# SACRAMENTO METROPOLITAN
# AIR QUALITY MANAGEMENT DISTRICT

## CLIENT # S061
## REPORT # 23-624

SUBMITTED BY:
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# CHESTER LabNet

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## Case Narrative

Date: January 23, 2024

### General Information

| | |
|---|---|
| Client: | Sacramento Metropolitan Air Quality Management District |
| Client Number: | S061 |
| Report Number: | 23-624 |
| Sample Description: | 47mm Teflon filters |
| Sample Numbers: | 23-T2565, 23-T2897 – 23-T2899, 23-T3027 – 23-T3029, 23-T3328, 23-T3329<br>23-U475, 23-U494 – 23-U496, 23-U520 – 23-U522, 23-U580, 23-U581 |

### Analysis

| | |
|---|---|
| Analytes: | Particulate Mass, XRF Metals (Na – Pb), Cl, $NO_3$, $SO_4$, $NH_4$, K,<br>Organic Carbon, Elemental Carbon |
| Analytical Protocols: | Gravimetry ($PM_{2.5}$): 40 CFR 50 Appendix L (10/17/06 version)<br>X-Ray Fluorescence: EPA IO-3.3 (June 1999 version)<br>Anions - EPA 300.0 (revision 2.1)<br>Cations - ASTM D6919-17<br>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 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. |

1/23/24

Project Manager — Date
Paul Duda

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-T2565
Filter ID: P7464871
Client ID: Canister SMAQMD 05_04
Site: 617 Fern
Sample Date: 11/ 2/23
Filter Lot #: 7118468
Volume: 9.693 ± 0.485 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | percent | | | µg/m³ | | |
|---|---|---|---|---|---|---|---|---|---|
| Gravimetry | | | | | | | | | |
| Net Mass | 175. | ± | 10. | | | | 18.05 | ± | 1.371 |
| XRF | | | | | | | | | |
| * Na | 0.2373 | ± | 0.3254 | 0.1356 | ± | 0.1861 | 0.0245 | ± | 0.0336 |
| Mg | 0.2802 | ± | 0.0633 | 0.1601 | ± | 0.0373 | 0.0289 | ± | 0.0067 |
| Al | 0.9854 | ± | 0.1040 | 0.5631 | ± | 0.0676 | 0.1017 | ± | 0.0119 |
| Si | 3.259 | ± | 0.1661 | 1.862 | ± | 0.1426 | 0.3362 | ± | 0.0240 |
| P | 0.0960 | ± | 0.0147 | 0.0549 | ± | 0.0090 | 0.0099 | ± | 0.0016 |
| S | 1.958 | ± | 0.1051 | 1.119 | ± | 0.0877 | 0.2020 | ± | 0.0148 |
| Cl | 0.1537 | ± | 0.0373 | 0.0878 | ± | 0.0219 | 0.0159 | ± | 0.0039 |
| K | 1.512 | ± | 0.0768 | 0.8640 | ± | 0.0661 | 0.1560 | ± | 0.0111 |
| Ca | 0.8147 | ± | 0.0429 | 0.4656 | ± | 0.0362 | 0.0841 | ± | 0.0061 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0071 | 0.0000 | ± | 0.0013 |
| Ti | 0.1288 | ± | 0.0124 | 0.0736 | ± | 0.0083 | 0.0133 | ± | 0.0014 |
| * V | 0.0034 | ± | 0.0102 | 0.0019 | ± | 0.0058 | 0.0003 | ± | 0.0010 |
| Cr | 0.0316 | ± | 0.0102 | 0.0181 | ± | 0.0059 | 0.0033 | ± | 0.0011 |
| Mn | 0.0655 | ± | 0.0090 | 0.0375 | ± | 0.0056 | 0.0068 | ± | 0.0010 |
| Fe | 2.149 | ± | 0.1074 | 1.228 | ± | 0.0932 | 0.2217 | ± | 0.0157 |
| * Co | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0052 | 0.0000 | ± | 0.0009 |
| * Ni | 0.0034 | ± | 0.0068 | 0.0019 | ± | 0.0039 | 0.0003 | ± | 0.0007 |
| Cu | 0.0791 | ± | 0.0113 | 0.0452 | ± | 0.0070 | 0.0082 | ± | 0.0012 |
| Zn | 0.1695 | ± | 0.0113 | 0.0969 | ± | 0.0085 | 0.0175 | ± | 0.0015 |
| * Ga | 0.0000 | ± | 0.0068 | 0.0000 | ± | 0.0039 | 0.0000 | ± | 0.0007 |
| * Ge | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0045 | 0.0000 | ± | 0.0008 |
| * As | 0.0090 | ± | 0.0102 | 0.0052 | ± | 0.0058 | 0.0009 | ± | 0.0011 |
| * Se | 0.0023 | ± | 0.0056 | 0.0013 | ± | 0.0032 | 0.0002 | ± | 0.0006 |
| Br | 0.0554 | ± | 0.0090 | 0.0316 | ± | 0.0055 | 0.0057 | ± | 0.0010 |
| * Rb | 0.0023 | ± | 0.0079 | 0.0013 | ± | 0.0045 | 0.0002 | ± | 0.0008 |
| * Sr | 0.0011 | ± | 0.0079 | 0.0006 | ± | 0.0045 | 0.0001 | ± | 0.0008 |
| * Y | 0.0000 | ± | 0.0158 | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0016 |
| * Zr | 0.0429 | ± | 0.0226 | 0.0245 | ± | 0.0130 | 0.0044 | ± | 0.0023 |
| * Nb | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0181 | 0.0000 | ± | 0.0033 |
| * Mo | 0.0226 | ± | 0.0384 | 0.0129 | ± | 0.0220 | 0.0023 | ± | 0.0040 |
| * Pd | 0.0000 | ± | 0.0294 | 0.0000 | ± | 0.0168 | 0.0000 | ± | 0.0030 |
| * Ag | 0.0226 | ± | 0.0316 | 0.0129 | ± | 0.0181 | 0.0023 | ± | 0.0033 |
| * Cd | 0.0316 | ± | 0.0328 | 0.0181 | ± | 0.0188 | 0.0033 | ± | 0.0034 |
| * In | 0.0848 | ± | 0.0429 | 0.0484 | ± | 0.0247 | 0.0087 | ± | 0.0045 |
| * Sn | 0.1266 | ± | 0.0644 | 0.0723 | ± | 0.0370 | 0.0131 | ± | 0.0067 |
| * Sb | 0.0848 | ± | 0.0723 | 0.0484 | ± | 0.0414 | 0.0087 | ± | 0.0075 |
| * Cs | 0.0000 | ± | 0.0158 | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0016 |
| Ba | 0.1729 | ± | 0.0203 | 0.0988 | ± | 0.0129 | 0.0178 | ± | 0.0023 |
| * La | 0.0000 | ± | 0.0181 | 0.0000 | ± | 0.0103 | 0.0000 | ± | 0.0019 |
| * Ce | 0.0023 | ± | 0.0147 | 0.0013 | ± | 0.0084 | 0.0002 | ± | 0.0015 |
| * Sm | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0071 | 0.0000 | ± | 0.0013 |
| * Eu | 0.0271 | ± | 0.0305 | 0.0155 | ± | 0.0175 | 0.0028 | ± | 0.0032 |
| * Tb | 0.0000 | ± | 0.0520 | 0.0000 | ± | 0.0297 | 0.0000 | ± | 0.0054 |
| * Hf | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0065 | 0.0000 | ± | 0.0012 |
| * Ta | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0071 | 0.0000 | ± | 0.0013 |
| * W | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0052 | 0.0000 | ± | 0.0009 |
| * Ir | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0032 | 0.0000 | ± | 0.0006 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0045 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0102 | ± | 0.0124 | 0.0058 | ± | 0.0071 | 0.0010 | ± | 0.0013 |
| Pb | 0.0542 | ± | 0.0079 | 0.0310 | ± | 0.0049 | 0.0056 | ± | 0.0009 |

Lab ID: 23-T2565
Client ID: Canister SMAQMD 05_04

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 0.260 | 0.100 | 0.1486 | 0.0571 | 0.027 | 0.010 |
| NO3 | 4.120 | 0.100 | 2.354 | 0.0571 | 0.425 | 0.010 |
| SO4 | 4.820 | 0.200 | 2.754 | 0.1143 | 0.497 | 0.021 |
| Na | 0.300 | 0.100 | 0.1714 | 0.0571 | 0.031 | 0.010 |
| NH4 | 2.550 | 0.100 | 1.457 | 0.0571 | 0.263 | 0.010 |
| K | 1.150 | 0.100 | 0.6571 | 0.0571 | 0.119 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Lab ID: 23-T2897
Filter ID: P7465454
Client ID: Canister SMAQMD 03_03
Site: 617 Fern
Sample Date: 11/ 8/23
Filter Lot #: 7118468
Volume: 9.696 ± 0.485 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | percent | | | µg/m³ | | |
|---|---|---|---|---|---|---|---|---|---|
| Gravimetry | | | | | | | | | |
| Net Mass | 75. | ± | 10. | | | | 7.735 | ± | 1.102 |
| XRF | | | | | | | | | |
| * Na | 0.4814 | ± | 0.3187 | 0.6418 | ± | 0.4334 | 0.0496 | ± | 0.0330 |
| Mg | 0.2836 | ± | 0.0622 | 0.3782 | ± | 0.0970 | 0.0293 | ± | 0.0066 |
| Al | 1.128 | ± | 0.1085 | 1.504 | ± | 0.2472 | 0.1163 | ± | 0.0126 |
| Si | 3.461 | ± | 0.1752 | 4.615 | ± | 0.6581 | 0.3570 | ± | 0.0254 |
| P | 0.0407 | ± | 0.0136 | 0.0542 | ± | 0.0195 | 0.0042 | ± | 0.0014 |
| S | 1.757 | ± | 0.0949 | 2.343 | ± | 0.3370 | 0.1812 | ± | 0.0133 |
| * Cl | 0.1074 | ± | 0.0373 | 0.1431 | ± | 0.0533 | 0.0111 | ± | 0.0039 |
| K | 0.9548 | ± | 0.0508 | 1.273 | ± | 0.1828 | 0.0985 | ± | 0.0072 |
| Ca | 0.9176 | ± | 0.0486 | 1.223 | ± | 0.1755 | 0.0946 | ± | 0.0069 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0166 | 0.0000 | ± | 0.0013 |
| Ti | 0.0881 | ± | 0.0113 | 0.1175 | ± | 0.0217 | 0.0091 | ± | 0.0013 |
| * V | 0.0124 | ± | 0.0102 | 0.0166 | ± | 0.0137 | 0.0013 | ± | 0.0011 |
| * Cr | 0.0215 | ± | 0.0090 | 0.0286 | ± | 0.0126 | 0.0022 | ± | 0.0009 |
| Mn | 0.0282 | ± | 0.0090 | 0.0377 | ± | 0.0131 | 0.0029 | ± | 0.0009 |
| Fe | 1.327 | ± | 0.0667 | 1.769 | ± | 0.2520 | 0.1368 | ± | 0.0097 |
| * Co | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0105 | 0.0000 | ± | 0.0008 |
| * Ni | 0.0023 | ± | 0.0068 | 0.0030 | ± | 0.0090 | 0.0002 | ± | 0.0007 |
| * Cu | 0.0102 | ± | 0.0102 | 0.0136 | ± | 0.0137 | 0.0010 | ± | 0.0011 |
| Zn | 0.0723 | ± | 0.0090 | 0.0964 | ± | 0.0176 | 0.0075 | ± | 0.0010 |
| * Ga | 0.0034 | ± | 0.0068 | 0.0045 | ± | 0.0091 | 0.0003 | ± | 0.0007 |
| * Ge | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0105 | 0.0000 | ± | 0.0008 |
| * As | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0136 | 0.0000 | ± | 0.0010 |
| * Se | 0.0034 | ± | 0.0056 | 0.0045 | ± | 0.0076 | 0.0003 | ± | 0.0006 |
| Br | 0.1695 | ± | 0.0113 | 0.2260 | ± | 0.0337 | 0.0175 | ± | 0.0015 |
| * Rb | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0105 | 0.0000 | ± | 0.0008 |
| * Sr | 0.0181 | ± | 0.0079 | 0.0241 | ± | 0.0110 | 0.0019 | ± | 0.0008 |
| * Y | 0.0068 | ± | 0.0158 | 0.0090 | ± | 0.0211 | 0.0007 | ± | 0.0016 |
| * Zr | 0.0271 | ± | 0.0226 | 0.0362 | ± | 0.0305 | 0.0028 | ± | 0.0023 |
| * Nb | 0.0237 | ± | 0.0316 | 0.0316 | ± | 0.0424 | 0.0024 | ± | 0.0033 |
| * Mo | 0.0000 | ± | 0.0384 | 0.0000 | ± | 0.0512 | 0.0000 | ± | 0.0040 |
| * Pd | 0.0000 | ± | 0.0294 | 0.0000 | ± | 0.0392 | 0.0000 | ± | 0.0030 |
| * Ag | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0422 | 0.0000 | ± | 0.0033 |
| * Cd | 0.0079 | ± | 0.0328 | 0.0105 | ± | 0.0437 | 0.0008 | ± | 0.0034 |
| * In | 0.0000 | ± | 0.0418 | 0.0000 | ± | 0.0557 | 0.0000 | ± | 0.0043 |
| * Sn | 0.0000 | ± | 0.0644 | 0.0000 | ± | 0.0859 | 0.0000 | ± | 0.0066 |
| * Sb | 0.0000 | ± | 0.0780 | 0.0000 | ± | 0.1040 | 0.0000 | ± | 0.0080 |
| * Cs | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0196 | 0.0000 | ± | 0.0015 |
| Ba | 0.0723 | ± | 0.0181 | 0.0964 | ± | 0.0273 | 0.0075 | ± | 0.0019 |
| * La | 0.0147 | ± | 0.0170 | 0.0196 | ± | 0.0228 | 0.0015 | ± | 0.0017 |
| * Ce | 0.0000 | ± | 0.0136 | 0.0000 | ± | 0.0181 | 0.0000 | ± | 0.0014 |
| * Sm | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0166 | 0.0000 | ± | 0.0013 |
| * Eu | 0.0000 | ± | 0.0237 | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0024 |
| * Tb | 0.0000 | ± | 0.0418 | 0.0000 | ± | 0.0557 | 0.0000 | ± | 0.0043 |
| * Hf | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0151 | 0.0000 | ± | 0.0012 |
| * Ta | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0136 | 0.0000 | ± | 0.0010 |
| * W | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0121 | 0.0000 | ± | 0.0009 |
| * Ir | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0075 | 0.0000 | ± | 0.0006 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0105 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0011 | ± | 0.0124 | 0.0015 | ± | 0.0166 | 0.0001 | ± | 0.0013 |
| * Pb | 0.0170 | ± | 0.0079 | 0.0226 | ± | 0.0110 | 0.0017 | ± | 0.0008 |

