



Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
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QC CERTIFICATE PH10173276

Project: COPPERADO

P.O. No.: REDEX - 26

This report is for 170 Pulp samples submitted to our lab in Perth, WA, Australia on 23-NOV-2010.

The following have access to data associated with this certificate:

RUSSELL BIRRELL

CRAIG HALL

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LEV-01	Waste Disposal Levy
LOG-22	Sample login - Rcd w/o BarCode
WEI-21	Received Sample Weight

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
pH-MS23	MS23 Leach pH
ME-MS23	IONIC Leach - Complete PKG. ICP-MS

To: REDBANK COPPER LTD
ATTN: RUSSELL BIRRELL
PO BOX 8116
SUBIACO EAST WA 6008

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Wayne Abbott, Operations Manager, Western Australia



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QC CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	pH-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Final pH	Ag	As	Au	Ba	Be	Bi	Br	Ca	Cd	Ce	Co	Cr	Cs	Cu
		Unity	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb
		0.1	0.1	2	0.02	10	0.2	3	0.05	0.2	1	0.1	0.3	1	0.1	1
STANDARDS																
ION-SRM18		9.0	19.2	9	6.97	180	<0.2	<3	1.48	146.5	59	14.7	59.8	5	6.9	726
ION-SRM18		9.0	19.4	9	7.04	180	<0.2	<3	1.49	148.0	60	14.9	60.4	5	7.0	734
ION-SRM18		9.0	18.8	10	8.00	190	<0.2	<3	1.52	158.5	71	14.8	62.2	7	7.6	828
ION-SRM18		9.0	18.7	10	7.97	190	<0.2	<3	1.52	158.0	71	14.8	61.9	7	7.6	825
ION-SRM18		9.0	17.7	10	6.84	190	0.3	<3	1.61	145.0	67	16.5	56.5	7	6.9	735
ION-SRM18		9.0	17.7	7	6.84	190	0.3	<3	1.61	145.0	67	16.5	56.6	7	6.9	736
ION-SRM18		9.0	15.8	10	7.24	180	0.4	<3	1.24	150.0	61	15.4	57.0	7	7.0	720
ION-SRM18		9.0	15.9	9	7.28	180	0.4	<3	1.25	151.5	62	15.5	57.4	7	7.1	725
Target Range - Lower Bound			15.7	5	6.83	180	<0.2	<3	1.23	139.5	58	13.6	54.6	4	6.6	693
Upper Bound			19.4	11	8.39	240	0.4	6	1.61	171.0	73	16.8	67.3	7	8.2	849
BLANKS																
BLANK		9.0	<0.1	2	0.02	10	<0.2	<3	0.06	<0.2	<1	0.1	<0.3	1	<0.1	1
BLANK		9.0	<0.1	2	<0.02	<10	0.2	<3	0.07	<0.2	<1	<0.1	<0.3	1	<0.1	<1
BLANK		9.0	<0.1	<2	0.02	<10	<0.2	<3	<0.05	<0.2	<1	<0.1	<0.3	1	<0.1	<1
BLANK		9.0	<0.1	2	<0.02	<10	0.3	<3	<0.05	0.3	<1	<0.1	<0.3	1	<0.1	1
Target Range - Lower Bound		8.8	<0.1	<2	<0.02	<10	<0.2	<3	<0.05	<0.2	<1	<0.1	<0.3	<1	<0.1	<1
Upper Bound		9.2	0.2	4	0.04	20	0.4	6	0.10	0.4	2	0.2	0.6	2	0.2	2
DUPLICATES																
CPS10		8.5	0.8	6	0.03	680	<0.2	<3	0.15	21.2	<1	125.0	207	<1	2.7	536
DUP		8.5	1.0	<2	0.04	800	<0.2	<3	0.09	22.8	1	151.5	246	1	3.5	609
Target Range - Lower Bound		8.0	0.8	<2	<0.02	690	<0.2	<3	0.06	20.7	<1	131.0	215	<1	2.8	543
Upper Bound		9.0	1.0	6	0.04	790	0.4	6	0.18	23.3	2	145.5	238	2	3.4	602
CPS20		9.0	1.3	<2	0.05	1130	<0.2	<3	0.07	34.8	1	184.0	176.5	<1	4.6	711
DUP		9.0	0.9	2	0.04	1150	<0.2	<3	<0.05	27.2	<1	187.0	170.5	1	4.6	538
Target Range - Lower Bound		8.5	0.9	<2	<0.02	1070	<0.2	<3	<0.05	29.3	<1	176.0	164.5	<1	4.3	592
Upper Bound		9.6	1.3	4	0.07	1210	0.4	6	0.10	32.8	2	195.0	182.5	2	4.9	657



