SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

CLIENT # S061
REPORT # 23-368

SUBMITTED BY:
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Case Narrative

Date: August 25, 2023

General Information

Client:	Sacramento Metropolitan Air Quality Management District
Client Number:	S061
Report Number:	23-368
Sample Description:	47mm Teflon filters, 47mm quartz filters
Sample Numbers:	23-T1885, 23-T1886, 23-T1916, 23-T1933 – 23-T1935, 23-U308 – 23-U310, 23-U408 – 23-U410

Analysis

Analytes:	Particulate Mass, XRF Metals (Na – Pb), Cl, NO3, SO4, NH4, K, Organic Carbon, Elemental Carbon
Analytical Protocols:	Gravimetry: 40 CFR 50 Appendix L (10/17/06 version) X-Ray Fluorescence: EPA IO-3.3 (June 1999 version) Anions - EPA 300.0 (revision 2.1) Cations - ASTM D6919-17 OC/EC: Modified IMPROVE-A (revision 1, 1/25/16)
Analytical Notes:	No problems were encountered during the analyses. Results have **not** been blank corrected.
QA/QC Review:	All 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 t. 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.

Paul Duda 8/25/23

Project Manager Date
Paul Duda

Client: S061 - SMAQMD
Report Number: 23-368

Lab ID: 23-T1933
Filter ID: P7468387
Client ID: Canister SMAQMD 01
Site: 617 Fern
Sample Date: 7/ 5/23
Filter Lot #: 7118468
Volume: 9.688 ± 0.484 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter			percent			µg/m³		
Gravimetry									
Net Mass	61.	±	10.				6.296	±	1.079
XRF									
Na	2.347	±	0.3446	3.848	±	0.8468	0.2423	±	0.0376
Mg	0.2644	±	0.0622	0.4335	±	0.1242	0.0273	±	0.0066
Al	0.2667	±	0.0825	0.4372	±	0.1530	0.0275	±	0.0086
Si	0.6113	±	0.0350	1.002	±	0.1740	0.0631	±	0.0048
* P	0.0294	±	0.0147	0.0482	±	0.0253	0.0030	±	0.0015
S	4.504	±	0.2305	7.384	±	1.268	0.4649	±	0.0333
* Cl	0.1062	±	0.0373	0.1741	±	0.0675	0.0110	±	0.0039
K	0.8226	±	0.0441	1.349	±	0.2326	0.0849	±	0.0062
Ca	0.2215	±	0.0181	0.3631	±	0.0665	0.0229	±	0.0022
* Sc	0.0000	±	0.0124	0.0000	±	0.0204	0.0000	±	0.0013
* Ti	0.0237	±	0.0102	0.0389	±	0.0179	0.0024	±	0.0011
* V	0.0079	±	0.0102	0.0130	±	0.0168	0.0008	±	0.0011
* Cr	0.0102	±	0.0090	0.0167	±	0.0151	0.0010	±	0.0009
* Mn	0.0068	±	0.0090	0.0111	±	0.0149	0.0007	±	0.0009
Fe	0.2249	±	0.0136	0.3686	±	0.0644	0.0232	±	0.0018
* Co	0.0000	±	0.0079	0.0000	±	0.0130	0.0000	±	0.0008
* Ni	0.0034	±	0.0068	0.0056	±	0.0112	0.0003	±	0.0007
* Cu	0.0249	±	0.0102	0.0408	±	0.0180	0.0026	±	0.0011
* Zn	0.0136	±	0.0079	0.0222	±	0.0135	0.0014	±	0.0008
* Ga	0.0000	±	0.0068	0.0000	±	0.0111	0.0000	±	0.0007
* As	0.0068	±	0.0102	0.0111	±	0.0168	0.0007	±	0.0011
* Se	0.0011	±	0.0056	0.0019	±	0.0093	0.0001	±	0.0006
* Br	0.0102	±	0.0079	0.0167	±	0.0133	0.0010	±	0.0008
* Rb	0.0000	±	0.0079	0.0000	±	0.0130	0.0000	±	0.0008
* Sr	0.0215	±	0.0079	0.0352	±	0.0142	0.0022	±	0.0008
* Y	0.0000	±	0.0158	0.0000	±	0.0259	0.0000	±	0.0016
* Zr	0.0023	±	0.0226	0.0037	±	0.0371	0.0002	±	0.0023
* Nb	0.0068	±	0.0316	0.0111	±	0.0519	0.0007	±	0.0033
* Mo	0.0203	±	0.0384	0.0333	±	0.0632	0.0021	±	0.0040
* Ag	0.0000	±	0.0316	0.0000	±	0.0519	0.0000	±	0.0033
* Cd	0.0644	±	0.0328	0.1056	±	0.0564	0.0066	±	0.0034
* In	0.0441	±	0.0429	0.0722	±	0.0714	0.0045	±	0.0044
* Sn	0.0000	±	0.0644	0.0000	±	0.1056	0.0000	±	0.0066
* Sb	0.0746	±	0.0712	0.1223	±	0.1184	0.0077	±	0.0074
* Cs	0.0000	±	0.0147	0.0000	±	0.0241	0.0000	±	0.0015
* Ba	0.0328	±	0.0158	0.0537	±	0.0274	0.0034	±	0.0016
* La	0.0090	±	0.0158	0.0148	±	0.0260	0.0009	±	0.0016
* Ce	0.0000	±	0.0136	0.0000	±	0.0222	0.0000	±	0.0014
* Sm	0.0000	±	0.0113	0.0000	±	0.0185	0.0000	±	0.0012
* Eu	0.0000	±	0.0237	0.0000	±	0.0389	0.0000	±	0.0024
* Tb	0.0000	±	0.0226	0.0000	±	0.0370	0.0000	±	0.0023
* Hf	0.0000	±	0.0102	0.0000	±	0.0167	0.0000	±	0.0010
* Ta	0.0000	±	0.0102	0.0000	±	0.0167	0.0000	±	0.0010
* W	0.0113	±	0.0079	0.0185	±	0.0133	0.0012	±	0.0008
* Ir	0.0000	±	0.0056	0.0000	±	0.0093	0.0000	±	0.0006
* Au	0.0000	±	0.0079	0.0000	±	0.0130	0.0000	±	0.0008
* Hg	0.0000	±	0.0124	0.0000	±	0.0204	0.0000	±	0.0013
* Pb	0.0000	±	0.0079	0.0000	±	0.0130	0.0000	±	0.0008

Lab ID: 23-T1933
Client ID: Canister SMAQMD 01

Analyte	µg/filter		percent		µg/m³	
IC	Conc.	DL	Conc.	DL	Conc.	DL
Cl	0.610	0.100	1.000	0.1639	0.063	0.010
NO3	2.960	0.100	4.852	0.1639	0.306	0.010
SO4	7.420	0.200	12.16	0.3279	0.766	0.021
Na	2.380	0.100	3.902	0.1639	0.246	0.010
NH4	2.700	0.100	4.426	0.1639	0.279	0.010
K	0.730	0.100	1.197	0.1639	0.075	0.010

