Appendix A

Chronic HHRA Calculations

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Table A-1. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for All Air Monitoring Stations								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	2.14E-02		2.03E+00		µg/m³	585/704	0.0201 - 0.265
Arsenic	7440-38-2	4.41E-04	J	4.47E-03		µg/m³	51/704	0.000376 - 0.00129
Barium	7440-39-3	2.04E-02	J	3.58E-02	J	µg/m³	4/506	0.0119 - 0.0237
Beryllium	7440-41-7	4.14E-06	J	9.94E-05	J	µg/m³	129/506	0.00000287 - 0.00003542
Cadmium	7440-43-9	1.51E-05	J	2.83E-03	J	µg/m³	381/704	0.00001368 - 0.00013464
Calcium	7440-70-2	3.63E-01	J	2.06E+00		µg/m³	51/506	0.307 - 0.751
Chromium, Total	7440-47-3	1.08E-03	J	1.84E-02	J	µg/m³	76/704	0.00101 - 0.00791
Cobalt	7440-48-4	1.43E-03		2.01E-02	J	µg/m³	9/704	0.00097169 - 0.00252
Copper	7440-50-8	1.78E-03	J	3.61E-01		µg/m³	693/704	0.00162 - 0.0111
Iron	7439-89-6	1.93E-02	J	3.41E+00		µg/m³	412/506	0.011 - 0.145
Lead	7439-92-1	2.00E-04	J	1.16E-02	J	µg/m³	444/506	0.00019563 - 0.00126
Magnesium	7439-95-4	4.68E-02	J	5.98E-01		µg/m³	328/506	0.0478 - 0.224
Manganese	7439-96-5	9.96E-04	J	6.76E-02		µg/m³	617/704	0.00097236 - 0.0141
Mercury	7439-97-6	3.70E-07	J	6.67E-04		µg/m³	115/400	0.00000017 - 0.00017221
Molybdenum	7439-98-7	6.33E-04	J	2.60E-03	J	µg/m³	11/506	0.00037581 - 0.00076336
Nickel	7440-02-0	6.09E-04	J	2.72E-02		µg/m³	118/704	0.00050697 - 0.00846
Selenium	7782-49-2	9.96E-04	J	1.80E-03	J	µg/m³	7/506	0.0005808 - 0.00116
Silver	7440-22-4	6.93E-06	J	1.27E-04	J	µg/m³	129/506	0.00000487 - 0.00003603
Sodium	7440-23-5	1.09E+00	J	2.43E+00	J	µg/m³	8/506	0.69 - 1.373
Sulfate (as SO4)	14808-79-8	2.20E-04	J	5.46E-03		mg/m³	169/193	0.00027577 - 0.00185
Vanadium	7440-62-2	1.06E-03	J	2.40E-02	J	µg/m³	65/506	0.00101 - 0.00461
Zinc	7440-66-6	2.50E-03	J	4.47E-02	J	µg/m³	236/506	0.00213 - 0.0131
Radiochemicals								
Alpha, Gross	ALPHA	5.86E-04	J	4.68E-02		pCi/m³	332/704	0.00003611 - 0.00964
Beta, Gross	BETA	8.34E-04	J	1.25E-01		pCi/m³	474/506	0.00213 - 0.0871
Radium-226	RA-226	9.76E-05	J	3.16E-03		pCi/m³	95/704	0.00002956 - 0.0015
Radium-228	RA-228	7.74E-04	J	2.20E-02		pCi/m³	115/704	0.00052632 - 0.00559
Thorium-228	TH-228	1.62E-04	J	2.63E-03		pCi/m³	12/703	0.00000551 - 0.00124
Thorium-230	TH-230	1.43E-05	J	1.12E-02		pCi/m³	131/703	0.00000517 - 0.00099299
Thorium-232	TH-232	1.49E-04	J	2.04E-03		pCi/m³	7/703	0.00000524 - 0.00047536

Table A-1. Summary Statistics for 24-Hour Average Concentrations
PM_{10} and Associated Chemicals and Radiochemicals for All Air Monitoring Stations

Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Uranium-234	U-234	4.85E-05	J	6.51E-03		pCi/m³	8/506	0.00002811 - 0.00146
Uranium-238	U-238	8.70E-05	J	2.98E-03		pCi/m³	4/506	0.00002697 - 0.00146
Particulate Matter in Ambient Air								
PM_{10}	PM10	1.40E-07		1.66E-04		g/m³	698/704	0.00000005 - 0.00000007

Notes:
[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:
CAS – Chemical Abstract Service
g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter

Review Qualifiers:
J – indicates a value estimated by the laboratory

Table A-2. Summary Statistics for 24-Hour Average Concentrations TSP and Associated Chemicals and Radiochemicals for All Air Monitoring Stations								
Chemical	CAS Number	Minimum Concentrationa (Qualifier)		Maximum Concentrationa (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	1.96E-02	J	3.42E+00		µg/m³	432/449	0.0184 - 0.0216
Arsenic	7440-38-2	3.59E-04	J	3.38E-03		µg/m³	46/449	0.00047492 - 0.00137
Barium	7440-39-3	1.83E-02	J	3.60E-02	J	µg/m³	6/420	0.0155 - 0.0252
Beryllium	7440-41-7	4.07E-06	J	1.70E-04	J	µg/m³	186/420	0.00000376 - 0.00006346
Cadmium	7440-43-9	2.23E-05	J	2.37E-03		µg/m³	318/449	0.00002411 - 0.00011514
Calcium	7440-70-2	4.21E-01	J	3.11E+00		µg/m³	211/420	0.401 - 0.65
Chromium, Total	7440-47-3	1.23E-03	J	1.75E-03		µg/m³	10/449	0.00085154 - 0.00745
Cobalt	7440-48-4	1.63E-03		5.19E-03	J	µg/m³	6/449	0.00085154 - 0.00268
Copper	7440-50-8	9.93E-03		3.37E-01		µg/m³	449/449	
Iron	7439-89-6	3.37E-02	J	9.24E+00		µg/m³	386/420	0.0147 - 0.261
Lead	7439-92-1	1.72E-04	J	8.41E-03		µg/m³	391/420	0.00015985 - 0.00119
Magnesium	7439-95-4	4.57E-02	J	1.88E+00		µg/m³	364/420	0.0436 - 0.0703
Manganese	7439-96-5	9.54E-04	J	1.26E-01		µg/m³	418/449	0.00085547 - 0.016
Mercury	7439-97-6	2.90E-07	J	5.76E-05	J	µg/m³	127/414	0.00000016 - 0.0002963
Molybdenum	7439-98-7	5.54E-04	J	1.92E-03	J	µg/m³	18/420	0.00049107 - 0.00079595
Nickel	7440-02-0	7.10E-04	J	3.64E-03		µg/m³	32/449	0.00065288 - 0.00253
Selenium	7782-49-2	8.90E-04	J	2.77E-03		µg/m³	18/420	0.00075893 - 0.00123
Silver	7440-22-4	6.69E-06	J	1.54E-04	J	µg/m³	320/420	0.00000641 - 0.00012588
Sodium	7440-23-5	9.57E-01	J	5.44E+00		µg/m³	27/420	0.902 - 1.462
Sulfate (as SO4)	14808-79-8	2.04E-04	J	4.53E-03		mg/m³	25/27	0.00040261 - 0.00104
Vanadium	7440-62-2	1.37E-03	J	4.99E-03	J	µg/m³	148/420	0.0013 - 0.00988
Zinc	7440-66-6	2.79E-03	J	4.31E-02		µg/m³	320/420	0.00278 - 0.00988
Radiochemicals								
Alpha, Gross	ALPHA	1.59E-03	J	2.96E-02		pCi/m³	248/449	0.0000408 - 0.0084
Beta, Gross	BETA	1.07E-03	J	1.85E-01		pCi/m³	402/420	0.00233 - 0.0967
Radium-226	RA-226	1.34E-04	J	1.10E-03		pCi/m³	61/449	0.00010317 - 0.00082027
Radium-228	RA-228	7.54E-04	J	1.15E-02		pCi/m³	74/449	0.00029278 - 0.00456
Thorium-228	TH-228	1.02E-05	J	3.34E-04	J	pCi/m³	29/449	0.00000666 - 0.00063448
Thorium-230	TH-230	1.15E-05	J	1.75E-03		pCi/m³	102/449	0.0000057 - 0.00061202

Table A-2. Summary Statistics for 24-Hour Average Concentrations TSP and Associated Chemicals and Radiochemicals for All Air Monitoring Stations							
Chemical	CAS Number	Minimum Concentrationa (Qualifier)		Maximum Concentrationa (Qualifier)	Units	Detection Frequency	Range of Detection Limits
Thorium-232	TH-232	8.93E-05	J	5.14E-04	pCi/m³	16/449	0.0000052 - 0.00061202
Uranium-234	U-234	4.52E-05	J	6.18E-03	pCi/m³	16/420	0.00002227 - 0.00070293
Uranium-235	U-235	1.76E-03		3.30E-03	pCi/m³	2/420	0.00002227 - 0.00045246
Uranium-238	U-238	7.76E-05	J	3.06E-03	pCi/m³	13/420	0.00002431 - 0.00063773
Total Suspended Particulates in Ambient Air							
TSP	TSP	1.24E-06		1.93E-04	g/m³	413/413	

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service

g/m³ – grams per cubic meter

µg/m³ – micrograms per cubic meter

mg/m³ – milligrams per cubic meter

pCi/m³ – picoCurrie per cubic meter

TSP – total suspended particulates

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table A-3. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-1								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	2.54E-02	J	1.54E+00		µg/m³	128/151	0.0201 - 0.255
Arsenic	7440-38-2	5.32E-04	J	1.48E-03	J	µg/m³	12/151	0.00043225 - 0.00117
Barium	7440-39-3	3.58E-02	J	3.58E-02	J	µg/m³	1/85	0.071 - 0.0214
Beryllium	7440-41-7	4.88E-06	J	3.01E-05	J	µg/m³	27/85	0.00000423 - 0.00001442
Cadmium	7440-43-9	1.51E-05	J	4.29E-04	J	µg/m³	91/151	0.00001368 - 0.00007859
Calcium	7440-70-2	5.01E-01	J	7.80E-01	J	µg/m³	6/85	0.441 - 0.551
Chromium, Total	7440-47-3	1.37E-03	J	2.59E-03		µg/m³	25/151	0.00113 - 0.00632
Cobalt	7440-48-4	2.35E-03	J	2.01E-02	J	µg/m³	4/151	0.00112 - 0.00227
Copper	7440-50-8	1.82E-03	J	4.53E-02		µg/m³	148/151	0.00175 - 0.00809
Iron	7439-89-6	2.63E-02	J	5.48E-01		µg/m³	69/85	0.011 - 0.0861
Lead	7439-92-1	2.47E-04	J	1.16E-02	J	µg/m³	74/85	0.00020286 - 0.00095751
Magnesium	7439-95-4	6.35E-02	J	2.78E-01	J	µg/m³	55/85	0.0478 - 0.0597
Manganese	7439-96-5	1.18E-03	J	6.76E-02		µg/m³	133/151	0.00106 - 0.0086
Mercury	7439-97-6	2.86E-06	J	1.53E-04	J	µg/m³	20/67	0.00000018 - 0.00012798
Molybdenum	7439-98-7	6.33E-04	J	2.60E-03	J	µg/m³	5/85	0.00054081 - 0.00067526
Nickel	7440-02-0	6.72E-04	J	3.92E-03	J	µg/m³	42/151	0.00059026 - 0.00215
Selenium	7782-49-2	1.02E-03	J	1.02E-03	J	µg/m³	1/85	0.000836 - 0.00104
Silver	7440-22-4	7.94E-06	J	6.63E-05	J	µg/m³	27/85	0.00000697 - 0.00001689
Sodium	7440-23-5	1.63E+00	J	2.10E+00	J	µg/m³	2/85	0.993 - 1.24
Sulfate (as SO4)	14808-79-8	2.20E-04	J	5.46E-03		mg/m³	56/64	0.00027577 - 0.00185
Vanadium	7440-62-2	1.72E-03	J	2.32E-03	J	µg/m³	10/85	0.00143 - 0.00281
Zinc	7440-66-6	3.73E-03	J	4.25E-02	J	µg/m³	41/85	0.00305 - 0.00844
Radiochemicals								
Alpha, Gross	ALPHA	9.25E-04	J	2.06E-02		pCi/m³	80/151	0.0000553 - 0.00471
Beta, Gross	BETA	1.19E-03	J	1.25E-01		pCi/m³	80/85	0.00239 - 0.0801
Radium-226	RA-226	1.60E-04	J	9.23E-04	J	pCi/m³	23/151	0.00010937 - 0.00073503
Radium-228	RA-228	9.69E-04	J	4.27E-03		pCi/m³	29/151	0.00076736 - 0.00341
Thorium-228	TH-228	1.62E-04	J	2.44E-04	J	pCi/m³	3/151	0.00000677 - 0.00052516
Thorium-230	TH-230	8.39E-05	J	1.58E-03	J	pCi/m³	39/151	0.00000517 - 0.00041608
Thorium-232	TH-232	1.49E-04	J	2.12E-04	J	pCi/m³	2/151	0.00000648 - 0.000359

Table A-3. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-1								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Uranium-234	U-234	—		—		pCi/m³	0/85	0.0000369 - 0.000481
Uranium-238	U-238	4.54E-04	J	4.54E-04	J	pCi/m³	1/85	0.0000449 - 0.000449
Particulate Matter in Ambient Air								
PM_{10}	PM10	9.90E-07	J	8.68E-05		g/m³	148/151	0.00000005 - 0.00000007

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service

g/m³ – grams per cubic meter

µg/m³ – micrograms per cubic meter

mg/m³ – milligrams per cubic meter

pCi/m³ – picoCurrie per cubic meter

PM_{10} – particulate matter less than 10 microns in diameter

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table A-4. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-2								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	2.37E-02	J	4.10E-01		µg/m³	65/85	0.0203 - 0.222
Arsenic	7440-38-2	—		—		µg/m³	0/85	0.00094574 - 0.00124918
Barium	7440-39-3	—		—		µg/m³	0/85	0.01732205 - 0.02287968
Beryllium	7440-41-7	4.78E-06	J	3.18E-05	J	µg/m³	24/85	0.00000422 - 0.0000267
Cadmium	7440-43-9	3.09E-05	J	1.53E-04	J	µg/m³	33/85	0.0000269 - 0.0000792
Calcium	7440-70-2	5.06E-01	J	6.57E-01	J	µg/m³	4/85	0.447 - 0.59
Chromium, Total	7440-47-3	—		—		µg/m³	0/85	0.00512693 - 0.00677186
Cobalt	7440-48-4	3.75E-03	J	3.75E-03	J	µg/m³	1/85	0.00184 - 0.00243
Copper	7440-50-8	1.78E-03	J	2.91E-02		µg/m³	83/85	0.00144 - 0.00916
Iron	7439-89-6	1.93E-02	J	3.94E-01		µg/m³	63/85	0.00717 - 0.0785
Lead	7439-92-1	2.00E-04	J	3.89E-03		µg/m³	73/85	0.000171 - 0.00103
Magnesium	7439-95-4	5.76E-02	J	2.42E-01	J	µg/m³	51/85	0.0484 - 0.224
Manganese	7439-96-5	1.00E-03	J	2.13E-02		µg/m³	70/85	0.000946 - 0.00858
Mercury	7439-97-6	1.76E-06	J	6.67E-04		µg/m³	20/67	0.000000032 - 0.000169
Molybdenum	7439-98-7	6.56E-04	J	9.03E-04	J	µg/m³	5/85	0.000548 - 0.000763
Nickel	7440-02-0	2.61E-03	J	2.66E-03	J	µg/m³	2/85	0.00174 - 0.0023
Selenium	7782-49-2	—		—		µg/m³	0/85	0.00084619 - 0.00111769
Silver	7440-22-4	8.23E-06	J	5.10E-05	J	µg/m³	23/85	0.00000697 - 0.000036
Sodium	7440-23-5	1.53E+00	J	1.53E+00	J	µg/m³	1/85	1.01 - 1.33
Sulfate (as SO4)	14808-79-8	—		—		mg/m³	0/0	—
Vanadium	7440-62-2	1.67E-03	J	2.17E-03	J	µg/m³	7/85	0.00144 - 0.0031
Zinc	7440-66-6	3.63E-03	J	3.77E-02		µg/m³	29/85	0.00309 - 0.00756
Radiochemicals								
Alpha, Gross	ALPHA	7.51E-04	J	2.34E-02		pCi/m³	37/85	0.0000499 - 0.00536
Beta, Gross	BETA	9.65E-04	J	1.18E-01		pCi/m³	79/85	0.000244 - 0.0757
Radium-226	RA-226	1.89E-04	J	6.09E-04	J	pCi/m³	9/85	0.0000296 - 0.00071
Radium-228	RA-228	9.74E-04	J	4.48E-03		pCi/m³	12/85	0.000774 - 0.00326
Thorium-228	TH-228	—		—		pCi/m³	0/85	0.00001794 - 0.00124179
Thorium-230	TH-230	1.40E-04	J	4.25E-04	J	pCi/m³	7/85	0.0000122 - 0.000349
Thorium-232	TH-232	—		—		pCi/m³	0/85	0.0000055 - 0.00034122

