

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

CLIENT # S061
REPORT # 21-356

SUBMITTED BY:
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Case Narrative

Date: August 26, 2021

General Information

Client: Sacramento Metropolitan Air Quality Management District
Client Number: S061
Report Number: 21-356
Sample Description: 47mm Teflon filters
Sample Numbers: 21-T1695 – 21-T1698, 21-T1702 – 21-T1714, 21-T2536 – 21-T2540, 21-T2552,
21-T2554

Analysis

Analytes: Particulate Mass, XRF Metals (Na – Pb)
Analytical Protocols: Gravimetry (PM_{2.5}): 40 CFR 50 Appendix L (10/17/06 version)
Gravimetry (PM₁₀): 40 CFR 50 Appendix J (8/7/87 version)
X-Ray Fluorescence: EPA IO-3.3 (June 1999 version)
Analytical Notes: No problems were encountered during the analyses. Results have **not** been blank corrected.
QA/QC Review: All of the data have been reviewed by the analysts performing the analyses and the project manager. All of the quality control and sample-specific information in this package is complete and meets or exceeds the minimum requirements for acceptability.
Comments: If you have any questions or concerns regarding this analysis, please feel free to contact the project manager.
Disclaimer: This report shall not be reproduced, except in full, without the written approval of the laboratory. The results only represent that of the samples as received into the laboratory.


Project Manager
Paul Duda

8/26/21

Date

Lab ID: 21-T1697
Site: VFW PM2.5
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	124.	± 10.			17.22	± 1.634
XRF						
Na	2.226	± 0.3932	1.795	± 0.3486	0.3092	± 0.0568
Mg	1.201	± 0.1119	0.9687	± 0.1193	0.1668	± 0.0176
Al	3.313	± 0.1729	2.672	± 0.2567	0.4602	± 0.0333
Si	8.080	± 0.4102	6.516	± 0.6209	1.1222	± 0.0800
P	0.1153	± 0.0158	0.0930	± 0.0148	0.0160	± 0.0023
S	2.687	± 0.1367	2.167	± 0.2066	0.3732	± 0.0266
Cl	0.7402	± 0.0441	0.5969	± 0.0598	0.1028	± 0.0080
K	1.122	± 0.0576	0.9049	± 0.0865	0.1558	± 0.0112
Ca	1.593	± 0.0802	1.285	± 0.1222	0.2213	± 0.0157
* Sc	0.0000	± 0.0102	0.0000	± 0.0082	0.0000	± 0.0014
Ti	0.2802	± 0.0147	0.2260	± 0.0217	0.0389	± 0.0028
* V	0.0000	± 0.0068	0.0000	± 0.0055	0.0000	± 0.0009
* Cr	0.0000	± 0.0045	0.0000	± 0.0036	0.0000	± 0.0006
Mn	0.0475	± 0.0124	0.0383	± 0.0105	0.0066	± 0.0018
Fe	2.939	± 0.1469	2.370	± 0.2249	0.4082	± 0.0289
* Co	0.0000	± 0.0102	0.0000	± 0.0082	0.0000	± 0.0014
* Ni	0.0090	± 0.0034	0.0073	± 0.0028	0.0013	± 0.0005
Cu	0.0667	± 0.0045	0.0538	± 0.0057	0.0093	± 0.0008
Zn	0.1254	± 0.0068	0.1012	± 0.0098	0.0174	± 0.0013
Ga	0.0102	± 0.0023	0.0082	± 0.0019	0.0014	± 0.0003
As	0.0124	± 0.0034	0.0100	± 0.0029	0.0017	± 0.0005
* Se	0.0000	± 0.0023	0.0000	± 0.0018	0.0000	± 0.0003
Br	0.0203	± 0.0034	0.0164	± 0.0030	0.0028	± 0.0005
Rb	0.0102	± 0.0023	0.0082	± 0.0019	0.0014	± 0.0003
Sr	0.0305	± 0.0034	0.0246	± 0.0034	0.0042	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0036	0.0000	± 0.0006
Zr	0.0158	± 0.0045	0.0128	± 0.0038	0.0022	± 0.0006
Nb	0.0294	± 0.0068	0.0237	± 0.0058	0.0041	± 0.0010
* Mo	0.0000	± 0.0079	0.0000	± 0.0064	0.0000	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0164	0.0000	± 0.0028
* Cd	0.0508	± 0.0215	0.0410	± 0.0176	0.0071	± 0.0030
* In	0.0350	± 0.0249	0.0282	± 0.0202	0.0049	± 0.0035
* Sn	0.0565	± 0.0373	0.0456	± 0.0303	0.0078	± 0.0052
* Sb	0.0226	± 0.0418	0.0182	± 0.0337	0.0031	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0082	0.0000	± 0.0014
* Ba	0.0000	± 0.0237	0.0000	± 0.0191	0.0000	± 0.0033
* La	0.0000	± 0.0158	0.0000	± 0.0128	0.0000	± 0.0022
* Ce	0.0350	± 0.0124	0.0282	± 0.0103	0.0049	± 0.0017
* Sm	0.0000	± 0.0136	0.0000	± 0.0109	0.0000	± 0.0019
* Eu	0.0056	± 0.0249	0.0046	± 0.0201	0.0008	± 0.0035
* Tb	0.0000	± 0.0565	0.0000	± 0.0456	0.0000	± 0.0078
* Hf	0.0090	± 0.0102	0.0073	± 0.0082	0.0013	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0073	0.0000	± 0.0013
* W	0.0124	± 0.0056	0.0100	± 0.0046	0.0017	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0036	0.0000	± 0.0006
* Au	0.0000	± 0.0056	0.0000	± 0.0046	0.0000	± 0.0008
* Hg	0.0000	± 0.0079	0.0000	± 0.0064	0.0000	± 0.0011
* Pb	0.0170	± 0.0068	0.0137	± 0.0056	0.0024	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1695
Site: Impact PM2.5
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	84.	± 10.			11.67	± 1.506
XRF						
Na	1.890	± 0.3831	2.251	± 0.5289	0.2626	± 0.0548
Mg	0.7368	± 0.0972	0.8771	± 0.1558	0.1023	± 0.0144
Al	2.237	± 0.1198	2.664	± 0.3477	0.3108	± 0.0228
Si	5.068	± 0.2565	6.033	± 0.7805	0.7039	± 0.0501
P	0.1311	± 0.0158	0.1560	± 0.0265	0.0182	± 0.0024
S	2.376	± 0.1198	2.829	± 0.3657	0.3301	± 0.0234
Cl	0.3695	± 0.0294	0.4399	± 0.0630	0.0513	± 0.0048
K	0.6904	± 0.0362	0.8219	± 0.1069	0.0959	± 0.0069
Ca	1.122	± 0.0565	1.336	± 0.1727	0.1558	± 0.0111
* Sc	0.0000	± 0.0090	0.0000	± 0.0108	0.0000	± 0.0013
Ti	0.2057	± 0.0113	0.2448	± 0.0321	0.0286	± 0.0021
* V	0.0000	± 0.0056	0.0000	± 0.0067	0.0000	± 0.0008
* Cr	0.0000	± 0.0045	0.0000	± 0.0054	0.0000	± 0.0006
Mn	0.0508	± 0.0090	0.0605	± 0.0130	0.0071	± 0.0013
Fe	2.017	± 0.1006	2.401	± 0.3099	0.2801	± 0.0198
* Co	0.0000	± 0.0090	0.0000	± 0.0108	0.0000	± 0.0013
* Ni	0.0090	± 0.0034	0.0108	± 0.0042	0.0013	± 0.0005
Cu	0.0588	± 0.0045	0.0700	± 0.0099	0.0082	± 0.0007
Zn	0.1040	± 0.0056	0.1238	± 0.0162	0.0144	± 0.0011
Ga	0.0090	± 0.0023	0.0108	± 0.0030	0.0013	± 0.0003
* As	0.0000	± 0.0034	0.0000	± 0.0040	0.0000	± 0.0005
* Se	0.0000	± 0.0023	0.0000	± 0.0027	0.0000	± 0.0003
Br	0.0203	± 0.0034	0.0242	± 0.0050	0.0028	± 0.0005
Rb	0.0192	± 0.0023	0.0229	± 0.0038	0.0027	± 0.0003
Sr	0.0113	± 0.0034	0.0135	± 0.0043	0.0016	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0054	0.0000	± 0.0006
* Zr	0.0079	± 0.0045	0.0094	± 0.0055	0.0011	± 0.0006
* Nb	0.0000	± 0.0056	0.0000	± 0.0067	0.0000	± 0.0008
* Mo	0.0170	± 0.0079	0.0202	± 0.0097	0.0024	± 0.0011
* Ag	0.0350	± 0.0215	0.0417	± 0.0260	0.0049	± 0.0030
* Cd	0.0000	± 0.0215	0.0000	± 0.0256	0.0000	± 0.0030
* In	0.0305	± 0.0339	0.0363	± 0.0406	0.0042	± 0.0047
* Sn	0.0881	± 0.0384	0.1049	± 0.0474	0.0122	± 0.0054
* Sb	0.0000	± 0.0418	0.0000	± 0.0498	0.0000	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0121	0.0000	± 0.0014
* Ba	0.0000	± 0.0226	0.0000	± 0.0269	0.0000	± 0.0031
* La	0.0000	± 0.0136	0.0000	± 0.0161	0.0000	± 0.0019
* Ce	0.0000	± 0.0124	0.0000	± 0.0148	0.0000	± 0.0017
* Sm	0.0000	± 0.0136	0.0000	± 0.0161	0.0000	± 0.0019
* Eu	0.0000	± 0.0249	0.0000	± 0.0296	0.0000	± 0.0035
* Tb	0.0000	± 0.0463	0.0000	± 0.0552	0.0000	± 0.0064
* Hf	0.0068	± 0.0102	0.0081	± 0.0121	0.0009	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0108	0.0000	± 0.0013
* W	0.0000	± 0.0056	0.0000	± 0.0067	0.0000	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0054	0.0000	± 0.0006
* Au	0.0068	± 0.0056	0.0081	± 0.0068	0.0009	± 0.0008
* Hg	0.0000	± 0.0079	0.0000	± 0.0094	0.0000	± 0.0011
* Pb	0.0090	± 0.0068	0.0108	± 0.0082	0.0013	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1706
Site: Florin PM2.5
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	134.	± 10.			18.61	± 1.672
XRF						
Na	2.662	± 0.4283	1.987	± 0.3523	0.3698	± 0.0623
Mg	0.9888	± 0.1175	0.7379	± 0.1036	0.1373	± 0.0177
Al	2.455	± 0.1322	1.832	± 0.1686	0.3410	± 0.0251
Si	5.995	± 0.3051	4.474	± 0.4041	0.8326	± 0.0594
P	0.1379	± 0.0181	0.1029	± 0.0155	0.0191	± 0.0027
S	4.270	± 0.2158	3.187	± 0.2872	0.5931	± 0.0422
Cl	1.057	± 0.0554	0.7885	± 0.0719	0.1467	± 0.0106
K	0.9311	± 0.0486	0.6949	± 0.0633	0.1293	± 0.0093
Ca	1.177	± 0.0588	0.8787	± 0.0789	0.1635	± 0.0116
Sc	0.0384	± 0.0090	0.0287	± 0.0071	0.0053	± 0.0013
Ti	0.1627	± 0.0102	0.1214	± 0.0118	0.0226	± 0.0018
* V	0.0124	± 0.0056	0.0093	± 0.0043	0.0017	± 0.0008
* Cr	0.0000	± 0.0045	0.0000	± 0.0034	0.0000	± 0.0006
Mn	0.0373	± 0.0124	0.0278	± 0.0095	0.0052	± 0.0017
Fe	2.109	± 0.1051	1.574	± 0.1412	0.2929	± 0.0207
* Co	0.0000	± 0.0090	0.0000	± 0.0067	0.0000	± 0.0013
* Ni	0.0034	± 0.0034	0.0025	± 0.0025	0.0005	± 0.0005
Cu	0.0633	± 0.0045	0.0472	± 0.0049	0.0088	± 0.0008
Zn	0.1503	± 0.0079	0.1122	± 0.0102	0.0209	± 0.0015
Ga	0.0113	± 0.0023	0.0084	± 0.0018	0.0016	± 0.0003
As	0.0102	± 0.0034	0.0076	± 0.0026	0.0014	± 0.0005
* Se	0.0056	± 0.0023	0.0042	± 0.0017	0.0008	± 0.0003
Br	0.0294	± 0.0034	0.0219	± 0.0030	0.0041	± 0.0005
* Rb	0.0090	± 0.0034	0.0067	± 0.0026	0.0013	± 0.0005
Sr	0.0203	± 0.0034	0.0152	± 0.0028	0.0028	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0034	0.0000	± 0.0006
* Zr	0.0102	± 0.0045	0.0076	± 0.0034	0.0014	± 0.0006
* Nb	0.0068	± 0.0068	0.0051	± 0.0051	0.0009	± 0.0009
* Mo	0.0000	± 0.0079	0.0000	± 0.0059	0.0000	± 0.0011
* Ag	0.0373	± 0.0203	0.0278	± 0.0153	0.0052	± 0.0028
* Cd	0.0000	± 0.0215	0.0000	± 0.0160	0.0000	± 0.0030
* In	0.0588	± 0.0249	0.0439	± 0.0188	0.0082	± 0.0035
* Sn	0.0904	± 0.0373	0.0675	± 0.0283	0.0126	± 0.0052
* Sb	0.0000	± 0.0418	0.0000	± 0.0312	0.0000	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0076	0.0000	± 0.0014
Ba	0.1797	± 0.0215	0.1341	± 0.0189	0.0250	± 0.0032
* La	0.0328	± 0.0136	0.0245	± 0.0103	0.0046	± 0.0019
* Ce	0.0000	± 0.0124	0.0000	± 0.0093	0.0000	± 0.0017
* Sm	0.0000	± 0.0147	0.0000	± 0.0110	0.0000	± 0.0020
* Eu	0.0294	± 0.0249	0.0219	± 0.0186	0.0041	± 0.0035
* Tb	0.0000	± 0.0486	0.0000	± 0.0363	0.0000	± 0.0067
* Hf	0.0079	± 0.0102	0.0059	± 0.0076	0.0011	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0067	0.0000	± 0.0013
* W	0.0079	± 0.0056	0.0059	± 0.0042	0.0011	± 0.0008
* Ir	0.0000	± 0.0068	0.0000	± 0.0051	0.0000	± 0.0009
* Au	0.0000	± 0.0056	0.0000	± 0.0042	0.0000	± 0.0008
* Hg	0.0000	± 0.0079	0.0000	± 0.0059	0.0000	± 0.0011
* Pb	0.0000	± 0.0068	0.0000	± 0.0051	0.0000	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1709
Site: SUMP50 PM2.5
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	48. ± 10.				6.667	± 1.428
XRF						
Na	1.803	± 0.3774	3.757	± 1.109	0.2505	± 0.0539
Mg	0.5006	± 0.0927	1.043	± 0.2906	0.0695	± 0.0133
Al	1.063	± 0.0667	2.215	± 0.4820	0.1477	± 0.0118
Si	2.010	± 0.1028	4.188	± 0.8984	0.2792	± 0.0200
P	0.0588	± 0.0147	0.1224	± 0.0398	0.0082	± 0.0021
S	2.314	± 0.1164	4.821	± 1.033	0.3214	± 0.0228
Cl	0.1661	± 0.0249	0.3461	± 0.0888	0.0231	± 0.0036
K	0.4622	± 0.0260	0.9629	± 0.2078	0.0642	± 0.0048
Ca	0.5356	± 0.0282	1.116	± 0.2398	0.0744	± 0.0054
* Sc	0.0000	± 0.0068	0.0000	± 0.0141	0.0000	± 0.0009
Ti	0.0667	± 0.0079	0.1389	± 0.0333	0.0093	± 0.0012
* V	0.0068	± 0.0056	0.0141	± 0.0121	0.0009	± 0.0008
* Cr	0.0000	± 0.0045	0.0000	± 0.0094	0.0000	± 0.0006
Mn	0.0294	± 0.0090	0.0612	± 0.0227	0.0041	± 0.0013
Fe	0.9164	± 0.0463	1.909	± 0.4093	0.1273	± 0.0091
* Co	0.0000	± 0.0056	0.0000	± 0.0118	0.0000	± 0.0008
* Ni	0.0034	± 0.0034	0.0071	± 0.0072	0.0005	± 0.0005
Cu	0.0554	± 0.0034	0.1154	± 0.0250	0.0077	± 0.0006
Zn	0.0848	± 0.0045	0.1766	± 0.0380	0.0118	± 0.0009
* Ga	0.0034	± 0.0023	0.0071	± 0.0049	0.0005	± 0.0003
* As	0.0000	± 0.0034	0.0000	± 0.0071	0.0000	± 0.0005
* Se	0.0011	± 0.0023	0.0024	± 0.0047	0.0002	± 0.0003
Br	0.0192	± 0.0034	0.0400	± 0.0109	0.0027	± 0.0005
Rb	0.0102	± 0.0023	0.0212	± 0.0065	0.0014	± 0.0003
Sr	0.0113	± 0.0034	0.0235	± 0.0086	0.0016	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0094	0.0000	± 0.0006
Zr	0.0170	± 0.0045	0.0353	± 0.0119	0.0024	± 0.0006
* Nb	0.0000	± 0.0056	0.0000	± 0.0118	0.0000	± 0.0008
* Mo	0.0000	± 0.0079	0.0000	± 0.0165	0.0000	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0424	0.0000	± 0.0028
* Cd	0.0158	± 0.0215	0.0330	± 0.0453	0.0022	± 0.0030
* In	0.0000	± 0.0339	0.0000	± 0.0706	0.0000	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.0777	0.0000	± 0.0052
* Sb	0.0452	± 0.0418	0.0942	± 0.0893	0.0063	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0212	0.0000	± 0.0014
Ba	0.1480	± 0.0158	0.3084	± 0.0722	0.0206	± 0.0024
La	0.0497	± 0.0102	0.1036	± 0.0302	0.0069	± 0.0015
* Ce	0.0158	± 0.0124	0.0330	± 0.0268	0.0022	± 0.0017
* Sm	0.0000	± 0.0147	0.0000	± 0.0306	0.0000	± 0.0020
* Eu	0.0034	± 0.0249	0.0071	± 0.0518	0.0005	± 0.0035
* Tb	0.0000	± 0.0328	0.0000	± 0.0683	0.0000	± 0.0046
* Hf	0.0147	± 0.0102	0.0306	± 0.0221	0.0020	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0188	0.0000	± 0.0013
* W	0.0000	± 0.0079	0.0000	± 0.0165	0.0000	± 0.0011
* Ir	0.0000	± 0.0045	0.0000	± 0.0094	0.0000	± 0.0006
* Au	0.0068	± 0.0056	0.0141	± 0.0121	0.0009	± 0.0008
* Hg	0.0000	± 0.0068	0.0000	± 0.0141	0.0000	± 0.0009
* Pb	0.0011	± 0.0068	0.0024	± 0.0141	0.0002	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1702
Site: ST56 PM2.5
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	52.	± 10.			7.222	± 1.435
XRF						
Na	1.666	± 0.3763	3.203	± 0.9503	0.2313	± 0.0535
Mg	0.3831	± 0.0994	0.7367	± 0.2380	0.0532	± 0.0141
Al	0.8803	± 0.0588	1.693	± 0.3446	0.1223	± 0.0102
Si	1.695	± 0.0881	3.260	± 0.6494	0.2354	± 0.0170
* P	0.0260	± 0.0147	0.0500	± 0.0298	0.0036	± 0.0020
S	2.275	± 0.1141	4.374	± 0.8694	0.3159	± 0.0224
Cl	0.2599	± 0.0260	0.4998	± 0.1083	0.0361	± 0.0040
K	0.4215	± 0.0237	0.8106	± 0.1624	0.0585	± 0.0044
Ca	0.4000	± 0.0215	0.7693	± 0.1536	0.0556	± 0.0041
* Sc	0.0000	± 0.0068	0.0000	± 0.0130	0.0000	± 0.0009
Ti	0.0554	± 0.0056	0.1065	± 0.0232	0.0077	± 0.0009
* V	0.0056	± 0.0056	0.0109	± 0.0111	0.0008	± 0.0008
* Cr	0.0000	± 0.0045	0.0000	± 0.0087	0.0000	± 0.0006
* Mn	0.0045	± 0.0124	0.0087	± 0.0240	0.0006	± 0.0017
Fe	0.8735	± 0.0441	1.680	± 0.3340	0.1213	± 0.0086
* Co	0.0000	± 0.0056	0.0000	± 0.0109	0.0000	± 0.0008
* Ni	0.0000	± 0.0034	0.0000	± 0.0065	0.0000	± 0.0005
Cu	0.0565	± 0.0034	0.1087	± 0.0219	0.0078	± 0.0006
Zn	0.0938	± 0.0056	0.1804	± 0.0363	0.0130	± 0.0010
* Ga	0.0056	± 0.0023	0.0109	± 0.0048	0.0008	± 0.0003
* As	0.0011	± 0.0034	0.0022	± 0.0065	0.0002	± 0.0005
* Se	0.0000	± 0.0023	0.0000	± 0.0043	0.0000	± 0.0003
* Br	0.0079	± 0.0034	0.0152	± 0.0071	0.0011	± 0.0005
* Rb	0.0034	± 0.0034	0.0065	± 0.0066	0.0005	± 0.0005
* Sr	0.0068	± 0.0034	0.0130	± 0.0070	0.0009	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0087	0.0000	± 0.0006
Zr	0.0305	± 0.0045	0.0587	± 0.0142	0.0042	± 0.0007
* Nb	0.0000	± 0.0068	0.0000	± 0.0130	0.0000	± 0.0009
* Mo	0.0000	± 0.0079	0.0000	± 0.0152	0.0000	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0391	0.0000	± 0.0028
* Cd	0.0000	± 0.0215	0.0000	± 0.0413	0.0000	± 0.0030
* In	0.0000	± 0.0339	0.0000	± 0.0652	0.0000	± 0.0047
* Sn	0.0079	± 0.0384	0.0152	± 0.0739	0.0011	± 0.0053
* Sb	0.0282	± 0.0418	0.0543	± 0.0811	0.0039	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0196	0.0000	± 0.0014
Ba	0.1028	± 0.0158	0.1978	± 0.0487	0.0143	± 0.0023
La	0.0610	± 0.0102	0.1173	± 0.0299	0.0085	± 0.0015
Ce	0.0373	± 0.0090	0.0717	± 0.0222	0.0052	± 0.0013
* Sm	0.0000	± 0.0147	0.0000	± 0.0282	0.0000	± 0.0020
* Eu	0.0000	± 0.0249	0.0000	± 0.0478	0.0000	± 0.0035
* Tb	0.0000	± 0.0328	0.0000	± 0.0630	0.0000	± 0.0046
* Hf	0.0000	± 0.0102	0.0000	± 0.0196	0.0000	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0174	0.0000	± 0.0013
* W	0.0000	± 0.0056	0.0000	± 0.0109	0.0000	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0087	0.0000	± 0.0006
* Au	0.0011	± 0.0056	0.0022	± 0.0109	0.0002	± 0.0008
* Hg	0.0147	± 0.0079	0.0282	± 0.0162	0.0020	± 0.0011
* Pb	0.0102	± 0.0068	0.0196	± 0.0136	0.0014	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1707
Site: CRC PM2.5
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³		
Gravimetry							
Net Mass	43. ± 10.				5.972	± 1.421	
XRF							
Na	1.609	± 0.4012	3.742	± 1.276	0.2235	± 0.0568	
Mg	0.4475	± 0.0994	1.041	± 0.3347	0.0622	± 0.0142	
Al	0.9300	± 0.0633	2.163	± 0.5241	0.1292	± 0.0109	
Si	1.827	± 0.0938	4.249	± 1.012	0.2538	± 0.0182	
* P	0.0429	± 0.0147	0.0999	± 0.0413	0.0060	± 0.0021	
S	2.574	± 0.1300	5.986	± 1.425	0.3575	± 0.0254	
Cl	0.1435	± 0.0237	0.3337	± 0.0952	0.0199	± 0.0034	
K	0.4576	± 0.0260	1.064	± 0.2548	0.0636	± 0.0048	
Ca	0.3842	± 0.0203	0.8935	± 0.2131	0.0534	± 0.0039	
* Sc	0.0000	± 0.0068	0.0000	± 0.0158	0.0000	± 0.0009	
Ti	0.0475	± 0.0056	0.1104	± 0.0288	0.0066	± 0.0009	
V	0.0203	± 0.0045	0.0473	± 0.0152	0.0028	± 0.0006	
* Cr	0.0000	± 0.0045	0.0000	± 0.0105	0.0000	± 0.0006	
* Mn	0.0215	± 0.0090	0.0499	± 0.0240	0.0030	± 0.0013	
Fe	0.7548	± 0.0384	1.755	± 0.4179	0.1048	± 0.0075	
* Co	0.0011	± 0.0056	0.0026	± 0.0132	0.0002	± 0.0008	
Ni	0.0124	± 0.0034	0.0289	± 0.0104	0.0017	± 0.0005	
Cu	0.0463	± 0.0034	0.1077	± 0.0263	0.0064	± 0.0006	
Zn	0.0927	± 0.0056	0.2155	± 0.0518	0.0129	± 0.0010	
* Ga	0.0000	± 0.0034	0.0000	± 0.0079	0.0000	± 0.0005	
* As	0.0000	± 0.0034	0.0000	± 0.0079	0.0000	± 0.0005	
* Se	0.0000	± 0.0023	0.0000	± 0.0053	0.0000	± 0.0003	
* Br	0.0045	± 0.0034	0.0105	± 0.0083	0.0006	± 0.0005	
* Rb	0.0079	± 0.0034	0.0184	± 0.0090	0.0011	± 0.0005	
Sr	0.0136	± 0.0034	0.0315	± 0.0108	0.0019	± 0.0005	
* Y	0.0000	± 0.0045	0.0000	± 0.0105	0.0000	± 0.0006	
* Zr	0.0113	± 0.0045	0.0263	± 0.0122	0.0016	± 0.0006	
* Nb	0.0000	± 0.0068	0.0000	± 0.0158	0.0000	± 0.0009	
* Mo	0.0136	± 0.0079	0.0315	± 0.0198	0.0019	± 0.0011	
* Ag	0.0000	± 0.0203	0.0000	± 0.0473	0.0000	± 0.0028	
* Cd	0.0000	± 0.0215	0.0000	± 0.0499	0.0000	± 0.0030	
* In	0.0396	± 0.0249	0.0920	± 0.0616	0.0055	± 0.0035	
* Sn	0.0113	± 0.0373	0.0263	± 0.0869	0.0016	± 0.0052	
* Sb	0.0000	± 0.0418	0.0000	± 0.0972	0.0000	± 0.0058	
* Cs	0.0000	± 0.0102	0.0000	± 0.0237	0.0000	± 0.0014	
Ba	0.0915	± 0.0113	0.2129	± 0.0560	0.0127	± 0.0017	
La	0.0859	± 0.0102	0.1997	± 0.0521	0.0119	± 0.0015	
Ce	0.0452	± 0.0090	0.1051	± 0.0322	0.0063	± 0.0013	
* Sm	0.0000	± 0.0147	0.0000	± 0.0342	0.0000	± 0.0020	
* Eu	0.0000	± 0.0249	0.0000	± 0.0578	0.0000	± 0.0035	
* Tb	0.0000	± 0.0294	0.0000	± 0.0683	0.0000	± 0.0041	
* Hf	0.0000	± 0.0102	0.0000	± 0.0237	0.0000	± 0.0014	
* Ta	0.0260	± 0.0090	0.0604	± 0.0253	0.0036	± 0.0013	
* W	0.0079	± 0.0056	0.0184	± 0.0138	0.0011	± 0.0008	
* Ir	0.0000	± 0.0045	0.0000	± 0.0105	0.0000	± 0.0006	
* Au	0.0000	± 0.0056	0.0000	± 0.0131	0.0000	± 0.0008	
* Hg	0.0045	± 0.0079	0.0105	± 0.0186	0.0006	± 0.0011	
* Pb	0.0136	± 0.0068	0.0315	± 0.0174	0.0019	± 0.0009	