Lab ID: 23-T2897
Client ID: Canister SMAQMD 03_03

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 0.230 | 0.100 | 0.3067 | 0.1333 | 0.024 | 0.010 |
| NO3 | 1.580 | 0.100 | 2.107 | 0.1333 | 0.163 | 0.010 |
| SO4 | 3.800 | 0.200 | 5.067 | 0.2667 | 0.392 | 0.021 |
| Na | 0.380 | 0.100 | 0.5067 | 0.1333 | 0.039 | 0.010 |
| NH4 | 1.330 | 0.100 | 1.773 | 0.1333 | 0.137 | 0.010 |
| K | 0.500 | 0.100 | 0.6667 | 0.1333 | 0.052 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Lab ID: 23-T2899
Filter ID: P7465456
Client ID: Canister SMAQMD 07_04
Site: 617 Fern
Sample Date: 11/14/23
Filter Lot #: 7118468
Volume: 9.686 ± 0.484 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | percent | | | µg/m³ | | |
|---|---|---|---|---|---|---|---|---|---|
| Gravimetry | | | | | | | | | |
| Net Mass | 92. | ± | 10. | | | | 9.498 | ± | 1.136 |
| XRF | | | | | | | | | |
| * Na | 0.6565 | ± | 0.3141 | 0.7136 | ± | 0.3502 | 0.0678 | ± | 0.0326 |
| Mg | 0.2859 | ± | 0.0610 | 0.3108 | ± | 0.0744 | 0.0295 | ± | 0.0065 |
| Al | 0.6158 | ± | 0.0915 | 0.6694 | ± | 0.1233 | 0.0636 | ± | 0.0100 |
| Si | 1.745 | ± | 0.0893 | 1.896 | ± | 0.2278 | 0.1801 | ± | 0.0129 |
| P | 0.0655 | ± | 0.0147 | 0.0712 | ± | 0.0177 | 0.0068 | ± | 0.0016 |
| S | 2.580 | ± | 0.1345 | 2.804 | ± | 0.3380 | 0.2663 | ± | 0.0192 |
| * Cl | 0.0972 | ± | 0.0373 | 0.1056 | ± | 0.0421 | 0.0100 | ± | 0.0039 |
| K | 1.172 | ± | 0.0610 | 1.274 | ± | 0.1535 | 0.1210 | ± | 0.0087 |
| Ca | 0.5119 | ± | 0.0294 | 0.5564 | ± | 0.0684 | 0.0528 | ± | 0.0040 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0135 | 0.0000 | ± | 0.0013 |
| Ti | 0.0689 | ± | 0.0102 | 0.0749 | ± | 0.0137 | 0.0071 | ± | 0.0011 |
| * V | 0.0045 | ± | 0.0102 | 0.0049 | ± | 0.0111 | 0.0005 | ± | 0.0011 |
| * Cr | 0.0136 | ± | 0.0090 | 0.0147 | ± | 0.0100 | 0.0014 | ± | 0.0009 |
| Mn | 0.0418 | ± | 0.0090 | 0.0454 | ± | 0.0110 | 0.0043 | ± | 0.0010 |
| Fe | 0.9503 | ± | 0.0486 | 1.033 | ± | 0.1241 | 0.0981 | ± | 0.0070 |
| * Co | 0.0045 | ± | 0.0079 | 0.0049 | ± | 0.0086 | 0.0005 | ± | 0.0008 |
| * Ni | 0.0023 | ± | 0.0068 | 0.0025 | ± | 0.0074 | 0.0002 | ± | 0.0007 |
| * Cu | 0.0237 | ± | 0.0102 | 0.0258 | ± | 0.0114 | 0.0024 | ± | 0.0011 |
| Zn | 0.1017 | ± | 0.0090 | 0.1105 | ± | 0.0155 | 0.0105 | ± | 0.0011 |
| * Ga | 0.0056 | ± | 0.0068 | 0.0061 | ± | 0.0074 | 0.0006 | ± | 0.0007 |
| * Ge | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0086 | 0.0000 | ± | 0.0008 |
| * As | 0.0023 | ± | 0.0102 | 0.0025 | ± | 0.0111 | 0.0002 | ± | 0.0011 |
| * Se | 0.0056 | ± | 0.0056 | 0.0061 | ± | 0.0062 | 0.0006 | ± | 0.0006 |
| Br | 0.0418 | ± | 0.0079 | 0.0454 | ± | 0.0099 | 0.0043 | ± | 0.0008 |
| * Rb | 0.0023 | ± | 0.0079 | 0.0025 | ± | 0.0086 | 0.0002 | ± | 0.0008 |
| * Sr | 0.0136 | ± | 0.0079 | 0.0147 | ± | 0.0087 | 0.0014 | ± | 0.0008 |
| * Y | 0.0068 | ± | 0.0158 | 0.0074 | ± | 0.0172 | 0.0007 | ± | 0.0016 |
| * Zr | 0.0000 | ± | 0.0226 | 0.0000 | ± | 0.0246 | 0.0000 | ± | 0.0023 |
| * Nb | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0344 | 0.0000 | ± | 0.0033 |
| * Mo | 0.0000 | ± | 0.0384 | 0.0000 | ± | 0.0418 | 0.0000 | ± | 0.0040 |
| * Pd | 0.0090 | ± | 0.0294 | 0.0098 | ± | 0.0320 | 0.0009 | ± | 0.0030 |
| * Ag | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0344 | 0.0000 | ± | 0.0033 |
| * Cd | 0.0000 | ± | 0.0328 | 0.0000 | ± | 0.0356 | 0.0000 | ± | 0.0034 |
| * In | 0.0000 | ± | 0.0418 | 0.0000 | ± | 0.0454 | 0.0000 | ± | 0.0043 |
| * Sn | 0.0000 | ± | 0.0644 | 0.0000 | ± | 0.0700 | 0.0000 | ± | 0.0066 |
| * Sb | 0.1537 | ± | 0.0723 | 0.1670 | ± | 0.0807 | 0.0159 | ± | 0.0075 |
| * Cs | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0160 | 0.0000 | ± | 0.0015 |
| Ba | 0.0565 | ± | 0.0170 | 0.0614 | ± | 0.0196 | 0.0058 | ± | 0.0018 |
| * La | 0.0023 | ± | 0.0170 | 0.0025 | ± | 0.0184 | 0.0002 | ± | 0.0017 |
| * Ce | 0.0056 | ± | 0.0136 | 0.0061 | ± | 0.0148 | 0.0006 | ± | 0.0014 |
| * Sm | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0123 | 0.0000 | ± | 0.0012 |
| * Eu | 0.0000 | ± | 0.0237 | 0.0000 | ± | 0.0258 | 0.0000 | ± | 0.0024 |
| * Tb | 0.0000 | ± | 0.0362 | 0.0000 | ± | 0.0393 | 0.0000 | ± | 0.0037 |
| * Hf | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0111 | 0.0000 | ± | 0.0010 |
| * Ta | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0111 | 0.0000 | ± | 0.0010 |
| * W | 0.0000 | ± | 0.0068 | 0.0000 | ± | 0.0074 | 0.0000 | ± | 0.0007 |
| * Ir | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0061 | 0.0000 | ± | 0.0006 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0086 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0023 | ± | 0.0124 | 0.0025 | ± | 0.0135 | 0.0002 | ± | 0.0013 |
| * Pb | 0.0102 | ± | 0.0079 | 0.0111 | ± | 0.0087 | 0.0010 | ± | 0.0008 |

Lab ID: 23-T2899
Client ID: Canister SMAQMD 07_04

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 0.200 | 0.100 | 0.2174 | 0.1087 | 0.021 | 0.010 |
| NO3 | 4.210 | 0.100 | 4.576 | 0.1087 | 0.435 | 0.010 |
| SO4 | 5.860 | 0.200 | 6.370 | 0.2174 | 0.605 | 0.021 |
| Na | 0.560 | 0.100 | 0.6087 | 0.1087 | 0.058 | 0.010 |
| NH4 | 2.420 | 0.100 | 2.630 | 0.1087 | 0.250 | 0.010 |
| K | 0.790 | 0.100 | 0.8587 | 0.1087 | 0.082 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-T2898
Filter ID: P7465455
Client ID: Canister SMAQMD 04_04
Site: 617Fern
Sample Date: 11/20/23
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 | 49. | ± | 10. | | | | 5.056 | ± | 1.062 |
| XRF | | | | | | | | | |
| Na | 1.137 | ± | 0.3085 | 2.320 | ± | 0.7877 | 0.1173 | ± | 0.0324 |
| * Mg | 0.0893 | ± | 0.0565 | 0.1822 | ± | 0.1212 | 0.0092 | ± | 0.0058 |
| * Al | 0.1062 | ± | 0.0791 | 0.2168 | ± | 0.1674 | 0.0110 | ± | 0.0082 |
| Si | 0.5469 | ± | 0.0316 | 1.116 | ± | 0.2368 | 0.0564 | ± | 0.0043 |
| * P | 0.0328 | ± | 0.0136 | 0.0669 | ± | 0.0309 | 0.0034 | ± | 0.0014 |
| S | 0.8125 | ± | 0.0497 | 1.658 | ± | 0.3533 | 0.0838 | ± | 0.0066 |
| * Cl | 0.0983 | ± | 0.0373 | 0.2006 | ± | 0.0864 | 0.0101 | ± | 0.0039 |
| K | 0.4882 | ± | 0.0282 | 0.9962 | ± | 0.2113 | 0.0504 | ± | 0.0039 |
| Ca | 0.1978 | ± | 0.0170 | 0.4036 | ± | 0.0893 | 0.0204 | ± | 0.0020 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0254 | 0.0000 | ± | 0.0013 |
| Ti | 0.0339 | ± | 0.0102 | 0.0692 | ± | 0.0251 | 0.0035 | ± | 0.0011 |
| * V | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0208 | 0.0000 | ± | 0.0010 |
| * Cr | 0.0158 | ± | 0.0090 | 0.0323 | ± | 0.0196 | 0.0016 | ± | 0.0009 |
| * Mn | 0.0215 | ± | 0.0090 | 0.0438 | ± | 0.0205 | 0.0022 | ± | 0.0009 |
| Fe | 0.7368 | ± | 0.0373 | 1.504 | ± | 0.3162 | 0.0760 | ± | 0.0054 |
| * Co | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0161 | 0.0000 | ± | 0.0008 |
| * Ni | 0.0034 | ± | 0.0068 | 0.0069 | ± | 0.0139 | 0.0003 | ± | 0.0007 |
| * Cu | 0.0215 | ± | 0.0102 | 0.0438 | ± | 0.0226 | 0.0022 | ± | 0.0011 |
| Zn | 0.0701 | ± | 0.0090 | 0.1430 | ± | 0.0345 | 0.0072 | ± | 0.0010 |
| * Ga | 0.0011 | ± | 0.0068 | 0.0023 | ± | 0.0138 | 0.0001 | ± | 0.0007 |
| * As | 0.0090 | ± | 0.0102 | 0.0184 | ± | 0.0211 | 0.0009 | ± | 0.0011 |
| * Se | 0.0023 | ± | 0.0056 | 0.0046 | ± | 0.0116 | 0.0002 | ± | 0.0006 |
| Br | 0.0271 | ± | 0.0079 | 0.0553 | ± | 0.0197 | 0.0028 | ± | 0.0008 |
| * Rb | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0161 | 0.0000 | ± | 0.0008 |
| * Sr | 0.0045 | ± | 0.0079 | 0.0092 | ± | 0.0163 | 0.0005 | ± | 0.0008 |
| * Y | 0.0000 | ± | 0.0158 | 0.0000 | ± | 0.0323 | 0.0000 | ± | 0.0016 |
| * Zr | 0.0068 | ± | 0.0226 | 0.0138 | ± | 0.0462 | 0.0007 | ± | 0.0023 |
| * Nb | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0646 | 0.0000 | ± | 0.0033 |
| * Mo | 0.0000 | ± | 0.0384 | 0.0000 | ± | 0.0784 | 0.0000 | ± | 0.0040 |
| * Ag | 0.0362 | ± | 0.0316 | 0.0738 | ± | 0.0663 | 0.0037 | ± | 0.0033 |
| * Cd | 0.0068 | ± | 0.0328 | 0.0138 | ± | 0.0669 | 0.0007 | ± | 0.0034 |
| * In | 0.1040 | ± | 0.0429 | 0.2122 | ± | 0.0977 | 0.0107 | ± | 0.0045 |
| * Sn | 0.1605 | ± | 0.0644 | 0.3275 | ± | 0.1475 | 0.0166 | ± | 0.0067 |
| * Sb | 0.1763 | ± | 0.0723 | 0.3598 | ± | 0.1648 | 0.0182 | ± | 0.0075 |
| * Cs | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0300 | 0.0000 | ± | 0.0015 |
| Ba | 0.0870 | ± | 0.0170 | 0.1776 | ± | 0.0501 | 0.0090 | ± | 0.0018 |
| * La | 0.0000 | ± | 0.0170 | 0.0000 | ± | 0.0346 | 0.0000 | ± | 0.0017 |
| * Ce | 0.0000 | ± | 0.0136 | 0.0000 | ± | 0.0277 | 0.0000 | ± | 0.0014 |
| * Sm | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0231 | 0.0000 | ± | 0.0012 |
| * Eu | 0.0000 | ± | 0.0237 | 0.0000 | ± | 0.0484 | 0.0000 | ± | 0.0024 |
| * Tb | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0646 | 0.0000 | ± | 0.0033 |
| * Hf | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0208 | 0.0000 | ± | 0.0010 |
| * Ta | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0208 | 0.0000 | ± | 0.0010 |
| * W | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0161 | 0.0000 | ± | 0.0008 |
| * Ir | 0.0079 | ± | 0.0045 | 0.0161 | ± | 0.0098 | 0.0008 | ± | 0.0005 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0161 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0147 | ± | 0.0124 | 0.0300 | ± | 0.0261 | 0.0015 | ± | 0.0013 |
| * Pb | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0161 | 0.0000 | ± | 0.0008 |

