

metals
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MATRIX SPIKE SUMMARY

client: HDR, Inc. **level:** low **sdg no.:** Q3662
contract: HDRI08 **lab code:** ACE
matrix: Solid **sample id:** Q3669-01 **client id:** EO-01-11182025MS

Percent Solids for Sample: 92.9 **Spiked ID:** Q3669-01MS **Percent Solids for Spike Sample:** 92.9

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	6560		6170		97.9	398		P
Antimony	mg/Kg	75 - 125	14.9		2.52	U	39.1	38	N	P
Arsenic	mg/Kg	75 - 125	33.2		2.61		39.1	78		P
Barium	mg/Kg	75 - 125	32.3		23.0		9.8	95		P
Beryllium	mg/Kg	75 - 125	7.63		0.40		9.8	74	N	P
Cadmium	mg/Kg	75 - 125	10.9		1.46		9.8	97		P
Calcium	mg/Kg	75 - 125	2700		2560		48.9	287		P
Chromium	mg/Kg	75 - 125	25.9		10.6		19.6	78		P
Cobalt	mg/Kg	75 - 125	17.6		8.51		9.8	93		P
Copper	mg/Kg	75 - 125	32.2		14.7		14.7	119		P
Iron	mg/Kg	75 - 125	14100		14800		150	-465		P
Lead	mg/Kg	75 - 125	160		21.3		48.9	284	N	P
Magnesium	mg/Kg	75 - 125	2110		2020		97.9	87		P
Manganese	mg/Kg	75 - 125	219		197		9.8	226		P
Mercury	mg/Kg	80 - 120	0.35		0.032		0.27	116		CV
Nickel	mg/Kg	75 - 125	35.9		12.8		24.5	94		P
Potassium	mg/Kg	75 - 125	769		397		490	76		P
Selenium	mg/Kg	75 - 125	74.5		1.01	U	97.9	76		P
Silver	mg/Kg	75 - 125	2.13		0.50	U	3.7	58	N	P
Sodium	mg/Kg	75 - 125	576		468		150	71	N	P
Thallium	mg/Kg	75 - 125	83.4		2.01	U	97.9	85		P
Vanadium	mg/Kg	75 - 125	35.7		25.7		14.7	68	N	P
Zinc	mg/Kg	75 - 125	44.4		35.1		9.8	95		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: HDR, Inc. **level:** low **sdg no.:** Q3662
contract: HDRI08 **lab code:** ACE
matrix: Solid **sample id:** Q3669-01 **client id:** EO-01-11182025MSD

Percent Solids for Sample: 92.9 **Spiked ID:** Q3669-01MSD **Percent Solids for Spike Sample:** 92.9

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	7300		6170		97.0	1166		P
Antimony	mg/Kg	75 - 125	14.6		2.52	U	38.8	38	N	P
Arsenic	mg/Kg	75 - 125	33.0		2.61		38.8	78		P
Barium	mg/Kg	75 - 125	34.9		23.0		9.7	123		P
Beryllium	mg/Kg	75 - 125	7.67		0.40		9.7	75		P
Cadmium	mg/Kg	75 - 125	11.5		1.46		9.7	103		P
Calcium	mg/Kg	75 - 125	3160		2560		48.5	1245		P
Chromium	mg/Kg	75 - 125	26.2		10.6		19.4	80		P
Cobalt	mg/Kg	75 - 125	19.2		8.51		9.7	110		P
Copper	mg/Kg	75 - 125	32.4		14.7		14.5	122		P
Iron	mg/Kg	75 - 125	15800		14800		150	671		P
Lead	mg/Kg	75 - 125	83.3		21.3		48.5	128	N	P
Magnesium	mg/Kg	75 - 125	2390		2020		97.0	374		P
Manganese	mg/Kg	75 - 125	232		197		9.7	365		P
Mercury	mg/Kg	80 - 120	0.34		0.032		0.28	110		CV
Nickel	mg/Kg	75 - 125	39.2		12.8		24.2	109		P
Potassium	mg/Kg	75 - 125	873		397		480	99		P
Selenium	mg/Kg	75 - 125	73.2		1.01	U	97.0	76		P
Silver	mg/Kg	75 - 125	1.99		0.50	U	3.6	55	N	P
Sodium	mg/Kg	75 - 125	677		468		150	139	N	P
Thallium	mg/Kg	75 - 125	88.4		2.01	U	97.0	91		P
Vanadium	mg/Kg	75 - 125	39.8		25.7		14.5	98		P
Zinc	mg/Kg	75 - 125	40.5		35.1		9.7	56	N	P