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1704
Site: VFW PM10
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	215.	± 10.			29.86	± 2.039
XRF						
Na	3.066	± 0.4486	1.426	± 0.2189	0.4258	± 0.0658
Mg	2.095	± 0.1492	0.9744	± 0.0829	0.2910	± 0.0253
Al	6.778	± 0.3526	3.152	± 0.2200	0.9414	± 0.0679
Si	17.12	± 0.8803	7.963	± 0.5521	2.3777	± 0.1705
P	0.2079	± 0.0192	0.0967	± 0.0100	0.0289	± 0.0030
S	2.695	± 0.1379	1.254	± 0.0867	0.3743	± 0.0268
Cl	0.5876	± 0.0373	0.2733	± 0.0215	0.0816	± 0.0066
K	1.932	± 0.0983	0.8987	± 0.0620	0.2684	± 0.0191
Ca	2.882	± 0.1446	1.340	± 0.0917	0.4002	± 0.0284
* Sc	0.0000	± 0.0136	0.0000	± 0.0063	0.0000	± 0.0019
Ti	0.4893	± 0.0260	0.2276	± 0.0161	0.0680	± 0.0050
V	0.0418	± 0.0068	0.0194	± 0.0033	0.0058	± 0.0010
* Cr	0.0000	± 0.0045	0.0000	± 0.0021	0.0000	± 0.0006
Mn	0.1367	± 0.0147	0.0636	± 0.0074	0.0190	± 0.0023
Fe	6.168	± 0.3085	2.869	± 0.1959	0.8566	± 0.0606
* Co	0.0000	± 0.0147	0.0000	± 0.0068	0.0000	± 0.0020
Ni	0.0170	± 0.0034	0.0079	± 0.0016	0.0024	± 0.0005
Cu	0.0927	± 0.0056	0.0431	± 0.0033	0.0129	± 0.0010
Zn	0.1808	± 0.0090	0.0841	± 0.0057	0.0251	± 0.0018
Ga	0.0090	± 0.0023	0.0042	± 0.0011	0.0013	± 0.0003
* As	0.0000	± 0.0034	0.0000	± 0.0016	0.0000	± 0.0005
Se	0.0068	± 0.0023	0.0032	± 0.0011	0.0009	± 0.0003
Br	0.0260	± 0.0034	0.0121	± 0.0017	0.0036	± 0.0005
Rb	0.0124	± 0.0034	0.0058	± 0.0016	0.0017	± 0.0005
Sr	0.0282	± 0.0034	0.0131	± 0.0017	0.0039	± 0.0005
* Y	0.0056	± 0.0045	0.0026	± 0.0021	0.0008	± 0.0006
Zr	0.0508	± 0.0056	0.0237	± 0.0028	0.0071	± 0.0009
* Nb	0.0000	± 0.0056	0.0000	± 0.0026	0.0000	± 0.0008
Mo	0.0384	± 0.0079	0.0179	± 0.0038	0.0053	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0095	0.0000	± 0.0028
* Cd	0.0000	± 0.0215	0.0000	± 0.0100	0.0000	± 0.0030
* In	0.0407	± 0.0260	0.0189	± 0.0121	0.0056	± 0.0036
* Sn	0.0000	± 0.0373	0.0000	± 0.0173	0.0000	± 0.0052
* Sb	0.1130	± 0.0418	0.0526	± 0.0196	0.0157	± 0.0059
* Cs	0.0000	± 0.0136	0.0000	± 0.0063	0.0000	± 0.0019
Ba	0.3345	± 0.0350	0.1556	± 0.0178	0.0465	± 0.0054
La	0.1458	± 0.0203	0.0678	± 0.0100	0.0202	± 0.0030
Ce	0.0734	± 0.0158	0.0342	± 0.0075	0.0102	± 0.0023
* Sm	0.0000	± 0.0147	0.0000	± 0.0068	0.0000	± 0.0020
* Eu	0.0023	± 0.0249	0.0011	± 0.0116	0.0003	± 0.0035
* Tb	0.0000	± 0.0814	0.0000	± 0.0378	0.0000	± 0.0113
* Hf	0.0102	± 0.0102	0.0047	± 0.0047	0.0014	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0042	0.0000	± 0.0013
* W	0.0023	± 0.0079	0.0011	± 0.0037	0.0003	± 0.0011
* Ir	0.0000	± 0.0045	0.0000	± 0.0021	0.0000	± 0.0006
* Au	0.0023	± 0.0056	0.0011	± 0.0026	0.0003	± 0.0008
* Hg	0.0079	± 0.0079	0.0037	± 0.0037	0.0011	± 0.0011
* Pb	0.0079	± 0.0068	0.0037	± 0.0032	0.0011	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1696
Site: Impact PM10
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	146.	± 10.			20.28	± 1.720
XRF						
Na	2.180	± 0.4226	1.493	± 0.3070	0.3027	± 0.0606
Mg	1.502	± 0.1266	1.029	± 0.1117	0.2086	± 0.0204
Al	4.331	± 0.2249	2.967	± 0.2550	0.6016	± 0.0434
Si	10.49	± 0.5345	7.183	± 0.6133	1.4566	± 0.1040
P	0.2430	± 0.0192	0.1664	± 0.0174	0.0337	± 0.0032
S	2.668	± 0.1356	1.827	± 0.1559	0.3705	± 0.0264
Cl	0.4949	± 0.0339	0.3390	± 0.0328	0.0687	± 0.0058
K	1.250	± 0.0633	0.8560	± 0.0729	0.1736	± 0.0124
Ca	2.059	± 0.1040	1.410	± 0.1200	0.2860	± 0.0203
* Sc	0.0000	± 0.0124	0.0000	± 0.0085	0.0000	± 0.0017
Ti	0.4023	± 0.0203	0.2755	± 0.0235	0.0559	± 0.0040
* V	0.0147	± 0.0068	0.0101	± 0.0047	0.0020	± 0.0009
* Cr	0.0000	± 0.0045	0.0000	± 0.0031	0.0000	± 0.0006
Mn	0.0780	± 0.0124	0.0534	± 0.0093	0.0108	± 0.0018
Fe	4.071	± 0.2034	2.789	± 0.2364	0.5655	± 0.0400
* Co	0.0000	± 0.0113	0.0000	± 0.0077	0.0000	± 0.0016
* Ni	0.0068	± 0.0034	0.0046	± 0.0023	0.0009	± 0.0005
Cu	0.0848	± 0.0045	0.0580	± 0.0050	0.0118	± 0.0009
Zn	0.1356	± 0.0068	0.0929	± 0.0079	0.0188	± 0.0013
Ga	0.0068	± 0.0023	0.0046	± 0.0016	0.0009	± 0.0003
* As	0.0034	± 0.0034	0.0023	± 0.0023	0.0005	± 0.0005
* Se	0.0000	± 0.0023	0.0000	± 0.0015	0.0000	± 0.0003
Br	0.0113	± 0.0034	0.0077	± 0.0024	0.0016	± 0.0005
* Rb	0.0045	± 0.0034	0.0031	± 0.0023	0.0006	± 0.0005
Sr	0.0215	± 0.0034	0.0147	± 0.0025	0.0030	± 0.0005
* Y	0.0068	± 0.0045	0.0046	± 0.0031	0.0009	± 0.0006
Zr	0.0305	± 0.0045	0.0209	± 0.0034	0.0042	± 0.0007
* Nb	0.0000	± 0.0056	0.0000	± 0.0039	0.0000	± 0.0008
* Mo	0.0124	± 0.0079	0.0085	± 0.0054	0.0017	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0139	0.0000	± 0.0028
Cd	0.0655	± 0.0215	0.0449	± 0.0150	0.0091	± 0.0030
* In	0.0000	± 0.0339	0.0000	± 0.0232	0.0000	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.0255	0.0000	± 0.0052
* Sb	0.0000	± 0.0418	0.0000	± 0.0286	0.0000	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0070	0.0000	± 0.0014
* Ba	0.0000	± 0.0294	0.0000	± 0.0201	0.0000	± 0.0041
* La	0.0000	± 0.0181	0.0000	± 0.0124	0.0000	± 0.0025
* Ce	0.0000	± 0.0147	0.0000	± 0.0101	0.0000	± 0.0020
* Sm	0.0000	± 0.0147	0.0000	± 0.0101	0.0000	± 0.0020
* Eu	0.0000	± 0.0249	0.0000	± 0.0170	0.0000	± 0.0035
* Tb	0.0000	± 0.0655	0.0000	± 0.0449	0.0000	± 0.0091
* Hf	0.0000	± 0.0102	0.0000	± 0.0070	0.0000	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0062	0.0000	± 0.0013
* W	0.0079	± 0.0056	0.0054	± 0.0039	0.0011	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0031	0.0000	± 0.0006
* Au	0.0000	± 0.0056	0.0000	± 0.0039	0.0000	± 0.0008
* Hg	0.0011	± 0.0079	0.0008	± 0.0054	0.0002	± 0.0011
* Pb	0.0023	± 0.0068	0.0015	± 0.0046	0.0003	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1708
Site: Florin PM10
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	138.	± 10.			19.17	± 1.687
XRF						
Na	2.597	± 0.4531	1.882	± 0.3555	0.3607	± 0.0655
Mg	1.246	± 0.1243	0.9032	± 0.1113	0.1731	± 0.0193
Al	3.981	± 0.2079	2.885	± 0.2577	0.5529	± 0.0400
Si	9.814	± 0.4995	7.112	± 0.6297	1.3631	± 0.0972
P	0.1661	± 0.0181	0.1204	± 0.0157	0.0231	± 0.0028
S	2.616	± 0.1333	1.896	± 0.1679	0.3633	± 0.0259
Cl	0.6430	± 0.0396	0.4659	± 0.0443	0.0893	± 0.0071
K	1.200	± 0.0610	0.8696	± 0.0770	0.1667	± 0.0119
Ca	2.018	± 0.1017	1.462	± 0.1291	0.2803	± 0.0199
* Sc	0.0000	± 0.0124	0.0000	± 0.0090	0.0000	± 0.0017
Ti	0.3639	± 0.0192	0.2637	± 0.0236	0.0505	± 0.0037
* V	0.0068	± 0.0068	0.0049	± 0.0049	0.0009	± 0.0009
* Cr	0.0000	± 0.0045	0.0000	± 0.0033	0.0000	± 0.0006
Mn	0.0768	± 0.0124	0.0557	± 0.0099	0.0107	± 0.0018
Fe	3.536	± 0.1774	2.562	± 0.2258	0.4911	± 0.0348
* Co	0.0000	± 0.0113	0.0000	± 0.0082	0.0000	± 0.0016
* Ni	0.0068	± 0.0034	0.0049	± 0.0025	0.0009	± 0.0005
Cu	0.0712	± 0.0045	0.0516	± 0.0050	0.0099	± 0.0008
Zn	0.1379	± 0.0079	0.0999	± 0.0092	0.0191	± 0.0015
Ga	0.0090	± 0.0023	0.0066	± 0.0017	0.0013	± 0.0003
* As	0.0000	± 0.0034	0.0000	± 0.0025	0.0000	± 0.0005
* Se	0.0000	± 0.0023	0.0000	± 0.0016	0.0000	± 0.0003
Br	0.0362	± 0.0034	0.0262	± 0.0031	0.0050	± 0.0005
Rb	0.0102	± 0.0034	0.0074	± 0.0025	0.0014	± 0.0005
Sr	0.0192	± 0.0034	0.0139	± 0.0027	0.0027	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0033	0.0000	± 0.0006
Zr	0.0192	± 0.0056	0.0139	± 0.0042	0.0027	± 0.0008
* Nb	0.0136	± 0.0068	0.0098	± 0.0050	0.0019	± 0.0009
* Mo	0.0000	± 0.0079	0.0000	± 0.0057	0.0000	± 0.0011
* Ag	0.0418	± 0.0215	0.0303	± 0.0157	0.0058	± 0.0030
* Cd	0.0000	± 0.0215	0.0000	± 0.0156	0.0000	± 0.0030
* In	0.0000	± 0.0339	0.0000	± 0.0246	0.0000	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.0270	0.0000	± 0.0052
* Sb	0.0000	± 0.0418	0.0000	± 0.0303	0.0000	± 0.0058
* Cs	0.0000	± 0.0136	0.0000	± 0.0098	0.0000	± 0.0019
* Ba	0.0000	± 0.0282	0.0000	± 0.0205	0.0000	± 0.0039
* La	0.0000	± 0.0181	0.0000	± 0.0131	0.0000	± 0.0025
Ce	0.0565	± 0.0147	0.0409	± 0.0111	0.0078	± 0.0021
* Sm	0.0000	± 0.0147	0.0000	± 0.0106	0.0000	± 0.0020
* Eu	0.0226	± 0.0249	0.0164	± 0.0181	0.0031	± 0.0035
* Tb	0.0000	± 0.0622	0.0000	± 0.0450	0.0000	± 0.0086
* Hf	0.0090	± 0.0102	0.0066	± 0.0074	0.0013	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0066	0.0000	± 0.0013
* W	0.0034	± 0.0079	0.0025	± 0.0057	0.0005	± 0.0011
* Ir	0.0000	± 0.0068	0.0000	± 0.0049	0.0000	± 0.0009
* Au	0.0124	± 0.0056	0.0090	± 0.0041	0.0017	± 0.0008
* Hg	0.0124	± 0.0068	0.0090	± 0.0050	0.0017	± 0.0009
Pb	0.0294	± 0.0079	0.0213	± 0.0059	0.0041	± 0.0011

