

metals
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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q2198
contract: PORT06 **lab code:** CHEM **case no.:** Q2198 **sas no.:** Q2198
matrix: Solid **sample id:** Q2195-01 **client id:** OK-01-060325MS
Percent Solids for Sample: 94.4 **Spiked ID:** Q2195-01MS **Percent Solids for Spike Sample:** 94.4

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	7080		6560		96.7	546		P
Antimony	mg/Kg	75 - 125	12.8		2.46	U	38.7	33	N	P
Arsenic	mg/Kg	75 - 125	33.0		1.40		38.7	82		P
Barium	mg/Kg	75 - 125	45.7		32.7		9.7	134	N	P
Beryllium	mg/Kg	75 - 125	7.37		0.29	J	9.7	73	N	P
Cadmium	mg/Kg	75 - 125	10.8		0.70		9.7	104		P
Calcium	mg/Kg	75 - 125	3380		2630		48.4	1553		P
Chromium	mg/Kg	75 - 125	37.4		17.7		19.3	102		P
Cobalt	mg/Kg	75 - 125	21.5		10.1		9.7	118		P
Copper	mg/Kg	75 - 125	53.9		38.9		14.5	104		P
Iron	mg/Kg	75 - 125	16700		15000		150	1152		P
Lead	mg/Kg	75 - 125	53.9		4.53		48.4	102		P
Magnesium	mg/Kg	75 - 125	4380		3660		96.7	745		P
Manganese	mg/Kg	75 - 125	216		203		9.7	134		P
Mercury	mg/Kg	80 - 120	0.22		0.0090	J	0.27	79	N	CV
Nickel	mg/Kg	75 - 125	45.4		17.9		24.2	114		P
Potassium	mg/Kg	75 - 125	2560		1810		480	157	N	P
Selenium	mg/Kg	75 - 125	76.0		0.99	U	96.7	79		P
Silver	mg/Kg	75 - 125	3.77		0.77		3.6	84		P
Sodium	mg/Kg	75 - 125	217		234		150	-12	N	P
Thallium	mg/Kg	75 - 125	92.7		1.97	U	96.7	96		P
Vanadium	mg/Kg	75 - 125	39.3		26.0		14.5	92		P
Zinc	mg/Kg	75 - 125	39.5		25.8		9.7	141	N	P

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MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q2198
contract: PORT06 **lab code:** CHEM **case no.:** Q2198 **sas no.:** Q2198
matrix: Solid **sample id:** Q2195-01 **client id:** OK-01-060325MSD
Percent Solids for Sample: 94.4 **Spiked ID:** Q2195-01MSD **Percent Solids for Spike Sample:** 94.4

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	7130		6560		92.5	620		P
Antimony	mg/Kg	75 - 125	11.4		2.46	U	37.0	31	N	P
Arsenic	mg/Kg	75 - 125	30.4		1.40		37.0	78		P
Barium	mg/Kg	75 - 125	39.3		32.7		9.3	71	N	P
Beryllium	mg/Kg	75 - 125	6.79		0.29	J	9.3	70	N	P
Cadmium	mg/Kg	75 - 125	10.0		0.70		9.3	100		P
Calcium	mg/Kg	75 - 125	2900		2630		46.3	581		P
Chromium	mg/Kg	75 - 125	31.1		17.7		18.5	72	N	P
Cobalt	mg/Kg	75 - 125	19.4		10.1		9.3	100		P
Copper	mg/Kg	75 - 125	48.8		38.9		13.9	71	N	P
Iron	mg/Kg	75 - 125	14400		15000		140	-439		P
Lead	mg/Kg	75 - 125	50.1		4.53		46.3	98		P
Magnesium	mg/Kg	75 - 125	3740		3660		92.5	90		P
Manganese	mg/Kg	75 - 125	188		203		9.3	-153		P
Mercury	mg/Kg	80 - 120	0.22		0.0090	J	0.26	82		CV
Nickel	mg/Kg	75 - 125	41.3		17.9		23.1	101		P
Potassium	mg/Kg	75 - 125	2070		1810		460	57	N	P
Selenium	mg/Kg	75 - 125	69.8		0.99	U	92.5	76		P
Silver	mg/Kg	75 - 125	3.25		0.77		3.5	71	N	P
Sodium	mg/Kg	75 - 125	253		234		140	13	N	P
Thallium	mg/Kg	75 - 125	86.7		1.97	U	92.5	94		P
Vanadium	mg/Kg	75 - 125	37.1		26.0		13.9	80		P
Zinc	mg/Kg	75 - 125	32.9		25.8		9.3	76		P

