
35.00	0.00222	0.00221
40.00	0.00188	0.00188
45.00	0.00163	0.00163
50.00	0.00144	0.00143

Notes

Base Case Anthropogenic Heat Flux = 20 watts/m2

Test Case 1: Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-4
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE CONCENTRATION

Distance (Km)	AHF = 20.0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1.00000	0.99980
0.20	1.00000	0.99968
0.30	1.00000	0.99958
0.40	1.00000	0.99946
0.50	1.00000	0.99939
0.60	1.00000	0.99934
0.70	1.00000	0.99926
0.80	1.00000	0.99921
0.90	1.00000	0.99915
1.00	1.00000	0.99911
1.25	1.00000	0.99900
1.50	1.00000	0.99896
1.75	1.00000	0.99887
2.00	1.00000	0.99883
2.25	1.00000	0.99878
2.50	1.00000	0.99878
3.00	1.00000	0.99867
3.50	1.00000	0.99869
4.00	1.00000	0.99862
4.50	1.00000	0.99862
5.00	1.00000	0.99870
6.00	1.00000	0.99830
7.00	1.00000	0.99840
8.00	1.00000	0.99806
9.00	1.00000	0.99847
10.00	1.00000	0.99823
15.00	1.00000	0.99847
20.00	1.00000	0.99777
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	0.99550
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	0.99306

Notes
Base Case: Anthropogenic Heat Flux = 20 watts/m2
Test Case 1 Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-5
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
VAPOR PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	AHF = 20 0 Watts/m²	AHF = 198 Watts/m²
0.10	3 23188	3.23188
0 20	2 97083	2 97083
0 30	1 95782	1.95782
0.40	1.39044	1.39044
0.50	1.04413	1.04413
0.60	0.81544	0.81544
0.70	0.65591	0 65591
0 80	0.54002	0 54002
0 90	0.45312	0 45312
1 00	0.38626	0 38626
1 25	0.27366	0.27366
1.50	0.20557	0.20557
1.75	0.16114	0.16114
2.00	0.13045	0.13045
2.25	0.10831	0.10831
2.50	0.09175	0.09175
3.00	0 06898	0.06898
3.50	0 05432	0.05432
4.00	0 04426	0.04426
4.50	0 03701	0.03701
5.00	0 03159	0.03159
6.00	0 02411	0.02411
7.00	0.01926	0.01926
8.00	0.01591	0.01591
9.00	0 01348	0.01348
10.00	0 01164	0 01164
15 00	0 00674	0 00674
20 00	0 00464	0 00464
25.00	0.00350	0 00350
30 00	0.00279	0 00279
35 00	0.00231	0 00231
40 00	0.00197	0 00197
45 00	0.00171	0 00171
50.00	0.00150	0.00150

Notes.
Base Case Anthropogenic Heat Flux = 20 watts/m2
Test Case 1 Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-6
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE CONCENTRATION

Distance (Km)	AHF = 20.0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1.00000	1.00000
0.20	1.00000	1.00000
0.30	1.00000	1.00000
0.40	1.00000	1.00000
0.50	1.00000	1.00000
0.60	1.00000	1.00000
0.70	1.00000	1.00000
0.80	1.00000	1.00000
0.90	1.00000	1.00000
1.00	1.00000	1.00000
1.25	1.00000	1.00000
1.50	1.00000	1.00000
1.75	1.00000	1.00000
2.00	1.00000	1.00000
2.25	1.00000	1.00000
2.50	1.00000	1.00000
3.00	1.00000	1.00000
3.50	1.00000	1.00000
4.00	1.00000	1.00000
4.50	1.00000	1.00000
5.00	1.00000	1.00000
6.00	1.00000	1.00000
7.00	1.00000	1.00000
8.00	1.00000	1.00000
9.00	1.00000	1.00000
10.00	1.00000	1.00000
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes

Base Case. Anthropogenic Heat Flux = 20 watts/m2

Test Case 1: Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-7
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
PARTICLE PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	AHF = 20.0 Watts/m²	AHF = 198 Watts/m²
0.10	33.64256	36.04821
0.20	12.94575	13.90237
0.30	7.41623	7.96201
0.40	4.70821	5.04697
0.50	3.24894	3.47801
0.60	2.38116	2.54590
0.70	1.81639	1.93890
0.80	1.43004	1.52418
0.90	1.15826	1.23292
1.00	0.95819	1.01878
1.25	0.63949	0.67822
1.50	0.45855	0.48528
1.75	0.34588	0.36533
2.00	0.27106	0.28587
2.25	0.21878	0.23041
2.50	0.18076	0.19015
3.00	0.13025	0.13674
3.50	0.09887	0.10360
4.00	0.07807	0.08170
4.50	0.06348	0.06634
5.00	0.05285	0.05517
6.00	0.03871	0.04034
7.00	0.02987	0.03108
8.00	0.02392	0.02485
9.00	0.01970	0.02045
10.00	0.01660	0.01721
15.00	0.00877	0.00907
20.00	0.00563	0.00580
25.00	0.00401	0.00413
30.00	0.00304	0.00311
35.00	0.00239	0.00245
40.00	0.00193	0.00197
45.00	0.00160	0.00163
50.00	0.00134	0.00137

Notes:
Base Case: Anthropogenic Heat Flux = 20 watts/m2
Test Case 1 Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-8
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Km)	AHF = 20.0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1.00000	1.07151
0.20	1.00000	1.07389
0.30	1.00000	1.07359
0.40	1.00000	1.07195
0.50	1.00000	1.07051
0.60	1.00000	1.06918
0.70	1.00000	1.06745
0.80	1.00000	1.06583
0.90	1.00000	1.06446
1.00	1.00000	1.06323
1.25	1.00000	1.06056
1.50	1.00000	1.05829
1.75	1.00000	1.05623
2.00	1.00000	1.05464
2.25	1.00000	1.05316
2.50	1.00000	1.05195
3.00	1.00000	1.04983
3.50	1.00000	1.04784
4.00	1.00000	1.04650
4.50	1.00000	1.04505
5.00	1.00000	1.04390
6.00	1.00000	1.04211
7.00	1.00000	1.04051
8.00	1.00000	1.03888
9.00	1.00000	1.03807
10.00	1.00000	1.03675
15.00	1.00000	1.03421
20.00	1.00000	1.03020
25.00	1.00000	1.02993
30.00	1.00000	1.02303
35.00	1.00000	1.02510
40.00	1.00000	1.02073
45.00	1.00000	1.01875
50.00	1.00000	1.02239