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1710
Site: SUMP50 PM10
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	113.	± 10.			15.69	± 1.595
XRF						
Na	2.384	± 0.4215	2.110	± 0.4171	0.3312	± 0.0608
Mg	1.211	± 0.1164	1.072	± 0.1400	0.1682	± 0.0182
Al	4.051	± 0.2102	3.585	± 0.3678	0.5626	± 0.0405
Si	9.513	± 0.4836	8.419	± 0.8592	1.3213	± 0.0942
P	0.1074	± 0.0170	0.0950	± 0.0172	0.0149	± 0.0025
S	2.545	± 0.1288	2.252	± 0.2296	0.3534	± 0.0251
Cl	0.3966	± 0.0305	0.3510	± 0.0412	0.0551	± 0.0051
K	1.166	± 0.0599	1.032	± 0.1056	0.1620	± 0.0116
Ca	1.592	± 0.0802	1.409	± 0.1435	0.2211	± 0.0157
* Sc	0.0000	± 0.0102	0.0000	± 0.0090	0.0000	± 0.0014
Ti	0.2961	± 0.0170	0.2620	± 0.0276	0.0411	± 0.0031
V	0.0249	± 0.0068	0.0220	± 0.0063	0.0035	± 0.0010
* Cr	0.0000	± 0.0045	0.0000	± 0.0040	0.0000	± 0.0006
Mn	0.0723	± 0.0124	0.0640	± 0.0124	0.0100	± 0.0018
Fe	3.320	± 0.1661	2.938	± 0.2987	0.4611	± 0.0326
* Co	0.0000	± 0.0113	0.0000	± 0.0100	0.0000	± 0.0016
Ni	0.0147	± 0.0034	0.0130	± 0.0032	0.0020	± 0.0005
Cu	0.0757	± 0.0045	0.0670	± 0.0072	0.0105	± 0.0008
Zn	0.1277	± 0.0068	0.1130	± 0.0117	0.0177	± 0.0013
* Ga	0.0056	± 0.0023	0.0050	± 0.0020	0.0008	± 0.0003
* As	0.0068	± 0.0034	0.0060	± 0.0030	0.0009	± 0.0005
* Se	0.0034	± 0.0023	0.0030	± 0.0020	0.0005	± 0.0003
Br	0.0147	± 0.0034	0.0130	± 0.0032	0.0020	± 0.0005
Rb	0.0124	± 0.0034	0.0110	± 0.0032	0.0017	± 0.0005
* Sr	0.0068	± 0.0034	0.0060	± 0.0030	0.0009	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0040	0.0000	± 0.0006
* Zr	0.0124	± 0.0045	0.0110	± 0.0041	0.0017	± 0.0006
* Nb	0.0000	± 0.0068	0.0000	± 0.0060	0.0000	± 0.0009
Mo	0.0452	± 0.0090	0.0400	± 0.0087	0.0063	± 0.0013
* Ag	0.0249	± 0.0203	0.0220	± 0.0181	0.0035	± 0.0028
* Cd	0.0215	± 0.0226	0.0190	± 0.0201	0.0030	± 0.0031
* In	0.0000	± 0.0339	0.0000	± 0.0300	0.0000	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.0330	0.0000	± 0.0052
* Sb	0.0655	± 0.0418	0.0580	± 0.0374	0.0091	± 0.0058
* Cs	0.0000	± 0.0136	0.0000	± 0.0120	0.0000	± 0.0019
Ba	0.3413	± 0.0316	0.3020	± 0.0387	0.0474	± 0.0050
* La	0.0497	± 0.0170	0.0440	± 0.0155	0.0069	± 0.0024
* Ce	0.0305	± 0.0170	0.0270	± 0.0152	0.0042	± 0.0024
* Sm	0.0000	± 0.0158	0.0000	± 0.0140	0.0000	± 0.0022
* Eu	0.0000	± 0.0249	0.0000	± 0.0220	0.0000	± 0.0035
* Tb	0.0000	± 0.0588	0.0000	± 0.0520	0.0000	± 0.0082
* Hf	0.0000	± 0.0102	0.0000	± 0.0090	0.0000	± 0.0014
* Ta	0.0260	± 0.0090	0.0230	± 0.0083	0.0036	± 0.0013
* W	0.0158	± 0.0056	0.0140	± 0.0052	0.0022	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0040	0.0000	± 0.0006
* Au	0.0068	± 0.0056	0.0060	± 0.0050	0.0009	± 0.0008
* Hg	0.0068	± 0.0068	0.0060	± 0.0060	0.0009	± 0.0009
* Pb	0.0000	± 0.0068	0.0000	± 0.0060	0.0000	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1703
Site: ST56 PM10
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	188.	± 10.			26.11	± 1.906
XRF						
Na	2.866	± 0.4418	1.524	± 0.2486	0.3980	± 0.0645
Mg	2.003	± 0.1390	1.066	± 0.0932	0.2783	± 0.0238
Al	6.281	± 0.3254	3.341	± 0.2481	0.8723	± 0.0628
Si	15.56	± 0.7978	8.277	± 0.6115	2.1611	± 0.1548
P	0.1638	± 0.0181	0.0872	± 0.0107	0.0228	± 0.0028
S	2.674	± 0.1367	1.422	± 0.1049	0.3713	± 0.0266
Cl	0.6238	± 0.0396	0.3318	± 0.0275	0.0866	± 0.0070
K	1.670	± 0.0848	0.8884	± 0.0653	0.2320	± 0.0165
Ca	3.197	± 0.1605	1.700	± 0.1244	0.4440	± 0.0315
* Sc	0.0000	± 0.0136	0.0000	± 0.0072	0.0000	± 0.0019
Ti	0.5311	± 0.0271	0.2825	± 0.0208	0.0738	± 0.0053
* V	0.0034	± 0.0079	0.0018	± 0.0042	0.0005	± 0.0011
* Cr	0.0000	± 0.0045	0.0000	± 0.0024	0.0000	± 0.0006
Mn	0.0994	± 0.0136	0.0529	± 0.0077	0.0138	± 0.0020
Fe	5.974	± 0.2983	3.178	± 0.2318	0.8298	± 0.0586
* Co	0.0000	± 0.0147	0.0000	± 0.0078	0.0000	± 0.0020
Ni	0.0124	± 0.0034	0.0066	± 0.0018	0.0017	± 0.0005
Cu	0.1345	± 0.0068	0.0715	± 0.0052	0.0187	± 0.0013
Zn	0.2158	± 0.0113	0.1148	± 0.0086	0.0300	± 0.0022
Ga	0.0068	± 0.0023	0.0036	± 0.0012	0.0009	± 0.0003
* As	0.0011	± 0.0034	0.0006	± 0.0018	0.0002	± 0.0005
* Se	0.0023	± 0.0023	0.0012	± 0.0012	0.0003	± 0.0003
Br	0.0282	± 0.0034	0.0150	± 0.0020	0.0039	± 0.0005
Rb	0.0113	± 0.0034	0.0060	± 0.0018	0.0016	± 0.0005
Sr	0.0294	± 0.0034	0.0156	± 0.0020	0.0041	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0024	0.0000	± 0.0006
Zr	0.0441	± 0.0056	0.0234	± 0.0033	0.0061	± 0.0008
* Nb	0.0000	± 0.0056	0.0000	± 0.0030	0.0000	± 0.0008
* Mo	0.0000	± 0.0079	0.0000	± 0.0042	0.0000	± 0.0011
* Ag	0.0226	± 0.0203	0.0120	± 0.0108	0.0031	± 0.0028
Cd	0.0644	± 0.0215	0.0343	± 0.0116	0.0089	± 0.0030
* In	0.0000	± 0.0249	0.0000	± 0.0132	0.0000	± 0.0035
* Sn	0.0452	± 0.0384	0.0240	± 0.0205	0.0063	± 0.0053
* Sb	0.0000	± 0.0418	0.0000	± 0.0222	0.0000	± 0.0058
* Cs	0.0000	± 0.0136	0.0000	± 0.0072	0.0000	± 0.0019
* Ba	0.0000	± 0.0339	0.0000	± 0.0180	0.0000	± 0.0047
* La	0.0000	± 0.0203	0.0000	± 0.0108	0.0000	± 0.0028
* Ce	0.0000	± 0.0170	0.0000	± 0.0090	0.0000	± 0.0024
* Sm	0.0000	± 0.0147	0.0000	± 0.0078	0.0000	± 0.0020
* Eu	0.0237	± 0.0350	0.0126	± 0.0186	0.0033	± 0.0049
* Tb	0.0000	± 0.0791	0.0000	± 0.0421	0.0000	± 0.0110
* Hf	0.0000	± 0.0102	0.0000	± 0.0054	0.0000	± 0.0014
* Ta	0.0339	± 0.0124	0.0180	± 0.0067	0.0047	± 0.0017
* W	0.0023	± 0.0079	0.0012	± 0.0042	0.0003	± 0.0011
* Ir	0.0034	± 0.0045	0.0018	± 0.0024	0.0005	± 0.0006
* Au	0.0102	± 0.0056	0.0054	± 0.0030	0.0014	± 0.0008
* Hg	0.0158	± 0.0079	0.0084	± 0.0042	0.0022	± 0.0011
* Pb	0.0203	± 0.0079	0.0108	± 0.0042	0.0028	± 0.0011