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-368

Lab ID: 23-T1934
Filter ID: P7468388
Client ID: Canister SMAQMD 02
Site: 617 Fern
Sample Date: 7/11/23
Filter Lot #: 7118468
Volume: 9.692 ± 0.485 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter			percent			µg/m³		
Gravimetry									
Net Mass	44.	±	10.				4.540	±	1.056
XRF									
Na	2.730	±	0.3514	6.205	±	1.621	0.2817	±	0.0389
Mg	0.3220	±	0.0622	0.7319	±	0.2182	0.0332	±	0.0066
Al	0.4723	±	0.0870	1.074	±	0.3141	0.0487	±	0.0093
Si	0.8882	±	0.0475	2.019	±	0.4713	0.0916	±	0.0067
P	0.0486	±	0.0147	0.1104	±	0.0418	0.0050	±	0.0015
S	3.340	±	0.1729	7.592	±	1.770	0.3446	±	0.0248
Cl	0.6317	±	0.0497	1.436	±	0.3453	0.0652	±	0.0061
K	0.3763	±	0.0249	0.8552	±	0.2024	0.0388	±	0.0032
Ca	0.3040	±	0.0215	0.6908	±	0.1644	0.0314	±	0.0027
* Sc	0.0000	±	0.0124	0.0000	±	0.0282	0.0000	±	0.0013
* Ti	0.0294	±	0.0102	0.0668	±	0.0277	0.0030	±	0.0011
* V	0.0034	±	0.0102	0.0077	±	0.0232	0.0003	±	0.0010
* Cr	0.0158	±	0.0090	0.0360	±	0.0221	0.0016	±	0.0009
* Mn	0.0034	±	0.0090	0.0077	±	0.0206	0.0003	±	0.0009
Fe	0.3944	±	0.0215	0.8963	±	0.2095	0.0407	±	0.0030
* Co	0.0000	±	0.0079	0.0000	±	0.0180	0.0000	±	0.0008
* Ni	0.0011	±	0.0068	0.0026	±	0.0154	0.0001	±	0.0007
* Cu	0.0079	±	0.0102	0.0180	±	0.0235	0.0008	±	0.0011
* Zn	0.0158	±	0.0079	0.0360	±	0.0197	0.0016	±	0.0008
* Ga	0.0000	±	0.0068	0.0000	±	0.0154	0.0000	±	0.0007
* As	0.0011	±	0.0102	0.0026	±	0.0231	0.0001	±	0.0010
* Se	0.0079	±	0.0056	0.0180	±	0.0135	0.0008	±	0.0006
* Br	0.0113	±	0.0079	0.0257	±	0.0189	0.0012	±	0.0008
* Rb	0.0034	±	0.0079	0.0077	±	0.0181	0.0003	±	0.0008
* Sr	0.0113	±	0.0079	0.0257	±	0.0189	0.0012	±	0.0008
* Y	0.0000	±	0.0158	0.0000	±	0.0360	0.0000	±	0.0016
* Zr	0.0000	±	0.0226	0.0000	±	0.0514	0.0000	±	0.0023
* Nb	0.0136	±	0.0316	0.0308	±	0.0722	0.0014	±	0.0033
* Mo	0.0000	±	0.0384	0.0000	±	0.0873	0.0000	±	0.0040
* Ag	0.0000	±	0.0316	0.0000	±	0.0719	0.0000	±	0.0033
* Cd	0.0000	±	0.0328	0.0000	±	0.0745	0.0000	±	0.0034
* In	0.0000	±	0.0418	0.0000	±	0.0950	0.0000	±	0.0043
* Sn	0.0000	±	0.0644	0.0000	±	0.1464	0.0000	±	0.0066
* Sb	0.0000	±	0.0780	0.0000	±	0.1772	0.0000	±	0.0080
* Cs	0.0000	±	0.0147	0.0000	±	0.0334	0.0000	±	0.0015
* Ba	0.0000	±	0.0158	0.0000	±	0.0360	0.0000	±	0.0016
* La	0.0000	±	0.0170	0.0000	±	0.0385	0.0000	±	0.0017
* Ce	0.0000	±	0.0136	0.0000	±	0.0308	0.0000	±	0.0014
* Sm	0.0000	±	0.0124	0.0000	±	0.0282	0.0000	±	0.0013
* Eu	0.0000	±	0.0237	0.0000	±	0.0539	0.0000	±	0.0024
* Tb	0.0000	±	0.0249	0.0000	±	0.0565	0.0000	±	0.0026
* Hf	0.0000	±	0.0102	0.0000	±	0.0231	0.0000	±	0.0010
* Ta	0.0000	±	0.0102	0.0000	±	0.0231	0.0000	±	0.0010
* W	0.0090	±	0.0079	0.0205	±	0.0186	0.0009	±	0.0008
* Ir	0.0000	±	0.0056	0.0000	±	0.0128	0.0000	±	0.0006
* Au	0.0000	±	0.0079	0.0000	±	0.0180	0.0000	±	0.0008
* Hg	0.0011	±	0.0124	0.0026	±	0.0283	0.0001	±	0.0013
* Pb	0.0000	±	0.0079	0.0000	±	0.0180	0.0000	±	0.0008

Lab ID: 23-T1934
Client ID: Canister SMAQMD 02

Analyte	µg/filter		percent		µg/m³	
IC	Conc.	DL	Conc.	DL	Conc.	DL
Cl	4.150	0.100	9.432	0.2273	0.428	0.010
NO3	3.880	0.100	8.818	0.2273	0.400	0.010
SO4	5.200	0.200	11.82	0.4545	0.537	0.021
Na	4.510	0.100	10.25	0.2273	0.465	0.010
NH4	2.150	0.100	4.886	0.2273	0.222	0.010
K	1.140	0.100	2.591	0.2273	0.118	0.010

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-368

Lab ID: 23-T1935
Filter ID: P7468389
Client ID: Canister SMAQMD 03
Site: 617Fern
Sample Date: 7/17/23
Filter Lot #: 7118468
Volume: 9.698 ± 0.485 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter			percent			µg/m³		
Gravimetry									
Net Mass	112.	±	10.				11.55	±	1.182
XRF									
Na	8.222	±	0.5594	7.341	±	0.8240	0.8478	±	0.0716
Mg	1.156	±	0.0848	1.032	±	0.1192	0.1192	±	0.0106
Al	0.9854	±	0.1040	0.8798	±	0.1216	0.1016	±	0.0119
Si	2.249	±	0.1153	2.008	±	0.2067	0.2319	±	0.0166
P	0.0520	±	0.0147	0.0464	±	0.0138	0.0054	±	0.0015
S	4.227	±	0.2181	3.774	±	0.3892	0.4359	±	0.0313
Cl	3.172	±	0.1695	2.832	±	0.2947	0.3271	±	0.0239
K	0.4170	±	0.0282	0.3723	±	0.0417	0.0430	±	0.0036
Ca	0.7164	±	0.0384	0.6397	±	0.0666	0.0739	±	0.0054
* Sc	0.0000	±	0.0124	0.0000	±	0.0111	0.0000	±	0.0013
Ti	0.0859	±	0.0102	0.0767	±	0.0114	0.0089	±	0.0011
* V	0.0000	±	0.0102	0.0000	±	0.0091	0.0000	±	0.0010
* Cr	0.0147	±	0.0090	0.0131	±	0.0082	0.0015	±	0.0009
* Mn	0.0181	±	0.0090	0.0161	±	0.0082	0.0019	±	0.0009
Fe	0.8498	±	0.0429	0.7587	±	0.0778	0.0876	±	0.0062
* Co	0.0000	±	0.0079	0.0000	±	0.0071	0.0000	±	0.0008
* Ni	0.0045	±	0.0068	0.0040	±	0.0061	0.0005	±	0.0007
* Cu	0.0056	±	0.0102	0.0050	±	0.0091	0.0006	±	0.0010
Zn	0.0282	±	0.0079	0.0252	±	0.0074	0.0029	±	0.0008
* Ga	0.0045	±	0.0068	0.0040	±	0.0061	0.0005	±	0.0007
* As	0.0000	±	0.0102	0.0000	±	0.0091	0.0000	±	0.0010
* Se	0.0000	±	0.0056	0.0000	±	0.0050	0.0000	±	0.0006
Br	0.0441	±	0.0079	0.0393	±	0.0079	0.0045	±	0.0008
* Rb	0.0045	±	0.0079	0.0040	±	0.0071	0.0005	±	0.0008
* Sr	0.0000	±	0.0079	0.0000	±	0.0071	0.0000	±	0.0008
* Y	0.0000	±	0.0158	0.0000	±	0.0141	0.0000	±	0.0016
* Zr	0.0056	±	0.0226	0.0050	±	0.0202	0.0006	±	0.0023
* Nb	0.0102	±	0.0316	0.0091	±	0.0283	0.0010	±	0.0033
* Mo	0.0170	±	0.0384	0.0151	±	0.0343	0.0017	±	0.0040
* Ag	0.0000	±	0.0316	0.0000	±	0.0282	0.0000	±	0.0033
* Cd	0.0463	±	0.0328	0.0414	±	0.0295	0.0048	±	0.0034
* In	0.0011	±	0.0418	0.0010	±	0.0373	0.0001	±	0.0043
* Sn	0.0000	±	0.0644	0.0000	±	0.0575	0.0000	±	0.0066
* Sb	0.0294	±	0.0712	0.0262	±	0.0636	0.0030	±	0.0073
* Cs	0.0000	±	0.0147	0.0000	±	0.0131	0.0000	±	0.0015
* Ba	0.0000	±	0.0170	0.0000	±	0.0151	0.0000	±	0.0017
* La	0.0000	±	0.0170	0.0000	±	0.0151	0.0000	±	0.0017
* Ce	0.0000	±	0.0136	0.0000	±	0.0121	0.0000	±	0.0014
* Sm	0.0000	±	0.0124	0.0000	±	0.0111	0.0000	±	0.0013
* Eu	0.0011	±	0.0237	0.0010	±	0.0212	0.0001	±	0.0024
* Tb	0.0000	±	0.0350	0.0000	±	0.0313	0.0000	±	0.0036
* Hf	0.0000	±	0.0102	0.0000	±	0.0091	0.0000	±	0.0010
* Ta	0.0000	±	0.0102	0.0000	±	0.0091	0.0000	±	0.0010
* W	0.0079	±	0.0079	0.0071	±	0.0071	0.0008	±	0.0008
* Ir	0.0000	±	0.0056	0.0000	±	0.0050	0.0000	±	0.0006
* Au	0.0000	±	0.0079	0.0000	±	0.0071	0.0000	±	0.0008
* Hg	0.0056	±	0.0124	0.0050	±	0.0111	0.0006	±	0.0013
* Pb	0.0023	±	0.0079	0.0020	±	0.0071	0.0002	±	0.0008

Lab ID: 23-T1935
Client ID: Canister SMAQMD 03

Analyte	µg/filter		percent		µg/m³	
IC	Conc.	DL	Conc.	DL	Conc.	DL
Cl	4.700	0.100	4.196	0.0893	0.485	0.010
NO3	7.490	0.100	6.688	0.0893	0.772	0.010
SO4	7.300	0.200	6.518	0.1786	0.753	0.021
Na	7.910	0.100	7.062	0.0893	0.816	0.010
NH4	2.600	0.100	2.321	0.0893	0.268	0.010
K	0.560	0.100	0.5000	0.0893	0.058	0.010

