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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** P4718
contract: PORT06 **lab code:** CHEM **case no.:** P4718 **sas no.:** P4718
matrix: Solid **sample id:** P4699-01 **client id:** MIXED-DEMOMS
Percent Solids for Sample: 99.5 **Spiked ID:** P4699-01MS **Percent Solids for Spike Sample:** 99.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	4160		3900		85.5	297		P
Antimony	mg/Kg	75 - 125	35.5		0.18	J	34.2	103		P
Arsenic	mg/Kg	75 - 125	37.3		0.81	J	34.2	107		P
Barium	mg/Kg	75 - 125	26.5		17.9		8.6	100		P
Beryllium	mg/Kg	75 - 125	8.92		0.17	J	8.6	102		P
Cadmium	mg/Kg	75 - 125	8.39		0.46		8.6	92		P
Calcium	mg/Kg	75 - 125	67400		64800		42.8	6009		P
Chromium	mg/Kg	75 - 125	30.8		16.0		17.1	87		P
Cobalt	mg/Kg	75 - 125	9.10		1.10	J	8.6	93		P
Copper	mg/Kg	75 - 125	16.2		5.06		12.8	87		P
Iron	mg/Kg	75 - 125	3270		3100		130	129		P
Lead	mg/Kg	75 - 125	42.1		4.31		42.8	88		P
Magnesium	mg/Kg	75 - 125	13700		13200		85.5	539		P
Manganese	mg/Kg	75 - 125	152		142		8.6	117		P
Nickel	mg/Kg	75 - 125	23.1		3.50		21.4	92		P
Potassium	mg/Kg	75 - 125	1960		1410		430	128	N	P
Selenium	mg/Kg	75 - 125	86.0		0.82	U	85.5	101		P
Silver	mg/Kg	75 - 125	3.61		0.21	J	3.2	106		P
Sodium	mg/Kg	75 - 125	538		362		130	135	N	P
Thallium	mg/Kg	75 - 125	80.8		1.65	U	85.5	94		P
Vanadium	mg/Kg	75 - 125	16.8		5.40		12.8	89		P
Zinc	mg/Kg	75 - 125	58.9		50.0		8.6	103		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Portal Partners Tri-Venture</u>	level: <u>low</u>	sdg no.: <u>P4718</u>
contract: <u>PORT06</u>	lab code: <u>CHEM</u>	case no.: <u>P4718</u> sas no.: <u>P4718</u>
matrix: <u>Solid</u>	sample id: <u>P4699-01</u>	client id: <u>MIXED-DEMOMSD</u>
Percent Solids for Sample: 99.5	Spiked ID: P4699-01MSD	Percent Solids for Spike Sample: 99.5

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	4550		3900		91.8	702		P
Antimony	mg/Kg	75 - 125	37.5		0.18	J	36.7	102		P
Arsenic	mg/Kg	75 - 125	39.2		0.81	J	36.7	105		P
Barium	mg/Kg	75 - 125	29.0		17.9		9.2	120		P
Beryllium	mg/Kg	75 - 125	8.59		0.17	J	9.2	91		P
Cadmium	mg/Kg	75 - 125	8.98		0.46		9.2	93		P
Calcium	mg/Kg	75 - 125	74000		64800		45.9	20038		P
Chromium	mg/Kg	75 - 125	33.1		16.0		18.4	93		P
Cobalt	mg/Kg	75 - 125	9.76		1.10	J	9.2	94		P
Copper	mg/Kg	75 - 125	17.3		5.06		13.8	89		P
Iron	mg/Kg	75 - 125	3530		3100		140	306		P
Lead	mg/Kg	75 - 125	45.2		4.31		45.9	89		P
Magnesium	mg/Kg	75 - 125	12800		13200		91.8	-451		P
Manganese	mg/Kg	75 - 125	151		142		9.2	91		P
Nickel	mg/Kg	75 - 125	24.8		3.50		22.9	93		P
Potassium	mg/Kg	75 - 125	2080		1410		460	145	N	P
Selenium	mg/Kg	75 - 125	90.0		0.82	U	91.8	98		P
Silver	mg/Kg	75 - 125	3.84		0.21	J	3.4	107		P
Sodium	mg/Kg	75 - 125	568		362		140	147	N	P
Thallium	mg/Kg	75 - 125	85.5		1.65	U	91.8	93		P
Vanadium	mg/Kg	75 - 125	18.3		5.40		13.8	93		P
Zinc	mg/Kg	75 - 125	63.5		50.0		9.2	146		P

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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** P4718
contract: PORT06 **lab code:** CHEM **case no.:** P4718 **sas no.:** P4718
matrix: Solid **sample id:** P4706-01 **client id:** TR-04-110424MS
Percent Solids for Sample: 93.5 **Spiked ID:** P4706-01MS **Percent Solids for Spike Sample:** 93.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.33		0.060		0.27	99		CV