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1712
Site: CRC PM10
Sample Date: 7/27/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	164.	± 10.			22.78	± 1.796
XRF						
Na	2.770	± 0.4362	1.689	± 0.2852	0.3847	± 0.0636
Mg	1.623	± 0.1311	0.9894	± 0.1001	0.2254	± 0.0214
Al	5.563	± 0.2882	3.392	± 0.2714	0.7726	± 0.0556
Si	13.97	± 0.7142	8.516	± 0.6777	1.9398	± 0.1387
P	0.2927	± 0.0215	0.1785	± 0.0170	0.0406	± 0.0036
S	2.815	± 0.1435	1.716	± 0.1364	0.3909	± 0.0279
Cl	0.6215	± 0.0384	0.3790	± 0.0329	0.0863	± 0.0069
K	1.521	± 0.0768	0.9274	± 0.0734	0.2112	± 0.0150
Ca	3.072	± 0.1548	1.873	± 0.1482	0.4267	± 0.0303
* Sc	0.0000	± 0.0136	0.0000	± 0.0083	0.0000	± 0.0019
Ti	0.5175	± 0.0260	0.3156	± 0.0249	0.0719	± 0.0051
* V	0.0056	± 0.0068	0.0034	± 0.0041	0.0008	± 0.0009
* Cr	0.0000	± 0.0045	0.0000	± 0.0028	0.0000	± 0.0006
Mn	0.1107	± 0.0136	0.0675	± 0.0092	0.0154	± 0.0020
Fe	5.174	± 0.2588	3.155	± 0.2488	0.7186	± 0.0508
* Co	0.0000	± 0.0136	0.0000	± 0.0083	0.0000	± 0.0019
* Ni	0.0068	± 0.0034	0.0041	± 0.0021	0.0009	± 0.0005
Cu	0.0768	± 0.0045	0.0469	± 0.0040	0.0107	± 0.0008
Zn	0.1831	± 0.0090	0.1116	± 0.0088	0.0254	± 0.0018
* Ga	0.0045	± 0.0023	0.0028	± 0.0014	0.0006	± 0.0003
* As	0.0045	± 0.0034	0.0028	± 0.0021	0.0006	± 0.0005
* Se	0.0000	± 0.0023	0.0000	± 0.0014	0.0000	± 0.0003
Br	0.0237	± 0.0034	0.0145	± 0.0022	0.0033	± 0.0005
* Rb	0.0045	± 0.0034	0.0028	± 0.0021	0.0006	± 0.0005
Sr	0.0328	± 0.0034	0.0200	± 0.0024	0.0046	± 0.0005
* Y	0.0034	± 0.0045	0.0021	± 0.0028	0.0005	± 0.0006
Zr	0.0282	± 0.0045	0.0172	± 0.0029	0.0039	± 0.0007
* Nb	0.0000	± 0.0056	0.0000	± 0.0034	0.0000	± 0.0008
* Mo	0.0136	± 0.0079	0.0083	± 0.0048	0.0019	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0124	0.0000	± 0.0028
* Cd	0.0000	± 0.0215	0.0000	± 0.0131	0.0000	± 0.0030
* In	0.0723	± 0.0249	0.0441	± 0.0154	0.0100	± 0.0035
* Sn	0.0452	± 0.0373	0.0276	± 0.0228	0.0063	± 0.0052
* Sb	0.0079	± 0.0429	0.0048	± 0.0262	0.0011	± 0.0060
* Cs	0.0000	± 0.0136	0.0000	± 0.0083	0.0000	± 0.0019
* Ba	0.0000	± 0.0328	0.0000	± 0.0200	0.0000	± 0.0046
* La	0.0000	± 0.0203	0.0000	± 0.0124	0.0000	± 0.0028
* Ce	0.0000	± 0.0147	0.0000	± 0.0090	0.0000	± 0.0020
* Sm	0.0000	± 0.0147	0.0000	± 0.0090	0.0000	± 0.0020
* Eu	0.0305	± 0.0249	0.0186	± 0.0152	0.0042	± 0.0035
* Tb	0.0000	± 0.0746	0.0000	± 0.0455	0.0000	± 0.0104
* Hf	0.0102	± 0.0102	0.0062	± 0.0062	0.0014	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0055	0.0000	± 0.0013
W	0.0237	± 0.0056	0.0145	± 0.0036	0.0033	± 0.0008
* Ir	0.0068	± 0.0045	0.0041	± 0.0028	0.0009	± 0.0006
* Au	0.0034	± 0.0056	0.0021	± 0.0034	0.0005	± 0.0008
* Hg	0.0000	± 0.0068	0.0000	± 0.0041	0.0000	± 0.0009
* Pb	0.0079	± 0.0079	0.0048	± 0.0048	0.0011	± 0.0011

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T2540
Filter ID: P7325293
Site: VFW PM2.5
Sample Date: 8/2/21
Filter Lot #: 7094056
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	46. ± 10.				6.389	± 1.425
XRF						
Na	1.768	± 0.5153	3.844	± 1.398	0.2456	± 0.0726
Mg	0.7164	± 0.1288	1.557	± 0.4394	0.0995	± 0.0186
Al	1.370	± 0.0870	2.977	± 0.6743	0.1902	± 0.0154
Si	3.098	± 0.1582	6.736	± 1.504	0.4303	± 0.0308
* P	0.0271	± 0.0192	0.0590	± 0.0437	0.0038	± 0.0027
S	2.028	± 0.1028	4.409	± 0.9843	0.2817	± 0.0201
Cl	0.3220	± 0.0282	0.7001	± 0.1641	0.0447	± 0.0045
K	0.3446	± 0.0203	0.7492	± 0.1688	0.0479	± 0.0037
Ca	0.5865	± 0.0305	1.275	± 0.2850	0.0815	± 0.0059
* Sc	0.0192	± 0.0090	0.0418	± 0.0216	0.0027	± 0.0013
Ti	0.0746	± 0.0079	0.1621	± 0.0392	0.0104	± 0.0012
* V	0.0056	± 0.0068	0.0123	± 0.0150	0.0008	± 0.0009
* Cr	0.0000	± 0.0056	0.0000	± 0.0123	0.0000	± 0.0008
* Mn	0.0362	± 0.0124	0.0786	± 0.0320	0.0050	± 0.0017
Fe	1.201	± 0.0610	2.611	± 0.5830	0.1668	± 0.0119
* Co	0.0000	± 0.0079	0.0000	± 0.0172	0.0000	± 0.0011
* Ni	0.0068	± 0.0045	0.0147	± 0.0103	0.0009	± 0.0006
Cu	0.0542	± 0.0045	0.1179	± 0.0275	0.0075	± 0.0007
Zn	0.0870	± 0.0056	0.1892	± 0.0429	0.0121	± 0.0010
* Ga	0.0068	± 0.0034	0.0147	± 0.0080	0.0009	± 0.0005
* As	0.0000	± 0.0045	0.0000	± 0.0098	0.0000	± 0.0006
* Se	0.0056	± 0.0034	0.0123	± 0.0078	0.0008	± 0.0005
* Br	0.0011	± 0.0034	0.0025	± 0.0074	0.0002	± 0.0005
Rb	0.0124	± 0.0034	0.0270	± 0.0094	0.0017	± 0.0005
* Sr	0.0090	± 0.0045	0.0197	± 0.0107	0.0013	± 0.0006
* Y	0.0034	± 0.0056	0.0074	± 0.0124	0.0005	± 0.0008
* Zr	0.0147	± 0.0068	0.0319	± 0.0163	0.0020	± 0.0009
* Nb	0.0181	± 0.0090	0.0393	± 0.0214	0.0025	± 0.0013
* Mo	0.0000	± 0.0113	0.0000	± 0.0246	0.0000	± 0.0016
* Ag	0.0610	± 0.0215	0.1327	± 0.0549	0.0085	± 0.0030
* Cd	0.0000	± 0.0305	0.0000	± 0.0663	0.0000	± 0.0042
* In	0.0678	± 0.0339	0.1474	± 0.0804	0.0094	± 0.0047
* Sn	0.0554	± 0.0396	0.1204	± 0.0899	0.0077	± 0.0055
* Sb	0.0339	± 0.0576	0.0737	± 0.1263	0.0047	± 0.0080
* Cs	0.0000	± 0.0136	0.0000	± 0.0295	0.0000	± 0.0019
Ba	0.0881	± 0.0181	0.1916	± 0.0573	0.0122	± 0.0026
La	0.0802	± 0.0136	0.1744	± 0.0480	0.0111	± 0.0020
Ce	0.0463	± 0.0147	0.1007	± 0.0387	0.0064	± 0.0021
* Sm	0.0000	± 0.0203	0.0000	± 0.0442	0.0000	± 0.0028
* Eu	0.0000	± 0.0249	0.0000	± 0.0540	0.0000	± 0.0035
* Tb	0.0000	± 0.0396	0.0000	± 0.0860	0.0000	± 0.0055
* Hf	0.0000	± 0.0102	0.0000	± 0.0221	0.0000	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0197	0.0000	± 0.0013
* W	0.0090	± 0.0079	0.0197	± 0.0177	0.0013	± 0.0011
* Ir	0.0000	± 0.0068	0.0000	± 0.0147	0.0000	± 0.0009
* Au	0.0068	± 0.0056	0.0147	± 0.0127	0.0009	± 0.0008
* Hg	0.0000	± 0.0090	0.0000	± 0.0197	0.0000	± 0.0013
* Pb	0.0102	± 0.0079	0.0221	± 0.0179	0.0014	± 0.0011

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T2538
Filter ID: P7325291
Site: Impact PM2.5
Sample Date: 8/ 2/21
Filter Lot #: 7094056
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	26. ± 10.				3.611	± 1.401
XRF						
* Na	1.423	± 0.5096	5.472	± 2.876	0.1976	± 0.0715
Mg	0.3819	± 0.1254	1.469	± 0.7429	0.0530	± 0.0176
Al	0.9808	± 0.0723	3.772	± 1.477	0.1362	± 0.0121
Si	1.728	± 0.0915	6.645	± 2.580	0.2400	± 0.0175
* P	0.0418	± 0.0192	0.1608	± 0.0964	0.0058	± 0.0027
S	2.017	± 0.1017	7.758	± 3.009	0.2801	± 0.0199
Cl	0.2576	± 0.0339	0.9909	± 0.4028	0.0358	± 0.0050
K	0.3672	± 0.0215	1.412	± 0.5495	0.0510	± 0.0039
Ca	0.3831	± 0.0215	1.473	± 0.5727	0.0532	± 0.0040
* Sc	0.0000	± 0.0090	0.0000	± 0.0348	0.0000	± 0.0013
Ti	0.0475	± 0.0068	0.1825	± 0.0749	0.0066	± 0.0010
V	0.0215	± 0.0068	0.0826	± 0.0411	0.0030	± 0.0010
* Cr	0.0000	± 0.0068	0.0000	± 0.0261	0.0000	± 0.0009
* Mn	0.0316	± 0.0124	0.1217	± 0.0669	0.0044	± 0.0017
Fe	0.7978	± 0.0407	3.068	± 1.190	0.1108	± 0.0079
* Co	0.0000	± 0.0056	0.0000	± 0.0217	0.0000	± 0.0008
* Ni	0.0011	± 0.0045	0.0043	± 0.0175	0.0002	± 0.0006
Cu	0.0429	± 0.0045	0.1652	± 0.0659	0.0060	± 0.0007
Zn	0.0667	± 0.0045	0.2564	± 0.1001	0.0093	± 0.0008
* Ga	0.0045	± 0.0034	0.0174	± 0.0147	0.0006	± 0.0005
As	0.0136	± 0.0034	0.0522	± 0.0239	0.0019	± 0.0005
Se	0.0147	± 0.0023	0.0565	± 0.0234	0.0020	± 0.0003
Br	0.0249	± 0.0045	0.0956	± 0.0407	0.0035	± 0.0007
* Rb	0.0000	± 0.0034	0.0000	± 0.0130	0.0000	± 0.0005
* Sr	0.0000	± 0.0045	0.0000	± 0.0174	0.0000	± 0.0006
Y	0.0237	± 0.0045	0.0913	± 0.0392	0.0033	± 0.0006
Zr	0.0328	± 0.0068	0.1260	± 0.0550	0.0046	± 0.0010
* Nb	0.0203	± 0.0090	0.0782	± 0.0460	0.0028	± 0.0013
* Mo	0.0000	± 0.0113	0.0000	± 0.0435	0.0000	± 0.0016
* Ag	0.0181	± 0.0203	0.0695	± 0.0827	0.0025	± 0.0028
* Cd	0.0000	± 0.0305	0.0000	± 0.1173	0.0000	± 0.0042
* In	0.0000	± 0.0339	0.0000	± 0.1304	0.0000	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.1434	0.0000	± 0.0052
* Sb	0.0000	± 0.0576	0.0000	± 0.2217	0.0000	± 0.0080
* Cs	0.0000	± 0.0136	0.0000	± 0.0522	0.0000	± 0.0019
Ba	0.0825	± 0.0147	0.3173	± 0.1345	0.0115	± 0.0021
* La	0.0316	± 0.0136	0.1217	± 0.0701	0.0044	± 0.0019
* Ce	0.0249	± 0.0147	0.0956	± 0.0674	0.0035	± 0.0020
* Sm	0.0000	± 0.0203	0.0000	± 0.0782	0.0000	± 0.0028
* Eu	0.0282	± 0.0249	0.1087	± 0.1043	0.0039	± 0.0035
* Tb	0.0000	± 0.0328	0.0000	± 0.1260	0.0000	± 0.0046
* Hf	0.0090	± 0.0102	0.0348	± 0.0413	0.0013	± 0.0014
Ta	0.1175	± 0.0102	0.4520	± 0.1782	0.0163	± 0.0016
* W	0.0000	± 0.0079	0.0000	± 0.0304	0.0000	± 0.0011
* Ir	0.0000	± 0.0068	0.0000	± 0.0261	0.0000	± 0.0009
* Au	0.0136	± 0.0056	0.0522	± 0.0296	0.0019	± 0.0008
* Hg	0.0011	± 0.0090	0.0043	± 0.0348	0.0002	± 0.0013
* Pb	0.0000	± 0.0102	0.0000	± 0.0391	0.0000	± 0.0014