Lab ID: 23-T2898
Client ID: Canister SMAQMD 04_04

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 0.270 | 0.100 | 0.5510 | 0.2041 | 0.028 | 0.010 |
| NO3 | 3.710 | 0.100 | 7.571 | 0.2041 | 0.383 | 0.010 |
| SO4 | 1.360 | 0.200 | 2.776 | 0.4082 | 0.140 | 0.021 |
| Na | 0.900 | 0.100 | 1.837 | 0.2041 | 0.093 | 0.010 |
| NH4 | 0.660 | 0.100 | 1.347 | 0.2041 | 0.068 | 0.010 |
| K | 0.270 | 0.100 | 0.5510 | 0.2041 | 0.028 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-T3027
Filter ID: P7465584
Client ID: Canister SMAQMD 01_05
Site: 617Fern
Sample Date: 11/26/23
Filter Lot #: 7118468
Volume: 9.681 ± 0.484 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | percent | | | µg/m³ | | |
|---|---|---|---|---|---|---|---|---|---|
| Gravimetry | | | | | | | | | |
| Net Mass | 215. | ± | 10. | | | | 22.21 | ± | 1.516 |
| XRF | | | | | | | | | |
| * Na | 0.3390 | ± | 0.3288 | 0.1577 | ± | 0.1531 | 0.0350 | ± | 0.0340 |
| * Mg | 0.0497 | ± | 0.0622 | 0.0231 | ± | 0.0289 | 0.0051 | ± | 0.0064 |
| * Al | 0.1672 | ± | 0.0814 | 0.0778 | ± | 0.0380 | 0.0173 | ± | 0.0084 |
| Si | 0.7955 | ± | 0.0441 | 0.3700 | ± | 0.0268 | 0.0822 | ± | 0.0061 |
| P | 0.0508 | ± | 0.0147 | 0.0237 | ± | 0.0069 | 0.0053 | ± | 0.0015 |
| S | 1.787 | ± | 0.0960 | 0.8309 | ± | 0.0591 | 0.1845 | ± | 0.0135 |
| Cl | 0.3243 | ± | 0.0407 | 0.1508 | ± | 0.0202 | 0.0335 | ± | 0.0045 |
| K | 2.791 | ± | 0.1412 | 1.298 | ± | 0.0892 | 0.2883 | ± | 0.0205 |
| Ca | 0.2882 | ± | 0.0203 | 0.1340 | ± | 0.0113 | 0.0298 | ± | 0.0026 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0058 | 0.0000 | ± | 0.0013 |
| Ti | 0.0915 | ± | 0.0113 | 0.0426 | ± | 0.0056 | 0.0095 | ± | 0.0013 |
| * V | 0.0023 | ± | 0.0102 | 0.0011 | ± | 0.0047 | 0.0002 | ± | 0.0011 |
| * Cr | 0.0136 | ± | 0.0090 | 0.0063 | ± | 0.0042 | 0.0014 | ± | 0.0009 |
| * Mn | 0.0113 | ± | 0.0090 | 0.0053 | ± | 0.0042 | 0.0012 | ± | 0.0009 |
| Fe | 1.320 | ± | 0.0667 | 0.6139 | ± | 0.0422 | 0.1363 | ± | 0.0097 |
| * Co | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0037 | 0.0000 | ± | 0.0008 |
| * Ni | 0.0034 | ± | 0.0068 | 0.0016 | ± | 0.0032 | 0.0004 | ± | 0.0007 |
| Cu | 0.0723 | ± | 0.0113 | 0.0336 | ± | 0.0055 | 0.0075 | ± | 0.0012 |
| Zn | 0.1740 | ± | 0.0113 | 0.0809 | ± | 0.0065 | 0.0180 | ± | 0.0015 |
| * Ga | 0.0034 | ± | 0.0068 | 0.0016 | ± | 0.0032 | 0.0004 | ± | 0.0007 |
| * As | 0.0068 | ± | 0.0102 | 0.0032 | ± | 0.0047 | 0.0007 | ± | 0.0011 |
| * Se | 0.0113 | ± | 0.0056 | 0.0053 | ± | 0.0026 | 0.0012 | ± | 0.0006 |
| Br | 0.0667 | ± | 0.0090 | 0.0310 | ± | 0.0044 | 0.0069 | ± | 0.0010 |
| * Rb | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0037 | 0.0000 | ± | 0.0008 |
| * Sr | 0.0260 | ± | 0.0090 | 0.0121 | ± | 0.0042 | 0.0027 | ± | 0.0009 |
| * Y | 0.0170 | ± | 0.0158 | 0.0079 | ± | 0.0074 | 0.0018 | ± | 0.0016 |
| * Zr | 0.0407 | ± | 0.0226 | 0.0189 | ± | 0.0105 | 0.0042 | ± | 0.0023 |
| * Nb | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0033 |
| * Mo | 0.0102 | ± | 0.0384 | 0.0047 | ± | 0.0179 | 0.0011 | ± | 0.0040 |
| * Ag | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0033 |
| * Cd | 0.0000 | ± | 0.0328 | 0.0000 | ± | 0.0152 | 0.0000 | ± | 0.0034 |
| * In | 0.0000 | ± | 0.0418 | 0.0000 | ± | 0.0194 | 0.0000 | ± | 0.0043 |
| * Sn | 0.0000 | ± | 0.0644 | 0.0000 | ± | 0.0300 | 0.0000 | ± | 0.0067 |
| * Sb | 0.1650 | ± | 0.0723 | 0.0767 | ± | 0.0338 | 0.0170 | ± | 0.0075 |
| * Cs | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0068 | 0.0000 | ± | 0.0015 |
| Ba | 0.1672 | ± | 0.0192 | 0.0778 | ± | 0.0096 | 0.0173 | ± | 0.0022 |
| * La | 0.0215 | ± | 0.0170 | 0.0100 | ± | 0.0079 | 0.0022 | ± | 0.0018 |
| * Ce | 0.0113 | ± | 0.0147 | 0.0053 | ± | 0.0068 | 0.0012 | ± | 0.0015 |
| * Sm | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0058 | 0.0000 | ± | 0.0013 |
| * Eu | 0.0203 | ± | 0.0305 | 0.0095 | ± | 0.0142 | 0.0021 | ± | 0.0032 |
| * Tb | 0.0000 | ± | 0.0418 | 0.0000 | ± | 0.0194 | 0.0000 | ± | 0.0043 |
| * Hf | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0053 | 0.0000 | ± | 0.0012 |
| * Ta | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0058 | 0.0000 | ± | 0.0013 |
| * W | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0042 | 0.0000 | ± | 0.0009 |
| * Ir | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0026 | 0.0000 | ± | 0.0006 |
| * Au | 0.0090 | ± | 0.0079 | 0.0042 | ± | 0.0037 | 0.0009 | ± | 0.0008 |
| * Hg | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0058 | 0.0000 | ± | 0.0013 |
| Pb | 0.0339 | ± | 0.0079 | 0.0158 | ± | 0.0038 | 0.0035 | ± | 0.0008 |

Lab ID: 23-T3027
Client ID: Canister SMAQMD 01_05

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 0.280 | 0.100 | 0.1302 | 0.0465 | 0.029 | 0.010 |
| NO3 | 5.140 | 0.100 | 2.391 | 0.0465 | 0.531 | 0.010 |
| SO4 | 4.710 | 0.200 | 2.191 | 0.0930 | 0.487 | 0.021 |
| Na | 0.300 | 0.100 | 0.1395 | 0.0465 | 0.031 | 0.010 |
| NH4 | 1.250 | 0.100 | 0.5814 | 0.0465 | 0.129 | 0.010 |
| K | 2.610 | 0.100 | 1.214 | 0.0465 | 0.270 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-T3028
Filter ID: P7465585
Client ID: Canister SMAQMD 02_05
Site: 617Fern
Sample Date: 12/ 2/23
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 | 52. | ± | 10. | | | | 5.366 | ± | 1.066 |
| XRF | | | | | | | | | |
| Na | 1.676 | ± | 0.3232 | 3.223 | ± | 0.8777 | 0.1729 | ± | 0.0345 |
| * Mg | 0.1740 | ± | 0.0588 | 0.3347 | ± | 0.1300 | 0.0180 | ± | 0.0061 |
| * Al | 0.1401 | ± | 0.0791 | 0.2695 | ± | 0.1607 | 0.0145 | ± | 0.0082 |
| Si | 0.2689 | ± | 0.0215 | 0.5172 | ± | 0.1077 | 0.0278 | ± | 0.0026 |
| * P | 0.0011 | ± | 0.0136 | 0.0022 | ± | 0.0261 | 0.0001 | ± | 0.0014 |
| S | 1.151 | ± | 0.0655 | 2.214 | ± | 0.4441 | 0.1188 | ± | 0.0090 |
| * Cl | 0.0757 | ± | 0.0373 | 0.1456 | ± | 0.0770 | 0.0078 | ± | 0.0039 |
| K | 0.3978 | ± | 0.0249 | 0.7649 | ± | 0.1547 | 0.0410 | ± | 0.0033 |
| Ca | 0.1322 | ± | 0.0158 | 0.2542 | ± | 0.0576 | 0.0136 | ± | 0.0018 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0239 | 0.0000 | ± | 0.0013 |
| * Ti | 0.0113 | ± | 0.0090 | 0.0217 | ± | 0.0179 | 0.0012 | ± | 0.0009 |
| * V | 0.0079 | ± | 0.0102 | 0.0152 | ± | 0.0198 | 0.0008 | ± | 0.0011 |
| * Cr | 0.0113 | ± | 0.0090 | 0.0217 | ± | 0.0179 | 0.0012 | ± | 0.0009 |
| * Mn | 0.0056 | ± | 0.0090 | 0.0109 | ± | 0.0175 | 0.0006 | ± | 0.0009 |
| Fe | 0.2712 | ± | 0.0158 | 0.5215 | ± | 0.1048 | 0.0280 | ± | 0.0021 |
| * Co | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0152 | 0.0000 | ± | 0.0008 |
| * Ni | 0.0000 | ± | 0.0068 | 0.0000 | ± | 0.0130 | 0.0000 | ± | 0.0007 |
| * Cu | 0.0056 | ± | 0.0102 | 0.0109 | ± | 0.0197 | 0.0006 | ± | 0.0010 |
| Zn | 0.0328 | ± | 0.0079 | 0.0630 | ± | 0.0194 | 0.0034 | ± | 0.0008 |
| * Ga | 0.0079 | ± | 0.0068 | 0.0152 | ± | 0.0134 | 0.0008 | ± | 0.0007 |
| * As | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0196 | 0.0000 | ± | 0.0010 |
| * Se | 0.0079 | ± | 0.0056 | 0.0152 | ± | 0.0113 | 0.0008 | ± | 0.0006 |
| * Br | 0.0192 | ± | 0.0079 | 0.0369 | ± | 0.0168 | 0.0020 | ± | 0.0008 |
| * Rb | 0.0023 | ± | 0.0079 | 0.0043 | ± | 0.0152 | 0.0002 | ± | 0.0008 |
| * Sr | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0152 | 0.0000 | ± | 0.0008 |
| * Y | 0.0136 | ± | 0.0158 | 0.0261 | ± | 0.0308 | 0.0014 | ± | 0.0016 |
| * Zr | 0.0000 | ± | 0.0226 | 0.0000 | ± | 0.0435 | 0.0000 | ± | 0.0023 |
| * Nb | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0608 | 0.0000 | ± | 0.0033 |
| * Mo | 0.0000 | ± | 0.0384 | 0.0000 | ± | 0.0739 | 0.0000 | ± | 0.0040 |
| * Ag | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0608 | 0.0000 | ± | 0.0033 |
| * Cd | 0.0102 | ± | 0.0328 | 0.0196 | ± | 0.0631 | 0.0010 | ± | 0.0034 |
| * In | 0.0000 | ± | 0.0475 | 0.0000 | ± | 0.0913 | 0.0000 | ± | 0.0049 |
| * Sn | 0.0000 | ± | 0.0644 | 0.0000 | ± | 0.1239 | 0.0000 | ± | 0.0066 |
| * Sb | 0.0181 | ± | 0.0780 | 0.0348 | ± | 0.1501 | 0.0019 | ± | 0.0080 |
| * Cs | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0282 | 0.0000 | ± | 0.0015 |
| * Ba | 0.0452 | ± | 0.0158 | 0.0869 | ± | 0.0347 | 0.0047 | ± | 0.0016 |
| * La | 0.0124 | ± | 0.0158 | 0.0239 | ± | 0.0308 | 0.0013 | ± | 0.0016 |
| * Ce | 0.0000 | ± | 0.0136 | 0.0000 | ± | 0.0261 | 0.0000 | ± | 0.0014 |
| * Sm | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0239 | 0.0000 | ± | 0.0013 |
| * Eu | 0.0000 | ± | 0.0237 | 0.0000 | ± | 0.0456 | 0.0000 | ± | 0.0024 |
| * Tb | 0.0000 | ± | 0.0226 | 0.0000 | ± | 0.0435 | 0.0000 | ± | 0.0023 |
| * Hf | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0196 | 0.0000 | ± | 0.0010 |
| * Ta | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0196 | 0.0000 | ± | 0.0010 |
| * W | 0.0011 | ± | 0.0079 | 0.0022 | ± | 0.0152 | 0.0001 | ± | 0.0008 |
| * Ir | 0.0068 | ± | 0.0056 | 0.0130 | ± | 0.0112 | 0.0007 | ± | 0.0006 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0152 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0239 | 0.0000 | ± | 0.0013 |
| * Pb | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0152 | 0.0000 | ± | 0.0008 |