Notes
Base Case Anthropogenic Heat Flux = 20 watts/m2
Test Case 1: Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-9
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	AHF = 20.0 Watts/m²	AHF = 198 Watts/m²
0.10	6.41012	6.86844
0.20	2.42726	2.60623
0.30	1.38442	1.48639
0.40	0.87801	0.94156
0.50	0.60539	0.64852
0.60	0.44341	0.47454
0.70	0.33844	0.36173
0.80	0.26678	0.28476
0.90	0.21626	0.23060
1.00	0.17907	0.19077
1.25	0.11984	0.12740
1.50	0.08619	0.09147
1.75	0.06520	0.06909
2.00	0.05124	0.05422
2.25	0.04147	0.04383
2.50	0.03435	0.03627
3.00	0.02487	0.02622
3.50	0.01897	0.01996
4.00	0.01504	0.01581
4.50	0.01227	0.01289
5.00	0.01026	0.01076
6.00	0.00756	0.00792
7.00	0.00587	0.00614
8.00	0.00473	0.00494
9.00	0.00391	0.00409
10.00	0.00331	0.00346
15.00	0.00179	0.00186
20.00	0.00117	0.00121
25.00	0.00084	0.00087
30.00	0.00065	0.00067
35.00	0.00052	0.00053
40.00	0.00042	0.00044
45.00	0.00035	0.00036
50.00	0.00030	0.00031

Notes.

Base Case. Anthropogenic Heat Flux = 20 watts/m2

Test Case 1 Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-10
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Km)	AHF = 20.0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1.00000	1.07150
0.20	1.00000	1.07373
0.30	1.00000	1.07366
0.40	1.00000	1.07238
0.50	1.00000	1.07124
0.60	1.00000	1.07021
0.70	1.00000	1.06882
0.80	1.00000	1.06747
0.90	1.00000	1.06631
1.00	1.00000	1.06534
1.25	1.00000	1.06308
1.50	1.00000	1.06126
1.75	1.00000	1.05966
2.00	1.00000	1.05816
2.25	1.00000	1.05691
2.50	1.00000	1.05590
3.00	1.00000	1.05428
3.50	1.00000	1.05219
4.00	1.00000	1.05120
4.50	1.00000	1.05053
5.00	1.00000	1.04873
6.00	1.00000	1.04762
7.00	1.00000	1.04600
8.00	1.00000	1.04440
9.00	1.00000	1.04604
10.00	1.00000	1.04532
15.00	1.00000	1.03911
20.00	1.00000	1.03419
25.00	1.00000	1.03571
30.00	1.00000	1.03077
35.00	1.00000	1.01923
40.00	1.00000	1.04762
45.00	1.00000	1.02857
50.00	1.00000	1.03333

Notes
Base Case: Anthropogenic Heat Flux = 20 watts/m2
Test Case 1: Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-11
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	AHF = 20.0 Watts/m²	AHF = 198 Watts/m²
0.10	2.91339	2.91052
0.20	1.33487	1.33168
0.30	0.82214	0.81930
0.40	0.57331	0.57084
0.50	0.42930	0.42718
0.60	0.33580	0.33498
0.70	0.27297	0.27138
0.80	0.22667	0.22526
0.90	0.19184	0.19059
1.00	0.16498	0.16388
1.25	0.11910	0.11825
1.50	0.09068	0.08999
1.75	0.07169	0.07113
2.00	0.05830	0.05783
2.25	0.04845	0.04805
2.50	0.04098	0.04063
3.00	0.03051	0.03025
3.50	0.02364	0.02343
4.00	0.01888	0.01871
4.50	0.01544	0.01530
5.00	0.01286	0.01275
6.00	0.00931	0.00923
7.00	0.00703	0.00697
8.00	0.00549	0.00544
9.00	0.00439	0.00436
10.00	0.00359	0.00356
15.00	0.00160	0.00158
20.00	0.00087	0.00087
25.00	0.00054	0.00053
30.00	0.00036	0.00035
35.00	0.00025	0.00025
40.00	0.00018	0.00018
45.00	0.00014	0.00014
50.00	0.00011	0.00011

Notes

Base Case. Anthropogenic Heat Flux = 20 watts/m2

Test Case 1. Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-12
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Km)	AHF = 20.0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1.00000	0.99901
0.20	1.00000	0.99761
0.30	1.00000	0.99655
0.40	1.00000	0.99569
0.50	1.00000	0.99506
0.60	1.00000	0.99460
0.70	1.00000	0.99418
0.80	1.00000	0.99378
0.90	1.00000	0.99348
1.00	1.00000	0.99333
1.25	1.00000	0.99286
1.50	1.00000	0.99239
1.75	1.00000	0.99219
2.00	1.00000	0.99194
2.25	1.00000	0.99174
2.50	1.00000	0.99146
3.00	1.00000	0.99148
3.50	1.00000	0.99112
4.00	1.00000	0.99100
4.50	1.00000	0.99093
5.00	1.00000	0.99145
6.00	1.00000	0.99141
7.00	1.00000	0.99147
8.00	1.00000	0.99089
9.00	1.00000	0.99317
10.00	1.00000	0.99164
15.00	1.00000	0.98750
20.00	1.00000	1.00000
25.00	1.00000	0.98148
30.00	1.00000	0.97222
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes

Base Case Anthropogenic Heat Flux = 20 watts/m2

Test Case 1. Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-13
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	AHF = 20.0 Watts/m²	AHF = 198 Watts/m²
0.10	1.16890	1.16841
0.20	0.56190	0.56138
0.30	0.36119	0.36073
0.40	0.26185	0.26145
0.50	0.20308	0.20273
0.60	0.16447	0.16417
0.70	0.13727	0.13701
0.80	0.11715	0.11691
0.90	0.10170	0.10149
1.00	0.08953	0.08934
1.25	0.06807	0.06793
1.50	0.05419	0.05407
1.75	0.04454	0.04444
2.00	0.03748	0.03740
2.25	0.03212	0.03205
2.50	0.02793	0.02787
3.00	0.02182	0.02178
3.50	0.01762	0.01759
4.00	0.01458	0.01455
4.50	0.01230	0.01227
5.00	0.01053	0.01051
6.00	0.00799	0.00797
7.00	0.00628	0.00627
8.00	0.00506	0.00505
9.00	0.00417	0.00416
10.00	0.00349	0.00348
15.00	0.00170	0.00170
20.00	0.00099	0.00099
25.00	0.00064	0.00064
30.00	0.00044	0.00044
35.00	0.00032	0.00032
40.00	0.00024	0.00024
45.00	0.00019	0.00019
50.00	0.00015	0.00015

