

TETRA TECH EM, INC.  
BOISE, ID

CLIENT # T029  
REPORT # 09-211

SUBMITTED BY:  
***CHESTER LabNet***  
12242 S.W. GARDEN PLACE  
TIGARD, OR 97223  
(503)624-2183/FAX (503)624-2653  
[www.ChesterLab.Net](http://www.ChesterLab.Net)

# ***CHESTER LabNet***

12242 SW Garden Place ❖ Tigard, OR 97223-8246 ❖ USA  
Telephone 503-624-2183 ❖ Fax 503-624-2653 ❖ [www.chesterlab.net](http://www.chesterlab.net)

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## **Case Narrative**

Date: July 17, 2009

## **General Information**

Client: Tetra Tech EM, Inc.  
Client Number: T029  
Report Number: 09-211  
Sample Description: 47mm Teflon filter

## **Analysis**

Analytes: Particulate Mass, XRF Metals (Na - Pb)  
Analytical Protocols: Gravimetry, X-Ray Fluorescence protocol 6  
Analytical Notes: No problems were encountered during the analyses. Results have **not** been blank corrected.  
QA/QC Review: All of the data have been reviewed by the analysts performing the analyses and the project manager. All of the quality control and sample-specific information in this package is complete and meets or exceeds the minimum requirements for acceptability.  
Comments: If you have any questions or concerns regarding this analysis, please feel free to contact the project manager.  
Disclaimer: This report shall not be reproduced, except in full, without the written approval of the laboratory. The results only represent that of the samples as received into the laboratory.

  
Project Manager  
Paul Duda

7/17/09  
Date

**Tetra Tech EMI**  
**Gravimetric Data**

Lab ID	Client ID	Site	Sample Date	Particle Size	Tare Wt.(mg)	Gross Wt.(mg)	Net Wt.(µg)	Volume (m³)	Conc. (µg/m³)	Comments
09-T2561	CAMU04-063009	CAMU04	6/30/09	TSP	149.244	149.347	103	1.05	98.10	Void-do not analyze
09-T2562	CAMU06-063009	CAMU06	6/30/09	TSP	148.085	149.826	1741	22.20	78.42	
09-T2563	BMI03-063009	BMI03	6/30/09	TSP	146.993	147.256	263	18.12	14.51	
09-T2564	BMI01-063009	BMI01	6/30/09	TSP	145.958	146.267	309	24.04	12.85	
09-T2565	OFF04-063009	OFF04	6/30/09	TSP	146.517	146.769	252	9.42	26.75	
09-T2566	OFF03-063009	OFF03	6/30/09	TSP	147.156	147.322	166	9.50	17.47	
09-T2567	OFF04-070209	OFF04	7/2/09	TSP	146.464	146.628	164	9.81	16.72	
09-T2568	OFF03-070209	OFF03	7/2/09	TSP	146.048	146.151	103	9.03	11.41	
09-T2569	BMI08-070309	BMI08	7/3/09	TSP	146.388	146.590	202	18.02	11.21	
09-T2570	BMI06-070309	BMI06	7/3/09	TSP	147.082	147.351	269	24.20	11.12	
09-T2571	BMI03-070309	BMI03	7/3/09	TSP	147.643	147.816	173	16.98	10.19	
09-T2572	CAMU04-070309	CAMU04	7/3/09	TSP	144.772	145.622	850	24.04	35.36	
09-T2573	CAMU06-070309	CAMU06	7/3/09	TSP	146.346	146.914	568	20.02	28.37	
09-T2574	CAMU04-070709	CAMU04	7/7/09	TSP	148.544	148.704	160	24.08	6.64	
09-T2575	CAMU06-070709	CAMU06	7/7/09	TSP	147.700	149.222	1522	21.19	71.83	
09-T2576	BMI03-070709	BMI03	7/7/09	TSP	148.359	148.466	107	12.63	8.47	
09-T2577	BMI08-070709	BMI08	7/7/09	TSP	146.366	146.661	295	16.42	17.97	
09-T2578	OFF04-070709	OFF04	7/7/09	TSP	148.445	148.719	274	9.86	27.79	
09-T2579	BMI06-070709	BMI06	7/7/09	TSP	147.355	147.666	311	24.04	12.94	
09-T2580	OFF03-070709	OFF03	7/7/09	TSP	147.498	147.632	134	10.07	13.31	
09-T2581	CAMU06-070709BS	CAMU06	7/7/09	TSP	147.998	148.011	13			
09-T2847	OFF03-070709BS	OFF03	7/7/09	TSP	145.095	145.099	4			

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

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Lab ID: 09-T2561  
Client ID: CAMU04-063009  
Filter ID: P8099578  
Site: CAMU04  
Sample Date: 6/30/09  
Filter Lot #: 6336008  
Volume: 1.050 +- 0.105 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP  
Comments: Void-do not analyze

Analyte	<u>µg/filter</u>	<u>percent</u>	<u>µg/m<sup>3</sup></u>
Gravimetry			
Net Mass	103. ± 10.		98.10 ± 13.67

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2562  
Client ID: CAMU06-063009  
Filter ID: P8099579  
Site: CAMU06  
Sample Date: 6/30/09  
Filter Lot #: 6336008  
Volume: 22.20 +/- 2.220 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	1,741. ± 10.		78.42 ± 7.855
XRF			
* Na	0.0000 ± 0.9413	0.0000 ± 0.0541	0.0000 ± 0.0424
Mg	15.61 ± 1.408	0.8963 ± 0.0810	0.7029 ± 0.0947
Al	27.73 ± 1.901	1.593 ± 0.1096	1.249 ± 0.1514
Si	80.24 ± 4.450	4.609 ± 0.2570	3.614 ± 0.4133
* P	0.0508 ± 0.0588	0.0029 ± 0.0034	0.0023 ± 0.0027
S	14.07 ± 0.7616	0.8081 ± 0.0440	0.6337 ± 0.0721
Cl	8.843 ± 0.4769	0.5079 ± 0.0275	0.3984 ± 0.0453
K	15.91 ± 0.8204	0.9139 ± 0.0474	0.7167 ± 0.0806
Ca	64.16 ± 3.261	3.685 ± 0.1885	2.890 ± 0.3242
Ti	3.927 ± 0.2000	0.2255 ± 0.0116	0.1769 ± 0.0199
V	0.2441 ± 0.0203	0.0140 ± 0.0012	0.0110 ± 0.0014
Cr	0.0384 ± 0.0124	0.0022 ± 0.0007	0.0017 ± 0.0006
Mn	2.103 ± 0.1627	0.1208 ± 0.0094	0.0947 ± 0.0120
Fe	19.91 ± 0.9989	1.144 ± 0.0578	0.8969 ± 0.1003
* Co	0.0000 ± 0.0316	0.0000 ± 0.0018	0.0000 ± 0.0014
* Ni	0.0531 ± 0.0192	0.0031 ± 0.0011	0.0024 ± 0.0009
Cu	0.0825 ± 0.0181	0.0047 ± 0.0010	0.0037 ± 0.0009
Zn	0.2215 ± 0.0192	0.0127 ± 0.0011	0.0100 ± 0.0013
* Ga	0.0000 ± 0.0113	0.0000 ± 0.0006	0.0000 ± 0.0005
* Ge	0.0000 ± 0.0102	0.0000 ± 0.0006	0.0000 ± 0.0005
* As	0.0090 ± 0.0158	0.0005 ± 0.0009	0.0004 ± 0.0007
* Se	0.0068 ± 0.0079	0.0004 ± 0.0005	0.0003 ± 0.0004
Br	0.1119 ± 0.0102	0.0064 ± 0.0006	0.0050 ± 0.0007
Rb	0.0520 ± 0.0090	0.0030 ± 0.0005	0.0023 ± 0.0005
Sr	0.6068 ± 0.0328	0.0349 ± 0.0019	0.0273 ± 0.0031
* Y	0.0068 ± 0.0113	0.0004 ± 0.0006	0.0003 ± 0.0005
Zr	0.4124 ± 0.0271	0.0237 ± 0.0016	0.0186 ± 0.0022
Nb	0.1367 ± 0.0158	0.0079 ± 0.0009	0.0062 ± 0.0009
* Mo	0.0000 ± 0.0203	0.0000 ± 0.0012	0.0000 ± 0.0009
* Pd	0.0994 ± 0.0520	0.0057 ± 0.0030	0.0045 ± 0.0024
* Ag	0.0497 ± 0.0531	0.0029 ± 0.0031	0.0022 ± 0.0024
* Cd	0.0554 ± 0.0576	0.0032 ± 0.0033	0.0025 ± 0.0026
* In	0.1559 ± 0.0655	0.0090 ± 0.0038	0.0070 ± 0.0030
* Sn	0.0881 ± 0.0757	0.0051 ± 0.0043	0.0040 ± 0.0034
* Sb	0.1582 ± 0.0927	0.0091 ± 0.0053	0.0071 ± 0.0042
Ba	0.4350 ± 0.1288	0.0250 ± 0.0074	0.0196 ± 0.0061
* La	0.0000 ± 0.1096	0.0000 ± 0.0063	0.0000 ± 0.0049
* Hg	0.0000 ± 0.0181	0.0000 ± 0.0010	0.0000 ± 0.0008
Pb	0.1944 ± 0.0260	0.0112 ± 0.0015	0.0088 ± 0.0015

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2563  
Client ID: BMI03-063009  
Filter ID: P8099580  
Site: BMI03  
Sample Date: 6/30/09  
Filter Lot #: 6336008  
Volume: 18.12 +/- 1.812 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	263. ± 10.		14.51 ± 1.553
XRF			
* Na	0.6972 ± 0.4249	0.2651 ± 0.1619	0.0385 ± 0.0238
Mg	1.323 ± 0.3119	0.5031 ± 0.1201	0.0730 ± 0.0187
Al	3.782 ± 0.2836	1.438 ± 0.1209	0.2087 ± 0.0261
Si	11.17 ± 0.5910	4.249 ± 0.2768	0.6167 ± 0.0698
* P	0.0000 ± 0.0339	0.0000 ± 0.0129	0.0000 ± 0.0019
S	9.419 ± 0.4972	3.581 ± 0.2330	0.5198 ± 0.0588
Cl	1.590 ± 0.1051	0.6045 ± 0.0461	0.0877 ± 0.0105
K	2.668 ± 0.1458	1.014 ± 0.0675	0.1472 ± 0.0168
Ca	8.881 ± 0.7255	3.377 ± 0.3043	0.4901 ± 0.0633
Ti	0.7876 ± 0.0429	0.2995 ± 0.0199	0.0435 ± 0.0050
V	0.0870 ± 0.0102	0.0331 ± 0.0041	0.0048 ± 0.0007
* Cr	0.0249 ± 0.0090	0.0095 ± 0.0035	0.0014 ± 0.0005
Mn	0.1593 ± 0.0147	0.0606 ± 0.0060	0.0088 ± 0.0012
Fe	3.717 ± 0.1898	1.413 ± 0.0900	0.2051 ± 0.0230
* Co	0.0000 ± 0.0237	0.0000 ± 0.0090	0.0000 ± 0.0013
* Ni	0.0000 ± 0.0170	0.0000 ± 0.0064	0.0000 ± 0.0009
* Cu	0.0373 ± 0.0170	0.0142 ± 0.0065	0.0021 ± 0.0010
Zn	0.0757 ± 0.0136	0.0288 ± 0.0053	0.0042 ± 0.0009
* Ga	0.0181 ± 0.0113	0.0069 ± 0.0043	0.0010 ± 0.0006
* Ge	0.0282 ± 0.0102	0.0107 ± 0.0039	0.0016 ± 0.0006
* As	0.0000 ± 0.0147	0.0000 ± 0.0056	0.0000 ± 0.0008
* Se	0.0000 ± 0.0068	0.0000 ± 0.0026	0.0000 ± 0.0004
Br	0.0893 ± 0.0090	0.0339 ± 0.0037	0.0049 ± 0.0007
* Rb	0.0056 ± 0.0079	0.0021 ± 0.0030	0.0003 ± 0.0004
Sr	0.0588 ± 0.0102	0.0223 ± 0.0040	0.0032 ± 0.0006
* Y	0.0000 ± 0.0113	0.0000 ± 0.0043	0.0000 ± 0.0006
Zr	0.0983 ± 0.0158	0.0374 ± 0.0062	0.0054 ± 0.0010
Nb	0.0802 ± 0.0147	0.0305 ± 0.0057	0.0044 ± 0.0009
* Mo	0.0000 ± 0.0203	0.0000 ± 0.0077	0.0000 ± 0.0011
* Pd	0.0486 ± 0.0486	0.0185 ± 0.0185	0.0027 ± 0.0027
* Ag	0.0893 ± 0.0508	0.0339 ± 0.0194	0.0049 ± 0.0028
* Cd	0.0305 ± 0.0542	0.0116 ± 0.0206	0.0017 ± 0.0030
* In	0.0158 ± 0.0610	0.0060 ± 0.0232	0.0009 ± 0.0034
* Sn	0.0000 ± 0.0701	0.0000 ± 0.0266	0.0000 ± 0.0039
* Sb	0.0915 ± 0.0881	0.0348 ± 0.0335	0.0051 ± 0.0049
* Ba	0.0113 ± 0.0463	0.0043 ± 0.0176	0.0006 ± 0.0026
* La	0.0000 ± 0.0452	0.0000 ± 0.0172	0.0000 ± 0.0025
* Hg	0.0158 ± 0.0203	0.0060 ± 0.0077	0.0009 ± 0.0011
* Pb	0.0181 ± 0.0215	0.0069 ± 0.0082	0.0010 ± 0.0012