Table A-4. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-2								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Uranium-234	U-234	4.68E-04	J	4.68E-04	J	pCi/m³	1/85	0.0000686 - 0.000747
Uranium-238	U-238	—		—		pCi/m³	0/85	0.00002697 - 0.00074691
Particulate Matter in Ambient Air								
PM_{10}	PM10	2.30E-07		2.99E-05		g/m³	84/85	0.0000000498 - 0.0000000657

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service

g/m³ – grams per cubic meter

µg/m³ – micrograms per cubic meter

mg/m³ – milligrams per cubic meter

pCi/m³ – picoCurrie per cubic meter

PM_{10} – particulate matter less than 10 microns in diameter

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table A-5. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-3								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	2.72E-02	J	2.03E+00		µg/m³	127/153	0.0139 - 0.121
Arsenic	7440-38-2	4.41E-04	J	4.47E-03		µg/m³	16/153	0.000376 - 0.00129
Barium	7440-39-3	—		—		µg/m³	0/85	0.01188931 - 0.02365738
Beryllium	7440-41-7	4.45E-06	J	2.22E-05	J	µg/m³	11/85	0.00000287 - 0.0000231
Cadmium	7440-43-9	1.69E-05	J	5.09E-04	J	µg/m³	92/153	0.0000118 - 0.000106
Calcium	7440-70-2	3.63E-01	J	6.00E-01	J	µg/m³	6/85	0.307 - 0.61
Chromium, Total	7440-47-3	1.08E-03	J	2.81E-03		µg/m³	25/153	0.00103 - 0.00791
Cobalt	7440-48-4	1.43E-03		2.39E-03		µg/m³	3/153	0.000972 - 0.00252
Copper	7440-50-8	3.23E-03	J	3.61E-01		µg/m³	153/153	0.000549 - 0.00197
Iron	7439-89-6	2.71E-02	J	1.08E+00		µg/m³	70/85	0.00492 - 0.077
Lead	7439-92-1	2.43E-04	J	3.96E-03		µg/m³	75/85	0.000116 - 0.00106
Magnesium	7439-95-4	4.68E-02	J	2.09E-01	J	µg/m³	54/85	0.0332 - 0.207
Manganese	7439-96-5	1.10E-03	J	4.45E-02		µg/m³	134/153	0.000649 - 0.00908
Mercury	7439-97-6	1.65E-06	J	2.57E-05	J	µg/m³	16/67	0.0000000335 - 0.000119
Molybdenum	7439-98-7	—		—		µg/m³	0/85	0.00037581 - 0.00074779
Nickel	7440-02-0	6.39E-04	J	2.72E-02		µg/m³	32/153	0.000507 - 0.00238
Selenium	7782-49-2	—		—		µg/m³	0/85	0.0005808 - 0.00115568
Silver	7440-22-4	8.24E-06	J	3.33E-05	J	µg/m³	24/85	0.00000478 - 0.0000351
Sodium	7440-23-5	1.12E+00	J	1.12E+00	J	µg/m³	1/85	0.69 - 1.37
Sulfate (as SO4)	14808-79-8	2.33E-04	J	4.26E-03		mg/m³	58/66	0.0000216 - 0.00108
Vanadium	7440-62-2	1.06E-03	J	2.06E-03	J	µg/m³	8/85	0.000991 - 0.00314
Zinc	7440-66-6	2.50E-03	J	1.24E-02	J	µg/m³	32/85	0.00212 - 0.00803
Radiochemicals								
Alpha, Gross	ALPHA	9.70E-04	J	4.68E-02		pCi/m³	70/153	0.0000407 - 0.00631
Beta, Gross	BETA	1.02E-03	J	1.15E-01		pCi/m³	80/85	0.000223 - 0.0815
Radium-226	RA-226	9.76E-05	J	1.34E-03		pCi/m³	20/153	0.0000824 - 0.00102
Radium-228	RA-228	1.18E-03	J	1.21E-02		pCi/m³	32/153	0.000526 - 0.00453
Thorium-228	TH-228	1.65E-04	J	2.63E-03		pCi/m³	5/153	0.00000688 - 0.000522
Thorium-230	TH-230	7.71E-05	J	1.12E-02		pCi/m³	30/153	0.00000655 - 0.000627
Thorium-232	TH-232	6.57E-04	J	2.04E-03		pCi/m³	2/153	0.00000655 - 0.000461

Table A-5. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-3								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Uranium-234	U-234	6.51E-03		6.51E-03		pCi/m³	1/85	0.0000307 - 0.000646
Uranium-238	U-238	2.98E-03		2.98E-03		pCi/m³	1/85	0.0000876 - 0.000748
Particulate Matter in Ambient Air								
PM_{10}	PM10	9.50E-07		1.38E-04		g/m³	151/153	0.0000000342 - 0.000000101

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service

g/m³ – grams per cubic meter

µg/m³ – micrograms per cubic meter

mg/m³ – milligrams per cubic meter

pCi/m³ – picoCurrie per cubic meter

PM_{10} – particulate matter less than 10 microns in diameter

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table A-6. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-4								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	2.81E-02	J	4.51E-01	J	µg/m³	74/84	0.0166 - 0.0264
Arsenic	7440-38-2	8.80E-04	J	8.80E-04	J	µg/m³	1/84	0.000774 - 0.00123
Barium	7440-39-3	2.15E-02	J	2.15E-02	J	µg/m³	1/84	0.0142 - 0.0226
Beryllium	7440-41-7	4.14E-06	J	1.90E-05	J	µg/m³	25/84	0.00000342 - 0.0000349
Cadmium	7440-43-9	3.12E-05	J	1.73E-04	J	µg/m³	41/84	0.000022 - 0.0000976
Calcium	7440-70-2	4.51E-01	J	9.74E-01	J	µg/m³	15/84	0.366 - 0.751
Chromium, Total	7440-47-3	—		—		µg/m³	0/84	0.00419723 - 0.00667531
Cobalt	7440-48-4	—		—		µg/m³	0/84	0.00150774 - 0.00239793
Copper	7440-50-8	2.49E-03	J	6.26E-02		µg/m³	83/84	0.00118 - 0.00593
Iron	7439-89-6	2.56E-02	J	3.23E+00		µg/m³	73/84	0.00587 - 0.145
Lead	7439-92-1	2.57E-04	J	4.89E-03		µg/m³	74/84	0.000139 - 0.00124
Magnesium	7439-95-4	5.85E-02	J	4.55E-01		µg/m³	59/84	0.0396 - 0.063
Manganese	7439-96-5	1.06E-03	J	1.93E-02		µg/m³	75/84	0.000774 - 0.00884
Mercury	7439-97-6	1.40E-06	J	4.50E-05	J	µg/m³	20/66	0.0000000328 - 0.000134
Molybdenum	7439-98-7	8.24E-04	J	8.24E-04	J	µg/m³	1/84	0.000448 - 0.000727
Nickel	7440-02-0	—		—		µg/m³	0/84	0.00142624 - 0.00226831
Selenium	7782-49-2	—		—		µg/m³	0/84	0.00069275 - 0.00110175
Silver	7440-22-4	6.93E-06	J	2.04E-05	J	µg/m³	20/84	0.0000057 - 0.0000261
Sodium	7440-23-5	1.09E+00	J	1.09E+00	J	µg/m³	1/84	0.823 - 1.31
Sulfate (as SO4)	14808-79-8	—		—		mg/m³	0/0	—
Vanadium	7440-62-2	1.41E-03	J	3.06E-03	J	µg/m³	15/84	0.0012 - 0.00347
Zinc	7440-66-6	3.62E-03	J	1.95E-02		µg/m³	59/84	0.00253 - 0.00862
Radiochemicals								
Alpha, Gross	ALPHA	1.16E-03	J	2.22E-02		pCi/m³	41/84	0.0000479 - 0.00553
Beta, Gross	BETA	9.98E-04	J	1.12E-01		pCi/m³	78/84	0.000256 - 0.0863
Radium-226	RA-226	1.18E-04	J	5.28E-04	J	pCi/m³	10/84	0.000113 - 0.000788
Radium-228	RA-228	7.74E-04	J	3.95E-03		pCi/m³	12/84	0.000659 - 0.00338
Thorium-228	TH-228	3.79E-04	J	3.79E-04	J	pCi/m³	1/84	0.0000072 - 0.000453
Thorium-230	TH-230	9.71E-05	J	1.14E-03	J	pCi/m³	12/84	0.00000685 - 0.000509
Thorium-232	TH-232	2.85E-04	J	3.10E-04	J	pCi/m³	2/84	0.00000685 - 0.000276

Table A-6. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-4								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Uranium-234	U-234	4.85E-05	J	4.28E-04	J	pCi/m³	3/84	0.0000263 - 0.000907
Uranium-238	U-238	8.70E-05	J	8.70E-05	J	pCi/m³	1/84	0.000059 - 0.000802
Particulate Matter in Ambient Air								
PM_{10}	PM10	1.80E-07		3.97E-05		g/m³	84/84	0.0000000407 - 0.0000000648

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service

g/m³ – grams per cubic meter

µg/m³ – micrograms per cubic meter

mg/m³ – milligrams per cubic meter

pCi/m³ – picoCurrie per cubic meter

PM_{10} – particulate matter less than 10 microns in diameter

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table A-7 Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-5								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	2.14E-02		1.13E+00		µg/m³	66/82	0.0209 - 0.247
Arsenic	7440-38-2	1.20E-03	J	1.40E-03	J	µg/m³	3/82	0.000972 - 0.00119
Barium	7440-39-3	3.08E-02	J	3.08E-02	J	µg/m³	1/82	0.0178 - 0.0218
Beryllium	7440-41-7	5.36E-06	J	9.94E-05	J	µg/m³	21/82	0.0000043 - 0.0000219
Cadmium	7440-43-9	3.14E-05	J	2.83E-03	J	µg/m³	37/82	0.0000276 - 0.000135
Calcium	7440-70-2	4.92E-01	J	2.06E+00		µg/m³	9/82	0.46 - 0.586
Chromium, Total	7440-47-3	1.84E-02	J	1.84E-02	J	µg/m³	1/82	0.00527 - 0.00644
Cobalt	7440-48-4	—		—		µg/m³	0/82	0.00189355 - 0.00231395
Copper	7440-50-8	1.80E-03	J	5.90E-02		µg/m³	81/82	0.00148 - 0.00181
Iron	7439-89-6	2.08E-02	J	3.41E+00		µg/m³	68/82	0.00737 - 0.0855
Lead	7439-92-1	2.19E-04	J	6.93E-03		µg/m³	73/82	0.000174 - 0.00126
Magnesium	7439-95-4	6.30E-02	J	5.97E-01		µg/m³	54/82	0.0497 - 0.0608
Manganese	7439-96-5	9.96E-04	J	3.34E-02	J	µg/m³	70/82	0.000972 - 0.00849
Mercury	7439-97-6	3.70E-07	J	2.46E-05	J	µg/m³	19/66	0.0000000321 - 0.000147
Molybdenum	7439-98-7	—		—		µg/m³	0/82	0.00056295 - 0.00068793
Nickel	7440-02-0	3.30E-03	J	3.36E-03	J	µg/m³	2/82	0.00179 - 0.00219
Selenium	7782-49-2	9.96E-04	J	1.80E-03	J	µg/m³	4/82	0.00087 - 0.00106
Silver	7440-22-4	7.90E-06	J	1.27E-04	J	µg/m³	17/82	0.00000716 - 0.0000252
Sodium	7440-23-5	1.48E+00	J	2.43E+00	J	µg/m³	2/82	1.03 - 1.26
Sulfate (as SO4)	14808-79-8	—		—		mg/m³	0/0	0.00E+00
Vanadium	7440-62-2	1.67E-03	J	2.40E-02	J	µg/m³	12/82	0.00148 - 0.00361
Zinc	7440-66-6	3.30E-03	J	4.47E-02	J	µg/m³	40/82	0.00317 - 0.00737
Radiochemicals								
Alpha, Gross	ALPHA	1.58E-03	J	1.96E-02		pCi/m³	33/82	0.0000588 - 0.0049
Beta, Gross	BETA	9.74E-04	J	1.25E-01		pCi/m³	77/82	0.000224 - 0.0425
Radium-226	RA-226	2.64E-04	J	7.79E-04		pCi/m³	14/82	0.000118 - 0.0015
Radium-228	RA-228	8.15E-04	J	3.49E-03		pCi/m³	11/82	0.000654 - 0.00559
Thorium-228	TH-228	1.80E-04	J	2.90E-04	J	pCi/m³	2/82	0.00000551 - 0.000617
Thorium-230	TH-230	1.26E-04	J	2.61E-03		pCi/m³	11/82	0.0000143 - 0.000716
Thorium-232	TH-232	—		—		pCi/m³	0/82	0.00000524 - 0.00032896

Table A-7 Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-5								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Uranium-234	U-234	2.56E-03		2.56E-03		pCi/m³	1/82	0.000115 - 0.00142
Uranium-238	U-238	2.11E-03		2.11E-03		pCi/m³	1/82	0.0000973 - 0.00125
Particulate Matter in Ambient Air								
PM_{10}	PM10	2.40E-07		6.08E-05		g/m³	82/82	0.0000000512 - 0.0000000625

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service

g/m³ – grams per cubic meter

µg/m³ – micrograms per cubic meter

mg/m³ – milligrams per cubic meter

pCi/m³ – picoCurrie per cubic meter

PM_{10} – particulate matter less than 10 microns in diameter

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table A-8 Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-6								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Metals								
Aluminum	7429-90-5	2.43E-02	J	1.22E+00		µg/m³	125/149	0.0209 - 0.265
Arsenic	7440-38-2	5.27E-04	J	2.36E-03		µg/m³	19/149	0.00039 - 0.00119
Barium	7440-39-3	2.04E-02	J	2.04E-02	J	µg/m³	1/85	0.0178 - 0.0217
Beryllium	7440-41-7	5.29E-06	J	4.49E-05	J	µg/m³	21/85	0.0000043 - 0.0000354
Cadmium	7440-43-9	1.56E-05	J	3.03E-04	J	µg/m³	87/149	0.0000123 - 0.0000812
Calcium	7440-70-2	5.52E-01	J	1.12E+00	J	µg/m³	11/85	0.46 - 0.679
Chromium, Total	7440-47-3	1.48E-03	J	3.02E-03		µg/m³	25/149	0.00101 - 0.00643
Cobalt	7440-48-4	4.43E-03	J	4.43E-03	J	µg/m³	1/149	0.00101 - 0.00231
Copper	7440-50-8	2.39E-03	J	6.93E-02		µg/m³	145/149	0.00057 - 0.0111
Iron	7439-89-6	2.23E-02	J	1.18E+00		µg/m³	69/85	0.00737 - 0.127
Lead	7439-92-1	2.21E-04	J	3.85E-03		µg/m³	75/85	0.000174 - 0.0011
Magnesium	7439-95-4	6.30E-02	J	5.98E-01		µg/m³	55/85	0.0497 - 0.0606
Manganese	7439-96-5	1.11E-03	J	4.14E-02		µg/m³	135/149	0.000877 - 0.0141
Mercury	7439-97-6	1.42E-06	J	7.17E-05	J	µg/m³	20/67	0.0000000349 - 0.000172
Molybdenum	7439-98-7	—		—		µg/m³	0/85	0.00056295 - 0.00068621
Nickel	7440-02-0	6.09E-04	J	1.75E-03	J	µg/m³	40/149	0.000526 - 0.00846
Selenium	7782-49-2	1.31E-03	J	1.36E-03	J	µg/m³	2/85	0.00087 - 0.00106
Silver	7440-22-4	8.19E-06	J	2.70E-05	J	µg/m³	18/85	0.00000716 - 0.0000271
Sodium	7440-23-5	1.34E+00	J	1.34E+00	J	µg/m³	1/85	1.03 - 1.26
Sulfate (as SO4)	14808-79-8	2.21E-04	J	3.93E-03		mg/m³	55/63	0.0000211 - 0.00111
Vanadium	7440-62-2	1.49E-03	J	3.18E-03	J	µg/m³	13/85	0.00148 - 0.00461
Zinc	7440-66-6	3.54E-03	J	1.75E-02		µg/m³	35/85	0.00318 - 0.0131
Radiochemicals								
Alpha, Gross	ALPHA	5.86E-04	J	2.18E-02		pCi/m³	71/149	0.0000361 - 0.00964
Beta, Gross	BETA	8.34E-04	J	1.20E-01		pCi/m³	80/85	0.000241 - 0.0871
Radium-226	RA-226	2.51E-04	J	3.16E-03		pCi/m³	19/149	0.0000429 - 0.000792
Radium-228	RA-228	8.14E-04	J	2.20E-02		pCi/m³	19/149	0.000724 - 0.00343
Thorium-228	TH-228	7.97E-04		7.97E-04		pCi/m³	1/148	0.000018 - 0.000873
Thorium-230	TH-230	1.43E-05	J	4.19E-03		pCi/m³	32/148	0.00000552 - 0.000993
Thorium-232	TH-232	6.22E-04		6.22E-04		pCi/m³	1/148	0.0000122 - 0.000475