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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q2198
contract: PORT06 **lab code:** CHEM **case no.:** Q2198 **sas no.:** Q2198
matrix: Water **sample id:** Q2198-05 **client id:** B-202-GW01MS
Percent Solids for Sample: NA **Spiked ID:** Q2198-05MS **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	29600	D	23100	D	1000	652		P
Antimony	ug/L	75 - 125	281	D	125	UD	400	70	N	P
Arsenic	ug/L	75 - 125	355	D	50.0	UD	400	87		P
Barium	ug/L	75 - 125	174	JD	68.1	JD	100	106		P
Beryllium	ug/L	75 - 125	98.5	D	15.0	UD	100	97		P
Cadmium	ug/L	75 - 125	97.6	D	15.0	UD	100	97		P
Calcium	ug/L	75 - 125	37400	D	33200	D	500	832		P
Chromium	ug/L	75 - 125	254	D	59.5	D	200	97		P
Cobalt	ug/L	75 - 125	106	D	6.74	JD	100	99		P
Copper	ug/L	75 - 125	199	D	50.5	D	150	99		P
Iron	ug/L	75 - 125	31800	D	26800	D	1500	336		P
Lead	ug/L	75 - 125	555	D	79.0	D	500	95		P
Magnesium	ug/L	75 - 125	41400	D	36300	D	1000	504		P
Manganese	ug/L	75 - 125	490	D	354	D	100	136	N	P
Nickel	ug/L	75 - 125	272	D	23.9	JD	250	99		P
Potassium	ug/L	75 - 125	37500	D	30400	D	5000	141		P
Selenium	ug/L	75 - 125	867	D	50.0	UD	1000	87		P
Silver	ug/L	75 - 125	35.9	D	25.0	UD	37.5	93		P
Sodium	ug/L	75 - 125	395000	D	367000	D	1500	1833		P
Thallium	ug/L	75 - 125	942	D	100	UD	1000	95		P
Vanadium	ug/L	75 - 125	227	D	77.0	JD	150	100		P
Zinc	ug/L	75 - 125	239	D	149	D	100	90		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q2198
contract: PORT06 **lab code:** CHEM **case no.:** Q2198 **sas no.:** Q2198
matrix: Water **sample id:** Q2198-05 **client id:** B-202-GW01MSD
Percent Solids for Sample: NA **Spiked ID:** Q2198-05MSD **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	30200	D	23100	D	1000	710		P
Antimony	ug/L	75 - 125	285	D	125	UD	400	71	N	P
Arsenic	ug/L	75 - 125	360	D	50.0	UD	400	88		P
Barium	ug/L	75 - 125	176	JD	68.1	JD	100	107		P
Beryllium	ug/L	75 - 125	99.5	D	15.0	UD	100	98		P
Cadmium	ug/L	75 - 125	99.4	D	15.0	UD	100	99		P
Calcium	ug/L	75 - 125	37700	D	33200	D	500	886		P
Chromium	ug/L	75 - 125	265	D	59.5	D	200	103		P
Cobalt	ug/L	75 - 125	108	D	6.74	JD	100	101		P
Copper	ug/L	75 - 125	203	D	50.5	D	150	102		P
Iron	ug/L	75 - 125	34000	D	26800	D	1500	479		P
Lead	ug/L	75 - 125	568	D	79.0	D	500	98		P
Magnesium	ug/L	75 - 125	41800	D	36300	D	1000	543		P
Manganese	ug/L	75 - 125	493	D	354	D	100	138	N	P
Nickel	ug/L	75 - 125	277	D	23.9	JD	250	101		P
Potassium	ug/L	75 - 125	39800	D	30400	D	5000	189		P
Selenium	ug/L	75 - 125	873	D	50.0	UD	1000	88		P
Silver	ug/L	75 - 125	37.1	D	25.0	UD	37.5	96		P
Sodium	ug/L	75 - 125	414000	D	367000	D	1500	3103		P
Thallium	ug/L	75 - 125	946	D	100	UD	1000	95		P
Vanadium	ug/L	75 - 125	230	D	77.0	JD	150	102		P
Zinc	ug/L	75 - 125	245	D	149	D	100	96		P

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MATRIX SPIKE SUMMARY

client: <u>Portal Partners Tri-Venture</u>	level: <u>low</u>	sdg no.: <u>Q2198</u>
contract: <u>PORT06</u>	lab code: <u>CHEM</u>	case no.: <u>Q2198</u> sas no.: <u>Q2198</u>
matrix: <u>Water</u>	sample id: <u>Q2216-02</u>	client id: <u>3887MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q2216-02MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	4.16		0.20	U	4.0	104		CV

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MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Portal Partners Tri-Venture</u>	level: <u>low</u>	sdg no.: <u>Q2198</u>
contract: <u>PORT06</u>	lab code: <u>CHEM</u>	case no.: <u>Q2198</u> sas no.: <u>Q2198</u>
matrix: <u>Water</u>	sample id: <u>Q2216-02</u>	client id: <u>3887MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q2216-02MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	3.65		0.20	U	4.0	91		CV