Lab ID: 23-T3028
Client ID: Canister SMAQMD 02_05

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 0.290 | 0.100 | 0.5577 | 0.1923 | 0.030 | 0.010 |
| NO3 | 5.860 | 0.100 | 11.27 | 0.1923 | 0.605 | 0.010 |
| SO4 | 2.260 | 0.200 | 4.346 | 0.3846 | 0.233 | 0.021 |
| Na | 1.540 | 0.100 | 2.962 | 0.1923 | 0.159 | 0.010 |
| NH4 | 1.020 | 0.100 | 1.962 | 0.1923 | 0.105 | 0.010 |
| K | 0.210 | 0.100 | 0.4038 | 0.1923 | 0.022 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-T3029
Filter ID: P7465586
Client ID: Canister SMAQMD 06_04
Site: 617Fern
Sample Date: 12/ 8/23
Filter Lot #: 7118468
Volume: 9.689 ± 0.484 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | percent | | | µg/m³ | | |
|---|---|---|---|---|---|---|---|---|---|
| Gravimetry | | | | | | | | | |
| Net Mass | 37. | ± | 10. | | | | 3.819 | ± | 1.050 |
| XRF | | | | | | | | | |
| * Na | 0.3096 | ± | 0.3062 | 0.8368 | ± | 0.8580 | 0.0320 | ± | 0.0316 |
| * Mg | 0.0000 | ± | 0.0576 | 0.0000 | ± | 0.1558 | 0.0000 | ± | 0.0059 |
| * Al | 0.0915 | ± | 0.0780 | 0.2474 | ± | 0.2211 | 0.0094 | ± | 0.0081 |
| Si | 0.1514 | ± | 0.0181 | 0.4092 | ± | 0.1209 | 0.0156 | ± | 0.0020 |
| * P | 0.0113 | ± | 0.0136 | 0.0305 | ± | 0.0376 | 0.0012 | ± | 0.0014 |
| S | 0.7108 | ± | 0.0452 | 1.921 | ± | 0.5334 | 0.0734 | ± | 0.0059 |
| * Cl | 0.0418 | ± | 0.0362 | 0.1130 | ± | 0.1024 | 0.0043 | ± | 0.0037 |
| K | 0.3650 | ± | 0.0237 | 0.9865 | ± | 0.2742 | 0.0377 | ± | 0.0031 |
| Ca | 0.0622 | ± | 0.0147 | 0.1680 | ± | 0.0603 | 0.0064 | ± | 0.0015 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0336 | 0.0000 | ± | 0.0013 |
| * Ti | 0.0079 | ± | 0.0102 | 0.0214 | ± | 0.0281 | 0.0008 | ± | 0.0011 |
| * V | 0.0023 | ± | 0.0102 | 0.0061 | ± | 0.0275 | 0.0002 | ± | 0.0010 |
| * Cr | 0.0113 | ± | 0.0090 | 0.0305 | ± | 0.0258 | 0.0012 | ± | 0.0009 |
| * Mn | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0244 | 0.0000 | ± | 0.0009 |
| Fe | 0.2486 | ± | 0.0147 | 0.6719 | ± | 0.1859 | 0.0257 | ± | 0.0020 |
| * Co | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0214 | 0.0000 | ± | 0.0008 |
| * Ni | 0.0000 | ± | 0.0068 | 0.0000 | ± | 0.0183 | 0.0000 | ± | 0.0007 |
| * Cu | 0.0079 | ± | 0.0102 | 0.0214 | ± | 0.0281 | 0.0008 | ± | 0.0011 |
| Zn | 0.0249 | ± | 0.0079 | 0.0672 | ± | 0.0280 | 0.0026 | ± | 0.0008 |
| * Ga | 0.0056 | ± | 0.0068 | 0.0153 | ± | 0.0188 | 0.0006 | ± | 0.0007 |
| * As | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0275 | 0.0000 | ± | 0.0010 |
| * Se | 0.0068 | ± | 0.0056 | 0.0183 | ± | 0.0161 | 0.0007 | ± | 0.0006 |
| * Br | 0.0124 | ± | 0.0079 | 0.0336 | ± | 0.0232 | 0.0013 | ± | 0.0008 |
| * Rb | 0.0023 | ± | 0.0079 | 0.0061 | ± | 0.0214 | 0.0002 | ± | 0.0008 |
| * Sr | 0.0011 | ± | 0.0079 | 0.0031 | ± | 0.0214 | 0.0001 | ± | 0.0008 |
| * Y | 0.0000 | ± | 0.0158 | 0.0000 | ± | 0.0428 | 0.0000 | ± | 0.0016 |
| * Zr | 0.0158 | ± | 0.0226 | 0.0428 | ± | 0.0622 | 0.0016 | ± | 0.0023 |
| * Nb | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0855 | 0.0000 | ± | 0.0033 |
| * Mo | 0.0000 | ± | 0.0384 | 0.0000 | ± | 0.1038 | 0.0000 | ± | 0.0040 |
| * Ag | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0855 | 0.0000 | ± | 0.0033 |
| * Cd | 0.0316 | ± | 0.0328 | 0.0855 | ± | 0.0915 | 0.0033 | ± | 0.0034 |
| * In | 0.0000 | ± | 0.0475 | 0.0000 | ± | 0.1283 | 0.0000 | ± | 0.0049 |
| * Sn | 0.0000 | ± | 0.0644 | 0.0000 | ± | 0.1741 | 0.0000 | ± | 0.0066 |
| * Sb | 0.1277 | ± | 0.0734 | 0.3451 | ± | 0.2193 | 0.0132 | ± | 0.0076 |
| * Cs | 0.0090 | ± | 0.0147 | 0.0244 | ± | 0.0402 | 0.0009 | ± | 0.0015 |
| * Ba | 0.0294 | ± | 0.0158 | 0.0794 | ± | 0.0478 | 0.0030 | ± | 0.0016 |
| * La | 0.0000 | ± | 0.0170 | 0.0000 | ± | 0.0458 | 0.0000 | ± | 0.0017 |
| * Ce | 0.0000 | ± | 0.0136 | 0.0000 | ± | 0.0366 | 0.0000 | ± | 0.0014 |
| * Sm | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0336 | 0.0000 | ± | 0.0013 |
| * Eu | 0.0170 | ± | 0.0237 | 0.0458 | ± | 0.0653 | 0.0017 | ± | 0.0025 |
| * Tb | 0.0000 | ± | 0.0226 | 0.0000 | ± | 0.0611 | 0.0000 | ± | 0.0023 |
| * Hf | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0275 | 0.0000 | ± | 0.0010 |
| * Ta | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0275 | 0.0000 | ± | 0.0010 |
| * W | 0.0045 | ± | 0.0079 | 0.0122 | ± | 0.0216 | 0.0005 | ± | 0.0008 |
| * Ir | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0153 | 0.0000 | ± | 0.0006 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0214 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0336 | 0.0000 | ± | 0.0013 |
| * Pb | 0.0034 | ± | 0.0079 | 0.0092 | ± | 0.0215 | 0.0003 | ± | 0.0008 |

Lab ID: 23-T3029
Client ID: Canister SMAQMD 06_04

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | < DL | 0.100 | < DL | 0.2703 | < DL | 0.010 |
| NO3 | 1.720 | 0.100 | 4.649 | 0.2703 | 0.178 | 0.010 |
| SO4 | 1.160 | 0.200 | 3.135 | 0.5405 | 0.120 | 0.021 |
| Na | 0.340 | 0.100 | 0.9189 | 0.2703 | 0.035 | 0.010 |
| NH4 | 0.590 | 0.100 | 1.595 | 0.2703 | 0.061 | 0.010 |
| K | 0.160 | 0.100 | 0.4324 | 0.2703 | 0.017 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-T3328
Filter ID: P7465935
Client ID: Canister SMAQMD 03_04
Site: 617Fern
Sample Date: 12/14/23
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 | 271. | ± | 10. | | | | 27.97 | ± | 1.737 |
| XRF | | | | | | | | | |
| * Na | 0.1695 | ± | 0.3322 | 0.0625 | ± | 0.1226 | 0.0175 | ± | 0.0343 |
| * Mg | 0.1141 | ± | 0.0610 | 0.0421 | ± | 0.0226 | 0.0118 | ± | 0.0063 |
| Al | 0.3288 | ± | 0.0859 | 0.1213 | ± | 0.0320 | 0.0339 | ± | 0.0090 |
| Si | 1.011 | ± | 0.0542 | 0.3732 | ± | 0.0243 | 0.1044 | ± | 0.0077 |
| P | 0.0723 | ± | 0.0147 | 0.0267 | ± | 0.0055 | 0.0075 | ± | 0.0016 |
| S | 2.252 | ± | 0.1198 | 0.8310 | ± | 0.0538 | 0.2325 | ± | 0.0170 |
| Cl | 1.730 | ± | 0.0949 | 0.6384 | ± | 0.0422 | 0.1786 | ± | 0.0133 |
| K | 2.400 | ± | 0.1209 | 0.8857 | ± | 0.0553 | 0.2477 | ± | 0.0176 |
| Ca | 0.3650 | ± | 0.0237 | 0.1347 | ± | 0.0101 | 0.0377 | ± | 0.0031 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0046 | 0.0000 | ± | 0.0013 |
| Ti | 0.0554 | ± | 0.0102 | 0.0204 | ± | 0.0038 | 0.0057 | ± | 0.0011 |
| * V | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0038 | 0.0000 | ± | 0.0010 |
| * Cr | 0.0215 | ± | 0.0090 | 0.0079 | ± | 0.0033 | 0.0022 | ± | 0.0009 |
| Mn | 0.0282 | ± | 0.0090 | 0.0104 | ± | 0.0034 | 0.0029 | ± | 0.0009 |
| Fe | 1.568 | ± | 0.0791 | 0.5788 | ± | 0.0362 | 0.1619 | ± | 0.0115 |
| * Co | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0029 | 0.0000 | ± | 0.0008 |
| * Ni | 0.0023 | ± | 0.0068 | 0.0008 | ± | 0.0025 | 0.0002 | ± | 0.0007 |
| Cu | 0.0542 | ± | 0.0102 | 0.0200 | ± | 0.0038 | 0.0056 | ± | 0.0011 |
| Zn | 0.1808 | ± | 0.0124 | 0.0667 | ± | 0.0052 | 0.0187 | ± | 0.0016 |
| * Ga | 0.0000 | ± | 0.0068 | 0.0000 | ± | 0.0025 | 0.0000 | ± | 0.0007 |
| * As | 0.0068 | ± | 0.0102 | 0.0025 | ± | 0.0038 | 0.0007 | ± | 0.0011 |
| * Se | 0.0056 | ± | 0.0056 | 0.0021 | ± | 0.0021 | 0.0006 | ± | 0.0006 |
| Br | 0.1186 | ± | 0.0102 | 0.0438 | ± | 0.0041 | 0.0122 | ± | 0.0012 |
| * Rb | 0.0090 | ± | 0.0079 | 0.0033 | ± | 0.0029 | 0.0009 | ± | 0.0008 |
| * Sr | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0029 | 0.0000 | ± | 0.0008 |
| * Y | 0.0000 | ± | 0.0158 | 0.0000 | ± | 0.0058 | 0.0000 | ± | 0.0016 |
| * Zr | 0.0463 | ± | 0.0226 | 0.0171 | ± | 0.0084 | 0.0048 | ± | 0.0023 |
| * Nb | 0.0090 | ± | 0.0316 | 0.0033 | ± | 0.0117 | 0.0009 | ± | 0.0033 |
| * Mo | 0.0011 | ± | 0.0384 | 0.0004 | ± | 0.0142 | 0.0001 | ± | 0.0040 |
| * Ag | 0.0068 | ± | 0.0316 | 0.0025 | ± | 0.0117 | 0.0007 | ± | 0.0033 |
| * Cd | 0.0170 | ± | 0.0328 | 0.0063 | ± | 0.0121 | 0.0017 | ± | 0.0034 |
| * In | 0.0102 | ± | 0.0475 | 0.0038 | ± | 0.0175 | 0.0010 | ± | 0.0049 |
| Sn | 0.1944 | ± | 0.0644 | 0.0717 | ± | 0.0239 | 0.0201 | ± | 0.0067 |
| * Sb | 0.0000 | ± | 0.0780 | 0.0000 | ± | 0.0288 | 0.0000 | ± | 0.0080 |
| * Cs | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0054 | 0.0000 | ± | 0.0015 |
| Ba | 0.1638 | ± | 0.0192 | 0.0605 | ± | 0.0074 | 0.0169 | ± | 0.0022 |
| * La | 0.0068 | ± | 0.0170 | 0.0025 | ± | 0.0063 | 0.0007 | ± | 0.0017 |
| * Ce | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0054 | 0.0000 | ± | 0.0015 |
| * Sm | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0046 | 0.0000 | ± | 0.0013 |
| * Eu | 0.0000 | ± | 0.0271 | 0.0000 | ± | 0.0100 | 0.0000 | ± | 0.0028 |
| * Tb | 0.0000 | ± | 0.0452 | 0.0000 | ± | 0.0167 | 0.0000 | ± | 0.0047 |
| * Hf | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0042 | 0.0000 | ± | 0.0012 |
| * Ta | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0042 | 0.0000 | ± | 0.0012 |
| * W | 0.0000 | ± | 0.0090 | 0.0000 | ± | 0.0033 | 0.0000 | ± | 0.0009 |
| * Ir | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0021 | 0.0000 | ± | 0.0006 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0029 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0023 | ± | 0.0124 | 0.0008 | ± | 0.0046 | 0.0002 | ± | 0.0013 |
| Pb | 0.0497 | ± | 0.0079 | 0.0183 | ± | 0.0030 | 0.0051 | ± | 0.0009 |