Table A-8 Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for AM-6								
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits
Uranium-234	U-234	1.61E-04	J	2.26E-04	J	pCi/m³	2/85	0.0000281 - 0.00146
Uranium-238	U-238	—		—		pCi/m³	0/85	0.00007656 - 0.00145747
Particulate Matter in Ambient Air								
PM_{10}	PM10	1.40E-07		1.66E-04		g/m³	149/149	0.0000000439 - 0.0000000936

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service

g/m³ – grams per cubic meter

µg/m³ – micrograms per cubic meter

mg/m³ – milligrams per cubic meter

pCi/m³ – picoCurrie per cubic meter

PM_{10} – particulate matter less than 10 microns in diameter

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table A-9. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for All Air Monitoring Stations							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
Metals							
Aluminum	µg/m³	1.49E-01	1.60E-01	2.03E+00	1.60E-01	statistics	U.S. EPA guidance
Arsenic	µg/m³	5.10E-04	5.28E-04	4.47E-03	5.28E-04	statistics	U.S. EPA guidance
Barium	µg/m³	2.05E-02	2.05E-02	3.58E-02	2.05E-02	statistics	U.S. EPA guidance
Beryllium	µg/m³	6.12E-06	6.57E-06	9.94E-05	6.57E-06	statistics	U.S. EPA guidance
Cadmium	µg/m³	4.21E-05	4.90E-05	2.83E-03	4.90E-05	statistics	U.S. EPA guidance
Chromium, Total	µg/m³	1.51E-03	1.58E-03	1.84E-02	1.58E-03	statistics	U.S. EPA guidance
Cobalt	µg/m³	1.48E-03	1.53E-03	2.01E-02	1.53E-03	statistics	U.S. EPA guidance
Copper	µg/m³	1.35E-02	1.48E-02	3.61E-01	1.48E-02	statistics	U.S. EPA guidance
Iron	µg/m³	1.85E-01	2.08E-01	3.41E+00	2.08E-01	statistics	U.S. EPA guidance
Lead	µg/m³	9.94E-04	1.06E-03	1.16E-02	1.06E-03	statistics	U.S. EPA guidance
Manganese	µg/m³	6.09E-03	6.45E-03	6.76E-02	6.45E-03	statistics	U.S. EPA guidance
Mercury	µg/m³	8.09E-06	1.10E-05	6.67E-04	1.10E-05	statistics	U.S. EPA guidance
Molybdenum	µg/m³	6.38E-04	6.45E-04	2.60E-03	6.45E-04	statistics	U.S. EPA guidance
Nickel	µg/m³	8.47E-04	9.17E-04	2.72E-02	9.17E-04	statistics	U.S. EPA guidance
Selenium	µg/m³	1.00E-03	1.00E-03	1.80E-03	1.00E-03	statistics	U.S. EPA guidance
Silver	µg/m³	9.14E-06	9.69E-06	1.27E-04	9.69E-06	statistics	U.S. EPA guidance
Sulfate (as SO4)	mg/m³	8.63E-04	9.56E-04	5.46E-03	9.56E-04	statistics	U.S. EPA guidance
Vanadium	µg/m³	1.33E-03	1.43E-03	2.40E-02	1.43E-03	statistics	U.S. EPA guidance
Zinc	µg/m³	4.44E-03	4.73E-03	4.47E-02	4.73E-03	statistics	U.S. EPA guidance
Radiochemicals							
Alpha, Gross	pCi/m³	3.06E-03	3.30E-03	4.68E-02	3.30E-03	statistics	U.S. EPA guidance
Beta, Gross	pCi/m³	1.82E-02	1.95E-02	1.25E-01	1.95E-02	statistics	U.S. EPA guidance
Radium-226	pCi/m³	1.79E-04	1.94E-04	3.16E-03	1.94E-04	statistics	U.S. EPA guidance
Radium-228	pCi/m³	1.07E-03	1.14E-03	2.20E-02	1.14E-03	statistics	U.S. EPA guidance
Thorium-228	pCi/m³	1.68E-04	1.75E-04	2.63E-03	1.75E-04	statistics	U.S. EPA guidance
Thorium-230	pCi/m³	9.35E-05	1.23E-04	1.12E-02	1.23E-04	statistics	U.S. EPA guidance
Thorium-232	pCi/m³	1.54E-04	1.59E-04	2.04E-03	1.59E-04	statistics	U.S. EPA guidance
Uranium-234	pCi/m³	7.33E-05	9.81E-05	6.51E-03	9.81E-05	statistics	U.S. EPA guidance
Uranium-238	pCi/m³	9.76E-05	1.11E-04	2.98E-03	1.11E-04	statistics	U.S. EPA guidance
Particulate Matter in Ambient Air							

Table A-9. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for All Air Monitoring Stations							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
PM_{10}	g/m³	1.08E-05	1.16E-05	1.66E-04	1.16E-05	statistics	U.S. EPA guidance

Note:

* the maximum positive detection was used as the exposure point concentration when the 95% UCL exceeded the maximum positive detection

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit
U.S. EPA – United States Environmental Protection Agency

Table A-10. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-1							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
Metals							
Aluminum	µg/m³	1.49E-01	1.75E-01	1.54E+00	1.75E-01	statistics	U.S. EPA guidance
Arsenic	µg/m³	5.55E-04	5.71E-04	1.48E-03	5.71E-04	statistics	U.S. EPA guidance
Barium	µg/m³	too few positive detections		3.58E-02	3.58E-02	maximum	U.S. EPA guidance
Beryllium	µg/m³	6.57E-06	7.27E-06	3.01E-05	7.27E-06	statistics	U.S. EPA guidance
Cadmium	µg/m³	3.88E-05	4.50E-05	4.29E-04	4.50E-05	statistics	U.S. EPA guidance
Chromium, Total	µg/m³	1.63E-03	1.71E-03	2.59E-03	1.71E-03	statistics	U.S. EPA guidance
Cobalt	µg/m³	2.49E-03	2.71E-03	2.01E-02	2.71E-03	statistics	U.S. EPA guidance
Copper	µg/m³	1.36E-02	1.47E-02	4.53E-02	1.47E-02	statistics	U.S. EPA guidance
Iron	µg/m³	1.37E-01	1.56E-01	5.48E-01	1.56E-01	statistics	U.S. EPA guidance
Lead	µg/m³	1.08E-03	1.36E-03	1.16E-02	1.36E-03	statistics	U.S. EPA guidance
Manganese	µg/m³	6.24E-03	7.16E-03	6.76E-02	7.16E-03	statistics	U.S. EPA guidance
Mercury	µg/m³	9.30E-06	1.36E-05	1.53E-04	1.36E-05	statistics	U.S. EPA guidance
Molybdenum	µg/m³	6.60E-04	7.03E-04	2.60E-03	7.03E-04	statistics	U.S. EPA guidance
Nickel	µg/m³	8.67E-04	9.33E-04	3.92E-03	9.33E-04	statistics	U.S. EPA guidance
Selenium	µg/m³	too few positive detections		1.02E-03	1.02E-03	maximum	U.S. EPA guidance
Silver	µg/m³	1.12E-05	1.28E-05	6.63E-05	1.28E-05	statistics	U.S. EPA guidance
Sulfate (As So4)	mg/m³	8.71E-04	1.28E-03	5.46E-03	1.28E-03	statistics	U.S. EPA guidance
Vanadium	µg/m³	1.75E-03	1.76E-03	2.32E-03	1.76E-03	statistics	U.S. EPA guidance
Zinc	µg/m³	5.22E-03	6.20E-03	4.25E-02	6.20E-03	statistics	U.S. EPA guidance
Radiochemicals							
Alpha, Gross	pCi/m³	3.25E-03	3.65E-03	2.06E-02	3.65E-03	statistics	U.S. EPA guidance
Beta, Gross	pCi/m³	1.92E-02	2.33E-02	1.25E-01	2.33E-02	statistics	U.S. EPA guidance
Radium-226	pCi/m³	2.11E-04	2.29E-04	9.23E-04	2.29E-04	statistics	U.S. EPA guidance
Radium-228	pCi/m³	1.14E-03	1.20E-03	4.27E-03	1.20E-03	statistics	U.S. EPA guidance
Thorium-228	pCi/m³	1.63E-04	1.64E-04	2.44E-04	1.64E-04	statistics	U.S. EPA guidance
Thorium-230	pCi/m³	1.33E-04	1.53E-04	1.58E-03	1.53E-04	statistics	U.S. EPA guidance
Thorium-232	pCi/m³	too few positive detections		2.12E-04	2.12E-04	maximum	U.S. EPA guidance
Uranium-234	pCi/m³	not detected, exposure point concentration for all stations used			9.81E-05	statistics	Professional Judgement
Uranium-238	pCi/m³	too few positive detections		4.54E-04	4.54E-04	maximum	U.S. EPA guidance
Particulate Matter in Ambient Air							

Table A-10. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-1							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
PM_{10}	g/m³	1.06E-05	1.38E-05	8.68E-05	1.38E-05	statistics	U.S. EPA guidance

Note:

* the maximum positive detection was used as the exposure point concentration when the 95% UCL exceeded the maximum positive detection

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit
U.S. EPA – United States Environmental Protection Agency

Table A-11. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-2							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
Metals							
Aluminum	µg/m³	1.00E-01	1.14E-01	4.10E-01	1.14E-01	statistics	U.S. EPA guidance
Arsenic	µg/m³	not detected, exposure point concentration for all stations used			5.28E-04	statistics	Professional Judgement
Barium	µg/m³	not detected, exposure point concentration for all stations used			2.05E-02	statistics	Professional Judgement
Beryllium	µg/m³	6.92E-06	7.90E-06	3.18E-05	7.90E-06	statistics	U.S. EPA guidance
Cadmium	µg/m³	4.05E-05	4.44E-05	1.53E-04	4.44E-05	statistics	U.S. EPA guidance
Chromium, Total	µg/m³	not detected, exposure point concentration for all stations used			1.58E-03	statistics	Professional Judgement
Cobalt	µg/m³	too few positive detections		3.75E-03	3.75E-03	maximum	U.S. EPA guidance
Copper	µg/m³	8.25E-03	9.01E-03	2.91E-02	9.01E-03	statistics	U.S. EPA guidance
Iron	µg/m³	1.15E-01	1.31E-01	3.94E-01	1.31E-01	statistics	U.S. EPA guidance
Lead	µg/m³	8.43E-04	9.75E-04	3.89E-03	9.75E-04	statistics	U.S. EPA guidance
Manganese	µg/m³	4.89E-03	5.62E-03	2.13E-02	5.62E-03	statistics	U.S. EPA guidance
Mercury	µg/m³	1.57E-05	3.66E-05	6.67E-04	3.66E-05	statistics	U.S. EPA guidance
Molybdenum	µg/m³	6.60E-04	6.65E-04	9.03E-04	6.65E-04	statistics	U.S. EPA guidance
Nickel	µg/m³	too few positive detections		2.66E-03	2.66E-03	maximum	U.S. EPA guidance
Selenium	µg/m³	not detected, exposure point concentration for all stations used			1.00E-03	statistics	Professional Judgement
Silver	µg/m³	1.06E-05	1.18E-05	5.10E-05	1.18E-05	statistics	U.S. EPA guidance
Sulfate (as SO4)	mg/m³	not detected, exposure point concentration for all stations used			9.56E-04	statistics	Professional Judgement
Vanadium	µg/m³	1.69E-03	1.71E-03	2.17E-03	1.71E-03	statistics	U.S. EPA guidance
Zinc	µg/m³	4.46E-03	5.14E-03	3.77E-02	5.14E-03	statistics	U.S. EPA guidance
Radiochemicals							
Alpha, Gross	pCi/m³	2.87E-03	3.53E-03	2.34E-02	3.53E-03	statistics	U.S. EPA guidance
Beta, Gross	pCi/m³	1.71E-02	2.06E-02	1.18E-01	2.06E-02	statistics	U.S. EPA guidance
Radium-226	pCi/m³	2.16E-04	2.32E-04	6.09E-04	2.32E-04	statistics	U.S. EPA guidance
Radium-228	pCi/m³	1.13E-03	1.22E-03	4.48E-03	1.22E-03	statistics	U.S. EPA guidance
Thorium-228	pCi/m³	not detected, exposure point concentration for all stations used			1.75E-04	statistics	Professional Judgement
Thorium-230	pCi/m³	1.49E-04	1.57E-04	4.25E-04	1.57E-04	statistics	U.S. EPA guidance
Thorium-232	pCi/m³	not detected, exposure point concentration for all stations used			1.59E-04	statistics	Professional Judgement
Uranium-234	pCi/m³	too few positive detections		4.68E-04	4.68E-04	maximum	U.S. EPA guidance
Uranium-238	pCi/m³	not detected, exposure point concentration for all stations used			1.11E-04	statistics	Professional Judgement
Particulate Matter in Ambient Air							

Table A-11. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-2							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
PM_{10}	g/m³	7.50E-06	1.00E-05	2.99E-05	1.00E-05	statistics	U.S. EPA guidance

Note:

* the maximum positive detection was used as the exposure point concentration when the 95% UCL exceeded the maximum positive detection

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit
U.S. EPA – United States Environmental Protection Agency

Table A-12. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-3							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
Metals							
Aluminum	µg/m³	1.37E-01	1.65E-01	2.03E+00	1.65E-01	statistics	U.S. EPA guidance
Arsenic	µg/m³	5.13E-04	5.62E-04	4.47E-03	5.62E-04	statistics	U.S. EPA guidance
Barium	µg/m³	not detected, exposure point concentration for all stations used			2.05E-02	statistics	Professional Judgement
Beryllium	µg/m³	5.18E-06	5.65E-06	2.22E-05	5.65E-06	statistics	U.S. EPA guidance
Cadmium	µg/m³	3.98E-05	4.73E-05	5.09E-04	4.73E-05	statistics	U.S. EPA guidance
Chromium, Total	µg/m³	1.50E-03	1.62E-03	2.81E-03	1.62E-03	statistics	U.S. EPA guidance
Cobalt	µg/m³	1.45E-03	1.46E-03	2.39E-03	1.46E-03	statistics	U.S. EPA guidance
Copper	µg/m³	—	2.78E-02	3.61E-01	2.78E-02	statistics	U.S. EPA guidance
Iron	µg/m³	1.43E-01	1.70E-01	1.08E+00	1.70E-01	statistics	U.S. EPA guidance
Lead	µg/m³	1.02E-03	1.15E-03	3.96E-03	1.15E-03	statistics	U.S. EPA guidance
Manganese	µg/m³	5.42E-03	6.10E-03	4.45E-02	6.10E-03	statistics	U.S. EPA guidance
Mercury	µg/m³	5.64E-06	7.25E-06	2.57E-05	7.25E-06	statistics	U.S. EPA guidance
Molybdenum	µg/m³	not detected, exposure point concentration for all stations used			6.45E-04	statistics	Professional Judgement
Nickel	µg/m³	9.74E-04	1.27E-03	2.72E-02	1.27E-03	statistics	U.S. EPA guidance
Selenium	µg/m³	not detected, exposure point concentration for all stations used			1.00E-03	statistics	Professional Judgement
Silver	µg/m³	9.57E-06	1.02E-05	3.33E-05	1.02E-05	statistics	U.S. EPA guidance
Sulfate (as SO4)	mg/m³	8.54E-04	1.24E-03	4.26E-03	1.24E-03	statistics	U.S. EPA guidance
Vanadium	µg/m³	1.22E-03	1.35E-03	2.06E-03	1.35E-03	statistics	U.S. EPA guidance
Zinc	µg/m³	3.72E-03	4.08E-03	1.24E-02	4.08E-03	statistics	U.S. EPA guidance
Radiochemicals							
Alpha, Gross	pCi/m³	3.42E-03	4.09E-03	4.68E-02	4.09E-03	statistics	U.S. EPA guidance
Beta, Gross	pCi/m³	1.87E-02	2.29E-02	1.15E-01	2.29E-02	statistics	U.S. EPA guidance
Radium-226	pCi/m³	1.80E-04	2.10E-04	1.34E-03	2.10E-04	statistics	U.S. EPA guidance
Radium-228	pCi/m³	1.49E-03	1.64E-03	1.21E-02	1.64E-03	statistics	U.S. EPA guidance
Thorium-228	pCi/m³	1.87E-04	2.18E-04	2.63E-03	2.18E-04	statistics	U.S. EPA guidance
Thorium-230	pCi/m³	1.88E-04	3.10E-04	1.12E-02	3.10E-04	statistics	U.S. EPA guidance
Thorium-232	pCi/m³	too few positive detections		2.04E-03	2.04E-03	maximum	U.S. EPA guidance
Uranium-234	pCi/m³	too few positive detections		6.51E-03	6.51E-03	maximum	U.S. EPA guidance
Uranium-238	pCi/m³	too few positive detections		2.98E-03	2.98E-03	maximum	U.S. EPA guidance
Particulate Matter in Ambient Air							

