

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1746
contract: PORT06 **lab code:** CHEM **case no.:** Q1746 **sas no.:** Q1746
matrix: Solid **sample id:** Q1745-09 **client id:** IB-6.5-WCMS
Percent Solids for Sample: 71.5 **Spiked ID:** Q1745-09MS **Percent Solids for Spike Sample:** 71.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5740		5630		130	82		P
Antimony	mg/Kg	75 - 125	49.3		3.35	U	53.5	92		P
Arsenic	mg/Kg	75 - 125	82.2		36.0		53.5	86		P
Barium	mg/Kg	75 - 125	403		386		13.4	129		P
Beryllium	mg/Kg	75 - 125	10.8		0.54		13.4	77		P
Cadmium	mg/Kg	75 - 125	12.4		0.13	J	13.4	91		P
Calcium	mg/Kg	75 - 125	9880		9780		66.9	149		P
Chromium	mg/Kg	75 - 125	39.0		16.2		26.8	85		P
Cobalt	mg/Kg	75 - 125	18.7		6.11		13.4	94		P
Copper	mg/Kg	75 - 125	230		217		20.1	63		P
Iron	mg/Kg	75 - 125	18100		18500		200	-219		P
Lead	mg/Kg	75 - 125	740		694		66.9	69		P
Magnesium	mg/Kg	75 - 125	1140		1030		130	86		P
Manganese	mg/Kg	75 - 125	207		193		13.4	103		P
Nickel	mg/Kg	75 - 125	57.1		26.1		33.5	93		P
Potassium	mg/Kg	75 - 125	1810		1240		670	85		P
Selenium	mg/Kg	75 - 125	115		1.34	U	130	88		P
Silver	mg/Kg	75 - 125	7.33		3.03		5.0	86		P
Sodium	mg/Kg	75 - 125	1270		1130		200	73		P
Thallium	mg/Kg	75 - 125	120		0.76	J	130	92		P
Vanadium	mg/Kg	75 - 125	37.8		21.1		20.1	83		P
Zinc	mg/Kg	75 - 125	298		292		13.4	43		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1746
contract: PORT06 **lab code:** CHEM **case no.:** Q1746 **sas no.:** Q1746
matrix: Solid **sample id:** Q1745-09 **client id:** IB-6.5-WCMSD
Percent Solids for Sample: 71.5 **Spiked ID:** Q1745-09MSD **Percent Solids for Spike Sample:** 71.5

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5680		5630		130	40		P
Antimony	mg/Kg	75 - 125	47.3		3.35	U	52.5	90		P
Arsenic	mg/Kg	75 - 125	79.3		36.0		52.5	82		P
Barium	mg/Kg	75 - 125	425		386		13.1	297		P
Beryllium	mg/Kg	75 - 125	9.94		0.54		13.1	72	N	P
Cadmium	mg/Kg	75 - 125	11.8		0.13	J	13.1	89		P
Calcium	mg/Kg	75 - 125	9780		9780		65.7	-10		P
Chromium	mg/Kg	75 - 125	37.9		16.2		26.3	82		P
Cobalt	mg/Kg	75 - 125	18.1		6.11		13.1	91		P
Copper	mg/Kg	75 - 125	223		217		19.7	28		P
Iron	mg/Kg	75 - 125	18400		18500		200	-31		P
Lead	mg/Kg	75 - 125	725		694		65.7	47		P
Magnesium	mg/Kg	75 - 125	1120		1030		130	69		P
Manganese	mg/Kg	75 - 125	204		193		13.1	84		P
Nickel	mg/Kg	75 - 125	55.3		26.1		32.8	89		P
Potassium	mg/Kg	75 - 125	1870		1240		660	94		P
Selenium	mg/Kg	75 - 125	110		1.34	U	130	85		P
Silver	mg/Kg	75 - 125	7.24		3.03		4.9	86		P
Sodium	mg/Kg	75 - 125	1300		1130		200	84		P
Thallium	mg/Kg	75 - 125	116		0.76	J	130	89		P
Vanadium	mg/Kg	75 - 125	37.0		21.1		19.7	81		P
Zinc	mg/Kg	75 - 125	289		292		13.1	-17		P

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1746
contract: PORT06 **lab code:** CHEM **case no.:** Q1746 **sas no.:** Q1746
matrix: Water **sample id:** Q1746-05 **client id:** B-158-GW01MS
Percent Solids for Sample: NA **Spiked ID:** Q1746-05MS **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	82 - 119	2.22		0.20	J	4.0	51	N	CV

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client:	<u>Portal Partners Tri-Venture</u>	level:	<u>low</u>	sdg no.:	<u>Q1746</u>		
contract:	<u>PORT06</u>	lab code:	<u>CHEM</u>	case no.:	<u>Q1746</u>	sas no.:	<u>Q1746</u>
matrix:	<u>Water</u>	sample id:	<u>Q1746-05</u>	client id:	<u>B-158-GW01MSD</u>		
Percent Solids for Sample:	<u>NA</u>	Spiked ID:	<u>Q1746-05MSD</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	82 - 119	2.16		0.20	J	4.0	49	N	CV