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2564  
Client ID: BMI01-063009  
Filter ID: P8099581  
Site: BMI01  
Sample Date: 6/30/09  
Filter Lot #: 6336008  
Volume: 24.04 +/- 2.404 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	309. ± 10.		12.85 ± 1.351
XRF			
* Na	0.5153 ± 0.4520	0.1668 ± 0.1464	0.0214 ± 0.0189
Mg	1.918 ± 0.3526	0.6206 ± 0.1159	0.0798 ± 0.0167
Al	5.165 ± 0.3627	1.672 ± 0.1293	0.2149 ± 0.0263
Si	14.35 ± 0.7548	4.644 ± 0.2868	0.5970 ± 0.0675
* P	0.0000 ± 0.0339	0.0000 ± 0.0110	0.0000 ± 0.0014
S	10.30 ± 0.5424	3.334 ± 0.2060	0.4285 ± 0.0484
Cl	3.375 ± 0.1910	1.092 ± 0.0712	0.1404 ± 0.0161
K	3.228 ± 0.1740	1.045 ± 0.0657	0.1343 ± 0.0153
Ca	12.89 ± 0.6531	4.173 ± 0.2508	0.5363 ± 0.0601
Ti	0.9752 ± 0.0531	0.3156 ± 0.0200	0.0406 ± 0.0046
V	0.0576 ± 0.0102	0.0187 ± 0.0033	0.0024 ± 0.0005
* Cr	0.0034 ± 0.0090	0.0011 ± 0.0029	0.0001 ± 0.0004
Mn	3.053 ± 0.2271	0.9881 ± 0.0802	0.1270 ± 0.0158
Fe	4.940 ± 0.2509	1.599 ± 0.0963	0.2055 ± 0.0230
* Co	0.0000 ± 0.0249	0.0000 ± 0.0080	0.0000 ± 0.0010
* Ni	0.0068 ± 0.0170	0.0022 ± 0.0055	0.0003 ± 0.0007
Cu	0.0565 ± 0.0170	0.0183 ± 0.0055	0.0024 ± 0.0007
Zn	0.0848 ± 0.0136	0.0274 ± 0.0045	0.0035 ± 0.0007
* Ga	0.0124 ± 0.0102	0.0040 ± 0.0033	0.0005 ± 0.0004
* Ge	0.0000 ± 0.0113	0.0000 ± 0.0037	0.0000 ± 0.0005
* As	0.0147 ± 0.0147	0.0048 ± 0.0048	0.0006 ± 0.0006
* Se	0.0136 ± 0.0079	0.0044 ± 0.0026	0.0006 ± 0.0003
Br	0.0746 ± 0.0079	0.0241 ± 0.0027	0.0031 ± 0.0005
* Rb	0.0011 ± 0.0079	0.0004 ± 0.0026	0.0000 ± 0.0003
Sr	0.1040 ± 0.0113	0.0336 ± 0.0038	0.0043 ± 0.0006
* Y	0.0079 ± 0.0113	0.0026 ± 0.0037	0.0003 ± 0.0005
Zr	0.0734 ± 0.0147	0.0238 ± 0.0048	0.0031 ± 0.0007
* Mo	0.0000 ± 0.0203	0.0000 ± 0.0066	0.0000 ± 0.0008
* Pd	0.0000 ± 0.0475	0.0000 ± 0.0154	0.0000 ± 0.0020
Ag	0.2000 ± 0.0508	0.0647 ± 0.0166	0.0083 ± 0.0023
* Cd	0.1469 ± 0.0542	0.0475 ± 0.0176	0.0061 ± 0.0023
* In	0.1300 ± 0.0610	0.0421 ± 0.0198	0.0054 ± 0.0026
* Sn	0.0000 ± 0.0712	0.0000 ± 0.0230	0.0000 ± 0.0030
* Sb	0.0000 ± 0.0859	0.0000 ± 0.0278	0.0000 ± 0.0036
* Ba	0.0678 ± 0.0486	0.0219 ± 0.0157	0.0028 ± 0.0020
* La	0.0282 ± 0.0452	0.0091 ± 0.0146	0.0012 ± 0.0019
Hg	0.0542 ± 0.0181	0.0176 ± 0.0059	0.0023 ± 0.0008
* Pb	0.0090 ± 0.0215	0.0029 ± 0.0069	0.0004 ± 0.0009

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2565  
Client ID: OFF04-063009  
Filter ID: P8099582  
Site: OFF04  
Sample Date: 6/30/09  
Filter Lot #: 6336008  
Volume: 9.420 +- 0.942 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	252. ± 10.		26.75 ± 2.878
XRF			
* Na	0.1559 ± 0.3718	0.0619 ± 0.1475	0.0166 ± 0.0395
Mg	0.7910 ± 0.2610	0.3139 ± 0.1043	0.0840 ± 0.0290
Al	2.353 ± 0.1966	0.9336 ± 0.0864	0.2498 ± 0.0325
Si	6.399 ± 0.3492	2.539 ± 0.1713	0.6793 ± 0.0774
* P	0.0000 ± 0.0282	0.0000 ± 0.0112	0.0000 ± 0.0030
S	5.239 ± 0.2882	2.079 ± 0.1410	0.5561 ± 0.0635
Cl	0.5435 ± 0.0565	0.2157 ± 0.0240	0.0577 ± 0.0083
K	1.523 ± 0.0881	0.6045 ± 0.0424	0.1617 ± 0.0187
Ca	4.771 ± 0.4350	1.893 ± 0.1883	0.5065 ± 0.0685
Ti	0.3786 ± 0.0237	0.1502 ± 0.0111	0.0402 ± 0.0047
* V	0.0147 ± 0.0079	0.0058 ± 0.0031	0.0016 ± 0.0009
* Cr	0.0000 ± 0.0079	0.0000 ± 0.0031	0.0000 ± 0.0008
Mn	0.2994 ± 0.0192	0.1188 ± 0.0090	0.0318 ± 0.0038
Fe	2.562 ± 0.1322	1.017 ± 0.0662	0.2719 ± 0.0306
* Co	0.0000 ± 0.0237	0.0000 ± 0.0094	0.0000 ± 0.0025
* Ni	0.0124 ± 0.0170	0.0049 ± 0.0067	0.0013 ± 0.0018
Cu	0.1695 ± 0.0215	0.0673 ± 0.0089	0.0180 ± 0.0029
Zn	0.0655 ± 0.0136	0.0260 ± 0.0055	0.0070 ± 0.0016
* Ga	0.0170 ± 0.0113	0.0067 ± 0.0045	0.0018 ± 0.0012
* Ge	0.0068 ± 0.0102	0.0027 ± 0.0040	0.0007 ± 0.0011
* As	0.0000 ± 0.0147	0.0000 ± 0.0058	0.0000 ± 0.0016
* Se	0.0056 ± 0.0079	0.0022 ± 0.0031	0.0006 ± 0.0008
Br	0.0429 ± 0.0079	0.0170 ± 0.0032	0.0046 ± 0.0010
* Rb	0.0079 ± 0.0079	0.0031 ± 0.0031	0.0008 ± 0.0008
Sr	0.0373 ± 0.0090	0.0148 ± 0.0036	0.0040 ± 0.0010
* Y	0.0113 ± 0.0113	0.0045 ± 0.0045	0.0012 ± 0.0012
* Zr	0.0294 ± 0.0147	0.0117 ± 0.0058	0.0031 ± 0.0016
* Mo	0.0034 ± 0.0203	0.0013 ± 0.0081	0.0004 ± 0.0022
* Pd	0.0814 ± 0.0486	0.0323 ± 0.0193	0.0086 ± 0.0052
* Ag	0.0960 ± 0.0508	0.0381 ± 0.0202	0.0102 ± 0.0055
* Cd	0.0881 ± 0.0542	0.0350 ± 0.0216	0.0094 ± 0.0058
* In	0.1243 ± 0.0610	0.0493 ± 0.0243	0.0132 ± 0.0066
* Sn	0.0294 ± 0.0712	0.0117 ± 0.0283	0.0031 ± 0.0076
* Sb	0.0429 ± 0.0870	0.0170 ± 0.0345	0.0046 ± 0.0092
* Ba	0.0655 ± 0.0373	0.0260 ± 0.0148	0.0070 ± 0.0040
* La	0.0237 ± 0.0305	0.0094 ± 0.0121	0.0025 ± 0.0032
* Hg	0.0090 ± 0.0203	0.0036 ± 0.0081	0.0010 ± 0.0022
* Pb	0.0102 ± 0.0215	0.0040 ± 0.0085	0.0011 ± 0.0023

\* - Concentration is less than three times the uncertainty



Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2566  
Client ID: OFF03-063009  
Filter ID: P8099583  
Site: OFF03  
Sample Date: 6/30/09  
Filter Lot #: 6336008  
Volume: 9.500 +/- 0.950 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	166. ± 10.		17.47 ± 2.040
XRF			
Na	2.420 ± 0.6927	1.458 ± 0.4264	0.2548 ± 0.0772
Mg	0.9548 ± 0.2441	0.5752 ± 0.1511	0.1005 ± 0.0276
Al	2.354 ± 0.1955	1.418 ± 0.1455	0.2478 ± 0.0322
Si	5.902 ± 0.3220	3.555 ± 0.2890	0.6213 ± 0.0708
* P	0.0000 ± 0.0271	0.0000 ± 0.0163	0.0000 ± 0.0029
S	5.482 ± 0.2994	3.302 ± 0.2685	0.5770 ± 0.0657
Cl	0.2814 ± 0.0497	0.1695 ± 0.0316	0.0296 ± 0.0060
K	1.411 ± 0.0825	0.8502 ± 0.0714	0.1486 ± 0.0172
Ca	3.694 ± 0.3537	2.225 ± 0.2517	0.3888 ± 0.0538
Ti	0.2090 ± 0.0158	0.1259 ± 0.0122	0.0220 ± 0.0028
* V	0.0215 ± 0.0079	0.0129 ± 0.0048	0.0023 ± 0.0009
* Cr	0.0124 ± 0.0090	0.0075 ± 0.0055	0.0013 ± 0.0010
Mn	0.0927 ± 0.0124	0.0558 ± 0.0082	0.0098 ± 0.0016
Fe	1.861 ± 0.0972	1.121 ± 0.0894	0.1959 ± 0.0221
* Co	0.0203 ± 0.0249	0.0123 ± 0.0150	0.0021 ± 0.0026
* Ni	0.0463 ± 0.0181	0.0279 ± 0.0110	0.0049 ± 0.0020
Cu	0.2497 ± 0.0249	0.1504 ± 0.0175	0.0263 ± 0.0037
* Zn	0.0316 ± 0.0136	0.0191 ± 0.0082	0.0033 ± 0.0015
* Ga	0.0000 ± 0.0113	0.0000 ± 0.0068	0.0000 ± 0.0012
* Ge	0.0090 ± 0.0113	0.0054 ± 0.0068	0.0010 ± 0.0012
* As	0.0000 ± 0.0147	0.0000 ± 0.0088	0.0000 ± 0.0015
* Se	0.0215 ± 0.0079	0.0129 ± 0.0048	0.0023 ± 0.0009
Br	0.0260 ± 0.0079	0.0157 ± 0.0049	0.0027 ± 0.0009
* Rb	0.0045 ± 0.0079	0.0027 ± 0.0048	0.0005 ± 0.0008
* Sr	0.0226 ± 0.0102	0.0136 ± 0.0062	0.0024 ± 0.0011
* Y	0.0000 ± 0.0113	0.0000 ± 0.0068	0.0000 ± 0.0012
* Zr	0.0045 ± 0.0147	0.0027 ± 0.0089	0.0005 ± 0.0015
* Mo	0.0271 ± 0.0215	0.0163 ± 0.0130	0.0029 ± 0.0023
* Pd	0.1390 ± 0.0497	0.0837 ± 0.0304	0.0146 ± 0.0054
* Ag	0.1107 ± 0.0508	0.0667 ± 0.0309	0.0117 ± 0.0055
* Cd	0.0475 ± 0.0542	0.0286 ± 0.0327	0.0050 ± 0.0057
* In	0.1469 ± 0.0622	0.0885 ± 0.0378	0.0155 ± 0.0067
* Sn	0.0576 ± 0.0734	0.0347 ± 0.0443	0.0061 ± 0.0078
* Sb	0.0565 ± 0.0893	0.0340 ± 0.0538	0.0059 ± 0.0094
* Ba	0.0034 ± 0.0339	0.0020 ± 0.0204	0.0004 ± 0.0036
* La	0.0158 ± 0.0237	0.0095 ± 0.0143	0.0017 ± 0.0025
* Hg	0.0147 ± 0.0215	0.0088 ± 0.0129	0.0015 ± 0.0023
* Pb	0.0260 ± 0.0226	0.0157 ± 0.0136	0.0027 ± 0.0024