Table A-12. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-3							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
PM_{10}	g/m³	9.93E-06	1.18E-05	1.38E-04	1.18E-05	statistics	U.S. EPA guidance

Note:

* the maximum positive detection was used as the exposure point concentration when the 95% UCL exceeded the maximum positive detection

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit
U.S. EPA – United States Environmental Protection Agency

Table A-13. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-4							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
Metals							
Aluminum	µg/m³	1.39E-01	1.57E-01	4.51E-01	1.57E-01	statistics	U.S. EPA guidance
Arsenic	µg/m³	too few positive detections		8.80E-04	8.80E-04	maximum	U.S. EPA guidance
Barium	µg/m³	too few positive detections		2.15E-02	2.15E-02	maximum	U.S. EPA guidance
Beryllium	µg/m³	5.84E-06	6.49E-06	1.90E-05	6.49E-06	statistics	U.S. EPA guidance
Cadmium	µg/m³	4.22E-05	4.61E-05	1.73E-04	4.61E-05	statistics	U.S. EPA guidance
Chromium, Total	µg/m³	not detected, exposure point concentration for all stations used			1.58E-03	statistics	Professional Judgement
Cobalt	µg/m³	not detected, exposure point concentration for all stations used			1.53E-03	statistics	Professional Judgement
Copper	µg/m³	1.36E-02	1.55E-02	6.26E-02	1.55E-02	statistics	U.S. EPA guidance
Iron	µg/m³	2.97E-01	3.99E-01	3.23E+00	3.99E-01	statistics	U.S. EPA guidance
Lead	µg/m³	1.10E-03	1.27E-03	4.89E-03	1.27E-03	statistics	U.S. EPA guidance
Manganese	µg/m³	5.34E-03	6.07E-03	1.93E-02	6.07E-03	statistics	U.S. EPA guidance
Mercury	µg/m³	7.35E-06	9.63E-06	4.50E-05	9.63E-06	statistics	U.S. EPA guidance
Molybdenum	µg/m³	too few positive detections		8.24E-04	8.24E-04	maximum	U.S. EPA guidance
Nickel	µg/m³	not detected, exposure point concentration for all stations used			9.17E-04	statistics	Professional Judgement
Selenium	µg/m³	not detected, exposure point concentration for all stations used			1.00E-03	statistics	Professional Judgement
Silver	µg/m³	8.48E-06	9.09E-06	2.04E-05	9.09E-06	statistics	U.S. EPA guidance
Sulfate (as SO4)	mg/m³	not detected, exposure point concentration for all stations used			9.56E-04	statistics	Professional Judgement
Vanadium	µg/m³	1.56E-03	1.63E-03	3.06E-03	1.63E-03	statistics	U.S. EPA guidance
Zinc	µg/m³	5.98E-03	6.58E-03	1.95E-02	6.58E-03	statistics	U.S. EPA guidance
Radiochemicals							
Alpha, Gross	pCi/m³	3.22E-03	3.85E-03	2.22E-02	3.85E-03	statistics	U.S. EPA guidance
Beta, Gross	pCi/m³	1.82E-02	2.21E-02	1.12E-01	2.21E-02	statistics	U.S. EPA guidance
Radium-226	pCi/m³	1.62E-04	1.86E-04	5.28E-04	1.86E-04	statistics	U.S. EPA guidance
Radium-228	pCi/m³	9.95E-04	1.12E-03	3.95E-03	1.12E-03	statistics	U.S. EPA guidance
Thorium-228	pCi/m³	too few positive detections		3.79E-04	3.79E-04	maximum	U.S. EPA guidance
Thorium-230	pCi/m³	1.29E-04	1.55E-04	1.14E-03	1.55E-04	statistics	U.S. EPA guidance
Thorium-232	pCi/m³	too few positive detections		3.10E-04	3.10E-04	maximum	U.S. EPA guidance
Uranium-234	pCi/m³	6.18E-05	7.80E-05	4.28E-04	7.80E-05	statistics	U.S. EPA guidance
Uranium-238	pCi/m³	too few positive detections		8.70E-05	8.70E-05	maximum	U.S. EPA guidance
Particulate Matter in Ambient Air							

Table A-13. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-4							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
PM_{10}	g/m³	—	1.29E-05	3.97E-05	1.29E-05	statistics	U.S. EPA guidance

Note:

* the maximum positive detection was used as the exposure point concentration when the 95% UCL exceeded the maximum positive detection

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit
U.S. EPA – United States Environmental Protection Agency

Table A-14. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-5							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
Metals							
Aluminum	µg/m³	1.33E-01	1.62E-01	1.13E+00	1.62E-01	statistics	U.S. EPA guidance
Arsenic	µg/m³	1.21E-03	1.21E-03	1.40E-03	1.21E-03	statistics	U.S. EPA guidance
Barium	µg/m³	too few positive detections		3.08E-02	3.08E-02	maximum	U.S. EPA guidance
Beryllium	µg/m³	7.50E-06	9.50E-06	9.94E-05	9.50E-06	statistics	U.S. EPA guidance
Cadmium	µg/m³	7.33E-05	1.30E-04	2.83E-03	1.30E-04	statistics	U.S. EPA guidance
Chromium, Total	µg/m³	too few positive detections		1.84E-02	1.84E-02	maximum	U.S. EPA guidance
Cobalt	µg/m³	not detected, exposure point concentration for all stations used			1.53E-03	statistics	Professional Judgement
Copper	µg/m³	1.12E-02	1.28E-02	5.90E-02	1.28E-02	statistics	U.S. EPA guidance
Iron	µg/m³	2.31E-01	3.23E-01	3.41E+00	3.23E-01	statistics	U.S. EPA guidance
Lead	µg/m³	1.01E-03	1.19E-03	6.93E-03	1.19E-03	statistics	U.S. EPA guidance
Manganese	µg/m³	5.19E-03	6.16E-03	3.34E-02	6.16E-03	statistics	U.S. EPA guidance
Mercury	µg/m³	5.66E-06	7.47E-06	2.46E-05	7.47E-06	statistics	U.S. EPA guidance
Molybdenum	µg/m³	not detected, exposure point concentration for all stations used			6.45E-04	statistics	Professional Judgement
Nickel	µg/m³	too few positive detections		3.36E-03	3.36E-03	maximum	U.S. EPA guidance
Selenium	µg/m³	1.01E-03	1.03E-03	1.80E-03	1.03E-03	statistics	U.S. EPA guidance
Silver	µg/m³	1.00E-05	1.25E-05	1.27E-04	1.25E-05	statistics	U.S. EPA guidance
Sulfate (as SO4)	mg/m³	not detected, exposure point concentration for all stations used			9.56E-04	statistics	Professional Judgement
Vanadium	µg/m³	1.99E-03	2.46E-03	2.40E-02	2.46E-03	statistics	U.S. EPA guidance
Zinc	µg/m³	4.89E-03	5.78E-03	4.47E-02	5.78E-03	statistics	U.S. EPA guidance
Radiochemicals							
Alpha, Gross	pCi/m³	3.26E-03	3.88E-03	1.96E-02	3.88E-03	statistics	U.S. EPA guidance
Beta, Gross	pCi/m³	1.82E-02	2.25E-02	1.25E-01	2.25E-02	statistics	U.S. EPA guidance
Radium-226	pCi/m³	2.96E-04	3.15E-04	7.79E-04	3.15E-04	statistics	U.S. EPA guidance
Radium-228	pCi/m³	9.70E-04	1.05E-03	3.49E-03	1.05E-03	statistics	U.S. EPA guidance
Thorium-228	pCi/m³	too few positive detections		2.90E-04	2.90E-04	maximum	U.S. EPA guidance
Thorium-230	pCi/m³	1.69E-04	2.22E-04	2.61E-03	2.22E-04	statistics	U.S. EPA guidance
Thorium-232	pCi/m³	not detected, exposure point concentration for all stations used			1.59E-04	statistics	Professional Judgement
Uranium-234	pCi/m³	too few positive detections		2.56E-03	2.56E-03	maximum	U.S. EPA guidance
Uranium-238	pCi/m³	too few positive detections		2.11E-03	2.11E-03	maximum	U.S. EPA guidance
Particulate Matter in Ambient Air							

Table A-14. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-5							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
PM_{10}	g/m³		1.15E-05	6.08E-05	1.15E-05	statistics	U.S. EPA guidance

Note:

* the maximum positive detection was used as the exposure point concentration when the 95% UCL exceeded the maximum positive detection

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit
U.S. EPA – United States Environmental Protection Agency

Table A-15. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-6							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
Metals							
Aluminum	µg/m³	2.06E-01	2.33E-01	1.22E+00	2.33E-01	statistics	U.S. EPA guidance
Arsenic	µg/m³	6.10E-04	6.48E-04	2.36E-03	6.48E-04	statistics	U.S. EPA guidance
Barium	µg/m³	too few positive detections		2.04E-02	2.04E-02	maximum	U.S. EPA guidance
Beryllium	µg/m³	7.55E-06	8.74E-06	4.49E-05	8.74E-06	statistics	U.S. EPA guidance
Cadmium	µg/m³	4.03E-05	4.49E-05	3.03E-04	4.49E-05	statistics	U.S. EPA guidance
Chromium, Total	µg/m³	1.74E-03	1.83E-03	3.02E-03	1.83E-03	statistics	U.S. EPA guidance
Cobalt	µg/m³	too few positive detections		4.43E-03	4.43E-03	maximum	U.S. EPA guidance
Copper	µg/m³	1.41E-02	1.53E-02	6.93E-02	1.53E-02	statistics	U.S. EPA guidance
Iron	µg/m³	1.91E-01	2.33E-01	1.18E+00	2.33E-01	statistics	U.S. EPA guidance
Lead	µg/m³	9.18E-04	1.03E-03	3.85E-03	1.03E-03	statistics	U.S. EPA guidance
Manganese	µg/m³	8.27E-03	1.09E-02	4.14E-02	1.09E-02	statistics	U.S. EPA guidance
Mercury	µg/m³	8.53E-06	1.14E-05	7.17E-05	1.14E-05	statistics	U.S. EPA guidance
Molybdenum	µg/m³	not detected, exposure point concentration for all stations used			6.45E-04	statistics	Professional Judgement
Nickel	µg/m³	7.98E-04	8.47E-04	1.75E-03	8.47E-04	statistics	U.S. EPA guidance
Selenium	µg/m³	too few positive detections		1.36E-03	1.36E-03	maximum	U.S. EPA guidance
Silver	µg/m³	9.12E-06	9.63E-06	2.70E-05	9.63E-06	statistics	U.S. EPA guidance
Sulfate (as SO4)	mg/m³	8.64E-04	1.21E-03	3.93E-03	1.21E-03	statistics	U.S. EPA guidance
Vanadium	µg/m³	1.58E-03	1.63E-03	3.18E-03	1.63E-03	statistics	U.S. EPA guidance
Zinc	µg/m³	4.52E-03	4.91E-03	1.75E-02	4.91E-03	statistics	U.S. EPA guidance
Radiochemicals							
Alpha, Gross	pCi/m³	2.91E-03	3.33E-03	2.18E-02	3.33E-03	statistics	U.S. EPA guidance
Beta, Gross	pCi/m³	1.75E-02	2.12E-02	1.20E-01	2.12E-02	statistics	U.S. EPA guidance
Radium-226	pCi/m³	3.00E-04	3.37E-04	3.16E-03	3.37E-04	statistics	U.S. EPA guidance
Radium-228	pCi/m³	1.16E-03	1.44E-03	2.20E-02	1.44E-03	statistics	U.S. EPA guidance
Thorium-228	pCi/m³	too few positive detections		7.97E-04	7.97E-04	maximum	U.S. EPA guidance
Thorium-230	pCi/m³	1.12E-04	1.63E-04	4.19E-03	1.63E-04	statistics	U.S. EPA guidance
Thorium-232	pCi/m³	too few positive detections		6.22E-04	6.22E-04	maximum	U.S. EPA guidance
Uranium-234	pCi/m³	too few positive detections		2.26E-04	2.26E-04	maximum	U.S. EPA guidance
Uranium-238	pCi/m³	not detected, exposure point concentration for all stations used			1.11E-04	statistics	Professional Judgement
Particulate Matter in Ambient Air							

Table A-15. Exposure Point Concentration Summary 24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-6							
					Exposure Point Concentration		
Chemical	Units	Mean of Detected Values	95% UCL	Maximum Concentration	Value	Basis	Rationale*
PM_{10}	g/m³		1.60E-05	1.66E-04	1.60E-05	statistics	U.S. EPA guidance

Note:

* the maximum positive detection was used as the exposure point concentration when the 95% UCL exceeded the maximum positive detection

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit
U.S. EPA – United States Environmental Protection Agency

Table A-16. Statistical Summary of Calculation of Exposure Concentrations
24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for All Air Monitoring Stations

Chemical	Units	Frequency of Detections	Minimum Detected Value	Maximum Detected Value	Kaplan-Meier Method Mean	Kaplan-Meier Method Standard Error	Minimum Non-Detected Value	Maximum Non-Detected Value	ProUCL UCL Recommendation	ProUCL Recommended UCL	Final UCL	Basis for Final UCL
Metals												
Aluminum	µg/m³	585/704	2.14E-02	2.03E+00	1.49E-01	6.02E-03	2.01E-02	2.65E-01	95% KM (BCA) UCL	1.60E-01	1.60E-01	Statistics
Arsenic	µg/m³	51/704	4.41E-04	4.47E-03	5.10E-04	1.07E-05	3.76E-04	1.29E-03	95% KM (t) UCL	5.28E-04	5.28E-04	Statistics
Barium	µg/m³	4/506	2.04E-02	3.58E-02	2.05E-02	4.23E-05	1.19E-02	2.37E-02	95% KM (t) UCL	2.05E-02	2.05E-02	Statistics
Beryllium	µg/m³	129/506	4.14E-06	9.94E-05	6.12E-06	2.76E-07	2.87E-06	3.54E-05	95% KM (t) UCL	6.57E-06	6.57E-06	Statistics
Cadmium	µg/m³	381/704	1.51E-05	2.83E-03	4.21E-05	4.19E-06	1.37E-05	1.35E-04	95% KM (t) UCL	4.90E-05	4.90E-05	Statistics
Chromium, Total	µg/m³	76/704	1.08E-03	1.84E-02	1.51E-03	4.60E-05	1.01E-03	7.91E-03	95% KM (t) UCL	1.58E-03	1.58E-03	Statistics
Cobalt	µg/m³	9/704	1.43E-03	2.01E-02	1.48E-03	2.92E-05	9.72E-04	2.52E-03	95% KM (t) UCL	1.53E-03	1.53E-03	Statistics
Copper	µg/m³	693/704	1.78E-03	3.61E-01	1.35E-02	6.00E-04	1.62E-03	1.11E-02	95% KM (BCA) UCL	1.48E-02	1.48E-02	Statistics
Iron	µg/m³	412/506	1.93E-02	3.41E+00	1.85E-01	1.30E-02	1.10E-02	1.45E-01	95% KM (BCA) UCL	2.08E-01	2.08E-01	Statistics
Lead	µg/m³	444/506	2.00E-04	1.16E-02	9.94E-04	3.97E-05	1.96E-04	1.26E-03	95% KM (BCA) UCL	1.06E-03	1.06E-03	Statistics
Manganese	µg/m³	617/704	9.96E-04	6.76E-02	6.09E-03	2.12E-04	9.72E-04	1.41E-02	95% KM (BCA) UCL	6.45E-03	6.45E-03	Statistics
Mercury	µg/m³	115/400	3.70E-07	6.67E-04	8.09E-06	1.78E-06	1.70E-07	1.72E-04	95% KM (t) UCL	1.10E-05	1.10E-05	Statistics
Molybdenum	µg/m³	11/506	6.33E-04	2.60E-03	6.38E-04	4.15E-06	3.76E-04	7.63E-04	95% KM (t) UCL	6.45E-04	6.45E-04	Statistics
Nickel	µg/m³	118/704	6.09E-04	2.72E-02	8.47E-04	4.24E-05	5.07E-04	8.46E-03	95% KM (t) UCL	9.17E-04	9.17E-04	Statistics
Selenium	µg/m³	7/506	9.96E-04	1.80E-03	1.00E-03	2.13E-06	5.81E-04	1.16E-03	95% KM (t) UCL	1.00E-03	1.00E-03	Statistics
Silver	µg/m³	129/506	6.93E-06	1.27E-04	9.14E-06	3.34E-07	4.87E-06	3.60E-05	95% KM (t) UCL	9.69E-06	9.69E-06	Statistics
Sulfate (as SO4)	mg/m³	169/193	2.20E-04	5.46E-03	8.63E-04	5.02E-05	2.76E-04	1.85E-03	95% KM (BCA) UCL	9.56E-04	9.56E-04	Statistics
Vanadium	µg/m³	65/506	1.06E-03	2.40E-02	1.33E-03	6.55E-05	1.01E-03	4.61E-03	95% KM (t) UCL	1.43E-03	1.43E-03	Statistics
Zinc	µg/m³	236/506	2.50E-03	4.47E-02	4.44E-03	1.77E-04	2.13E-03	1.31E-02	95% KM (t) UCL	4.73E-03	4.73E-03	Statistics
Radiochemicals												
Alpha, Gross	pCi/m³	332/704	5.86E-04	4.68E-02	3.06E-03	1.43E-04	3.61E-05	9.64E-03	95% KM (t) UCL	3.30E-03	3.30E-03	Statistics
Beta, Gross	pCi/m³	474/506	8.34E-04	1.25E-01	1.82E-02	8.69E-04	2.13E-03	8.71E-02	95% KM (BCA) UCL	1.95E-02	1.95E-02	Statistics
Radium-226	pCi/m³	95/704	9.76E-05	3.16E-03	1.79E-04	8.87E-06	2.96E-05	1.50E-03	95% KM (t) UCL	1.94E-04	1.94E-04	Statistics
Radium-228	pCi/m³	115/704	7.74E-04	2.20E-02	1.07E-03	4.33E-05	5.26E-04	5.59E-03	95% KM (t) UCL	1.14E-03	1.14E-03	Statistics
Thorium-228	pCi/m³	12/703	1.62E-04	2.63E-03	1.68E-04	3.94E-06	5.51E-06	1.24E-03	95% KM (t) UCL	1.75E-04	1.75E-04	Statistics
Thorium-230	pCi/m³	131/703	1.43E-05	1.12E-02	9.35E-05	1.81E-05	5.17E-06	9.93E-04	95% KM (t) UCL	1.23E-04	1.23E-04	Statistics
Thorium-232	pCi/m³	7/703	1.49E-04	2.04E-03	1.54E-04	3.11E-06	5.24E-06	4.75E-04	95% KM (t) UCL	1.59E-04	1.59E-04	Statistics
Uranium-234	pCi/m³	8/506	4.85E-05	6.51E-03	7.33E-05	1.50E-05	2.81E-05	1.46E-03	95% KM (t) UCL	9.81E-05	9.81E-05	Statistics
Uranium-238	pCi/m³	4/506	8.70E-05	2.98E-03	9.76E-05	8.10E-06	2.70E-05	1.46E-03	95% KM (t) UCL	1.11E-04	1.11E-04	Statistics
Particulate Matter in Ambient Air												
PM_{10}	g/m³	698/704	1.40E-07	1.66E-04	1.08E-05	4.17E-07	5.00E-08	7.00E-08	95% KM (BCA) UCL	1.16E-05	1.16E-05	Statistics