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1714
Site: Florin PM2.5
Sample Date: 8/ 2/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	35.	± 10.			4.861	± 1.410
XRF						
* Na	1.141	± 0.3944	3.261	± 1.462	0.1585	± 0.0553
* Mg	0.0825	± 0.0972	0.2357	± 0.2857	0.0115	± 0.0135
Al	0.3345	± 0.0452	0.9557	± 0.3020	0.0465	± 0.0067
Si	0.4949	± 0.0328	1.414	± 0.4147	0.0687	± 0.0057
* P	0.0023	± 0.0147	0.0065	± 0.0420	0.0003	± 0.0020
S	1.848	± 0.0927	5.279	± 1.531	0.2566	± 0.0182
Cl	0.2011	± 0.0249	0.5747	± 0.1789	0.0279	± 0.0037
K	0.1695	± 0.0147	0.4843	± 0.1446	0.0235	± 0.0024
Ca	0.1695	± 0.0113	0.4843	± 0.1421	0.0235	± 0.0020
* Sc	0.0068	± 0.0068	0.0194	± 0.0201	0.0009	± 0.0009
Ti	0.0147	± 0.0045	0.0420	± 0.0176	0.0020	± 0.0006
* V	0.0045	± 0.0045	0.0129	± 0.0134	0.0006	± 0.0006
* Cr	0.0000	± 0.0045	0.0000	± 0.0129	0.0000	± 0.0006
* Mn	0.0000	± 0.0090	0.0000	± 0.0258	0.0000	± 0.0013
Fe	0.2339	± 0.0124	0.6683	± 0.1942	0.0325	± 0.0024
* Co	0.0000	± 0.0045	0.0000	± 0.0129	0.0000	± 0.0006
* Ni	0.0011	± 0.0034	0.0032	± 0.0097	0.0002	± 0.0005
Cu	0.0429	± 0.0034	0.1227	± 0.0364	0.0060	± 0.0006
Zn	0.0588	± 0.0045	0.1679	± 0.0497	0.0082	± 0.0007
Ga	0.0090	± 0.0023	0.0258	± 0.0098	0.0013	± 0.0003
As	0.0136	± 0.0034	0.0387	± 0.0147	0.0019	± 0.0005
* Se	0.0000	± 0.0023	0.0000	± 0.0065	0.0000	± 0.0003
Br	0.0170	± 0.0034	0.0484	± 0.0169	0.0024	± 0.0005
Rb	0.0090	± 0.0023	0.0258	± 0.0098	0.0013	± 0.0003
* Sr	0.0000	± 0.0034	0.0000	± 0.0097	0.0000	± 0.0005
* Y	0.0113	± 0.0045	0.0323	± 0.0159	0.0016	± 0.0006
* Zr	0.0068	± 0.0045	0.0194	± 0.0141	0.0009	± 0.0006
* Nb	0.0000	± 0.0068	0.0000	± 0.0194	0.0000	± 0.0009
* Mo	0.0000	± 0.0079	0.0000	± 0.0226	0.0000	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0581	0.0000	± 0.0028
* Cd	0.0000	± 0.0215	0.0000	± 0.0613	0.0000	± 0.0030
* In	0.0622	± 0.0249	0.1776	± 0.0873	0.0086	± 0.0035
* Sn	0.0000	± 0.0373	0.0000	± 0.1065	0.0000	± 0.0052
* Sb	0.0000	± 0.0418	0.0000	± 0.1195	0.0000	± 0.0058
* Cs	0.0158	± 0.0102	0.0452	± 0.0318	0.0022	± 0.0014
Ba	0.0429	± 0.0102	0.1227	± 0.0455	0.0060	± 0.0014
* La	0.0102	± 0.0102	0.0291	± 0.0302	0.0014	± 0.0014
* Ce	0.0068	± 0.0090	0.0194	± 0.0264	0.0009	± 0.0013
* Sm	0.0000	± 0.0147	0.0000	± 0.0420	0.0000	± 0.0020
* Eu	0.0181	± 0.0249	0.0517	± 0.0725	0.0025	± 0.0035
* Tb	0.0000	± 0.0215	0.0000	± 0.0613	0.0000	± 0.0030
* Hf	0.0090	± 0.0102	0.0258	± 0.0300	0.0013	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0258	0.0000	± 0.0013
* W	0.0079	± 0.0056	0.0226	± 0.0174	0.0011	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0129	0.0000	± 0.0006
* Au	0.0000	± 0.0056	0.0000	± 0.0161	0.0000	± 0.0008
* Hg	0.0079	± 0.0068	0.0226	± 0.0204	0.0011	± 0.0009
* Pb	0.0000	± 0.0068	0.0000	± 0.0194	0.0000	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1698
Site: SUMP50 PM2.5
Sample Date: 8/ 2/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	18.	± 10.			2.500	± 1.394
XRF						
Na	1.106	± 0.3661	6.146	± 3.974	0.1536	± 0.0514
* Mg	0.2328	± 0.0893	1.293	± 0.8730	0.0323	± 0.0125
Al	0.3955	± 0.0441	2.197	± 1.245	0.0549	± 0.0067
Si	0.5062	± 0.0339	2.812	± 1.574	0.0703	± 0.0059
* P	0.0000	± 0.0147	0.0000	± 0.0816	0.0000	± 0.0020
S	1.695	± 0.0848	9.417	± 5.253	0.2354	± 0.0166
Cl	0.1458	± 0.0237	0.8098	± 0.4688	0.0202	± 0.0034
K	0.1401	± 0.0136	0.7784	± 0.4390	0.0195	± 0.0021
Ca	0.1514	± 0.0113	0.8412	± 0.4715	0.0210	± 0.0019
* Sc	0.0000	± 0.0068	0.0000	± 0.0377	0.0000	± 0.0009
Ti	0.0305	± 0.0056	0.1695	± 0.0993	0.0042	± 0.0008
* V	0.0102	± 0.0045	0.0565	± 0.0402	0.0014	± 0.0006
* Cr	0.0000	± 0.0045	0.0000	± 0.0251	0.0000	± 0.0006
* Mn	0.0203	± 0.0090	0.1130	± 0.0804	0.0028	± 0.0013
Fe	0.2384	± 0.0136	1.325	± 0.7397	0.0331	± 0.0025
* Co	0.0011	± 0.0056	0.0063	± 0.0316	0.0002	± 0.0008
* Ni	0.0034	± 0.0034	0.0188	± 0.0215	0.0005	± 0.0005
Cu	0.0429	± 0.0034	0.2386	± 0.1339	0.0060	± 0.0006
Zn	0.1153	± 0.0068	0.6403	± 0.3577	0.0160	± 0.0012
* Ga	0.0056	± 0.0023	0.0314	± 0.0215	0.0008	± 0.0003
* As	0.0056	± 0.0034	0.0314	± 0.0257	0.0008	± 0.0005
* Se	0.0023	± 0.0023	0.0126	± 0.0144	0.0003	± 0.0003
* Br	0.0034	± 0.0034	0.0188	± 0.0215	0.0005	± 0.0005
* Rb	0.0000	± 0.0034	0.0000	± 0.0188	0.0000	± 0.0005
* Sr	0.0000	± 0.0034	0.0000	± 0.0188	0.0000	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0251	0.0000	± 0.0006
* Zr	0.0034	± 0.0045	0.0188	± 0.0272	0.0005	± 0.0006
* Nb	0.0045	± 0.0056	0.0251	± 0.0343	0.0006	± 0.0008
* Mo	0.0000	± 0.0079	0.0000	± 0.0439	0.0000	± 0.0011
* Ag	0.0079	± 0.0203	0.0439	± 0.1156	0.0011	± 0.0028
* Cd	0.0000	± 0.0215	0.0000	± 0.1193	0.0000	± 0.0030
* In	0.0441	± 0.0249	0.2448	± 0.1938	0.0061	± 0.0035
* Sn	0.1130	± 0.0384	0.6278	± 0.4089	0.0157	± 0.0054
* Sb	0.0000	± 0.0418	0.0000	± 0.2323	0.0000	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0565	0.0000	± 0.0014
* Ba	0.0000	± 0.0102	0.0000	± 0.0565	0.0000	± 0.0014
* La	0.0000	± 0.0102	0.0000	± 0.0565	0.0000	± 0.0014
* Ce	0.0090	± 0.0090	0.0502	± 0.0575	0.0013	± 0.0013
* Sm	0.0000	± 0.0136	0.0000	± 0.0753	0.0000	± 0.0019
* Eu	0.0000	± 0.0249	0.0000	± 0.1381	0.0000	± 0.0035
* Tb	0.0000	± 0.0158	0.0000	± 0.0879	0.0000	± 0.0022
* Hf	0.0000	± 0.0102	0.0000	± 0.0565	0.0000	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0502	0.0000	± 0.0013
* W	0.0000	± 0.0056	0.0000	± 0.0314	0.0000	± 0.0008
* Ir	0.0023	± 0.0045	0.0126	± 0.0261	0.0003	± 0.0006
* Au	0.0056	± 0.0056	0.0314	± 0.0359	0.0008	± 0.0008
* Hg	0.0000	± 0.0079	0.0000	± 0.0439	0.0000	± 0.0011
* Pb	0.0000	± 0.0068	0.0000	± 0.0377	0.0000	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T2536
Filter ID: P7325289
Site: ST56 PM2.5
Sample Date: 8/ 2/21
Filter Lot #: 7094056
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	27.	± 10.			3.750	± 1.401
XRF						
* Na	1.353	± 0.5085	5.010	± 2.644	0.1879	± 0.0712
* Mg	0.2667	± 0.1186	0.9877	± 0.5718	0.0370	± 0.0166
Al	0.4893	± 0.0576	1.812	± 0.7043	0.0680	± 0.0087
Si	0.6531	± 0.0429	2.419	± 0.9099	0.0907	± 0.0075
* P	0.0000	± 0.0181	0.0000	± 0.0670	0.0000	± 0.0025
S	1.737	± 0.0881	6.433	± 2.405	0.2412	± 0.0172
Cl	0.1367	± 0.0316	0.5064	± 0.2212	0.0190	± 0.0045
K	0.1051	± 0.0124	0.3892	± 0.1513	0.0146	± 0.0019
Ca	0.1401	± 0.0102	0.5190	± 0.1959	0.0195	± 0.0017
* Sc	0.0000	± 0.0090	0.0000	± 0.0335	0.0000	± 0.0013
Ti	0.0362	± 0.0056	0.1339	± 0.0538	0.0050	± 0.0008
* V	0.0000	± 0.0068	0.0000	± 0.0251	0.0000	± 0.0009
* Cr	0.0000	± 0.0068	0.0000	± 0.0251	0.0000	± 0.0009
* Mn	0.0215	± 0.0124	0.0795	± 0.0547	0.0030	± 0.0017
Fe	0.2814	± 0.0158	1.042	± 0.3904	0.0391	± 0.0029
* Co	0.0000	± 0.0056	0.0000	± 0.0209	0.0000	± 0.0008
* Ni	0.0000	± 0.0045	0.0000	± 0.0167	0.0000	± 0.0006
Cu	0.0531	± 0.0045	0.1967	± 0.0748	0.0074	± 0.0007
Zn	0.0768	± 0.0045	0.2846	± 0.1067	0.0107	± 0.0008
Ga	0.0102	± 0.0034	0.0377	± 0.0188	0.0014	± 0.0005
* As	0.0000	± 0.0045	0.0000	± 0.0167	0.0000	± 0.0006
* Se	0.0000	± 0.0034	0.0000	± 0.0126	0.0000	± 0.0005
* Br	0.0023	± 0.0034	0.0084	± 0.0129	0.0003	± 0.0005
Rb	0.0170	± 0.0034	0.0628	± 0.0264	0.0024	± 0.0005
* Sr	0.0000	± 0.0045	0.0000	± 0.0167	0.0000	± 0.0006
Y	0.0147	± 0.0045	0.0544	± 0.0262	0.0020	± 0.0006
* Zr	0.0079	± 0.0068	0.0293	± 0.0274	0.0011	± 0.0009
* Nb	0.0000	± 0.0090	0.0000	± 0.0335	0.0000	± 0.0013
Mo	0.0384	± 0.0113	0.1423	± 0.0673	0.0053	± 0.0016
* Ag	0.0000	± 0.0282	0.0000	± 0.1046	0.0000	± 0.0039
* Cd	0.0000	± 0.0305	0.0000	± 0.1130	0.0000	± 0.0042
* In	0.0407	± 0.0339	0.1507	± 0.1374	0.0056	± 0.0047
* Sn	0.1130	± 0.0384	0.4185	± 0.2104	0.0157	± 0.0054
* Sb	0.0000	± 0.0576	0.0000	± 0.2134	0.0000	± 0.0080
* Cs	0.0000	± 0.0102	0.0000	± 0.0377	0.0000	± 0.0014
* Ba	0.0000	± 0.0147	0.0000	± 0.0544	0.0000	± 0.0020
* La	0.0000	± 0.0136	0.0000	± 0.0502	0.0000	± 0.0019
* Ce	0.0000	± 0.0147	0.0000	± 0.0544	0.0000	± 0.0020
* Sm	0.0000	± 0.0192	0.0000	± 0.0711	0.0000	± 0.0027
* Eu	0.0181	± 0.0249	0.0670	± 0.0954	0.0025	± 0.0035
* Tb	0.0000	± 0.0215	0.0000	± 0.0795	0.0000	± 0.0030
* Hf	0.0260	± 0.0102	0.0963	± 0.0519	0.0036	± 0.0014
* Ta	0.0124	± 0.0090	0.0460	± 0.0376	0.0017	± 0.0013
* W	0.0226	± 0.0079	0.0837	± 0.0427	0.0031	± 0.0011
* Ir	0.0000	± 0.0068	0.0000	± 0.0251	0.0000	± 0.0009
* Au	0.0000	± 0.0056	0.0000	± 0.0209	0.0000	± 0.0008
* Hg	0.0000	± 0.0090	0.0000	± 0.0335	0.0000	± 0.0013
* Pb	0.0000	± 0.0102	0.0000	± 0.0377	0.0000	± 0.0014

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1705
Site: CRC PM2.5
Sample Date: 8/ 2/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	28.	± 10.			3.889	± 1.402
XRF						
* Na	0.9594	± 0.3921	3.426	± 1.860	0.1332	± 0.0549
* Mg	0.0000	± 0.0972	0.0000	± 0.3471	0.0000	± 0.0135
Al	0.2542	± 0.0441	0.9080	± 0.3605	0.0353	± 0.0064
Si	0.3356	± 0.0271	1.199	± 0.4389	0.0466	± 0.0044
* P	0.0000	± 0.0147	0.0000	± 0.0525	0.0000	± 0.0020
S	1.958	± 0.0983	6.994	± 2.522	0.2720	± 0.0193
Cl	0.1526	± 0.0237	0.5448	± 0.2122	0.0212	± 0.0035
K	0.2034	± 0.0158	0.7264	± 0.2655	0.0282	± 0.0026
Ca	0.1085	± 0.0090	0.3874	± 0.1421	0.0151	± 0.0015
* Sc	0.0000	± 0.0068	0.0000	± 0.0242	0.0000	± 0.0009
* Ti	0.0124	± 0.0045	0.0444	± 0.0226	0.0017	± 0.0006
* V	0.0056	± 0.0045	0.0202	± 0.0177	0.0008	± 0.0006
* Cr	0.0000	± 0.0045	0.0000	± 0.0161	0.0000	± 0.0006
* Mn	0.0034	± 0.0090	0.0121	± 0.0326	0.0005	± 0.0013
Fe	0.2113	± 0.0113	0.7547	± 0.2725	0.0293	± 0.0021
* Co	0.0000	± 0.0056	0.0000	± 0.0202	0.0000	± 0.0008
* Ni	0.0079	± 0.0034	0.0282	± 0.0158	0.0011	± 0.0005
Cu	0.0407	± 0.0034	0.1453	± 0.0533	0.0056	± 0.0005
Zn	0.0655	± 0.0045	0.2341	± 0.0851	0.0091	± 0.0008
* Ga	0.0023	± 0.0023	0.0081	± 0.0086	0.0003	± 0.0003
As	0.0147	± 0.0034	0.0525	± 0.0223	0.0020	± 0.0005
* Se	0.0034	± 0.0023	0.0121	± 0.0092	0.0005	± 0.0003
* Br	0.0023	± 0.0034	0.0081	± 0.0124	0.0003	± 0.0005
Rb	0.0124	± 0.0023	0.0444	± 0.0178	0.0017	± 0.0003
* Sr	0.0034	± 0.0034	0.0121	± 0.0129	0.0005	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0161	0.0000	± 0.0006
* Zr	0.0079	± 0.0045	0.0282	± 0.0190	0.0011	± 0.0006
* Nb	0.0000	± 0.0068	0.0000	± 0.0242	0.0000	± 0.0009
* Mo	0.0000	± 0.0079	0.0000	± 0.0282	0.0000	± 0.0011
* Ag	0.0000	± 0.0203	0.0000	± 0.0726	0.0000	± 0.0028
* Cd	0.0158	± 0.0226	0.0565	± 0.0832	0.0022	± 0.0031
* In	0.0316	± 0.0339	0.1130	± 0.1276	0.0044	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.1332	0.0000	± 0.0052
* Sb	0.0000	± 0.0418	0.0000	± 0.1493	0.0000	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0363	0.0000	± 0.0014
* Ba	0.0192	± 0.0102	0.0686	± 0.0438	0.0027	± 0.0014
La	0.0384	± 0.0102	0.1372	± 0.0610	0.0053	± 0.0014
* Ce	0.0215	± 0.0090	0.0767	± 0.0423	0.0030	± 0.0013
* Sm	0.0000	± 0.0147	0.0000	± 0.0525	0.0000	± 0.0020
* Eu	0.0000	± 0.0249	0.0000	± 0.0888	0.0000	± 0.0035
* Tb	0.0000	± 0.0158	0.0000	± 0.0565	0.0000	± 0.0022
* Hf	0.0000	± 0.0102	0.0000	± 0.0363	0.0000	± 0.0014
* Ta	0.0192	± 0.0090	0.0686	± 0.0405	0.0027	± 0.0013
* W	0.0023	± 0.0056	0.0081	± 0.0204	0.0003	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0161	0.0000	± 0.0006
* Au	0.0000	± 0.0056	0.0000	± 0.0202	0.0000	± 0.0008
* Hg	0.0000	± 0.0079	0.0000	± 0.0282	0.0000	± 0.0011
* Pb	0.0034	± 0.0068	0.0121	± 0.0246	0.0005	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T2539
Filter ID: P7325292
Site: VFW PM10
Sample Date: 8/2/21
Filter Lot #: 7094056
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	72.	± 10.			10.00	± 1.476
XRF						
Na	2.292	± 0.5051	3.183	± 0.8292	0.3183	± 0.0719
Mg	0.4475	± 0.1266	0.6215	± 0.1958	0.0622	± 0.0179
Al	1.440	± 0.0904	1.999	± 0.3048	0.1999	± 0.0160
Si	3.246	± 0.1661	4.509	± 0.6674	0.4509	± 0.0323
P	0.0768	± 0.0181	0.1067	± 0.0292	0.0107	± 0.0026
S	2.003	± 0.1017	2.783	± 0.4115	0.2783	± 0.0198
Cl	0.7481	± 0.0441	1.039	± 0.1567	0.1039	± 0.0080
K	0.3311	± 0.0203	0.4598	± 0.0698	0.0460	± 0.0036
Ca	0.6498	± 0.0339	0.9024	± 0.1339	0.0902	± 0.0065
Sc	0.0328	± 0.0090	0.0455	± 0.0141	0.0046	± 0.0013
Ti	0.0870	± 0.0079	0.1208	± 0.0201	0.0121	± 0.0013
* V	0.0079	± 0.0068	0.0110	± 0.0095	0.0011	± 0.0009
* Cr	0.0000	± 0.0056	0.0000	± 0.0078	0.0000	± 0.0008
Mn	0.0452	± 0.0124	0.0628	± 0.0193	0.0063	± 0.0018
Fe	1.229	± 0.0622	1.708	± 0.2524	0.1708	± 0.0121
* Co	0.0000	± 0.0079	0.0000	± 0.0110	0.0000	± 0.0011
* Ni	0.0023	± 0.0045	0.0031	± 0.0063	0.0003	± 0.0006
Cu	0.0576	± 0.0045	0.0800	± 0.0128	0.0080	± 0.0007
Zn	0.0780	± 0.0056	0.1083	± 0.0170	0.0108	± 0.0010
Ga	0.0113	± 0.0034	0.0157	± 0.0052	0.0016	± 0.0005
* As	0.0000	± 0.0045	0.0000	± 0.0063	0.0000	± 0.0006
* Se	0.0000	± 0.0034	0.0000	± 0.0047	0.0000	± 0.0005
Br	0.0113	± 0.0034	0.0157	± 0.0052	0.0016	± 0.0005
* Rb	0.0090	± 0.0034	0.0126	± 0.0050	0.0013	± 0.0005
* Sr	0.0000	± 0.0045	0.0000	± 0.0063	0.0000	± 0.0006
* Y	0.0000	± 0.0045	0.0000	± 0.0063	0.0000	± 0.0006
* Zr	0.0158	± 0.0056	0.0220	± 0.0084	0.0022	± 0.0008
* Nb	0.0011	± 0.0090	0.0016	± 0.0126	0.0002	± 0.0013
* Mo	0.0000	± 0.0102	0.0000	± 0.0141	0.0000	± 0.0014
* Ag	0.0407	± 0.0203	0.0565	± 0.0293	0.0056	± 0.0028
* Cd	0.0113	± 0.0305	0.0157	± 0.0424	0.0016	± 0.0042
* In	0.0000	± 0.0339	0.0000	± 0.0471	0.0000	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.0518	0.0000	± 0.0052
* Sb	0.1130	± 0.0418	0.1569	± 0.0620	0.0157	± 0.0059
* Cs	0.0000	± 0.0136	0.0000	± 0.0188	0.0000	± 0.0019
* Ba	0.0000	± 0.0170	0.0000	± 0.0235	0.0000	± 0.0024
* La	0.0000	± 0.0136	0.0000	± 0.0188	0.0000	± 0.0019
* Ce	0.0102	± 0.0147	0.0141	± 0.0205	0.0014	± 0.0020
* Sm	0.0000	± 0.0192	0.0000	± 0.0267	0.0000	± 0.0027
* Eu	0.0000	± 0.0249	0.0000	± 0.0345	0.0000	± 0.0035
* Tb	0.0000	± 0.0396	0.0000	± 0.0549	0.0000	± 0.0055
* Hf	0.0000	± 0.0102	0.0000	± 0.0141	0.0000	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0126	0.0000	± 0.0013
* W	0.0170	± 0.0079	0.0235	± 0.0115	0.0024	± 0.0011
* Ir	0.0000	± 0.0068	0.0000	± 0.0094	0.0000	± 0.0009
* Au	0.0000	± 0.0056	0.0000	± 0.0078	0.0000	± 0.0008
* Hg	0.0000	± 0.0090	0.0000	± 0.0126	0.0000	± 0.0013
* Pb	0.0192	± 0.0079	0.0267	± 0.0116	0.0027	± 0.0011

