**Posting type** Advisory updated May 2009

**Subject** Sporadic contamination by Zn

**Module/Species** A/ Zn

**Sites** entire network

**Period** Documented in 2004 and later years; likely in earlier years.

**Recommendation** Consider contamination as a possible contributor to isolated

sample values.

**Submitter** W.H. White, white@crocker.ucdavis.edu

## **Supporting information**

The table below summarizes XRF analysis of January 2004 field blanks exposed at all sites, and October 2004 acceptance tests of unexposed filters. Elements measured by the Cu-anode system (distinguished by "Y" before element symbol) are at the top, elements measured by the Mo-anode system are at the bottom. Blank concentrations are presented as percentiles of contemporary sample concentrations. As an example the 90<sup>th</sup> percentile of the field blank Zn loadings is higher than 20% of the well-determined sample Zn loadings, *i.e.* those with estimated uncertainties of less than 10%. It is of course higher than *more* than 20% of *all* sample loadings. The implication is that apparently well-measured low-to-moderate values of Zn can occasionally be attributable to filter contamination. Updated statistics have been included in quarterly reports of XRF QA/QC since the fourth quarter of 2005.

YNA	YMG	YAL	YSI	ΥP	YS	YCL	ΥK	YCA	YTI	ΥV	YCR	YMN	YFE
percent of 1/04 samples throughout network yielding 'quantitative' values (ERR/VAL < 10%)													
0%	0%	13%	74%	1%	100%	10%	99%	98%	67%	15%	1%	49%	99%
percent of quantitative v	alues b	elow fie	ld blan	k (FB)	levels								
95%ile 1/04 FB			2.9%				5.8%	0.7%	0.2%				7.4%
90%ile 1/04 FB							5.1%	0.1%					3.6%
75%ile 1/04 FB							3.7%						1.0%
50%ile 1/04 FB							1.5%						
percent of quantitative values below acceptance test (AT) levels													
95%ile 10/04 AT			0.3%				0.7%		0.3%				2.0%
90%ile 10/04 AT							0.2%						0.6%
75%ile 10/04 AT													
percent of 1/04 samples throughout network yielding 'quantitative' values (ERR/VAL < 10%)													
nercent of 1/0/ samples	FE through	NI hout ne	CU twork v	<b>ZN</b> rielding	AS L'auanti	PB	SE	BR (ERRA)	RB ′Δ1	SR ೧%)	Υ	ZR	CD
percent of 1/04 samples	through	hout ne	twork y	ielding	'quanti	tative'	/alues	(ERR/V	'AL < 1	0%)			
	through	hout ne	twork y 34%	rielding <b>99</b> %	'quanti 3%		-	(ERR/V			Υ 0%	<b>ZR</b> 0%	<b>CD</b> 0%
percent of quantitative v	through 99% alues b	hout ne	twork y 34% eld blan	rielding <b>99%</b> k (FB)	'quanti 3%	tative'	/alues	(ERR/V	'AL < 1	0%)			
percent of quantitative v 95%ile 1/04 FB	s through 99% values be 5.7%	hout ne	twork y 34% eld blan	rielding <b>99%</b> k (FB) 35.4%	'quanti 3%	tative'	/alues	(ERR/V	'AL < 1	0%)			
percent of quantitative v 95%ile 1/04 FB 90%ile 1/04 FB	through 99% alues b	hout ne	twork y 34% eld blan	99% k (FB) 35.4% 20.1%	'quanti 3%	tative'	/alues	(ERR/V	'AL < 1	0%)			
percent of quantitative v 95%ile 1/04 FB 90%ile 1/04 FB 75%ile 1/04 FB	s through 99% values be 5.7%	hout ne	twork y 34% eld blan	99% k (FB) 35.4% 20.1%	'quanti 3%	tative'	/alues	(ERR/V	'AL < 1	0%)			
percent of quantitative v 95%ile 1/04 FB 90%ile 1/04 FB 75%ile 1/04 FB 50%ile 1/04 FB	99% yalues b 5.7% 0.9%	hout ne 9% elow fie	twork y 34% eld blan	99% k (FB) 35.4% 20.1% 3.7% 0.1%	'quanti 3% levels	tative' v 37%	/alues	(ERR/V	'AL < 1	0%)			
percent of quantitative v 95%ile 1/04 FB 90%ile 1/04 FB 75%ile 1/04 FB 50%ile 1/04 FB percent of quantitative v	s through 99% values b 5.7% 0.9%	hout ne 9% elow fie	twork y 34% eld blan cceptan	rielding 99% k (FB) 35.4% 20.1% 3.7% 0.1% ce test	'quanti 3% levels	tative' v 37%	/alues	(ERR/V	'AL < 1	0%)			
percent of quantitative v 95%ile 1/04 FB 90%ile 1/04 FB 75%ile 1/04 FB 50%ile 1/04 FB percent of quantitative v 95%ile 10/04 AT	99% yalues b 5.7% 0.9%	hout ne 9% elow fie	twork y 34% eld blan cceptan	rielding 99% k (FB) 35.4% 20.1% 3.7% 0.1% ce test 26.0%	'quanti 3% levels	tative' v 37%	/alues	(ERR/V	'AL < 1	0%)			
percent of quantitative v 95%ile 1/04 FB 90%ile 1/04 FB 75%ile 1/04 FB 50%ile 1/04 FB percent of quantitative v	s through 99% values b 5.7% 0.9%	hout ne 9% elow fie	twork y 34% eld blan cceptan	rielding 99% k (FB) 35.4% 20.1% 3.7% 0.1% ce test	'quanti 3% levels	tative' v 37%	/alues	(ERR/V	'AL < 1	0%)			