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit

Table A-17. Statistical Summary of Calculation of Exposure Concentrations
24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-1

Chemical	Units	Frequency of Detections	Minimum Detected Value	Maximum Detected Value	Kaplan-Meier Method Mean	Kaplan-Meier Method Standard Error	Minimum Non-Detected Value	Maximum Non-Detected Value	ProUCL UCL Recommendation	ProUCL Recommended UCL	Final UCL	Basis for Final UCL
Metals												
Aluminum	µg/m³	128/151	2.54E-02	1.54E+00	1.49E-01	1.21E-02	2.01E-02	2.55E-01	95% KM (BCA) UCL	1.75E-01	1.75E-01	Statistics
Arsenic	µg/m³	12/151	5.32E-04	1.48E-03	5.55E-04	9.68E-06	4.32E-04	1.17E-03	95% KM (t) UCL	5.71E-04	5.71E-04	Statistics
Barium	µg/m³	1/85	3.58E-02	3.58E-02	Too few positive results to run statistics, default to the maximum detected value						3.58E-02	Maximum
Beryllium	µg/m³	27/85	4.88E-06	3.01E-05	6.57E-06	4.20E-07	4.23E-06	1.44E-05	95% KM (t) UCL	7.27E-06	7.27E-06	Statistics
Cadmium	µg/m³	91/151	1.51E-05	4.29E-04	3.88E-05	3.27E-06	1.37E-05	7.86E-05	95% KM (BCA) UCL	4.50E-05	4.50E-05	Statistics
Chromium, Total	µg/m³	25/151	1.37E-03	2.59E-03	1.63E-03	4.90E-05	1.13E-03	6.32E-03	95% KM (t) UCL	1.71E-03	1.71E-03	Statistics
Cobalt	µg/m³	4/151	2.35E-03	2.01E-02	2.49E-03	1.36E-04	1.12E-03	2.27E-03	95% KM (t) UCL	2.71E-03	2.71E-03	Statistics
Copper	µg/m³	148/151	1.82E-03	4.53E-02	1.36E-02	6.23E-04	1.75E-03	8.09E-03	95% KM (BCA) UCL	1.47E-02	1.47E-02	Statistics
Iron	µg/m³	69/85	2.63E-02	5.48E-01	1.37E-01	1.11E-02	1.10E-02	8.61E-02	95% KM (t) UCL	1.56E-01	1.56E-01	Statistics
Lead	µg/m³	74/85	2.47E-04	1.16E-02	1.08E-03	1.47E-04	2.03E-04	9.58E-04	95% KM (BCA) UCL	1.36E-03	1.36E-03	Statistics
Manganese	µg/m³	133/151	1.18E-03	6.76E-02	6.24E-03	5.03E-04	1.06E-03	8.60E-03	95% KM (BCA) UCL	7.16E-03	7.16E-03	Statistics
Mercury	µg/m³	20/67	2.86E-06	1.53E-04	9.30E-06	2.56E-06	1.80E-07	1.28E-04	95% KM (t) UCL	1.36E-05	1.36E-05	Statistics
Molybdenum	µg/m³	5/85	6.33E-04	2.60E-03	6.60E-04	2.58E-05	5.41E-04	6.75E-04	95% KM (t) UCL	7.03E-04	7.03E-04	Statistics
Nickel	µg/m³	42/151	6.72E-04	3.92E-03	8.67E-04	3.96E-05	5.90E-04	2.15E-03	95% KM (t) UCL	9.33E-04	9.33E-04	Statistics
Selenium	µg/m³	1/85	1.02E-03	1.02E-03	Too few positive results to run statistics, default to the maximum detected value						1.02E-03	Maximum
Silver	µg/m³	27/85	7.94E-06	6.63E-05	1.12E-05	9.96E-07	6.97E-06	1.69E-05	95% KM (t) UCL	1.28E-05	1.28E-05	Statistics
Sulfate (As So4)	mg/m³	56/64	2.20E-04	5.46E-03	8.71E-04	9.28E-05	2.76E-04	1.85E-03	95% KM (Chebyshev) UCL	1.28E-03	1.28E-03	Statistics
Vanadium	µg/m³	10/85	1.72E-03	2.32E-03	1.75E-03	1.11E-05	1.43E-03	2.81E-03	95% KM (t) UCL	1.76E-03	1.76E-03	Statistics
Zinc	µg/m³	41/85	3.73E-03	4.25E-02	5.22E-03	5.90E-04	3.05E-03	8.44E-03	95% KM (t) UCL	6.20E-03	6.20E-03	Statistics
Radiochemicals												
Alpha, Gross	pCi/m³	80/151	9.25E-04	2.06E-02	3.25E-03	2.45E-04	5.53E-05	4.71E-03	95% KM (t) UCL	3.65E-03	3.65E-03	Statistics
Beta, Gross	pCi/m³	80/85	1.19E-03	1.25E-01	1.92E-02	2.23E-03	2.39E-03	8.01E-02	95% KM (BCA) UCL	2.33E-02	2.33E-02	Statistics
Radium-226	pCi/m³	23/151	1.60E-04	9.23E-04	2.11E-04	1.10E-05	1.09E-04	7.35E-04	95% KM (t) UCL	2.29E-04	2.29E-04	Statistics
Radium-228	pCi/m³	29/151	9.69E-04	4.27E-03	1.14E-03	3.78E-05	7.67E-04	3.41E-03	95% KM (t) UCL	1.20E-03	1.20E-03	Statistics
Thorium-228	pCi/m³	3/151	1.62E-04	2.44E-04	1.63E-04	7.74E-07	6.77E-06	5.25E-04	95% KM (t) UCL	1.64E-04	1.64E-04	Statistics
Thorium-230	pCi/m³	39/151	8.39E-05	1.58E-03	1.33E-04	1.18E-05	5.17E-06	4.16E-04	95% KM (t) UCL	1.53E-04	1.53E-04	Statistics
Thorium-232	pCi/m³	2/151	1.49E-04	2.12E-04	Too few positive results to run statistics, default to the maximum detected value						2.12E-04	Maximum
Uranium-234	pCi/m³	0/85	not detected, exposure point concentration for all stations used									
Uranium-238	pCi/m³	1/85	4.54E-04	4.54E-04	Too few positive results to run statistics, default to the maximum detected value						4.54E-04	Maximum
Particulate Matter in Ambient Air												
PM_{10}	g/m³	148/151	9.90E-07	8.68E-05	1.06E-05	7.24E-07	5.00E-08	7.00E-08	95% KM (Chebyshev) UCL	1.38E-05	1.38E-05	Statistics

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit

Table A-18. Statistical Summary of Calculation of Exposure Concentrations
24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-2

Chemical	Units	Frequency of Detections	Minimum Detected Value	Maximum Detected Value	Kaplan-Meier Method Mean	Kaplan-Meier Method Standard Error	Minimum Non-Detected Value	Maximum Non-Detected Value	ProUCL UCL Recommendation	ProUCL Recommended UCL	Final UCL	Basis for Final UCL
Metals												
Aluminum	µg/m³	65/85	2.37E-02	4.10E-01	1.00E-01	8.99E-03	2.13E-02	2.22E-01	95% KM (Percentile Bootstrap) UCL	1.14E-01	1.14E-01	Statistics
Arsenic	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Barium	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Beryllium	µg/m³	24/85	4.78E-06	3.18E-05	6.92E-06	5.92E-07	4.22E-06	2.67E-05	95% KM (t) UCL	7.90E-06	7.90E-06	Statistics
Cadmium	µg/m³	33/85	3.09E-05	1.53E-04	4.05E-05	2.32E-06	2.71E-05	7.92E-05	95% KM (t) UCL	4.44E-05	4.44E-05	Statistics
Chromium, Total	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Cobalt	µg/m³	1/85	3.75E-03	3.75E-03	Too few positive results to run statistics, default to the maximum detected value						3.75E-03	Maximum
Copper	µg/m³	83/85	1.78E-03	2.91E-02	8.25E-03	4.54E-04	8.19E-03	9.16E-03	95% KM (BCA) UCL	9.01E-03	9.01E-03	Statistics
Iron	µg/m³	63/85	1.93E-02	3.94E-01	1.15E-01	1.00E-02	1.26E-02	7.85E-02	95% KM (t) UCL	1.31E-01	1.31E-01	Statistics
Lead	µg/m³	73/85	2.00E-04	3.89E-03	8.43E-04	7.16E-05	1.96E-04	1.03E-03	95% KM (BCA) UCL	9.75E-04	9.75E-04	Statistics
Manganese	µg/m³	70/85	1.00E-03	2.13E-02	4.89E-03	4.47E-04	9.93E-04	8.58E-03	95% KM (BCA) UCL	5.62E-03	5.62E-03	Statistics
Mercury	µg/m³	20/67	1.76E-06	6.67E-04	1.57E-05	1.01E-05	2.10E-07	1.69E-04	95% KM (BCA) UCL	3.66E-05	3.66E-05	Statistics
Molybdenum	µg/m³	5/85	6.56E-04	9.03E-04	6.60E-04	3.24E-06	5.48E-04	7.63E-04	95% KM (t) UCL	6.65E-04	6.65E-04	Statistics
Nickel	µg/m³	2/85	2.61E-03	2.66E-03	Too few positive results to run statistics, default to the maximum detected value						2.66E-03	Maximum
Selenium	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Silver	µg/m³	23/85	8.23E-06	5.10E-05	1.06E-05	6.80E-07	7.03E-06	3.60E-05	95% KM (t) UCL	1.18E-05	1.18E-05	Statistics
Sulfate (as SO4)	mg/m³	0/0	not detected, exposure point concentration for all stations used									
Vanadium	µg/m³	7/85	1.67E-03	2.17E-03	1.69E-03	1.17E-05	1.44E-03	3.10E-03	95% KM (t) UCL	1.71E-03	1.71E-03	Statistics
Zinc	µg/m³	29/85	3.63E-03	3.77E-02	4.46E-03	4.11E-04	3.25E-03	7.56E-03	95% KM (t) UCL	5.14E-03	5.14E-03	Statistics
Radiochemicals												
Alpha, Gross	pCi/m³	37/85	7.51E-04	2.34E-02	2.87E-03	3.99E-04	4.99E-05	5.23E-03	95% KM (t) UCL	3.53E-03	3.53E-03	Statistics
Beta, Gross	pCi/m³	79/85	9.65E-04	1.18E-01	1.71E-02	2.05E-03	2.17E-03	7.57E-02	95% KM (BCA) UCL	2.06E-02	2.06E-02	Statistics
Radium-226	pCi/m³	9/85	1.89E-04	6.09E-04	2.16E-04	9.65E-06	2.96E-05	7.10E-04	95% KM (t) UCL	2.32E-04	2.32E-04	Statistics
Radium-228	pCi/m³	12/85	9.74E-04	4.48E-03	1.13E-03	5.52E-05	8.01E-04	3.26E-03	95% KM (t) UCL	1.22E-03	1.22E-03	Statistics
Thorium-228	pCi/m³	0/85	not detected, exposure point concentration for all stations used									
Thorium-230	pCi/m³	7/85	1.40E-04	4.25E-04	1.49E-04	4.69E-06	1.22E-05	3.49E-04	95% KM (t) UCL	1.57E-04	1.57E-04	Statistics
Thorium-232	pCi/m³	0/85	not detected, exposure point concentration for all stations used									
Uranium-234	pCi/m³	1/85	4.68E-04	4.68E-04	Too few positive results to run statistics, default to the maximum detected value						4.68E-04	Maximum
Uranium-238	pCi/m³	0/85	not detected, exposure point concentration for all stations used									
Particulate Matter in Ambient Air												
PM_{10}	g/m³	84/85	2.30E-07	2.99E-05	7.50E-06	5.85E-07	5.00E-08	7.00E-08	95% KM (Chebyshev) UCL	1.00E-05	1.00E-05	Statistics

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit

Table A-19. Statistical Summary of Calculation of Exposure Concentrations
24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-3