Lab ID: 23-T3328
Client ID: Canister SMAQMD 03_04

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 1.460 | 0.100 | 0.5387 | 0.0369 | 0.151 | 0.010 |
| NO3 | 31.41 | 0.100 | 11.59 | 0.0369 | 3.242 | 0.010 |
| SO4 | 6.140 | 0.200 | 2.266 | 0.0738 | 0.634 | 0.021 |
| Na | 0.250 | 0.100 | 0.0923 | 0.0369 | 0.026 | 0.010 |
| NH4 | 8.460 | 0.100 | 3.122 | 0.0369 | 0.873 | 0.010 |
| K | 2.360 | 0.100 | 0.8708 | 0.0369 | 0.244 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-T3329
Filter ID: P7465936
Client ID: Canister SMAQMD 05_05
Site: 617Fern
Sample Date: 12/26/23
Filter Lot #: 7118468
Volume: 9.685 ± 0.484 m³
Deposit Area: 11.3 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | percent | | | µg/m³ | | |
|---|---|---|---|---|---|---|---|---|---|
| Gravimetry | | | | | | | | | |
| Net Mass | 280. | ± | 10. | | | | 28.91 | ± | 1.776 |
| XRF | | | | | | | | | |
| * Na | 0.1006 | ± | 0.3322 | 0.0359 | ± | 0.1187 | 0.0104 | ± | 0.0343 |
| * Mg | 0.0000 | ± | 0.0599 | 0.0000 | ± | 0.0214 | 0.0000 | ± | 0.0062 |
| * Al | 0.1198 | ± | 0.0814 | 0.0428 | ± | 0.0291 | 0.0124 | ± | 0.0084 |
| Si | 0.7288 | ± | 0.0407 | 0.2603 | ± | 0.0172 | 0.0753 | ± | 0.0056 |
| * P | 0.0328 | ± | 0.0147 | 0.0117 | ± | 0.0053 | 0.0034 | ± | 0.0015 |
| S | 2.397 | ± | 0.1266 | 0.8560 | ± | 0.0546 | 0.2475 | ± | 0.0180 |
| Cl | 2.136 | ± | 0.1130 | 0.7628 | ± | 0.0487 | 0.2205 | ± | 0.0160 |
| K | 2.366 | ± | 0.1198 | 0.8451 | ± | 0.0524 | 0.2443 | ± | 0.0174 |
| Ca | 0.1978 | ± | 0.0181 | 0.0706 | ± | 0.0069 | 0.0204 | ± | 0.0021 |
| * Sc | 0.0000 | ± | 0.0124 | 0.0000 | ± | 0.0044 | 0.0000 | ± | 0.0013 |
| Ti | 0.0576 | ± | 0.0102 | 0.0206 | ± | 0.0037 | 0.0060 | ± | 0.0011 |
| * V | 0.0000 | ± | 0.0102 | 0.0000 | ± | 0.0036 | 0.0000 | ± | 0.0011 |
| * Cr | 0.0102 | ± | 0.0090 | 0.0036 | ± | 0.0032 | 0.0011 | ± | 0.0009 |
| * Mn | 0.0124 | ± | 0.0090 | 0.0044 | ± | 0.0032 | 0.0013 | ± | 0.0009 |
| Fe | 1.009 | ± | 0.0508 | 0.3604 | ± | 0.0223 | 0.1042 | ± | 0.0074 |
| * Co | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0028 | 0.0000 | ± | 0.0008 |
| * Ni | 0.0034 | ± | 0.0068 | 0.0012 | ± | 0.0024 | 0.0004 | ± | 0.0007 |
| Cu | 0.0542 | ± | 0.0102 | 0.0194 | ± | 0.0037 | 0.0056 | ± | 0.0011 |
| Zn | 0.1898 | ± | 0.0124 | 0.0678 | ± | 0.0051 | 0.0196 | ± | 0.0016 |
| * Ga | 0.0000 | ± | 0.0068 | 0.0000 | ± | 0.0024 | 0.0000 | ± | 0.0007 |
| * As | 0.0215 | ± | 0.0102 | 0.0077 | ± | 0.0036 | 0.0022 | ± | 0.0011 |
| * Se | 0.0102 | ± | 0.0056 | 0.0036 | ± | 0.0020 | 0.0011 | ± | 0.0006 |
| Br | 0.0746 | ± | 0.0090 | 0.0266 | ± | 0.0034 | 0.0077 | ± | 0.0010 |
| * Rb | 0.0023 | ± | 0.0079 | 0.0008 | ± | 0.0028 | 0.0002 | ± | 0.0008 |
| * Sr | 0.0158 | ± | 0.0079 | 0.0056 | ± | 0.0028 | 0.0016 | ± | 0.0008 |
| * Y | 0.0000 | ± | 0.0158 | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0016 |
| * Zr | 0.0350 | ± | 0.0226 | 0.0125 | ± | 0.0081 | 0.0036 | ± | 0.0023 |
| * Nb | 0.0023 | ± | 0.0316 | 0.0008 | ± | 0.0113 | 0.0002 | ± | 0.0033 |
| * Mo | 0.0000 | ± | 0.0384 | 0.0000 | ± | 0.0137 | 0.0000 | ± | 0.0040 |
| * Ag | 0.0000 | ± | 0.0316 | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0033 |
| * Cd | 0.0565 | ± | 0.0328 | 0.0202 | ± | 0.0117 | 0.0058 | ± | 0.0034 |
| * In | 0.0000 | ± | 0.0418 | 0.0000 | ± | 0.0149 | 0.0000 | ± | 0.0043 |
| * Sn | 0.0000 | ± | 0.0644 | 0.0000 | ± | 0.0230 | 0.0000 | ± | 0.0067 |
| * Sb | 0.0000 | ± | 0.0780 | 0.0000 | ± | 0.0278 | 0.0000 | ± | 0.0081 |
| * Cs | 0.0000 | ± | 0.0147 | 0.0000 | ± | 0.0052 | 0.0000 | ± | 0.0015 |
| Ba | 0.1028 | ± | 0.0181 | 0.0367 | ± | 0.0066 | 0.0106 | ± | 0.0019 |
| * La | 0.0023 | ± | 0.0170 | 0.0008 | ± | 0.0061 | 0.0002 | ± | 0.0018 |
| * Ce | 0.0011 | ± | 0.0136 | 0.0004 | ± | 0.0048 | 0.0001 | ± | 0.0014 |
| * Sm | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0040 | 0.0000 | ± | 0.0012 |
| * Eu | 0.0000 | ± | 0.0271 | 0.0000 | ± | 0.0097 | 0.0000 | ± | 0.0028 |
| * Tb | 0.0000 | ± | 0.0373 | 0.0000 | ± | 0.0133 | 0.0000 | ± | 0.0039 |
| * Hf | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0040 | 0.0000 | ± | 0.0012 |
| * Ta | 0.0000 | ± | 0.0113 | 0.0000 | ± | 0.0040 | 0.0000 | ± | 0.0012 |
| * W | 0.0090 | ± | 0.0079 | 0.0032 | ± | 0.0028 | 0.0009 | ± | 0.0008 |
| * Ir | 0.0000 | ± | 0.0056 | 0.0000 | ± | 0.0020 | 0.0000 | ± | 0.0006 |
| * Au | 0.0000 | ± | 0.0079 | 0.0000 | ± | 0.0028 | 0.0000 | ± | 0.0008 |
| * Hg | 0.0045 | ± | 0.0124 | 0.0016 | ± | 0.0044 | 0.0005 | ± | 0.0013 |
| * Pb | 0.0147 | ± | 0.0079 | 0.0052 | ± | 0.0028 | 0.0015 | ± | 0.0008 |

Lab ID: 23-T3329
Client ID: Canister SMAQMD 05_05

| Analyte | µg/filter | | percent | | µg/m³ | |
|---|---|---|---|---|---|---|
| IC | Conc. | DL | Conc. | DL | Conc. | DL |
| Cl | 2.010 | 0.100 | 0.7179 | 0.0357 | 0.208 | 0.010 |
| NO3 | 35.35 | 0.100 | 12.62 | 0.0357 | 3.650 | 0.010 |
| SO4 | 6.140 | 0.200 | 2.193 | 0.0714 | 0.634 | 0.021 |
| Na | 0.260 | 0.100 | 0.0929 | 0.0357 | 0.027 | 0.010 |
| NH4 | 10.32 | 0.100 | 3.686 | 0.0357 | 1.066 | 0.010 |
| K | 2.260 | 0.100 | 0.8071 | 0.0357 | 0.233 | 0.010 |

* - XRF Concentration is less than three times the uncertainty

Lab ID: 23-U475
Client ID: Canister SMAQMD 09_03
Site: 617 Fern
Sample Date: 11/ 2/23
Volume: 9.696 +- 0.485 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 87.24 | ± | 5.537 | 8.997 | ± | 0.7271 |
| EC | 11.19 | ± | 1.695 | 1.154 | ± | 0.1841 |
| TC | 98.54 | ± | 7.232 | 10.16 | ± | 0.9026 |
| *Organic Carbon Fractions* | | | | | | |
| OC1 | 0.9040 | | | 0.0932 | | |
| OC2 | 17.85 | | | 1.841 | | |
| OC3 | 28.82 | | | 2.972 | | |
| OC4 | 15.59 | | | 1.608 | | |
| PC | 24.07 | | | 2.482 | | |
| *Elemental Carbon Fractions* | | | | | | |
| EC1 | 14.12 | | | 1.457 | | |
| EC2 | 17.40 | | | 1.795 | | |
| EC3 | 3.729 | | | 0.3846 | | |

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Lab ID: 23-U494
Client ID: Canister SMAQMD 11_04
Site: 617 Fern
Sample Date: 11/ 8/23
Volume: 9.685 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 39.10 | ± | 3.051 | 4.037 | ± | 0.3741 |
| EC | 4.633 | ± | 1.356 | 0.4784 | ± | 0.1420 |
| TC | 43.73 | ± | 4.407 | 4.515 | ± | 0.5079 |
| *Organic Carbon Fractions* | | | | | | |
| OC1 | 0.6780 | | | 0.0700 | | |
| OC2 | 8.927 | | | 0.9217 | | |
| OC3 | 11.98 | | | 1.237 | | |
| OC4 | 6.780 | | | 0.7001 | | |
| PC | 10.74 | | | 1.108 | | |
| *Elemental Carbon Fractions* | | | | | | |
| EC1 | 5.198 | | | 0.5367 | | |
| EC2 | 7.119 | | | 0.7351 | | |
| EC3 | 3.051 | | | 0.3150 | | |

---

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-U495
Client ID: Canister SMAQMD 12_04
Site: 617 Fern
Sample Date: 11/14/23
Volume: 9.689 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 44.75 | ± | 3.390 | 4.618 | ± | 0.4191 |
| EC | 6.893 | ± | 1.469 | 0.7114 | ± | 0.1557 |
| TC | 51.64 | ± | 4.859 | 5.330 | ± | 0.5678 |
| *Organic Carbon Fractions* | | | | | | |
| OC1 | 0.5650 | | | 0.0583 | | |
| OC2 | 10.17 | | | 1.050 | | |
| OC3 | 13.00 | | | 1.341 | | |
| OC4 | 7.458 | | | 0.7697 | | |
| PC | 13.56 | | | 1.400 | | |
| *Elemental Carbon Fractions* | | | | | | |
| EC1 | 8.701 | | | 0.8980 | | |
| EC2 | 8.588 | | | 0.8864 | | |
| EC3 | 3.277 | | | 0.3382 | | |

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Lab ID: 23-U496
Client ID: Canister SMAQMD 13_03
Site: 617Fern
Sample Date: 11/20/23
Volume: 9.690 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 42.15 | ± | 3.277 | 4.350 | ± | 0.4020 |
| EC | 7.684 | ± | 1.469 | 0.7930 | ± | 0.1567 |
| TC | 49.83 | ± | 4.746 | 5.143 | ± | 0.5531 |
| *Organic Carbon Fractions* | | | | | | |
| OC1 | 0.4520 | | | 0.0466 | | |
| OC2 | 10.96 | | | 1.131 | | |
| OC3 | 13.33 | | | 1.376 | | |
| OC4 | 6.554 | | | 0.6764 | | |
| PC | 10.85 | | | 1.120 | | |
| *Elemental Carbon Fractions* | | | | | | |
| EC1 | 7.684 | | | 0.7930 | | |
| EC2 | 8.362 | | | 0.8630 | | |
| EC3 | 2.486 | | | 0.2566 | | |

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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-U520
Client ID: Canister SMAQMD 08_04
Site: 617Fern
Sample Date: 11/26/23
Volume: 9.681 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 105.1 | ± | 6.328 | 10.86 | ± | 0.8496 |
| EC | 34.58 | ± | 2.825 | 3.572 | ± | 0.3421 |
| TC | 139.7 | ± | 9.266 | 14.43 | ± | 1.198 |

*Organic Carbon Fractions*

| | | |
|---|---|---|
| OC1 | 3.051 | 0.3152 |
| OC2 | 28.02 | 2.895 |
| OC3 | 36.84 | 3.805 |
| OC4 | 12.43 | 1.284 |
| PC | 24.75 | 2.556 |

*Elemental Carbon Fractions*

| | | |
|---|---|---|
| EC1 | 25.76 | 2.661 |
| EC2 | 30.28 | 3.128 |
| EC3 | 3.277 | 0.3385 |

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Lab ID: 23-U521
Client ID: Canister SMAQMD 10_04
Site: 617Fern
Sample Date: 12/ 2/23
Volume: 9.684 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 18.87 | ± | 2.034 | 1.949 | ± | 0.2315 |
| EC | 7.232 | ± | 1.469 | 0.7468 | ± | 0.1562 |
| TC | 26.10 | ± | 3.616 | 2.695 | ± | 0.3970 |

*Organic Carbon Fractions*

| | | |
|---|---|---|
| OC1 | 0.1130 | 0.0117 |
| OC2 | 5.198 | 0.5368 |
| OC3 | 7.571 | 0.7818 |
| OC4 | 4.520 | 0.4667 |
| PC | 1.469 | 0.1517 |

*Elemental Carbon Fractions*

| | | |
|---|---|---|
| EC1 | 3.051 | 0.3151 |
| EC2 | 4.068 | 0.4201 |
| EC3 | 1.582 | 0.1634 |

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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-U522
Client ID: Canister SMAQMD 14_03
Site: 617Fern
Sample Date: 12/ 8/23
Volume: 9.688 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 27.57 | ± | 2.486 | 2.846 | ± | 0.2934 |
| EC | 3.616 | ± | 1.356 | 0.3732 | ± | 0.1412 |
| TC | 31.19 | ± | 3.842 | 3.219 | ± | 0.4279 |
| *Organic Carbon Fractions* | | | | | | |
| OC1 | 0.2260 | | | 0.0233 | | |
| OC2 | 6.215 | | | 0.6415 | | |
| OC3 | 9.040 | | | 0.9331 | | |
| OC4 | 4.746 | | | 0.4899 | | |
| PC | 7.345 | | | 0.7582 | | |
| *Elemental Carbon Fractions* | | | | | | |
| EC1 | 4.294 | | | 0.4432 | | |
| EC2 | 4.407 | | | 0.4549 | | |
| EC3 | 2.147 | | | 0.2216 | | |

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Lab ID: 23-U580
Client ID: Canister SMAQMD 09_04
Site: 617Fern
Sample Date: 12/14/23
Volume: 9.689 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 103.3 | ± | 6.328 | 10.66 | ± | 0.8427 |
| EC | 28.02 | ± | 2.486 | 2.892 | ± | 0.2945 |
| TC | 131.2 | ± | 8.814 | 13.54 | ± | 1.134 |
| *Organic Carbon Fractions* | | | | | | |
| OC1 | 1.695 | | | 0.1749 | | |
| OC2 | 24.63 | | | 2.542 | | |
| OC3 | 38.19 | | | 3.942 | | |
| OC4 | 12.43 | | | 1.283 | | |
| PC | 26.10 | | | 2.694 | | |
| *Elemental Carbon Fractions* | | | | | | |
| EC1 | 31.75 | | | 3.277 | | |
| EC2 | 19.55 | | | 2.018 | | |
| EC3 | 2.825 | | | 0.2916 | | |

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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

Client: S061 - SMAQMD
Report Number: 23-624

Lab ID: 23-U581
Client ID: Canister SMAQMD 11_05
Site: 617Fern
Sample Date: 12/26/23
Volume: 9.686 +- 0.484 m³
Deposit Area: 11.30 cm²
Size Fraction: PM2.5

| Analyte | µg/filter | | | µg/m³ | | |
|---|---|---|---|---|---|---|
| OC | 113.9 | ± | 6.780 | 11.76 | ± | 0.9139 |
| EC | 30.74 | ± | 2.712 | 3.173 | ± | 0.3218 |
| TC | 144.8 | ± | 9.492 | 14.94 | ± | 1.232 |

*Organic Carbon Fractions*

| | | |
|---|---|---|
| OC1 | 1.582 | 0.1633 |
| OC2 | 27.12 | 2.800 |
| OC3 | 40.45 | 4.177 |
| OC4 | 17.74 | 1.832 |
| PC | 27.01 | 2.788 |

*Elemental Carbon Fractions*

| | | |
|---|---|---|
| EC1 | 31.53 | 3.255 |
| EC2 | 22.94 | 2.368 |
| EC3 | 3.277 | 0.3383 |

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: 23-624 & 24-003**
**Analysis Period: December 5, 2023 through January 10, 2024**
**Number of Samples: 9**

## 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 | 6.94 | 0.01 | 0.16 | -1.29 |
| Ti | 3 | 10.22 | 10.17 | 0.02 | 0.16 | -0.54 |
| Fe | 3 | 10.59 | 10.53 | 0.02 | 0.19 | -0.48 |
| Se | 3 | 5.26 | 5.22 | 0.02 | 0.39 | -0.68 |
| Cd | 3 | 6.47 | 6.49 | 0.04 | 0.67 | 0.35 |
| Pb | 3 | 12.61 | 12.54 | 0.02 | 0.15 | -0.54 |

