

**APPENDIX IV**  
**MATES IV**  
**DRAFT REPORT**

**Summaries for the MATES IV Fixed Monitoring Sites**

## Appendix IV

### Summaries for the MATES IV Fixed Monitoring Sites

#### IV.1 Method Detection Limit (MDL) and Data Reporting

Guidance for determination of the method detection limit (MDL) and data reporting was taken from the U. S. EPA's National Air Toxics Pilot City Monitoring Program. The MDL, as defined in 40 CFR Appendix B, Part 136, "Definition and Procedure for Determination of the Method Detection Limit" was used. The MDL is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given sample matrix containing the analyte (EPA, 2001) <sup>1</sup>

The AQMD Laboratory used this MDL determination method for the analyses conducted. It consists of seven replicate analyses of a sample containing the analyte of interest at a level not to exceed five times the projected MDL. A standard deviation is determined using results of the analysis. The standard deviation times 3.14 (from the Tables of Student's t Values at the 99% confidence level) is the reported MDL.

It was recognized by the Science Advisory Board (EPA, 2001) that just because a value is below the MDL does not mean the laboratory has not been able to measure a value, but rather the measurement has less reliability than others above the MDL. From this study, the convention is to report every value, even those below the MDL. These values were flagged as being below the MDL but above the Limit of Detection (LoD). For analytes that had concentrations that were below the LoD, no concentration is ascertained in the analysis; and the data are reported as zero.

In calculating the average concentrations, the reported analytical values are used. Other reporting conventions include reporting a value equal to ½ the MDL for all values below the MDL. However, this can lead to potential biases in calculating average values.

The station abbreviations used in the following tables are listed below.

Station	Abbreviation
Anaheim	AN
Burbank	BU
Central Los Angeles	LA
Compton	CO
Inland Valley San Bernardino	SB
Huntington Park	HP
North Long Beach	NLB
Pico Rivera	PR
Rubidoux	RU
West Long Beach	WLB

<sup>1</sup> Reference: Pilot City Air Toxics Measurements Summary, EPA454/R-01-003, February 2001

Method detection limits for the analytes are given in the Tables below

Analyte	ppb
2_Butanone	0.001
Acetaldehyde	0.008
Acetone	0.005
Formaldehyde	0.014
1,2-Dibromoethane	0.070
1,2-Dichlorobenzene	0.095
1,2-Dichloroethane	0.044
1,2-Dichloropropane	0.022
1,3-Butadiene	0.028
1,4-Dichlorobenzene	0.057
2-Butanone	0.022
2-Propenal	0.079
Acetone	0.053
Benzene	0.026
Carbon Tetrachloride	0.046
Chloroform	0.054
Ethylbenzene	0.050
m+p-Xylene	0.072
Methyl Tert Butyl Ether	0.051
Methylene Chloride	0.076
o-Xylene	0.065
Styrene	0.069
Tetrachloroethylene	0.065
Toluene	0.024
Trichloroethylene	0.072
Vinyl Chloride	0.051

Analyte	ng/M3
TSP Antimony	0.08
TSP Arsenic	0.09
TSP Barium	2.40
TSP Beryllium	0.09
TSP Cadmium	0.08
TSP Calcium	0.29
TSP Cesium	0.29
TSP Chromium	1.05
TSP Cobalt	0.12
TSP Copper	0.93
TSP Hexavalent Chromium	0.00
TSP Iron	0.29
TSP Lead	0.49
TSP Manganese	0.37
TSP Molybdenum	0.12
TSP Nickel	0.72
TSP Potassium	0.29
TSP Rubidium	0.29
TSP Selenium	0.87
TSP Strontium	0.21
TSP Tin	0.44
TSP Titanium	0.88
TSP Uranium	0.08
TSP Vanadium	0.20
TSP Zinc	0.29
PM10 EC	0.01
PM10 Mass	0.06
PM10 OC	0.10
PM10 TC	0.10

Analyte	ng/M3
PM <sub>2.5</sub> Aluminum	42.20
PM <sub>2.5</sub> Ammonium Ion	43.75
PM <sub>2.5</sub> Antimony	59.83
PM <sub>2.5</sub> Arsenic	13.08
PM <sub>2.5</sub> Barium	123.19
PM <sub>2.5</sub> Cadmium	42.75
PM <sub>2.5</sub> Calcium	13.90
PM <sub>2.5</sub> Cesium	154.49
PM <sub>2.5</sub> Chloride Ion	150.00
PM <sub>2.5</sub> Chlorine	12.44
PM <sub>2.5</sub> Chromium	8.86
PM <sub>2.5</sub> Cobalt	10.27
PM <sub>2.5</sub> Copper	11.67
PM <sub>2.5</sub> EC	37.50
PM <sub>2.5</sub> Iron	15.83
PM <sub>2.5</sub> Lead	22.23
PM <sub>2.5</sub> Manganese	14.66
PM <sub>2.5</sub> Mass	104.17
PM <sub>2.5</sub> Nickel	8.03
PM <sub>2.5</sub> Nitrate Ion	150.00
PM <sub>2.5</sub> OC	500.00
PM <sub>2.5</sub> Phosphorus	15.43
PM <sub>2.5</sub> Potassium	7.16
PM <sub>2.5</sub> Potassium Ion	81.25
PM <sub>2.5</sub> Rubidium	13.33
PM <sub>2.5</sub> Selenium	25.63
PM <sub>2.5</sub> Silicon	28.75
PM <sub>2.5</sub> Sodium Ion	15.63
PM <sub>2.5</sub> Strontium	16.41
PM <sub>2.5</sub> Sulfate Ion	150.00
PM <sub>2.5</sub> Sulfur	31.35
PM <sub>2.5</sub> TC	500.00
PM <sub>2.5</sub> Tin	49.81
PM <sub>2.5</sub> Titanium	17.48
PM <sub>2.5</sub> Uranium	23.41
PM <sub>2.5</sub> Vanadium	15.53
PM <sub>2.5</sub> Yttrium	15.67
PM <sub>2.5</sub> Zinc	8.37