Chemical	Units	Frequency of Detections	Minimum Detected Value	Maximum Detected Value	Kaplan-Meier Method Mean	Kaplan-Meier Method Standard Error	Minimum Non-Detected Value	Maximum Non-Detected Value	ProUCL UCL Recommendation	ProUCL Recommended UCL	Final UCL	Basis for Final UCL
Metals												
Aluminum	µg/m³	127/153	2.72E-02	2.03E+00	1.37E-01	1.44E-02	2.26E-02	1.21E-01	95% KM (BCA) UCL	1.65E-01	1.65E-01	Statistics
Arsenic	µg/m³	16/153	4.41E-04	4.47E-03	5.13E-04	2.94E-05	3.76E-04	1.29E-03	95% KM (t) UCL	5.62E-04	5.62E-04	Statistics
Barium	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Beryllium	µg/m³	11/85	4.45E-06	2.22E-05	5.18E-06	2.88E-07	2.87E-06	2.31E-05	95% KM (t) UCL	5.65E-06	5.65E-06	Statistics
Cadmium	µg/m³	92/153	1.69E-05	5.09E-04	3.98E-05	3.80E-06	1.57E-05	1.06E-04	95% KM (BCA) UCL	4.73E-05	4.73E-05	Statistics
Chromium, Total	µg/m³	25/153	1.08E-03	2.81E-03	1.50E-03	7.20E-05	1.29E-03	7.91E-03	95% KM (t) UCL	1.62E-03	1.62E-03	Statistics
Cobalt	µg/m³	3/153	1.43E-03	2.39E-03	1.45E-03	1.11E-05	9.72E-04	2.52E-03	95% KM (t) UCL	1.46E-03	1.46E-03	Statistics
Copper	µg/m³	153/153	3.23E-03	3.61E-01	—	—	—	—	Use 95% Chebyshev (Mean, Sd) UCL	2.78E-02	2.78E-02	Statistics
Iron	µg/m³	70/85	2.71E-02	1.08E+00	1.43E-01	1.48E-02	1.55E-02	7.70E-02	95% KM (BCA) UCL	1.70E-01	1.70E-01	Statistics
Lead	µg/m³	75/85	2.43E-04	3.96E-03	1.02E-03	8.12E-05	1.98E-04	1.06E-03	95% KM (BCA) UCL	1.15E-03	1.15E-03	Statistics
Manganese	µg/m³	134/153	1.10E-03	4.45E-02	5.42E-03	3.67E-04	1.05E-03	9.08E-03	95% KM (BCA) UCL	6.10E-03	6.10E-03	Statistics
Mercury	µg/m³	16/67	1.65E-06	2.57E-05	5.64E-06	9.66E-07	1.70E-07	1.19E-04	95% KM (t) UCL	7.25E-06	7.25E-06	Statistics
Molybdenum	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Nickel	µg/m³	32/153	6.39E-04	2.72E-02	9.74E-04	1.82E-04	5.07E-04	2.38E-03	95% KM (t) UCL	1.27E-03	1.27E-03	Statistics
Selenium	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Silver	µg/m³	24/85	8.24E-06	3.33E-05	9.57E-06	3.78E-07	4.87E-06	3.51E-05	95% KM (t) UCL	1.02E-05	1.02E-05	Statistics
Sulfate (as SO4)	mg/m³	58/66	2.33E-04	4.26E-03	8.54E-04	8.95E-05	2.82E-04	1.08E-03	95% KM (Chebyshev) UCL	1.24E-03	1.24E-03	Statistics
Vanadium	µg/m³	8/85	1.06E-03	2.06E-03	1.22E-03	7.84E-05	1.01E-03	3.14E-03	95% KM (t) UCL	1.35E-03	1.35E-03	Statistics
Zinc	µg/m³	32/85	2.50E-03	1.24E-02	3.72E-03	2.16E-04	2.13E-03	8.03E-03	95% KM (t) UCL	4.08E-03	4.08E-03	Statistics
Radiochemicals												
Alpha, Gross	pCi/m³	70/153	9.70E-04	4.68E-02	3.42E-03	4.05E-04	4.07E-05	5.29E-03	95% KM (t) UCL	4.09E-03	4.09E-03	Statistics
Beta, Gross	pCi/m³	80/85	1.02E-03	1.15E-01	1.87E-02	2.32E-03	2.13E-03	8.15E-02	95% KM (BCA) UCL	2.29E-02	2.29E-02	Statistics
Radium-226	pCi/m³	20/153	9.76E-05	1.34E-03	1.80E-04	1.85E-05	1.26E-04	1.02E-03	95% KM (t) UCL	2.10E-04	2.10E-04	Statistics
Radium-228	pCi/m³	32/153	1.18E-03	1.21E-02	1.49E-03	8.86E-05	5.26E-04	4.53E-03	95% KM (t) UCL	1.64E-03	1.64E-03	Statistics
Thorium-228	pCi/m³	5/153	1.65E-04	2.63E-03	1.87E-04	1.86E-05	6.88E-06	5.22E-04	95% KM (t) UCL	2.18E-04	2.18E-04	Statistics
Thorium-230	pCi/m³	30/153	7.71E-05	1.12E-02	1.88E-04	7.39E-05	6.55E-06	6.27E-04	95% KM (t) UCL	3.10E-04	3.10E-04	Statistics
Thorium-232	pCi/m³	2/153	6.57E-04	2.04E-03	Too few positive results to run statistics, default to the maximum detected value						2.04E-03	Maximum
Uranium-234	pCi/m³	1/85	6.51E-03	6.51E-03	Too few positive results to run statistics, default to the maximum detected value						6.51E-03	Maximum
Uranium-238	pCi/m³	1/85	2.98E-03	2.98E-03	Too few positive results to run statistics, default to the maximum detected value						2.98E-03	Maximum
Particulate Matter in Ambient Air												
PM_{10}	g/m³	151/153	9.50E-07	1.38E-04	9.93E-06	9.50E-07	5.00E-08	7.00E-08	95% KM (BCA) UCL	1.18E-05	1.18E-05	Statistics

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit

Table A-20. Statistical Summary of Calculation of Exposure Concentrations
24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-4

Chemical	Units	Frequency of Detections	Minimum Detected Value	Maximum Detected Value	Kaplan-Meier Method Mean	Kaplan-Meier Method Standard Error	Minimum Non-Detected Value	Maximum Non-Detected Value	ProUCL UCL Recommendation	ProUCL Recommended UCL	Final UCL	Basis for Final UCL
Metals												
Aluminum	µg/m³	74/84	2.81E-02	4.51E-01	1.39E-01	1.16E-02	2.19E-02	2.53E-02	95% KM (BCA) UCL	1.57E-01	1.57E-01	Statistics
Arsenic	µg/m³	1/84	8.80E-04	8.80E-04	Too few positive results to run statistics, default to the maximum detected value						8.80E-04	Maximum
Barium	µg/m³	1/84	2.15E-02	2.15E-02	Too few positive results to run statistics, default to the maximum detected value						2.15E-02	Maximum
Beryllium	µg/m³	25/84	4.14E-06	1.90E-05	5.84E-06	3.92E-07	3.52E-06	3.49E-05	95% KM (t) UCL	6.49E-06	6.49E-06	Statistics
Cadmium	µg/m³	41/84	3.12E-05	1.73E-04	4.22E-05	2.37E-06	2.20E-05	9.76E-05	95% KM (t) UCL	4.61E-05	4.61E-05	Statistics
Chromium, Total	µg/m³	0/84	not detected, exposure point concentration for all stations used									
Cobalt	µg/m³	0/84	not detected, exposure point concentration for all stations used									
Copper	µg/m³	83/84	2.49E-03	6.26E-02	1.36E-02	1.06E-03	5.93E-03	5.93E-03	95% KM (BCA) UCL	1.55E-02	1.55E-02	Statistics
Iron	µg/m³	73/84	2.56E-02	3.23E+00	2.97E-01	5.47E-02	1.57E-02	1.45E-01	95% KM (BCA) UCL	3.99E-01	3.99E-01	Statistics
Lead	µg/m³	74/84	2.57E-04	4.89E-03	1.10E-03	9.04E-05	2.26E-04	1.24E-03	95% KM (BCA) UCL	1.27E-03	1.27E-03	Statistics
Manganese	µg/m³	75/84	1.06E-03	1.93E-02	5.34E-03	4.24E-04	1.02E-03	8.84E-03	95% KM (BCA) UCL	6.07E-03	6.07E-03	Statistics
Mercury	µg/m³	20/66	1.40E-06	4.50E-05	7.35E-06	1.37E-06	1.70E-07	1.34E-04	95% KM (t) UCL	9.63E-06	9.63E-06	Statistics
Molybdenum	µg/m³	1/84	8.24E-04	8.24E-04	Too few positive results to run statistics, default to the maximum detected value						8.24E-04	Maximum
Nickel	µg/m³	0/84	not detected, exposure point concentration for all stations used									
Selenium	µg/m³	0/84	not detected, exposure point concentration for all stations used									
Silver	µg/m³	20/84	6.93E-06	2.04E-05	8.48E-06	3.65E-07	5.87E-06	2.61E-05	95% KM (t) UCL	9.09E-06	9.09E-06	Statistics
Sulfate (as SO4)	mg/m³	0/0	not detected, exposure point concentration for all stations used									
Vanadium	µg/m³	15/84	1.41E-03	3.06E-03	1.56E-03	4.19E-05	1.22E-03	3.47E-03	95% KM (t) UCL	1.63E-03	1.63E-03	Statistics
Zinc	µg/m³	59/84	3.62E-03	1.95E-02	5.98E-03	3.31E-04	2.53E-03	8.62E-03	95% KM (BCA) UCL	6.58E-03	6.58E-03	Statistics
Radiochemicals												
Alpha, Gross	pCi/m³	41/84	1.16E-03	2.22E-02	3.22E-03	3.80E-04	4.80E-05	5.53E-03	95% KM (t) UCL	3.85E-03	3.85E-03	Statistics
Beta, Gross	pCi/m³	78/84	9.98E-04	1.12E-01	1.82E-02	2.12E-03	2.27E-03	8.63E-02	95% KM (BCA) UCL	2.21E-02	2.21E-02	Statistics
Radium-226	pCi/m³	10/84	1.18E-04	5.28E-04	1.62E-04	1.43E-05	1.51E-04	7.88E-04	95% KM (t) UCL	1.86E-04	1.86E-04	Statistics
Radium-228	pCi/m³	12/84	7.74E-04	3.95E-03	9.95E-04	7.24E-05	6.59E-04	3.38E-03	95% KM (t) UCL	1.12E-03	1.12E-03	Statistics
Thorium-228	pCi/m³	1/84	3.79E-04	3.79E-04	Too few positive results to run statistics, default to the maximum detected value						3.79E-04	Maximum
Thorium-230	pCi/m³	12/84	9.71E-05	1.14E-03	1.29E-04	1.53E-05	6.85E-06	5.09E-04	95% KM (t) UCL	1.55E-04	1.55E-04	Statistics
Thorium-232	pCi/m³	2/84	2.85E-04	3.10E-04	Too few positive results to run statistics, default to the maximum detected value						3.10E-04	Maximum
Uranium-234	pCi/m³	3/84	4.85E-05	4.28E-04	6.18E-05	9.72E-06	1.21E-04	9.07E-04	95% KM (t) UCL	7.80E-05	7.80E-05	Statistics
Uranium-238	pCi/m³	1/84	8.70E-05	8.70E-05	Too few positive results to run statistics, default to the maximum detected value						8.70E-05	Maximum
Particulate Matter in Ambient Air												
PM_{10}	g/m³	84/84	1.80E-07	3.97E-05	—	—	—	—	Use 95% Approximate Gamma UCL	1.29E-05	1.29E-05	Statistics

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit

Table A-21. Statistical Summary of Calculation of Exposure Concentrations
24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-5

Chemical	Units	Frequency of Detections	Minimum Detected Value	Maximum Detected Value	Kaplan-Meier Method Mean	Kaplan-Meier Method Standard Error	Minimum Non-Detected Value	Maximum Non-Detected Value	ProUCL UCL Recommendation	ProUCL Recommended UCL	Final UCL	Basis for Final UCL
Metals												
Aluminum	µg/m³	66/82	2.14E-02	1.13E+00	1.33E-01	1.64E-02	2.09E-02	2.47E-01	95% KM (BCA) UCL	1.62E-01	1.62E-01	Statistics
Arsenic	µg/m³	3/82	1.20E-03	1.40E-03	1.21E-03	2.91E-06	9.72E-04	1.19E-03	95% KM (t) UCL	1.21E-03	1.21E-03	Statistics
Barium	µg/m³	1/82	3.08E-02	3.08E-02	Too few positive results to run statistics, default to the maximum detected value						3.08E-02	Maximum
Beryllium	µg/m³	21/82	5.36E-06	9.94E-05	7.50E-06	1.20E-06	4.30E-06	2.19E-05	95% KM (t) UCL	9.50E-06	9.50E-06	Statistics
Cadmium	µg/m³	37/82	3.14E-05	2.83E-03	7.33E-05	3.43E-05	2.76E-05	1.35E-04	95% KM (t) UCL	1.30E-04	1.30E-04	Statistics
Chromium, Total	µg/m³	1/82	1.84E-02	1.84E-02	Too few positive results to run statistics, default to the maximum detected value						1.84E-02	Maximum
Cobalt	µg/m³	0/82	not detected, exposure point concentration for all stations used									
Copper	µg/m³	81/82	1.80E-03	5.90E-02	1.12E-02	9.03E-04	1.77E-03	1.77E-03	95% KM (BCA) UCL	1.28E-02	1.28E-02	Statistics
Iron	µg/m³	68/82	2.08E-02	3.41E+00	2.31E-01	4.54E-02	1.56E-02	8.55E-02	95% KM (BCA) UCL	3.23E-01	3.23E-01	Statistics
Lead	µg/m³	73/82	2.19E-04	6.93E-03	1.01E-03	1.04E-04	4.34E-04	1.26E-03	95% KM (BCA) UCL	1.19E-03	1.19E-03	Statistics
Manganese	µg/m³	70/82	9.96E-04	3.34E-02	5.19E-03	5.37E-04	9.72E-04	8.49E-03	95% KM (BCA) UCL	6.16E-03	6.16E-03	Statistics
Mercury	µg/m³	19/66	3.70E-07	2.46E-05	5.66E-06	1.08E-06	2.20E-07	1.47E-04	95% KM (t) UCL	7.47E-06	7.47E-06	Statistics
Molybdenum	µg/m³	0/82	not detected, exposure point concentration for all stations used									
Nickel	µg/m³	2/82	3.30E-03	3.36E-03	Too few positive results to run statistics, default to the maximum detected value						3.36E-03	Maximum
Selenium	µg/m³	4/82	9.96E-04	1.80E-03	1.01E-03	1.22E-05	8.70E-04	1.06E-03	95% KM (t) UCL	1.03E-03	1.03E-03	Statistics
Silver	µg/m³	17/82	7.90E-06	1.27E-04	1.00E-05	1.49E-06	7.16E-06	2.52E-05	95% KM (t) UCL	1.25E-05	1.25E-05	Statistics
Sulfate (as SO4)	mg/m³	0/0	not detected, exposure point concentration for all stations used									
Vanadium	µg/m³	12/82	1.67E-03	2.40E-02	1.99E-03	2.82E-04	1.48E-03	3.61E-03	95% KM (t) UCL	2.46E-03	2.46E-03	Statistics
Zinc	µg/m³	40/82	3.30E-03	4.47E-02	4.89E-03	5.36E-04	3.17E-03	7.37E-03	95% KM (t) UCL	5.78E-03	5.78E-03	Statistics
Radiochemicals												
Alpha, Gross	pCi/m³	33/82	1.58E-03	1.96E-02	3.26E-03	3.68E-04	5.88E-05	4.90E-03	95% KM (t) UCL	3.88E-03	3.88E-03	Statistics
Beta, Gross	pCi/m³	77/82	9.74E-04	1.25E-01	1.82E-02	2.09E-03	2.14E-03	4.25E-02	95% KM (BCA) UCL	2.25E-02	2.25E-02	Statistics
Radium-226	pCi/m³	14/82	2.64E-04	7.79E-04	2.96E-04	1.11E-05	1.18E-04	1.50E-03	95% KM (t) UCL	3.15E-04	3.15E-04	Statistics
Radium-228	pCi/m³	11/82	8.15E-04	3.49E-03	9.70E-04	4.97E-05	6.81E-04	5.59E-03	95% KM (t) UCL	1.05E-03	1.05E-03	Statistics
Thorium-228	pCi/m³	2/82	1.80E-04	2.90E-04	Too few positive results to run statistics, default to the maximum detected value						2.90E-04	Maximum
Thorium-230	pCi/m³	11/82	1.26E-04	2.61E-03	1.69E-04	3.18E-05	1.43E-05	7.16E-04	95% KM (t) UCL	2.22E-04	2.22E-04	Statistics
Thorium-232	pCi/m³	0/82	not detected, exposure point concentration for all stations used									
Uranium-234	pCi/m³	1/82	2.56E-03	2.56E-03	Too few positive results to run statistics, default to the maximum detected value						2.56E-03	Maximum
Uranium-238	pCi/m³	1/82	2.11E-03	2.11E-03	Too few positive results to run statistics, default to the maximum detected value						2.11E-03	Maximum
Particulate Matter in Ambient Air												
PM_{10}	g/m³	82/82	2.40E-07	6.08E-05			5.00E-08	7.00E-08	Use 95% Approximate Gamma UCL	1.15E-05	1.15E-05	Statistics

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit

Table A-22. Statistical Summary of Calculation of Exposure Concentrations
24-Hour Average Concentrations of PM_{10} and Associated Chemicals and Radiochemicals for AM-6

