

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1415
contract: PORT06 **lab code:** CHEM **case no.:** Q1415 **sas no.:** Q1415
matrix: Water **sample id:** Q1409-01 **client id:** SURFACE-WATER-1MS
Percent Solids for Sample: NA **Spiked ID:** Q1409-01MS **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	3.72		0.20	U	4.0	93		CV

metals

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture level: low sdg no.: Q1415
contract: PORT06 lab code: CHEM case no.: Q1415 sas no.: Q1415
matrix: Water sample id: Q1409-01 client id: SURFACE-WATER-1MSD
Percent Solids for Sample: NA Spiked ID: Q1409-01MSD 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	3.74		0.20	U	4.0	94		CV

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1415
contract: PORT06 **lab code:** CHEM **case no.:** Q1415 **sas no.:** Q1415
matrix: Solid **sample id:** Q1413-01 **client id:** BU-2-022125MS
Percent Solids for Sample: 94.4 **Spiked ID:** Q1413-01MS **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	1350		1020		91.7	354		P
Antimony	mg/Kg	75 - 125	22.8		2.26	U	36.7	62	N	P
Arsenic	mg/Kg	75 - 125	33.2		1.26		36.7	87		P
Barium	mg/Kg	75 - 125	13.0		5.31		9.2	84		P
Beryllium	mg/Kg	75 - 125	8.31		0.21	J	9.2	88		P
Cadmium	mg/Kg	75 - 125	8.20		0.27	U	9.2	89		P
Calcium	mg/Kg	75 - 125	3010		1330		45.9	3653		P
Chromium	mg/Kg	75 - 125	24.3		6.38		18.3	98		P
Cobalt	mg/Kg	75 - 125	9.23		0.76	J	9.2	92		P
Copper	mg/Kg	75 - 125	16.8		4.10		13.8	92		P
Iron	mg/Kg	75 - 125	6040		5440		140	431		P
Lead	mg/Kg	75 - 125	47.9		6.42		45.9	90		P
Magnesium	mg/Kg	75 - 125	714		645		91.7	75		P
Manganese	mg/Kg	75 - 125	37.8		27.6		9.2	111		P
Nickel	mg/Kg	75 - 125	22.5		1.62	J	22.9	91		P
Potassium	mg/Kg	75 - 125	805		294		460	111		P
Selenium	mg/Kg	75 - 125	71.6		0.91	U	91.7	78		P
Silver	mg/Kg	75 - 125	3.14		0.45	U	3.4	92		P
Sodium	mg/Kg	75 - 125	253		130		140	88		P
Thallium	mg/Kg	75 - 125	78.1		1.81	U	91.7	85		P
Vanadium	mg/Kg	75 - 125	18.5		6.24		13.8	89		P
Zinc	mg/Kg	75 - 125	17.8		8.39		9.2	102		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1415
contract: PORT06 **lab code:** CHEM **case no.:** Q1415 **sas no.:** Q1415
matrix: Solid **sample id:** Q1413-01 **client id:** BU-2-022125MSD
Percent Solids for Sample: 94.4 **Spiked ID:** Q1413-01MSD **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	1460		1020		99.5	441		P
Antimony	mg/Kg	75 - 125	24.9		2.26	U	39.8	63	N	P
Arsenic	mg/Kg	75 - 125	36.1		1.26		39.8	88		P
Barium	mg/Kg	75 - 125	14.0		5.31		9.9	87		P
Beryllium	mg/Kg	75 - 125	9.15		0.21	J	9.9	90		P
Cadmium	mg/Kg	75 - 125	8.92		0.27	U	9.9	90		P
Calcium	mg/Kg	75 - 125	3220		1330		49.7	3796		P
Chromium	mg/Kg	75 - 125	26.2		6.38		19.9	100		P
Cobalt	mg/Kg	75 - 125	9.96		0.76	J	9.9	93		P
Copper	mg/Kg	75 - 125	18.4		4.10		14.9	96		P
Iron	mg/Kg	75 - 125	6290		5440		150	568		P
Lead	mg/Kg	75 - 125	51.5		6.42		49.7	91		P
Magnesium	mg/Kg	75 - 125	763		645		99.5	119		P
Manganese	mg/Kg	75 - 125	40.2		27.6		9.9	127	N	P
Nickel	mg/Kg	75 - 125	24.3		1.62	J	24.9	91		P
Potassium	mg/Kg	75 - 125	862		294		500	114		P
Selenium	mg/Kg	75 - 125	78.5		0.91	U	99.5	79		P
Silver	mg/Kg	75 - 125	3.34		0.45	U	3.7	90		P
Sodium	mg/Kg	75 - 125	270		130		150	94		P
Thallium	mg/Kg	75 - 125	87.4		1.81	U	99.5	88		P
Vanadium	mg/Kg	75 - 125	19.8		6.24		14.9	91		P
Zinc	mg/Kg	75 - 125	19.5		8.39		9.9	112		P