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-368

Lab ID: 23-T1885
Filter ID: P7468289
Client ID: Canister SMAQMD 07
Site: 617Fern
Sample Date: 7/23/23
Filter Lot #: 7118468
Volume: 9.713 ± 0.486 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter			percent			µg/m³		
Gravimetry									
Net Mass	127.	±	10.				13.08	±	1.220
XRF									
Na	10.67	±	0.6848	8.405	±	0.8536	1.0989	±	0.0894
Mg	1.168	±	0.0893	0.9200	±	0.1009	0.1203	±	0.0110
Al	0.5356	±	0.0904	0.4217	±	0.0785	0.0551	±	0.0097
Si	1.121	±	0.0599	0.8826	±	0.0840	0.1154	±	0.0084
* P	0.0079	±	0.0147	0.0062	±	0.0116	0.0008	±	0.0015
S	3.824	±	0.1978	3.011	±	0.2836	0.3937	±	0.0283
Cl	5.826	±	0.3062	4.588	±	0.4343	0.5998	±	0.0435
K	0.1740	±	0.0237	0.1370	±	0.0216	0.0179	±	0.0026
Ca	0.6678	±	0.0362	0.5258	±	0.0503	0.0688	±	0.0051
* Sc	0.0000	±	0.0124	0.0000	±	0.0098	0.0000	±	0.0013
Ti	0.0475	±	0.0102	0.0374	±	0.0085	0.0049	±	0.0011
* V	0.0000	±	0.0102	0.0000	±	0.0080	0.0000	±	0.0010
* Cr	0.0045	±	0.0090	0.0036	±	0.0071	0.0005	±	0.0009
* Mn	0.0147	±	0.0090	0.0116	±	0.0072	0.0015	±	0.0009
Fe	0.4690	±	0.0249	0.3693	±	0.0351	0.0483	±	0.0035
* Co	0.0000	±	0.0079	0.0000	±	0.0062	0.0000	±	0.0008
* Ni	0.0011	±	0.0068	0.0009	±	0.0053	0.0001	±	0.0007
* Cu	0.0045	±	0.0102	0.0036	±	0.0080	0.0005	±	0.0010
Zn	0.0294	±	0.0079	0.0231	±	0.0065	0.0030	±	0.0008
* Ga	0.0000	±	0.0068	0.0000	±	0.0053	0.0000	±	0.0007
* As	0.0000	±	0.0102	0.0000	±	0.0080	0.0000	±	0.0010
* Se	0.0068	±	0.0056	0.0053	±	0.0045	0.0007	±	0.0006
Br	0.0271	±	0.0079	0.0214	±	0.0065	0.0028	±	0.0008
* Rb	0.0056	±	0.0079	0.0044	±	0.0062	0.0006	±	0.0008
* Sr	0.0000	±	0.0090	0.0000	±	0.0071	0.0000	±	0.0009
* Y	0.0000	±	0.0158	0.0000	±	0.0125	0.0000	±	0.0016
* Zr	0.0068	±	0.0226	0.0053	±	0.0178	0.0007	±	0.0023
* Nb	0.0000	±	0.0316	0.0000	±	0.0249	0.0000	±	0.0033
* Mo	0.0045	±	0.0384	0.0036	±	0.0303	0.0005	±	0.0040
* Ag	0.0181	±	0.0316	0.0142	±	0.0249	0.0019	±	0.0033
* Cd	0.0000	±	0.0328	0.0000	±	0.0258	0.0000	±	0.0034
* In	0.0441	±	0.0429	0.0347	±	0.0339	0.0045	±	0.0044
* Sn	0.0000	±	0.0644	0.0000	±	0.0507	0.0000	±	0.0066
* Sb	0.0000	±	0.0780	0.0000	±	0.0614	0.0000	±	0.0080
* Cs	0.0000	±	0.0147	0.0000	±	0.0116	0.0000	±	0.0015
* Ba	0.0000	±	0.0170	0.0000	±	0.0133	0.0000	±	0.0017
* La	0.0000	±	0.0170	0.0000	±	0.0133	0.0000	±	0.0017
* Ce	0.0124	±	0.0136	0.0098	±	0.0107	0.0013	±	0.0014
* Sm	0.0000	±	0.0124	0.0000	±	0.0098	0.0000	±	0.0013
* Eu	0.0000	±	0.0237	0.0000	±	0.0187	0.0000	±	0.0024
* Tb	0.0000	±	0.0271	0.0000	±	0.0214	0.0000	±	0.0028
* Hf	0.0000	±	0.0102	0.0000	±	0.0080	0.0000	±	0.0010
* Ta	0.0000	±	0.0102	0.0000	±	0.0080	0.0000	±	0.0010
* W	0.0034	±	0.0079	0.0027	±	0.0062	0.0003	±	0.0008
* Ir	0.0000	±	0.0056	0.0000	±	0.0044	0.0000	±	0.0006
* Au	0.0102	±	0.0079	0.0080	±	0.0063	0.0010	±	0.0008
* Hg	0.0023	±	0.0124	0.0018	±	0.0098	0.0002	±	0.0013
* Pb	0.0000	±	0.0079	0.0000	±	0.0062	0.0000	±	0.0008

Lab ID: 23-T1885
Client ID: Canister SMAQMD 07

Analyte	µg/filter		percent		µg/m³	
IC	Conc.	DL	Conc.	DL	Conc.	DL
Cl	11.80	0.100	9.291	0.0787	1.215	0.010
NO3	5.440	0.100	4.283	0.0787	0.560	0.010
SO4	6.970	0.200	5.488	0.1575	0.718	0.021
Na	11.21	0.100	8.827	0.0787	1.154	0.010
NH4	2.280	0.100	1.795	0.0787	0.235	0.010
K	0.640	0.100	0.5039	0.0787	0.066	0.010

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-368

Lab ID: 23-T1886
Filter ID: P7468290
Client ID: Canister SMAQMD 08
Site: 617Fern
Sample Date: 7/29/23
Filter Lot #: 7118468
Volume: 9.710 ± 0.486 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter			percent			µg/m³		
Gravimetry									
Net Mass	80.	±	10.				8.239	±	1.109
XRF									
Na	4.912	±	0.4294	6.140	±	0.9366	0.5059	±	0.0510
Mg	0.5311	±	0.0678	0.6639	±	0.1186	0.0547	±	0.0075
Al	0.3763	±	0.0848	0.4704	±	0.1212	0.0388	±	0.0089
Si	0.7786	±	0.0429	0.9732	±	0.1330	0.0802	±	0.0060
* P	0.0124	±	0.0147	0.0155	±	0.0185	0.0013	±	0.0015
S	3.607	±	0.1864	4.509	±	0.6099	0.3715	±	0.0267
Cl	2.540	±	0.1401	3.175	±	0.4338	0.2616	±	0.0195
K	0.1514	±	0.0192	0.1893	±	0.0337	0.0156	±	0.0021
Ca	0.4475	±	0.0271	0.5594	±	0.0777	0.0461	±	0.0036
* Sc	0.0000	±	0.0124	0.0000	±	0.0155	0.0000	±	0.0013
Ti	0.0305	±	0.0102	0.0381	±	0.0136	0.0031	±	0.0011
* V	0.0011	±	0.0102	0.0014	±	0.0127	0.0001	±	0.0010
* Cr	0.0079	±	0.0090	0.0099	±	0.0114	0.0008	±	0.0009
* Mn	0.0056	±	0.0090	0.0071	±	0.0113	0.0006	±	0.0009
Fe	0.3379	±	0.0192	0.4223	±	0.0580	0.0348	±	0.0026
* Co	0.0034	±	0.0079	0.0042	±	0.0099	0.0003	±	0.0008
* Ni	0.0034	±	0.0068	0.0042	±	0.0085	0.0003	±	0.0007
* Cu	0.0034	±	0.0102	0.0042	±	0.0127	0.0003	±	0.0010
* Zn	0.0158	±	0.0079	0.0198	±	0.0102	0.0016	±	0.0008
* Ga	0.0034	±	0.0068	0.0042	±	0.0085	0.0003	±	0.0007
* As	0.0034	±	0.0102	0.0042	±	0.0127	0.0003	±	0.0010
* Se	0.0045	±	0.0056	0.0056	±	0.0071	0.0005	±	0.0006
Br	0.0237	±	0.0079	0.0297	±	0.0106	0.0024	±	0.0008
* Rb	0.0045	±	0.0079	0.0056	±	0.0099	0.0005	±	0.0008
* Sr	0.0000	±	0.0090	0.0000	±	0.0113	0.0000	±	0.0009
* Y	0.0011	±	0.0158	0.0014	±	0.0198	0.0001	±	0.0016
* Zr	0.0045	±	0.0226	0.0056	±	0.0283	0.0005	±	0.0023
* Nb	0.0000	±	0.0316	0.0000	±	0.0396	0.0000	±	0.0033
* Mo	0.0170	±	0.0384	0.0212	±	0.0481	0.0017	±	0.0040
* Ag	0.0452	±	0.0316	0.0565	±	0.0402	0.0047	±	0.0033
* Cd	0.0565	±	0.0328	0.0706	±	0.0419	0.0058	±	0.0034
* In	0.0475	±	0.0429	0.0593	±	0.0542	0.0049	±	0.0044
* Sn	0.0000	±	0.0644	0.0000	±	0.0805	0.0000	±	0.0066
* Sb	0.1051	±	0.0723	0.1314	±	0.0919	0.0108	±	0.0075
* Cs	0.0000	±	0.0147	0.0000	±	0.0184	0.0000	±	0.0015
* Ba	0.0215	±	0.0158	0.0268	±	0.0201	0.0022	±	0.0016
* La	0.0000	±	0.0170	0.0000	±	0.0212	0.0000	±	0.0017
* Ce	0.0000	±	0.0136	0.0000	±	0.0170	0.0000	±	0.0014
* Sm	0.0000	±	0.0124	0.0000	±	0.0155	0.0000	±	0.0013
* Eu	0.0000	±	0.0237	0.0000	±	0.0297	0.0000	±	0.0024
* Tb	0.0000	±	0.0249	0.0000	±	0.0311	0.0000	±	0.0026
* Hf	0.0000	±	0.0102	0.0000	±	0.0127	0.0000	±	0.0010
* Ta	0.0000	±	0.0102	0.0000	±	0.0127	0.0000	±	0.0010
* W	0.0000	±	0.0068	0.0000	±	0.0085	0.0000	±	0.0007
* Ir	0.0000	±	0.0056	0.0000	±	0.0071	0.0000	±	0.0006
* Au	0.0000	±	0.0079	0.0000	±	0.0099	0.0000	±	0.0008
* Hg	0.0000	±	0.0136	0.0000	±	0.0170	0.0000	±	0.0014
* Pb	0.0000	±	0.0079	0.0000	±	0.0099	0.0000	±	0.0008