**Table IV-1** Ambient Concentrations (ppb) of Carbonyls at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Acetaldehyde	Avg	0.59	1.08	0.94	0.83	0.99	1.04	0.67	1.25	0.84	0.75
	SD	0.47	0.56	0.43	0.59	0.49	0.61	0.42	0.56	0.39	0.60
	N	60	59	59	60	59	57	59	59	59	55
	95% CI	0.12	0.15	0.11	0.15	0.13	0.16	0.11	0.15	0.10	0.16
	Max	3.07	2.70	2.00	2.94	2.44	2.94	2.07	2.61	1.95	2.79
	Min	0.11	0.22	0.32	0.02	0.21	0.41	0.18	0.42	0.12	0.15
Acetone	Avg	1.65	2.34	1.91	1.62	1.43	2.59	1.17	1.92	1.14	1.23
	SD	3.55	3.77	2.21	2.77	0.98	4.12	1.83	2.44	0.86	2.05
	N	59	59	59	60	59	57	59	60	59	55
	95% CI	0.93	0.98	0.58	0.72	0.26	1.09	0.48	0.63	0.23	0.56
	Max	21.79	19.47	9.97	12.45	4.77	19.75	8.95	11.38	5.05	9.93
	Min	0.02	0.10	0.08	0.06	0.08	0.11	0.10	0.15	0.14	0.02
Formaldehyde	Avg	1.19	2.58	2.93	2.05	2.63	2.73	1.86	2.81	2.00	1.55
	SD	0.82	1.13	0.99	0.81	1.19	0.95	0.71	1.04	1.10	0.95
	N	58	59	59	60	59	57	59	59	57	51
	95% CI	0.22	0.29	0.26	0.21	0.31	0.25	0.18	0.27	0.29	0.27
	Max	3.73	4.72	5.06	4.18	5.14	5.40	3.79	6.32	4.40	4.06
	Min	0.25	0.29	0.92	0.12	0.26	1.14	0.40	0.36	0.34	0.13
Methyl Ethyl Ketone	Avg	0.07	0.11	0.08	0.08	0.09	0.11	0.06	0.15	0.07	0.07
	SD	0.10	0.14	0.08	0.12	0.06	0.16	0.08	0.17	0.05	0.11
	N	57	59	59	59	58	57	59	60	59	53
	95% CI	0.03	0.04	0.02	0.03	0.01	0.04	0.02	0.04	0.01	0.03
	Max	0.57	0.62	0.35	0.55	0.23	0.77	0.39	0.76	0.29	0.47
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00

**Table IV-2** Ambient Concentrations (ppb) of Organic Gases at the Fixed Sites

Pollutant	Period	Statistic	Measurement Site									
			AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Benzene		Avg	0.33	0.46	0.40	0.50	0.29	0.52	0.33	0.35	0.28	0.36
		SD	0.25	0.29	0.21	0.46	0.14	0.38	0.19	0.21	0.15	0.29
		N	51	55	51	57	53	53	54	57	52	57
		95% CI	0.07	0.08	0.06	0.12	0.04	0.10	0.05	0.05	0.04	0.08
		Max	1.33	1.23	1.15	1.77	0.91	1.72	0.84	0.91	0.91	1.17
		Min	0.08	0.17	0.13	0.11	0.10	0.02	0.11	0.10	0.11	0.07
1,3-Butadiene		Avg	0.08	0.11	0.10	0.12	0.05	0.14	0.07	0.07	0.06	0.07
		SD	0.09	0.11	0.07	0.15	0.05	0.13	0.07	0.07	0.06	0.09
		N	51	55	51	57	53	53	54	57	52	57
		95% CI	0.02	0.03	0.02	0.04	0.01	0.04	0.02	0.02	0.02	0.02
		Max	0.41	0.39	0.36	0.58	0.22	0.53	0.28	0.30	0.21	0.32
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carbon Tetrachloride		Avg	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		SD	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
		N	47	49	45	51	49	47	50	51	49	53
		95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	0.12	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.11	0.11
		Min	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06
Chloroform		Avg	0.04	0.05	0.04	0.03	0.04	0.03	0.03	0.04	0.04	0.03
		SD	0.02	0.03	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.01
		N	51	55	51	57	53	53	54	57	52	57
		95% CI	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	0.08	0.14	0.09	0.07	0.08	0.10	0.06	0.10	0.08	0.06
		Min	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.02	0.02

**Table IV-2** Ambient Concentrations (ppb) of Organic Gases at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Dibromoethane	Avg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,2-Dichlorobenzene	Avg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SD	0.00	0.01	0.01	0.00	0.00	0.02	0.00	0.02	0.00	0.00
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.00	0.04	0.04	0.00	0.01	0.12	0.02	0.12	0.02	0.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,4-Dichlorobenzene	Avg	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00
	SD	0.01	0.02	0.02	0.01	0.00	0.03	0.01	0.01	0.01	0.01
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00
	Max	0.03	0.08	0.11	0.04	0.02	0.24	0.05	0.03	0.05	0.02
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,2-Dichloroethane	Avg	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.01
	SD	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.05	0.06	0.05	0.05	0.05	0.06	0.04	0.06	0.05	0.05
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table IV-2** Ambient Concentrations (ppb) of Organic Gases at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
1,2-Dichloropropane	Avg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	SD	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.03	0.02	0.03	0.00	0.01	0.01	0.01	0.01	0.06	0.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethylbenzene	Avg	0.12	0.18	0.72	0.20	0.11	0.24	0.11	0.12	0.15	0.13
	SD	0.12	0.14	0.74	0.21	0.07	0.24	0.07	0.09	0.10	0.14
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.03	0.04	0.21	0.06	0.02	0.07	0.02	0.02	0.03	0.04
	Max	0.63	0.58	4.75	0.81	0.42	1.43	0.32	0.35	0.43	0.73
	Min	0.00	0.04	0.11	0.00	0.00	0.01	0.04	0.00	0.04	0.00
Methylene Chloride	Avg	0.64	0.24	0.32	0.17	0.28	0.24	0.91	0.17	2.00	0.48
	SD	1.97	0.14	0.21	0.08	0.43	0.18	4.98	0.08	3.15	1.83
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.55	0.04	0.06	0.02	0.12	0.05	1.36	0.02	0.88	0.49
	Max	13.79	0.86	1.16	0.44	2.56	1.05	36.83	0.45	17.07	13.59
	Min	0.08	0.08	0.07	0.08	0.06	0.00	0.07	0.08	0.10	0.07
Methyl t-Butyl Ether	Avg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