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1415
contract: PORT06 **lab code:** CHEM **case no.:** Q1415 **sas no.:** Q1415
matrix: Water **sample id:** Q1415-06 **client id:** B-173-GW01MS
Percent Solids for Sample: NA **Spiked ID:** Q1415-06MS **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	45300		42100		2000	161		P
Antimony	ug/L	75 - 125	533		50.0	U	800	67	N	P
Arsenic	ug/L	75 - 125	829		16.1	J	800	102		P
Barium	ug/L	75 - 125	721		508		200	107		P
Beryllium	ug/L	75 - 125	192		3.13	J	200	95		P
Cadmium	ug/L	75 - 125	213		6.00	U	200	106		P
Calcium	ug/L	75 - 125	105000		99700		1000	562		P
Chromium	ug/L	75 - 125	575		187		400	97		P
Cobalt	ug/L	75 - 125	257		40.0		200	109		P
Copper	ug/L	75 - 125	598		290		300	103		P
Iron	ug/L	75 - 125	85200		77800		3000	244		P
Lead	ug/L	75 - 125	1140		116		1000	102		P
Magnesium	ug/L	75 - 125	72500		68300		2000	210		P
Manganese	ug/L	75 - 125	2930		2580		200	174		P
Nickel	ug/L	75 - 125	662		130		500	107		P
Potassium	ug/L	75 - 125	61300		50900		10000	104		P
Selenium	ug/L	75 - 125	1820		20.0	U	2000	91		P
Silver	ug/L	75 - 125	75.2		10.0	U	75.0	100		P
Sodium	ug/L	75 - 125	547000		525000		3000	749		P
Thallium	ug/L	75 - 125	1910		40.0	U	2000	96		P
Vanadium	ug/L	75 - 125	374		96.3		300	93		P
Zinc	ug/L	75 - 125	552		323		200	114		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1415
contract: PORT06 **lab code:** CHEM **case no.:** Q1415 **sas no.:** Q1415
matrix: Water **sample id:** Q1415-06 **client id:** B-173-GW01MSD
Percent Solids for Sample: NA **Spiked ID:** Q1415-06MSD **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	45100		42100		2000	150		P
Antimony	ug/L	75 - 125	529		50.0	U	800	66	N	P
Arsenic	ug/L	75 - 125	819		16.1	J	800	100		P
Barium	ug/L	75 - 125	698		508		200	95		P
Beryllium	ug/L	75 - 125	211		3.13	J	200	104		P
Cadmium	ug/L	75 - 125	214		6.00	U	200	107		P
Calcium	ug/L	75 - 125	105000		99700		1000	537		P
Chromium	ug/L	75 - 125	565		187		400	95		P
Cobalt	ug/L	75 - 125	258		40.0		200	109		P
Copper	ug/L	75 - 125	597		290		300	103		P
Iron	ug/L	75 - 125	77900		77800		3000	3		P
Lead	ug/L	75 - 125	1140		116		1000	103		P
Magnesium	ug/L	75 - 125	73000		68300		2000	234		P
Manganese	ug/L	75 - 125	2910		2580		200	166		P
Nickel	ug/L	75 - 125	662		130		500	106		P
Potassium	ug/L	75 - 125	55300		50900		10000	44		P
Selenium	ug/L	75 - 125	1790		20.0	U	2000	90		P
Silver	ug/L	75 - 125	75.1		10.0	U	75.0	100		P
Sodium	ug/L	75 - 125	508000		525000		3000	-563		P
Thallium	ug/L	75 - 125	1930		40.0	U	2000	96		P
Vanadium	ug/L	75 - 125	372		96.3		300	92		P
Zinc	ug/L	75 - 125	532		323		200	104		P

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1415
contract: PORT06 **lab code:** CHEM **case no.:** Q1415 **sas no.:** Q1415
matrix: Solid **sample id:** Q1421-01 **client id:** P001-CLAY-CF01-01MS
Percent Solids for Sample: 70.3 **Spiked ID:** Q1421-02 **Percent Solids for Spike Sample:** 70.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.52		0.030		0.4	122	N	CV

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client:	<u>Portal Partners Tri-Venture</u>	level:	<u>low</u>	sdg no.:	<u>Q1415</u>	
contract:	<u>PORT06</u>	lab code:	<u>CHEM</u>	case no.:	<u>Q1415</u>	sas no.: <u>Q1415</u>
matrix:	<u>Solid</u>	sample id:	<u>Q1421-01</u>	client id:	<u>P001-CLAY-CF01-01MSD</u>	
Percent Solids for Sample:	70.3	Spiked ID:	<u>Q1421-03</u>	Percent Solids for Spike Sample:	70.3	

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.48		0.030		0.38	117		CV