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QC CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	Li
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
		0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.5	0.1	0.1	0.01	0.1	0.1	0.2
		0.1													
STANDARDS															
ION-SRM18		1.5	0.7	0.8	2.1	4.8	3.0	0.1	<0.5	4.1	0.3	0.17	<0.1	4.6	0.5
ION-SRM18		1.5	0.7	0.8	2.1	4.8	3.0	0.1	<0.5	4.1	0.3	0.17	<0.1	4.7	0.5
ION-SRM18		1.4	0.7	0.7	2.1	6.2	3.2	<0.1	<0.5	3.9	0.3	0.17	<0.1	5.4	0.6
ION-SRM18		1.4	0.7	0.7	2.1	6.2	3.1	<0.1	<0.5	3.9	0.3	0.17	<0.1	5.4	0.6
ION-SRM18		1.4	0.8	0.9	2.1	6.4	3.2	<0.1	<0.5	3.8	0.3	0.17	<0.1	5.5	0.5
ION-SRM18		1.4	0.8	0.9	2.1	6.4	3.2	<0.1	<0.5	3.8	0.3	0.17	<0.1	5.5	0.5
ION-SRM18		1.4	0.8	0.8	2.1	5.9	3.2	0.1	<0.5	4.2	0.3	0.16	<0.1	5.4	0.5
ION-SRM18		1.5	0.8	0.8	2.1	6.0	3.3	0.1	<0.5	4.2	0.3	0.16	<0.1	5.4	0.5
Target Range - Lower Bound		1.1	0.5	0.6	2.0	4.6	2.5	<0.1	<0.5	3.7	<0.1	0.13	<0.1	4.4	<0.2
Upper Bound		1.5	0.9	1.0	2.7	6.7	3.3	0.2	1.0	4.8	0.3	0.18	0.2	5.6	0.4
BLANKS															
BLANK		<0.1	<0.1	<0.1	0.2	<0.5	<0.1	<0.1	<0.5	<0.1	<0.1	<0.01	<0.1	<0.1	0.4
BLANK		<0.1	<0.1	<0.1	0.1	<0.5	<0.1	<0.1	<0.5	<0.1	<0.1	<0.01	<0.1	<0.1	<0.2
BLANK		<0.1	<0.1	<0.1	0.1	<0.5	<0.1	<0.1	<0.5	<0.1	<0.1	<0.01	<0.1	<0.1	<0.2
BLANK		<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.5	<0.1	<0.1	<0.01	<0.1	<0.1	0.4
Target Range - Lower Bound		<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.5	<0.1	<0.1	<0.01		<0.1	<0.2
Upper Bound		0.2	0.2	0.2	0.2	1.0	0.2	0.2	1.0	0.2	0.2	0.02		0.2	0.4
DUPLICATES															
CPS10		11.8	5.2	6.5	2.7	17.6	22.6	0.6	<0.5	0.1	2.1	0.11	<0.1	17.8	1.1
DUP		13.1	6.0	7.1	3.2	20.2	25.2	0.6	<0.5	0.1	2.4	0.13	<0.1	21.5	0.7
Target Range - Lower Bound		11.7	5.2	6.4	2.7	17.5	22.6	0.5	<0.5	<0.1	2.0	0.10	<0.1	18.6	0.7
Upper Bound		13.2	6.0	7.2	3.2	20.3	25.2	0.7	1.0	0.2	2.5	0.14	0.2	20.7	1.1
CPS20		24.7	9.9	14.5	3.2	28.2	59.3	1.7	<0.5	0.1	4.1	0.11	<0.1	130.5	0.7
DUP		27.3	10.9	14.1	3.9	28.2	57.3	1.6	<0.5	0.1	4.6	0.09	<0.1	130.0	0.3
Target Range - Lower Bound		24.6	9.8	13.5	3.3	26.3	55.3	1.5	<0.5	<0.1	4.0	0.09	<0.1	123.5	0.3
Upper Bound		27.4	11.0	15.1	3.8	30.1	61.3	1.8	1.0	0.2	4.7	0.12	0.2	137.0	0.7