**Table IV-2** Ambient Concentrations (ppb) of Organic Gases at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Perchloroethylene	Avg	0.03	0.04	0.03	0.04	0.04	0.04	0.02	0.02	0.01	0.02
	SD	0.04	0.03	0.02	0.04	0.04	0.03	0.02	0.02	0.01	0.02
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00
	Max	0.17	0.15	0.10	0.26	0.23	0.12	0.07	0.10	0.05	0.07
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Styrene	Avg	0.07	0.06	0.03	0.08	0.01	0.05	0.03	0.03	0.04	0.07
	SD	0.14	0.08	0.04	0.12	0.02	0.06	0.05	0.03	0.04	0.09
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.04	0.02	0.01	0.03	0.00	0.02	0.01	0.01	0.01	0.02
	Max	0.85	0.33	0.16	0.49	0.10	0.25	0.26	0.11	0.14	0.32
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	Avg	0.87	1.32	1.15	1.42	0.84	1.61	0.74	0.97	0.81	0.89
	SD	0.83	0.96	0.70	1.51	0.49	1.21	0.52	0.68	0.50	0.83
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.23	0.26	0.20	0.40	0.13	0.33	0.14	0.18	0.14	0.22
	Max	4.60	3.78	3.76	6.15	2.92	5.67	2.33	2.81	2.71	3.58
	Min	0.15	0.30	0.19	0.21	0.11	0.10	0.19	0.19	0.24	0.12
Trichloroethylene	Avg	0.00	0.01	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00
	SD	0.01	0.01	0.03	0.01	0.01	0.01	0.00	0.01	0.01	0.01
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.03	0.07	0.10	0.03	0.04	0.03	0.01	0.07	0.03	0.07
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table IV-2** Ambient Concentrations (ppb) of Organic Gases at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
(m+p)-Xylenes	Avg	0.40	0.61	2.50	0.67	0.35	0.86	0.34	0.39	0.38	0.43
	SD	0.42	0.50	2.48	0.76	0.23	1.01	0.25	0.28	0.25	0.46
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.12	0.14	0.70	0.20	0.06	0.28	0.07	0.07	0.07	0.12
	Max	2.31	2.19	16.22	3.06	1.42	6.62	1.09	1.08	1.03	2.53
	Min	0.07	0.13	0.37	0.07	0.06	0.06	0.08	0.07	0.10	0.05
o-Xylene	Avg	0.12	0.17	0.52	0.19	0.09	0.23	0.09	0.11	0.12	0.12
	SD	0.14	0.16	0.52	0.25	0.06	0.32	0.08	0.08	0.09	0.15
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.04	0.04	0.15	0.07	0.02	0.09	0.02	0.02	0.02	0.04
	Max	0.79	0.72	3.17	1.01	0.30	2.03	0.34	0.34	0.35	0.86
	Min	0.01	0.02	0.07	0.02	0.00	0.02	0.00	0.00	0.02	0.00
Vinyl Chloride	Avg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N	51	55	51	57	53	53	54	57	52	57
	95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table IV-3** Ambient Concentrations (ng/m<sup>3</sup>) of TSP Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Antimony	Avg	2.45	5.07	6.06	3.97	4.50	4.95	3.28	6.09	3.98	2.76
	SD	2.18	3.74	4.36	3.36	1.98	3.63	2.87	4.43	3.39	2.50
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.56	0.98	1.14	0.87	0.53	0.98	0.75	1.15	0.89	0.66
	Max	11.40	21.40	19.00	13.90	9.01	16.60	11.80	30.40	23.70	11.40
	Min	0.04	1.18	0.80	0.92	0.46	0.81	0.00	1.38	0.96	0.51
Arsenic	Avg	0.23	0.44	0.64	0.50	0.91	0.56	0.39	0.56	0.76	0.50
	SD	0.14	0.22	0.41	0.36	0.43	0.35	0.24	0.25	0.81	0.32
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.04	0.06	0.11	0.09	0.12	0.10	0.06	0.06	0.21	0.09
	Max	0.52	0.96	2.10	2.08	2.35	1.67	1.02	1.19	6.33	1.46
	Min	0.00	0.00	0.14	0.00	0.21	0.11	0.00	0.01	0.16	0.07
Barium	Avg	29.42	57.33	67.12	46.28	69.70	55.60	43.39	61.06	58.49	56.95
	SD	26.62	39.88	48.40	31.21	55.09	35.39	29.78	36.98	54.08	38.66
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	6.87	10.48	12.61	8.13	14.75	9.56	7.76	9.55	14.21	10.16
	Max	159.00	216.00	216.00	139.00	306.00	158.00	115.00	162.00	371.00	159.00
	Min	1.05	14.00	9.77	12.40	11.20	15.70	3.53	16.10	6.80	8.61
Beryllium	Avg	0.02	0.01	0.02	0.01	0.03	0.01	0.01	0.02	0.03	0.02
	SD	0.03	0.01	0.02	0.02	0.03	0.01	0.01	0.02	0.03	0.02
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
	Max	0.15	0.05	0.08	0.09	0.10	0.05	0.06	0.08	0.23	0.09
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table IV-3** Ambient Concentrations (ng/m<sup>3</sup>) of TSP Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Cadmium	Avg	0.05	0.12	0.25	0.15	0.28	0.17	0.21	0.11	0.11	0.11
	SD	0.05	0.12	0.83	0.16	0.22	0.16	0.44	0.10	0.12	0.10
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.01	0.03	0.22	0.04	0.06	0.04	0.11	0.02	0.03	0.03
	Max	0.20	0.65	6.50	0.70	1.45	0.76	3.19	0.59	0.84	0.42
	Min	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
Calcium	Avg	640	903	1133	986	2332	1022	879	1149	2324	1303
	SD	584	554	852	613	2181	581	645	770	2072	988
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	151	145	222	159	583	157	168	198	544	259
	Max	3540	2880	4610	3090	11200	3420	3340	3800	9220	4640
	Min	103	169	248	257	325	330	96	211	230	157
Cesium	Avg	0.04	0.06	0.07	0.06	0.13	0.06	0.06	0.07	0.12	0.08
	SD	0.03	0.04	0.05	0.04	0.11	0.04	0.04	0.04	0.12	0.05
	N	41	39	40	40	39	40	41	42	39	41
	95% CI	0.01	0.01	0.02	0.01	0.04	0.01	0.01	0.01	0.04	0.02
	Max	0.13	0.16	0.26	0.20	0.63	0.21	0.19	0.22	0.67	0.23
	Min	0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.01	0.01
Chromium	Avg	1.91	3.15	3.74	3.66	5.54	5.28	3.72	3.53	4.19	3.36
	SD	0.97	1.56	1.54	2.33	3.38	7.44	6.05	1.54	4.14	1.77
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.25	0.41	0.40	0.61	0.90	2.01	1.58	0.40	1.09	0.47
	Max	4.60	7.94	6.92	13.10	19.90	49.50	47.70	8.17	31.50	8.83
	Min	0.37	0.88	0.48	1.05	0.99	1.19	0.28	1.08	0.40	0.49