Lab ID: 23-T1886
Client ID: Canister SMAQMD 08

Analyte	µg/filter		percent		µg/m³	
IC	Conc.	DL	Conc.	DL	Conc.	DL
Cl	3.930	0.100	4.912	0.1250	0.405	0.010
NO3	3.520	0.100	4.400	0.1250	0.363	0.010
SO4	5.990	0.200	7.488	0.2500	0.617	0.021
Na	4.420	0.100	5.525	0.1250	0.455	0.010
NH4	2.290	0.100	2.862	0.1250	0.236	0.010
K	0.310	0.100	0.3875	0.1250	0.032	0.010

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-368

Lab ID: 23-T1916
Filter ID: P7468370
Client ID: Canister SMAQMD 09
Site: 617Fern
Sample Date: 8/ 4/23
Filter Lot #: 7118468
Volume: 9.690 ± 0.484 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

Analyte	µg/filter			percent			µg/m³		
Gravimetry									
Net Mass	50.	±	10.				5.160	±	1.064
XRF									
* Na	0.8554	±	0.3130	1.711	±	0.7134	0.0883	±	0.0326
* Mg	0.1503	±	0.0588	0.3006	±	0.1320	0.0155	±	0.0061
Al	0.3153	±	0.0825	0.6305	±	0.2077	0.0325	±	0.0087
Si	0.8057	±	0.0441	1.611	±	0.3341	0.0831	±	0.0062
* P	0.0158	±	0.0136	0.0316	±	0.0278	0.0016	±	0.0014
S	3.031	±	0.1571	6.061	±	1.252	0.3128	±	0.0225
Cl	0.2294	±	0.0384	0.4588	±	0.1197	0.0237	±	0.0041
K	0.2509	±	0.0192	0.5017	±	0.1074	0.0259	±	0.0024
Ca	0.2283	±	0.0181	0.4565	±	0.0982	0.0236	±	0.0022
* Sc	0.0000	±	0.0113	0.0000	±	0.0226	0.0000	±	0.0012
Ti	0.0294	±	0.0090	0.0588	±	0.0216	0.0030	±	0.0009
* V	0.0011	±	0.0102	0.0023	±	0.0203	0.0001	±	0.0010
* Cr	0.0192	±	0.0090	0.0384	±	0.0196	0.0020	±	0.0009
* Mn	0.0079	±	0.0090	0.0158	±	0.0184	0.0008	±	0.0009
Fe	0.3865	±	0.0215	0.7729	±	0.1604	0.0399	±	0.0030
* Co	0.0000	±	0.0079	0.0000	±	0.0158	0.0000	±	0.0008
* Ni	0.0000	±	0.0068	0.0000	±	0.0136	0.0000	±	0.0007
* Cu	0.0034	±	0.0102	0.0068	±	0.0204	0.0003	±	0.0010
* Zn	0.0090	±	0.0079	0.0181	±	0.0162	0.0009	±	0.0008
* Ga	0.0000	±	0.0068	0.0000	±	0.0136	0.0000	±	0.0007
* As	0.0000	±	0.0102	0.0000	±	0.0203	0.0000	±	0.0010
* Se	0.0090	±	0.0056	0.0181	±	0.0119	0.0009	±	0.0006
* Br	0.0147	±	0.0079	0.0294	±	0.0169	0.0015	±	0.0008
* Rb	0.0000	±	0.0079	0.0000	±	0.0158	0.0000	±	0.0008
* Sr	0.0000	±	0.0079	0.0000	±	0.0158	0.0000	±	0.0008
* Y	0.0000	±	0.0158	0.0000	±	0.0316	0.0000	±	0.0016
* Zr	0.0000	±	0.0226	0.0000	±	0.0452	0.0000	±	0.0023
* Nb	0.0113	±	0.0305	0.0226	±	0.0612	0.0012	±	0.0031
* Mo	0.0000	±	0.0384	0.0000	±	0.0768	0.0000	±	0.0040
* Ag	0.0599	±	0.0282	0.1198	±	0.0614	0.0062	±	0.0029
* Cd	0.0000	±	0.0328	0.0000	±	0.0655	0.0000	±	0.0034
* In	0.0000	±	0.0418	0.0000	±	0.0836	0.0000	±	0.0043
* Sn	0.0249	±	0.0644	0.0497	±	0.1292	0.0026	±	0.0066
* Sb	0.0294	±	0.0712	0.0588	±	0.1429	0.0030	±	0.0073
* Cs	0.0000	±	0.0147	0.0000	±	0.0294	0.0000	±	0.0015
* Ba	0.0000	±	0.0158	0.0000	±	0.0316	0.0000	±	0.0016
* La	0.0000	±	0.0158	0.0000	±	0.0316	0.0000	±	0.0016
* Ce	0.0000	±	0.0124	0.0000	±	0.0249	0.0000	±	0.0013
* Sm	0.0000	±	0.0113	0.0000	±	0.0226	0.0000	±	0.0012
* Eu	0.0000	±	0.0237	0.0000	±	0.0475	0.0000	±	0.0024
* Tb	0.0000	±	0.0249	0.0000	±	0.0497	0.0000	±	0.0026
* Hf	0.0000	±	0.0102	0.0000	±	0.0203	0.0000	±	0.0010
* Ta	0.0000	±	0.0102	0.0000	±	0.0203	0.0000	±	0.0010
* W	0.0000	±	0.0079	0.0000	±	0.0158	0.0000	±	0.0008
* Ir	0.0124	±	0.0045	0.0249	±	0.0103	0.0013	±	0.0005
* Au	0.0000	±	0.0079	0.0000	±	0.0158	0.0000	±	0.0008
* Hg	0.0034	±	0.0124	0.0068	±	0.0249	0.0003	±	0.0013
* Pb	0.0113	±	0.0079	0.0226	±	0.0165	0.0012	±	0.0008

Lab ID: 23-T1916
Client ID: Canister SMAQMD 09

Analyte	µg/filter		percent		µg/m³	
IC	Conc.	DL	Conc.	DL	Conc.	DL
Cl	0.370	0.100	0.7400	0.2000	0.038	0.010
NO3	1.560	0.100	3.120	0.2000	0.161	0.010
SO4	5.460	0.200	10.92	0.4000	0.563	0.021
Na	1.210	0.100	2.420	0.2000	0.125	0.010
NH4	2.470	0.100	4.940	0.2000	0.255	0.010
K	0.200	0.100	0.4000	0.2000	0.021	0.010

* - XRF Concentration is less than three times the uncertainty

Lab ID: 23-U308
Client ID: Canister SMAQMD 04
Site: 617 Fern
Sample Date: 7/ 5/23
Volume: 9.687 +- 0.484 m³
Deposit Area: 13.90 cm²
Size Fraction: PM2.5

Analyte	µg/filter			µg/m³		
OC	37.39	±	3.197	3.860	±	0.3822
EC	0.0000	±	1.390	0.0000	±	0.1435
TC	37.39	±	4.587	3.860	±	0.5113
Organic Carbon Fractions						
OC1	0.5560			0.0574		
OC2	7.645			0.7892		
OC3	14.32			1.478		
OC4	7.784			0.8036		
PC	6.950			0.7175		
Elemental Carbon Fractions						
EC1	3.197			0.3300		
EC2	3.197			0.3300		
EC3	0.5560			0.0574		

Lab ID: 23-U309
Client ID: Canister SMAQMD 05
Site: 617 Fern
Sample Date: 7/11/23
Volume: 9.695 +- 0.485 m³
Deposit Area: 13.90 cm²
Size Fraction: PM2.5

Analyte	µg/filter			µg/m³		
OC	53.10	±	4.031	5.477	±	0.4979
EC	2.363	±	1.529	0.2437	±	0.1582
TC	55.46	±	5.560	5.721	±	0.6409
Organic Carbon Fractions						
OC1	0.6950			0.0717		
OC2	13.07			1.348		
OC3	20.43			2.108		
OC4	10.56			1.090		
PC	8.340			0.8602		
Elemental Carbon Fractions						
EC1	5.004			0.5161		
EC2	4.170			0.4301		
EC3	1.390			0.1434		

OC: Organic Carbon EC: Elemental Carbon PC: Pyrolyzed Carbon TC: Total Carbon

OC = OC1 + OC2 + OC3 + OC4 + PC EC = EC1 + EC2 + EC3 - PC TC = OC + EC

Lab ID: 23-U310
Client ID: Canister SMAQMD 06
Site: 617Fern
Sample Date: 7/17/23
Volume: 9.700 +- 0.485 m³
Deposit Area: 13.90 cm²
Size Fraction: PM2.5