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1746
contract: PORT06 **lab code:** CHEM **case no.:** Q1746 **sas no.:** Q1746
matrix: Water **sample id:** Q1746-06 **client id:** B-149-GW01MS
Percent Solids for Sample: NA **Spiked ID:** Q1746-06MS **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	94900		77300		1000	1761		P
Antimony	ug/L	75 - 125	324		25.0	U	400	81		P
Arsenic	ug/L	75 - 125	396		53.3		400	86		P
Barium	ug/L	75 - 125	247		144		100	103		P
Beryllium	ug/L	75 - 125	81.9		4.92		100	77		P
Cadmium	ug/L	75 - 125	93.6		3.00	U	100	94		P
Calcium	ug/L	75 - 125	37900		37000		500	191		P
Chromium	ug/L	75 - 125	398		204		200	97		P
Cobalt	ug/L	75 - 125	166		56.1		100	110		P
Copper	ug/L	75 - 125	620		382		150	158	N	P
Iron	ug/L	75 - 125	168000		131000		1500	2487		P
Lead	ug/L	75 - 125	551		89.6		500	92		P
Magnesium	ug/L	75 - 125	46600		38600		1000	799		P
Manganese	ug/L	75 - 125	1020		757		100	268		P
Nickel	ug/L	75 - 125	403		143		250	104		P
Potassium	ug/L	75 - 125	41100		36400		5000	93		P
Selenium	ug/L	75 - 125	795		10.0	U	1000	80		P
Silver	ug/L	75 - 125	22.2		5.00	U	37.5	59	N	P
Sodium	ug/L	75 - 125	144000		143000		1500	63		P
Thallium	ug/L	75 - 125	829		20.0	U	1000	83		P
Vanadium	ug/L	75 - 125	345		198		150	98		P
Zinc	ug/L	75 - 125	726		559		100	168		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1746
contract: PORT06 **lab code:** CHEM **case no.:** Q1746 **sas no.:** Q1746
matrix: Water **sample id:** Q1746-06 **client id:** B-149-GW01MSD
Percent Solids for Sample: NA **Spiked ID:** Q1746-06MSD **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	62300		77300		1000	-1504		P
Antimony	ug/L	75 - 125	360		25.0	U	400	90		P
Arsenic	ug/L	75 - 125	412		53.3		400	90		P
Barium	ug/L	75 - 125	187		144		100	43	N	P
Beryllium	ug/L	75 - 125	89.8		4.92		100	85		P
Cadmium	ug/L	75 - 125	97.5		3.00	U	100	98		P
Calcium	ug/L	75 - 125	23500		37000		500	-2683		P
Chromium	ug/L	75 - 125	336		204		200	66	N	P
Cobalt	ug/L	75 - 125	143		56.1		100	87		P
Copper	ug/L	75 - 125	479		382		150	65	N	P
Iron	ug/L	75 - 125	109000		131000		1500	-1405		P
Lead	ug/L	75 - 125	543		89.6		500	91		P
Magnesium	ug/L	75 - 125	30600		38600		1000	-799		P
Manganese	ug/L	75 - 125	703		757		100	-54		P
Nickel	ug/L	75 - 125	350		143		250	83		P
Potassium	ug/L	75 - 125	26000		36400		5000	-209		P
Selenium	ug/L	75 - 125	885		10.0	U	1000	88		P
Silver	ug/L	75 - 125	26.0		5.00	U	37.5	69	N	P
Sodium	ug/L	75 - 125	83200		143000		1500	-3998		P
Thallium	ug/L	75 - 125	902		20.0	U	1000	90		P
Vanadium	ug/L	75 - 125	274		198		150	51	N	P
Zinc	ug/L	75 - 125	518		559		100	-41		P

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1746
contract: PORT06 **lab code:** CHEM **case no.:** Q1746 **sas no.:** Q1746
matrix: Solid **sample id:** Q1753-05 **client id:** WC-2MS
Percent Solids for Sample: 89 **Spiked ID:** Q1753-05MS **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.23		0.026		0.3	69	N	CV

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client:	<u>Portal Partners Tri-Venture</u>	level:	<u>low</u>	sdg no.:	<u>Q1746</u>		
contract:	<u>PORT06</u>	lab code:	<u>CHEM</u>	case no.:	<u>Q1746</u>	sas no.:	<u>Q1746</u>
matrix:	<u>Solid</u>	sample id:	<u>Q1753-05</u>	client id:	<u>WC-2MSD</u>		
Percent Solids for Sample:	89	Spiked ID:	Q1753-05MSD	Percent Solids for Spike Sample:	89		

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.18		0.026		0.28	56	N	CV