Notes:
Base Case: Anthropogenic Heat Flux = 20 watts/m2
Test Case 1: Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-14
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Km)	AHF = 20 0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1 00000	0.99958
0.20	1 00000	0.99907
0.30	1 00000	0.99873
0.40	1 00000	0.99847
0 50	1 00000	0 99828
0 60	1 00000	0.99818
0.70	1 00000	0.99811
0.80	1.00000	0.99795
0.90	1.00000	0.99794
1.00	1.00000	0.99788
1.25	1.00000	0.99794
1.50	1.00000	0.99779
1.75	1.00000	0.99775
2.00	1.00000	0 99787
2.25	1.00000	0.99782
2.50	1.00000	0.99785
3.00	1.00000	0.99817
3.50	1.00000	0.99830
4 00	1.00000	0.99794
4 50	1 00000	0 99756
5 00	1 00000	0 99810
6 00	1 00000	0 99750
7 00	1 00000	0 99841
8.00	1 00000	0.99802
9.00	1 00000	0.99760
10.00	1.00000	0.99713
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1 00000	1.00000
30.00	1 00000	1.00000
35.00	1 00000	1.00000
40.00	1 00000	1.00000
45 00	1 00000	1.00000
50.00	1.00000	1.00000

Notes

Base Case Anthropogenic Heat Flux = 20 watts/m2

Test Case 1: Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-15
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	AHF = 20.0 Watts/m²	AHF = 198 Watts/m²
0.10	1.76394	1.76394
0.20	0.86346	0.86346
0.30	0.56259	0.56259
0.40	0.41205	0.41205
0.50	0.32193	0.32193
0.60	0.26207	0.26207
0.70	0.21952	0.21952
0.80	0.18776	0.18776
0.90	0.16321	0.16321
1.00	0.14370	0.14370
1.25	0.10898	0.10898
1.50	0.08628	0.08628
1.75	0.07040	0.07040
2.00	0.05876	0.05876
2.25	0.04990	0.04990
2.50	0.04299	0.04299
3.00	0.03297	0.03297
3.50	0.02615	0.02615
4.00	0.02128	0.02128
4.50	0.01766	0.01766
5.00	0.01490	0.01490
6.00	0.01102	0.01102
7.00	0.00847	0.00847
8.00	0.00671	0.00671
9.00	0.00543	0.00543
10.00	0.00448	0.00448
15.00	0.00206	0.00206
20.00	0.00115	0.00115
25.00	0.00071	0.00071
30.00	0.00048	0.00048
35.00	0.00034	0.00034
40.00	0.00025	0.00025
45.00	0.00020	0.00020
50.00	0.00015	0.00015

Notes.
Base Case Anthropogenic Heat Flux = 20 watts/m2
Test Case 1 Anthropogenic Heat Flux = 198 watts/m2

TABLE A-14-16
ANTHROPOGENIC HEAT FLUX SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Km)	AHF = 20.0 Watts/m^2	AHF = 198 Watts/m^2
0.10	1.00000	1.00000
0.20	1.00000	1.00000
0.30	1.00000	1.00000
0.40	1.00000	1.00000
0.50	1.00000	1.00000
0.60	1.00000	1.00000
0.70	1.00000	1.00000
0.80	1.00000	1.00000
0.90	1.00000	1.00000
1.00	1.00000	1.00000
1.25	1.00000	1.00000
1.50	1.00000	1.00000
1.75	1.00000	1.00000
2.00	1.00000	1.00000
2.25	1.00000	1.00000
2.50	1.00000	1.00000
3.00	1.00000	1.00000
3.50	1.00000	1.00000
4.00	1.00000	1.00000
4.50	1.00000	1.00000
5.00	1.00000	1.00000
6.00	1.00000	1.00000
7.00	1.00000	1.00000
8.00	1.00000	1.00000
9.00	1.00000	1.00000
10.00	1.00000	1.00000
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes

Base Case: Anthropogenic Heat Flux = 20 watts/m2

Test Case 1. Anthropogenic Heat Flux = 198 watts/m2

TABLE A-15-1
NET RADIATION SENSITIVITY ANALYSIS
PARTICLE PHASE CONCENTRATION
UNITS = $\mu g/m^3/g/s$

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	3.18194	3.18171
0.20	2.90439	2.90408
0.30	1.90309	1.90282
0.40	1.34217	1.34194
0.50	1.00332	1.00314
0.60	0.78070	0.78055
0.70	0.62460	0.62448
0.80	0.51115	0.51104
0.90	0.42692	0.42683
1.00	0.36237	0.36230
1.25	0.25422	0.25417
1.50	0.18933	0.18929
1.75	0.14728	0.14725
2.00	0.11844	0.11841
2.25	0.09774	0.09771
2.50	0.08234	0.08232
3.00	0.06131	0.06130
3.50	0.04787	0.04786
4.00	0.03871	0.03870
4.50	0.03215	0.03215
5.00	0.02728	0.02727
6.00	0.02061	0.02060
7.00	0.01632	0.01632
8.00	0.01337	0.01337
9.00	0.01125	0.01124
10.00	0.00965	0.00965
15.00	0.00545	0.00544
20.00	0.00368	0.00368
25.00	0.00273	0.00273
30.00	0.00215	0.00215
35.00	0.00176	0.00176
40.00	0.00148	0.00148
45.00	0.00127	0.00127
50.00	0.00111	0.00111

Notes.
Base Case Net Radiation at Ground Level = 0.27
Test Case 1. Net Radiation at Ground Level = 0.22

TABLE A-15-2
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE CONCENTRATION

Distance (Km)	Net Radiation = 0 27	Net Radiation = 0 22
0.10	1 00000	0 99993
0.20	1.00000	0.99989
0.30	1.00000	0.99986
0.40	1.00000	0.99983
0.50	1 00000	0 99982
0.60	1 00000	0 99981
0.70	1 00000	0 99981
0.80	1 00000	0 99978
0.90	1.00000	0 99979
1.00	1.00000	0.99981
1.25	1.00000	0.99980
1.50	1.00000	0.99979
1 75	1.00000	0.99980
2 00	1.00000	0.99975
2 25	1 00000	0.99969
2 50	1.00000	0.99976
3.00	1.00000	0.99984
3.50	1.00000	0.99979
4.00	1.00000	0.99974
4.50	1.00000	1.00000
5.00	1.00000	0.99963
6.00	1 00000	0.99951
7.00	1 00000	1 00000
8.00	1.00000	1.00000
9.00	1.00000	0.99911
10.00	1.00000	1.00000
15 00	1.00000	0.99817
20 00	1.00000	1.00000
25 00	1.00000	1.00000
30 00	1.00000	1 00000
35 00	1.00000	1 00000
40 00	1.00000	1 00000
45.00	1.00000	1.00000
50 00	1.00000	1.00000

Notes
Base Case Net Radiation at Ground Level = 0 27
Test Case 1: Net Radiation at Ground Level = 0 22