## 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 | 0.4686 | 0.4632 | 0.4665 +/- 0.0021 | 88.0 |
| Ca 2783 | 4 | 1.3253 | 1.1767 | 1.1702 | 1.1723 +/- 0.0026 | 88.5 |
| Ti 2783 | 4 | 0.1496 | 0.1507 | 0.1483 | 0.1493 +/- 0.0009 | 99.8 |
| Fe 2783 | 4 | 2.6606 | 2.6308 | 2.6143 | 2.6219 +/- 0.0062 | 98.5 |
| Cu 2783 | 4 | 0.0406 | 0.0407 | 0.0385 | 0.0395 +/- 0.0008 | 97.2 |
| Zn 2783 | 4 | 0.1797 | 0.2289 | 0.2254 | 0.2278 +/- 0.0014 | 126.8 |
| Pb 2783 | 4 | 0.0318 | 0.0361 | 0.0338 | 0.0346 +/- 0.0009 | 108.8 |

## 3. Addendum

Micromatter Certified Reference Materials

| CRM | Analytes | Certified Value(µg/cm²) | Measured Value(µg/cm²) | % Rec. |
|---|---|---|---|---|
| 39149 | Cr | 53.7 | 54.3 | 101.1 |
| 39150 | Cu | 49.4 | 48.6 | 98.3 |
| 39151 | Zn, Te | 49.8 | 52.0 | 104.3 |
| 39152 | Ga, As | 50.9 | 49.8 | 97.8 |
| 39153 | Se, Cd | 47.1 | 46.7 | 99.2 |
| 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**

4.28

Original ID: 23T2565

Replicate ID: RT2565

| Element | Original ug/cm2 | | | Replicate ug/cm2 | | | Difference ug/cm2 | | | RPD | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Na | 0.0210 | +- | 0.0288 | 0.0609 | +- | 0.0291 | -0.0399 | +- | 0.0410 | | | | |
| Mg | 0.0248 | +- | 0.0056 | 0.0205 | +- | 0.0055 | 0.0043 | +- | 0.0079 | + | 19.0 | +- | 34.7 |
| Al | 0.0872 | +- | 0.0092 | 0.0900 | +- | 0.0093 | -0.0028 | +- | 0.0131 | + | -3.2 | +- | 14.8 |
| Si | 0.2884 | +- | 0.0147 | 0.2835 | +- | 0.0145 | 0.0049 | +- | 0.0206 | + | 1.7 | +- | 7.2 |
| P | 0.0085 | +- | 0.0013 | 0.0079 | +- | 0.0013 | 0.0005 | +- | 0.0018 | + | 6.6 | +- | 22.5 |
| S | 0.1733 | +- | 0.0093 | 0.1733 | +- | 0.0093 | 0.0000 | +- | 0.0131 | + | 0.0 | +- | 7.6 |
| Cl | 0.0136 | +- | 0.0033 | 0.0120 | +- | 0.0033 | 0.0016 | +- | 0.0047 | + | 12.5 | +- | 36.6 |
| K | 0.1338 | +- | 0.0068 | 0.1339 | +- | 0.0069 | -0.0001 | +- | 0.0097 | + | -0.1 | +- | 7.2 |
| Ca | 0.0721 | +- | 0.0038 | 0.0731 | +- | 0.0039 | -0.0010 | +- | 0.0055 | + | -1.4 | +- | 7.5 |
| Sc | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0015 | | | | |
| Ti | 0.0114 | +- | 0.0011 | 0.0107 | +- | 0.0010 | 0.0007 | +- | 0.0015 | + | 6.5 | +- | 13.4 |
| V | 0.0003 | +- | 0.0009 | 0.0004 | +- | 0.0009 | -0.0001 | +- | 0.0012 | | | | |
| Cr | 0.0028 | +- | 0.0009 | 0.0042 | +- | 0.0009 | -0.0014 | +- | 0.0012 | 0 | -40.2 | +- | 34.8 |
| Mn | 0.0058 | +- | 0.0008 | 0.0047 | +- | 0.0008 | 0.0011 | +- | 0.0012 | + | 19.9 | +- | 22.5 |
| Fe | 0.1902 | +- | 0.0095 | 0.1917 | +- | 0.0096 | -0.0015 | +- | 0.0135 | + | -0.8 | +- | 7.1 |
| Co | 0.0000 | +- | 0.0008 | 0.0000 | +- | 0.0008 | 0.0000 | +- | 0.0011 | | | | |
| Ni | 0.0003 | +- | 0.0006 | 0.0002 | +- | 0.0006 | 0.0000 | +- | 0.0009 | | | | |
| Cu | 0.0070 | +- | 0.0010 | 0.0065 | +- | 0.0010 | 0.0005 | +- | 0.0014 | + | 8.0 | +- | 20.4 |
| Zn | 0.0150 | +- | 0.0010 | 0.0157 | +- | 0.0011 | -0.0007 | +- | 0.0015 | + | -4.8 | +- | 9.7 |
| Ga | 0.0000 | +- | 0.0006 | 0.0002 | +- | 0.0006 | -0.0002 | +- | 0.0009 | | | | |
| As | 0.0008 | +- | 0.0009 | 0.0000 | +- | 0.0009 | 0.0008 | +- | 0.0013 | | | | |
| Se | 0.0002 | +- | 0.0005 | 0.0008 | +- | 0.0005 | -0.0006 | +- | 0.0007 | | | | |
| Br | 0.0049 | +- | 0.0008 | 0.0048 | +- | 0.0008 | 0.0001 | +- | 0.0011 | + | 2.5 | +- | 22.0 |
| Rb | 0.0002 | +- | 0.0007 | 0.0000 | +- | 0.0007 | 0.0002 | +- | 0.0010 | | | | |
| Sr | 0.0001 | +- | 0.0007 | 0.0015 | +- | 0.0007 | -0.0014 | +- | 0.0011 | | | | |
| Y | 0.0000 | +- | 0.0014 | 0.0000 | +- | 0.0014 | 0.0000 | +- | 0.0020 | | | | |
| Zr | 0.0038 | +- | 0.0020 | 0.0044 | +- | 0.0021 | -0.0006 | +- | 0.0029 | | | | |
| Nb | 0.0000 | +- | 0.0028 | 0.0009 | +- | 0.0028 | -0.0009 | +- | 0.0039 | | | | |
| Mo | 0.0020 | +- | 0.0034 | 0.0000 | +- | 0.0034 | 0.0020 | +- | 0.0048 | | | | |
| Ag | 0.0020 | +- | 0.0028 | 0.0000 | +- | 0.0028 | 0.0020 | +- | 0.0039 | | | | |
| Cd | 0.0028 | +- | 0.0029 | 0.0002 | +- | 0.0029 | 0.0026 | +- | 0.0041 | | | | |
| In | 0.0075 | +- | 0.0038 | 0.0066 | +- | 0.0038 | 0.0009 | +- | 0.0053 | | | | |
| Sn | 0.0112 | +- | 0.0057 | 0.0102 | +- | 0.0057 | 0.0010 | +- | 0.0080 | | | | |
| Sb | 0.0075 | +- | 0.0064 | 0.0116 | +- | 0.0063 | -0.0042 | +- | 0.0090 | | | | |
| Cs | 0.0000 | +- | 0.0014 | 0.0000 | +- | 0.0014 | 0.0000 | +- | 0.0020 | | | | |
| Ba | 0.0153 | +- | 0.0018 | 0.0194 | +- | 0.0019 | -0.0041 | +- | 0.0026 | 0 | -23.6 | +- | 15.1 |
| La | 0.0000 | +- | 0.0016 | 0.0024 | +- | 0.0015 | -0.0024 | +- | 0.0022 | | | | |
| Ce | 0.0002 | +- | 0.0013 | 0.0000 | +- | 0.0013 | 0.0002 | +- | 0.0019 | | | | |
| Sm | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0016 | | | | |
| Eu | 0.0024 | +- | 0.0027 | 0.0002 | +- | 0.0027 | 0.0022 | +- | 0.0038 | | | | |
| Tb | 0.0000 | +- | 0.0046 | 0.0000 | +- | 0.0046 | 0.0000 | +- | 0.0065 | | | | |
| Hf | 0.0000 | +- | 0.0010 | 0.0000 | +- | 0.0010 | 0.0000 | +- | 0.0015 | | | | |
| Ta | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0016 | | | | |
| W | 0.0000 | +- | 0.0008 | 0.0001 | +- | 0.0008 | -0.0001 | +- | 0.0012 | | | | |
| 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 | 0.0009 | +- | 0.0011 | 0.0000 | +- | 0.0011 | 0.0009 | +- | 0.0016 | | | | |
| Pb | 0.0048 | +- | 0.0007 | 0.0053 | +- | 0.0007 | -0.0005 | +- | 0.0010 | + | -9.1 | +- | 20.2 |

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**

3.48

Original ID: 23T3328

Replicate ID: RT3328

| Element | Original ug/cm2 | | | Replicate ug/cm2 | | | Difference ug/cm2 | | | RPD | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Na | 0.0150 | +- | 0.0294 | 0.0000 | +- | 0.0300 | 0.0150 | +- | 0.0420 | | | | |
| Mg | 0.0101 | +- | 0.0054 | 0.0026 | +- | 0.0055 | 0.0075 | +- | 0.0077 | | | | |
| Al | 0.0291 | +- | 0.0076 | 0.0281 | +- | 0.0076 | 0.0010 | +- | 0.0107 | + | 3.5 | +- | 37.4 |
| Si | 0.0895 | +- | 0.0048 | 0.0866 | +- | 0.0047 | 0.0029 | +- | 0.0067 | + | 3.3 | +- | 7.6 |
| P | 0.0064 | +- | 0.0013 | 0.0063 | +- | 0.0013 | 0.0001 | +- | 0.0018 | + | 1.6 | +- | 28.6 |
| S | 0.1993 | +- | 0.0106 | 0.1975 | +- | 0.0105 | 0.0018 | +- | 0.0149 | + | 0.9 | +- | 7.5 |
| Cl | 0.1531 | +- | 0.0084 | 0.1437 | +- | 0.0079 | 0.0094 | +- | 0.0115 | + | 6.3 | +- | 7.8 |
| K | 0.2124 | +- | 0.0107 | 0.2151 | +- | 0.0109 | -0.0027 | +- | 0.0153 | + | -1.3 | +- | 7.1 |
| Ca | 0.0323 | +- | 0.0021 | 0.0331 | +- | 0.0021 | -0.0008 | +- | 0.0030 | + | -2.3 | +- | 9.1 |
| Sc | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0015 | | | | |
| Ti | 0.0049 | +- | 0.0009 | 0.0074 | +- | 0.0009 | -0.0025 | +- | 0.0013 | 0 | -40.5 | +- | 21.5 |
| V | 0.0000 | +- | 0.0009 | 0.0000 | +- | 0.0009 | 0.0000 | +- | 0.0012 | | | | |
| Cr | 0.0019 | +- | 0.0008 | 0.0015 | +- | 0.0008 | 0.0004 | +- | 0.0012 | | | | |
| Mn | 0.0025 | +- | 0.0008 | 0.0028 | +- | 0.0008 | -0.0002 | +- | 0.0011 | + | -8.7 | +- | 40.7 |
| Fe | 0.1388 | +- | 0.0070 | 0.1413 | +- | 0.0071 | -0.0025 | +- | 0.0100 | + | -1.8 | +- | 7.1 |
| Co | 0.0000 | +- | 0.0007 | 0.0004 | +- | 0.0007 | -0.0004 | +- | 0.0010 | | | | |
| Ni | 0.0002 | +- | 0.0006 | 0.0000 | +- | 0.0006 | 0.0002 | +- | 0.0009 | | | | |
| Cu | 0.0048 | +- | 0.0009 | 0.0044 | +- | 0.0009 | 0.0004 | +- | 0.0013 | + | 8.5 | +- | 29.0 |
| Zn | 0.0160 | +- | 0.0011 | 0.0167 | +- | 0.0011 | -0.0007 | +- | 0.0015 | + | -4.3 | +- | 9.4 |
| Ga | 0.0000 | +- | 0.0006 | 0.0002 | +- | 0.0006 | -0.0002 | +- | 0.0009 | | | | |
| As | 0.0006 | +- | 0.0009 | 0.0000 | +- | 0.0009 | 0.0006 | +- | 0.0013 | | | | |
| Se | 0.0005 | +- | 0.0005 | 0.0004 | +- | 0.0005 | 0.0001 | +- | 0.0007 | | | | |
| Br | 0.0105 | +- | 0.0009 | 0.0091 | +- | 0.0008 | 0.0014 | +- | 0.0012 | 0 | 14.5 | +- | 12.5 |
| Rb | 0.0008 | +- | 0.0007 | 0.0001 | +- | 0.0007 | 0.0007 | +- | 0.0010 | | | | |
| Sr | 0.0000 | +- | 0.0007 | 0.0000 | +- | 0.0007 | 0.0000 | +- | 0.0011 | | | | |
| Y | 0.0000 | +- | 0.0014 | 0.0000 | +- | 0.0014 | 0.0000 | +- | 0.0020 | | | | |
| Zr | 0.0041 | +- | 0.0020 | 0.0029 | +- | 0.0020 | 0.0011 | +- | 0.0029 | | | | |
| Nb | 0.0008 | +- | 0.0028 | 0.0018 | +- | 0.0028 | -0.0010 | +- | 0.0039 | | | | |
| Mo | 0.0001 | +- | 0.0034 | 0.0000 | +- | 0.0034 | 0.0001 | +- | 0.0048 | | | | |
| Ag | 0.0006 | +- | 0.0028 | 0.0000 | +- | 0.0028 | 0.0006 | +- | 0.0039 | | | | |
| Cd | 0.0015 | +- | 0.0029 | 0.0000 | +- | 0.0029 | 0.0015 | +- | 0.0041 | | | | |
| In | 0.0009 | +- | 0.0042 | 0.0000 | +- | 0.0037 | 0.0009 | +- | 0.0056 | | | | |
| Sn | 0.0172 | +- | 0.0057 | 0.0179 | +- | 0.0057 | -0.0007 | +- | 0.0081 | | | | |
| Sb | 0.0000 | +- | 0.0069 | 0.0086 | +- | 0.0063 | -0.0086 | +- | 0.0094 | | | | |
| Cs | 0.0000 | +- | 0.0013 | 0.0000 | +- | 0.0013 | 0.0000 | +- | 0.0019 | | | | |
| Ba | 0.0145 | +- | 0.0017 | 0.0112 | +- | 0.0016 | 0.0033 | +- | 0.0023 | 0 | 25.7 | +- | 18.2 |
| La | 0.0006 | +- | 0.0015 | 0.0032 | +- | 0.0015 | -0.0026 | +- | 0.0021 | | | | |
| Ce | 0.0000 | +- | 0.0013 | 0.0022 | +- | 0.0012 | -0.0022 | +- | 0.0018 | | | | |
| Sm | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0011 | 0.0000 | +- | 0.0015 | | | | |
| Eu | 0.0000 | +- | 0.0024 | 0.0000 | +- | 0.0024 | 0.0000 | +- | 0.0034 | | | | |
| Tb | 0.0000 | +- | 0.0040 | 0.0000 | +- | 0.0040 | 0.0000 | +- | 0.0056 | | | | |
| Hf | 0.0000 | +- | 0.0010 | 0.0000 | +- | 0.0010 | 0.0000 | +- | 0.0015 | | | | |
| Ta | 0.0000 | +- | 0.0010 | 0.0000 | +- | 0.0010 | 0.0000 | +- | 0.0014 | | | | |
| W | 0.0000 | +- | 0.0008 | 0.0003 | +- | 0.0007 | -0.0003 | +- | 0.0010 | | | | |
| Ir | 0.0000 | +- | 0.0005 | 0.0000 | +- | 0.0005 | 0.0000 | +- | 0.0008 | | | | |
| Au | 0.0000 | +- | 0.0007 | 0.0003 | +- | 0.0007 | -0.0003 | +- | 0.0010 | | | | |
| Hg | 0.0002 | +- | 0.0011 | 0.0011 | +- | 0.0011 | -0.0008 | +- | 0.0016 | | | | |
| Pb | 0.0044 | +- | 0.0007 | 0.0042 | +- | 0.0007 | 0.0001 | +- | 0.0010 | + | 3.0 | +- | 23.4 |