**Table IV-3** Ambient Concentrations (ng/m<sup>3</sup>) of TSP Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Chromium Hexavalent	Avg	0.03	0.04	0.07	0.11	0.04	0.10	0.04	0.05	0.04	0.03
	SD	0.02	0.03	0.06	0.14	0.03	0.24	0.04	0.03	0.04	0.03
	N	60	57	59	60	58	55	60	61	59	58
	95% CI	0.00	0.01	0.02	0.04	0.01	0.07	0.01	0.01	0.01	0.01
	Max	0.09	0.19	0.39	0.85	0.12	1.80	0.20	0.17	0.25	0.14
	Min	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.00	0.00
Cobalt	Avg	0.20	0.48	0.42	0.41	0.79	0.46	0.36	0.46	0.64	0.56
	SD	0.15	0.34	0.21	0.24	0.43	0.32	0.23	0.24	0.52	0.54
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.04	0.09	0.05	0.06	0.11	0.09	0.06	0.06	0.14	0.14
	Max	0.66	1.92	1.00	1.04	1.96	1.74	0.98	1.26	3.57	3.70
	Min	0.00	0.00	0.00	0.00	0.13	0.14	0.00	0.05	0.06	0.08
Copper	Avg	17.35	38.05	42.18	29.62	42.48	49.69	31.98	46.86	33.45	31.65
	SD	15.74	26.35	32.87	20.14	28.48	40.28	59.06	34.38	26.87	35.46
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	4.06	6.93	8.56	5.25	7.62	10.89	15.38	8.88	7.06	9.32
	Max	74.10	127.00	160.00	87.40	147.00	261.00	459.00	140.00	162.00	251.00
	Min	1.12	7.55	5.69	9.70	4.73	9.03	2.60	8.04	4.53	4.50
Iron	Avg	613	1157	1424	1153	2727	1244	1037	1474	2148	1495
	SD	613	691	1042	701	2421	770	792	969	1888	1145
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	158	182	272	183	648	208	206	250	496	301
	Max	4050	3310	5560	3000	11600	3660	3920	4470	9440	5730
	Min	43	215	192	216	344	367	57	222	149	152

**Table IV-3** Ambient Concentrations (ng/m<sup>3</sup>) of TSP Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Lead	Avg	2.11	5.27	7.34	6.24	9.80	9.46	4.39	5.89	6.21	5.83
	SD	1.28	2.84	3.35	4.10	4.79	10.76	2.31	2.43	4.52	5.90
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.33	0.75	0.87	1.07	1.28	2.91	0.60	0.63	1.19	1.55
	Max	6.84	16.80	15.60	20.10	19.30	81.70	13.00	12.60	32.30	43.30
	Min	0.03	1.28	1.62	2.20	1.43	2.81	0.00	1.68	1.31	1.22
Manganese	Avg	8.32	15.21	19.20	18.62	51.97	22.73	14.37	21.16	32.99	21.28
	SD	5.42	8.36	8.91	12.69	30.04	20.89	8.30	9.94	25.08	13.18
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	1.40	2.20	2.32	3.31	8.04	5.65	2.16	2.57	6.59	3.47
	Max	28.30	40.20	38.80	77.50	120.00	103.00	42.60	40.30	178.00	61.70
	Min	0.80	3.30	3.92	3.99	6.63	6.37	0.13	3.68	2.58	2.84
Molybdenum	Avg	0.83	1.81	3.36	1.90	2.13	2.39	1.74	1.66	1.39	1.58
	SD	0.63	1.13	2.61	1.42	1.78	2.62	1.66	1.09	1.25	1.35
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.16	0.30	0.68	0.37	0.48	0.71	0.43	0.28	0.33	0.35
	Max	2.84	5.27	12.60	6.62	9.78	17.00	7.25	5.88	8.48	7.35
	Min	0.17	0.46	0.25	0.35	0.36	0.56	0.08	0.42	0.24	0.35
Nickel	Avg	1.74	3.90	3.37	4.06	4.05	5.40	3.59	4.47	3.35	3.73
	SD	1.03	7.66	3.65	2.60	2.28	6.98	2.65	2.66	2.48	2.10
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.27	2.01	0.95	0.68	0.61	1.89	0.69	0.69	0.65	0.55
	Max	5.80	44.50	29.40	13.70	13.37	50.00	14.80	17.50	14.62	13.00
	Min	0.27	0.56	0.75	0.99	0.33	1.45	0.04	1.06	0.31	0.59