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T2537
Filter ID: P7325290
Site: Impact PM10
Sample Date: 8/2/21
Filter Lot #: 7094056
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	58.	± 10.			8.056	± 1.446
XRF						
Na	2.017	± 0.5401	3.478	± 1.108	0.2801	± 0.0763
Mg	0.4791	± 0.1322	0.8261	± 0.2688	0.0665	± 0.0187
Al	1.480	± 0.0927	2.552	± 0.4681	0.2056	± 0.0165
Si	3.250	± 0.1661	5.603	± 1.008	0.4514	± 0.0323
* P	0.0373	± 0.0192	0.0643	± 0.0349	0.0052	± 0.0027
S	2.227	± 0.1130	3.840	± 0.6901	0.3093	± 0.0220
Cl	0.9119	± 0.0508	1.572	± 0.2849	0.1267	± 0.0095
K	0.5040	± 0.0282	0.8689	± 0.1575	0.0700	± 0.0053
Ca	0.6690	± 0.0350	1.153	± 0.2078	0.0929	± 0.0067
* Sc	0.0000	± 0.0090	0.0000	± 0.0156	0.0000	± 0.0013
Ti	0.1119	± 0.0090	0.1929	± 0.0367	0.0155	± 0.0015
* V	0.0147	± 0.0068	0.0253	± 0.0125	0.0020	± 0.0009
* Cr	0.0000	± 0.0068	0.0000	± 0.0117	0.0000	± 0.0009
* Mn	0.0294	± 0.0124	0.0507	± 0.0231	0.0041	± 0.0017
Fe	1.283	± 0.0644	2.211	± 0.3971	0.1781	± 0.0126
* Co	0.0090	± 0.0079	0.0156	± 0.0139	0.0013	± 0.0011
* Ni	0.0056	± 0.0045	0.0097	± 0.0080	0.0008	± 0.0006
Cu	0.0452	± 0.0045	0.0779	± 0.0155	0.0063	± 0.0007
Zn	0.0915	± 0.0056	0.1578	± 0.0289	0.0127	± 0.0010
* Ga	0.0045	± 0.0034	0.0078	± 0.0060	0.0006	± 0.0005
* As	0.0000	± 0.0045	0.0000	± 0.0078	0.0000	± 0.0006
* Se	0.0000	± 0.0034	0.0000	± 0.0058	0.0000	± 0.0005
* Br	0.0045	± 0.0034	0.0078	± 0.0060	0.0006	± 0.0005
* Rb	0.0000	± 0.0034	0.0000	± 0.0058	0.0000	± 0.0005
Sr	0.0316	± 0.0045	0.0546	± 0.0122	0.0044	± 0.0007
* Y	0.0000	± 0.0056	0.0000	± 0.0097	0.0000	± 0.0008
* Zr	0.0045	± 0.0068	0.0078	± 0.0118	0.0006	± 0.0009
* Nb	0.0000	± 0.0090	0.0000	± 0.0156	0.0000	± 0.0013
* Mo	0.0000	± 0.0113	0.0000	± 0.0195	0.0000	± 0.0016
* Ag	0.0000	± 0.0282	0.0000	± 0.0487	0.0000	± 0.0039
* Cd	0.0531	± 0.0305	0.0916	± 0.0549	0.0074	± 0.0043
* In	0.0000	± 0.0339	0.0000	± 0.0584	0.0000	± 0.0047
* Sn	0.0701	± 0.0384	0.1208	± 0.0694	0.0097	± 0.0054
* Sb	0.0226	± 0.0599	0.0390	± 0.1035	0.0031	± 0.0083
* Cs	0.0000	± 0.0136	0.0000	± 0.0234	0.0000	± 0.0019
* Ba	0.0000	± 0.0203	0.0000	± 0.0351	0.0000	± 0.0028
* La	0.0000	± 0.0158	0.0000	± 0.0273	0.0000	± 0.0022
* Ce	0.0000	± 0.0147	0.0000	± 0.0253	0.0000	± 0.0020
* Sm	0.0000	± 0.0203	0.0000	± 0.0351	0.0000	± 0.0028
* Eu	0.0000	± 0.0249	0.0000	± 0.0429	0.0000	± 0.0035
* Tb	0.0000	± 0.0396	0.0000	± 0.0682	0.0000	± 0.0055
* Hf	0.0079	± 0.0102	0.0136	± 0.0177	0.0011	± 0.0014
Ta	0.0859	± 0.0090	0.1481	± 0.0299	0.0119	± 0.0014
* W	0.0170	± 0.0079	0.0292	± 0.0145	0.0024	± 0.0011
* Ir	0.0124	± 0.0068	0.0214	± 0.0123	0.0017	± 0.0009
* Au	0.0113	± 0.0056	0.0195	± 0.0103	0.0016	± 0.0008
* Hg	0.0034	± 0.0090	0.0058	± 0.0156	0.0005	± 0.0013
* Pb	0.0000	± 0.0102	0.0000	± 0.0175	0.0000	± 0.0014

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1713
Site: Florin PM10
Sample Date: 8/2/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	6.	± 10.			0.8333	± 1.390
XRF						
* Na	0.5401	± 0.3605	9.002	± 16.16	0.0750	± 0.0502
* Mg	0.0056	± 0.0881	0.0942	± 1.477	0.0008	± 0.0122
* Al	0.1164	± 0.0396	1.940	± 3.300	0.0162	± 0.0056
* Si	0.0215	± 0.0203	0.3578	± 0.6860	0.0030	± 0.0028
* P	0.0045	± 0.0124	0.0753	± 0.2422	0.0006	± 0.0017
S	0.0768	± 0.0113	1.281	± 2.143	0.0107	± 0.0017
* Cl	0.0102	± 0.0226	0.1695	± 0.4708	0.0014	± 0.0031
* K	0.0090	± 0.0113	0.1507	± 0.3139	0.0013	± 0.0016
Ca	0.0271	± 0.0079	0.4520	± 0.7648	0.0038	± 0.0011
* Sc	0.0000	± 0.0068	0.0000	± 0.1130	0.0000	± 0.0009
* Ti	0.0000	± 0.0045	0.0000	± 0.0753	0.0000	± 0.0006
* V	0.0011	± 0.0045	0.0188	± 0.0816	0.0002	± 0.0006
Cr	0.0520	± 0.0045	0.8663	± 1.446	0.0072	± 0.0007
* Mn	0.0000	± 0.0090	0.0000	± 0.1507	0.0000	± 0.0013
Fe	0.0429	± 0.0056	0.7157	± 1.196	0.0060	± 0.0008
* Co	0.0000	± 0.0045	0.0000	± 0.0753	0.0000	± 0.0006
* Ni	0.0056	± 0.0034	0.0942	± 0.1668	0.0008	± 0.0005
Cu	0.0418	± 0.0034	0.6968	± 1.163	0.0058	± 0.0006
Zn	0.0644	± 0.0045	1.074	± 1.791	0.0089	± 0.0008
Ga	0.0068	± 0.0023	0.1130	± 0.1921	0.0009	± 0.0003
As	0.0102	± 0.0034	0.1695	± 0.2881	0.0014	± 0.0005
* Se	0.0045	± 0.0023	0.0753	± 0.1311	0.0006	± 0.0003
* Br	0.0056	± 0.0034	0.0942	± 0.1668	0.0008	± 0.0005
* Rb	0.0000	± 0.0034	0.0000	± 0.0565	0.0000	± 0.0005
* Sr	0.0000	± 0.0034	0.0000	± 0.0565	0.0000	± 0.0005
* Y	0.0023	± 0.0045	0.0377	± 0.0981	0.0003	± 0.0006
* Zr	0.0045	± 0.0045	0.0753	± 0.1464	0.0006	± 0.0006
* Nb	0.0000	± 0.0056	0.0000	± 0.0942	0.0000	± 0.0008
* Mo	0.0113	± 0.0079	0.1883	± 0.3404	0.0016	± 0.0011
* Ag	0.0034	± 0.0203	0.0565	± 0.3518	0.0005	± 0.0028
* Cd	0.0000	± 0.0215	0.0000	± 0.3578	0.0000	± 0.0030
* In	0.0000	± 0.0339	0.0000	± 0.5650	0.0000	± 0.0047
* Sn	0.0000	± 0.0373	0.0000	± 0.6215	0.0000	± 0.0052
* Sb	0.0452	± 0.0418	0.7533	± 1.436	0.0063	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.1695	0.0000	± 0.0014
* Ba	0.0000	± 0.0102	0.0000	± 0.1695	0.0000	± 0.0014
* La	0.0000	± 0.0102	0.0000	± 0.1695	0.0000	± 0.0014
* Ce	0.0000	± 0.0090	0.0000	± 0.1507	0.0000	± 0.0013
* Sm	0.0000	± 0.0136	0.0000	± 0.2260	0.0000	± 0.0019
* Eu	0.0000	± 0.0249	0.0000	± 0.4143	0.0000	± 0.0035
* Tb	0.0000	± 0.0158	0.0000	± 0.2637	0.0000	± 0.0022
* Hf	0.0000	± 0.0102	0.0000	± 0.1695	0.0000	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.1507	0.0000	± 0.0013
* W	0.0045	± 0.0056	0.0753	± 0.1569	0.0006	± 0.0008
* Ir	0.0000	± 0.0045	0.0000	± 0.0753	0.0000	± 0.0006
* Au	0.0045	± 0.0056	0.0753	± 0.1569	0.0006	± 0.0008
* Hg	0.0000	± 0.0068	0.0000	± 0.1130	0.0000	± 0.0009
* Pb	0.0000	± 0.0068	0.0000	± 0.1130	0.0000	± 0.0009

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T2554
Filter ID: P7325557
Site: SUMP50 PM10
Sample Date: 8/ 2/21
Filter Lot #: 7094056
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	79.	± 10.			10.97	± 1.493
XRF						
Na	1.704	± 0.5390	2.157	± 0.7349	0.2367	± 0.0758
Mg	0.4464	± 0.1322	0.5650	± 0.1820	0.0620	± 0.0186
Al	1.485	± 0.0927	1.880	± 0.2653	0.2062	± 0.0165
Si	3.440	± 0.1752	4.354	± 0.5941	0.4777	± 0.0341
P	0.0825	± 0.0192	0.1044	± 0.0277	0.0115	± 0.0027
S	2.111	± 0.1074	2.672	± 0.3645	0.2932	± 0.0209
Cl	0.7887	± 0.0508	0.9984	± 0.1418	0.1095	± 0.0089
K	0.4373	± 0.0249	0.5536	± 0.0768	0.0607	± 0.0046
Ca	0.6690	± 0.0350	0.8468	± 0.1160	0.0929	± 0.0067
* Sc	0.0000	± 0.0102	0.0000	± 0.0129	0.0000	± 0.0014
Ti	0.1300	± 0.0090	0.1645	± 0.0238	0.0180	± 0.0015
* V	0.0124	± 0.0079	0.0157	± 0.0102	0.0017	± 0.0011
* Cr	0.0000	± 0.0068	0.0000	± 0.0086	0.0000	± 0.0009
* Mn	0.0316	± 0.0124	0.0401	± 0.0165	0.0044	± 0.0017
Fe	1.259	± 0.0633	1.593	± 0.2170	0.1748	± 0.0124
* Co	0.0000	± 0.0079	0.0000	± 0.0100	0.0000	± 0.0011
* Ni	0.0000	± 0.0045	0.0000	± 0.0057	0.0000	± 0.0006
Cu	0.0723	± 0.0056	0.0915	± 0.0136	0.0100	± 0.0009
Zn	0.0780	± 0.0056	0.0987	± 0.0144	0.0108	± 0.0010
* Ga	0.0079	± 0.0034	0.0100	± 0.0045	0.0011	± 0.0005
* As	0.0000	± 0.0045	0.0000	± 0.0057	0.0000	± 0.0006
* Se	0.0000	± 0.0034	0.0000	± 0.0043	0.0000	± 0.0005
* Br	0.0056	± 0.0034	0.0072	± 0.0044	0.0008	± 0.0005
* Rb	0.0068	± 0.0034	0.0086	± 0.0044	0.0009	± 0.0005
* Sr	0.0023	± 0.0045	0.0029	± 0.0057	0.0003	± 0.0006
Y	0.0203	± 0.0045	0.0257	± 0.0066	0.0028	± 0.0006
* Zr	0.0090	± 0.0068	0.0114	± 0.0087	0.0013	± 0.0009
Nb	0.0339	± 0.0090	0.0429	± 0.0127	0.0047	± 0.0013
* Mo	0.0000	± 0.0113	0.0000	± 0.0143	0.0000	± 0.0016
* Ag	0.0282	± 0.0215	0.0358	± 0.0276	0.0039	± 0.0030
* Cd	0.0226	± 0.0305	0.0286	± 0.0388	0.0031	± 0.0042
* In	0.0339	± 0.0339	0.0429	± 0.0433	0.0047	± 0.0047
* Sn	0.0181	± 0.0384	0.0229	± 0.0487	0.0025	± 0.0053
* Sb	0.0000	± 0.0576	0.0000	± 0.0729	0.0000	± 0.0080
* Cs	0.0000	± 0.0136	0.0000	± 0.0172	0.0000	± 0.0019
* Ba	0.0000	± 0.0203	0.0000	± 0.0257	0.0000	± 0.0028
* La	0.0056	± 0.0158	0.0072	± 0.0200	0.0008	± 0.0022
* Ce	0.0350	± 0.0147	0.0443	± 0.0194	0.0049	± 0.0021
* Sm	0.0000	± 0.0215	0.0000	± 0.0272	0.0000	± 0.0030
* Eu	0.0249	± 0.0249	0.0315	± 0.0317	0.0035	± 0.0035
* Tb	0.0000	± 0.0396	0.0000	± 0.0501	0.0000	± 0.0055
* Hf	0.0000	± 0.0102	0.0000	± 0.0129	0.0000	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0114	0.0000	± 0.0013
* W	0.0147	± 0.0079	0.0186	± 0.0103	0.0020	± 0.0011
* Ir	0.0000	± 0.0068	0.0000	± 0.0086	0.0000	± 0.0009
* Au	0.0102	± 0.0056	0.0129	± 0.0073	0.0014	± 0.0008
* Hg	0.0000	± 0.0090	0.0000	± 0.0114	0.0000	± 0.0013
* Pb	0.0011	± 0.0102	0.0014	± 0.0129	0.0002	± 0.0014