Chemical	Units	Frequency of Detections	Minimum Detected Value	Maximum Detected Value	Kaplan-Meier Method Mean	Kaplan-Meier Method Standard Error	Minimum Non-Detected Value	Maximum Non-Detected Value	ProUCL UCL Recommendation	ProUCL Recommended UCL	Final UCL	Basis for Final UCL
Metals												
Aluminum	µg/m³	125/149	2.43E-02	1.22E+00	2.06E-01	1.60E-02	2.28E-02	2.65E-01	95% KM (BCA) UCL	2.33E-01	2.33E-01	Statistics
Arsenic	µg/m³	19/149	5.27E-04	2.36E-03	6.10E-04	2.25E-05	3.90E-04	1.19E-03	95% KM (t) UCL	6.48E-04	6.48E-04	Statistics
Barium	µg/m³	1/85	2.04E-02	2.04E-02	Too few positive results to run statistics, default to the maximum detected value						2.04E-02	Maximum
Beryllium	µg/m³	21/85	5.29E-06	4.49E-05	7.55E-06	7.20E-07	4.30E-06	3.54E-05	95% KM (t) UCL	8.74E-06	8.74E-06	Statistics
Cadmium	µg/m³	87/149	1.56E-05	3.03E-04	4.03E-05	2.77E-06	1.57E-05	8.12E-05	95% KM (t) UCL	4.49E-05	4.49E-05	Statistics
Chromium, Total	µg/m³	25/149	1.48E-03	3.02E-03	1.74E-03	5.24E-05	1.01E-03	6.43E-03	95% KM (t) UCL	1.83E-03	1.83E-03	Statistics
Cobalt	µg/m³	1/149	4.43E-03	4.43E-03	Too few positive results to run statistics, default to the maximum detected value						4.43E-03	Maximum
Copper	µg/m³	145/149	2.39E-03	6.93E-02	1.41E-02	7.06E-04	1.62E-03	1.11E-02	95% KM (BCA) UCL	1.53E-02	1.53E-02	Statistics
Iron	µg/m³	69/85	2.23E-02	1.18E+00	1.91E-01	2.18E-02	1.82E-02	1.27E-01	95% KM (BCA) UCL	2.33E-01	2.33E-01	Statistics
Lead	µg/m³	75/85	2.21E-04	3.85E-03	9.18E-04	6.75E-05	2.04E-04	1.10E-03	95% KM (BCA) UCL	1.03E-03	1.03E-03	Statistics
Manganese	µg/m³	135/149	1.11E-03	4.14E-02	8.27E-03	5.94E-04	1.06E-03	1.41E-02	95% KM (Chebyshev) UCL	1.09E-02	1.09E-02	Statistics
Mercury	µg/m³	20/67	1.42E-06	7.17E-05	8.53E-06	1.75E-06	2.10E-07	1.72E-04	95% KM (t) UCL	1.14E-05	1.14E-05	Statistics
Molybdenum	µg/m³	0/85	not detected, exposure point concentration for all stations used									
Nickel	µg/m³	40/149	6.09E-04	1.75E-03	7.98E-04	2.96E-05	5.69E-04	8.46E-03	95% KM (t) UCL	8.47E-04	8.47E-04	Statistics
Selenium	µg/m³	2/85	1.31E-03	1.36E-03	Too few positive results to run statistics, default to the maximum detected value						1.36E-03	Maximum
Silver	µg/m³	18/85	8.19E-06	2.70E-05	9.12E-06	3.04E-07	7.81E-06	2.71E-05	95% KM (t) UCL	9.63E-06	9.63E-06	Statistics
Sulfate (as SO4)	mg/m³	55/63	2.21E-04	3.93E-03	8.64E-04	7.94E-05	3.03E-04	1.11E-03	95% KM (Chebyshev) UCL	1.21E-03	1.21E-03	Statistics
Vanadium	µg/m³	13/85	1.49E-03	3.18E-03	1.58E-03	3.01E-05	1.48E-03	4.61E-03	95% KM (t) UCL	1.63E-03	1.63E-03	Statistics
Zinc	µg/m³	35/85	3.54E-03	1.75E-02	4.52E-03	2.33E-04	3.46E-03	1.31E-02	95% KM (t) UCL	4.91E-03	4.91E-03	Statistics
Radiochemicals												
Alpha, Gross	pCi/m³	71/149	5.86E-04	2.18E-02	2.91E-03	2.53E-04	3.61E-05	9.64E-03	95% KM (t) UCL	3.33E-03	3.33E-03	Statistics
Beta, Gross	pCi/m³	80/85	8.34E-04	1.20E-01	1.75E-02	1.99E-03	2.30E-03	8.71E-02	95% KM (BCA) UCL	2.12E-02	2.12E-02	Statistics
Radium-226	pCi/m³	19/149	2.51E-04	3.16E-03	3.00E-04	2.22E-05	1.30E-04	7.92E-04	95% KM (t) UCL	3.37E-04	3.37E-04	Statistics
Radium-228	pCi/m³	19/149	8.14E-04	2.20E-02	1.16E-03	1.65E-04	7.24E-04	3.43E-03	95% KM (t) UCL	1.44E-03	1.44E-03	Statistics
Thorium-228	pCi/m³	1/148	7.97E-04	7.97E-04	Too few positive results to run statistics, default to the maximum detected value						7.97E-04	Maximum
Thorium-230	pCi/m³	32/148	1.43E-05	4.19E-03	1.12E-04	3.09E-05	2.84E-05	9.93E-04	95% KM (t) UCL	1.63E-04	1.63E-04	Statistics
Thorium-232	pCi/m³	1/148	6.22E-04	6.22E-04	Too few positive results to run statistics, default to the maximum detected value						6.22E-04	Maximum
Uranium-234	pCi/m³	2/85	1.61E-04	2.26E-04	Too few positive results to run statistics, default to the maximum detected value						2.26E-04	Maximum
Uranium-238	pCi/m³	0/85	not detected, exposure point concentration for all stations used									
Particulate Matter in Ambient Air												
PM_{10}	g/m³	149/149	1.40E-07	1.66E-04			5.00E-08	7.00E-08	Use 95% Approximate Gamma UCL	1.60E-05	1.60E-05	Statistics

Acronyms/Abbreviations:

g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
UCL – upper confidence limit

Table A-23. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident, 24-Hour Average Concentrations of Chemicals for All Air Monitoring Stations

CAS Number	Chemical	Outdoor Air Exposure Point Concentration (mg/m³)	Exposure Time (hours/day)	Exposure Frequency (days/year)	Exposure Duration (years)	Averaging Time (c) (days)	Averaging Time (nc) (days)	Cancer Intake (µg/m³)	Hazard Intake (mg/m³)	IUR $(\mu g/m^3)^{-1}$	RfCi (mg/m³)	Cancer Risk	Hazard Quotient
Metals													
7429-90-5	Aluminum	1.60E-04	1	350	30	25,550	10,950	—	1.5E-04	—	5.0E-03	—	3.1E-02
7440-38-2	Arsenic	5.28E-07	1	350	30	25,550	10,950	2.2E-04	5.1E-07	4.3E-03	1.5E-05	9.3E-07	3.4E-02
7440-39-3	Barium	2.05E-05	1	350	30	25,550	10,950	—	2.0E-05	—	5.0E-04	—	3.9E-02
7440-41-7	Beryllium	6.57E-09	1	350	30	25,550	10,950	2.7E-06	6.3E-09	2.4E-03	2.0E-05	6.5E-09	3.2E-04
7440-43-9	Cadmium	4.90E-08	1	350	30	25,550	10,950	2.0E-05	4.7E-08	1.8E-03	1.0E-05	3.6E-08	4.7E-03
7440-47-3	Chromium, Total	1.58E-06	1	350	30	25,550	10,950	6.5E-04	1.5E-06	1.2E-02	1.0E-04	7.8E-06	1.5E-02
7440-48-4	Cobalt	1.53E-06	1	350	30	25,550	10,950	6.3E-04	1.5E-06	9.0E-03	6.0E-06	5.7E-06	2.4E-01
7439-96-5	Manganese	6.45E-06	1	350	30	25,550	10,950	—	6.2E-06	—	5.0E-05	—	1.2E-01
7439-97-6	Mercury	1.10E-08	1	350	30	25,550	10,950	—	1.1E-08	—	3.0E-04	—	3.5E-05
7440-02-0	Nickel	9.17E-07	1	350	30	25,550	10,950	3.8E-04	8.8E-07	2.6E-04	5.0E-05	9.8E-08	1.8E-02
7782-49-2	Selenium	1.00E-06	1	350	30	25,550	10,950	—	9.6E-07	—	2.0E-02	—	4.8E-05
7440-62-2	Vanadium	1.43E-06	1	350	30	25,550	10,950	5.9E-04	1.4E-06	8.3E-03	7.0E-06	4.9E-06	2.0E-01
TOTAL												**1.9E-05**	**7.0E-01**

Note:
dash indicates that a value is not available or cannot be calculated
see Section 4.3 for discussion of chemicals not included in the risk calculations

Acronyms/Abbreviations:
c – for cancer endpoint evaluation
CAS – Chemical Abstracts Service
IUR – inhalation unit risk factor
mg/m³ – milligrams per cubic meter
nc – for noncancer endpoint evaluation
RfCi – inhalation reference concentration

Table A-24. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Chemicals for AM-1

CAS Number	Chemical	Outdoor Air Exposure Point Concentration (mg/m³)	Exposure Time (hours/day)	Exposure Frequency (days/year)	Exposure Duration (years)	Averaging Time (c) (days)	Averaging Time (nc) (days)	Cancer Intake (µg/m³)	Hazard Intake (mg/m³)	IUR (µg/m³)$^{-1}$	RfCi (mg/m³)	Cancer Risk	Hazard Quotient
Metals													
7429-90-5	Aluminum	1.72E-04	1	350	30	25,550	10,950	—	1.6E-04	—	5.0E-03	—	3.3E-02
7440-38-2	Arsenic	5.73E-07	1	350	30	25,550	10,950	2.4E-04	5.5E-07	4.3E-03	1.5E-05	1.0E-06	3.7E-02
7440-39-3	Barium	3.58E-05	1	350	30	25,550	10,950	—	3.4E-05	—	5.0E-04	—	6.9E-02
7440-41-7	Beryllium	7.33E-09	1	350	30	25,550	10,950	3.0E-06	7.0E-09	2.4E-03	2.0E-05	7.2E-09	3.5E-04
7440-43-9	Cadmium	4.45E-08	1	350	30	25,550	10,950	1.8E-05	4.3E-08	1.8E-03	1.0E-05	3.3E-08	4.3E-03
7440-47-3	Chromium, Total	1.72E-06	1	350	30	25,550	10,950	7.1E-04	1.6E-06	1.2E-02	1.0E-04	8.5E-06	1.6E-02
7440-48-4	Cobalt	2.72E-06	1	350	30	25,550	10,950	1.1E-03	2.6E-06	9.0E-03	6.0E-06	1.0E-05	4.3E-01
7439-96-5	Manganese	7.13E-06	1	350	30	25,550	10,950	—	6.8E-06	—	5.0E-05	—	1.4E-01
7439-97-6	Mercury	1.35E-08	1	350	30	25,550	10,950	—	1.3E-08	—	3.0E-04	—	4.3E-05
7440-02-0	Nickel	9.40E-07	1	350	30	25,550	10,950	3.9E-04	9.0E-07	2.6E-04	5.0E-05	1.0E-07	1.8E-02
7782-49-2	Selenium	1.02E-06	1	350	30	25,550	10,950	—	9.8E-07	—	2.0E-02	—	4.9E-05
7440-62-2	Vanadium	1.77E-06	1	350	30	25,550	10,950	7.3E-04	1.7E-06	8.3E-03	7.0E-06	6.0E-06	2.4E-01
TOTAL												**2.6E-05**	**9.9E-01**

Note:
dash indicates that a value is not available or cannot be calculated
see Section 4.3 for discussion of chemicals not included in the risk calculations

Acronyms/Abbreviations:
c – for cancer endpoint evaluation
CAS – Chemical Abstracts Service
IUR – inhalation unit risk factor
mg/m³ – milligrams per cubic meter
nc – for noncancer endpoint evaluation
RfCi – inhalation reference concentration

Table A-25. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Chemicals for AM-2

CAS Number	Chemical	Outdoor Air Exposure Point Concentration (mg/m³)	Exposure Time (hours/day)	Exposure Frequency (days/year)	Exposure Duration (years)	Averaging Time (c) (days)	Averaging Time (nc) (days)	Cancer Intake (µg/m³)	Hazard Intake (mg/m³)	IUR $(\mu g/m^3)^{-1}$	RfCi (mg/m³)	Cancer Risk	Hazard Quotient
Metals													
7429-90-5	Aluminum	1.14E-04	1	350	30	25,550	10,950	—	1.1E-04	—	5.0E-03	—	2.2E-02
7440-38-2	Arsenic	5.28E-07	1	350	30	25,550	10,950	2.2E-04	5.1E-07	4.3E-03	1.5E-05	9.3E-07	3.4E-02
7440-39-3	Barium	2.05E-05	1	350	30	25,550	10,950	—	2.0E-05	—	5.0E-04	—	3.9E-02
7440-41-7	Beryllium	7.90E-09	1	350	30	25,550	10,950	3.2E-06	7.6E-09	2.4E-03	2.0E-05	7.8E-09	3.8E-04
7440-43-9	Cadmium	4.44E-08	1	350	30	25,550	10,950	1.8E-05	4.3E-08	1.8E-03	1.0E-05	3.3E-08	4.3E-03
7440-47-3	Chromium, Total	1.58E-06	1	350	30	25,550	10,950	6.5E-04	1.5E-06	1.2E-02	1.0E-04	7.8E-06	1.5E-02
7440-48-4	Cobalt	3.75E-06	1	350	30	25,550	10,950	1.5E-03	3.6E-06	9.0E-03	6.0E-06	1.4E-05	6.0E-01
7439-96-5	Manganese	5.62E-06	1	350	30	25,550	10,950	—	5.4E-06	—	5.0E-05	—	1.1E-01
7439-97-6	Mercury	3.66E-08	1	350	30	25,550	10,950	—	3.5E-08	—	3.0E-04	—	1.2E-04
7440-02-0	Nickel	2.66E-06	1	350	30	25,550	10,950	1.1E-03	2.6E-06	2.6E-04	5.0E-05	2.8E-07	5.1E-02
7782-49-2	Selenium	1.00E-06	1	350	30	25,550	10,950	—	9.6E-07	—	2.0E-02	—	4.8E-05
7440-62-2	Vanadium	1.71E-06	1	350	30	25,550	10,950	7.0E-04	1.6E-06	8.3E-03	7.0E-06	5.8E-06	2.3E-01
TOTAL												**2.9E-05**	**1.1E+00**

Note:
dash indicates that a value is not available or cannot be calculated
see Section 4.3 for discussion of chemicals not included in the risk calculations

Acronyms/Abbreviations:
c – for cancer endpoint evaluation
CAS – Chemical Abstracts Service
IUR – inhalation unit risk factor
mg/m³ – milligrams per cubic meter
nc – for noncancer endpoint evaluation
RfCi – inhalation reference concentration

Table A-26. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Chemicals for AM-3

CAS Number	Chemical	Outdoor Air Exposure Point Concentration (mg/m³)	Exposure Time (hours/day)	Exposure Frequency (days/year)	Exposure Duration (years)	Averaging Time (c) (days)	Averaging Time (nc) (days)	Cancer Intake (µg/m³)	Hazard Intake (mg/m³)	IUR (µg/m³)$^{-1}$	RfCi (mg/m³)	Cancer Risk	Hazard Quotient
Metals													
7429-90-5	Aluminum	1.65E-04	1	350	30	25,550	10,950	—	1.6E-04	—	5.0E-03	—	3.2E-02
7440-38-2	Arsenic	5.62E-07	1	350	30	25,550	10,950	2.3E-04	5.4E-07	4.3E-03	1.5E-05	9.9E-07	3.6E-02
7440-39-3	Barium	2.05E-05	1	350	30	25,550	10,950	—	2.0E-05	—	5.0E-04	—	3.9E-02
7440-41-7	Beryllium	5.65E-09	1	350	30	25,550	10,950	2.3E-06	5.4E-09	2.4E-03	2.0E-05	5.6E-09	2.7E-04
7440-43-9	Cadmium	4.73E-08	1	350	30	25,550	10,950	1.9E-05	4.5E-08	1.8E-03	1.0E-05	3.5E-08	4.5E-03
7440-47-3	Chromium, Total	1.62E-06	1	350	30	25,550	10,950	6.7E-04	1.6E-06	1.2E-02	1.0E-04	8.0E-06	1.6E-02
7440-48-4	Cobalt	1.46E-06	1	350	30	25,550	10,950	6.0E-04	1.4E-06	9.0E-03	6.0E-06	5.4E-06	2.3E-01
7439-96-5	Manganese	6.10E-06	1	350	30	25,550	10,950	—	5.8E-06	—	5.0E-05	—	1.2E-01
7439-97-6	Mercury	7.25E-09	1	350	30	25,550	10,950	—	7.0E-09	—	3.0E-04	—	2.3E-05
7440-02-0	Nickel	1.27E-06	1	350	30	25,550	10,950	5.2E-04	1.2E-06	2.6E-04	5.0E-05	1.4E-07	2.4E-02
7782-49-2	Selenium	1.00E-06	1	350	30	25,550	10,950	—	9.6E-07	—	2.0E-02	—	4.8E-05
7440-62-2	Vanadium	1.35E-06	1	350	30	25,550	10,950	5.5E-04	1.3E-06	8.3E-03	7.0E-06	4.6E-06	1.8E-01
TOTAL												**1.9E-05**	**6.8E-01**

Note:
dash indicates that a value is not available or cannot be calculated
see Section 4.3 for discussion of chemicals not included in the risk calculations

Acronyms/Abbreviations:
c – for cancer endpoint evaluation
CAS – Chemical Abstracts Service
IUR – inhalation unit risk factor
mg/m³ – milligrams per cubic meter
nc – for noncancer endpoint evaluation
RfCi – inhalation reference concentration

Table A-27. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Chemicals for AM-4