Analyte	µg/filter			µg/m³		
OC	69.22	±	4.865	7.136	±	0.6155
EC	3.058	±	1.529	0.3153	±	0.1584
TC	72.28	±	6.394	7.452	±	0.7572
Organic Carbon Fractions						
OC1	0.6950			0.0716		
OC2	15.71			1.619		
OC3	28.91			2.981		
OC4	10.01			1.032		
PC	13.90			1.433		
Elemental Carbon Fractions						
EC1	9.869			1.017		
EC2	6.116			0.6305		
EC3	1.112			0.1146		

Lab ID: 23-U408
Client ID: Canister SMAQMD 10
Site: 617Fern
Sample Date: 7/23/23
Volume: 9.689 +- 0.484 m³
Deposit Area: 13.90 cm²
Size Fraction: PM2.5

Analyte	µg/filter			µg/m³		
OC	76.87	±	5.282	7.933	±	0.6740
EC	3.197	±	1.529	0.3300	±	0.1587
TC	80.06	±	6.811	8.263	±	0.8152
Organic Carbon Fractions						
OC1	0.5560			0.0574		
OC2	14.18			1.463		
OC3	33.50			3.457		
OC4	11.54			1.191		
PC	17.24			1.779		
Elemental Carbon Fractions						
EC1	14.46			1.492		
EC2	5.421			0.5595		
EC3	0.5560			0.0574		

OC: Organic Carbon EC: Elemental Carbon PC: Pyrolyzed Carbon TC: Total Carbon

OC = OC1 + OC2 + OC3 + OC4 + PC EC = EC1 + EC2 + EC3 - PC TC = OC + EC

Lab ID: 23-U409
Client ID: Canister SMAQMD 11
Site: 617Fern
Sample Date: 7/29/23
Volume: 9.710 +- 0.486 m³
Deposit Area: 13.90 cm²
Size Fraction: PM2.5

Analyte	µg/filter			µg/m³		
OC	44.76	±	3.614	4.609	±	0.4379
EC	2.085	±	1.529	0.2147	±	0.1578
TC	46.84	±	5.143	4.824	±	0.5821
Organic Carbon Fractions						
OC1	0.4170			0.0429		
OC2	8.757			0.9019		
OC3	16.96			1.746		
OC4	7.645			0.7873		
PC	10.98			1.131		
Elemental Carbon Fractions						
EC1	7.089			0.7301		
EC2	5.282			0.5440		
EC3	0.6950			0.0716		

Lab ID: 23-U410
Client ID: Canister SMAQMD 12
Site: 617Fern
Sample Date: 8/ 4/23
Volume: 9.690 +- 0.484 m³
Deposit Area: 13.90 cm²
Size Fraction: PM2.5

Analyte	µg/filter			µg/m³		
OC	52.26	±	4.031	5.394	±	0.4956
EC	2.085	±	1.529	0.2152	±	0.1582
TC	54.35	±	5.560	5.609	±	0.6385
Organic Carbon Fractions						
OC1	0.8340			0.0861		
OC2	12.23			1.262		
OC3	17.65			1.822		
OC4	8.618			0.8894		
PC	13.07			1.348		
Elemental Carbon Fractions						
EC1	7.228			0.7459		
EC2	6.811			0.7029		
EC3	1.112			0.1148		

OC: Organic Carbon EC: Elemental Carbon PC: Pyrolyzed Carbon TC: Total Carbon

OC = OC1 + OC2 + OC3 + OC4 + PC EC = EC1 + EC2 + EC3 - PC TC = OC + EC

CHESTER LabNet

Quant'X 1020 **XRF Analytical Quality Assurance Report**

Client: Sacramento Metro AQMD
Report: 23-368
Analysis Period: July 26 through August 15, 2023
Number of Samples: 6

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	7.03	6.99	0.03	0.41	-0.63
Ti	3	10.22	10.18	0.03	0.26	-0.44
Fe	3	10.59	10.53	0.04	0.35	-0.57
Se	3	5.26	5.24	0.01	0.10	-0.41
Cd	3	6.47	6.49	0.10	1.55	0.30
Pb	3	12.61	12.56	0.02	0.14	-0.43

2. Accuracy Data

NIST Standard Reference Materials: SRM 2783

Analyte/ SRM	n	Certified Value(µg/cm²)	Measured Value (µg/cm²)			% Rec.
			High	Low	Average	
K 2783	4	0.5301	0.5285	0.5077	0.5172 +/- 0.0074	97.6
Ca 2783	4	1.3253	1.1912	1.1795	1.1853 +/- 0.0056	89.4
Ti 2783	4	0.1496	0.1503	0.1492	0.1498 +/- 0.0005	100.1
Fe 2783	4	2.6606	2.6587	2.6204	2.6431 +/- 0.0147	99.3
Cu 2783	4	0.0406	0.0413	0.0400	0.0405 +/- 0.0005	99.7
Zn 2783	4	0.1797	0.2316	0.2249	0.2290 +/- 0.0026	127.4
Pb 2783	4	0.0318	0.0359	0.0326	0.0348 +/- 0.0013	109.4

3. Addendum

Micromatter Certified Reference Materials

CRM	Analytes	Certified Value(µg/cm²)	Measured Value(µg/cm²)	% Rec.
39149	Cr	53.7	54.4	101.3
39150	Cu	49.4	48.6	98.4
39151	Zn, Te	49.8	51.7	103.8
39152	Ga, As	50.9	49.8	97.8
39153	Se, Cd	47.1	46.5	98.7
39154	Pb	47.9	50.6	105.7

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

4.44

Original ID: 23T1886

Replicate ID: RT1886

Element	Original ug/cm2			Replicate ug/cm2			Difference ug/cm2				RPD		
Na	0.4347	+-	0.0380	0.3726	+-	0.0365	0.0621	+-	0.0527	0	15.4	+-	13.0
Mg	0.0470	+-	0.0060	0.0415	+-	0.0059	0.0055	+-	0.0085	+	12.4	+-	19.1
Al	0.0333	+-	0.0075	0.0323	+-	0.0075	0.0009	+-	0.0106	+	2.8	+-	32.4
Si	0.0689	+-	0.0038	0.0715	+-	0.0039	-0.0026	+-	0.0054	+	-3.7	+-	7.8
P	0.0011	+-	0.0013	0.0012	+-	0.0013	-0.0002	+-	0.0018				
S	0.3192	+-	0.0165	0.3281	+-	0.0169	-0.0089	+-	0.0236	+	-2.8	+-	7.3
Cl	0.2248	+-	0.0124	0.2217	+-	0.0122	0.0031	+-	0.0174	+	1.4	+-	7.8
K	0.0134	+-	0.0017	0.0126	+-	0.0017	0.0009	+-	0.0024	+	6.7	+-	18.8
Ca	0.0396	+-	0.0024	0.0405	+-	0.0024	-0.0009	+-	0.0033	+	-2.2	+-	8.4
Sc	0.0000	+-	0.0011	0.0000	+-	0.0011	0.0000	+-	0.0015				
Ti	0.0027	+-	0.0009	0.0020	+-	0.0009	0.0007	+-	0.0012	+	28.8	+-	51.3
V	0.0001	+-	0.0009	0.0000	+-	0.0009	0.0001	+-	0.0012				
Cr	0.0007	+-	0.0008	0.0009	+-	0.0008	-0.0002	+-	0.0012				
Mn	0.0005	+-	0.0008	0.0007	+-	0.0008	-0.0001	+-	0.0011				
Fe	0.0299	+-	0.0017	0.0295	+-	0.0016	0.0003	+-	0.0023	+	1.1	+-	7.9
Co	0.0003	+-	0.0007	0.0001	+-	0.0007	0.0002	+-	0.0009				
Ni	0.0003	+-	0.0006	0.0000	+-	0.0006	0.0003	+-	0.0009				
Cu	0.0003	+-	0.0009	0.0004	+-	0.0009	-0.0001	+-	0.0013				
Zn	0.0014	+-	0.0007	0.0018	+-	0.0007	-0.0004	+-	0.0010				
Ga	0.0003	+-	0.0006	0.0005	+-	0.0006	-0.0002	+-	0.0009				
As	0.0003	+-	0.0009	0.0002	+-	0.0009	0.0001	+-	0.0013				
Se	0.0004	+-	0.0005	0.0002	+-	0.0005	0.0003	+-	0.0007				
Br	0.0021	+-	0.0007	0.0022	+-	0.0007	0.0000	+-	0.0010				
Rb	0.0004	+-	0.0007	0.0000	+-	0.0007	0.0004	+-	0.0010				
Sr	0.0000	+-	0.0008	0.0000	+-	0.0008	0.0000	+-	0.0011				
Y	0.0001	+-	0.0014	0.0006	+-	0.0014	-0.0005	+-	0.0020				
Zr	0.0004	+-	0.0020	0.0000	+-	0.0020	0.0004	+-	0.0029				
Nb	0.0000	+-	0.0028	0.0000	+-	0.0028	0.0000	+-	0.0039				
Mo	0.0015	+-	0.0034	0.0000	+-	0.0034	0.0015	+-	0.0048				
Ag	0.0040	+-	0.0028	0.0006	+-	0.0028	0.0034	+-	0.0039				
Cd	0.0050	+-	0.0029	0.0000	+-	0.0029	0.0050	+-	0.0041				
In	0.0042	+-	0.0038	0.0000	+-	0.0037	0.0042	+-	0.0053				
Sn	0.0000	+-	0.0057	0.0000	+-	0.0057	0.0000	+-	0.0080				
Sb	0.0093	+-	0.0064	0.0000	+-	0.0069	0.0093	+-	0.0095				
Cs	0.0000	+-	0.0013	0.0000	+-	0.0013	0.0000	+-	0.0019				
Ba	0.0019	+-	0.0014	0.0016	+-	0.0014	0.0003	+-	0.0020				
La	0.0000	+-	0.0015	0.0000	+-	0.0015	0.0000	+-	0.0021				
Ce	0.0000	+-	0.0012	0.0000	+-	0.0012	0.0000	+-	0.0017				
Sm	0.0000	+-	0.0011	0.0000	+-	0.0011	0.0000	+-	0.0015				
Eu	0.0000	+-	0.0021	0.0000	+-	0.0021	0.0000	+-	0.0030				
Tb	0.0000	+-	0.0022	0.0000	+-	0.0022	0.0000	+-	0.0032				
Hf	0.0000	+-	0.0009	0.0000	+-	0.0009	0.0000	+-	0.0012				
Ta	0.0000	+-	0.0009	0.0000	+-	0.0009	0.0000	+-	0.0012				
W	0.0000	+-	0.0006	0.0000	+-	0.0007	0.0000	+-	0.0009				
Ir	0.0000	+-	0.0005	0.0004	+-	0.0005	-0.0004	+-	0.0008				
Au	0.0000	+-	0.0007	0.0000	+-	0.0007	0.0000	+-	0.0010				
Hg	0.0000	+-	0.0012	0.0000	+-	0.0012	0.0000	+-	0.0017				
Pb	0.0000	+-	0.0007	0.0004	+-	0.0007	-0.0004	+-	0.0010				