**Table IV-3** Ambient Concentrations (ng/m<sup>3</sup>) of TSP Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Potassium	Avg	250	320	382	398	812	371	357	454	985	475
	SD	217	191	284	237	814	224	269	318	964	356
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	56	50	74	62	218	61	70	82	253	94
	Max	1150	998	1490	1240	4420	1350	1350	1470	4170	1920
	Min	6	79	63	82	85	90	0	87	83	61
Rubidium	Avg	0.62	1.13	1.11	1.16	2.24	1.14	0.93	1.24	2.18	1.44
	SD	0.37	0.72	0.66	0.68	1.47	0.66	0.58	0.75	1.52	1.00
	N	41	39	40	40	39	40	41	42	39	41
	95% CI	0.12	0.23	0.21	0.22	0.48	0.21	0.18	0.23	0.49	0.32
	Max	1.63	3.24	3.41	2.77	5.77	3.39	2.07	3.18	5.57	4.48
	Min	0.10	0.18	0.18	0.16	0.33	0.24	0.00	0.00	0.20	0.15
Selenium	Avg	0.44	0.54	0.95	0.80	0.75	1.67	0.76	0.98	0.73	0.63
	SD	0.31	0.39	0.65	0.72	0.45	1.96	1.19	0.67	0.66	0.68
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.08	0.10	0.17	0.19	0.12	0.53	0.31	0.17	0.17	0.18
	Max	1.46	1.73	2.52	5.21	2.14	12.60	9.26	3.32	4.06	5.19
	Min	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00
Strontium	Avg	7.27	10.90	16.11	10.86	17.82	11.91	9.60	12.73	20.14	15.56
	SD	6.31	6.36	11.47	6.13	15.57	6.91	6.32	7.92	17.34	11.69
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	1.63	1.67	2.99	1.60	4.17	1.87	1.65	2.05	4.56	3.07
	Max	37.60	34.00	58.80	33.00	75.30	40.50	28.50	36.90	83.80	56.00
	Min	0.28	2.61	2.11	2.28	2.79	3.43	1.14	2.90	1.79	2.55

**Table IV-3** Ambient Concentrations (ng/m<sup>3</sup>) of TSP Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Tin	Avg	1.89	5.26	6.50	2.86	3.97	5.83	3.25	20.04	2.89	2.55
	SD	1.53	3.42	5.36	2.01	3.26	6.42	4.51	71.12	2.35	1.95
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.40	0.90	1.40	0.52	0.87	1.73	1.18	18.37	0.62	0.51
	Max	7.70	18.40	31.10	8.93	17.70	33.50	32.80	549.00	13.20	8.63
	Min	0.13	1.07	0.93	0.80	0.27	0.83	0.60	0.84	0.82	0.57
Titanium	Avg	30.00	53.92	59.71	58.81	145.75	56.17	51.55	71.50	132.87	73.14
	SD	28.48	32.44	43.60	34.92	133.47	34.11	42.50	49.85	119.57	60.83
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	7.35	8.53	11.36	9.10	35.73	9.22	11.07	12.87	31.43	15.99
	Max	183.00	147.00	221.00	145.00	636.00	169.00	215.00	238.00	554.00	324.00
	Min	3.19	9.58	7.62	10.30	15.10	14.80	4.49	7.87	7.27	5.83
Uranium	Avg	0.04	0.05	0.06	0.04	0.10	0.04	0.04	0.06	0.10	0.05
	SD	0.05	0.04	0.05	0.04	0.09	0.03	0.03	0.07	0.10	0.05
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.03	0.01
	Max	0.24	0.18	0.25	0.24	0.54	0.11	0.19	0.46	0.61	0.29
	Min	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Vanadium	Avg	1.81	2.10	2.64	3.14	5.63	2.67	3.53	3.11	4.72	4.58
	SD	2.82	1.20	1.95	1.73	5.44	1.50	3.06	2.32	4.48	3.38
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	0.73	0.32	0.51	0.45	1.46	0.40	0.80	0.60	1.18	0.89
	Max	21.10	6.09	10.00	8.50	28.10	8.08	12.30	11.10	22.30	18.00
	Min	0.06	0.47	0.28	0.91	0.54	0.44	0.00	0.55	0.37	0.72



**Table IV-3** Ambient Concentrations (ng/m<sup>3</sup>) of TSP Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Zinc	Avg	43.40	53.74	72.38	54.11	109.69	74.11	61.05	73.01	64.27	71.74
	SD	44.44	32.47	52.21	32.62	91.64	57.20	50.33	57.39	44.44	49.45
	N	60	58	59	59	56	55	59	60	58	58
	95% CI	11.48	8.53	13.60	8.50	24.53	15.46	13.11	14.82	11.68	13.00
	Max	219.00	162.00	264.00	138.00	496.00	305.00	267.00	351.00	250.00	225.00
	Min	1.46	11.10	14.00	15.60	20.10	29.10	11.40	16.60	13.70	11.20

**Table IV-4** Ambient Concentrations (ng/m<sup>3</sup>) of PM<sub>2.5</sub> Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Aluminum	Avg	42.20	44.59	48.17	41.20	71.22	48.18	44.90	50.57	56.42	64.18
	SD	38.01	28.33	43.45	42.68	47.98	48.41	45.42	33.07	39.90	57.61
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	9.90	7.45	11.32	10.93	12.39	12.84	11.63	8.69	10.30	14.75
	Max	176.00	119.00	214.00	286.00	286.00	317.00	285.00	130.00	161.00	290.00
	Min	0.00	0.00	0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00
Antimony	Avg	19.61	19.52	18.83	18.44	17.63	20.02	19.36	15.16	19.48	18.77
	SD	17.72	16.36	17.38	14.41	14.76	15.45	17.37	15.04	15.69	16.95
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	4.62	4.30	4.53	3.69	3.81	4.10	4.45	3.95	4.05	4.34
	Max	72.00	69.00	59.00	54.00	59.00	53.00	61.00	55.00	65.00	63.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arsenic	Avg	0.15	0.21	0.08	0.34	0.20	0.18	0.41	0.28	0.33	0.11
	SD	0.74	0.64	0.47	1.21	0.71	0.57	1.60	0.89	1.08	0.49
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	0.19	0.17	0.12	0.31	0.18	0.15	0.41	0.24	0.28	0.12
	Max	4.00	3.00	3.00	8.00	4.00	2.00	11.00	4.00	6.00	3.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barium	Avg	33.76	41.81	45.37	34.15	35.98	33.65	35.87	38.50	30.58	35.21
	SD	34.39	32.18	32.91	29.89	28.31	23.68	30.17	28.67	25.70	28.17
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	8.96	8.46	8.57	7.65	7.31	6.28	7.72	7.54	6.64	7.21
	Max	206.00	173.00	135.00	115.00	97.00	96.00	118.00	89.00	89.00	107.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table IV-4** Ambient Concentrations (ng/m<sup>3</sup>) of PM<sub>2.5</sub> Components at the Fixed Sites