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MATRIX SPIKE DUPLICATE SUMMARY

client:	<u>Portal Partners Tri-Venture</u>	level:	<u>low</u>	sdg no.:	<u>P4718</u>	
contract:	<u>PORT06</u>	lab code:	<u>CHEM</u>	case no.:	<u>P4718</u>	sas no.: <u>P4718</u>
matrix:	<u>Solid</u>	sample id:	<u>P4706-01</u>	client id:	<u>TR-04-110424MSD</u>	
Percent Solids for Sample:	93.5	Spiked ID:	<u>P4706-01MSD</u>	Percent Solids for Spike Sample:	93.5	

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.33		0.060		0.28	95		CV

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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** P4718
contract: PORT06 **lab code:** CHEM **case no.:** P4718 **sas no.:** P4718
matrix: Water **sample id:** P4718-04 **client id:** WB-307-SWMS
Percent Solids for Sample: NA **Spiked ID:** P4718-04MS **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	1670		389		1000	128	N	P
Antimony	ug/L	75 - 125	562		25.0	U	400	140	N	P
Arsenic	ug/L	75 - 125	549		10.0	U	400	137	N	P
Barium	ug/L	75 - 125	134		34.4	J	100	99		P
Beryllium	ug/L	75 - 125	115		3.00	U	100	115		P
Cadmium	ug/L	75 - 125	87.4		0.19	J	100	87		P
Calcium	ug/L	75 - 125	210000		206000		500	779		P
Chromium	ug/L	75 - 125	157		1.78	J	200	78		P
Cobalt	ug/L	75 - 125	92.0		15.0	U	100	92		P
Copper	ug/L	75 - 125	125		10.0	U	150	83		P
Iron	ug/L	75 - 125	2060		521		1500	102		P
Lead	ug/L	75 - 125	436		6.00	U	500	87		P
Magnesium	ug/L	75 - 125	642000		628000		1000	1362		P
Manganese	ug/L	75 - 125	154		69.7		100	84		P
Nickel	ug/L	75 - 125	221		20.0	U	250	88		P
Potassium	ug/L	75 - 125	394000		425000		5000	-622		P
Selenium	ug/L	75 - 125	1370		10.0	U	1000	137	N	P
Silver	ug/L	75 - 125	65.9		5.00	U	37.5	176	N	P
Sodium	ug/L	75 - 125	4920000	D	5110000	D	1500	-12683		P
Thallium	ug/L	75 - 125	814		20.0	U	1000	81		P
Vanadium	ug/L	75 - 125	145		3.65	J	150	94		P
Zinc	ug/L	75 - 125	177		19.8	J	100	157	N	P

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MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** P4718
contract: PORT06 **lab code:** CHEM **case no.:** P4718 **sas no.:** P4718
matrix: Water **sample id:** P4718-04 **client id:** WB-307-SWMSD
Percent Solids for Sample: NA **Spiked ID:** P4718-04MSD **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	1700		389		1000	131	N	P
Antimony	ug/L	75 - 125	591		25.0	U	400	148	N	P
Arsenic	ug/L	75 - 125	570		10.0	U	400	142	N	P
Barium	ug/L	75 - 125	135		34.4	J	100	101		P
Beryllium	ug/L	75 - 125	114		3.00	U	100	114		P
Cadmium	ug/L	75 - 125	87.0		0.19	J	100	87		P
Calcium	ug/L	75 - 125	212000		206000		500	1340		P
Chromium	ug/L	75 - 125	156		1.78	J	200	77		P
Cobalt	ug/L	75 - 125	91.8		15.0	U	100	92		P
Copper	ug/L	75 - 125	127		10.0	U	150	85		P
Iron	ug/L	75 - 125	2120		521		1500	107		P
Lead	ug/L	75 - 125	434		6.00	U	500	87		P
Magnesium	ug/L	75 - 125	654000		628000		1000	2518		P
Manganese	ug/L	75 - 125	156		69.7		100	86		P
Nickel	ug/L	75 - 125	220		20.0	U	250	88		P
Potassium	ug/L	75 - 125	413000		425000		5000	-248		P
Selenium	ug/L	75 - 125	1430		10.0	U	1000	143	N	P
Silver	ug/L	75 - 125	67.9		5.00	U	37.5	181	N	P
Sodium	ug/L	75 - 125	5190000	D	5110000	D	1500	5649		P
Thallium	ug/L	75 - 125	810		20.0	U	1000	81		P
Vanadium	ug/L	75 - 125	145		3.65	J	150	94		P
Zinc	ug/L	75 - 125	182		19.8	J	100	162	N	P

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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** P4718
contract: PORT06 **lab code:** CHEM **case no.:** P4718 **sas no.:** P4718
matrix: Water **sample id:** P4791-02 **client id:** HINCHMAN-OILY-WATERMS
Percent Solids for Sample: NA **Spiked ID:** P4791-02MS **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	3.06		0.20	U	4.0	76		CV

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MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** P4718
contract: PORT06 **lab code:** CHEM **case no.:** P4718 **sas no.:** P4718
matrix: Water **sample id:** P4791-02 **client id:** HINCHMAN-OILY-WATERMSD
Percent Solids for Sample: NA **Spiked ID:** P4791-02MSD **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	3.12		0.20	U	4.0	78		CV