RPD: Relative Percent Difference (X1-X2)/[(X1+X2)/2]*100. RPD is calculated when original value is greater than three times its uncertainty.

QUANT'X 1020 REPLICATE REPORT

3.89

Original ID: 23T1934

Replicate ID: RT1934

Element	Original ug/cm2			Replicate ug/cm2			Difference ug/cm2			RPD		
Na	0.2416	+-	0.0311	0.2735	+-	0.0319	-0.0319	+-	0.0445	+	-12.4	+-	17.3
Mg	0.0285	+-	0.0055	0.0273	+-	0.0055	0.0012	+-	0.0078	+	4.3	+-	28.0
Al	0.0418	+-	0.0077	0.0455	+-	0.0078	-0.0037	+-	0.0109	+	-8.6	+-	25.0
Si	0.0786	+-	0.0042	0.0789	+-	0.0042	-0.0003	+-	0.0060	+	-0.4	+-	7.6
P	0.0043	+-	0.0013	0.0021	+-	0.0012	0.0022	+-	0.0018	0	69.8	+-	55.3
S	0.2956	+-	0.0153	0.2995	+-	0.0155	-0.0039	+-	0.0217	+	-1.3	+-	7.3
Cl	0.0559	+-	0.0044	0.0500	+-	0.0043	0.0059	+-	0.0061	+	11.1	+-	11.6
K	0.0333	+-	0.0022	0.0306	+-	0.0021	0.0027	+-	0.0030	+	8.3	+-	9.5
Ca	0.0269	+-	0.0019	0.0265	+-	0.0018	0.0004	+-	0.0026	+	1.7	+-	9.8
Sc	0.0000	+-	0.0011	0.0000	+-	0.0011	0.0000	+-	0.0015				
Ti	0.0026	+-	0.0009	0.0020	+-	0.0009	0.0006	+-	0.0012				
V	0.0003	+-	0.0009	0.0000	+-	0.0009	0.0003	+-	0.0012				
Cr	0.0014	+-	0.0008	0.0004	+-	0.0008	0.0010	+-	0.0011				
Mn	0.0003	+-	0.0008	0.0008	+-	0.0008	-0.0005	+-	0.0011				
Fe	0.0349	+-	0.0019	0.0344	+-	0.0019	0.0004	+-	0.0027	+	1.3	+-	7.7
Co	0.0000	+-	0.0007	0.0000	+-	0.0007	0.0000	+-	0.0009				
Ni	0.0001	+-	0.0006	0.0002	+-	0.0006	-0.0001	+-	0.0009				
Cu	0.0007	+-	0.0009	0.0000	+-	0.0009	0.0007	+-	0.0013				
Zn	0.0014	+-	0.0007	0.0017	+-	0.0007	-0.0003	+-	0.0010				
Ga	0.0000	+-	0.0006	0.0002	+-	0.0006	-0.0002	+-	0.0009				
As	0.0001	+-	0.0009	0.0005	+-	0.0009	-0.0004	+-	0.0013				
Se	0.0007	+-	0.0005	0.0005	+-	0.0005	0.0003	+-	0.0007				
Br	0.0010	+-	0.0007	0.0017	+-	0.0007	-0.0007	+-	0.0010				
Rb	0.0003	+-	0.0007	0.0000	+-	0.0007	0.0003	+-	0.0010				
Sr	0.0010	+-	0.0007	0.0004	+-	0.0007	0.0006	+-	0.0011				
Y	0.0000	+-	0.0014	0.0000	+-	0.0014	0.0000	+-	0.0020				
Zr	0.0000	+-	0.0020	0.0015	+-	0.0020	-0.0015	+-	0.0029				
Nb	0.0012	+-	0.0028	0.0000	+-	0.0028	0.0012	+-	0.0039				
Mo	0.0000	+-	0.0034	0.0000	+-	0.0034	0.0000	+-	0.0048				
Ag	0.0000	+-	0.0028	0.0000	+-	0.0028	0.0000	+-	0.0039				
Cd	0.0000	+-	0.0029	0.0000	+-	0.0029	0.0000	+-	0.0041				
In	0.0000	+-	0.0037	0.0006	+-	0.0037	-0.0006	+-	0.0053				
Sn	0.0000	+-	0.0057	0.0072	+-	0.0057	-0.0072	+-	0.0080				
Sb	0.0000	+-	0.0069	0.0186	+-	0.0064	-0.0186	+-	0.0094				
Cs	0.0000	+-	0.0013	0.0000	+-	0.0013	0.0000	+-	0.0018				
Ba	0.0000	+-	0.0014	0.0039	+-	0.0014	-0.0039	+-	0.0020				
La	0.0000	+-	0.0015	0.0014	+-	0.0014	-0.0014	+-	0.0021				
Ce	0.0000	+-	0.0012	0.0000	+-	0.0012	0.0000	+-	0.0017				
Sm	0.0000	+-	0.0011	0.0000	+-	0.0011	0.0000	+-	0.0015				
Eu	0.0000	+-	0.0021	0.0007	+-	0.0021	-0.0007	+-	0.0030				
Tb	0.0000	+-	0.0022	0.0000	+-	0.0024	0.0000	+-	0.0033				
Hf	0.0000	+-	0.0009	0.0000	+-	0.0009	0.0000	+-	0.0012				
Ta	0.0000	+-	0.0009	0.0000	+-	0.0009	0.0000	+-	0.0012				
W	0.0008	+-	0.0007	0.0000	+-	0.0007	0.0008	+-	0.0010				
Ir	0.0000	+-	0.0005	0.0000	+-	0.0005	0.0000	+-	0.0008				
Au	0.0000	+-	0.0007	0.0000	+-	0.0007	0.0000	+-	0.0010				
Hg	0.0001	+-	0.0011	0.0000	+-	0.0011	0.0001	+-	0.0016				
Pb	0.0000	+-	0.0007	0.0000	+-	0.0007	0.0000	+-	0.0010				

RPD: Relative Percent Difference (X1-X2)/[(X1+X2)/2]*100. RPD is calculated when original value is greater than three times its uncertainty.

QA/QC Report

Client Name: SMAQMD
Project Number: S061
Analytical Technique: Ion Chromatography
Instrument: Thermo ICS-5000
Sample Description: 47mm Teflon
Report Number: 23-368

Blank Data

Analyte	Sample ID	Measured Conc. mg/L	DL Conc. mg/L
Cl	ICB	< DL	0.010
Cl	Meth_Blk	0.013	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010
NO3	ICB	< DL	0.030
NO3	Meth_Blk	< DL	0.030
NO3	CCB	< DL	0.030
NO3	CCB	< DL	0.030
SO4	ICB	< DL	0.020
SO4	Meth_Blk	< DL	0.020
SO4	CCB	< DL	0.020
SO4	CCB	< DL	0.020
Na	ICB	< DL	0.020
Na	Meth_Blk	< DL	0.020
Na	CCB	< DL	0.020
Na	CCB	< DL	0.020
Na	CCB	< DL	0.020
Na	CCB	< DL	0.020
NH4	ICB	< DL	0.010
NH4	Meth_Blk	< DL	0.010
NH4	CCB	< DL	0.010
NH4	CCB	< DL	0.010
NH4	CCB	< DL	0.010
NH4	CCB	< DL	0.010
K	ICB	< DL	0.010
K	Meth_Blk	< DL	0.010
K	CCB	< DL	0.010
K	CCB	< DL	0.010
K	CCB	< DL	0.010
K	CCB	< DL	0.010

ICB: Initial Calibration Blank CCB: Continuing Calibration Blank
*: Sample Media Blank (SM_Blk) concentration in µg/filter
Method Blank is in control if Method Blank results are <10% of sample results

QA/QC Report

Client Name: SMAQMD
Project Number: S061
Analytical Technique: Ion Chromatography
Instrument: Thermo ICS-5000
Sample Description: 47mm Teflon
Report Number: 23-368