TABLE A-15-3
NET RADIATION SENSITIVITY ANALYSIS
PARTICLE BOUND PHASE CONCENTRATION
UNITS = µg/m³/g/s

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	3.21890	3.21885
0.20	2.95647	2.95641
0.30	1.94692	1.94687
0.40	1.38122	1.38118
0.50	1.03652	1.03649
0.60	0.80906	0.80904
0.70	0.65027	0.65024
0.80	0.53488	0.53487
0.90	0.44850	0.44849
1.00	0.38208	0.38207
1.25	0.27030	0.27029
1.50	0.20279	0.20278
1.75	0.15878	0.15878
2.00	0.12842	0.12841
2.25	0.10652	0.10652
2.50	0.09016	0.09016
3.00	0.06769	0.06769
3.50	0.05324	0.05324
4.00	0.04333	0.04333
4.50	0.03620	0.03620
5.00	0.03087	0.03087
6.00	0.02353	0.02353
7.00	0.01878	0.01878
8.00	0.01550	0.01550
9.00	0.01311	0.01311
10.00	0.01131	0.01131
15.00	0.00652	0.00652
20.00	0.00448	0.00448
25.00	0.00337	0.00337
30.00	0.00268	0.00268
35.00	0.00222	0.00222
40.00	0.00188	0.00188
45.00	0.00163	0.00163
50.00	0.00144	0.00144

Notes:
Base Case: Net Radiation at Ground Level = 0.27
Test Case 1: Net Radiation at Ground Level = 0.22

TABLE A-15-4
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED PARTICLE BOUND PHASE CONCENTRATION

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.00000	0.99998
0.20	1.00000	0.99998
0.30	1.00000	0.99997
0.40	1.00000	0.99997
0.50	1.00000	0.99997
0.60	1.00000	0.99998
0.70	1.00000	0.99995
0.80	1.00000	0.99998
0.90	1.00000	0.99998
1.00	1.00000	0.99997
1.25	1.00000	0.99996
1.50	1.00000	0.99995
1.75	1.00000	1.00000
2.00	1.00000	0.99992
2.25	1.00000	1.00000
2.50	1.00000	1.00000
3.00	1.00000	1.00000
3.50	1.00000	1.00000
4.00	1.00000	1.00000
4.50	1.00000	1.00000
5.00	1.00000	1.00000
6.00	1.00000	1.00000
7.00	1.00000	1.00000
8.00	1.00000	1.00000
9.00	1.00000	1.00000
10.00	1.00000	1.00000
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes:
Base Case: Net Radiation at Ground Level = 0.27
Test Case 1. Net Radiation at Ground Level = 0.22

TABLE A-15-5
NET RADIATION SENSITIVITY ANALYSIS
VAPOR PHASE CONCENTRATION
UNITS = $\mu g/m^3/g/s$

Distance (Km)	Net Radiation = 0 27	Net Radiation = 0.22
0.10	3 23188	3.23188
0.20	2 97083	2 97083
0.30	1 95782	1.95782
0.40	1.39044	1.39044
0.50	1.04413	1.04413
0.60	0.81544	0.81544
0.70	0 65591	0 65591
0.80	0 54002	0.54002
0.90	0.45312	0.45312
1.00	0.38626	0.38626
1.25	0.27366	0.27366
1.50	0.20557	0.20557
1.75	0.16114	0.16114
2.00	0.13045	0.13045
2.25	0.10831	0.10831
2.50	0.09175	0.09175
3.00	0.06898	0.06898
3.50	0.05432	0.05432
4 00	0.04426	0 04426
4 50	0.03701	0 03701
5.00	0.03159	0 03159
6.00	0.02411	0.02411
7.00	0.01926	0.01926
8.00	0.01591	0.01591
9.00	0.01348	0.01348
10.00	0.01164	0.01164
15.00	0 00674	0.00674
20 00	0 00464	0 00464
25.00	0 00350	0 00350
30.00	0.00279	0.00279
35.00	0.00231	0.00231
40.00	0.00197	0.00197
45.00	0.00171	0.00171
50.00	0.00150	0.00150

Notes.

Base Case. Net Radiation at Ground Level = 0.27

Test Case 1 Net Radiation at Ground Level = 0.22

TABLE A-15-6
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE CONCENTRATION

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.00000	1.00000
0.20	1.00000	1.00000
0.30	1.00000	1.00000
0.40	1.00000	1.00000
0.50	1.00000	1.00000
0.60	1.00000	1.00000
0.70	1.00000	1.00000
0.80	1.00000	1.00000
0.90	1.00000	1.00000
1.00	1.00000	1.00000
1.25	1.00000	1.00000
1.50	1.00000	1.00000
1.75	1.00000	1.00000
2.00	1.00000	1.00000
2.25	1.00000	1.00000
2.50	1.00000	1.00000
3.00	1.00000	1.00000
3.50	1.00000	1.00000
4.00	1.00000	1.00000
4.50	1.00000	1.00000
5.00	1.00000	1.00000
6.00	1.00000	1.00000
7.00	1.00000	1.00000
8.00	1.00000	1.00000
9.00	1.00000	1.00000
10.00	1.00000	1.00000
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes

Base Case Net Radiation at Ground Level = 0.27

Test Case 1: Net Radiation at Ground Level = 0.22

TABLE A-16-7
NET RADIATION SENSITIVITY ANALYSIS
PARTICLE PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	33.64256	33.78790
0.20	12.94575	13.00128
0.30	7.41623	7.44518
0.40	4.70821	4.72516
0.50	3.24894	3.25986
0.60	2.38116	2.38868
0.70	1.81639	1.82185
0.80	1.43004	1.43415
0.90	1.15826	1.16147
1.00	0.95819	0.96075
1.25	0.63949	0.64107
1.50	0.45855	0.45962
1.75	0.34588	0.34665
2.00	0.27106	0.27164
2.25	0.21878	0.21924
2.50	0.18076	0.18113
3.00	0.13025	0.13050
3.50	0.09887	0.09906
4.00	0.07807	0.07822
4.50	0.06348	0.06360
5.00	0.05285	0.05295
6.00	0.03871	0.03879
7.00	0.02987	0.02993
8.00	0.02392	0.02396
9.00	0.01970	0.01974
10.00	0.01660	0.01664
15.00	0.00877	0.00879
20.00	0.00563	0.00564
25.00	0.00401	0.00402
30.00	0.00304	0.00304
35.00	0.00239	0.00239
40.00	0.00193	0.00194
45.00	0.00160	0.00160
50.00	0.00134	0.00135

Notes
Base Case: Net Radiation at Ground Level = 0.27
Test Case 1: Net Radiation at Ground Level = 0.22

TABLE A-15-8
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE DRY DEPOSITION

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.00000	1.00432
0.20	1.00000	1.00429
0.30	1.00000	1.00390
0.40	1.00000	1.00360
0.50	1.00000	1.00336
0.60	1.00000	1.00316
0.70	1.00000	1.00301
0.80	1.00000	1.00287
0.90	1.00000	1.00277
1.00	1.00000	1.00267
1.25	1.00000	1.00247
1.50	1.00000	1.00233
1.75	1.00000	1.00223
2.00	1.00000	1.00214
2.25	1.00000	1.00210
2.50	1.00000	1.00205
3.00	1.00000	1.00192
3.50	1.00000	1.00192
4.00	1.00000	1.00192
4.50	1.00000	1.00189
5.00	1.00000	1.00189
6.00	1.00000	1.00207
7.00	1.00000	1.00201
8.00	1.00000	1.00167
9.00	1.00000	1.00203
10.00	1.00000	1.00241
15.00	1.00000	1.00228
20.00	1.00000	1.00178
25.00	1.00000	1.00249
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00518
45.00	1.00000	1.00000
50.00	1.00000	1.00746

