Table S1
ICP-MS operating parameters.

Parameter	Type/Value Speciation analysis	Type/Value Total element concentration analysis
Sample introduction		
Nebuliser	Miramist	Miramist
Spray chamber	Scott	Scott
Skimmer and sampler	Ni	Ni
Plasma conditions		
Forward power	1550 W	1550 W
Plasma gas flow	15.0 L min^{-1}	15.0 L min^{-1}
Carrier gas flow	0.75 L min^{-1}	1.05 L min^{-1}
Dilution gas flow	0.45 L min^{-1}	0.10 L min^{-1}
He gas flow	10 mL min^{-1}	4.5 mL min^{-1}
QP bias	-97 V	-15 V
Oct bias	-100 V	-18 V
Cell entrance	-130 V	-40 V
Cell exit	-150 V	-60 V
Deflect	-80 V	-2.2 V
Plate bias	-150 V	-60 V
Sample uptake rate	1.5 mL min^{-1}	0.3 mL min^{-1}
Data acquisition parameters		
m/z of isotopes monitored	^{51}V, ^{50}V, ^{52}Cr, ^{75}As, ^{95}Mo	^{51}V, ^{52}Cr, ^{75}As, ^{95}Mo
m/z of internal standards	^{45}Sc, ^{72}Ge, ^{103}Rh, ^{115}In	^{45}Sc, ^{72}Ge, ^{103}Rh, ^{115}In
Total acquisition time	600 s	

Table S2
Spike recovery test for chromate, arsenate, molybdate and vanadate for leachate sample (building composite from a 99.5% mixture of fly ash (70%) and cement (30%), and 0.5% of EAF dust), 1 day after immersion into MilliQ water) determined by simultaneous HPLC-ICP-MS speciation analysis. Results represent the mean value of three replicate determinations of selected element with the standard deviation of the measurements.

Species	Concentration of element in leachate (ng mL^{-1})	Concentration of element added (ng mL^{-1})	Concentration of element found (ng mL^{-1})	Recovery (%)
Cr(VI) *m/z* 52	29.0 ± 0.3	50.0 ± 0.5	77 ± 2	98
As(V) *m/z* 75	175 ± 2	100 ± 1	280 ± 8	98
Mo(VI) *m/z* 95	38.0 ± 0.4	50 ± 0.5	90 ± 3	102
V(V) *m/z* 51	1100 ± 10	500 ± 5	1580 ± 50	99