

metals
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MATRIX SPIKE SUMMARY

client: CDM Smith **level:** low **sdg no.:** Q1956
contract: CAMP02 **lab code:** CHEM **case no.:** Q1956 **sas no.:** Q1956
matrix: Water **sample id:** Q1930-01 **client id:** WATER-TREATMENT-DISCHARGEMS
Percent Solids for Sample: NA **Spiked ID:** Q1930-01MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75 - 125	14800		14300		1000	52		P
Antimony	ug/L	75 - 125	440		25.0	U	400	110		P
Arsenic	ug/L	75 - 125	428		10.0	U	400	107		P
Barium	ug/L	75 - 125	92.9		50.0	U	100	93		P
Beryllium	ug/L	75 - 125	100		3.00	U	100	100		P
Cadmium	ug/L	75 - 125	107		3.00	U	100	107		P
Calcium	ug/L	75 - 125	8500		8400		500	21		P
Chromium	ug/L	75 - 125	345		156		200	94		P
Cobalt	ug/L	75 - 125	102		15.0	U	100	102		P
Copper	ug/L	75 - 125	151		17.4		150	89		P
Iron	ug/L	75 - 125	2190		668		1500	101		P
Lead	ug/L	75 - 125	492		6.00	U	500	98		P
Magnesium	ug/L	75 - 125	2000		1150		1000	85		P
Manganese	ug/L	75 - 125	99.1		4.86	J	100	94		P
Nickel	ug/L	75 - 125	267		12.9	J	250	101		P
Potassium	ug/L	75 - 125	128000		129000		5000	-38		P
Selenium	ug/L	75 - 125	1120		10.0	U	1000	112		P
Silver	ug/L	75 - 125	42.1		5.00	U	37.5	112		P
Sodium	ug/L	75 - 125	961000		1020000		1500	-4061		P
Thallium	ug/L	75 - 125	907		20.0	U	1000	91		P
Vanadium	ug/L	75 - 125	146		20.0	U	150	97		P
Zinc	ug/L	75 - 125	157		49.2		100	108		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: CDM Smith **level:** low **sdg no.:** Q1956
contract: CAMP02 **lab code:** CHEM **case no.:** Q1956 **sas no.:** Q1956
matrix: Water **sample id:** Q1930-01 **client id:** WATER-TREATMENT-DISCHARGEMSD
Percent Solids for Sample: NA **Spiked ID:** Q1930-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75 - 125	14000		14300		1000	-23		P
Antimony	ug/L	75 - 125	427		25.0	U	400	107		P
Arsenic	ug/L	75 - 125	436		10.0	U	400	109		P
Barium	ug/L	75 - 125	95.7		50.0	U	100	96		P
Beryllium	ug/L	75 - 125	93.7		3.00	U	100	94		P
Cadmium	ug/L	75 - 125	108		3.00	U	100	108		P
Calcium	ug/L	75 - 125	8260		8400		500	-29		P
Chromium	ug/L	75 - 125	341		156		200	93		P
Cobalt	ug/L	75 - 125	103		15.0	U	100	103		P
Copper	ug/L	75 - 125	152		17.4		150	90		P
Iron	ug/L	75 - 125	2280		668		1500	108		P
Lead	ug/L	75 - 125	495		6.00	U	500	99		P
Magnesium	ug/L	75 - 125	1940		1150		1000	79		P
Manganese	ug/L	75 - 125	106		4.86	J	100	101		P
Nickel	ug/L	75 - 125	269		12.9	J	250	102		P
Potassium	ug/L	75 - 125	128000		129000		5000	-28		P
Selenium	ug/L	75 - 125	1130		10.0	U	1000	113		P
Silver	ug/L	75 - 125	38.4		5.00	U	37.5	102		P
Sodium	ug/L	75 - 125	959000		1020000		1500	-4195		P
Thallium	ug/L	75 - 125	922		20.0	U	1000	92		P
Vanadium	ug/L	75 - 125	148		20.0	U	150	99		P
Zinc	ug/L	75 - 125	151		49.2		100	102		P

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MATRIX SPIKE SUMMARY

client: CDM Smith **level:** low **sdg no.:** Q1956
contract: CAMP02 **lab code:** CHEM **case no.:** Q1956 **sas no.:** Q1956
matrix: Water **sample id:** Q1945-01 **client id:** GB1WMS
Percent Solids for Sample: NA **Spiked ID:** Q1945-01MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	6.44		4.53		4.0	48	N	CV

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MATRIX SPIKE DUPLICATE SUMMARY

client: CDM Smith **level:** low **sdg no.:** Q1956
contract: CAMP02 **lab code:** CHEM **case no.:** Q1956 **sas no.:** Q1956
matrix: Water **sample id:** Q1945-01 **client id:** GB1WMSD
Percent Solids for Sample: NA **Spiked ID:** Q1945-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	6.37		4.53		4.0	46	N	CV

