APCA 8

Rachel Tao

1/23/2021

Loadings

element	MeanConc	source_1	source_2	source_3	source_4	source_5	source_6	source_7	source_8	r_squared	PredConc	Pct_error
aluminum	22.52	-0.12	-0.06	18.49	3.24	1.78	2.93	-1.29	2.19	0.61	27.17	20.65
ammonium	1119.33	40.84	19.45	121.10	580.32	-3.62	2.23	145.98	138.81	0.92	1045.10	-6.63
arsenic	0.49	0.00	0.01	0.04	0.10	0.04	0.03	0.06	0.12	0.17	0.39	-20.51
barium	1.95	0.01	0.11	0.41	-0.06	1.56	-0.20	0.96	-0.07	0.52	2.71	39.21
bromine	3.05	-0.10	0.34	0.40	0.63	0.04	0.22	0.05	1.38	0.60	2.94	-3.60
cadmium	1.68	0.04	-0.08	0.06	-0.07	0.04	-0.18	0.11	0.00	0.02	-0.08	-104.50
calcium	51.67	4.47	2.59	11.85	3.44	2.18	-6.12	15.16	4.55	0.70	38.12	-26.22
chlorine	36.83	0.82	42.71	-3.44	2.58	-0.75	1.78	1.68	15.18	0.66	60.57	64.47
chromium	2.13	0.20	-0.20	0.52	-0.18	-0.10	3.38	-0.52	0.38	0.61	3.48	63.45
copper	4.63	0.16	-0.11	0.51	0.60	1.09	0.28	2.04	0.79	0.73	5.36	15.92
EC	706.94	25.01	4.71	46.72	69.15	32.08	-66.23	549.10	49.07	0.82	709.60	0.38
iron	105.50	1.40	0.09	23.18	7.74	3.21	9.81	56.26	6.73	0.97	108.43	2.78
lead	2.01	0.05	0.03	0.19	0.35	0.23	-0.06	0.29	1.19	0.51	2.28	13.46
magnesium	7.32	-0.06	6.27	0.43	-0.20	3.03	0.04	-1.51	-0.86	0.93	7.13	-2.68
manganese	2.09	0.14	0.02	0.35	0.30	0.07	0.10	0.93	0.42	0.72	2.32	10.69
nickel	4.91	0.71	0.10	0.04	0.70	-0.06	0.75	0.53	0.88	0.94	3.65	-25.76
nitrate	1604.06	107.49	111.93	-60.27	468.28	42.24	-6.10	432.65	441.63	0.55	1537.85	-4.13
OC	2706.61	-32.20	-48.74	372.79	513.28	208.49	28.35	634.74	241.16	0.77	1917.87	-29.14
pm25	10356.26	36.30	190.90	1427.54	2900.56	517.54	123.21	1963.14	1266.55	0.84	8425.74	-18.64
potassium	39.33	1.08	2.64	3.59	9.65	27.56	-0.13	-9.70	5.19	0.70	39.89	1.41
selenium	0.39	0.01	0.01	0.06	0.16	0.02	0.00	-0.01	0.06	0.29	0.30	-22.88
silicon	61.29	1.26	1.26	49.88	6.15	1.01	-3.99	8.32	0.78	0.97	64.68	5.52
sodium	95.14	0.57	62.48	8.60	2.59	-8.18	1.04	12.04	4.06	0.94	83.19	-12.56
sulfur	791.26	-9.72	6.03	163.78	340.31	16.01	19.59	40.10	25.01	0.82	601.10	-24.03
titanium	2.39	0.00	0.00	1.28	0.25	0.15	-0.14	1.16	-0.07	0.53	2.63	9.89
vanadium	2.86	0.15	0.14	0.63	0.95	0.07	-0.06	1.31	0.43	0.44	3.62	26.63
zinc	25.90	1.85	0.68	-1.26	1.90	0.52	-1.62	5.25	16.17	0.97	23.48	-9.34

Source proportions

element	source_1	source_2	source_3	source_4	source_5	source_6	source_7	source_8
aluminum	0.00	0.00	64.54	11.33	6.23	10.25	0.00	7.65
ammonium	3.89	1.85	11.55	55.34	0.00	0.21	13.92	13.24
arsenic	0.25	1.44	11.41	25.36	9.65	6.92	14.82	30.15
barium	0.20	3.50	13.35	0.00	51.33	0.00	31.62	0.00
bromine	0.00	11.03	13.07	20.61	1.29	7.10	1.48	45.42
cadmium	16.10	0.00	25.19	0.00	15.46	0.00	43.25	0.00
calcium	10.11	5.84	26.78	7.77	4.94	0.00	34.27	10.29
chlorine	1.27	65.96	0.00	3.99	0.00	2.74	2.59	23.44
chromium	4.42	0.00	11.72	0.00	0.00	75.39	0.00	8.48
copper	2.92	0.00	9.38	11.03	19.88	5.12	37.22	14.44
EC	3.22	0.61	6.02	8.91	4.13	0.00	70.78	6.32
iron	1.29	0.09	21.38	7.14	2.96	9.05	51.89	6.21
lead	2.32	1.41	8.04	14.91	9.85	0.00	12.44	51.02
magnesium	0.00	64.20	4.41	0.00	30.99	0.39	0.00	0.00
manganese	5.92	0.94	14.97	12.82	2.96	4.17	39.96	18.28
nickel	19.26	2.79	0.99	18.88	0.00	20.26	14.18	23.64
nitrate	6.70	6.98	0.00	29.19	2.63	0.00	26.97	27.53
OC	0.00	0.00	18.65	25.68	10.43	1.42	31.76	12.06
pm25	0.43	2.27	16.94	34.42	6.14	1.46	23.30	15.03
potassium	2.18	5.31	7.21	19.42	55.44	0.00	0.00	10.43
selenium	3.28	3.17	18.07	49.64	6.22	1.13	0.00	18.50
silicon	1.83	1.84	72.64	8.96	1.48	0.00	12.11	1.14
sodium	0.62	68.38	9.41	2.84	0.00	1.14	13.18	4.44
sulfur	0.00	0.99	26.81	55.71	2.62	3.21	6.56	4.09
titanium	0.00	0.16	45.03	8.79	5.28	0.00	40.74	0.00
vanadium	3.97	3.85	17.12	25.84	1.99	0.00	35.47	11.76
zinc	7.01	2.56	0.00	7.21	1.97	0.00	19.91	61.33

Bar graph of the above proportions