

metals
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MATRIX SPIKE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1232
contract: RUTW01 **lab code:** CHEM **case no.:** Q1232 **sas no.:** Q1232
matrix: Solid **sample id:** Q1235-07 **client id:** JPP-16.1-012925MS
Percent Solids for Sample: 89.2 **Spiked ID:** Q1235-07MS **Percent Solids for Spike Sample:** 89.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	4430		4460		110	-22		P
Antimony	mg/Kg	75 - 125	21.9		0.90	J	43.3	49	N	P
Arsenic	mg/Kg	75 - 125	45.7		4.60		43.3	95		P
Barium	mg/Kg	75 - 125	89.2		80.4		10.8	81		P
Beryllium	mg/Kg	75 - 125	9.17		0.34		10.8	82		P
Cadmium	mg/Kg	75 - 125	10.8		0.44		10.8	95		P
Calcium	mg/Kg	75 - 125	30000		28600		54.2	2576		P
Chromium	mg/Kg	75 - 125	33.7		13.0		21.7	96		P
Cobalt	mg/Kg	75 - 125	16.0		4.72		10.8	105		P
Copper	mg/Kg	75 - 125	68.9		72.0		16.2	-19		P
Iron	mg/Kg	75 - 125	9930		9910		160	11		P
Lead	mg/Kg	75 - 125	236		184		54.2	96		P
Magnesium	mg/Kg	75 - 125	9850		7860		110	1806		P
Manganese	mg/Kg	75 - 125	174		156		10.8	171		P
Mercury	mg/Kg	80 - 120	0.55		0.31		0.27	87		CV
Nickel	mg/Kg	75 - 125	41.9		15.4		27.1	98		P
Potassium	mg/Kg	75 - 125	1660		1160		540	94		P
Selenium	mg/Kg	75 - 125	94.1		0.92	U	110	86		P
Silver	mg/Kg	75 - 125	3.81		0.068	J	4.1	91		P
Sodium	mg/Kg	75 - 125	1250		1180		160	46		P
Thallium	mg/Kg	75 - 125	104		1.84	U	110	94		P
Vanadium	mg/Kg	75 - 125	31.1		18.0		16.2	81		P
Zinc	mg/Kg	75 - 125	130		117		10.8	114		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1232
contract: RUTW01 **lab code:** CHEM **case no.:** Q1232 **sas no.:** Q1232
matrix: Solid **sample id:** Q1235-07 **client id:** JPP-16.1-012925MSD
Percent Solids for Sample: 89.2 **Spiked ID:** Q1235-07MSD **Percent Solids for Spike Sample:** 89.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	3840		4460		93.4	-655		P
Antimony	mg/Kg	75 - 125	18.8		0.90	J	37.4	48	N	P
Arsenic	mg/Kg	75 - 125	39.3		4.60		37.4	93		P
Barium	mg/Kg	75 - 125	79.2		80.4		9.3	-13		P
Beryllium	mg/Kg	75 - 125	7.94		0.34		9.3	82		P
Cadmium	mg/Kg	75 - 125	9.25		0.44		9.3	95		P
Calcium	mg/Kg	75 - 125	26100		28600		46.7	-5216		P
Chromium	mg/Kg	75 - 125	28.6		13.0		18.7	84		P
Cobalt	mg/Kg	75 - 125	13.8		4.72		9.3	98		P
Copper	mg/Kg	75 - 125	59.4		72.0		14.0	-90		P
Iron	mg/Kg	75 - 125	8620		9910		140	-925		P
Lead	mg/Kg	75 - 125	204		184		46.7	42	N	P
Magnesium	mg/Kg	75 - 125	8590		7860		93.4	783		P
Manganese	mg/Kg	75 - 125	155		156		9.3	-11		P
Mercury	mg/Kg	80 - 120	0.60		0.31		0.27	106		CV
Nickel	mg/Kg	75 - 125	36.2		15.4		23.4	89		P
Potassium	mg/Kg	75 - 125	1440		1160		470	59	N	P
Selenium	mg/Kg	75 - 125	80.6		0.92	U	93.4	86		P
Silver	mg/Kg	75 - 125	3.27		0.068	J	3.5	92		P
Sodium	mg/Kg	75 - 125	1100		1180		140	-54		P
Thallium	mg/Kg	75 - 125	89.2		1.84	U	93.4	96		P
Vanadium	mg/Kg	75 - 125	27.2		18.0		14.0	65	N	P
Zinc	mg/Kg	75 - 125	110		117		9.3	-82		P