Pollutant	Period	Statistic	Measurement Site									
			AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Cadmium		Avg	13.86	12.57	13.83	13.93	12.93	13.67	14.57	13.00	13.33	11.61
		SD	6.51	7.47	5.93	6.94	5.64	5.96	5.98	6.90	7.11	5.67
		N	59	58	59	61	60	57	61	58	60	61
		95% CI	1.70	1.96	1.55	1.78	1.46	1.58	1.53	1.81	1.84	1.45
		Max	33.00	31.00	30.00	41.00	26.00	29.00	31.00	27.00	34.00	32.00
		Min	0.70	0.00	2.00	0.00	2.00	4.00	4.00	0.00	3.00	0.00
Calcium		Avg	45.00	55.34	53.14	41.77	91.97	51.04	45.99	51.21	72.80	79.72
		SD	30.88	33.50	44.96	41.22	74.81	33.52	33.18	32.84	51.41	64.83
		N	59	58	59	61	60	57	61	58	60	61
		95% CI	8.05	8.81	11.71	10.55	19.32	8.89	8.50	8.63	13.28	16.60
		Max	166.00	132.00	298.00	259.00	424.00	142.00	194.00	138.00	260.00	288.00
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Cesium		Avg	58.29	62.21	55.11	62.87	55.88	63.75	57.33	58.84	64.18	58.61
		SD	29.65	40.44	34.34	38.45	30.21	36.70	36.16	33.43	33.38	33.81
		N	59	58	59	61	60	57	61	58	60	61
		95% CI	7.73	10.63	8.95	9.84	7.80	9.73	9.26	8.79	8.62	8.66
		Max	156.00	153.00	143.00	145.00	146.00	160.00	160.00	142.00	144.00	141.00
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chromium Total		Avg	1.15	1.64	1.68	1.86	1.09	5.42	3.28	1.60	1.49	1.64
		SD	1.43	1.95	2.86	1.86	1.10	11.01	9.86	2.51	1.80	2.33
		N	59	58	59	61	60	57	61	58	60	61
		95% CI	0.37	0.51	0.74	0.48	0.28	2.92	2.52	0.66	0.47	0.60
		Max	6.00	11.00	20.00	8.00	4.00	68.00	76.00	18.00	10.00	14.00
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table IV-4** Ambient Concentrations (ng/m<sup>3</sup>) of PM<sub>2.5</sub> Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Cobalt	Avg	0.81	0.83	0.59	0.61	0.68	0.73	0.72	0.52	0.61	0.62
	SD	0.97	1.28	1.07	0.92	1.00	1.17	0.94	0.84	0.92	0.91
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	0.25	0.34	0.28	0.23	0.26	0.31	0.24	0.22	0.24	0.23
	Max	3.00	5.00	7.00	4.00	5.00	4.00	4.00	3.00	4.00	4.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Copper	Avg	6.63	9.31	9.54	6.90	9.87	14.66	5.77	13.03	6.22	7.24
	SD	6.82	6.44	6.96	6.35	7.07	23.73	5.47	6.84	3.81	7.73
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	1.78	1.69	1.81	1.63	1.83	6.29	1.40	1.80	0.98	1.98
	Max	35.00	28.00	30.00	33.00	51.00	175.00	24.00	29.00	21.00	44.00
	Min	0.00	0.00	0.00	0.00	0.00	0.90	0.00	4.00	0.00	0.00
Iron	Avg	99	147	156	91	184	139	96	138	119	148
	SD	107	97	121	116	114	138	90	90	80	159
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	28	26	31	30	29	37	23	24	21	41
	Max	608	472	653	716	657	612	399	379	474	1060
	Min	2	41	20	14	31	24	23	39	25	19
Lead	Avg	6.04	6.05	6.56	6.92	8.15	7.84	7.00	5.97	6.61	6.69
	SD	3.78	3.65	3.57	4.50	4.60	3.97	3.96	4.00	4.18	5.75
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	0.99	0.96	0.93	1.15	1.19	1.05	1.02	1.05	1.08	1.47
	Max	17.00	14.00	14.00	17.00	17.00	18.00	18.00	18.00	17.00	33.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table IV-4** Ambient Concentrations (ng/m<sup>3</sup>) of PM<sub>2.5</sub> Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Manganese	Avg	3.31	2.38	4.51	2.64	5.49	6.94	3.52	4.73	2.83	3.32
	SD	5.29	3.83	5.72	3.99	7.80	14.18	4.94	5.88	4.49	5.17
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	1.38	1.01	1.49	1.02	2.01	3.76	1.26	1.54	1.16	1.32
	Max	23.00	14.00	22.00	14.00	32.00	82.00	16.00	23.00	17.00	18.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nickel	Avg	1.16	1.27	1.39	1.29	1.03	2.39	1.57	1.56	1.27	1.46
	SD	1.42	2.09	1.93	1.63	1.34	4.60	3.30	1.88	1.47	2.91
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	0.37	0.55	0.50	0.42	0.35	1.22	0.85	0.49	0.38	0.74
	Max	5.00	13.00	8.00	8.00	5.00	32.00	24.00	8.00	5.00	20.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phosphorous	Avg	14.96	18.16	19.42	17.66	18.09	20.21	16.13	17.72	17.16	16.85
	SD	13.14	15.75	15.86	14.09	15.66	16.46	13.81	13.81	13.93	12.62
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	3.42	4.14	4.13	3.61	4.04	4.37	3.54	3.63	3.60	3.23
	Max	48.00	64.00	69.00	54.00	55.00	74.00	60.00	46.00	52.00	49.00
	Min	0.00	0.00	0.00	0.00	0.00	0.40	0.05	0.00	0.00	0.00
Potassium	Avg	68.53	75.00	70.07	71.15	74.43	70.35	61.18	73.72	74.85	71.77
	SD	44.47	37.06	34.13	49.14	39.97	39.31	33.68	34.57	33.73	42.84
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	11.58	9.74	8.89	12.58	10.32	10.43	8.62	9.09	8.71	10.97
	Max	290.00	191.00	213.00	229.00	187.00	203.00	152.00	176.00	183.00	245.00
	Min	22.00	20.00	12.00	13.00	15.00	17.00	16.00	26.00	27.00	21.00