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MATRIX SPIKE SUMMARY

client: CDM Smith **level:** low **sdg no.:** Q1956
contract: CAMP02 **lab code:** CHEM **case no.:** Q1956 **sas no.:** Q1956
matrix: Solid **sample id:** Q1956-02 **client id:** SB2-4-5MS
Percent Solids for Sample: 93.5 **Spiked ID:** Q1956-03 **Percent Solids for Spike Sample:** 93.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	1210		834		98.6	384		P
Antimony	mg/Kg	75 - 125	24.8		2.46	U	39.4	63	N	P
Arsenic	mg/Kg	75 - 125	37.2		0.93	J	39.4	92		P
Barium	mg/Kg	75 - 125	10.9		1.99	J	9.9	90		P
Beryllium	mg/Kg	75 - 125	9.18		0.067	J	9.9	92		P
Cadmium	mg/Kg	75 - 125	9.19		0.30	U	9.9	93		P
Calcium	mg/Kg	75 - 125	414		363		49.3	104		P
Chromium	mg/Kg	75 - 125	21.7		2.65		19.7	97		P
Cobalt	mg/Kg	75 - 125	9.65		0.52	J	9.9	92		P
Copper	mg/Kg	75 - 125	15.3		1.60		14.8	92		P
Iron	mg/Kg	75 - 125	2010		1720		150	192		P
Lead	mg/Kg	75 - 125	47.0		1.49		49.3	92		P
Magnesium	mg/Kg	75 - 125	337		194		98.6	145	N	P
Manganese	mg/Kg	75 - 125	21.1		10.8		9.9	104		P
Mercury	mg/Kg	80 - 120	0.29		0.0080	J	0.27	104		CV
Nickel	mg/Kg	75 - 125	24.4		1.34	J	24.6	94		P
Potassium	mg/Kg	75 - 125	699		116		490	119		P
Selenium	mg/Kg	75 - 125	87.2		0.99	U	98.6	88		P
Silver	mg/Kg	75 - 125	3.46		0.49	U	3.7	94		P
Sodium	mg/Kg	75 - 125	1100		495		150	404	N	P
Thallium	mg/Kg	75 - 125	94.3		1.97	U	98.6	96		P
Vanadium	mg/Kg	75 - 125	16.1		2.21		14.8	94		P
Zinc	mg/Kg	75 - 125	13.1		3.27		9.9	99		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: CDM Smith **level:** low **sdg no.:** Q1956
contract: CAMP02 **lab code:** CHEM **case no.:** Q1956 **sas no.:** Q1956
matrix: Solid **sample id:** Q1956-02 **client id:** SB2-4-5MSD
Percent Solids for Sample: 93.5 **Spiked ID:** Q1956-04 **Percent Solids for Spike Sample:** 93.5

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	1070		834		89.9	262		P
Antimony	mg/Kg	75 - 125	22.9		2.46	U	36.0	64	N	P
Arsenic	mg/Kg	75 - 125	33.3		0.93	J	36.0	90		P
Barium	mg/Kg	75 - 125	10.0		1.99	J	9.0	89		P
Beryllium	mg/Kg	75 - 125	7.71		0.067	J	9.0	85		P
Cadmium	mg/Kg	75 - 125	8.20		0.30	U	9.0	91		P
Calcium	mg/Kg	75 - 125	410		363		44.9	105		P
Chromium	mg/Kg	75 - 125	19.5		2.65		18.0	94		P
Cobalt	mg/Kg	75 - 125	8.68		0.52	J	9.0	91		P
Copper	mg/Kg	75 - 125	13.7		1.60		13.5	90		P
Iron	mg/Kg	75 - 125	1960		1720		130	184		P
Lead	mg/Kg	75 - 125	42.3		1.49		44.9	91		P
Magnesium	mg/Kg	75 - 125	301		194		89.9	119		P
Manganese	mg/Kg	75 - 125	19.5		10.8		9.0	97		P
Mercury	mg/Kg	80 - 120	0.29		0.0080	J	0.25	114		CV
Nickel	mg/Kg	75 - 125	22.0		1.34	J	22.5	92		P
Potassium	mg/Kg	75 - 125	531		116		450	92		P
Selenium	mg/Kg	75 - 125	78.3		0.99	U	89.9	87		P
Silver	mg/Kg	75 - 125	3.11		0.49	U	3.4	92		P
Sodium	mg/Kg	75 - 125	566		495		130	55	N	P
Thallium	mg/Kg	75 - 125	87.9		1.97	U	89.9	98		P
Vanadium	mg/Kg	75 - 125	14.4		2.21		13.5	90		P
Zinc	mg/Kg	75 - 125	11.6		3.27		9.0	93		P