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: 23-624

**Blank Data**

| Analyte | Sample ID | Measured Conc. mg/L | DL Conc. mg/L |
|---|---|---|---|
| Cl | ICB | < DL | 0.010 |
| Cl | Meth_Blk | 0.018 | 0.010 |
| Cl | CCB | < DL | 0.010 |
| Cl | CCB | < DL | 0.010 |
| Cl | CCB | < DL | 0.010 |
| Cl | CCB | < DL | 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 |
| NO3 | CCB | < DL | 0.030 |
| NO3 | CCB | < 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 |
| SO4 | CCB | < DL | 0.020 |
| SO4 | CCB | < 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 |
| NH4 | ICB | < DL | 0.010 |
| NH4 | Meth_Blk | < 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 |

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: 23-624

**Calibration QC**

| Analyte | Sample ID | Standard Conc. mg/L | Measured Conc. mg/L | Percent Recovery |
|---|---|---|---|---|
| Cl | ICV | 0.500 | 0.513 | 102.6 |
| Cl | LL-LCS | 0.030 | 0.041 | 136.7 |
| Cl | CCV | 0.500 | 0.507 | 101.4 |
| Cl | CCV | 0.500 | 0.505 | 101.0 |
| Cl | CCV | 0.500 | 0.531 | 106.2 |
| Cl | CCV | 0.500 | 0.527 | 105.4 |
| Cl | CCV | 0.500 | 0.526 | 105.2 |
| Cl | CCV | 0.500 | 0.515 | 103.0 |
| NO3 | ICV | 0.500 | 0.506 | 101.2 |
| NO3 | LL-LCS | 0.100 | 0.128 | 128.0 |
| NO3 | CCV | 0.500 | 0.504 | 100.8 |
| NO3 | CCV | 0.500 | 0.500 | 100.0 |
| NO3 | CCV | 0.500 | 0.531 | 106.2 |
| NO3 | CCV | 0.500 | 0.526 | 105.2 |
| NO3 | CCV | 0.500 | 0.522 | 104.4 |
| NO3 | CCV | 0.500 | 0.516 | 103.2 |
| SO4 | ICV | 0.500 | 0.500 | 100.0 |
| SO4 | LL-LCS | 0.060 | 0.073 | 121.7 |
| SO4 | CCV | 0.500 | 0.504 | 100.8 |
| SO4 | CCV | 0.500 | 0.501 | 100.2 |
| SO4 | CCV | 0.500 | 0.536 | 107.2 |
| SO4 | CCV | 0.500 | 0.531 | 106.2 |
| SO4 | CCV | 0.500 | 0.511 | 102.2 |
| SO4 | CCV | 0.500 | 0.520 | 104.0 |
| Na | ICV | 0.500 | 0.476 | 95.2 |
| Na | LL-LCS | 0.040 | 0.049 | 122.5 |
| Na | CCV | 0.500 | 0.478 | 95.6 |
| Na | CCV | 0.500 | 0.481 | 96.2 |
| NH4 | ICV | 0.500 | 0.510 | 102.0 |
| NH4 | LL-LCS | 0.030 | 0.031 | 103.3 |
| NH4 | CCV | 0.500 | 0.504 | 100.8 |
| NH4 | CCV | 0.500 | 0.508 | 101.6 |
| K | ICV | 0.500 | 0.490 | 98.0 |
| K | LL-LCS | 0.030 | 0.023 | 76.7 |
| K | CCV | 0.500 | 0.499 | 99.8 |
| K | CCV | 0.500 | 0.494 | 98.8 |

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: 23-624

**Replicate Data**

| Analyte | Sample ID | Sample Conc. mg/L | Replicate Conc. mg/L | RPD |
|---|---|---|---|---|
| Cl | 23-T2565 | 0.026 | 0.020 | 26.1 * |
| Cl | 23-T3029 | < 0.01 | < 0.01 | N/C * |
| NO3 | 23-T2565 | 0.412 | 0.408 | 0.98 |
| NO3 | 23-T3029 | 0.172 | 0.173 | 0.58 |
| SO4 | 23-T2565 | 0.482 | 0.468 | 2.95 |
| SO4 | 23-T3029 | 0.116 | 0.118 | 1.71 |
| Na | 23-T2898 | 0.090 | 0.088 | 2.25 |
| Na | 23-T3328 | 0.025 | 0.022 | 12.8 * |
| NH4 | 23-T2898 | 0.066 | 0.067 | 1.50 |
| NH4 | 23-T3328 | 0.846 | 0.854 | 0.94 |
| K | 23-T2898 | 0.027 | 0.025 | 7.69 * |
| K | 23-T3328 | 0.236 | 0.239 | 1.26 |

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 | 0.018 | 0.512 | 0.500 | 98.8 |
| Cl | LCS-Duplicate | 0.018 | 0.511 | 0.500 | 98.6 |
| Cl | 23-T2897 | 0.023 | 0.542 | 0.500 | 104. |
| Cl | 23-T3328 | 0.146 | 0.685 | 0.500 | 108. |
| NO3 | LCS | < 0.03 | 0.514 | 0.500 | 103. |
| NO3 | LCS-Duplicate | < 0.03 | 0.513 | 0.500 | 103. |
| NO3 | 23-T2897 | 0.158 | 0.670 | 0.500 | 102. |
| NO3 | 23-T3328 | 3.14 | 8.03 | 5.00 | 97.8 |
| SO4 | LCS | < 0.02 | 0.501 | 0.500 | 100. |
| SO4 | LCS-Duplicate | < 0.02 | 0.513 | 0.500 | 103. |
| SO4 | 23-T2897 | 0.380 | 0.875 | 0.500 | 99.0 |
| SO4 | 23-T3328 | 0.614 | 1.08 | 0.500 | 93.6 |
| Na | LCS | < 0.02 | 0.479 | 0.500 | 95.8 |
| Na | LCS-Duplicate | < 0.02 | 0.479 | 0.500 | 95.8 |
| Na | 23-T2899 | 0.056 | 0.584 | 0.500 | 106. |
| Na | 23-T3329 | 0.026 | 0.538 | 0.500 | 102. |
| NH4 | LCS | < 0.01 | 0.513 | 0.500 | 103. |
| NH4 | LCS-Duplicate | < 0.01 | 0.507 | 0.500 | 101. |

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: 23-624

**Laboratory Control Sample/Matrix Post Spike Analysis (continued)**

| Analyte | Sample ID | Sample Conc. mg/L | Spike Conc. mg/L | Spike Amount mg/L | Percent Recovery |
|---|---|---|---|---|---|
| NH4 | 23-T2899 | 0.242 | 0.761 | 0.500 | 104. |
| NH4 | 23-T3329 | 1.03 | 1.56 | 0.500 | 105. |
| K | LCS | < 0.01 | 0.489 | 0.500 | 97.8 |
| K | LCS-Duplicate | < 0.01 | 0.488 | 0.500 | 97.6 |
| K | 23-T2899 | 0.079 | 0.603 | 0.500 | 105. |
| K | 23-T3329 | 0.226 | 0.729 | 0.500 | 101. |

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

**LCS Duplicate Data**

| Analyte | Sample ID | Original Conc. mg/L | Replicate Conc. mg/L | RPD |
|---|---|---|---|---|
| Cl | LCS-Duplicate | 0.512 | 0.511 | 0.20 |
| NO3 | LCS-Duplicate | 0.514 | 0.513 | 0.19 |
| SO4 | LCS-Duplicate | 0.501 | 0.513 | 2.37 |
| Na | LCS-Duplicate | 0.479 | 0.479 | 0.00 |
| NH4 | LCS-Duplicate | 0.513 | 0.507 | 1.18 |
| K | LCS-Duplicate | 0.489 | 0.488 | 0.20 |

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

# QA/QC Report

Client Name: Sacromento Metro
Project Number: S061
Analytical Technique: IMPROVE_A
Sample Description: 47mm Quartz
Report Number: 23-624

==========

**Calibration QC**

***OC/EC Split****

| Split ID: 11Q1121<br>Date run | Average %OC<br>of 20 data points | %OC<br>Measured | Control<br>Limits |
|---|---|---|---|
| 1/16/2024 | 67.61 | 67.21% | 60.85 - 74.37% |
| 1/16/2024 | 67.61 | 68.40% | 60.85 - 74.37% |
| 1/18/2024 | 67.61 | 68.04% | 60.85 - 74.37% |
| 1/18/2024 | 67.61 | 67.95% | 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.<br>µg/cm² | Measured Conc.<br>µg/cm² | Percent<br>Recovery |
|---|---|---|---|
| 1/16/2024 | 28.07 | 26.96 | 96.0 |
| 1/18/2024 | 28.07 | 28.17 | 100.4 |

*Sucrose Standard Control Limits: 90 - 110% recovery*

**Blank Data**

| Date run | Analyte | Measured Conc.<br>µg/cm² | MDL<br>µg/cm² |
|---|---|---|---|
| 1/16/2023 | OC | <MDL | 0.2 |
| | EC | <MDL | 0.2 |
| 1/16/2024 | OC | <MDL | 0.2 |
| | EC | <MDL | 0.2 |
| 1/18/2024 | OC | <MDL | 0.2 |
| | EC | <MDL | 0.2 |
| 1/18/2024 | OC | <MDL | 0.2 |
| | EC | <MDL | 0.2 |

# QA/QC Report

Client Name: Sacromento Metro
Project Number: S061
Analytical Technique: IMPROVE_A
Sample Description: 47mm Quartz
Report Number: 23-624

==========

**Duplicate Data**

| Sample ID | Analyte | Sample Conc. µg/cm² | Duplicate Conc. µg/cm² | RPD |
|---|---|---|---|---|
| 23U 475 | OC | 7.72 | 7.96 | 3.1 |
| | EC | 0.99 | 1.08 | 8.7 |
| | TC | 8.72 | 9.04 | 3.6 |
| 23U 496 | OC | 3.73 | 4.33 | 14.9 |
| | EC | 0.68 | 0.68 | 0.0 |
| | TC | 4.41 | 5.01 | 12.7 |

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

# QA/QC Report

Client Name: Sacromento Metro
Project Number: S060
Analytical Technique: IMPROVE_A
Sample Description: 47mm Quartz
Report Number: 23-624

==========

**Calibration QC**

***OC/EC Split****

| Split ID: 11Q1121<br>Date run | Average %OC<br>of 20 data points | %OC<br>Measured | Control<br>Limits |
|---|---|---|---|
| 1/22/2024 | 67.61 | 67.54% | 60.85 - 74.37% |
| 1/22/2024 | 67.61 | 67.69% | 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.<br>µg/cm² | Measured Conc.<br>µg/cm² | Percent<br>Recovery |
|---|---|---|---|
| 1/22/2024 | 28.07 | 30.53 | 108.8 |

*Sucrose Standard Control Limits: 90 - 110% recovery*

**Blank Data**

| Date run | Analyte | Measured Conc.<br>µg/cm² | MDL<br>µg/cm² |
|---|---|---|---|
| 1/22/2024 | OC | <MDL | 0.2 |
| | EC | <MDL | 0.2 |
| 1/22/2024 | OC | <MDL | 0.2 |
| | EC | <MDL | 0.2 |

**Duplicate Data**

| Sample ID | Analyte | Sample Conc.<br>µg/cm² | Duplicate Conc.<br>µg/cm² | RPD |
|---|---|---|---|---|
| 23U 580 | OC | 9.14 | 9.44 | 3.2 |
| | EC | 2.48 | 2.26 | 9.3 |
| | TC | 11.61 | 11.70 | 0.8 |

*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

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# CHAIN-OF-CUSTODY RECORD

For use by Lab:
Report #: 23-624

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

**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-T2565 | Canister SMAQMD 05_04 | 617Fern | 11/02/23 | 9.693 | 2.5 | X | X | X | | | | | | |
| 23-T2897 | Canister SMAQMD 03_03 | 617Fern | 11/08/23 | 9.696 | 2.5 | X | X | X | | | | | | |
| 23-T28~~98~~99 | Canister SMAQMD ~~04~~ 07_04 | 617Fern | 11/14/23 | 9.686 | 2.5 | X | X | X | | | | | | |
| 23-U475 | Canister SMAQMD 09_03 | 617Fern | 11/02/23 | 9.696 | 2.5 | | | | | X | | | | |
| 23-U494 | Canister SMAQMD 11_04 | 617Fern | 11/08/23 | 9.685 | 2.5 | | | | | X | | | | |
| 23-U495 | Canister SMAQMD 12_04 | 617Fern | 11/14/23 | 9.689 | 2.5 | | | | | X | | | | |
| | | | | | | | | | | | | | | |

CIR

**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: G.Rico | Date/Time: 11/01/23 11:00 | Sample Removal: G.Rico | Date/Time: 11/15/23 13:00 |
| Relinquished by: G.Rico | Date/Time: 11/21/23 10:00 | Received By: [signature] | Date/Time: 11/22/23 15:30 1.6°C |