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2567  
Client ID: OFF04-070209  
Filter ID: P8099584  
Site: OFF04  
Sample Date: 7/ 2/09  
Filter Lot #: 6336008  
Volume: 9.810 +/- 0.981 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	164. ± 10.		16.72 ± 1.958
XRF			
* Na	0.0000 ± 0.3706	0.0000 ± 0.2260	0.0000 ± 0.0378
Mg	4.541 ± 0.4373	2.769 ± 0.3156	0.4629 ± 0.0643
Al	1.626 ± 0.1616	0.9915 ± 0.1156	0.1658 ± 0.0234
Si	4.885 ± 0.2712	2.979 ± 0.2456	0.4980 ± 0.0570
* P	0.0000 ± 0.0271	0.0000 ± 0.0165	0.0000 ± 0.0028
S	5.407 ± 0.2961	3.297 ± 0.2702	0.5512 ± 0.0628
Cl	1.616 ± 0.1051	0.9853 ± 0.0878	0.1647 ± 0.0196
K	1.361 ± 0.0802	0.8296 ± 0.0704	0.1387 ± 0.0161
Ca	4.166 ± 0.2147	2.540 ± 0.2028	0.4247 ± 0.0478
Ti	0.6430 ± 0.0362	0.3921 ± 0.0325	0.0655 ± 0.0075
* V	0.0147 ± 0.0079	0.0090 ± 0.0049	0.0015 ± 0.0008
* Cr	0.0000 ± 0.0079	0.0000 ± 0.0048	0.0000 ± 0.0008
Mn	0.7424 ± 0.0712	0.4527 ± 0.0514	0.0757 ± 0.0105
Fe	1.897 ± 0.0994	1.157 ± 0.0930	0.1934 ± 0.0218
* Co	0.0000 ± 0.0237	0.0000 ± 0.0145	0.0000 ± 0.0024
* Ni	0.0158 ± 0.0170	0.0096 ± 0.0104	0.0016 ± 0.0017
Cu	0.0859 ± 0.0181	0.0524 ± 0.0115	0.0088 ± 0.0020
Zn	0.0508 ± 0.0136	0.0310 ± 0.0085	0.0052 ± 0.0015
* Ga	0.0079 ± 0.0113	0.0048 ± 0.0069	0.0008 ± 0.0012
* Ge	0.0000 ± 0.0102	0.0000 ± 0.0062	0.0000 ± 0.0010
* As	0.0000 ± 0.0147	0.0000 ± 0.0090	0.0000 ± 0.0015
* Se	0.0079 ± 0.0068	0.0048 ± 0.0041	0.0008 ± 0.0007
Br	0.0689 ± 0.0079	0.0420 ± 0.0055	0.0070 ± 0.0011
* Rb	0.0000 ± 0.0079	0.0000 ± 0.0048	0.0000 ± 0.0008
Sr	0.0373 ± 0.0090	0.0227 ± 0.0057	0.0038 ± 0.0010
* Y	0.0000 ± 0.0113	0.0000 ± 0.0069	0.0000 ± 0.0012
* Zr	0.0170 ± 0.0147	0.0103 ± 0.0090	0.0017 ± 0.0015
* Mo	0.0000 ± 0.0203	0.0000 ± 0.0124	0.0000 ± 0.0021
* Pd	0.0396 ± 0.0475	0.0241 ± 0.0290	0.0040 ± 0.0049
* Ag	0.1209 ± 0.0508	0.0737 ± 0.0313	0.0123 ± 0.0053
* Cd	0.0689 ± 0.0542	0.0420 ± 0.0332	0.0070 ± 0.0056
* In	0.0723 ± 0.0599	0.0441 ± 0.0366	0.0074 ± 0.0061
* Sn	0.1356 ± 0.0723	0.0827 ± 0.0444	0.0138 ± 0.0075
* Sb	0.0136 ± 0.0859	0.0083 ± 0.0524	0.0014 ± 0.0088
* Ba	0.0000 ± 0.0384	0.0000 ± 0.0234	0.0000 ± 0.0039
* La	0.0000 ± 0.0316	0.0000 ± 0.0193	0.0000 ± 0.0032
* Hg	0.0011 ± 0.0170	0.0007 ± 0.0103	0.0001 ± 0.0017
* Pb	0.0542 ± 0.0215	0.0331 ± 0.0132	0.0055 ± 0.0023

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2568  
Client ID: OFF03-070209  
Filter ID: P8099585  
Site: OFF03  
Sample Date: 7/ 2/09  
Filter Lot #: 6336008  
Volume: 9.030 +/- 0.903 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	103. ± 10.		11.41 ± 1.590
XRF			
* Na	0.8848 ± 0.6362	0.8590 ± 0.6233	0.0980 ± 0.0711
* Mg	0.0667 ± 0.1345	0.0647 ± 0.1307	0.0074 ± 0.0149
Al	0.7413 ± 0.1164	0.7197 ± 0.1329	0.0821 ± 0.0153
Si	2.945 ± 0.1740	2.859 ± 0.3249	0.3261 ± 0.0379
* P	0.0000 ± 0.0249	0.0000 ± 0.0241	0.0000 ± 0.0028
S	4.439 ± 0.2475	4.309 ± 0.4825	0.4915 ± 0.0563
* Cl	0.0407 ± 0.0407	0.0395 ± 0.0397	0.0045 ± 0.0045
K	1.006 ± 0.0633	0.9764 ± 0.1130	0.1114 ± 0.0132
Ca	1.936 ± 0.1040	1.879 ± 0.2085	0.2144 ± 0.0243
Ti	0.1051 ± 0.0113	0.1020 ± 0.0148	0.0116 ± 0.0017
* V	0.0000 ± 0.0068	0.0000 ± 0.0066	0.0000 ± 0.0008
* Cr	0.0000 ± 0.0079	0.0000 ± 0.0077	0.0000 ± 0.0009
* Mn	0.0124 ± 0.0102	0.0121 ± 0.0099	0.0014 ± 0.0011
Fe	0.8735 ± 0.0497	0.8480 ± 0.0954	0.0967 ± 0.0111
* Co	0.0373 ± 0.0226	0.0362 ± 0.0222	0.0041 ± 0.0025
* Ni	0.0475 ± 0.0170	0.0461 ± 0.0171	0.0053 ± 0.0019
* Cu	0.0271 ± 0.0158	0.0263 ± 0.0156	0.0030 ± 0.0018
Zn	0.0418 ± 0.0124	0.0406 ± 0.0127	0.0046 ± 0.0015
* Ga	0.0249 ± 0.0102	0.0241 ± 0.0101	0.0028 ± 0.0012
* Ge	0.0068 ± 0.0102	0.0066 ± 0.0099	0.0008 ± 0.0011
* As	0.0000 ± 0.0136	0.0000 ± 0.0132	0.0000 ± 0.0015
* Se	0.0102 ± 0.0068	0.0099 ± 0.0067	0.0011 ± 0.0008
Br	0.0339 ± 0.0068	0.0329 ± 0.0073	0.0038 ± 0.0008
* Rb	0.0000 ± 0.0068	0.0000 ± 0.0066	0.0000 ± 0.0008
* Sr	0.0203 ± 0.0090	0.0197 ± 0.0090	0.0023 ± 0.0010
* Y	0.0079 ± 0.0113	0.0077 ± 0.0110	0.0009 ± 0.0013
* Zr	0.0124 ± 0.0136	0.0121 ± 0.0132	0.0014 ± 0.0015
* Mo	0.0203 ± 0.0203	0.0197 ± 0.0198	0.0023 ± 0.0023
* Pd	0.0576 ± 0.0463	0.0560 ± 0.0453	0.0064 ± 0.0052
* Ag	0.1322 ± 0.0497	0.1284 ± 0.0499	0.0146 ± 0.0057
* Cd	0.1220 ± 0.0531	0.1185 ± 0.0528	0.0135 ± 0.0060
* In	0.0068 ± 0.0588	0.0066 ± 0.0571	0.0008 ± 0.0065
* Sn	0.0881 ± 0.0712	0.0856 ± 0.0696	0.0098 ± 0.0079
* Sb	0.0000 ± 0.0848	0.0000 ± 0.0823	0.0000 ± 0.0094
* Ba	0.0565 ± 0.0305	0.0549 ± 0.0301	0.0063 ± 0.0034
* La	0.0000 ± 0.0181	0.0000 ± 0.0176	0.0000 ± 0.0020
* Hg	0.0000 ± 0.0192	0.0000 ± 0.0187	0.0000 ± 0.0021
* Pb	0.0237 ± 0.0215	0.0230 ± 0.0210	0.0026 ± 0.0024

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2569  
Client ID: BMI08-070309  
Filter ID: P8099586  
Site: BMI08  
Sample Date: 7/ 3/09  
Filter Lot #: 6336008  
Volume: 18.02 +/- 1.802 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	202. ± 10.		11.21 ± 1.251
XRF			
* Na	2.271 ± 0.7661	1.124 ± 0.3833	0.1260 ± 0.0443
* Mg	0.4746 ± 0.2610	0.2350 ± 0.1297	0.0263 ± 0.0147
Al	2.179 ± 0.1910	1.079 ± 0.1086	0.1209 ± 0.0161
Si	6.314 ± 0.3435	3.126 ± 0.2299	0.3504 ± 0.0399
* P	0.0000 ± 0.0305	0.0000 ± 0.0151	0.0000 ± 0.0017
S	10.07 ± 0.5277	4.987 ± 0.3594	0.5590 ± 0.0631
Cl	0.4543 ± 0.0542	0.2249 ± 0.0291	0.0252 ± 0.0039
K	3.176 ± 0.1706	1.572 ± 0.1149	0.1763 ± 0.0200
Ca	4.147 ± 0.2147	2.053 ± 0.1471	0.2301 ± 0.0259
Ti	0.2576 ± 0.0181	0.1275 ± 0.0110	0.0143 ± 0.0017
* V	0.0158 ± 0.0079	0.0078 ± 0.0039	0.0009 ± 0.0004
* Cr	0.0113 ± 0.0079	0.0056 ± 0.0039	0.0006 ± 0.0004
Mn	0.0915 ± 0.0113	0.0453 ± 0.0060	0.0051 ± 0.0008
Fe	1.831 ± 0.0960	0.9062 ± 0.0654	0.1016 ± 0.0115
* Co	0.0000 ± 0.0226	0.0000 ± 0.0112	0.0000 ± 0.0013
* Ni	0.0034 ± 0.0158	0.0017 ± 0.0078	0.0002 ± 0.0009
* Cu	0.0486 ± 0.0170	0.0241 ± 0.0085	0.0027 ± 0.0010
Zn	0.0599 ± 0.0136	0.0296 ± 0.0069	0.0033 ± 0.0008
* Ga	0.0023 ± 0.0102	0.0011 ± 0.0050	0.0001 ± 0.0006
* Ge	0.0000 ± 0.0113	0.0000 ± 0.0056	0.0000 ± 0.0006
* As	0.0136 ± 0.0136	0.0067 ± 0.0067	0.0008 ± 0.0008
* Se	0.0023 ± 0.0068	0.0011 ± 0.0034	0.0001 ± 0.0004
Br	0.0870 ± 0.0090	0.0431 ± 0.0050	0.0048 ± 0.0007
* Rb	0.0113 ± 0.0068	0.0056 ± 0.0034	0.0006 ± 0.0004
Sr	0.0362 ± 0.0090	0.0179 ± 0.0046	0.0020 ± 0.0005
* Y	0.0170 ± 0.0102	0.0084 ± 0.0051	0.0009 ± 0.0006
* Zr	0.0237 ± 0.0136	0.0117 ± 0.0067	0.0013 ± 0.0008
* Mo	0.0113 ± 0.0192	0.0056 ± 0.0095	0.0006 ± 0.0011
Pd	0.1616 ± 0.0475	0.0800 ± 0.0238	0.0090 ± 0.0028
* Ag	0.0599 ± 0.0486	0.0296 ± 0.0241	0.0033 ± 0.0027
* Cd	0.0859 ± 0.0531	0.0425 ± 0.0264	0.0048 ± 0.0030
* In	0.0486 ± 0.0588	0.0241 ± 0.0291	0.0027 ± 0.0033
* Sn	0.0599 ± 0.0689	0.0296 ± 0.0342	0.0033 ± 0.0038
* Sb	0.0000 ± 0.0825	0.0000 ± 0.0408	0.0000 ± 0.0046
* Ba	0.0441 ± 0.0328	0.0218 ± 0.0163	0.0024 ± 0.0018
* La	0.0000 ± 0.0249	0.0000 ± 0.0123	0.0000 ± 0.0014
Hg	0.0576 ± 0.0170	0.0285 ± 0.0085	0.0032 ± 0.0010
* Pb	0.0000 ± 0.0203	0.0000 ± 0.0101	0.0000 ± 0.0011

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2570  
Client ID: BMI06-070309  
Filter ID: P8099587  
Site: BMI06  
Sample Date: 7/ 3/09  
Filter Lot #: 6336008  
Volume: 24.20 +/- 2.420 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	269. ± 10.		11.12 ± 1.186
XRF			
* Na	1.540 ± 0.8339	0.5726 ± 0.3107	0.0636 ± 0.0350
Mg	1.012 ± 0.3119	0.3764 ± 0.1168	0.0418 ± 0.0135
Al	3.512 ± 0.2701	1.306 ± 0.1115	0.1451 ± 0.0183
Si	11.14 ± 0.5899	4.140 ± 0.2679	0.4602 ± 0.0521
* P	0.0000 ± 0.0350	0.0000 ± 0.0130	0.0000 ± 0.0014
S	11.05 ± 0.5786	4.110 ± 0.2638	0.4568 ± 0.0516
Cl	0.9085 ± 0.0757	0.3377 ± 0.0308	0.0375 ± 0.0049
K	4.009 ± 0.2124	1.490 ± 0.0965	0.1657 ± 0.0187
Ca	7.507 ± 0.3831	2.791 ± 0.1762	0.3102 ± 0.0348
Ti	0.9289 ± 0.0508	0.3453 ± 0.0228	0.0384 ± 0.0044
V	0.0723 ± 0.0102	0.0269 ± 0.0039	0.0030 ± 0.0005
* Cr	0.0249 ± 0.0090	0.0092 ± 0.0034	0.0010 ± 0.0004
Mn	0.1785 ± 0.0147	0.0664 ± 0.0060	0.0074 ± 0.0010
Fe	3.106 ± 0.1593	1.155 ± 0.0732	0.1284 ± 0.0144
* Co	0.0000 ± 0.0237	0.0000 ± 0.0088	0.0000 ± 0.0010
* Ni	0.0000 ± 0.0170	0.0000 ± 0.0063	0.0000 ± 0.0007
Cu	0.2102 ± 0.0226	0.0781 ± 0.0089	0.0087 ± 0.0013
Zn	0.0689 ± 0.0136	0.0256 ± 0.0051	0.0028 ± 0.0006
* Ga	0.0170 ± 0.0113	0.0063 ± 0.0042	0.0007 ± 0.0005
* Ge	0.0113 ± 0.0102	0.0042 ± 0.0038	0.0005 ± 0.0004
* As	0.0079 ± 0.0147	0.0029 ± 0.0055	0.0003 ± 0.0006
* Se	0.0090 ± 0.0079	0.0034 ± 0.0029	0.0004 ± 0.0003
Br	0.1006 ± 0.0090	0.0374 ± 0.0036	0.0042 ± 0.0006
* Rb	0.0170 ± 0.0079	0.0063 ± 0.0029	0.0007 ± 0.0003
Sr	0.0881 ± 0.0113	0.0328 ± 0.0044	0.0036 ± 0.0006
* Y	0.0000 ± 0.0113	0.0000 ± 0.0042	0.0000 ± 0.0005
* Zr	0.0384 ± 0.0147	0.0143 ± 0.0055	0.0016 ± 0.0006
* Mo	0.0000 ± 0.0203	0.0000 ± 0.0076	0.0000 ± 0.0008
* Pd	0.0757 ± 0.0486	0.0281 ± 0.0181	0.0031 ± 0.0020
* Ag	0.1356 ± 0.0520	0.0504 ± 0.0194	0.0056 ± 0.0022
* Cd	0.0011 ± 0.0542	0.0004 ± 0.0202	0.0000 ± 0.0022
* In	0.0746 ± 0.0622	0.0277 ± 0.0231	0.0031 ± 0.0026
* Sn	0.1390 ± 0.0746	0.0517 ± 0.0278	0.0057 ± 0.0031
* Sb	0.0305 ± 0.0881	0.0113 ± 0.0328	0.0013 ± 0.0036
* Ba	0.1424 ± 0.0508	0.0529 ± 0.0190	0.0059 ± 0.0022
* La	0.0000 ± 0.0452	0.0000 ± 0.0168	0.0000 ± 0.0019
* Hg	0.0000 ± 0.0203	0.0000 ± 0.0076	0.0000 ± 0.0008
* Pb	0.0429 ± 0.0226	0.0160 ± 0.0084	0.0018 ± 0.0010

