

APCA factors = 4

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Predicted concentration and Percent Error

element	MeanConc	source_1	source_2	source_3	source_4	r_squared	PredConc	Pct_error
aluminum	20.906	1.241	22.770	-0.711	3.828	0.631	27.128	29.77
arsenic	0.657	0.388	0.067	0.061	0.022	0.344	0.537	-18.25
barium	6.227	3.545	1.858	0.686	-2.510	0.303	3.580	-42.51
bromine	3.312	2.053	0.296	0.195	0.374	0.501	2.919	-11.88
cadmium	1.510	0.049	0.046	-0.051	0.002	0.008	0.046	-96.92
calcium	56.074	37.810	17.892	-2.880	-3.140	0.743	49.683	-11.40
chromium	1.628	-0.051	0.083	-0.014	1.803	0.127	1.821	11.90
copper	4.483	2.356	0.926	0.051	1.542	0.655	4.875	8.74
iron	111.841	41.807	35.272	1.350	21.530	0.836	99.960	-10.62
lead	3.293	3.612	0.494	0.196	-0.487	0.624	3.815	15.84
magnesium	7.682	-0.918	1.807	0.253	0.965	0.032	2.106	-72.58
manganese	2.373	2.089	0.672	-0.055	0.191	0.707	2.898	22.11
nickel	8.590	9.531	-0.371	0.276	-2.778	0.727	6.658	-22.50
nitrate	1811.742	1736.652	-89.600	104.025	211.483	0.588	1962.561	8.32
pm25	11855.453	5291.548	2556.772	901.813	1108.777	0.719	9858.911	-16.84
potassium	47.913	15.460	15.774	1.969	6.566	0.152	39.769	-17.00
selenium	0.755	0.723	0.172	0.139	-0.071	0.755	0.962	27.43
silicon	72.073	12.418	64.363	0.821	-6.578	0.885	71.024	-1.46
sulfate	3008.629	988.365	1028.629	417.866	216.396	0.694	2651.255	-11.88
titanium	3.445	1.211	2.439	0.106	-0.520	0.700	3.236	-6.05
vanadium	4.449	4.281	1.107	0.312	-0.445	0.707	5.255	18.12
zinc	26.876	27.336	-1.552	-0.963	1.205	0.766	26.026	-3.16

Proportion of each element coming from each source

element	source_1	source_2	source_3	source_4
aluminum	4.46	81.79	0.00	13.75
arsenic	72.21	12.48	11.29	4.02
barium	58.22	30.51	11.27	0.00
bromine	70.36	10.13	6.70	12.81
cadmium	50.67	47.45	0.00	1.88
calcium	67.88	32.12	0.00	0.00
chromium	0.00	4.40	0.00	95.60
copper	48.33	19.00	1.04	31.62
iron	41.82	35.29	1.35	21.54
lead	83.96	11.49	4.55	0.00
magnesium	0.00	59.75	8.36	31.89

element	source_1	source_2	source_3	source_4
manganese	70.75	22.77	0.00	6.48
nickel	97.19	0.00	2.81	0.00
nitrate	84.63	0.00	5.07	10.31
pm25	53.67	25.93	9.15	11.25
potassium	38.88	39.66	4.95	16.51
selenium	69.92	16.67	13.41	0.00
silicon	16.00	82.94	1.06	0.00
sulfate	37.28	38.80	15.76	8.16
titanium	32.24	64.92	2.83	0.00
vanadium	75.09	19.43	5.48	0.00
zinc	95.78	0.00	0.00	4.22

Bar graph of proportion of each element coming from each element