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QC CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Mg	Mn	Mo	Nb	Nd	Ni	Pb	Pb 206	Pb 207	Pb 208	Pd	Pr	Rb	Re	Sb
		ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
		0.01	0.01	0.5	0.1	0.1	1	1	1	1	1	0.1	0.1	0.1	0.1	0.5
STANDARDS																
ION-SRM18		71.8	0.44	26.8	<0.1	12.1	531	85	20	18	46	11.4	2.1	163.5	<0.1	<0.5
ION-SRM18		72.6	0.44	27.0	<0.1	12.2	537	86	20	18	46	11.5	2.1	165.0	<0.1	<0.5
ION-SRM18		78.9	0.42	30.7	0.1	13.1	516	84	19	17	46	12.3	2.3	171.5	<0.1	<0.5
ION-SRM18		78.6	0.42	30.5	0.1	13.0	514	83	19	17	45	12.3	2.3	171.0	<0.1	<0.5
ION-SRM18		72.7	0.45	27.8	<0.1	13.6	498	86	20	18	47	10.9	2.2	164.0	<0.1	<0.5
ION-SRM18		72.7	0.45	27.8	<0.1	13.6	498	86	20	18	47	10.9	2.2	164.0	<0.1	<0.5
ION-SRM18		70.2	0.44	28.0	<0.1	13.9	503	78	18	17	42	10.8	2.3	163.5	<0.1	<0.5
ION-SRM18		70.8	0.44	28.2	<0.1	14.0	507	78	18	17	42	10.9	2.3	164.5	<0.1	<0.5
Target Range - Lower Bound		66.4	0.41	26.3	<0.1	11.4	495	77	17	17		10.6	1.7	156.5	<0.1	<0.5
Upper Bound		81.2	0.53	33.3	0.2	14.2	607	97	23	23		13.2	2.3	191.5	0.2	1.0
BLANKS																
BLANK		0.01	<0.01	<0.5	<0.1	0.1	<1	2	<1	<1	1	<0.1	<0.1	0.1	<0.1	<0.5
BLANK		<0.01	<0.01	<0.5	<0.1	<0.1	<1	1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.5
BLANK		<0.01	<0.01	<0.5	<0.1	<0.1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.5
BLANK		0.01	<0.01	<0.5	<0.1	<0.1	<1	1	<1	<1	1	<0.1	<0.1	0.1	<0.1	<0.5
Target Range - Lower Bound		<0.01	<0.01	<0.5	<0.1	<0.1	<1	<1	<1	<1		<0.1	<0.1	<0.1	<0.1	<0.5
Upper Bound		0.02	0.02	1.0	0.2	0.2	2	2	2	2		0.2	0.2	0.2	0.2	1.0
DUPLICATES																
CPS10		41.5	3.21	1.7	<0.1	96.3	67	131	33	26	70	0.5	13.8	366	<0.1	<0.5
DUP		46.2	3.61	2.1	<0.1	107.5	80	149	38	30	79	0.6	16.1	420	<0.1	<0.5
Target Range - Lower Bound		41.6	3.23	1.3	<0.1	96.7	69	132	33	26	70	0.4	14.1	373	<0.1	<0.5
Upper Bound		46.1	3.59	2.5	0.2	107.0	78	148	38	30	79	0.7	15.8	413	0.2	1.0
CPS20		33.3	12.20	3.3	0.1	325	86	19	5	4	10	0.9	59.3	250	<0.1	<0.5
DUP		26.0	11.60	2.5	0.2	313	69	28	7	6	15	1.0	59.0	215	<0.1	<0.5
Target Range - Lower Bound		28.2	11.30	2.3	<0.1	303	73	21	5	4	11	0.8	56.1	221	<0.1	<0.5
Upper Bound		31.1	12.50	3.5	0.2	335	82	26	7	6	14	1.1	62.2	244	0.2	1.0