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2571  
Client ID: BMI03-070309  
Filter ID: P8099588  
Site: BMI03  
Sample Date: 7/ 3/09  
Filter Lot #: 6336008  
Volume: 16.98 +/- 1.698 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	173. ± 10.		10.19 ± 1.177
XRF			
Na	3.418 ± 0.7876	1.976 ± 0.4694	0.2013 ± 0.0506
Mg	1.075 ± 0.2735	0.6212 ± 0.1621	0.0633 ± 0.0173
Al	2.709 ± 0.2204	1.566 ± 0.1562	0.1595 ± 0.0206
Si	7.776 ± 0.4170	4.495 ± 0.3544	0.4579 ± 0.0520
* P	0.0000 ± 0.0316	0.0000 ± 0.0183	0.0000 ± 0.0019
S	10.43 ± 0.5458	6.026 ± 0.4700	0.6140 ± 0.0693
Cl	0.2622 ± 0.0508	0.1515 ± 0.0307	0.0154 ± 0.0034
K	3.462 ± 0.1842	2.001 ± 0.1572	0.2039 ± 0.0231
Ca	4.335 ± 0.2237	2.506 ± 0.1942	0.2553 ± 0.0287
Ti	0.2757 ± 0.0192	0.1594 ± 0.0144	0.0162 ± 0.0020
* V	0.0215 ± 0.0079	0.0124 ± 0.0046	0.0013 ± 0.0005
* Cr	0.0079 ± 0.0090	0.0046 ± 0.0052	0.0005 ± 0.0005
* Mn	0.0316 ± 0.0113	0.0183 ± 0.0066	0.0019 ± 0.0007
Fe	2.128 ± 0.1107	1.230 ± 0.0957	0.1253 ± 0.0141
* Co	0.0000 ± 0.0237	0.0000 ± 0.0137	0.0000 ± 0.0014
* Ni	0.0181 ± 0.0181	0.0105 ± 0.0105	0.0011 ± 0.0011
* Cu	0.0237 ± 0.0170	0.0137 ± 0.0098	0.0014 ± 0.0010
Zn	0.0655 ± 0.0136	0.0379 ± 0.0081	0.0039 ± 0.0009
* Ga	0.0000 ± 0.0113	0.0000 ± 0.0065	0.0000 ± 0.0007
* Ge	0.0011 ± 0.0102	0.0007 ± 0.0059	0.0001 ± 0.0006
* As	0.0000 ± 0.0147	0.0000 ± 0.0085	0.0000 ± 0.0009
* Se	0.0000 ± 0.0079	0.0000 ± 0.0046	0.0000 ± 0.0005
Br	0.0825 ± 0.0090	0.0477 ± 0.0059	0.0049 ± 0.0007
* Rb	0.0147 ± 0.0079	0.0085 ± 0.0046	0.0009 ± 0.0005
Sr	0.0531 ± 0.0102	0.0307 ± 0.0061	0.0031 ± 0.0007
* Y	0.0023 ± 0.0113	0.0013 ± 0.0065	0.0001 ± 0.0007
* Zr	0.0124 ± 0.0147	0.0072 ± 0.0085	0.0007 ± 0.0009
* Mo	0.0373 ± 0.0215	0.0216 ± 0.0125	0.0022 ± 0.0013
* Pd	0.0780 ± 0.0497	0.0451 ± 0.0289	0.0046 ± 0.0030
* Ag	0.0791 ± 0.0520	0.0457 ± 0.0302	0.0047 ± 0.0031
* Cd	0.1074 ± 0.0565	0.0621 ± 0.0329	0.0063 ± 0.0034
* In	0.1627 ± 0.0622	0.0941 ± 0.0363	0.0096 ± 0.0038
* Sn	0.1345 ± 0.0746	0.0777 ± 0.0433	0.0079 ± 0.0045
* Sb	0.0441 ± 0.0893	0.0255 ± 0.0516	0.0026 ± 0.0053
* Ba	0.0429 ± 0.0373	0.0248 ± 0.0216	0.0025 ± 0.0022
* La	0.0000 ± 0.0282	0.0000 ± 0.0163	0.0000 ± 0.0017
* Hg	0.0339 ± 0.0181	0.0196 ± 0.0105	0.0020 ± 0.0011
* Pb	0.0124 ± 0.0226	0.0072 ± 0.0131	0.0007 ± 0.0013

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2572  
Client ID: CAMU04-070309  
Filter ID: P8099589  
Site: CAMU04  
Sample Date: 7/ 3/09  
Filter Lot #: 6336008  
Volume: 24.04 +/- 2.404 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	850. ± 10.		35.36 ± 3.560
XRF			
* Na	0.0000 ± 0.6814	0.0000 ± 0.0802	0.0000 ± 0.0283
Mg	11.67 ± 1.001	1.373 ± 0.1189	0.4856 ± 0.0640
Al	19.89 ± 1.296	2.340 ± 0.1549	0.8273 ± 0.0987
Si	61.84 ± 3.286	7.276 ± 0.3960	2.573 ± 0.2913
* P	0.0000 ± 0.0542	0.0000 ± 0.0064	0.0000 ± 0.0023
S	10.27 ± 0.5537	1.208 ± 0.0667	0.4271 ± 0.0485
Cl	6.357 ± 0.3446	0.7479 ± 0.0415	0.2644 ± 0.0301
K	11.25 ± 0.5797	1.323 ± 0.0700	0.4678 ± 0.0526
Ca	41.19 ± 2.084	4.846 ± 0.2517	1.713 ± 0.1920
Ti	1.919 ± 0.0994	0.2257 ± 0.0120	0.0798 ± 0.0090
V	0.0768 ± 0.0124	0.0090 ± 0.0015	0.0032 ± 0.0006
* Cr	0.0045 ± 0.0102	0.0005 ± 0.0012	0.0002 ± 0.0004
Mn	1.141 ± 0.0972	0.1343 ± 0.0115	0.0475 ± 0.0062
Fe	12.88 ± 0.6475	1.516 ± 0.0782	0.5359 ± 0.0600
* Co	0.0000 ± 0.0282	0.0000 ± 0.0033	0.0000 ± 0.0012
* Ni	0.0294 ± 0.0181	0.0035 ± 0.0021	0.0012 ± 0.0008
* Cu	0.0441 ± 0.0170	0.0052 ± 0.0020	0.0018 ± 0.0007
Zn	0.1130 ± 0.0147	0.0133 ± 0.0017	0.0047 ± 0.0008
* Ga	0.0136 ± 0.0113	0.0016 ± 0.0013	0.0006 ± 0.0005
* Ge	0.0000 ± 0.0113	0.0000 ± 0.0013	0.0000 ± 0.0005
* As	0.0000 ± 0.0147	0.0000 ± 0.0017	0.0000 ± 0.0006
* Se	0.0215 ± 0.0079	0.0025 ± 0.0009	0.0009 ± 0.0003
Br	0.0960 ± 0.0090	0.0113 ± 0.0011	0.0040 ± 0.0005
Rb	0.0418 ± 0.0079	0.0049 ± 0.0009	0.0017 ± 0.0004
Sr	0.3254 ± 0.0203	0.0383 ± 0.0024	0.0135 ± 0.0016
* Y	0.0124 ± 0.0113	0.0015 ± 0.0013	0.0005 ± 0.0005
Zr	0.1435 ± 0.0170	0.0169 ± 0.0020	0.0060 ± 0.0009
* Mo	0.0170 ± 0.0203	0.0020 ± 0.0024	0.0007 ± 0.0008
* Pd	0.0599 ± 0.0508	0.0070 ± 0.0060	0.0025 ± 0.0021
* Ag	0.0362 ± 0.0520	0.0043 ± 0.0061	0.0015 ± 0.0022
* Cd	0.0000 ± 0.0565	0.0000 ± 0.0066	0.0000 ± 0.0024
* In	0.0655 ± 0.0644	0.0077 ± 0.0076	0.0027 ± 0.0027
* Sn	0.2079 ± 0.0768	0.0245 ± 0.0090	0.0086 ± 0.0033
* Sb	0.0113 ± 0.0893	0.0013 ± 0.0105	0.0005 ± 0.0037
Ba	0.2463 ± 0.0746	0.0290 ± 0.0088	0.0102 ± 0.0033
* La	0.0000 ± 0.0644	0.0000 ± 0.0076	0.0000 ± 0.0027
Hg	0.0712 ± 0.0181	0.0084 ± 0.0021	0.0030 ± 0.0008
Pb	0.1096 ± 0.0237	0.0129 ± 0.0028	0.0046 ± 0.0011

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2573  
Client ID: CAMU06-070309  
Filter ID: P8099590  
Site: CAMU06  
Sample Date: 7/ 3/09  
Filter Lot #: 6336008  
Volume: 20.02 +/- 2.002 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	568. ± 10.		28.37 ± 2.881
XRF			
* Na	0.9436 ± 0.5209	0.1661 ± 0.0918	0.0471 ± 0.0264
Mg	4.309 ± 0.4927	0.7586 ± 0.0878	0.2152 ± 0.0327
Al	7.583 ± 0.5153	1.335 ± 0.0937	0.3788 ± 0.0458
Si	23.31 ± 1.228	4.104 ± 0.2280	1.164 ± 0.1316
* P	0.0000 ± 0.0373	0.0000 ± 0.0066	0.0000 ± 0.0019
S	10.85 ± 0.5740	1.910 ± 0.1065	0.5419 ± 0.0613
Cl	2.926 ± 0.1695	0.5151 ± 0.0312	0.1461 ± 0.0169
K	5.830 ± 0.3040	1.026 ± 0.0565	0.2912 ± 0.0328
Ca	17.84 ± 0.9029	3.141 ± 0.1683	0.8912 ± 0.0999
Ti	0.7910 ± 0.0441	0.1393 ± 0.0081	0.0395 ± 0.0045
* V	0.0203 ± 0.0090	0.0036 ± 0.0016	0.0010 ± 0.0005
* Cr	0.0215 ± 0.0090	0.0038 ± 0.0016	0.0011 ± 0.0005
Mn	0.7729 ± 0.0734	0.1361 ± 0.0132	0.0386 ± 0.0053
Fe	5.435 ± 0.2757	0.9569 ± 0.0514	0.2715 ± 0.0304
* Co	0.0000 ± 0.0249	0.0000 ± 0.0044	0.0000 ± 0.0012
* Ni	0.0000 ± 0.0181	0.0000 ± 0.0032	0.0000 ± 0.0009
Cu	0.0554 ± 0.0170	0.0097 ± 0.0030	0.0028 ± 0.0009
Zn	0.1130 ± 0.0147	0.0199 ± 0.0026	0.0056 ± 0.0009
* Ga	0.0215 ± 0.0113	0.0038 ± 0.0020	0.0011 ± 0.0006
* Ge	0.0090 ± 0.0102	0.0016 ± 0.0018	0.0005 ± 0.0005
* As	0.0000 ± 0.0147	0.0000 ± 0.0026	0.0000 ± 0.0007
* Se	0.0124 ± 0.0079	0.0022 ± 0.0014	0.0006 ± 0.0004
Br	0.1119 ± 0.0102	0.0197 ± 0.0018	0.0056 ± 0.0008
* Rb	0.0147 ± 0.0079	0.0026 ± 0.0014	0.0007 ± 0.0004
Sr	0.1492 ± 0.0124	0.0263 ± 0.0022	0.0075 ± 0.0010
* Y	0.0000 ± 0.0113	0.0000 ± 0.0020	0.0000 ± 0.0006
* Zr	0.0294 ± 0.0147	0.0052 ± 0.0026	0.0015 ± 0.0007
* Mo	0.0011 ± 0.0203	0.0002 ± 0.0036	0.0001 ± 0.0010
Pd	0.1627 ± 0.0508	0.0286 ± 0.0090	0.0081 ± 0.0027
Ag	0.1853 ± 0.0531	0.0326 ± 0.0094	0.0093 ± 0.0028
* Cd	0.0780 ± 0.0565	0.0137 ± 0.0100	0.0039 ± 0.0028
* In	0.0960 ± 0.0622	0.0169 ± 0.0109	0.0048 ± 0.0031
* Sn	0.1153 ± 0.0734	0.0203 ± 0.0129	0.0058 ± 0.0037
* Sb	0.0655 ± 0.0881	0.0115 ± 0.0155	0.0033 ± 0.0044
* Ba	0.0497 ± 0.0452	0.0088 ± 0.0080	0.0025 ± 0.0023
* La	0.0000 ± 0.0362	0.0000 ± 0.0064	0.0000 ± 0.0018
* Hg	0.0068 ± 0.0203	0.0012 ± 0.0036	0.0003 ± 0.0010
* Pb	0.0260 ± 0.0226	0.0046 ± 0.0040	0.0013 ± 0.0011