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T2552
Filter ID: P7325555
Site: ST56 PM10
Sample Date: 8/ 2/21
Filter Lot #: 7094056
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	70.	± 10.			9.722	± 1.472
XRF						
Na	2.231	± 0.5627	3.187	± 0.9239	0.3098	± 0.0797
Mg	0.8543	± 0.1379	1.220	± 0.2630	0.1186	± 0.0200
Al	2.023	± 0.1153	2.890	± 0.4444	0.2809	± 0.0213
Si	4.777	± 0.2430	6.824	± 1.035	0.6634	± 0.0473
* P	0.0565	± 0.0192	0.0807	± 0.0298	0.0078	± 0.0027
S	1.903	± 0.0972	2.718	± 0.4124	0.2643	± 0.0189
Cl	0.7322	± 0.0486	1.046	± 0.1648	0.1017	± 0.0084
K	0.4633	± 0.0260	0.6619	± 0.1016	0.0643	± 0.0048
Ca	0.9345	± 0.0475	1.335	± 0.2024	0.1298	± 0.0093
Sc	0.0463	± 0.0090	0.0662	± 0.0160	0.0064	± 0.0013
Ti	0.1684	± 0.0113	0.2405	± 0.0380	0.0234	± 0.0020
* V	0.0170	± 0.0079	0.0242	± 0.0118	0.0024	± 0.0011
* Cr	0.0000	± 0.0068	0.0000	± 0.0097	0.0000	± 0.0009
Mn	0.0396	± 0.0124	0.0565	± 0.0195	0.0055	± 0.0017
Fe	1.648	± 0.0825	2.354	± 0.3563	0.2288	± 0.0162
* Co	0.0000	± 0.0090	0.0000	± 0.0129	0.0000	± 0.0013
* Ni	0.0068	± 0.0045	0.0097	± 0.0066	0.0009	± 0.0006
Cu	0.0475	± 0.0045	0.0678	± 0.0116	0.0066	± 0.0007
Zn	0.0960	± 0.0056	0.1372	± 0.0212	0.0133	± 0.0010
Ga	0.0113	± 0.0034	0.0161	± 0.0054	0.0016	± 0.0005
* As	0.0000	± 0.0045	0.0000	± 0.0065	0.0000	± 0.0006
* Se	0.0000	± 0.0034	0.0000	± 0.0048	0.0000	± 0.0005
* Br	0.0034	± 0.0034	0.0048	± 0.0049	0.0005	± 0.0005
* Rb	0.0011	± 0.0034	0.0016	± 0.0048	0.0002	± 0.0005
Sr	0.0170	± 0.0045	0.0242	± 0.0073	0.0024	± 0.0006
* Y	0.0011	± 0.0056	0.0016	± 0.0081	0.0002	± 0.0008
* Zr	0.0056	± 0.0079	0.0081	± 0.0114	0.0008	± 0.0011
* Nb	0.0102	± 0.0102	0.0145	± 0.0147	0.0014	± 0.0014
* Mo	0.0000	± 0.0113	0.0000	± 0.0161	0.0000	± 0.0016
* Ag	0.0441	± 0.0294	0.0630	± 0.0429	0.0061	± 0.0041
* Cd	0.0079	± 0.0305	0.0113	± 0.0436	0.0011	± 0.0042
* In	0.0000	± 0.0339	0.0000	± 0.0484	0.0000	± 0.0047
* Sn	0.0339	± 0.0384	0.0484	± 0.0553	0.0047	± 0.0053
* Sb	0.0000	± 0.0576	0.0000	± 0.0823	0.0000	± 0.0080
* Cs	0.0000	± 0.0136	0.0000	± 0.0194	0.0000	± 0.0019
* Ba	0.0000	± 0.0237	0.0000	± 0.0339	0.0000	± 0.0033
* La	0.0000	± 0.0158	0.0000	± 0.0226	0.0000	± 0.0022
* Ce	0.0124	± 0.0170	0.0178	± 0.0243	0.0017	± 0.0024
* Sm	0.0000	± 0.0215	0.0000	± 0.0307	0.0000	± 0.0030
* Eu	0.0000	± 0.0249	0.0000	± 0.0355	0.0000	± 0.0035
* Tb	0.0000	± 0.0441	0.0000	± 0.0630	0.0000	± 0.0061
* Hf	0.0170	± 0.0102	0.0242	± 0.0149	0.0024	± 0.0014
* Ta	0.0000	± 0.0090	0.0000	± 0.0129	0.0000	± 0.0013
* W	0.0045	± 0.0079	0.0065	± 0.0113	0.0006	± 0.0011
* Ir	0.0102	± 0.0068	0.0145	± 0.0099	0.0014	± 0.0009
* Au	0.0000	± 0.0056	0.0000	± 0.0081	0.0000	± 0.0008
* Hg	0.0000	± 0.0090	0.0000	± 0.0129	0.0000	± 0.0013
* Pb	0.0000	± 0.0102	0.0000	± 0.0145	0.0000	± 0.0014

* - XRF Concentration is less than three times the uncertainty

Lab ID: 21-T1711
Site: CRC PM10
Sample Date: 8/ 2/21
Filter Lot #: P46601032
Volume: 7.200 ± 0.360 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		percent		µg/m ³	
Gravimetry						
Net Mass	52.	± 10.			7.222	± 1.435
XRF						
Na	2.066	± 0.4328	3.972	± 1.130	0.2869	± 0.0618
Mg	0.6351	± 0.1028	1.221	± 0.3070	0.0882	± 0.0149
Al	1.267	± 0.0768	2.436	± 0.4912	0.1759	± 0.0138
Si	2.861	± 0.1458	5.502	± 1.095	0.3974	± 0.0284
P	0.0622	± 0.0158	0.1195	± 0.0381	0.0086	± 0.0022
S	2.121	± 0.1074	4.079	± 0.8111	0.2946	± 0.0210
Cl	0.8893	± 0.0497	1.710	± 0.3425	0.1235	± 0.0093
K	0.3989	± 0.0226	0.7671	± 0.1538	0.0554	± 0.0042
Ca	0.7548	± 0.0384	1.452	± 0.2888	0.1048	± 0.0075
* Sc	0.0000	± 0.0090	0.0000	± 0.0174	0.0000	± 0.0013
Ti	0.0881	± 0.0068	0.1695	± 0.0351	0.0122	± 0.0011
* V	0.0124	± 0.0056	0.0239	± 0.0118	0.0017	± 0.0008
* Cr	0.0000	± 0.0045	0.0000	± 0.0087	0.0000	± 0.0006
* Mn	0.0170	± 0.0124	0.0326	± 0.0247	0.0024	± 0.0017
Fe	1.003	± 0.0508	1.930	± 0.3838	0.1394	± 0.0099
* Co	0.0000	± 0.0056	0.0000	± 0.0109	0.0000	± 0.0008
* Ni	0.0056	± 0.0034	0.0109	± 0.0068	0.0008	± 0.0005
Cu	0.0565	± 0.0034	0.1087	± 0.0219	0.0078	± 0.0006
Zn	0.0723	± 0.0045	0.1391	± 0.0281	0.0100	± 0.0008
* Ga	0.0023	± 0.0034	0.0043	± 0.0066	0.0003	± 0.0005
* As	0.0000	± 0.0034	0.0000	± 0.0065	0.0000	± 0.0005
* Se	0.0034	± 0.0023	0.0065	± 0.0045	0.0005	± 0.0003
* Br	0.0056	± 0.0034	0.0109	± 0.0068	0.0008	± 0.0005
* Rb	0.0000	± 0.0034	0.0000	± 0.0065	0.0000	± 0.0005
Sr	0.0113	± 0.0034	0.0217	± 0.0077	0.0016	± 0.0005
* Y	0.0000	± 0.0045	0.0000	± 0.0087	0.0000	± 0.0006
* Zr	0.0000	± 0.0056	0.0000	± 0.0109	0.0000	± 0.0008
* Nb	0.0000	± 0.0068	0.0000	± 0.0130	0.0000	± 0.0009
* Mo	0.0170	± 0.0079	0.0326	± 0.0165	0.0024	± 0.0011
* Ag	0.0508	± 0.0215	0.0978	± 0.0454	0.0071	± 0.0030
* Cd	0.0249	± 0.0215	0.0478	± 0.0423	0.0035	± 0.0030
* In	0.0136	± 0.0339	0.0261	± 0.0654	0.0019	± 0.0047
* Sn	0.0000	± 0.0384	0.0000	± 0.0739	0.0000	± 0.0053
* Sb	0.0000	± 0.0418	0.0000	± 0.0804	0.0000	± 0.0058
* Cs	0.0000	± 0.0102	0.0000	± 0.0196	0.0000	± 0.0014
Ba	0.0678	± 0.0147	0.1304	± 0.0378	0.0094	± 0.0021
La	0.0497	± 0.0102	0.0956	± 0.0268	0.0069	± 0.0015
* Ce	0.0226	± 0.0124	0.0435	± 0.0253	0.0031	± 0.0017
* Sm	0.0000	± 0.0158	0.0000	± 0.0304	0.0000	± 0.0022
* Eu	0.0170	± 0.0249	0.0326	± 0.0482	0.0024	± 0.0035
* Tb	0.0000	± 0.0328	0.0000	± 0.0630	0.0000	± 0.0046
* Hf	0.0000	± 0.0102	0.0000	± 0.0196	0.0000	± 0.0014
Ta	0.0271	± 0.0090	0.0522	± 0.0201	0.0038	± 0.0013
W	0.0226	± 0.0056	0.0435	± 0.0137	0.0031	± 0.0008
* Ir	0.0113	± 0.0045	0.0217	± 0.0096	0.0016	± 0.0006
* Au	0.0000	± 0.0056	0.0000	± 0.0109	0.0000	± 0.0008
* Hg	0.0000	± 0.0068	0.0000	± 0.0130	0.0000	± 0.0009
* Pb	0.0034	± 0.0068	0.0065	± 0.0131	0.0005	± 0.0009

* - XRF Concentration is less than three times the uncertainty

CHESTER LabNet

Quant'X 1020 XRF Analytical Quality Assurance Report

Client: Sacramento Metro - AQMD

Report: 21-356

Analysis Period: August 18 through 24, 2021

Number of Samples: 24

1. Precision Data

Micromatter Multi-elemental Quality Control Standard: 34103

QC Standard Results

Analyte	n	micrograms per square centimeter			c.v.	%E
		Calib.	Meas.	S.D.		
Si	3	7.91	7.72	0.08	1.08	-2.31
Ti	3	10.84	10.86	0.04	0.41	0.13
Fe	3	11.22	11.24	0.04	0.39	0.14
Se	3	5.19	5.16	0.04	0.74	-0.56
Cd	3	6.87	6.86	0.18	2.55	-0.15
Pb	3	12.57	12.66	0.20	1.55	0.73

2. Accuracy Data

NIST Standard Reference Materials: SRM 2783

Analyte/ SRM	n	Certified Value($\mu\text{g}/\text{cm}^2$)	Measured Value ($\mu\text{g}/\text{cm}^2$)			% Rec.
			High	Low	Average	
K 2783	4	0.5301	0.4623	0.4488	0.4554	+/- 0.0056 85.9
Ca 2783	4	1.3253	1.1205	1.0817	1.1003	+/- 0.0138 83.0
Ti 2783	4	0.1496	0.1381	0.1316	0.1340	+/- 0.0026 89.6
Fe 2783	4	2.6606	2.5105	2.4775	2.4978	+/- 0.0123 93.9
Cu 2783	4	0.0406	0.0338	0.0328	0.0334	+/- 0.0004 82.4
Zn 2783	4	0.1797	0.2168	0.2107	0.2129	+/- 0.0023 118.5
Pb 2783	4	0.0318	0.0352	0.0278	0.0311	+/- 0.0027 97.7

3. Addendum

Micromatter Certified Reference Materials

CRM	Analytes	Certified Value($\mu\text{g}/\text{cm}^2$)	Measured Value($\mu\text{g}/\text{cm}^2$)	% Rec.
39149	Cr	53.7	51.4	95.8
39150	Cu	49.4	45.7	92.5
39151	Zn, Te	49.8	47.9	96.3
39152	Ga, As	50.9	49.0	96.2
39153	Se, Cd	47.1	45.8	97.2
39154	Pb	47.9	45.0	93.9

