APCA 4 - remove 7/2 - 7/6

Rachel Tao

1/23/2021

Loadings

element	MeanConc	source_1	source_2	source_3	source_4	r_squared	PredConc	Pct_error
aluminum	22.18	0.30	0.10	27.51	3.15	0.55	31.07	40.10
ammonium	1120.78	438.89	0.75	119.29	594.45	0.95	1153.38	2.91
arsenic	0.49	0.18	0.01	0.07	0.09	0.15	0.35	-28.73
barium	1.87	0.60	0.19	1.49	-0.10	0.14	2.19	16.85
bromine	3.06	1.11	0.34	0.39	0.58	0.32	2.41	-21.21
cadmium	1.68	0.11	-0.05	0.20	-0.06	0.00	0.20	-88.26
calcium	51.85	22.89	2.48	22.68	2.26	0.49	50.31	-2.96
chlorine	37.07	19.90	41.20	-8.33	2.32	0.71	55.08	48.60
chromium	2.13	1.40	-0.39	0.90	-0.63	0.05	1.28	-40.05
copper	4.55	2.52	-0.09	1.73	0.35	0.59	4.51	-0.87
EC	707.73	320.79	-5.66	239.84	51.89	0.52	606.86	-14.25
iron	105.50	31.88	-2.02	51.99	4.58	0.73	86.43	-18.08
lead	2.02	1.53	0.10	0.26	0.26	0.37	2.16	7.22
magnesium	7.12	-0.86	5.95	1.45	0.00	0.86	6.55	-7.92
manganese	2.10	1.30	-0.02	0.80	0.18	0.75	2.26	7.58
nickel	4.94	3.56	-0.02	0.35	0.30	0.56	4.18	-15.36
nitrate	1613.47	1125.55	93.53	-78.28	411.63	0.60	1552.43	-3.78
OC	2693.20	464.19	-32.22	757.14	514.94	0.67	1704.04	-36.73
pm25	10322.11	2576.53	173.10	2388.94	3025.20	0.86	8163.77	-20.91
potassium	36.15	16.02	4.50	8.62	8.57	0.24	37.72	4.33
selenium	0.40	0.12	0.01	0.07	0.16	0.30	0.36	-9.88
silicon	61.01	2.01	1.42	71.96	7.34	0.84	82.73	35.60
sodium	95.65	6.87	54.59	12.48	3.56	0.86	77.51	-18.97
sulfur	788.05	43.28	-1.36	211.67	382.19	0.91	635.78	-19.32
titanium	2.37	0.16	-0.02	2.42	0.27	0.58	2.83	19.17
vanadium	2.86	1.51	0.07	1.22	0.90	0.44	3.71	29.72
zinc	26.09	23.14	1.15	-1.78	0.41	0.74	22.93	-12.14

Source proportions

element	source_1	source_2	source_3	source_4
aluminum	0.98	0.33	88.54	10.15
ammonium	38.05	0.06	10.34	51.54
arsenic	50.87	2.88	20.21	26.04
barium	26.29	8.28	65.43	0.00
bromine	45.96	14.01	15.97	24.06
cadmium	34.52	0.00	65.48	0.00
calcium	45.50	4.93	45.07	4.50
chlorine	31.38	64.96	0.00	3.66
$\operatorname{chromium}$	60.78	0.00	39.22	0.00
copper	54.73	0.00	37.70	7.57
EC	52.37	0.00	39.16	8.47
iron	36.04	0.00	58.78	5.17
lead	70.97	4.79	12.23	12.02
magnesium	0.00	80.37	19.56	0.07
manganese	57.19	0.00	34.94	7.87
nickel	84.53	0.00	8.30	7.17
nitrate	69.02	5.74	0.00	25.24
OC	26.73	0.00	43.61	29.66
pm25	31.56	2.12	29.26	37.06
potassium	42.48	11.93	22.86	22.73
selenium	32.98	3.27	18.46	45.29
silicon	2.42	1.72	86.99	8.87
sodium	8.87	70.43	16.11	4.59
sulfur	6.79	0.00	33.22	59.99
titanium	5.59	0.00	84.93	9.48
vanadium	40.72	1.96	33.02	24.31
zinc	93.68	4.67	0.00	1.65

Bar graph of the above proportions