\* - Concentration is less than three times the uncertainty



Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2574  
Client ID: CAMU04-070709  
Filter ID: P8099591  
Site: CAMU04  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Volume: 24.08 +/- 2.408 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	160. ± 10.		6.645 ± 0.7836
XRF			
* Na	1.271 ± 0.7153	0.7945 ± 0.4498	0.0528 ± 0.0302
Mg	1.435 ± 0.2859	0.8969 ± 0.1873	0.0596 ± 0.0133
Al	3.727 ± 0.2712	2.329 ± 0.2234	0.1548 ± 0.0191
Si	9.845 ± 0.5209	6.153 ± 0.5039	0.4088 ± 0.0463
* P	0.0000 ± 0.0282	0.0000 ± 0.0177	0.0000 ± 0.0012
S	4.439 ± 0.2497	2.774 ± 0.2333	0.1843 ± 0.0212
Cl	1.644 ± 0.1062	1.028 ± 0.0924	0.0683 ± 0.0081
K	2.059 ± 0.1153	1.287 ± 0.1080	0.0855 ± 0.0098
Ca	6.396 ± 0.3266	3.997 ± 0.3226	0.2656 ± 0.0298
Ti	0.3108 ± 0.0203	0.1942 ± 0.0176	0.0129 ± 0.0015
* V	0.0136 ± 0.0079	0.0085 ± 0.0050	0.0006 ± 0.0003
* Cr	0.0068 ± 0.0079	0.0042 ± 0.0050	0.0003 ± 0.0003
Mn	0.0644 ± 0.0113	0.0403 ± 0.0075	0.0027 ± 0.0005
Fe	3.044 ± 0.1559	1.903 ± 0.1538	0.1264 ± 0.0142
* Co	0.0000 ± 0.0237	0.0000 ± 0.0148	0.0000 ± 0.0010
* Ni	0.0000 ± 0.0170	0.0000 ± 0.0106	0.0000 ± 0.0007
* Cu	0.0486 ± 0.0170	0.0304 ± 0.0108	0.0020 ± 0.0007
Zn	0.0463 ± 0.0124	0.0290 ± 0.0080	0.0019 ± 0.0006
* Ga	0.0090 ± 0.0102	0.0056 ± 0.0064	0.0004 ± 0.0004
* Ge	0.0023 ± 0.0102	0.0014 ± 0.0064	0.0001 ± 0.0004
* As	0.0000 ± 0.0147	0.0000 ± 0.0092	0.0000 ± 0.0006
* Se	0.0079 ± 0.0068	0.0049 ± 0.0042	0.0003 ± 0.0003
Br	0.0249 ± 0.0068	0.0155 ± 0.0043	0.0010 ± 0.0003
* Rb	0.0124 ± 0.0079	0.0078 ± 0.0050	0.0005 ± 0.0003
Sr	0.0463 ± 0.0090	0.0290 ± 0.0059	0.0019 ± 0.0004
* Y	0.0000 ± 0.0113	0.0000 ± 0.0071	0.0000 ± 0.0005
* Zr	0.0079 ± 0.0136	0.0049 ± 0.0085	0.0003 ± 0.0006
* Mo	0.0192 ± 0.0203	0.0120 ± 0.0127	0.0008 ± 0.0008
* Pd	0.0791 ± 0.0475	0.0494 ± 0.0298	0.0033 ± 0.0020
* Ag	0.0780 ± 0.0497	0.0487 ± 0.0312	0.0032 ± 0.0021
* Cd	0.1119 ± 0.0542	0.0699 ± 0.0342	0.0046 ± 0.0023
* In	0.1537 ± 0.0610	0.0960 ± 0.0386	0.0064 ± 0.0026
* Sn	0.0712 ± 0.0712	0.0445 ± 0.0446	0.0030 ± 0.0030
* Sb	0.1921 ± 0.0893	0.1201 ± 0.0563	0.0080 ± 0.0038
* Ba	0.0452 ± 0.0350	0.0282 ± 0.0220	0.0019 ± 0.0015
* La	0.0000 ± 0.0282	0.0000 ± 0.0177	0.0000 ± 0.0012
* Hg	0.0000 ± 0.0192	0.0000 ± 0.0120	0.0000 ± 0.0008
* Pb	0.0158 ± 0.0215	0.0099 ± 0.0134	0.0007 ± 0.0009

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2575  
Client ID: CAMU06-070709  
Filter ID: P8099592  
Site: CAMU06  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Volume: 21.19 +/- 2.119 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	1,522. ± 10.		71.83 ± 7.198
XRF			
* Na	0.8385 ± 0.8452	0.0551 ± 0.0555	0.0396 ± 0.0401
Mg	15.16 ± 1.327	0.9964 ± 0.0874	0.7156 ± 0.0951
Al	27.01 ± 1.823	1.774 ± 0.1203	1.275 ± 0.1538
Si	79.18 ± 4.345	5.202 ± 0.2875	3.737 ± 0.4262
* P	0.0000 ± 0.0565	0.0000 ± 0.0037	0.0000 ± 0.0027
S	8.099 ± 0.4509	0.5321 ± 0.0298	0.3822 ± 0.0437
Cl	8.822 ± 0.4735	0.5796 ± 0.0313	0.4163 ± 0.0472
K	15.81 ± 0.8147	1.039 ± 0.0540	0.7460 ± 0.0839
Ca	56.67 ± 2.877	3.723 ± 0.1906	2.674 ± 0.2999
Ti	2.964 ± 0.1842	0.1947 ± 0.0122	0.1399 ± 0.0165
* V	0.0994 ± 0.0396	0.0065 ± 0.0026	0.0047 ± 0.0019
Cr	0.0418 ± 0.0124	0.0027 ± 0.0008	0.0020 ± 0.0006
Mn	0.8814 ± 0.0814	0.0579 ± 0.0054	0.0416 ± 0.0057
Fe	17.66 ± 0.8859	1.160 ± 0.0587	0.8335 ± 0.0932
* Co	0.0000 ± 0.0316	0.0000 ± 0.0021	0.0000 ± 0.0015
* Ni	0.0170 ± 0.0192	0.0011 ± 0.0013	0.0008 ± 0.0009
Cu	0.0780 ± 0.0181	0.0051 ± 0.0012	0.0037 ± 0.0009
Zn	0.1367 ± 0.0158	0.0090 ± 0.0010	0.0065 ± 0.0010
* Ga	0.0328 ± 0.0113	0.0022 ± 0.0007	0.0015 ± 0.0006
* Ge	0.0000 ± 0.0124	0.0000 ± 0.0008	0.0000 ± 0.0006
* As	0.0350 ± 0.0158	0.0023 ± 0.0010	0.0017 ± 0.0008
* Se	0.0023 ± 0.0079	0.0001 ± 0.0005	0.0001 ± 0.0004
Br	0.0689 ± 0.0090	0.0045 ± 0.0006	0.0033 ± 0.0005
Rb	0.0542 ± 0.0090	0.0036 ± 0.0006	0.0026 ± 0.0005
Sr	0.6384 ± 0.0350	0.0419 ± 0.0023	0.0301 ± 0.0034
* Y	0.0203 ± 0.0124	0.0013 ± 0.0008	0.0010 ± 0.0006
Zr	0.2859 ± 0.0226	0.0188 ± 0.0015	0.0135 ± 0.0017
* Mo	0.0000 ± 0.0215	0.0000 ± 0.0014	0.0000 ± 0.0010
* Pd	0.0927 ± 0.0520	0.0061 ± 0.0034	0.0044 ± 0.0025
* Ag	0.0960 ± 0.0554	0.0063 ± 0.0036	0.0045 ± 0.0027
* Cd	0.1311 ± 0.0599	0.0086 ± 0.0039	0.0062 ± 0.0029
* In	0.0237 ± 0.0667	0.0016 ± 0.0044	0.0011 ± 0.0031
* Sn	0.0192 ± 0.0768	0.0013 ± 0.0050	0.0009 ± 0.0036
* Sb	0.1446 ± 0.0960	0.0095 ± 0.0063	0.0068 ± 0.0046
Ba	0.8780 ± 0.1322	0.0577 ± 0.0087	0.0414 ± 0.0075
* La	0.0000 ± 0.1186	0.0000 ± 0.0078	0.0000 ± 0.0056
Hg	0.0723 ± 0.0192	0.0048 ± 0.0013	0.0034 ± 0.0010
Pb	0.1254 ± 0.0249	0.0082 ± 0.0016	0.0059 ± 0.0013

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2576  
Client ID: BMI03-070709  
Filter ID: P8099593  
Site: BMI03  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Volume: 12.63 +/- 1.263 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	107. ± 10.		8.472 ± 1.160
XRF			
* Na	0.2633 ± 0.3480	0.2461 ± 0.3261	0.0208 ± 0.0276
* Mg	0.2565 ± 0.2316	0.2397 ± 0.2177	0.0203 ± 0.0185
Al	1.328 ± 0.1412	1.241 ± 0.1757	0.1051 ± 0.0153
Si	3.249 ± 0.1887	3.036 ± 0.3341	0.2572 ± 0.0297
* P	0.0068 ± 0.0260	0.0063 ± 0.0243	0.0005 ± 0.0021
S	2.869 ± 0.1729	2.681 ± 0.2982	0.2272 ± 0.0265
Cl	0.3503 ± 0.0520	0.3274 ± 0.0574	0.0277 ± 0.0050
K	0.9808 ± 0.0622	0.9167 ± 0.1035	0.0777 ± 0.0092
Ca	2.192 ± 0.2588	2.049 ± 0.3085	0.1736 ± 0.0269
Ti	0.3322 ± 0.0215	0.3105 ± 0.0353	0.0263 ± 0.0031
* V	0.0170 ± 0.0079	0.0158 ± 0.0075	0.0013 ± 0.0006
* Cr	0.0000 ± 0.0090	0.0000 ± 0.0084	0.0000 ± 0.0007
Mn	0.2113 ± 0.0170	0.1975 ± 0.0243	0.0167 ± 0.0021
Fe	1.001 ± 0.0565	0.9357 ± 0.1022	0.0793 ± 0.0091
* Co	0.0023 ± 0.0237	0.0021 ± 0.0222	0.0002 ± 0.0019
* Ni	0.0339 ± 0.0181	0.0317 ± 0.0172	0.0027 ± 0.0015
* Cu	0.0249 ± 0.0170	0.0232 ± 0.0160	0.0020 ± 0.0014
* Zn	0.0147 ± 0.0136	0.0137 ± 0.0127	0.0012 ± 0.0011
* Ga	0.0136 ± 0.0113	0.0127 ± 0.0106	0.0011 ± 0.0009
* Ge	0.0113 ± 0.0113	0.0106 ± 0.0106	0.0009 ± 0.0009
* As	0.0023 ± 0.0158	0.0021 ± 0.0148	0.0002 ± 0.0013
* Se	0.0000 ± 0.0079	0.0000 ± 0.0074	0.0000 ± 0.0006
Br	0.0260 ± 0.0079	0.0243 ± 0.0077	0.0021 ± 0.0007
* Rb	0.0068 ± 0.0079	0.0063 ± 0.0074	0.0005 ± 0.0006
* Sr	0.0237 ± 0.0102	0.0222 ± 0.0097	0.0019 ± 0.0008
* Y	0.0000 ± 0.0113	0.0000 ± 0.0106	0.0000 ± 0.0009
* Zr	0.0034 ± 0.0147	0.0032 ± 0.0137	0.0003 ± 0.0012
* Mo	0.0000 ± 0.0215	0.0000 ± 0.0201	0.0000 ± 0.0017
* Pd	0.0949 ± 0.0497	0.0887 ± 0.0472	0.0075 ± 0.0040
* Ag	0.1311 ± 0.0520	0.1225 ± 0.0499	0.0104 ± 0.0042
* Cd	0.0463 ± 0.0554	0.0433 ± 0.0519	0.0037 ± 0.0044
* In	0.1028 ± 0.0610	0.0961 ± 0.0577	0.0081 ± 0.0049
* Sn	0.1910 ± 0.0746	0.1785 ± 0.0717	0.0151 ± 0.0061
* Sb	0.2011 ± 0.0904	0.1880 ± 0.0863	0.0159 ± 0.0073
* Ba	0.0192 ± 0.0373	0.0180 ± 0.0349	0.0015 ± 0.0030
* La	0.0000 ± 0.0305	0.0000 ± 0.0285	0.0000 ± 0.0024
* Hg	0.0056 ± 0.0215	0.0053 ± 0.0201	0.0004 ± 0.0017
* Pb	0.0249 ± 0.0226	0.0232 ± 0.0212	0.0020 ± 0.0018