**Laboratory Receipt Comments:**

# SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern

Sampling Date: 11/02/2023

| | Channel | 1 | 2 |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T2565 | 23-U475 |
| | Field ID | Canister SMAQMD 05_04 | Canister SMAQMD 09_03 |
| | Sample Date | 11/2/2023 | 11/2/2023 |
| | Start Date/Time | 11/2/2023 0:00 | 11/2/2023 0:00 |
| | End Date/Time | 11/3/2023 0:00 | 11/3/2023 0:00 |
| | Retrieval Date/Time | 11/7/2023 11:00 | 11/7/2023 11:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.693 | 9.696 |
| | Avg CV (%) | 0.8 | 0.9 |
| | Avg. Flow (l/min) | 6.73 | 6.73 |
| | Avg Ambient T (°C ) | 14.8 | 14.8 |
| | Max Ambient T (°C ) | 23.4 | 23.4 |
| | Min Ambient T (°C ) | 8.0 | 8.0 |
| | Avg Filter T (°C ) | 15.1 | 15.1 |
| | Max Filter T (°C ) | 26.0 | 26.0 |
| | Min Filter T (°C ) | 8.2 | 8.2 |
| | Avg. BP (mmHg) | 765.0 | 765.0 |
| | Max BP (mm Hg) | 766.0 | 766.0 |
| | Min BP (mmHg) | 764.0 | 764.0 |

# SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern

Sampling Date: 11/08/2023

| | Channel | 1 | 2 |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T2897 | 23-U494 |
| | Field ID | Canister SMAQMD 03_03 | Canister SMAQMD 11_04 |
| | Sample Date | 11/8/2023 | 11/8/2023 |
| | Start Date/Time | 11/8/2023 0:00 | 11/8/2023 0:00 |
| | End Date/Time | 11/9/2023 0:00 | 11/9/2023 0:00 |
| | Retrieval Date/Time | 11/9/2023 0:00 | 11/9/2023 0:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.696 | 9.685 |
| | Avg CV (%) | 0.9 | 0.9 |
| | Avg. Flow (l/min) | 6.73 | 6.72 |
| | Avg Ambient T (°C ) | 12.6 | 12.6 |
| | Max Ambient T (°C ) | 20.1 | 20.1 |
| | Min Ambient T (°C ) | 7.3 | 7.3 |
| | Avg Filter T (°C ) | 13.1 | 13.1 |
| | Max Filter T (°C ) | 22.0 | 22.0 |
| | Min Filter T (°C ) | 7.5 | 7.5 |
| | Avg. BP (mmHg) | 767.0 | 767.0 |
| | Max BP (mm Hg) | 768.0 | 768.0 |
| | Min BP (mmHg) | 766.0 | 766.0 |

# SMAQMD SASS Air Sampler Data Record Sheet

Site Name: 617 Fern

Sampling Date: 11/14/2023

| | Channel | 1 | 2 |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T2898 | 23-U495 |
| | Field ID | Canister SMAQMD 04_04 | Canister SMAQMD 12_04 |
| | Sample Date | 11/14/2023 | 11/14/2023 |
| | Start Date/Time | 11/14/2023 0:00 | 11/14/2023 0:00 |
| | End Date/Time | 11/15/2023 0:00 | 11/15/2023 0:00 |
| | Retrieval Date/Time | 11/15/2023 13:00 | 11/15/2023 13:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.686 | 9.689 |
| | Avg CV (%) | 0.8 | 0.9 |
| | Avg. Flow (l/min) | 6.72 | 6.72 |
| | Avg Ambient T (°C ) | 14.1 | 14.1 |
| | Max Ambient T (°C ) | 20.9 | 20.9 |
| | Min Ambient T (°C ) | 8.8 | 8.8 |
| | Avg Filter T (°C ) | 14.2 | 14.2 |
| | Max Filter T (°C ) | 23.2 | 23.2 |
| | Min Filter T (°C ) | 9.2 | 9.2 |
| | Avg. BP (mmHg) | 762.0 | 762.0 |
| | Max BP (mm Hg) | 760.0 | 760.0 |
| | Min BP (mmHg) | 761.0 | 761.0 |

# CHESTER LabNet

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# CHAIN-OF-CUSTODY RECORD

**For use by Lab:**
Report #: 23-624

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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-T2898 | Canister SMAQMD 04_04 | 617Fern | 11/20/23 | 9.692 | 2.5 | X | X | X | | | | | | |
| 23-T3027 | Canister SMAQMD 01_05 | 617Fern | 11/26/23 | 9.681 | 2.5 | X | X | X | | | | | | |
| 23-T3028 | Canister SMAQMD 02_05 | 617Fern | 12/02/23 | 9.690 | 2.5 | X | X | X | | | | | | |
| 23-U496 | Canister SMAQMD 13_03 | 617Fern | 11/20/23 | 9.690 | 2.5 | | | | | X | | | | |
| 23-U520 | Canister SMAQMD 08_04 | 617Fern | 11/26/23 | 9.681 | 2.5 | | | | | X | | | | |
| 23-U521 | Canister SMAQMD 10_04 | 617Fern | 12/02/23 | 9.684 | 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: G.Rico | Date/Time: 11/15/23 12:00 | Sample Removal: G.Rico | Date/Time: 12/07/23 13:00 |
| Relinquished by: G.Rico | Date/Time: 12/13/23 11:00 | Received By: [signature] | Date/Time: 12/14/23 9:45 -6°C |

**Laboratory Receipt Comments:**

# SMAQMD SASS Air Sampler Data Record Sheet

**Site Name: 617 Fern** **Sampling Date: 11/20/2023**

| | **Channel** | **1** | **2** |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T2898 | 23-U496 |
| | Field ID | Canister SMAQMD 04_04 | Canister SMAQMD 13_03 |
| | Sample Date | 11/20/2023 | 11/20/2023 |
| | Start Date/Time | 11/20/2023 0:00 | 11/20/2023 0:00 |
| | End Date/Time | 11/21/2023 0:00 | 11/21/2023 0:00 |
| | Retrieval Date/Time | 11/21/2023 10:00 | 11/21/2023 10:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.692 | 9.690 |
| | Avg CV (%) | 0.8 | 0.8 |
| | Avg. Flow (l/min) | 6.73 | 6.73 |
| | Avg Ambient T (°C ) | 12.9 | 12.9 |
| | Max Ambient T (°C ) | 17.2 | 17.2 |
| | Min Ambient T (°C ) | 5.6 | 5.6 |
| | Avg Filter T (°C ) | 14.2 | 14.2 |
| | Max Filter T (°C ) | 18.9 | 18.9 |
| | Min Filter T (°C ) | 5.7 | 5.7 |
| | Avg. BP (mmHg) | 768.0 | 768.0 |
| | Max BP (mm Hg) | 769.0 | 769.0 |
| | Min BP (mmHg) | 767.0 | 767.0 |

# SMAQMD SASS Air Sampler Data Record Sheet

**Site Name: 617 Fern** **Sampling Date: 11/26/2023**

| | **Channel** | **1** | **2** |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T3027 | 23-U520 |
| | Field ID | Canister SMAQMD 01_05 | Canister SMAQMD 08_04 |
| | Sample Date | 11/26/2023 | 11/26/2023 |
| | Start Date/Time | 11/26/2023 0:00 | 11/26/2023 0:00 |
| | End Date/Time | 11/27/2023 0:00 | 11/27/2023 0:00 |
| | Retrieval Date/Time | 11/29/2023 0:00 | 11/29/2023 0:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.681 | 9.681 |
| | Avg CV (%) | 0.9 | 0.8 |
| | Avg. Flow (l/min) | 6.72 | 6.72 |
| | Avg Ambient T (°C ) | 7.2 | 7.2 |
| | Max Ambient T (°C ) | 15.6 | 15.6 |
| | Min Ambient T (°C ) | 1.2 | 1.2 |
| | Avg Filter T (°C ) | 7.4 | 7.4 |
| | Max Filter T (°C ) | 17.5 | 17.5 |
| | Min Filter T (°C ) | 1.3 | 1.3 |
| | Avg. BP (mmHg) | 764.0 | 764.0 |
| | Max BP (mm Hg) | 767.0 | 767.0 |
| | Min BP (mmHg) | 764.0 | 764.0 |

# SMAQMD SASS Air Sampler Data Record Sheet

**Site Name: 617 Fern** **Sampling Date: 12/02/2023**

| | **Channel** | **1** | **2** |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T3028 | 23-U521 |
| | Field ID | Canister SMAQMD 02_05 | Canister SMAQMD 10_04 |
| | Sample Date | 12/2/2023 | 12/2/2023 |
| | Start Date/Time | 12/2/2023 0:00 | 12/2/2023 0:00 |
| | End Date/Time | 12/3/2023 0:00 | 12/3/2023 0:00 |
| | Retrieval Date/Time | 12/4/2023 11:20 | 12/4/2023 11:20 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.690 | 9.684 |
| | Avg CV (%) | 0.9 | 0.9 |
| | Avg. Flow (l/min) | 6.73 | 6.72 |
| | Avg Ambient T (°C ) | 11.8 | 11.8 |
| | Max Ambient T (°C ) | 14.0 | 14.0 |
| | Min Ambient T (°C ) | 9.9 | 9.9 |
| | Avg Filter T (°C ) | 13.7 | 13.7 |
| | Max Filter T (°C ) | 15.4 | 15.4 |
| | Min Filter T (°C ) | 10.9 | 10.9 |
| | Avg. BP (mmHg) | 768.0 | 768.0 |
| | Max BP (mm Hg) | 769.0 | 769.0 |
| | Min BP (mmHg) | 767.0 | 767.0 |

# 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: 23-624
Report #: ~~24-003~~

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## CLIENT INFORMATION

Company Name: Sacramento Metropolitan AQMD

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**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-T3029 | Canister SMAQMD 06_04 | 617Fern | 12/08/23 | 9.689 | 2.5 | X | X | X | | | | | | |
| 23-T3328 | Canister SMAQMD 03_04 | 617Fern | 12/14/23 | 9.688 | 2.5 | X | X | X | | | | | | |
| 23-T3329 | Canister SMAQMD 05_05 | 617Fern | 12/26/23 | 9.685 | 2.5 | X | X | X | | | | | | |
| 23-U522 | Canister SMAQMD 14_03 | 617Fern | 12/08/23 | 9.688 | 2.5 | | | | | X | | | | |
| 23-U580 | Canister SMAQMD 09_04 | 617Fern | 12/14/23 | 9.689 | 2.5 | | | | | X | | | | |
| 23-U581 | Canister SMAQMD 11_05 | 617Fern | 12/26/23 | 9.686 | 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: G.Rico | Date/Time: 12/6/23 12:00 | Sample Removal: G.Rico | Date/Time: 12/27/23 13:00 |
| Relinquished by: G.Rico | Date/Time: 01/02/23 11:00 | Received By: [signature] | Date/Time: 1/3/24 10:15 -3°C |

**Laboratory Receipt Comments:**

# SMAQMD SASS Air Sampler Data Record Sheet

**Site Name: 617 Fern** **Sampling Date: 12/08/2023**

| | **Channel** | **1** | **2** |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T3029 | 23-U522 |
| | Field ID | Canister SMAQMD 06_04 | Canister SMAQMD 14_03 |
| | Sample Date | 12/8/2023 | 12/8/2023 |
| | Start Date/Time | 12/8/2023 0:00 | 12/8/2023 0:00 |
| | End Date/Time | 12/9/2023 0:00 | 12/9/2023 0:00 |
| | Retrieval Date/Time | 12/12/2023 10:00 | 12/12/2023 10:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.689 | 9.688 |
| | Avg CV (%) | 0.8 | 0.7 |
| | Avg. Flow (l/min) | 6.72 | 6.73 |
| | Avg Ambient T (°C ) | 9.0 | 9.0 |
| | Max Ambient T (°C ) | 12.8 | 12.8 |
| | Min Ambient T (°C ) | 4.3 | 4.3 |
| | Avg Filter T (°C ) | 8.8 | 8.8 |
| | Max Filter T (°C ) | 14.1 | 14.1 |
| | Min Filter T (°C ) | 5.0 | 5.0 |
| | Avg. BP (mmHg) | 768.0 | 768.0 |
| | Max BP (mm Hg) | 769.0 | 769.0 |
| | Min BP (mmHg) | 767.0 | 767.0 |

# SMAQMD SASS Air Sampler Data Record Sheet

**Site Name: 617 Fern** **Sampling Date: 12/14/23**

| | **Channel** | **1** | **2** |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T3328 | 23-U580 |
| | Field ID | Canister SMAQMD 03_04 | Canister SMAQMD 09_04 |
| | Sample Date | 12/14/2023 | 12/14/2023 |
| | Start Date/Time | 12/14/2023 0:00 | 12/14/2023 0:00 |
| | End Date/Time | 12/15/2023 0:00 | 12/15/2023 0:00 |
| | Retrieval Date/Time | 12/21/2023 0:00 | 12/21/2023 0:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.688 | 9.689 |
| | Avg CV (%) | 0.9 | 0.9 |
| | Avg. Flow (l/min) | 6.73 | 6.73 |
| | Avg Ambient T (°C ) | 8.8 | 8.8 |
| | Max Ambient T (°C ) | 15.3 | 15.3 |
| | Min Ambient T (°C ) | 6.2 | 6.2 |
| | Avg Filter T (°C ) | 10.8 | 10.8 |
| | Max Filter T (°C ) | 16.2 | 16.2 |
| | Min Filter T (°C ) | 5.9 | 5.9 |
| | Avg. BP (mmHg) | 765.0 | 765.0 |
| | Max BP (mm Hg) | 767.0 | 767.0 |
| | Min BP (mmHg) | 763.0 | 763.0 |

# SMAQMD SASS Air Sampler Data Record Sheet

**Site Name: 617 Fern** **Sampling Date: 12/26/23**

| | **Channel** | **1** | **2** |
|---|---|---|---|
| Filter and Run Time | Lab Net ID | 23-T3329 | 23-U581 |
| | Field ID | Canister SMAQMD 05_05 | Canister SMAQMD 11_05 |
| | Sample Date | 12/26/2023 | 12/26/2023 |
| | Start Date/Time | 12/26/2023 0:00 | 12/26/2023 0:00 |
| | End Date/Time | 12/27/2023 0:00 | 12/27/2023 0:00 |
| | Retrieval Date/Time | 12/27/2023 12:00 | 12/27/2023 12:00 |
| | Run Time (hrs) | 24.00 | 24.00 |
| Event Information | Sample Volume (m3) | 9.685 | 9.686 |
| | Avg CV (%) | 0.9 | 0.9 |
| | Avg. Flow (l/min) | 6.72 | 6.72 |
| | Avg Ambient T (°C ) | 9.8 | 9.8 |
| | Max Ambient T (°C ) | 13.7 | 13.7 |
| | Min Ambient T (°C ) | 6.1 | 6.1 |
| | Avg Filter T (°C ) | 10.1 | 10.1 |
| | Max Filter T (°C ) | 16.2 | 16.2 |
| | Min Filter T (°C ) | 6.8 | 6.8 |
| | Avg. BP (mmHg) | 765.0 | 765.0 |
| | Max BP (mm Hg) | 768.0 | 768.0 |
| | Min BP (mmHg) | 763.0 | 763.0 |

## RAW DATA

Available upon request