Notes:

Base Case: Net Radiation at Ground Level = 0.27

Test Case 1: Net Radiation at Ground Level = 0.22

TABLE A-15-9
NET RADIATION SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE DRY DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	6.41012	6.43766
0.20	2.42726	2.43761
0.30	1.38442	1.38984
0.40	0.87801	0.88121
0.50	0.60539	0.60746
0.60	0.44341	0.44485
0.70	0.33844	0.33949
0.80	0.26678	0.26757
0.90	0.21626	0.21688
1.00	0.17907	0.17957
1.25	0.11984	0.12015
1.50	0.08619	0.08640
1.75	0.06520	0.06536
2.00	0.05124	0.05136
2.25	0.04147	0.04156
2.50	0.03435	0.03443
3.00	0.02487	0.02492
3.50	0.01897	0.01901
4.00	0.01504	0.01507
4.50	0.01227	0.01230
5.00	0.01026	0.01028
6.00	0.00756	0.00758
7.00	0.00587	0.00588
8.00	0.00473	0.00474
9.00	0.00391	0.00392
10.00	0.00331	0.00332
15.00	0.00179	0.00179
20.00	0.00117	0.00117
25.00	0.00084	0.00084
30.00	0.00065	0.00065
35.00	0.00052	0.00052
40.00	0.00042	0.00042
45.00	0.00035	0.00035
50.00	0.00030	0.00030

Notes:
Base Case: Net Radiation at Ground Level = 0.27
Test Case 1: Net Radiation at Ground Level = 0.22

TABLE A-16-10
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE DRY DEPOSITION

Distance (Km)	Net Radiation = 0 27	Net Radiation = 0 22
0 10	1 00000	1 00430
0 20	1 00000	1.00426
0 30	1 00000	1.00391
0 40	1.00000	1.00364
0.50	1.00000	1.00342
0.60	1.00000	1.00325
0.70	1 00000	1.00310
0 80	1 00000	1.00296
0 90	1.00000	1.00287
1.00	1.00000	1.00279
1.25	1.00000	1.00259
1.50	1.00000	1.00244
1.75	1.00000	1.00245
2.00	1.00000	1.00234
2.25	1.00000	1.00217
2.50	1.00000	1 00233
3.00	1.00000	1 00201
3.50	1.00000	1 00211
4.00	1.00000	1.00199
4.50	1.00000	1.00244
5.00	1.00000	1.00195
6.00	1.00000	1.00265
7.00	1.00000	1.00170
8.00	1.00000	1.00211
9.00	1.00000	1.00256
10.00	1.00000	1.00302
15.00	1.00000	1.00000
20.00	1 00000	1.00000
25.00	1 00000	1 00000
30.00	1 00000	1.00000
35.00	1 00000	1.00000
40.00	1 00000	1.00000
45.00	1 00000	1.00000
50 00	1 00000	1.00000

Notes
Base Case Net Radiation at Ground Level = 0 27
Test Case 1: Net Radiation at Ground Level = 0 22

TABLE A-15-11
NET RADIATION SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	2.91339	2.91329
0.20	1.33487	1.33475
0.30	0.82214	0.82204
0.40	0.57331	0.57322
0.50	0.42930	0.42922
0.60	0.33680	0.33673
0.70	0.27297	0.27292
0.80	0.22667	0.22662
0.90	0.19184	0.19180
1.00	0.16498	0.16495
1.25	0.11910	0.11907
1.50	0.09068	0.09065
1.75	0.07169	0.07167
2.00	0.05830	0.05828
2.25	0.04845	0.04843
2.50	0.04098	0.04096
3.00	0.03051	0.03050
3.50	0.02364	0.02363
4.00	0.01888	0.01887
4.50	0.01544	0.01543
5.00	0.01286	0.01286
6.00	0.00931	0.00931
7.00	0.00703	0.00703
8.00	0.00549	0.00549
9.00	0.00439	0.00439
10.00	0.00359	0.00359
15.00	0.00160	0.00160
20.00	0.00087	0.00087
25.00	0.00054	0.00054
30.00	0.00036	0.00036
35.00	0.00025	0.00025
40.00	0.00018	0.00018
45.00	0.00014	0.00014
50.00	0.00011	0.00011

Notes.

Base Case. Net Radiation at Ground Level = 0.27

Test Case 1 Net Radiation at Ground Level = 0.22

TABLE A-15-12
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.00000	0.99997
0.20	1.00000	0.99991
0.30	1.00000	0.99988
0.40	1.00000	0.99984
0.50	1.00000	0.99981
0.60	1.00000	0.99979
0.70	1.00000	0.99982
0.80	1.00000	0.99978
0.90	1.00000	0.99979
1.00	1.00000	0.99982
1.25	1.00000	0.99975
1.50	1.00000	0.99967
1.75	1.00000	0.99972
2.00	1.00000	0.99966
2.25	1.00000	0.99959
2.50	1.00000	0.99951
3.00	1.00000	0.99967
3.50	1.00000	0.99958
4.00	1.00000	0.99947
4.50	1.00000	0.99935
5.00	1.00000	1.00000
6.00	1.00000	1.00000
7.00	1.00000	1.00000
8.00	1.00000	1.00000
9.00	1.00000	1.00000
10.00	1.00000	1.00000
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes

Base Case: Net Radiation at Ground Level = 0.27

Test Case 1: Net Radiation at Ground Level = 0.22

TABLE A-16-13
NET RADIATION SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.16890	1.16888
0.20	0.56190	0.56188
0.30	0.36119	0.36118
0.40	0.26185	0.26184
0.50	0.20308	0.20306
0.60	0.16447	0.16446
0.70	0.13727	0.13726
0.80	0.11715	0.11714
0.90	0.10170	0.10169
1.00	0.08953	0.08952
1.25	0.06807	0.06807
1.50	0.05419	0.05418
1.75	0.04454	0.04454
2.00	0.03748	0.03748
2.25	0.03212	0.03212
2.50	0.02793	0.02793
3.00	0.02182	0.02182
3.50	0.01762	0.01762
4.00	0.01458	0.01458
4.50	0.01230	0.01230
5.00	0.01053	0.01053
6.00	0.00799	0.00799
7.00	0.00628	0.00628
8.00	0.00506	0.00506
9.00	0.00417	0.00417
10.00	0.00349	0.00349
15.00	0.00170	0.00170
20.00	0.00099	0.00099
25.00	0.00064	0.00064
30.00	0.00044	0.00044
35.00	0.00032	0.00032
40.00	0.00024	0.00024
45.00	0.00019	0.00019
50.00	0.00015	0.00015