CAS Number	Chemical	Outdoor Air Exposure Point Concentration (mg/m³)	Exposure Time (hours/day)	Exposure Frequency (days/year)	Exposure Duration (years)	Averaging Time (c) (days)	Averaging Time (nc) (days)	Cancer Intake (µg/m³)	Hazard Intake (mg/m³)	IUR $(\mu g/m^3)^{-1}$	RfCi (mg/m³)	Cancer Risk	Hazard Quotient
Metals													
7429-90-5	Aluminum	1.57E-04	1	350	30	25,550	10,950	—	1.5E-04	—	5.0E-03	—	3.0E-02
7440-38-2	Arsenic	8.80E-07	1	350	30	25,550	10,950	3.6E-04	8.4E-07	4.3E-03	1.5E-05	1.6E-06	5.6E-02
7440-39-3	Barium	2.15E-05	1	350	30	25,550	10,950	—	2.1E-05	—	5.0E-04	—	4.1E-02
7440-41-7	Beryllium	6.49E-09	1	350	30	25,550	10,950	2.7E-06	6.2E-09	2.4E-03	2.0E-05	6.4E-09	3.1E-04
7440-43-9	Cadmium	4.61E-08	1	350	30	25,550	10,950	1.9E-05	4.4E-08	1.8E-03	1.0E-05	3.4E-08	4.4E-03
7440-47-3	Chromium, Total	1.58E-06	1	350	30	25,550	10,950	6.5E-04	1.5E-06	1.2E-02	1.0E-04	7.8E-06	1.5E-02
7440-48-4	Cobalt	1.53E-06	1	350	30	25,550	10,950	6.3E-04	1.5E-06	9.0E-03	6.0E-06	5.7E-06	2.4E-01
7439-96-5	Manganese	6.07E-06	1	350	30	25,550	10,950	—	5.8E-06	—	5.0E-05	—	1.2E-01
7439-97-6	Mercury	9.63E-09	1	350	30	25,550	10,950	—	9.2E-09	—	3.0E-04	—	3.1E-05
7440-02-0	Nickel	9.17E-07	1	350	30	25,550	10,950	3.8E-04	8.8E-07	2.6E-04	5.0E-05	9.8E-08	1.8E-02
7782-49-2	Selenium	1.00E-06	1	350	30	25,550	10,950	—	9.6E-07	—	2.0E-02	—	4.8E-05
7440-62-2	Vanadium	1.63E-06	1	350	30	25,550	10,950	6.7E-04	1.6E-06	8.3E-03	7.0E-06	5.6E-06	2.2E-01
TOTAL												**2.1E-05**	**7.4E-01**

Note:
dash indicates that a value is not available or cannot be calculated
see Section 4.3 for discussion of chemicals not included in the risk calculations

Acronyms/Abbreviations:
c – for cancer endpoint evaluation
CAS – Chemical Abstracts Service
IUR – inhalation unit risk factor
mg/m³ – milligrams per cubic meter
nc – for noncancer endpoint evaluation
RfCi – inhalation reference concentration

Table A-28. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Chemicals for AM-5

CAS Number	Chemical	Outdoor Air Exposure Point Concentration (mg/m³)	Exposure Time (hours/day)	Exposure Frequency (days/year)	Exposure Duration (years)	Averaging Time (c) (days)	Averaging Time (nc) (days)	Cancer Intake (µg/m³)	Hazard Intake (mg/m³)	IUR (µg/m³)$^{-1}$	RfCi (mg/m³)	Cancer Risk	Hazard Quotient
Metals													
7429-90-5	Aluminum	1.62E-04	1	350	30	25,550	10,950	—	1.6E-04	—	5.0E-03	—	3.1E-02
7440-38-2	Arsenic	1.21E-06	1	350	30	25,550	10,950	5.0E-04	1.2E-06	4.3E-03	1.5E-05	2.1E-06	7.7E-02
7440-39-3	Barium	3.08E-05	1	350	30	25,550	10,950	—	3.0E-05	—	5.0E-04	—	5.9E-02
7440-41-7	Beryllium	9.50E-09	1	350	30	25,550	10,950	3.9E-06	9.1E-09	2.4E-03	2.0E-05	9.4E-09	4.6E-04
7440-43-9	Cadmium	1.30E-07	1	350	30	25,550	10,950	5.4E-05	1.2E-07	1.8E-03	1.0E-05	9.6E-08	1.2E-02
7440-47-3	Chromium, Total	1.84E-05	1	350	30	25,550	10,950	7.5E-03	1.8E-05	1.2E-02	1.0E-04	9.1E-05	1.8E-01
7440-48-4	Cobalt	1.53E-06	1	350	30	25,550	10,950	6.3E-04	1.5E-06	9.0E-03	6.0E-06	5.7E-06	2.4E-01
7439-96-5	Manganese	6.16E-06	1	350	30	25,550	10,950	—	5.9E-06	—	5.0E-05	—	1.2E-01
7439-97-6	Mercury	7.47E-09	1	350	30	25,550	10,950	—	7.2E-09	—	3.0E-04	—	2.4E-05
7440-02-0	Nickel	3.36E-06	1	350	30	25,550	10,950	1.4E-03	3.2E-06	2.6E-04	5.0E-05	3.6E-07	6.4E-02
7782-49-2	Selenium	1.03E-06	1	350	30	25,550	10,950	—	9.9E-07	—	2.0E-02	—	4.9E-05
7440-62-2	Vanadium	2.46E-06	1	350	30	25,550	10,950	1.0E-03	2.4E-06	8.3E-03	7.0E-06	8.4E-06	3.4E-01
TOTAL												**1.1E-04**	**1.1E+00**

Note:
dash indicates that a value is not available or cannot be calculated
see Section 4.3 for discussion of chemicals not included in the risk calculations

Acronyms/Abbreviations:
c – for cancer endpoint evaluation
CAS – Chemical Abstracts Service
IUR – inhalation unit risk factor
mg/m³ – milligrams per cubic meter
nc – for noncancer endpoint evaluation
RfCi – inhalation reference concentration

Table A-29. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Chemicals for AM-6

CAS Number	Chemical	Outdoor Air Exposure Point Concentration (mg/m³)	Exposure Time (hours/day)	Exposure Frequency (days/year)	Exposure Duration (years)	Averaging Time (c) (days)	Averaging Time (nc) (days)	Cancer Intake (µg/m³)	Hazard Intake (mg/m³)	IUR (µg/m³)$^{-1}$	RfCi (mg/m³)	Cancer Risk	Hazard Quotient
Metals													
7429-90-5	Aluminum	2.33E-04	1	350	30	25,550	10,950	—	2.2E-04	—	5.0E-03	—	4.5E-02
7440-38-2	Arsenic	6.48E-07	1	350	30	25,550	10,950	2.7E-04	6.2E-07	4.3E-03	1.5E-05	1.1E-06	4.1E-02
7440-39-3	Barium	2.04E-05	1	350	30	25,550	10,950	—	2.0E-05	—	5.0E-04	—	3.9E-02
7440-41-7	Beryllium	8.74E-09	1	350	30	25,550	10,950	3.6E-06	8.4E-09	2.4E-03	2.0E-05	8.6E-09	4.2E-04
7440-43-9	Cadmium	4.49E-08	1	350	30	25,550	10,950	1.8E-05	4.3E-08	1.8E-03	1.0E-05	3.3E-08	4.3E-03
7440-47-3	Chromium, Total	1.83E-06	1	350	30	25,550	10,950	7.5E-04	1.8E-06	1.2E-02	1.0E-04	9.0E-06	1.8E-02
7440-48-4	Cobalt	4.43E-06	1	350	30	25,550	10,950	1.8E-03	4.2E-06	9.0E-03	6.0E-06	1.6E-05	7.1E-01
7439-96-5	Manganese	1.09E-05	1	350	30	25,550	10,950	—	1.0E-05	—	5.0E-05	—	2.1E-01
7439-97-6	Mercury	1.14E-08	1	350	30	25,550	10,950	—	1.1E-08	—	3.0E-04	—	3.7E-05
7440-02-0	Nickel	8.47E-07	1	350	30	25,550	10,950	3.5E-04	8.1E-07	2.6E-04	5.0E-05	9.1E-08	1.6E-02
7782-49-2	Selenium	1.36E-06	1	350	30	25,550	10,950	—	1.3E-06	—	2.0E-02	—	6.5E-05
7440-62-2	Vanadium	1.63E-06	1	350	30	25,550	10,950	6.7E-04	1.6E-06	8.3E-03	7.0E-06	5.6E-06	2.2E-01
TOTAL												**3.2E-05**	**1.3E+00**

Note:
dash indicates that a value is not available or cannot be calculated
see Section 4.3 for discussion of chemicals not included in the risk calculations

Acronyms/Abbreviations:
c – for cancer endpoint evaluation
CAS – Chemical Abstracts Service
IUR – inhalation unit risk factor
mg/m³ – milligrams per cubic meter
nc – for noncancer endpoint evaluation
RfCi – inhalation reference concentration

Table A-30. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident, 24-Hour Average Concentrations of Radiochemicals for All Air Monitoring Stations

Radiochemical	Outdoor Air Exposure Point Concentration (pCi/m³)	Exposure Frequency (days/year)	Child Exposure Duration (years)	Adult Exposure Duration (years)	Child Inhalation Rate (m³/day)	Adult Inhalation Rate (m³/day)	Cancer slope factor (risk/pCi)	Cancer Risk
Radium-226	1.94E-04	350	6	24	10	20	1.2E-08	4.2E-07
Radium-228	1.14E-03	350	6	24	10	20	5.2E-09	1.1E-06
Thorium-228	1.75E-04	350	6	24	10	20	1.3E-07	4.4E-06
Thorium-230	1.23E-04	350	6	24	10	20	2.9E-08	6.6E-07
Thorium-232	1.59E-04	350	6	24	10	20	1.3E-08	4.0E-07
Uranium-234	9.81E-05	350	6	24	10	20	1.1E-08	2.1E-07
Uranium-238	1.11E-04	350	6	24	10	20	9.4E-09	2.0E-07
TOTAL								**7.4E-06**

Acronyms/Abbreviations:
- IUR – inhalation unit risk factor
- m³/day - cubic meters per day
- pCi/m³ – picocurie per cubic meter
- risk/pCi - risk per picocurie

Table A-31. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Radiochemicals for AM-1

Radiochemical	Outdoor Air Exposure Point Concentration (pCi/m³)	Exposure Frequency (days/year)	Child Exposure Duration (years)	Adult Exposure Duration (years)	Child Inhalation Rate (m³/day)	Adult Inhalation Rate (m³/day)	Cancer slope factor (risk/pCi)	Cancer Risk
Radium-226	2.29E-04	350	6	24	10	20	1.2E-08	5.0E-07
Radium-228	1.20E-03	350	6	24	10	20	5.2E-09	1.2E-06
Thorium-228	1.64E-04	350	6	24	10	20	1.3E-07	4.1E-06
Thorium-230	1.53E-04	350	6	24	10	20	2.9E-08	8.2E-07
Thorium-232	2.12E-04	350	6	24	10	20	1.3E-08	5.3E-07
Uranium-234	9.81E-05	350	6	24	10	20	1.1E-08	2.1E-07
Uranium-238	4.54E-04	350	6	24	10	20	9.4E-09	8.0E-07
TOTAL								**8.1E-06**

Note:
Uranium-234 not detected, value for site-wide average used

Acronyms/Abbreviations:
IUR – inhalation unit risk factor
m³/day - cubic meters per day
pCi/m³ – picocurie per cubic meter
risk/pCi - risk per picocurie

Table A-32. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Radiochemicals for AM-2

Radiochemical	Outdoor Air Exposure Point Concentration (pCi/m³)	Exposure Frequency (days/year)	Child Exposure Duration (years)	Adult Exposure Duration (years)	Child Inhalation Rate (m³/day)	Adult Inhalation Rate (m³/day)	Cancer slope factor (risk/pCi)	Cancer Risk
Radium-226	2.32E-04	350	6	24	10	20	1.2E-08	5.1E-07
Radium-228	1.22E-03	350	6	24	10	20	5.2E-09	1.2E-06
Thorium-228	1.75E-04	350	6	24	10	20	1.3E-07	4.4E-06
Thorium-230	1.57E-04	350	6	24	10	20	2.9E-08	8.5E-07
Thorium-232	1.59E-04	350	6	24	10	20	1.3E-08	4.0E-07
Uranium-234	4.68E-04	350	6	24	10	20	1.1E-08	1.0E-06
Uranium-238	1.11E-04	350	6	24	10	20	9.4E-09	2.0E-07
TOTAL								**8.5E-06**

Note:
Thorium-228, thorium-232, and uranium-238 not detected, values from site-wide average used

Acronyms/Abbreviations:
IUR – inhalation unit risk factor
m³/day - cubic meters per day
pCi/m³ – picocurie per cubic meter
risk/pCi - risk per picocurie

Table A-33. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Radiochemicals for AM-3

Radiochemical	Outdoor Air Exposure Point Concentration (pCi/m³)	Exposure Frequency (days/year)	Child Exposure Duration (years)	Adult Exposure Duration (years)	Child Inhalation Rate (m³/day)	Adult Inhalation Rate (m³/day)	Cancer slope factor (risk/pCi)	Cancer Risk
Radium-226	2.10E-04	350	6	24	10	20	1.2E-08	4.6E-07
Radium-228	1.64E-03	350	6	24	10	20	5.2E-09	1.6E-06
Thorium-228	2.18E-04	350	6	24	10	20	1.3E-07	5.4E-06
Thorium-230	3.10E-04	350	6	24	10	20	2.9E-08	1.7E-06
Thorium-232	2.04E-03	350	6	24	10	20	1.3E-08	5.1E-06
Uranium-234	6.51E-03	350	6	24	10	20	1.1E-08	1.4E-05
Uranium-238	2.98E-03	350	6	24	10	20	9.4E-09	5.3E-06
TOTAL								**3.4E-05**

Acronyms/Abbreviations:
IUR – inhalation unit risk factor
m³/day - cubic meters per day
pCi/m³ – picocurie per cubic meter
risk/pCi - risk per picocurie

Table A-34. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Radiochemicals for AM-4

Radiochemical	Outdoor Air Exposure Point Concentration (pCi/m³)	Exposure Frequency (days/year)	Child Exposure Duration (years)	Adult Exposure Duration (years)	Child Inhalation Rate (m³/day)	Adult Inhalation Rate (m³/day)	Cancer slope factor (risk/pCi)	Cancer Risk
Radium-226	1.86E-04	350	6	24	10	20	1.2E-08	4.1E-07
Radium-228	1.12E-03	350	6	24	10	20	5.2E-09	1.1E-06
Thorium-228	3.79E-04	350	6	24	10	20	1.3E-07	9.5E-06
Thorium-230	1.55E-04	350	6	24	10	20	2.9E-08	8.3E-07
Thorium-232	3.10E-04	350	6	24	10	20	1.3E-08	7.8E-07
Uranium-234	7.80E-05	350	6	24	10	20	1.1E-08	1.7E-07
Uranium-238	8.70E-05	350	6	24	10	20	9.4E-09	1.5E-07
TOTAL								**1.3E-05**

Acronyms/Abbreviations:
IUR – inhalation unit risk factor
m³/day - cubic meters per day
pCi/m³ – picocurie per cubic meter
risk/pCi - risk per picocurie

Table A-35. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Radiochemicals for AM-5

Radiochemical	Outdoor Air Exposure Point Concentration (pCi/m³)	Exposure Frequency (days/year)	Child Exposure Duration (years)	Adult Exposure Duration (years)	Child Inhalation Rate (m³/day)	Adult Inhalation Rate (m³/day)	Cancer slope factor (risk/pCi)	Cancer Risk
Radium-226	3.15E-04	350	6	24	10	20	1.2E-08	6.9E-07
Radium-228	1.05E-03	350	6	24	10	20	5.2E-09	1.0E-06
Thorium-228	2.90E-04	350	6	24	10	20	1.3E-07	7.2E-06
Thorium-230	2.22E-04	350	6	24	10	20	2.9E-08	1.2E-06
Thorium-232	1.59E-04	350	6	24	10	20	1.3E-08	4.0E-07
Uranium-234	2.56E-03	350	6	24	10	20	1.1E-08	5.5E-06
Uranium-238	2.11E-03	350	6	24	10	20	9.4E-09	3.7E-06
TOTAL								**2.0E-05**

Note:
Thorium-232 not detected, value for site-wide average used

Acronyms/Abbreviations:
IUR – inhalation unit risk factor
m³/day - cubic meters per day
pCi/m³ – picocurie per cubic meter
risk/pCi - risk per picocurie

Table A-36. Calculation of Total Risk via Inhalation of Particulates in Outdoor Air by a Resident
24-Hour Average Concentrations of Radiochemicals for AM-6

Radiochemical	Outdoor Air Exposure Point Concentration (pCi/m³)	Exposure Frequency (days/year)	Child Exposure Duration (years)	Adult Exposure Duration (years)	Child Inhalation Rate (m³/day)	Adult Inhalation Rate (m³/day)	Cancer slope factor (risk/pCi)	Cancer Risk
Radium-226	3.37E-04	350	6	24	10	20	1.2E-08	7.4E-07
Radium-228	1.44E-03	350	6	24	10	20	5.2E-09	1.4E-06
Thorium-228	7.97E-04	350	6	24	10	20	1.3E-07	2.0E-05
Thorium-230	1.63E-04	350	6	24	10	20	2.9E-08	8.8E-07
Thorium-232	6.22E-04	350	6	24	10	20	1.3E-08	1.6E-06
Uranium-234	2.26E-04	350	6	24	10	20	1.1E-08	4.9E-07
Uranium-238	1.11E-04	350	6	24	10	20	9.4E-09	2.0E-07
TOTAL								**2.5E-05**

Note:
Uranium-238 not detected, value for site-wide average used

Acronyms/Abbreviations:
IUR – inhalation unit risk factor
m³/day - cubic meters per day
pCi/m³ – picocurie per cubic meter
risk/pCi - risk per picocurie