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2577  
Client ID: BMI08-070709  
Filter ID: P8099594  
Site: BMI08  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Volume: 16.42 +/- 1.642 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	295. ± 10.		17.97 ± 1.897
XRF			
* Na	0.0000 ± 0.4271	0.0000 ± 0.1448	0.0000 ± 0.0260
Mg	3.271 ± 0.4034	1.109 ± 0.1418	0.1992 ± 0.0316
Al	6.642 ± 0.4475	2.252 ± 0.1698	0.4045 ± 0.0488
Si	17.47 ± 0.9142	5.922 ± 0.3692	1.064 ± 0.1201
* P	0.0226 ± 0.0362	0.0077 ± 0.0123	0.0014 ± 0.0022
S	5.425 ± 0.3006	1.839 ± 0.1194	0.3304 ± 0.0378
Cl	1.151 ± 0.0870	0.3903 ± 0.0323	0.0701 ± 0.0088
K	3.765 ± 0.2000	1.276 ± 0.0804	0.2293 ± 0.0260
Ca	10.25 ± 0.5209	3.476 ± 0.2123	0.6245 ± 0.0700
Ti	1.971 ± 0.1017	0.6680 ± 0.0412	0.1200 ± 0.0135
V	0.1616 ± 0.0147	0.0548 ± 0.0053	0.0098 ± 0.0013
Cr	0.0599 ± 0.0102	0.0203 ± 0.0035	0.0036 ± 0.0007
Mn	1.461 ± 0.0746	0.4953 ± 0.0303	0.0890 ± 0.0100
Fe	6.135 ± 0.3108	2.080 ± 0.1268	0.3736 ± 0.0419
* Co	0.0000 ± 0.0260	0.0000 ± 0.0088	0.0000 ± 0.0016
* Ni	0.0056 ± 0.0181	0.0019 ± 0.0061	0.0003 ± 0.0011
Cu	0.0881 ± 0.0181	0.0299 ± 0.0062	0.0054 ± 0.0012
Zn	0.0633 ± 0.0136	0.0215 ± 0.0047	0.0039 ± 0.0009
* Ga	0.0079 ± 0.0113	0.0027 ± 0.0038	0.0005 ± 0.0007
* Ge	0.0136 ± 0.0102	0.0046 ± 0.0035	0.0008 ± 0.0006
* As	0.0396 ± 0.0158	0.0134 ± 0.0054	0.0024 ± 0.0010
* Se	0.0147 ± 0.0079	0.0050 ± 0.0027	0.0009 ± 0.0005
Br	0.0565 ± 0.0079	0.0192 ± 0.0028	0.0034 ± 0.0006
* Rb	0.0102 ± 0.0079	0.0034 ± 0.0027	0.0006 ± 0.0005
Sr	0.1288 ± 0.0124	0.0437 ± 0.0045	0.0078 ± 0.0011
* Y	0.0000 ± 0.0113	0.0000 ± 0.0038	0.0000 ± 0.0007
Zr	0.1944 ± 0.0181	0.0659 ± 0.0065	0.0118 ± 0.0016
Nb	0.1243 ± 0.0158	0.0421 ± 0.0055	0.0076 ± 0.0012
* Mo	0.0000 ± 0.0215	0.0000 ± 0.0073	0.0000 ± 0.0013
* Pd	0.0678 ± 0.0497	0.0230 ± 0.0169	0.0041 ± 0.0031
* Ag	0.0678 ± 0.0520	0.0230 ± 0.0176	0.0041 ± 0.0032
* Cd	0.1266 ± 0.0565	0.0429 ± 0.0192	0.0077 ± 0.0035
* In	0.1390 ± 0.0633	0.0471 ± 0.0215	0.0085 ± 0.0039
* Sn	0.0633 ± 0.0734	0.0215 ± 0.0249	0.0039 ± 0.0045
* Sb	0.0000 ± 0.0870	0.0000 ± 0.0295	0.0000 ± 0.0053
Ba	0.3187 ± 0.0791	0.1080 ± 0.0271	0.0194 ± 0.0052
* La	0.0000 ± 0.0712	0.0000 ± 0.0241	0.0000 ± 0.0043
* Hg	0.0000 ± 0.0203	0.0000 ± 0.0069	0.0000 ± 0.0012
* Pb	0.0678 ± 0.0237	0.0230 ± 0.0081	0.0041 ± 0.0015

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2578  
Client ID: OFF04-070709  
Filter ID: P8099595  
Site: OFF04  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Volume: 9.860 +/- 0.986 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	274. ± 10.		27.79 ± 2.958
XRF			
* Na	0.0000 ± 0.3819	0.0000 ± 0.1394	0.0000 ± 0.0387
Mg	2.657 ± 0.3492	0.9696 ± 0.1323	0.2694 ± 0.0445
Al	3.036 ± 0.2362	1.108 ± 0.0952	0.3079 ± 0.0390
Si	5.403 ± 0.3017	1.972 ± 0.1315	0.5479 ± 0.0628
* P	0.0000 ± 0.0294	0.0000 ± 0.0107	0.0000 ± 0.0030
S	4.361 ± 0.2463	1.591 ± 0.1070	0.4423 ± 0.0508
Cl	1.171 ± 0.0859	0.4273 ± 0.0350	0.1187 ± 0.0147
K	1.252 ± 0.0757	0.4569 ± 0.0323	0.1270 ± 0.0148
Ca	5.111 ± 0.2622	1.865 ± 0.1174	0.5184 ± 0.0583
Ti	1.398 ± 0.0734	0.5102 ± 0.0326	0.1418 ± 0.0160
V	0.0622 ± 0.0113	0.0227 ± 0.0042	0.0063 ± 0.0013
* Cr	0.0170 ± 0.0090	0.0062 ± 0.0033	0.0017 ± 0.0009
Mn	5.522 ± 0.2768	2.015 ± 0.1250	0.5601 ± 0.0627
Fe	2.826 ± 0.1458	1.031 ± 0.0652	0.2866 ± 0.0323
* Co	0.0000 ± 0.0249	0.0000 ± 0.0091	0.0000 ± 0.0025
* Ni	0.0181 ± 0.0181	0.0066 ± 0.0066	0.0018 ± 0.0018
* Cu	0.0090 ± 0.0170	0.0033 ± 0.0062	0.0009 ± 0.0017
Zn	0.0554 ± 0.0136	0.0202 ± 0.0050	0.0056 ± 0.0015
* Ga	0.0158 ± 0.0102	0.0058 ± 0.0037	0.0016 ± 0.0010
* Ge	0.0000 ± 0.0102	0.0000 ± 0.0037	0.0000 ± 0.0010
* As	0.0000 ± 0.0147	0.0000 ± 0.0054	0.0000 ± 0.0015
* Se	0.0000 ± 0.0068	0.0000 ± 0.0025	0.0000 ± 0.0007
Br	0.0441 ± 0.0079	0.0161 ± 0.0029	0.0045 ± 0.0009
* Rb	0.0023 ± 0.0079	0.0008 ± 0.0029	0.0002 ± 0.0008
Sr	0.0520 ± 0.0102	0.0190 ± 0.0038	0.0053 ± 0.0012
* Y	0.0147 ± 0.0113	0.0054 ± 0.0041	0.0015 ± 0.0012
Zr	0.0994 ± 0.0158	0.0363 ± 0.0059	0.0101 ± 0.0019
Nb	0.0972 ± 0.0158	0.0355 ± 0.0059	0.0099 ± 0.0019
* Mo	0.0000 ± 0.0203	0.0000 ± 0.0074	0.0000 ± 0.0021
* Pd	0.0915 ± 0.0486	0.0334 ± 0.0178	0.0093 ± 0.0050
* Ag	0.0972 ± 0.0508	0.0355 ± 0.0186	0.0099 ± 0.0053
* Cd	0.0848 ± 0.0554	0.0309 ± 0.0202	0.0086 ± 0.0057
* In	0.1345 ± 0.0622	0.0491 ± 0.0228	0.0136 ± 0.0064
* Sn	0.0000 ± 0.0712	0.0000 ± 0.0260	0.0000 ± 0.0072
* Sb	0.0000 ± 0.0859	0.0000 ± 0.0313	0.0000 ± 0.0087
* Ba	0.0000 ± 0.0565	0.0000 ± 0.0206	0.0000 ± 0.0057
* La	0.0056 ± 0.0497	0.0021 ± 0.0181	0.0006 ± 0.0050
* Hg	0.0350 ± 0.0181	0.0128 ± 0.0066	0.0036 ± 0.0019
* Pb	0.0429 ± 0.0226	0.0157 ± 0.0083	0.0044 ± 0.0023

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2579  
Client ID: BMI06-070709  
Filter ID: P8099596  
Site: BMI06  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Volume: 24.04 +/- 2.404 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	$\mu\text{g}/\text{filter}$	percent	$\mu\text{g}/\text{m}^3$
Gravimetry			
Net Mass	311. $\pm$ 10.		12.94 $\pm$ 1.359
XRF			
* Na	0.8486 $\pm$ 0.4305	0.2729 $\pm$ 0.1387	0.0353 $\pm$ 0.0183
Mg	1.262 $\pm$ 0.3096	0.4059 $\pm$ 0.1004	0.0525 $\pm$ 0.0139
Al	4.077 $\pm$ 0.2983	1.311 $\pm$ 0.1048	0.1696 $\pm$ 0.0210
Si	10.30 $\pm$ 0.5492	3.312 $\pm$ 0.2062	0.4284 $\pm$ 0.0486
* P	0.0000 $\pm$ 0.0316	0.0000 $\pm$ 0.0102	0.0000 $\pm$ 0.0013
S	7.082 $\pm$ 0.3808	2.277 $\pm$ 0.1427	0.2946 $\pm$ 0.0334
Cl	0.9119 $\pm$ 0.0746	0.2932 $\pm$ 0.0258	0.0379 $\pm$ 0.0049
K	2.840 $\pm$ 0.1537	0.9131 $\pm$ 0.0575	0.1181 $\pm$ 0.0134
Ca	7.035 $\pm$ 0.6023	2.262 $\pm$ 0.2069	0.2927 $\pm$ 0.0385
Ti	0.8961 $\pm$ 0.0486	0.2881 $\pm$ 0.0182	0.0373 $\pm$ 0.0042
V	0.0610 $\pm$ 0.0102	0.0196 $\pm$ 0.0033	0.0025 $\pm$ 0.0005
Cr	0.0294 $\pm$ 0.0090	0.0094 $\pm$ 0.0029	0.0012 $\pm$ 0.0004
Mn	0.5243 $\pm$ 0.0599	0.1686 $\pm$ 0.0200	0.0218 $\pm$ 0.0033
Fe	3.639 $\pm$ 0.1853	1.170 $\pm$ 0.0705	0.1514 $\pm$ 0.0170
* Co	0.0000 $\pm$ 0.0249	0.0000 $\pm$ 0.0080	0.0000 $\pm$ 0.0010
* Ni	0.0158 $\pm$ 0.0181	0.0051 $\pm$ 0.0058	0.0007 $\pm$ 0.0008
Cu	0.1424 $\pm$ 0.0203	0.0458 $\pm$ 0.0067	0.0059 $\pm$ 0.0010
Zn	0.0542 $\pm$ 0.0136	0.0174 $\pm$ 0.0044	0.0023 $\pm$ 0.0006
* Ga	0.0000 $\pm$ 0.0113	0.0000 $\pm$ 0.0036	0.0000 $\pm$ 0.0005
* Ge	0.0079 $\pm$ 0.0102	0.0025 $\pm$ 0.0033	0.0003 $\pm$ 0.0004
* As	0.0136 $\pm$ 0.0147	0.0044 $\pm$ 0.0047	0.0006 $\pm$ 0.0006
* Se	0.0226 $\pm$ 0.0079	0.0073 $\pm$ 0.0026	0.0009 $\pm$ 0.0003
Br	0.0576 $\pm$ 0.0079	0.0185 $\pm$ 0.0026	0.0024 $\pm$ 0.0004
* Rb	0.0192 $\pm$ 0.0079	0.0062 $\pm$ 0.0026	0.0008 $\pm$ 0.0003
Sr	0.0802 $\pm$ 0.0102	0.0258 $\pm$ 0.0034	0.0033 $\pm$ 0.0005
* Y	0.0000 $\pm$ 0.0113	0.0000 $\pm$ 0.0036	0.0000 $\pm$ 0.0005
* Zr	0.0362 $\pm$ 0.0147	0.0116 $\pm$ 0.0047	0.0015 $\pm$ 0.0006
* Mo	0.0000 $\pm$ 0.0215	0.0000 $\pm$ 0.0069	0.0000 $\pm$ 0.0009
* Pd	0.1198 $\pm$ 0.0486	0.0385 $\pm$ 0.0157	0.0050 $\pm$ 0.0021
* Ag	0.0622 $\pm$ 0.0508	0.0200 $\pm$ 0.0164	0.0026 $\pm$ 0.0021
* Cd	0.0565 $\pm$ 0.0554	0.0182 $\pm$ 0.0178	0.0024 $\pm$ 0.0023
* In	0.1808 $\pm$ 0.0622	0.0581 $\pm$ 0.0201	0.0075 $\pm$ 0.0027
* Sn	0.0588 $\pm$ 0.0723	0.0189 $\pm$ 0.0233	0.0024 $\pm$ 0.0030
* Sb	0.2407 $\pm$ 0.0915	0.0774 $\pm$ 0.0295	0.0100 $\pm$ 0.0039
Ba	0.1853 $\pm$ 0.0497	0.0596 $\pm$ 0.0161	0.0077 $\pm$ 0.0022
* La	0.0000 $\pm$ 0.0463	0.0000 $\pm$ 0.0149	0.0000 $\pm$ 0.0019
* Hg	0.0000 $\pm$ 0.0203	0.0000 $\pm$ 0.0065	0.0000 $\pm$ 0.0008
* Pb	0.0362 $\pm$ 0.0226	0.0116 $\pm$ 0.0073	0.0015 $\pm$ 0.0010