Notes:
Base Case: Net Radiation at Ground Level = 0.27
Test Case 1: Net Radiation at Ground Level = 0.22

TABLE A-15-14
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.00000	0.99998
0.20	1.00000	0.99996
0.30	1.00000	0.99997
0.40	1.00000	0.99996
0.50	1.00000	0.99990
0.60	1.00000	0.99994
0.70	1.00000	0.99993
0.80	1.00000	0.99991
0.90	1.00000	0.99990
1.00	1.00000	0.99989
1.25	1.00000	1.00000
1.50	1.00000	0.99982
1.75	1.00000	1.00000
2.00	1.00000	1.00000
2.25	1.00000	1.00000
2.50	1.00000	1.00000
3.00	1.00000	1.00000
3.50	1.00000	1.00000
4.00	1.00000	1.00000
4.50	1.00000	1.00000
5.00	1.00000	1.00000
6.00	1.00000	1.00000
7.00	1.00000	1.00000
8.00	1.00000	1.00000
9.00	1.00000	1.00000
10.00	1.00000	1.00000
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes.
Base Case Net Radiation at Ground Level = 0.27
Test Case 1. Net Radiation at Ground Level = 0.22

TABLE A-15-15
NET RADIATION SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.76394	1.76394
0.20	0.86346	0.86346
0.30	0.56259	0.56259
0.40	0.41205	0.41205
0.50	0.32193	0.32193
0.60	0.26207	0.26207
0.70	0.21952	0.21952
0.80	0.18776	0.18776
0.90	0.16321	0.16321
1.00	0.14370	0.14370
1.25	0.10898	0.10898
1.50	0.08628	0.08628
1.75	0.07040	0.07040
2.00	0.05876	0.05876
2.25	0.04990	0.04990
2.50	0.04299	0.04299
3.00	0.03297	0.03297
3.50	0.02615	0.02615
4.00	0.02128	0.02128
4.50	0.01766	0.01766
5.00	0.01490	0.01490
6.00	0.01102	0.01102
7.00	0.00847	0.00847
8.00	0.00671	0.00671
9.00	0.00543	0.00543
10.00	0.00448	0.00448
15.00	0.00206	0.00206
20.00	0.00115	0.00115
25.00	0.00071	0.00071
30.00	0.00048	0.00048
35.00	0.00034	0.00034
40.00	0.00025	0.00025
45.00	0.00020	0.00020
50.00	0.00015	0.00015

Notes

Base Case Net Radiation at Ground Level = 0.27

Test Case 1 Net Radiation at Ground Level = 0.22

TABLE A-15-16
NET RADIATION SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Km)	Net Radiation = 0.27	Net Radiation = 0.22
0.10	1.00000	1.00000
0.20	1.00000	1.00000
0.30	1.00000	1.00000
0.40	1.00000	1.00000
0.50	1.00000	1.00000
0.60	1.00000	1.00000
0.70	1.00000	1.00000
0.80	1.00000	1.00000
0.90	1.00000	1.00000
1.00	1.00000	1.00000
1.25	1.00000	1.00000
1.50	1.00000	1.00000
1.75	1.00000	1.00000
2.00	1.00000	1.00000
2.25	1.00000	1.00000
2.50	1.00000	1.00000
3.00	1.00000	1.00000
3.50	1.00000	1.00000
4.00	1.00000	1.00000
4.50	1.00000	1.00000
5.00	1.00000	1.00000
6.00	1.00000	1.00000
7.00	1.00000	1.00000
8.00	1.00000	1.00000
9.00	1.00000	1.00000
10.00	1.00000	1.00000
15.00	1.00000	1.00000
20.00	1.00000	1.00000
25.00	1.00000	1.00000
30.00	1.00000	1.00000
35.00	1.00000	1.00000
40.00	1.00000	1.00000
45.00	1.00000	1.00000
50.00	1.00000	1.00000

Notes.

Base Case Net Radiation at Ground Level = 0.27

Test Case 1 Net Radiation at Ground Level = 0.22

TABLE A-16-1
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
PARTICLE PHASE CONCENTRATION
UNITS = μg/m³/g/s

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	0.00000	0.00000
0.20	0.00841	0.00737
0.30	0.07880	0.06515
0.40	0.20450	0.16023
0.50	0.45212	0.33755
0.60	0.85715	0.61301
0.70	1.42364	0.98003
0.80	1.98828	1.32257
0.90	2.58860	1.67020
1.00	3.18843	2.00220
1.25	4.32880	2.56932
1.50	5.10003	2.89809
1.75	5.51774	3.02744
2.00	5.66079	3.01499
2.25	5.50872	2.85565
2.50	5.27964	2.66865
3.00	4.72594	2.27530
3.50	4.11185	1.88372
4.00	3.58225	1.55838
4.50	3.13326	1.29120
5.00	2.75410	1.07263
6.00	2.16045	0.74727
7.00	1.72634	0.52742
8.00	1.40063	0.37672
9.00	1.15260	0.27240
10.00	0.95945	0.19905
15.00	0.43141	0.04662
20.00	0.22171	0.01261
25.00	0.12237	0.00372
30.00	0.07073	0.00116
35.00	0.04245	0.00038
40.00	0.02609	0.00013
45.00	0.01633	0.00005
50.00	0.01037	0.00002

Notes

Base Case: Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-2
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE CONCENTRATION

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff For Ice = Liquid
0.10	1.00000	1.00000
0.20	1.00000	0.87634
0.30	1.00000	0.82678
0.40	1.00000	0.78352
0.50	1.00000	0.74659
0.60	1.00000	0.71517
0.70	1.00000	0.68840
0.80	1.00000	0.66518
0.90	1.00000	0.64521
1.00	1.00000	0.62796
1.25	1.00000	0.59354
1.50	1.00000	0.56825
1.75	1.00000	0.54867
2.00	1.00000	0.53261
2.25	1.00000	0.51839
2.50	1.00000	0.50546
3.00	1.00000	0.48145
3.50	1.00000	0.45812
4.00	1.00000	0.43503
4.50	1.00000	0.41209
5.00	1.00000	0.38947
6.00	1.00000	0.34589
7.00	1.00000	0.30551
8.00	1.00000	0.26896
9.00	1.00000	0.23634
10.00	1.00000	0.20746
15.00	1.00000	0.10806
20.00	1.00000	0.05688
25.00	1.00000	0.03040
30.00	1.00000	0.01640
35.00	1.00000	0.00895
40.00	1.00000	0.00498
45.00	1.00000	0.00306
50.00	1.00000	0.00193

Notes:

Base Case: Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-3
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE CONCENTRATION
UNITS = $\mu g/m^3/g/s$

Distance (Km)	Scav Coeff For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	0.00000	0.00000
0.20	0.00842	0.00800
0.30	0.08009	0.07435
0.40	0.21081	0.19136
0.50	0.47385	0.42110
0.60	0.91458	0.79653
0.70	1.54753	1.32205
0.80	2.20092	1.84508
0.90	2.91623	2.40187
1.00	3.65587	2.95905
1.25	5.17488	4.01720
1.50	6.34025	4.72976
1.75	7.11298	5.10582
2.00	7.54503	5.21602
2.25	7.56630	5.04035
2.50	7.45399	4.78668
3.00	7.00058	4.18145
3.50	6.33641	3.52234
4.00	5.70440	2.95234
4.50	5.12737	2.47138
5.00	4.61062	2.07007
6.00	3.74633	1.46032
7.00	3.07071	1.03997
8.00	2.53926	0.74779
9.00	2.12057	0.54347
10.00	1.78605	0.39869
15.00	0.83224	0.09432
20.00	0.43589	0.02561
25.00	0.24350	0.00757
30.00	0.14193	0.00238
35.00	0.08568	0.00079
40.00	0.05288	0.00027
45.00	0.03320	0.00010
50.00	0.02112	0.00004

Notes

Base Case. Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-4
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE CONCENTRATION

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	1.00000	1.00000
0.20	1.00000	0.95012
0.30	1.00000	0.92833
0.40	1.00000	0.90774
0.50	1.00000	0.88868
0.60	1.00000	0.87092
0.70	1.00000	0.85430
0.80	1.00000	0.83855
0.90	1.00000	0.82362
1.00	1.00000	0.80940
1.25	1.00000	0.77629
1.50	1.00000	0.74599
1.75	1.00000	0.71782
2.00	1.00000	0.69132
2.25	1.00000	0.66616
2.50	1.00000	0.64219
3.00	1.00000	0.59730
3.50	1.00000	0.55589
4.00	1.00000	0.51755
4.50	1.00000	0.48200
5.00	1.00000	0.44898
6.00	1.00000	0.38980
7.00	1.00000	0.33867
8.00	1.00000	0.29449
9.00	1.00000	0.25628
10.00	1.00000	0.22322
15.00	1.00000	0.11333
20.00	1.00000	0.05875
25.00	1.00000	0.03109
30.00	1.00000	0.01677
35.00	1.00000	0.00922
40.00	1.00000	0.00511
45.00	1.00000	0.00301
50.00	1.00000	0.00189

Notes:
Base Case: Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient
Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-5
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
VAPOR PHASE CONCENTRATION
UNITS = μg/m³/g/s

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	0.00000	0.00000
0.20	0.00825	0.00766
0.30	0.07782	0.06962
0.40	0.20297	0.17498
0.50	0.45229	0.37572
0.60	0.86560	0.69287
0.70	1.45232	1.12017
0.80	2.04708	1.52140
0.90	2.68942	1.92600
1.00	3.34169	2.30596
1.25	4.62275	2.90742
1.50	5.53073	3.17037
1.75	6.05435	3.16313
2.00	6.26187	2.98178
2.25	6.11800	2.65523
2.50	5.86880	2.32147
3.00	5.21807	1.71461
3.50	4.46315	1.21826
4.00	3.79174	0.85977
4.50	3.21271	0.60514
5.00	2.72073	0.42571
6.00	1.95654	0.21125
7.00	1.41622	0.10552
8.00	1.03257	0.05309
9.00	0.75936	0.02694
10.00	0.56270	0.01378
15.00	0.13700	0.00052
20.00	0.03716	0.00002
25.00	0.01070	0.00000
30.00	0.00321	0.00000
35.00	0.00099	0.00000
40.00	0.00031	0.00000
45.00	0.00010	0.00000
50.00	0.00003	0.00000

Notes
Base Case: Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient
Test Case 1. Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-6
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE CONCENTRATION

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	1.00000	1.00000
0.20	1.00000	0.92848
0.30	1.00000	0.89463
0.40	1.00000	0.86210
0.50	1.00000	0.83071
0.60	1.00000	0.80045
0.70	1.00000	0.77130
0.80	1.00000	0.74320
0.90	1.00000	0.71614
1.00	1.00000	0.69006
1.25	1.00000	0.62894
1.50	1.00000	0.57323
1.75	1.00000	0.52246
2.00	1.00000	0.47618
2.25	1.00000	0.43400
2.50	1.00000	0.39556
3.00	1.00000	0.32859
3.50	1.00000	0.27296
4.00	1.00000	0.22675
4.50	1.00000	0.18836
5.00	1.00000	0.15647
6.00	1.00000	0.10797
7.00	1.00000	0.07451
8.00	1.00000	0.05142
9.00	1.00000	0.03548
10.00	1.00000	0.02449
15.00	1.00000	0.00380
20.00	1.00000	0.00054
25.00	1.00000	0.00000
30.00	1.00000	0.00000
35.00	1.00000	0.00000
40.00	1.00000	0.00000
45.00	1.00000	0.00000
50.00	1.00000	0.00000

Notes

Base Case: Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-7
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
PARTICLE PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	0.06882	0.18750
0.20	0.03803	0.09300
0.30	0.02845	0.06277
0.40	0.02254	0.04509
0.50	0.01825	0.03328
0.60	0.01506	0.02519
0.70	0.01264	0.01949
0.80	0.01075	0.01538
0.90	0.00925	0.01235
1.00	0.00804	0.01007
1.25	0.00585	0.00641
1.50	0.00441	0.00437
1.75	0.00342	0.00315
2.00	0.00271	0.00237
2.25	0.00219	0.00185
2.50	0.00179	0.00148
3.00	0.00125	0.00101
3.50	0.00091	0.00073
4.00	0.00069	0.00055
4.50	0.00053	0.00043
5.00	0.00043	0.00034
6.00	0.00029	0.00022
7.00	0.00021	0.00015
8.00	0.00016	0.00010
9.00	0.00012	0.00007
10.00	0.00010	0.00005
15.00	0.00004	0.00001
20.00	0.00002	0.00000
25.00	0.00001	0.00000
30.00	0.00001	0.00000
35.00	0.00000	0.00000
40.00	0.00000	0.00000
45.00	0.00000	0.00000
50.00	0.00000	0.00000

Notes.
Base Case Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient
Test Case 1. Ice Scavenging Coefficient = Liquid Scavenging Coefficent