**Table IV-4** Ambient Concentrations (ng/m<sup>3</sup>) of PM<sub>2.5</sub> Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Rubidium	Avg	0.06	0.02	0.04	0.03	0.03	0.01	0.00	0.04	0.01	0.03
	SD	0.20	0.13	0.18	0.16	0.13	0.03	0.00	0.16	0.04	0.26
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	0.05	0.03	0.05	0.04	0.03	0.01	0.00	0.04	0.01	0.07
	Max	1.00	1.00	1.00	1.00	0.70	0.20	0.00	1.00	0.30	2.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Selenium	Avg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicon	Avg	80.85	102.09	100.56	79.57	160.83	103.30	82.16	95.07	129.85	134.56
	SD	68.66	62.49	79.89	99.73	109.70	83.73	89.60	60.15	82.56	119.39
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	17.89	16.42	20.81	25.53	28.33	22.21	22.94	15.81	21.32	30.57
	Max	300.00	268.00	399.00	664.00	615.00	398.00	552.00	223.00	352.00	567.00
	Min	0.00	8.00	0.00	0.00	7.00	3.00	0.00	14.00	2.00	11.00
Strontium	Avg	3.14	2.93	3.53	1.82	2.45	2.24	1.93	2.72	2.54	3.38
	SD	3.66	2.26	3.82	1.94	1.89	2.00	1.85	2.20	2.27	4.83
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	0.95	0.59	0.99	0.50	0.49	0.53	0.47	0.58	0.58	1.24
	Max	24.00	8.00	25.00	5.00	8.00	7.00	7.00	7.00	8.00	35.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Capture										

**Table IV-4** Ambient Concentrations (ng/m<sup>3</sup>) of PM<sub>2.5</sub> Components at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Sulfur	Avg	520	518	554	547	501	591	558	546	474	595
	SD	318	327	363	347	341	368	347	335	301	346
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	83	86	94	89	88	98	89	88	78	88
	Max	1320	1260	1720	1480	1350	1640	1470	1510	1100	1670
	Min	94	90	88	93	40	97	103	110	74	105
Tin	Avg	25.25	26.09	26.80	27.64	25.68	27.86	25.38	47.33	25.55	24.54
	SD	11.30	12.13	11.03	16.48	10.28	14.31	10.67	124.68	11.09	11.27
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	2.94	3.19	2.87	4.22	2.66	3.80	2.73	32.77	2.86	2.88
	Max	61.00	63.00	59.00	81.00	58.00	77.00	52.00	966.00	53.00	55.00
	Min	5.00	0.00	7.00	0.00	6.00	5.00	8.00	5.00	6.00	0.00
Titanium	Avg	5.85	8.01	8.81	6.80	8.34	7.18	8.67	8.17	5.98	9.62
	SD	5.68	5.43	6.49	8.40	7.05	6.22	13.06	6.88	4.52	13.83
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	1.48	1.43	1.69	2.15	1.82	1.65	3.34	1.81	1.17	3.54
	Max	32.00	24.00	30.00	45.00	34.00	29.00	55.00	30.00	26.00	77.00
	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uranium	Avg	10.60	10.60	10.42	11.33	10.45	10.02	10.92	10.74	11.52	11.49
	SD	7.16	7.49	7.11	8.41	7.34	7.43	7.66	7.99	8.32	8.10
	N	59	58	59	61	60	57	61	58	60	61
	95% CI	1.87	1.97	1.85	2.15	1.90	1.97	1.96	2.10	2.15	2.07
	Max	32.00	31.00	27.00	33.00	34.00	29.00	31.00	32.00	33.00	31.00
	Min	0.50	1.00	1.00	0.00	1.00	0.00	2.00	1.00	1.00	0.00

**Table IV-4** Ambient Concentrations (ng/m<sup>3</sup>) of PM<sub>2.5</sub> Components at the Fixed Sites

Pollutant	Period	Statistic	Measurement Site									
			AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
Vanadium		Avg	0.37	0.22	0.47	0.46	0.29	0.36	0.56	0.43	0.33	0.60
		SD	0.76	0.49	0.84	0.73	0.72	0.62	1.08	1.01	0.78	1.10
		N	59	58	59	61	60	57	61	58	60	61
		95% CI	0.20	0.13	0.22	0.19	0.18	0.16	0.28	0.27	0.20	0.28
		Max	4.00	2.00	3.00	3.00	4.00	2.00	4.00	6.00	4.00	5.00
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yttrium		Avg	1.12	0.93	1.04	1.04	1.08	1.32	0.93	0.94	1.50	1.28
		SD	1.51	1.16	1.26	1.25	1.25	1.35	1.05	1.11	1.62	1.59
		N	59	58	59	61	60	57	61	58	60	61
		95% CI	0.39	0.31	0.33	0.32	0.32	0.36	0.27	0.29	0.42	0.41
		Max	8.00	5.00	5.00	5.00	5.00	6.00	4.00	4.00	7.00	7.00
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zinc		Avg	21.42	9.26	11.05	10.23	24.34	19.44	13.76	17.82	10.44	12.58
		SD	40.93	7.62	11.19	12.37	17.10	31.54	15.84	44.42	11.09	14.73
		N	59	58	59	61	60	57	61	58	60	61
		95% CI	10.66	2.00	2.92	3.17	4.42	8.36	4.06	11.67	2.86	3.77
		Max	210.00	36.00	58.00	61.00	72.00	189.00	72.00	332.00	56.00	64.00
		Min	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00