Calibration QC

Analyte	Sample ID	Standard Conc. mg/L	Measured Conc. mg/L	Percent Recovery
Cl	ICV	0.500	0.510	102.0
Cl	LL-LCS	0.030	0.039	130.0
Cl	CCV	0.500	0.518	103.6
Cl	CCV	0.500	0.515	103.0
NO3	ICV	0.500	0.508	101.6
NO3	LL-LCS	0.100	0.119	119.0
NO3	CCV	0.500	0.515	103.0
NO3	CCV	0.500	0.514	102.8
SO4	ICV	0.500	0.527	105.4
SO4	LL-LCS	0.060	0.068	113.3
SO4	CCV	0.500	0.526	105.2
SO4	CCV	0.500	0.532	106.4
Na	ICV	0.500	0.492	98.4
Na	LL-LCS	0.040	0.042	105.0
Na	CCV	0.500	0.493	98.6
Na	CCV	0.500	0.496	99.2
Na	CCV	0.500	0.491	98.2
Na	CCV	0.500	0.494	98.8
NH4	ICV	0.500	0.517	103.4
NH4	LL-LCS	0.030	0.030	100.0
NH4	CCV	0.500	0.518	103.6
NH4	CCV	0.500	0.521	104.2
NH4	CCV	0.500	0.517	103.4
NH4	CCV	0.500	0.517	103.4
K	ICV	0.500	0.485	97.0
K	LL-LCS	0.030	0.026	86.7
K	CCV	0.500	0.490	98.0
K	CCV	0.500	0.491	98.2
K	CCV	0.500	0.486	97.2
K	CCV	0.500	0.492	98.4

ICV: Initial Calibration Verification CCV: Continuing Calibration Verification
Calibration Verification Limits: 90% - 110% Recovery
Low Level-LCS Limits: 50% - 150% Recovery
LL-LCS results are insignificant if sample results are >10x LL-LCS concentration

QA/QC Report

Client Name: SMAQMD
Project Number: S061
Analytical Technique: Ion Chromatography
Instrument: Thermo ICS-5000
Sample Description: 47mm Teflon
Report Number: 23-368

Replicate Data

Analyte	Sample ID	Sample Conc. mg/L	Replicate Conc. mg/L	RPD
Cl	23-T1885	1.18	1.18	0.08
NO3	23-T1885	0.544	0.549	0.91
SO4	23-T1885	0.697	0.699	0.29
Na	23-T1916	0.121	0.125	3.25
NH4	23-T1916	0.247	0.248	0.40
K	23-T1916	0.020	0.022	9.52 *

RPD = {(sample-replicate)/[(sample+replicate)/2]}x100
N/C: RPD is not calculated when sample or replicate is below detection limit
Replicate Limit: 20% RPD
*: per EPA CLP protocol, control limits do not apply if sample and/or replicate concentration is less than 5x the detection limit

Laboratory Control Sample/Matrix Post Spike Analysis

Analyte	Sample ID	Sample Conc. mg/L	Spike Conc. mg/L	Spike Amount mg/L	Percent Recovery
Cl	LCS	0.013	0.548	0.500	107.
Cl	LCS-Duplicate	0.013	0.503	0.500	98.0
Cl	23-T1886	0.393	0.914	0.500	104.
NO3	LCS	< 0.03	0.517	0.500	103.
NO3	LCS-Duplicate	< 0.03	0.506	0.500	101.
NO3	23-T1886	0.352	0.856	0.500	101.
SO4	LCS	< 0.02	0.534	0.500	107.
SO4	LCS-Duplicate	< 0.02	0.522	0.500	104.
SO4	23-T1886	0.599	1.11	0.500	103.
Na	LCS	< 0.02	0.482	0.500	96.4
Na	LCS-Duplicate	< 0.02	0.480	0.500	96.0
Na	23-T1933	0.238	0.775	0.500	107.
NH4	LCS	< 0.01	0.508	0.500	102.
NH4	LCS-Duplicate	< 0.01	0.505	0.500	101.
NH4	23-T1933	0.270	0.795	0.500	105.
K	LCS	< 0.01	0.474	0.500	94.8
K	LCS-Duplicate	< 0.01	0.475	0.500	95.0
K	23-T1933	0.073	0.605	0.500	106.

LCS Limit: 80% - 120% Recovery Spike Limit: 75% - 125% Recovery

QA/QC Report

Client Name: SMAQMD
Project Number: S061
Analytical Technique: Ion Chromatography
Instrument: Thermo ICS-5000
Sample Description: 47mm Teflon
Report Number: 23-368

LCS Duplicate Data

Analyte	Sample ID	Original Conc. mg/L	Replicate Conc. mg/L	RPD
Cl	LCS-Duplicate	0.548	0.503	8.56
NO3	LCS-Duplicate	0.517	0.506	2.15
SO4	LCS-Duplicate	0.534	0.522	2.27
Na	LCS-Duplicate	0.482	0.480	0.42
NH4	LCS-Duplicate	0.508	0.505	0.59
K	LCS-Duplicate	0.474	0.475	0.21

RPD = {(sample-duplicate)/[(sample+duplicate)/2]}x100 Duplicate Limit: 20% RPD

QA/QC Report

Client Name: Sacromento Metro AQMD
Project Number: S061
Analytical Technique: IMPROVE_A
Sample Description: 47mm Quartz
Report Number: 23-368
==========

Calibration QC

OC/EC Split*

Split ID: 11Q1121 Date run	Average %OC of 20 data points	%OC Measured	Control Limits
8/17/23	67.61	68.75%	60.85 - 74.37%
8/17/23	67.61	66.71%	60.85 - 74.37%

**Note: the Split is composed of a "real world" 8"x10"sample (406 cm ^{2} deposit area) that the laboratory has visually inspected for homogeneity of deposit. The laboratory attempts to characterize the %OC by analyzing twenty 1.5 cm ^{2} sample aliquots. A split may be outside of the "control limits" if the sample is not completely homogenous, but still be considered "passing" as long as the result is not significantly off from those limits.*

Sucrose Standard

Date run	Sucrose Std. Conc. µg/cm²	Measured Conc. µg/cm²	Percent Recovery
8/17/23	28.07	27.44	97.8

Sucrose Standard Control Limits: 90 - 110% recovery

Blank Data

Date run	Analyte	Measured Conc. µg/cm²	MDL µg/cm²
8/17/23	OC	<MDL	0.2
	EC	<MDL	0.2
8/17/23	OC	<MDL	0.2
	EC	<MDL	0.2

Duplicate Data

Sample ID	Analyte	Sample Conc. µg/cm²	Duplicate Conc. µg/cm²	RPD
23U 309	OC	3.82	3.66	4.3
	EC	0.17	0.06	95.7
	TC	3.99	3.71	7.3
23U 408	OC	5.53	4.86	12.9
	EC	0.23	0.18	24.4
	TC	5.76	5.04	13.3
23U 410	OC	3.76	3.78	0.5
	EC	0.15	0.11	30.8
	TC	3.91	3.89	0.5

Duplicate Control Limits: ± 20% RPD
RPD = [(sample - duplicate)/(sample + duplicate)/2] x 100
Control limits do not apply where result <5x Detection Limit

CHESTER LabNet

12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net ♦ cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

For use by Lab:
Report #:

Page_1_of _1_COCs

CLIENT INFORMATION

Company Name: Sacramento Metropolitan AQMD

Contact: Levi Ford | Email: lford@airquality.org

Cell: 916-307-0505 | Office: 279-207-1122

Report To: Levi Ford
777 12th Street
Sacramento CA, 95814

Billing Address: 777 12th Street
Sacramento CA, 95814

Project Name: AB617

Contract 2022-00000024-A and 2023-00000004-A

Turn Around Time Requested

- [x] Standard
- [ ] Rush (Specify)_____

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m^3)	Particle Size (mm)	Gravimetry	XRF	IC	ICP	OC/EC				Sample Specific Notes:
23-T1933	Canister SMAQMD 01	617Fern	07/05/23		2.5	X	X	X						
23-T1934	Canister SMAQMD 02	617Fern	07/11/23		2.5	X	X	X						
23-TU308	Canister SMAQMD 04	617Fern	07/05/23		2.5					X				
23-U309	Canister SMAQMD 05	617Fern	07/11/23		2.5					X				
23-T1930	MiniVol SMAQMD 01	617Fern	07/05/23		10	X	X							
23-T1931	MiniVol SMAQMD 02	617Fern	07/11/23		10	X	X							

Do the samples pose any potential hazards? [ ] Yes [x] No
If yes please explain:

Are samples for compliance? [ ] Yes [x] No

Special Instructions/QC Requirements & Comments:

Sample Load: ~~07/03/2023~~ GRico	Date/Time: 07/03/23 12:00	Sample Removal: GRico	Date/Time/Temp: 07/12/23 12:00
Relinquished by: GRico	Date/Time: 07/13/23 08:10	Received By: Pal DL	Date/Time/Temp: 7/14/23 940 4.4°C

Laboratory Receipt Comments:

SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern

Sampling Date: 07/05/23

	Channel	1	2
Filter and Run Time	Lab Net ID	23-T1933	23-TU308
	Field ID	Canister SMAQMD 01	Canister SMAQMD 04
	Sample Date	7/5/2023	7/5/2023
	Start Date/Time	7/5/2023 0:00	7/5/2023 0:00
	End Date/Time	7/6/2023 0:00	7/6/2023 0:00
	Retrieval Date/Time	7/6/2023 12:30	7/6/2023 12:30
	Run Time (hrs)	24:00:00	24:00:00
Event Information	Sample Volume (m3)	9.688	9.687
	Avg CV (%)	0.8	0.8
	Avg. Flow (l/min)	6.72	6.72
	Avg Ambient T (°C)	18.5	18.5
	Max Ambient T (°C)	27.9	27.9
	Min Ambient T (°C)	12.2	12.2
	Avg Filter T (°C)	19.7	19.7
	Max Filter T (°C)	29.3	29.1
	Min Filter T (°C)	13.3	13.2
	Avg. BP (mmHg)	758	758
	Max BP (mm Hg)	756	756
	Min BP (mmHg)	757	757

SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern

Sampling Date: 07/11/23

	Channel	1	2
Filter and Run Time	Lab Net ID	23-T1934	23-TU309
	Field ID	Canister SMAQMD 02	Canister SMAQMD 05
	Sample Date	7/11/2023	7/11/2023
	Start Date/Time	7/11/2023 0:00	7/11/2023 0:00
	End Date/Time	7/12/2023 0:00	7/12/2023 0:00
	Retrieval Date/Time	7/12/2023 12:30	7/12/2023 12:30
	Run Time (hrs)	24:00:00	24:00:00
Event Information	Sample Volume (m3)	9.692	9.695
	Avg CV (%)	0.8	0.8
	Avg. Flow (l/min)	6.73	6.73
	Avg Ambient T (°C)	27.6	27.6
	Max Ambient T (°C)	34.6	34.6
	Min Ambient T (°C)	16.4	16.4
	Avg Filter T (°C)	24.9	24.9
	Max Filter T (°C)	36.5	36.5
	Min Filter T (°C)	16.9	16.9
	Avg. BP (mmHg)	759	759
	Max BP (mm Hg)	761	761
	Min BP (mmHg)	758	758

CHESTER LabNet

12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net ♦ cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

For use by Lab:
Report #: 23-368

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CLIENT INFORMATION

Company Name: Sacramento Metropolitan AQMD

Contact: Levi Ford | Email: lford@airquality.org

Cell: 916-307-0505 | Office: 279-207-1122

Report To: Levi Ford_____
777 12th Street
Sacramento CA, 95814

Billing Address:_777 12th Street_____
Sacramento CA, 95814

Project Name: AB617

Contract 2022-00000024-A

Turn Around Time Requested

☑ Standard
☐ Rush (Specify)_____

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m^3)	Particle Size (mm)	Gravimetry	XRF	IC	ICP	OC/EC				Sample Specific Notes:
23-T1935	Canister SMAQMD 03	617Fern	07/17/23		2.5	X	X	X						
23-T1885	Canister SMAQMD 07	617Fern	07/23/23		2.5	X	X	X						
23-TU310	Canister SMAQMD 06	617Fern	07/17/23		2.5					X				
23-TU408	Canister SMAQMD 10	617Fern	07/23/23		2.5					X				

Do the samples pose any potential hazards? ☐ Yes ☑ No
If yes please explain:

Are samples for compliance? ☐ Yes ☑ No

Special Instructions/QC Requirements & Comments:

Sample Load: 07/12/23 G. Rico	Date/Time: 07/12/23 —	Sample Removal: Luis H.	Date/Time/Temp: 07/27/23 - 30°C
Relinquished by: G. Rico	Date/Time: 07/31/23 09:00	Received By: Pal	Date/Time/Temp: 8/1/23 1115 5.3°C

Laboratory Receipt Comments:

SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern **Sampling Date: 07/17/23**

	Channel	**1**	**2**
Filter and Run Time	Lab Net ID	23-T1935	23-TU310
	Field ID	Canister SMAQMD 03	Canister SMAQMD 06
	Sample Date	7/17/2023	7/17/2023
	Start Date/Time	7/17/2023 0:00	7/17/2023 0:00
	End Date/Time	7/18/2023 0:00	7/18/2023 0:00
	Retrieval Date/Time	7/20/2023 14:30	7/20/2023 14:30
	Run Time (hrs)	24:00:00	24:00:00
Event Information	Sample Volume (m3)	9.698	9.7
	Avg CV (%)	0.6	0.8
	Avg. Flow (l/min)	6.73	6.73
	Avg Ambient T (°C)	27.5	27.5
	Max Ambient T (°C)	35.4	35.4
	Min Ambient T (°C)	22	22
	Avg Filter T (°C)	29.1	29.1
	Max Filter T (°C)	32.8	32.8
	Min Filter T (°C)	20.1	20.1
	Avg. BP (mmHg)	756	756
	Max BP (mm Hg)	758	758
	Min BP (mmHg)	755	755

SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern **Sampling Date: 07/23/23**

	Channel	**1**	**2**
Filter and Run Time	Lab Net ID	23-T1885	23-TU408
	Field ID	Canister SMAQMD 07	Canister SMAQMD 10
	Sample Date	7/23/2023	7/23/2023
	Start Date/Time	7-23-23/00:00	7-23-23/00:00
	End Date/Time	7-24-23/00:00	7-24-23/00:00
	Retrieval Date/Time	7-24-23/10:30	7-24-23/10:30
	Run Time (hrs)	24:00	24:00
Event Information	Sample Volume (m3)	9.713	9.689
	Avg CV (%)	0.7	0.8
	Avg. Flow (l/min)	6.74	6.72
	Avg Ambient T (°C)	26.5	26.5
	Max Ambient T (°C)	34.4	34.4
	Min Ambient T (°C)	18.1	18.1
	Avg Filter T (°C)	28.0	27.9
	Max Filter T (°C)	36.1	35.9
	Min Filter T (°C)	19.4	19.3
	Avg. BP (mmHg)	756	756
	Max BP (mm Hg)	759	759
	Min BP (mmHg)	755	755

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CHAIN-OF-CUSTODY RECORD

For use by Lab:
Report #:

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CLIENT INFORMATION

Company Name: Sacramento Metropolitan AQMD

Contact: Levi Ford | Email: lford@airquality.org

Cell: 916-307-0505 | Office: 279-207-1122

Report To: Levi Ford
777 12th Street
Sacramento CA, 95814

Billing Address: 777 12th Street
Sacramento CA, 95814

Project Name: AB617

Contract 2022-00000024-A

Turn Around Time Requested

- [x] Standard
- [ ] Rush (Specify)_____

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m^3)	Particle Size (mm)	Gravimetry	XRF	IC	ICP	OC/EC				Sample Specific Notes:
23-T1886	Canister SMAQMD 08	617Fern	07/29/23	9.71	2.5	X	X	X						
23-T1916	Canister SMAQMD 09	617Fern	08/04/23	9.69	2.5	X	X	X						
23-TU409	Canister SMAQMD 11	617Fern	07/29/23	9.71	2.5					X				
23-TU410	Canister SMAQMD 12	617Fern	08/04/23	9.69	2.5					X				

Do the samples pose any potential hazards? [ ] Yes [x] No
If yes please explain:

Are samples for compliance? [ ] Yes [x] No

Special Instructions/QC Requirements & Comments:

Sample Load: F. Wolff	Date/Time: 7/28/23 13:00	Sample Removal: F. Wolff	Date/Time/Temp:8/9/23 13:00
Relinquished by: M. Rico	Date/Time: 8/10/23 10:30	Received By: [signature]	Date/Time/Temp: 8/11/23 1100 4.3 °C

Laboratory Receipt Comments:

SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern

Sampling Date: 07/29/23

	Channel	1	2
Filter and Run Time	Lab Net ID	23-T188	23-TU409
	Field ID	Canister SMAQMD 08	Canister SMAQMD 11
	Sample Date	7/29/2023	7/29/2023
	Start Date/Time	7/29/2023 0:00	7/29/2023 0:00
	End Date/Time	7/30/2023 0:00	7/30/2023 0:00
	Retrieval Date/Time	7/31/2023 11:00	7/31/2023 11:00
	Run Time (hrs)	24.00	24.00
Event Information	Sample Volume (m3)	9.708	9.707
	Avg CV (%)	0.7	0.7
	Avg. Flow (l/min)	6.7	6.7
	Avg Ambient T (°C)	22.8	22.8
	Max Ambient T (°C)	32.2	32.2
	Min Ambient T (°C)	15.0	15.0
	Avg Filter T (°C)	28.0	28.2
	Max Filter T (°C)	34.5	34.5
	Min Filter T (°C)	16.0	16.0
	Avg. BP (mmHg)	761.0	761.0
	Max BP (mm Hg)	762.0	762.0
	Min BP (mmHg)	760.0	760.0

SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern **Sampling Date: 08/04/2023**

	Channel	**1**	**2**
Filter and Run Time	Lab Net ID	23-T1916	23-TU410
	Field ID	Canister SMAQMD 09	Canister SMAQMD 12
	Sample Date	8/4/2023	8/4/2023
	Start Date/Time	8/4/2023 0:00	8/4/2023 0:00
	End Date/Time	8/5/2023 0:00	8/5/2023 0:00
	Retrieval Date/Time	8/7/2023 0:00	8/7/2023 0:00
	Run Time (hrs)	24.00	24.00
Event Information	Sample Volume (m3)	9.698	9.702
	Avg CV (%)	0.8	0.7
	Avg. Flow (l/min)	6.7	6.7
	Avg Ambient T (°C)	22.2	22.2
	Max Ambient T (°C)	32.0	32.0
	Min Ambient T (°C)	14.2	14.2
	Avg Filter T (°C)	24.0	23.9
	Max Filter T (°C)	34.6	34.3
	Min Filter T (°C)	15.2	15.2
	Avg. BP (mmHg)	760.0	760.0
	Max BP (mm Hg)	762.0	762.0
	Min BP (mmHg)	758.0	758.0

RAW DATA

Available upon request