TABLE A-18-8
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
NORMALIZED PARTICLE PHASE WET DEPOSITION

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff For Ice = Liquid
0.10	1.00000	2.72450
0.20	1.00000	2.44544
0.30	1.00000	2.20633
0.40	1.00000	2.00044
0.50	1.00000	1.82356
0.60	1.00000	1.67264
0.70	1.00000	1.54193
0.80	1.00000	1.43070
0.90	1.00000	1.33514
1.00	1.00000	1.25249
1.25	1.00000	1.09573
1.50	1.00000	0.99093
1.75	1.00000	0.92105
2.00	1.00000	0.87454
2.25	1.00000	0.84475
2.50	1.00000	0.82682
3.00	1.00000	0.80800
3.50	1.00000	0.80220
4.00	1.00000	0.79710
4.50	1.00000	0.81132
5.00	1.00000	0.79070
6.00	1.00000	0.75862
7.00	1.00000	0.71429
8.00	1.00000	0.62500
9.00	1.00000	0.58333
10.00	1.00000	0.50000
15.00	1.00000	0.25000
20.00	1.00000	0.00000
25.00	1.00000	0.00000
30.00	1.00000	0.00000
35.00	1.00000	0.00000
40.00	1.00000	0.00000
45.00	1.00000	0.00000
50.00	1.00000	0.00000

Notes

Base Case Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1 Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-9
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
PARTICLE-BOUND PHASE WET DEPOSITION
UNITS = $g/m^2/g/s$

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	0.02634	0.07738
0.20	0.01494	0.04166
0.30	0.01148	0.03053
0.40	0.00934	0.02380
0.50	0.00777	0.01903
0.60	0.00659	0.01557
0.70	0.00568	0.01300
0.80	0.00496	0.01104
0.90	0.00439	0.00950
1.00	0.00391	0.00828
1.25	0.00305	0.00611
1.50	0.00246	0.00472
1.75	0.00203	0.00376
2.00	0.00172	0.00307
2.25	0.00148	0.00256
2.50	0.00129	0.00216
3.00	0.00101	0.00159
3.50	0.00081	0.00122
4.00	0.00067	0.00095
4.50	0.00057	0.00076
5.00	0.00049	0.00061
6.00	0.00037	0.00041
7.00	0.00029	0.00028
8.00	0.00024	0.00020
9.00	0.00020	0.00014
10.00	0.00016	0.00011
15.00	0.00008	0.00003
20.00	0.00004	0.00001
25.00	0.00002	0.00000
30.00	0.00001	0.00000
35.00	0.00001	0.00000
40.00	0.00001	0.00000
45.00	0.00000	0.00000
50.00	0.00000	0.00000

Notes

Base Case. Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-10
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
NORMALIZED PARTICLE-BOUND PHASE WET DEPOSITION

Distance (Km)	Scav. Coeff. For Ice = 1/3 Liquid	Scav Coeff For Ice = Liquid
0.10	1.00000	2 93774
0 20	1.00000	2.78849
0 30	1.00000	2 65941
0 40	1.00000	2.54818
0.50	1.00000	2.44916
0.60	1.00000	2.36267
0.70	1.00000	2.28873
0.80	1.00000	2 22581
0.90	1 00000	2.16401
1.00	1 00000	2.11765
1.25	1 00000	2.00328
1.50	1 00000	1.91870
1 75	1.00000	1 85222
2 00	1.00000	1 78488
2 25	1.00000	1 72973
2 50	1.00000	1 67442
3 00	1.00000	1.57426
3.50	1.00000	1.50617
4.00	1.00000	1.41791
4.50	1 00000	1.33333
5.00	1 00000	1.24490
6.00	1 00000	1.10811
7 00	1 00000	0.96552
8.00	1.00000	0.83333
9.00	1 00000	0.70000
10.00	1 00000	0.68750
15.00	1.00000	0.37500
20.00	1 00000	0.25000
25.00	1 00000	0.00000
30.00	1 00000	0.00000
35.00	1 00000	0.00000
40 00	1 00000	0.00000
45 00	1.00000	0.00000
50 00	1.00000	0 00000

Notes:

Base Case: Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-11
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
VAPOR PHASE WET DEPOSITION
UNITS = g/m²/g/s

Distance (Km)	Scav Coeff For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	0.04301	0.11741
0.20	0.02462	0.06477
0.30	0.01908	0.04836
0.40	0.01564	0.03821
0.50	0.01310	0.03083
0.60	0.01118	0.02535
0.70	0.00969	0.02118
0.80	0.00851	0.01793
0.90	0.00756	0.01534
1.00	0.00678	0.01325
1.25	0.00531	0.00947
1.50	0.00431	0.00699
1.75	0.00357	0.00529
2.00	0.00302	0.00407
2.25	0.00258	0.00317
2.50	0.00223	0.00250
3.00	0.00171	0.00160
3.50	0.00135	0.00104
4.00	0.00108	0.00070
4.50	0.00088	0.00047
5.00	0.00072	0.00032
6.00	0.00050	0.00015
7.00	0.00036	0.00008
8.00	0.00026	0.00004
9.00	0.00019	0.00002
10.00	0.00014	0.00001
15.00	0.00004	0.00000
20.00	0.00001	0.00000
25.00	0.00000	0.00000
30.00	0.00000	0.00000
35.00	0.00000	0.00000
40.00	0.00000	0.00000
45.00	0.00000	0.00000
50.00	0.00000	0.00000

Notes

Base Case Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1 Ice Scavenging Coefficient = Liquid Scavenging Coefficient

TABLE A-16-12
SCAVENGING COEFFICIENT SENSITIVITY ANALYSIS
NORMALIZED VAPOR PHASE WET DEPOSITION

Distance (Km)	Scav Coeff For Ice = 1/3 Liquid	Scav. Coeff. For Ice = Liquid
0.10	1.00000	2.72983
0.20	1.00000	2.63079
0.30	1.00000	2.53459
0.40	1.00000	2.44309
0.50	1.00000	2.35344
0.60	1.00000	2.26744
0.70	1.00000	2.18576
0.80	1.00000	2.10693
0.90	1.00000	2.02910
1.00	1.00000	1.95428
1.25	1.00000	1.78343
1.50	1.00000	1.62181
1.75	1.00000	1.48179
2.00	1.00000	1.34768
2.25	1.00000	1.22868
2.50	1.00000	1.12108
3.00	1.00000	0.93567
3.50	1.00000	0.77037
4.00	1.00000	0.64815
4.50	1.00000	0.53409
5.00	1.00000	0.44444
6.00	1.00000	0.30000
7.00	1.00000	0.22222
8.00	1.00000	0.15385
9.00	1.00000	0.10526
10.00	1.00000	0.07143
15.00	1.00000	0.00000
20.00	1.00000	0.00000
25.00	1.00000	0.00000
30.00	1.00000	0.00000
35.00	1.00000	0.00000
40.00	1.00000	0.00000
45.00	1.00000	0.00000
50.00	1.00000	0.00000

Notes

Base Case Ice Scavenging Coefficient = 1/3 Liquid Scavenging Coefficient

Test Case 1: Ice Scavenging Coefficient = Liquid Scavenging Coefficient