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2580  
Client ID: OFF03-070709  
Filter ID: P8099597  
Site: OFF03  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Volume: 10.07 +/- 1.007 m<sup>3</sup>  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	µg/filter	percent	µg/m <sup>3</sup>
Gravimetry			
Net Mass	134. ± 10.		13.31 ± 1.660
XRF			
* Na	1.836 ± 0.6238	1.370 ± 0.4766	0.1823 ± 0.0646
* Mg	0.3695 ± 0.2034	0.2758 ± 0.1532	0.0367 ± 0.0205
Al	0.9763 ± 0.1220	0.7286 ± 0.1061	0.0970 ± 0.0155
Si	2.759 ± 0.1650	2.059 ± 0.1969	0.2740 ± 0.0319
* P	0.0000 ± 0.0249	0.0000 ± 0.0186	0.0000 ± 0.0025
S	2.903 ± 0.1718	2.166 ± 0.2063	0.2883 ± 0.0335
Cl	0.2170 ± 0.0441	0.1619 ± 0.0350	0.0215 ± 0.0049
K	0.7447 ± 0.0508	0.5557 ± 0.0562	0.0739 ± 0.0090
Ca	1.583 ± 0.0859	1.181 ± 0.1090	0.1572 ± 0.0179
Ti	0.0881 ± 0.0102	0.0658 ± 0.0090	0.0088 ± 0.0013
* V	0.0000 ± 0.0068	0.0000 ± 0.0051	0.0000 ± 0.0007
* Cr	0.0023 ± 0.0079	0.0017 ± 0.0059	0.0002 ± 0.0008
Mn	0.0305 ± 0.0102	0.0228 ± 0.0078	0.0030 ± 0.0011
Fe	0.9096 ± 0.0508	0.6788 ± 0.0633	0.0903 ± 0.0103
* Co	0.0113 ± 0.0226	0.0084 ± 0.0169	0.0011 ± 0.0022
* Ni	0.0023 ± 0.0170	0.0017 ± 0.0126	0.0002 ± 0.0017
* Cu	0.0079 ± 0.0158	0.0059 ± 0.0118	0.0008 ± 0.0016
* Zn	0.0056 ± 0.0124	0.0042 ± 0.0093	0.0006 ± 0.0012
* Ga	0.0011 ± 0.0102	0.0008 ± 0.0076	0.0001 ± 0.0010
* Ge	0.0000 ± 0.0102	0.0000 ± 0.0076	0.0000 ± 0.0010
* As	0.0000 ± 0.0147	0.0000 ± 0.0110	0.0000 ± 0.0015
* Se	0.0000 ± 0.0068	0.0000 ± 0.0051	0.0000 ± 0.0007
Br	0.0215 ± 0.0068	0.0160 ± 0.0052	0.0021 ± 0.0007
* Rb	0.0000 ± 0.0079	0.0000 ± 0.0059	0.0000 ± 0.0008
* Sr	0.0170 ± 0.0090	0.0126 ± 0.0068	0.0017 ± 0.0009
* Y	0.0000 ± 0.0113	0.0000 ± 0.0084	0.0000 ± 0.0011
* Zr	0.0023 ± 0.0136	0.0017 ± 0.0101	0.0002 ± 0.0013
* Mo	0.0181 ± 0.0203	0.0135 ± 0.0152	0.0018 ± 0.0020
* Pd	0.1277 ± 0.0486	0.0953 ± 0.0370	0.0127 ± 0.0050
* Ag	0.0554 ± 0.0497	0.0413 ± 0.0372	0.0055 ± 0.0050
* Cd	0.0023 ± 0.0531	0.0017 ± 0.0396	0.0002 ± 0.0053
* In	0.1277 ± 0.0610	0.0953 ± 0.0461	0.0127 ± 0.0062
* Sn	0.0350 ± 0.0712	0.0261 ± 0.0532	0.0035 ± 0.0071
* Sb	0.0000 ± 0.0848	0.0000 ± 0.0632	0.0000 ± 0.0084
* Ba	0.0000 ± 0.0294	0.0000 ± 0.0219	0.0000 ± 0.0029
* La	0.0000 ± 0.0181	0.0000 ± 0.0135	0.0000 ± 0.0018
* Hg	0.0090 ± 0.0170	0.0067 ± 0.0127	0.0009 ± 0.0017
* Pb	0.0136 ± 0.0215	0.0101 ± 0.0160	0.0013 ± 0.0021

\* - Concentration is less than three times the uncertainty

Client: T029 - Tetra Tech EMI  
Report Number: 09-211

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Lab ID: 09-T2581  
Client ID: CAMU06-070709BS  
Filter ID: P8099598  
Site: CAMU06  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	<u>µg/filter</u>	<u>percent</u>
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Gravimetry

Net Mass	13. ± 10.	
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XRF

* Na	0.3334 ± 0.2972	2.564 ± 3.019
* Mg	0.0000 ± 0.1141	0.0000 ± 0.8779
* Al	0.0000 ± 0.0554	0.0000 ± 0.4259
* Si	0.0000 ± 0.0373	0.0000 ± 0.2868
* P	0.0102 ± 0.0203	0.0782 ± 0.1676
* S	0.0000 ± 0.0192	0.0000 ± 0.1478
* Cl	0.0090 ± 0.0384	0.0695 ± 0.3003
* K	0.0203 ± 0.0203	0.1565 ± 0.1974
* Ca	0.0407 ± 0.0147	0.3129 ± 0.2659
* Ti	0.0000 ± 0.0079	0.0000 ± 0.0608
* V	0.0102 ± 0.0068	0.0782 ± 0.0796
* Cr	0.0034 ± 0.0079	0.0261 ± 0.0641
* Mn	0.0000 ± 0.0113	0.0000 ± 0.0869
* Fe	0.0000 ± 0.0170	0.0000 ± 0.1304
* Co	0.0000 ± 0.0237	0.0000 ± 0.1825
* Ni	0.0350 ± 0.0181	0.2695 ± 0.2496
* Cu	0.0000 ± 0.0158	0.0000 ± 0.1217
* Zn	0.0000 ± 0.0124	0.0000 ± 0.0956
* Ga	0.0068 ± 0.0113	0.0522 ± 0.0957
* Ge	0.0000 ± 0.0102	0.0000 ± 0.0782
* As	0.0000 ± 0.0147	0.0000 ± 0.1130
* Se	0.0147 ± 0.0079	0.1130 ± 0.1061
* Br	0.0000 ± 0.0068	0.0000 ± 0.0522
* Rb	0.0181 ± 0.0079	0.1391 ± 0.1231
* Sr	0.0000 ± 0.0090	0.0000 ± 0.0695
* Y	0.0000 ± 0.0113	0.0000 ± 0.0869
* Zr	0.0000 ± 0.0147	0.0000 ± 0.1130
* Mo	0.0000 ± 0.0215	0.0000 ± 0.1652
* Pd	0.0836 ± 0.0497	0.6432 ± 0.6254
* Ag	0.0475 ± 0.0508	0.3651 ± 0.4815
* Cd	0.1333 ± 0.0565	1.026 ± 0.9008
* In	0.1062 ± 0.0622	0.8171 ± 0.7897
* Sn	0.0000 ± 0.0712	0.0000 ± 0.5476
* Sb	0.0000 ± 0.0870	0.0000 ± 0.6693
* Ba	0.0000 ± 0.0294	0.0000 ± 0.2260
* La	0.0226 ± 0.0158	0.1738 ± 0.1808
* Hg	0.0350 ± 0.0181	0.2695 ± 0.2496
* Pb	0.0305 ± 0.0226	0.2347 ± 0.2506

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\* - Concentration is less than three times the uncertainty



Client: T029 - Tetra Tech EMI  
Report Number: 09-211

Lab ID: 09-T2847  
Client ID: OFF03-070709BS  
Filter ID: P8100071  
Site: OFF03  
Sample Date: 7/ 7/09  
Filter Lot #: 6336008  
Deposit Area: 11.3 cm<sup>2</sup>  
Size Fraction: TSP

Analyte	<u>µg/filter</u>	<u>percent</u>
Gravimetry		
Net Mass	4. ± 10.	
XRF		
* Na	0.9017 ± 0.5288	22.54 ± 57.89
* Mg	0.0215 ± 0.1040	0.5368 ± 2.925
* Al	0.0780 ± 0.0701	1.949 ± 5.178
* Si	0.0000 ± 0.0339	0.0000 ± 0.8475
* P	0.0000 ± 0.0181	0.0000 ± 0.4520
* S	0.0000 ± 0.0181	0.0000 ± 0.4520
* Cl	0.0000 ± 0.0328	0.0000 ± 0.8192
* K	0.0000 ± 0.0170	0.0000 ± 0.4238
* Ca	0.0124 ± 0.0124	0.3108 ± 0.8367
* Ti	0.0045 ± 0.0068	0.1130 ± 0.3294
* V	0.0011 ± 0.0056	0.0282 ± 0.1579
* Cr	0.0000 ± 0.0068	0.0000 ± 0.1695
* Mn	0.0203 ± 0.0090	0.5085 ± 1.291
* Fe	0.0090 ± 0.0158	0.2260 ± 0.6897
* Co	0.0011 ± 0.0215	0.0282 ± 0.5414
* Ni	0.0000 ± 0.0158	0.0000 ± 0.3955
* Cu	0.0000 ± 0.0147	0.0000 ± 0.3672
* Zn	0.0000 ± 0.0113	0.0000 ± 0.2825
* Ga	0.0181 ± 0.0102	0.4520 ± 1.158
* Ge	0.0011 ± 0.0090	0.0282 ± 0.2368
* As	0.0000 ± 0.0136	0.0000 ± 0.3390
* Se	0.0068 ± 0.0068	0.1695 ± 0.4564
* Br	0.0136 ± 0.0068	0.3390 ± 0.8643
* Rb	0.0068 ± 0.0068	0.1695 ± 0.4564
* Sr	0.0068 ± 0.0079	0.1695 ± 0.4676
* Y	0.0056 ± 0.0102	0.1412 ± 0.4351
* Zr	0.0000 ± 0.0136	0.0000 ± 0.3390
* Mo	0.0181 ± 0.0192	0.4520 ± 1.228
* Pd	0.0260 ± 0.0452	0.6498 ± 1.979
* Ag	0.1367 ± 0.0475	3.418 ± 8.628
* Cd	0.1085 ± 0.0508	2.712 ± 6.898
* In	0.0000 ± 0.0565	0.0000 ± 1.412
* Sn	0.0316 ± 0.0667	0.7910 ± 2.586
* Sb	0.0000 ± 0.0814	0.0000 ± 2.034
* Ba	0.0170 ± 0.0260	0.4238 ± 1.243
* La	0.0136 ± 0.0136	0.3390 ± 0.9128
* Hg	0.0136 ± 0.0181	0.3390 ± 0.9605
* Pb	0.0203 ± 0.0203	0.5085 ± 1.369

\* - Concentration is less than three times the uncertainty

# CHESTER LabNet

XRF-770

## XRF Analytical Quality Assurance Report

Client: Tetra Tech

Report: 09-211

Analysis Period: July 14-15, 2009

Number of Samples: 22

### 1. Precision Data

Micromatter Multi-elemental Quality Control Standard: QS285

#### QC Standard Results

Analyte	n	Counts per Second			c.v.	%E
		Calib.	Meas.	S.D.		
Si(0)	2	1785.92	1668.10	77.36	4.64	-6.60
Ti(1)	2	591.36	564.06	15.25	2.70	-4.62
Fe(1)	2	1321.41	1271.22	20.90	1.64	-3.80
Se(3)	2	343.74	319.57	1.17	0.37	-7.03
Pb(3)	2	394.75	369.96	0.79	0.21	-6.28
Cd(4)	2	277.97	272.32	3.99	1.46	-2.03

### 2. Accuracy Data

NIST Standard Reference Materials: SRM 1832, SRM 1833, SRM 2783

Analyte/ SRM	n	Certified Value( $\mu\text{g}/\text{cm}^2$ )	Measured Value ( $\mu\text{g}/\text{cm}^2$ )			% Rec.
			High	Low	Average	
Al 1832	4	14.6 +/- .97	15.12	14.40	14.73 +/- 0.27	100.9
Si 1832	4	34.0 +/- 1.1	35.18	33.72	34.37 +/- 0.53	101.1
Si 1833	4	31.5 +/- 2.1	31.48	30.76	31.03 +/- 0.28	98.5
S 2708	4	2.46 +/- .25	2.42	2.33	2.37 +/- 0.04	96.2
K 1833	4	16.4 +/- 1.64	18.14	16.67	17.59 +/- 0.56	107.3
Ca 2783	4	1.33 +/- 0.17	1.34	1.30	1.32 +/- 0.02	99.9
Ti 1833	4	12.1 +/- 1.79	12.12	11.56	11.90 +/- 0.21	98.3
V 1832	4	4.70 +/- .49	4.70	4.44	4.56 +/- 0.11	97.1
Mn 1832	4	4.54 +/- .49	4.51	4.37	4.42 +/- 0.06	97.4
Fe 1833	4	13.6 +/- .45	13.63	13.32	13.50 +/- 0.12	99.2
Cu 1832	4	2.43 +/- .16	2.57	2.37	2.48 +/- 0.08	101.9
Zn 1833	4	3.88 +/- .30	3.62	3.44	3.53 +/- 0.07	90.9
Pb 1833	4	16.1 +/- .75	16.52	16.09	16.27 +/- 0.16	101.0

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

# XRF-770 REPLICATE REPORT

2.77

Original ID: 09-T2575

Replicate ID: RT2575

Filter Lot:

Deposit Mass: 1522 µg

Deposit Area: 11.3 cm²

Particle Size: F

Element	Original ug/cm2			Replicate ug/cm2			Difference ug/cm2			RPD		
Na	0.0742	+-	0.0748	0.0000	+-	0.0906	0.0742	+-	0.1175			
Mg	1.3425	+-	0.1174	1.3254	+-	0.1234	0.0171	+-	0.1703	+	1.3	+- 12.8
Al	2.3904	+-	0.1613	2.4175	+-	0.1645	-0.0271	+-	0.2304	+	-1.1	+- 9.6
Si	7.0074	+-	0.3845	7.0935	+-	0.3895	-0.0860	+-	0.5473	+	-1.2	+- 7.8
P	0.0000	+-	0.0050	0.0002	+-	0.0063	-0.0002	+-	0.0081			
S	0.7167	+-	0.0399	0.7021	+-	0.0416	0.0146	+-	0.0577	+	2.1	+- 8.1
Cl	0.7807	+-	0.0419	0.7371	+-	0.0412	0.0436	+-	0.0588	+	5.7	+- 7.7
K	1.3988	+-	0.0721	1.3793	+-	0.0716	0.0195	+-	0.1016	+	1.4	+- 7.3
Ca	5.0145	+-	0.2546	4.9820	+-	0.2533	0.0325	+-	0.3591	+	0.7	+- 7.2
Ti	0.2623	+-	0.0163	0.2979	+-	0.0155	-0.0356	+-	0.0225	0	-12.7	+- 8.0
V	0.0088	+-	0.0035	0.0166	+-	0.0021	-0.0078	+-	0.0041			
Cr	0.0037	+-	0.0011	0.0021	+-	0.0014	0.0016	+-	0.0018	+	53.5	+- 62.4
Mn	0.0780	+-	0.0072	0.0818	+-	0.0084	-0.0038	+-	0.0111	+	-4.7	+- 13.9
Fe	1.5627	+-	0.0784	1.5582	+-	0.0783	0.0045	+-	0.1108	+	0.3	+- 7.1
Co	0.0000	+-	0.0028	0.0000	+-	0.0038	0.0000	+-	0.0047			
Ni	0.0015	+-	0.0017	0.0000	+-	0.0023	0.0015	+-	0.0028			
Cu	0.0069	+-	0.0016	0.0046	+-	0.0020	0.0023	+-	0.0026	+	39.7	+- 45.0
Zn	0.0121	+-	0.0014	0.0140	+-	0.0018	-0.0019	+-	0.0023	+	-14.9	+- 17.9
Ga	0.0029	+-	0.0010	0.0000	+-	0.0013	0.0029	+-	0.0017			
Ge	0.0000	+-	0.0011	0.0003	+-	0.0013	-0.0003	+-	0.0017			
As	0.0031	+-	0.0014	0.0001	+-	0.0019	0.0030	+-	0.0024			
Se	0.0002	+-	0.0007	0.0021	+-	0.0010	-0.0019	+-	0.0012			
Br	0.0061	+-	0.0008	0.0073	+-	0.0010	-0.0012	+-	0.0013	+	-17.7	+- 18.8
Rb	0.0048	+-	0.0008	0.0060	+-	0.0011	-0.0012	+-	0.0013	+	-23.1	+- 25.0
Sr	0.0565	+-	0.0031	0.0572	+-	0.0033	-0.0006	+-	0.0045	+	-1.1	+- 7.9
Y	0.0018	+-	0.0011	0.0007	+-	0.0014	0.0011	+-	0.0018			
Zr	0.0253	+-	0.0020	0.0274	+-	0.0024	-0.0021	+-	0.0031	+	-8.1	+- 11.7
Mo	0.0000	+-	0.0019	0.0021	+-	0.0025	-0.0021	+-	0.0031			
Pd	0.0082	+-	0.0046	0.0143	+-	0.0065	-0.0061	+-	0.0080			
Ag	0.0085	+-	0.0049	0.0129	+-	0.0067	-0.0044	+-	0.0083			
Cd	0.0116	+-	0.0053	0.0094	+-	0.0075	0.0022	+-	0.0092			
In	0.0021	+-	0.0059	0.0027	+-	0.0080	-0.0006	+-	0.0099			
Sn	0.0017	+-	0.0068	0.0054	+-	0.0094	-0.0038	+-	0.0116			
Sb	0.0128	+-	0.0085	0.0151	+-	0.0111	-0.0023	+-	0.0140			
Ba	0.0777	+-	0.0117	0.0493	+-	0.0118	0.0284	+-	0.0166	0	44.8	+- 26.2
La	0.0000	+-	0.0105	0.0000	+-	0.0102	0.0000	+-	0.0146			
Hg	0.0064	+-	0.0017	0.0036	+-	0.0023	0.0028	+-	0.0028	0	56.7	+- 56.4
Tl	0.0038	+-	0.0020	0.0012	+-	0.0027	0.0026	+-	0.0033			
Pb	0.0111	+-	0.0022	0.0161	+-	0.0029	-0.0050	+-	0.0037	0	-37.1	+- 27.1
Bi	0.0000	+-	0.0021	0.0025	+-	0.0030	-0.0025	+-	0.0036			

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

**XRF-770 REPLICATE REPORT**

5.07

Original ID: 09-T2562

Replicate ID: RT2562

Filter Lot:

Deposit Mass: 1741 µg

Deposit Area: 11.3 cm<sup>2</sup>

Particle Size: F

Element	Original ug/cm2			Replicate ug/cm2			Difference ug/cm2			RPD		
Na	0.0000	+-	0.0833	0.0000	+-	0.0960	0.0000	+-	0.1271			
Mg	1.3812	+-	0.1246	1.3884	+-	0.1304	-0.0072	+-	0.1804	+	-0.5	+- 13.0
Al	2.4535	+-	0.1682	2.3771	+-	0.1644	0.0763	+-	0.2352	+	3.2	+- 9.7
Si	7.1014	+-	0.3938	6.8888	+-	0.3823	0.2126	+-	0.5488	+	3.0	+- 7.8
P	0.0045	+-	0.0052	0.0000	+-	0.0063	0.0045	+-	0.0082			
S	1.2449	+-	0.0674	1.2466	+-	0.0694	-0.0017	+-	0.0967	+	-0.1	+- 7.8
Cl	0.7826	+-	0.0422	0.7858	+-	0.0438	-0.0033	+-	0.0608	+	-0.4	+- 7.8
K	1.4075	+-	0.0726	1.3612	+-	0.0709	0.0464	+-	0.1015	+	3.3	+- 7.3
Ca	5.6778	+-	0.2886	5.6320	+-	0.2866	0.0458	+-	0.4067	+	0.8	+- 7.2
Ti	0.3475	+-	0.0177	0.3357	+-	0.0174	0.0118	+-	0.0248	+	3.5	+- 7.3
V	0.0216	+-	0.0018	0.0223	+-	0.0023	-0.0007	+-	0.0029	+	-3.1	+- 13.4
Cr	0.0034	+-	0.0011	0.0057	+-	0.0015	-0.0023	+-	0.0018	0	-51.3	+- 40.3
Mn	0.1861	+-	0.0144	0.1870	+-	0.0152	-0.0009	+-	0.0209	+	-0.5	+- 11.2
Fe	1.7619	+-	0.0884	1.7452	+-	0.0877	0.0167	+-	0.1245	+	1.0	+- 7.1
Co	0.0000	+-	0.0028	0.0000	+-	0.0038	0.0000	+-	0.0047			
Ni	0.0047	+-	0.0017	0.0081	+-	0.0023	-0.0034	+-	0.0028			
Cu	0.0073	+-	0.0016	0.0099	+-	0.0021	-0.0027	+-	0.0026	0	-30.8	+- 30.6
Zn	0.0196	+-	0.0017	0.0193	+-	0.0020	0.0003	+-	0.0026	+	1.4	+- 13.3
Ga	0.0000	+-	0.0010	0.0014	+-	0.0013	-0.0014	+-	0.0016			
Ge	0.0000	+-	0.0009	0.0000	+-	0.0012	0.0000	+-	0.0015			
As	0.0008	+-	0.0014	0.0028	+-	0.0018	-0.0020	+-	0.0023			
Se	0.0006	+-	0.0007	0.0006	+-	0.0009	0.0001	+-	0.0011			
Br	0.0099	+-	0.0009	0.0101	+-	0.0011	-0.0002	+-	0.0014	+	-1.8	+- 13.8
Rb	0.0046	+-	0.0008	0.0062	+-	0.0010	-0.0015	+-	0.0013	0	-28.3	+- 23.9
Sr	0.0537	+-	0.0029	0.0538	+-	0.0031	-0.0001	+-	0.0042	+	-0.2	+- 7.9
Y	0.0006	+-	0.0010	0.0019	+-	0.0013	-0.0013	+-	0.0017			
Zr	0.0365	+-	0.0024	0.0363	+-	0.0026	0.0002	+-	0.0036	+	0.6	+- 9.8
Nb	0.0105	+-	0.0016	0.0097	+-	0.0021	0.0009	+-	0.0026	+	8.7	+- 26.2
Mo	0.0000	+-	0.0018	0.0011	+-	0.0024	-0.0011	+-	0.0030			
Pd	0.0088	+-	0.0046	0.0107	+-	0.0062	-0.0019	+-	0.0077			
Ag	0.0044	+-	0.0047	0.0106	+-	0.0066	-0.0062	+-	0.0081			
Cd	0.0049	+-	0.0051	0.0326	+-	0.0075	-0.0277	+-	0.0091			
In	0.0138	+-	0.0058	0.0144	+-	0.0079	-0.0006	+-	0.0098			
Sn	0.0078	+-	0.0067	0.0070	+-	0.0092	0.0008	+-	0.0114			
Sb	0.0140	+-	0.0082	0.0000	+-	0.0106	0.0140	+-	0.0134			
Ba	0.0385	+-	0.0114	0.0529	+-	0.0130	-0.0144	+-	0.0173	+	-31.4	+- 37.9
La	0.0000	+-	0.0097	0.0000	+-	0.0112	0.0000	+-	0.0149			
Hg	0.0000	+-	0.0016	0.0000	+-	0.0021	0.0000	+-	0.0026			
Pb	0.0172	+-	0.0023	0.0154	+-	0.0028	0.0018	+-	0.0037	+	10.9	+- 22.5

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

Company Name <b>TETRA TECH EM Inc</b>		Phone	
Contact <b>Doug Herlocker</b>	208 484 9486		
E-Mail Address <b>douglas.herlocker@tetraem.com</b>	Fax <b>208 343 4954</b>		
Report Address <b>3380 Americana Terrace, Ste 201</b>			
City <b>Boise</b>	State <b>ID</b>	Zip <b>83704</b>	
Billing Address <b>3380 Americana Terrace, Ste 201</b>			
City <b>Boise</b>	State <b>ID</b>	Zip <b>83704</b>	
PO# <b>103P0233.005</b> Project <b>BMT</b>			

**CHESTER LabNet**  
 12242 SW Garden Place  
 Tigard, OR 97223  
 (503) 624-2183  
 Fax (503) 624-2653  
 cln@chesterlab.net

# CHAIN-OF-CUSTODY RECORD

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m <sup>3</sup> )	Particle Size	Analysis Requested										Turn Around Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush Specify _____	Remarks
• CAMU04-070309	CAMU04	CAMU04	6/30/09	21.05	N/A	X										09725701 - DO NOT ANALYZE	
• CAMU06-070309	CAMU06	CAMU06		22.20		X										09725702	
• BMT03-070309	BMT03	BMT03		18.12		X										09725703	
• BMT01-070309	BMT01	BMT01	✓	24.04		X										09725704	
• BMT03-070309	BMT03	BMT03	7/3/09	16.98		Y										09725711	
• CAMU04-070309	CAMU04	CAMU04		24.04		X										09725712	
• CAMU06-070309	CAMU06	CAMU06		20.02		X										09725713	
• BMT06-070309	BMT06	BMT06		24.20		X										09725710	
• BMT08-070309	BMT08	BMT08	✓	18.02		X										09725709	
• CAMU04-070709	CAMU04	CAMU04	7/7/09	24.08		X										09725714	
• CAMU06-070709	CAMU06	CAMU06		21.19		Y										09725715	
• BMT03-070709	BMT03	BMT03	✓	12.03	✓	X										09725716	

Relinquished By: (Signature) *[Signature]* Date/Time **7/8/2009 1000**

Relinquished By: (Signature) *[Signature]* Date/Time **7/9/2009 0945**

Received By: (Signature) *[Signature]* Date/Time **7/9/09 0945**

Received By: (Signature) *[Signature]* Date/Time **7/9/09 0945**

Notes: **XRF**

Company Name <b>TETRA TECH EM Inc</b>	
Contact <b>Doug Herbel</b>	Phone <b>208 484 9436</b>
E-Mail Address <b>douglas.herbel@tetraem.com</b>	Fax <b>208 343 4756</b>
Report Address <b>3380 Americana Terrace, Ste 201</b>	
City <b>Boise</b>	State <b>ID</b>
Zip <b>83704</b>	
Billing Address <b>3380 Americana Terrace, Ste 201</b>	
City <b>Boise</b>	State <b>ID</b>
Zip <b>83704</b>	
PO # <b>103PO233,000</b>	Project <b>BMT</b>

**CHESTER LabNet**

12242 SW Garden Place  
Tigard, OR 97223  
(503) 624-2183  
Fax (503) 624-2653  
cln@chesterlab.net

## CHAIN-OF-CUSTODY RECORD

Page 1 of 1

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m³)	Particle Size	Analysis Requested										Turn Around Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush _____ Specify _____	Remarks
0972566	0972566	0972566	6/30/09	09.50	n/a												
0972565	0972565	0972565	7/12/09	9.81													
0972567	0972567	0972567	7/17/09	9.84													
0972578	0972578	0972578	7/17/09	10.07													
0972580	0972580	0972580															
0972847	0972847	0972847															
<div style="display: flex; justify-content: space-between;"> <div> Relinquished By: (Signature) <i>[Signature]</i> Date/Time <b>7/18/2009 1000</b>  Relinquished By: (Signature) _____ Date/Time _____ </div> <div> Received By: (Signature) <i>[Signature]</i> Date/Time <b>7-9-09 0945</b>  Received By: (Signature) _____ Date/Time _____ </div> </div>																	

Notes:

XRF

**CHESTER LabNet**

**Tigard, OR 97223**

(503) 624-2183

Fax (503) 624-2653

cln@chesterlab.net

# CHAIN-OF-CUSTODY RECORD

[illegible]

**RAW DATA**

Available upon request