

metals
- 5a -
MATRIX SPIKE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1242
contract: RUTW01 **lab code:** CHEM **case no.:** Q1242 **sas no.:** Q1242
matrix: Solid **sample id:** Q1241-19 **client id:** JPP-51.4-013025MS
Percent Solids for Sample: 93.2 **Spiked ID:** Q1241-19MS **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	6020		5920		93.3	109		P
Antimony	mg/Kg	75 - 125	12.7		0.66	J	37.3	32	N	P
Arsenic	mg/Kg	75 - 125	39.8		7.33		37.3	87		P
Barium	mg/Kg	75 - 125	119		118		9.3	12		P
Beryllium	mg/Kg	75 - 125	7.59		0.44		9.3	77		P
Cadmium	mg/Kg	75 - 125	9.27		1.02		9.3	89		P
Calcium	mg/Kg	75 - 125	23300		23200		46.7	132		P
Chromium	mg/Kg	75 - 125	29.3		15.0		18.7	76		P
Cobalt	mg/Kg	75 - 125	15.6		7.16		9.3	91		P
Copper	mg/Kg	75 - 125	84.1		83.1		14.0	7		P
Iron	mg/Kg	75 - 125	18400		15800		140	1832		P
Lead	mg/Kg	75 - 125	285		286		46.7	-1		P
Magnesium	mg/Kg	75 - 125	4330		3980		93.3	378		P
Manganese	mg/Kg	75 - 125	202		221		9.3	-206		P
Nickel	mg/Kg	75 - 125	41.0		19.5		23.3	92		P
Potassium	mg/Kg	75 - 125	1680		1160		470	110		P
Selenium	mg/Kg	75 - 125	77.7		0.93	U	93.3	83		P
Silver	mg/Kg	75 - 125	3.93		0.79		3.5	90		P
Sodium	mg/Kg	75 - 125	2340		2280		140	40		P
Thallium	mg/Kg	75 - 125	75.9		1.85	U	93.3	81		P
Vanadium	mg/Kg	75 - 125	32.1		22.4		14.0	69	N	P
Zinc	mg/Kg	75 - 125	175		185		9.3	-110		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1242
contract: RUTW01 **lab code:** CHEM **case no.:** Q1242 **sas no.:** Q1242
matrix: Solid **sample id:** Q1241-19 **client id:** JPP-51.4-013025MSD
Percent Solids for Sample: 93.2 **Spiked ID:** Q1241-19MSD **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5960		5920		94.1	48		P
Antimony	mg/Kg	75 - 125	12.7		0.66	J	37.6	32	N	P
Arsenic	mg/Kg	75 - 125	40.1		7.33		37.6	87		P
Barium	mg/Kg	75 - 125	115		118		9.4	-33		P
Beryllium	mg/Kg	75 - 125	7.60		0.44		9.4	76		P
Cadmium	mg/Kg	75 - 125	9.35		1.02		9.4	89		P
Calcium	mg/Kg	75 - 125	22800		23200		47.1	-985		P
Chromium	mg/Kg	75 - 125	29.5		15.0		18.8	77		P
Cobalt	mg/Kg	75 - 125	15.7		7.16		9.4	91		P
Copper	mg/Kg	75 - 125	84.8		83.1		14.1	12		P
Iron	mg/Kg	75 - 125	18200		15800		140	1673		P
Lead	mg/Kg	75 - 125	286		286		47.1	1		P
Magnesium	mg/Kg	75 - 125	4250		3980		94.1	289		P
Manganese	mg/Kg	75 - 125	196		221		9.4	-265		P
Nickel	mg/Kg	75 - 125	41.2		19.5		23.5	92		P
Potassium	mg/Kg	75 - 125	1630		1160		470	99		P
Selenium	mg/Kg	75 - 125	78.5		0.93	U	94.1	83		P
Silver	mg/Kg	75 - 125	3.91		0.79		3.5	89		P
Sodium	mg/Kg	75 - 125	2300		2280		140	13		P
Thallium	mg/Kg	75 - 125	76.9		1.85	U	94.1	82		P
Vanadium	mg/Kg	75 - 125	31.4		22.4		14.1	64	N	P
Zinc	mg/Kg	75 - 125	176		185		9.4	-90		P

metals
- 5a -
MATRIX SPIKE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1242
contract: RUTW01 **lab code:** CHEM **case no.:** Q1242 **sas no.:** Q1242
matrix: Solid **sample id:** Q1269-01 **client id:** VNJ-231MS
Percent Solids for Sample: 88.9 **Spiked ID:** Q1269-01MS **Percent Solids for Spike Sample:** 88.9

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.31		0.019		0.3	97		CV

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1242
contract: RUTW01 **lab code:** CHEM **case no.:** Q1242 **sas no.:** Q1242
matrix: Solid **sample id:** Q1269-01 **client id:** VNJ-231MSD
Percent Solids for Sample: 88.9 **Spiked ID:** Q1269-01MSD **Percent Solids for Spike Sample:** 88.9

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.25		0.019		0.27	84		CV