**Table IV-5** Ambient PM<sub>10</sub> Carbon Concentrations (ug/m<sup>3</sup>) at the Fixed Sites

Pollutant	Period	Statistic	Measurement Site									
			AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
PM <sub>10</sub> Mass		Avg	22.46	26.16	27.30	26.26	35.64	27.37	22.40	27.32	33.45	30.02
		SD	7.19	8.44	8.84	8.87	15.37	8.25	7.25	8.74	13.14	13.01
		N	61	57	60	57	61	52	60	50	60	51
		95% CI	1.84	2.24	2.28	2.35	3.94	2.29	1.87	2.48	3.39	3.66
		Max	43.00	40.00	45.00	52.00	63.00	41.00	36.00	48.00	66.00	78.00
		Min	8.00	6.00	7.00	9.00	7.00	8.00	6.00	11.00	11.00	8.00
PM <sub>10</sub> Elemental Carbon		Avg	1.17	1.74	1.67	1.50	1.74	1.65	1.29	1.87	1.48	1.78
		SD	0.87	1.02	0.93	1.21	0.81	1.05	0.88	0.99	0.75	1.32
		N	61	57	60	57	61	52	58	50	59	51
		95% CI	0.22	0.27	0.24	0.32	0.21	0.29	0.23	0.28	0.20	0.37
		Max	4.76	4.54	4.24	4.68	3.98	5.15	3.69	4.39	3.96	5.98
		Min	0.26	0.54	0.52	0.29	0.33	0.66	0.30	0.58	0.57	0.38
PM <sub>10</sub> Organic Carbon		Avg	3.71	4.86	4.44	4.44	5.32	4.54	3.64	4.82	5.29	4.45
		SD	1.52	1.79	1.48	2.36	1.73	1.75	1.57	1.57	1.58	2.45
		N	61	57	60	57	61	52	58	50	59	51
		95% CI	0.39	0.47	0.38	0.63	0.44	0.49	0.41	0.45	0.41	0.69
		Max	9.32	10.30	8.22	12.10	9.27	9.26	7.96	9.28	9.17	12.20
		Min	1.79	2.38	2.13	1.84	2.05	2.44	1.70	2.43	3.02	1.60
PM <sub>10</sub> Total Carbon		Avg	4.88	6.60	6.12	5.94	7.05	6.19	4.92	6.69	6.77	6.23
		SD	2.35	2.76	2.37	3.53	2.46	2.75	2.42	2.50	2.14	3.71
		N	61	57	60	57	61	52	58	50	59	51
		95% CI	0.60	0.73	0.61	0.94	0.63	0.76	0.64	0.71	0.56	1.04
		Max	14.10	14.20	12.40	16.80	12.90	13.60	11.60	13.70	13.10	18.20
		Min	2.05	3.06	2.64	2.27	2.42	3.27	2.06	3.01	3.68	1.98

**Table IV-6** Ambient PM<sub>2.5</sub> Carbon Concentrations (ug/m<sup>3</sup>) at the Fixed Sites

Pollutant	Statistic	Measurement Site									
		AN	BU	LA	CP	SB	HP	NLB	PR	RU	WLB
PM <sub>2.5</sub> Mass	Avg	12.37	14.40	14.14	12.91	14.33	14.40	12.95	14.21	13.83	13.21
	SD	4.45	5.00	4.94	4.96	6.20	5.62	4.47	4.75	5.58	4.58
	N	59	59	59	61	60	57	61	58	61	60
	95% CI	1.16	1.30	1.29	1.27	1.60	1.49	1.14	1.25	1.43	1.18
	Max	31.64	27.89	27.37	29.59	34.08	35.40	27.05	29.52	30.27	28.11
	Min	5.47	3.31	4.13	2.58	4.45	4.33	4.34	6.61	4.75	4.96
PM <sub>2.5</sub> Elemental Carbon	Avg	0.90	1.32	1.23	1.06	1.36	1.28	0.90	1.40	1.11	1.13
	SD	0.90	1.07	0.87	1.11	0.88	1.08	0.97	0.97	0.69	1.18
	N	59	58	60	61	60	59	61	59	61	61
	95% CI	0.24	0.28	0.22	0.28	0.23	0.28	0.25	0.25	0.18	0.30
	Max	3.90	4.60	3.80	4.70	5.00	5.40	3.50	4.70	3.40	4.90
	Min	0.08	0.18	0.30	0.12	0.02	0.06	0.02	0.13	0.24	0.08
PM <sub>2.5</sub> Organic Carbon	Avg	3.74	4.81	4.47	4.00	4.84	4.68	3.59	4.68	4.62	3.67
	SD	1.53	1.75	1.48	1.97	1.83	1.85	1.84	1.63	1.50	1.94
	N	59	58	60	61	60	59	61	59	61	61
	95% CI	0.40	0.46	0.38	0.50	0.47	0.48	0.47	0.42	0.38	0.50
	Max	8.00	9.50	8.10	10.00	11.00	10.00	11.00	10.00	9.80	9.90
	Min	1.50	2.10	1.90	1.50	1.50	1.90	1.20	2.00	1.90	1.00
PM <sub>2.5</sub> Total Carbon	Avg	4.64	6.12	5.70	5.06	6.20	5.97	4.47	6.06	5.75	4.82
	SD	2.33	2.70	2.22	3.05	2.62	2.84	2.70	2.42	1.94	3.11
	N	59	58	60	61	60	59	61	59	61	61
	95% CI	0.61	0.71	0.57	0.78	0.68	0.74	0.69	0.63	0.50	0.80
	Max	12.00	14.00	12.00	15.00	17.00	15.00	14.00	14.00	12.00	15.00
	Min	1.70	2.30	2.30	1.60	1.50	2.20	1.20	2.20	2.20	1.30