NIST: National Institute of Standards and Technology

% Rec: Percent Recovery = (Experimental/Given) x 100

n: Number of Observations

S.D.: Standard Deviation

c.v.: Coefficient of Variation = (S.D./Measured) x 100

% E: Percent Error = [(Measured-Calibrated)/Calibrated] x 100

QUANT'X 1020 REPLICATE REPORT

1.60

Original ID: 21T1704

Replicate ID: RT1704

Element	Original ug/cm ²	Replicate ug/cm ²	Difference ug/cm ²	RPD				
Na	0.2713	+ 0.0397	0.2483	+ 0.0392	0.0229	+ 0.0558	+ 8.8	+ 21.5
Mg	0.1854	+ 0.0132	0.1761	+ 0.0130	0.0093	+ 0.0186	+ 5.1	+ 10.3
Al	0.5998	+ 0.0312	0.5885	+ 0.0306	0.0113	+ 0.0437	+ 1.9	+ 7.4
Si	1.5151	+ 0.0779	1.5016	+ 0.0772	0.0135	+ 0.1097	+ 0.9	+ 7.3
P	0.0184	+ 0.0017	0.0137	+ 0.0017	0.0047	+ 0.0024	0 29.3	+ 14.9
S	0.2385	+ 0.0122	0.2370	+ 0.0121	0.0016	+ 0.0172	+ 0.7	+ 7.2
Cl	0.0520	+ 0.0033	0.0479	+ 0.0032	0.0041	+ 0.0046	+ 8.2	+ 9.2
K	0.1710	+ 0.0087	0.1680	+ 0.0085	0.0030	+ 0.0121	+ 1.8	+ 7.2
Ca	0.2550	+ 0.0128	0.2604	+ 0.0131	-0.0054	+ 0.0183	+ -2.1	+ 7.1
Sc	0.0000	+ 0.0012	0.0000	+ 0.0012	0.0000	+ 0.0017		
Ti	0.0433	+ 0.0023	0.0436	+ 0.0023	-0.0003	+ 0.0032	+ -0.7	+ 7.4
V	0.0037	+ 0.0006	0.0033	+ 0.0006	0.0005	+ 0.0009	+ 13.7	+ 25.1
Cr	0.0000	+ 0.0004	0.0000	+ 0.0004	0.0000	+ 0.0006		
Mn	0.0121	+ 0.0013	0.0100	+ 0.0012	0.0021	+ 0.0017	0 19.0	+ 15.7
Fe	0.5458	+ 0.0273	0.5490	+ 0.0275	-0.0032	+ 0.0387	+ -0.6	+ 7.1
Co	0.0000	+ 0.0013	0.0000	+ 0.0013	0.0000	+ 0.0019		
Ni	0.0015	+ 0.0003	0.0012	+ 0.0003	0.0004	+ 0.0005	+ 26.5	+ 34.3
Cu	0.0082	+ 0.0005	0.0065	+ 0.0004	0.0017	+ 0.0006	- 23.7	+ 8.5
Zn	0.0160	+ 0.0008	0.0156	+ 0.0008	0.0004	+ 0.0012	+ 2.3	+ 7.4
Ga	0.0008	+ 0.0002	0.0000	+ 0.0003	0.0008	+ 0.0003	- 200.0	+ 83.7
As	0.0000	+ 0.0003	0.0018	+ 0.0003	-0.0018	+ 0.0004		
Se	0.0006	+ 0.0002	0.0008	+ 0.0002	-0.0001	+ 0.0003		
Br	0.0023	+ 0.0003	0.0034	+ 0.0003	-0.0011	+ 0.0004	- 39.6	+ 14.5
Rb	0.0011	+ 0.0003	0.0011	+ 0.0003	0.0000	+ 0.0004	+ 1.9	+ 38.4
Sr	0.0025	+ 0.0003	0.0023	+ 0.0003	0.0002	+ 0.0004	+ 7.5	+ 18.4
Y	0.0005	+ 0.0004	0.0006	+ 0.0004	-0.0002	+ 0.0005		
Zr	0.0045	+ 0.0005	0.0034	+ 0.0004	0.0011	+ 0.0006	0 27.8	+ 16.4
Nb	0.0000	+ 0.0005	0.0000	+ 0.0005	0.0000	+ 0.0008		
Mo	0.0034	+ 0.0007	0.0007	+ 0.0007	0.0027	+ 0.0010	- 131.7	+ 47.6
Ag	0.0000	+ 0.0018	0.0000	+ 0.0018	0.0000	+ 0.0026		
Cd	0.0000	+ 0.0019	0.0000	+ 0.0019	0.0000	+ 0.0027		
In	0.0036	+ 0.0023	0.0000	+ 0.0022	0.0036	+ 0.0031		
Sn	0.0000	+ 0.0033	0.0010	+ 0.0033	-0.0010	+ 0.0047		
Sb	0.0100	+ 0.0037	0.0000	+ 0.0037	0.0100	+ 0.0052		
Cs	0.0000	+ 0.0012	0.0000	+ 0.0012	0.0000	+ 0.0018		
Ba	0.0296	+ 0.0031	0.0269	+ 0.0031	0.0027	+ 0.0044	+ 9.6	+ 15.4
La	0.0129	+ 0.0018	0.0134	+ 0.0018	-0.0005	+ 0.0025	+ -3.8	+ 19.1
Ce	0.0065	+ 0.0014	0.0058	+ 0.0014	0.0007	+ 0.0019	+ 11.4	+ 31.3
Sm	0.0000	+ 0.0013	0.0000	+ 0.0013	0.0000	+ 0.0018		
Eu	0.0002	+ 0.0022	0.0015	+ 0.0022	-0.0013	+ 0.0032		
Tb	0.0000	+ 0.0072	0.0000	+ 0.0070	0.0000	+ 0.0100		
Hf	0.0009	+ 0.0009	0.0000	+ 0.0009	0.0009	+ 0.0013		
Ta	0.0000	+ 0.0008	0.0041	+ 0.0008	-0.0041	+ 0.0011		
W	0.0002	+ 0.0007	0.0004	+ 0.0005	-0.0002	+ 0.0009		
Ir	0.0000	+ 0.0004	0.0000	+ 0.0006	0.0000	+ 0.0007		
Au	0.0002	+ 0.0005	0.0000	+ 0.0005	0.0002	+ 0.0007		
Hg	0.0007	+ 0.0007	0.0007	+ 0.0007	0.0000	+ 0.0010		
Pb	0.0007	+ 0.0006	0.0006	+ 0.0006	0.0001	+ 0.0009		

RPD: Relative Percent Difference $(X_1 - X_2) / [(X_1 + X_2) / 2] * 100$. RPD is calculated when original value is greater than three times its uncertainty.

QUANT'X 1020 REPLICATE REPORT

1.56

 Original ID: 21T1708
 Replicate ID: RT1708

Element	Original ug/cm ²			Replicate ug/cm ²			Difference ug/cm ²			RPD			
	Value	Unc.	Value	Unc.	Value	Unc.	Value	Unc.	Value	Unc.	Value	Unc.	
Na	0.2298	+-	0.0401		0.1748	+-	0.0393		0.0550	+-	0.0561	+	27.2
Mg	0.1103	+-	0.0110		0.0890	+-	0.0105		0.0213	+-	0.0152	0	21.4
Al	0.3523	+-	0.0184		0.3303	+-	0.0173		0.0220	+-	0.0253	+	6.5
Si	0.8685	+-	0.0442		0.8308	+-	0.0423		0.0377	+-	0.0612	+	4.4
P	0.0147	+-	0.0016		0.0142	+-	0.0016		0.0005	+-	0.0023	+	3.5
S	0.2315	+-	0.0118		0.2309	+-	0.0117		0.0006	+-	0.0166	+	0.3
Cl	0.0569	+-	0.0035		0.0519	+-	0.0033		0.0050	+-	0.0048	0	9.2
K	0.1062	+-	0.0054		0.1066	+-	0.0054		-0.0004	+-	0.0077	+	-0.4
Ca	0.1786	+-	0.0090		0.1669	+-	0.0084		0.0117	+-	0.0123	+	6.8
Sc	0.0000	+-	0.0011		0.0054	+-	0.0010		-0.0054	+-	0.0014		
Ti	0.0322	+-	0.0017		0.0297	+-	0.0015		0.0025	+-	0.0023	0	8.2
V	0.0006	+-	0.0006		0.0000	+-	0.0006		0.0006	+-	0.0008		
Cr	0.0000	+-	0.0004		0.0000	+-	0.0004		0.0000	+-	0.0006		
Mn	0.0068	+-	0.0011		0.0077	+-	0.0012		-0.0009	+-	0.0016	+	-12.4
Fe	0.3129	+-	0.0157		0.3124	+-	0.0156		0.0005	+-	0.0221	+	0.2
Co	0.0000	+-	0.0010		0.0000	+-	0.0010		0.0000	+-	0.0014		
Ni	0.0006	+-	0.0003		0.0005	+-	0.0003		0.0001	+-	0.0005		
Cu	0.0063	+-	0.0004		0.0064	+-	0.0004		-0.0001	+-	0.0006	+	-1.4
Zn	0.0122	+-	0.0007		0.0122	+-	0.0007		-0.0001	+-	0.0009	+	-0.5
Ga	0.0008	+-	0.0002		0.0008	+-	0.0002		0.0000	+-	0.0003	+	-6.3
As	0.0000	+-	0.0003		0.0000	+-	0.0004		0.0000	+-	0.0005		
Se	0.0000	+-	0.0002		0.0003	+-	0.0002		-0.0003	+-	0.0003		
Br	0.0032	+-	0.0003		0.0025	+-	0.0003		0.0007	+-	0.0004	0	25.5
Rb	0.0009	+-	0.0003		0.0007	+-	0.0003		0.0001	+-	0.0004		
Sr	0.0017	+-	0.0003		0.0021	+-	0.0003		-0.0005	+-	0.0004	0	-23.7
Y	0.0000	+-	0.0004		0.0003	+-	0.0004		-0.0003	+-	0.0005		
Zr	0.0017	+-	0.0005		0.0039	+-	0.0005		-0.0022	+-	0.0007	--	-78.6
Nb	0.0012	+-	0.0006		0.0001	+-	0.0006		0.0011	+-	0.0008		
Mo	0.0000	+-	0.0007		0.0000	+-	0.0007		0.0000	+-	0.0010		
Ag	0.0037	+-	0.0019		0.0000	+-	0.0018		0.0037	+-	0.0026		
Cd	0.0000	+-	0.0019		0.0000	+-	0.0019		0.0000	+-	0.0027		
In	0.0000	+-	0.0030		0.0000	+-	0.0030		0.0000	+-	0.0042		
Sn	0.0000	+-	0.0033		0.0240	+-	0.0035		-0.0240	+-	0.0048		
Sb	0.0000	+-	0.0037		0.0070	+-	0.0037		-0.0070	+-	0.0052		
Cs	0.0000	+-	0.0012		0.0000	+-	0.0012		0.0000	+-	0.0018		
Ba	0.0000	+-	0.0025		0.0000	+-	0.0025		0.0000	+-	0.0035		
La	0.0000	+-	0.0016		0.0000	+-	0.0016		0.0000	+-	0.0023		
Ce	0.0050	+-	0.0013		0.0000	+-	0.0013		0.0050	+-	0.0019	-	200.0
Sm	0.0000	+-	0.0013		0.0000	+-	0.0013		0.0000	+-	0.0018		
Eu	0.0020	+-	0.0022		0.0000	+-	0.0022		0.0020	+-	0.0032		
Tb	0.0000	+-	0.0055		0.0000	+-	0.0053		0.0000	+-	0.0076		
Hf	0.0008	+-	0.0009		0.0005	+-	0.0009		0.0003	+-	0.0013		
Ta	0.0000	+-	0.0008		0.0000	+-	0.0008		0.0000	+-	0.0011		
W	0.0003	+-	0.0007		0.0010	+-	0.0007		-0.0007	+-	0.0010		
Ir	0.0000	+-	0.0006		0.0005	+-	0.0006		-0.0005	+-	0.0008		
Au	0.0011	+-	0.0005		0.0006	+-	0.0005		0.0005	+-	0.0007		
Hg	0.0011	+-	0.0006		0.0003	+-	0.0006		0.0008	+-	0.0008		
Pb	0.0026	+-	0.0007		0.0017	+-	0.0007		0.0008	+-	0.0009	+	39.1
												+-	43.3

RPD: Relative Percent Difference $(X_1 - X_2) / [(X_1 + X_2) / 2] * 100$. RPD is calculated when original value is greater than three times its uncertainty.

QUANT'X 1020 REPLICATE REPORT

2.36

 Original ID: 21T2552
 Replicate ID: RT2552

Element	Original ug/cm ²			Replicate ug/cm ²			Difference ug/cm ²			RPD			
	Value	U	Value	U	Value	U	Value	U	Value	U	Value	U	
Na	0.1974	+-	0.0498		0.1396	+-	0.0492		0.0578	+-	0.0700	+	34.3
Mg	0.0756	+-	0.0122		0.0775	+-	0.0122		-0.0019	+-	0.0172	+	-2.5
Al	0.1790	+-	0.0102		0.1823	+-	0.0104		-0.0033	+-	0.0146	+	-1.8
Si	0.4227	+-	0.0215		0.4338	+-	0.0220		-0.0111	+-	0.0308	+	-2.6
P	0.0050	+-	0.0017		0.0028	+-	0.0018		0.0022	+-	0.0025		
S	0.1684	+-	0.0086		0.1676	+-	0.0085		0.0008	+-	0.0121	+	0.5
Cl	0.0648	+-	0.0043		0.0690	+-	0.0044		-0.0042	+-	0.0062	+	-6.3
K	0.0410	+-	0.0023		0.0400	+-	0.0024		0.0010	+-	0.0034	+	2.5
Ca	0.0827	+-	0.0042		0.0881	+-	0.0045		-0.0054	+-	0.0061	+	-6.3
Sc	0.0041	+-	0.0008		0.0040	+-	0.0008		0.0001	+-	0.0011	+	2.5
Ti	0.0149	+-	0.0010		0.0161	+-	0.0010		-0.0012	+-	0.0014	+	-7.6
V	0.0015	+-	0.0007		0.0000	+-	0.0007		0.0015	+-	0.0010		
Cr	0.0000	+-	0.0006		0.0000	+-	0.0006		0.0000	+-	0.0009		
Mn	0.0035	+-	0.0011		0.0029	+-	0.0011		0.0006	+-	0.0016	+	17.6
Fe	0.1458	+-	0.0073		0.1524	+-	0.0076		-0.0066	+-	0.0106	+	-4.4
Co	0.0000	+-	0.0008		0.0000	+-	0.0008		0.0000	+-	0.0011		
Ni	0.0006	+-	0.0004		0.0001	+-	0.0004		0.0005	+-	0.0006		
Cu	0.0042	+-	0.0004		0.0050	+-	0.0004		-0.0008	+-	0.0006	0	-17.6
Zn	0.0085	+-	0.0005		0.0074	+-	0.0005		0.0011	+-	0.0007	0	13.6
Ga	0.0010	+-	0.0003		0.0007	+-	0.0003		0.0002	+-	0.0004	+	24.9
As	0.0000	+-	0.0004		0.0010	+-	0.0004		-0.0010	+-	0.0006		
Se	0.0000	+-	0.0003		0.0005	+-	0.0003		-0.0005	+-	0.0004		
Br	0.0003	+-	0.0003		0.0013	+-	0.0003		-0.0010	+-	0.0005		
Rb	0.0001	+-	0.0003		0.0023	+-	0.0003		-0.0022	+-	0.0004		
Sr	0.0015	+-	0.0004		0.0000	+-	0.0004		0.0015	+-	0.0006	-	200.0
Y	0.0001	+-	0.0005		0.0000	+-	0.0005		0.0001	+-	0.0007		
Zr	0.0005	+-	0.0007		0.0006	+-	0.0006		-0.0001	+-	0.0009		
Nb	0.0009	+-	0.0009		0.0000	+-	0.0009		0.0009	+-	0.0012		
Mo	0.0000	+-	0.0010		0.0018	+-	0.0010		-0.0018	+-	0.0014		
Ag	0.0039	+-	0.0026		0.0000	+-	0.0025		0.0039	+-	0.0036		
Cd	0.0007	+-	0.0027		0.0085	+-	0.0027		-0.0078	+-	0.0038		
In	0.0000	+-	0.0030		0.0000	+-	0.0030		0.0000	+-	0.0042		
Sn	0.0030	+-	0.0034		0.0092	+-	0.0035		-0.0062	+-	0.0049		
Sb	0.0000	+-	0.0051		0.0110	+-	0.0052		-0.0110	+-	0.0073		
Cs	0.0000	+-	0.0012		0.0000	+-	0.0012		0.0000	+-	0.0018		
Ba	0.0000	+-	0.0021		0.0000	+-	0.0021		0.0000	+-	0.0030		
La	0.0000	+-	0.0014		0.0000	+-	0.0014		0.0000	+-	0.0020		
Ce	0.0011	+-	0.0015		0.0000	+-	0.0015		0.0011	+-	0.0021		
Sm	0.0000	+-	0.0019		0.0000	+-	0.0019		0.0000	+-	0.0027		
Eu	0.0000	+-	0.0022		0.0000	+-	0.0022		0.0000	+-	0.0032		
Tb	0.0000	+-	0.0039		0.0000	+-	0.0039		0.0000	+-	0.0055		
Hf	0.0015	+-	0.0009		0.0012	+-	0.0009		0.0003	+-	0.0013		
Ta	0.0000	+-	0.0008		0.0014	+-	0.0008		-0.0014	+-	0.0011		
W	0.0004	+-	0.0007		0.0000	+-	0.0007		0.0004	+-	0.0010		
Ir	0.0009	+-	0.0006		0.0000	+-	0.0006		0.0009	+-	0.0008		
Au	0.0000	+-	0.0005		0.0020	+-	0.0005		-0.0020	+-	0.0007		
Hg	0.0000	+-	0.0008		0.0016	+-	0.0008		-0.0016	+-	0.0012		
Pb	0.0000	+-	0.0009		0.0000	+-	0.0009		0.0000	+-	0.0013		

RPD: Relative Percent Difference $(X_1 - X_2) / [(X_1 + X_2) / 2] * 100$. RPD is calculated when original value is greater than three times its uncertainty.

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CHAIN-OFF-CUSTODY RECORD

Report # 21-356

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CHAIN-OFF-CUSTODY RECORD

CLIENT INFORMATION	
Company Name: SMAQMD	Email: iford@airquality.org Office: 916-874-4868
Contact: Levi Ford Cell:	Report To: <u>Levi Ford</u> 777 12th Street Sacramento, CA 95814
	Billing Address: 777 12th Street Sacramento, CA 95814
	Project Name: AR617

Do the samples pose any potential hazards?

If yes please explain:

Are samples for compliance? Yes No

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Relinquished by: Mark S. S. Relinquished by: Mark S. S.
Date/Time: 8/10/11 Date/Time: 8/10/11
Received By: Mark S. S. Received By: Mark S. S.

Laboratory Receipt Comments:

CHESTER LabNet

112242 SW Garden Place ◆ Tigard, OR 97223 ◆ (503) 624-2183 ◆ www.chesterlab.net ◆ cln@chesterlab.net

CHAIN-OFF-CUSTODY RECORD

CLIENT INFORMATION	
Company Name:	SMAQMD
Contact:	Levi Ford
Cell:	
Report To:	Levi Ford 777 12th Street Sacramento, CA 95814
Email:	iford@airquality.org
Office:	916-874-4868
Billing Address:	77 12th Street Sacramento, CA 95814

Do the samples pose any potential hazards?

If yes please explain:

Special Instructions/QC Requirements & Comments: Yes No

٢٠٢٣ @ ١٥:٤٦ Date/Time/Temp:

Laboratory Receipt Comments:

RAW DATA

Available upon request