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QC CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23 Sc ppb 1	ME-MS23 Se ppb 2	ME-MS23 Sm ppb 0.1	ME-MS23 Sn ppb 0.2	ME-MS23 Sr ppb 1	ME-MS23 Ta ppb 1	ME-MS23 Tb ppb 0.1	ME-MS23 Te ppb 1	ME-MS23 Th ppb 0.02	ME-MS23 Ti ppb 5	ME-MS23 Tl ppb 0.5	ME-MS23 Tm ppb 0.1	ME-MS23 U ppb 0.1	ME-MS23 W ppb 1	ME-MS23 Y ppb 0.1
STANDARDS																
ION-SRM18		2	20	3.2	<0.2	1070	<1	0.4	2	3.71	24	<0.5	0.1	9.2	<1	10.0
ION-SRM18		2	21	3.2	<0.2	1090	<1	0.4	2	3.76	25	<0.5	0.1	9.3	<1	10.1
ION-SRM18		2	20	3.2	0.3	1230	<1	0.4	2	3.69	25	<0.5	0.1	9.1	<1	9.7
ION-SRM18		2	20	3.2	0.3	1230	<1	0.4	1	3.68	24	<0.5	0.1	9.0	<1	9.7
ION-SRM18		3	14	3.1	<0.2	1050	<1	0.5	1	3.78	23	<0.5	0.1	10.7	<1	10.0
ION-SRM18		3	14	3.1	<0.2	1050	<1	0.5	1	3.79	23	<0.5	0.1	10.7	<1	10.0
ION-SRM18		2	18	3.1	<0.2	1210	<1	0.5	1	3.80	23	<0.5	0.1	9.8	<1	9.2
ION-SRM18		2	18	3.2	<0.2	1210	<1	0.5	1	3.83	23	<0.5	0.1	9.8	<1	9.2
Target Range - Lower Bound		2	13	2.5	<0.2	1010	<1	0.3	<1	3.11	24	<0.5	<0.1	8.7	<1	8.1
Upper Bound		4	21	3.3	0.4	1235	2	0.5	2	3.85	41	1.0	0.2	10.8	2	10.1
BLANKS																
BLANK		<1	<2	<0.1	0.2	<1	<1	<0.1	<1	0.02	9	<0.5	<0.1	<0.1	<1	<0.1
BLANK		<1	2	<0.1	<0.2	<1	<1	<0.1	<1	<0.02	<5	<0.5	<0.1	<0.1	<1	<0.1
BLANK		<1	2	<0.1	<0.2	<1	<1	<0.1	<1	<0.02	8	<0.5	<0.1	<0.1	<1	<0.1
BLANK		<1	4	<0.1	<0.2	1	<1	<0.1	<1	<0.02	<5	<0.5	<0.1	<0.1	<1	<0.1
Target Range - Lower Bound		<1	<2	<0.1	<0.2	<1	<1	<0.1	<1	<0.02	<5	<0.5	<0.1	<0.1	<1	<0.1
Upper Bound		2	4	0.2	0.4	2	2	0.2	2	0.04	10	1.0	0.2	0.2	2	0.2
DUPLICATES																
CPS10		17	20	25.3	5.8	90	<1	2.9	<1	5.69	42	<0.5	0.5	10.3	<1	52.5
DUP		19	<2	27.6	7.9	102	<1	3.2	<1	5.95	45	<0.5	0.6	11.1	<1	60.7
Target Range - Lower Bound		16	8	25.0	6.3	90	<1	2.8	<1	5.51	36	<0.5	0.4	10.1	<1	53.7
Upper Bound		20	14	27.9	7.4	102	2	3.3	2	6.13	51	1.0	0.7	11.3	2	59.5
CPS20		9	<2	66.3	3.8	374	<1	6.8	<1	22.8	48	1.2	0.8	16.4	<1	104.5
DUP		10	6	64.0	6.8	305	<1	7.0	1	18.75	104	1.1	0.9	12.9	<1	112.5
Target Range - Lower Bound		8	<2	61.8	4.8	322	<1	6.5	<1	19.70	67	0.6	0.7	13.8	<1	103.0
Upper Bound		11	6	68.5	5.8	357	2	7.3	2	21.8	85	1.7	1.0	15.5	2	114.0



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Sample Description	Method Analyte Units LOR	ME-MS23 Yb ppb 0.1	ME-MS23 Zn ppb 10	ME-MS23 Zr ppb 0.1
STANDARDS				
ION-SRM18		0.4	560	5.1
ION-SRM18		0.4	560	5.1
ION-SRM18		0.3	590	5.1
ION-SRM18		0.3	590	5.0
ION-SRM18		0.4	630	5.3
ION-SRM18		0.4	630	5.3
ION-SRM18		0.4	560	5.1
ION-SRM18		0.4	560	5.1
Target Range - Lower Bound		0.2	530	4.3
Upper Bound		0.4	670	5.5
BLANKS				
BLANK		<0.1	10	0.1
BLANK		<0.1	<10	<0.1
BLANK		<0.1	10	<0.1
BLANK		<0.1	20	<0.1
Target Range - Lower Bound		<0.1	<10	<0.1
Upper Bound		0.2	20	0.2
DUPLICATES				
CPS10		3.4	280	2.3
DUP		4.0	290	2.4
Target Range - Lower Bound		3.4	260	2.1
Upper Bound		4.0	310	2.6
CPS20		4.7	60	3.1
DUP		5.4	40	3.4
Target Range - Lower Bound		4.7	40	3.0
Upper Bound		5.4	60	3.5



Australian Laboratory Services Pty. Ltd.
 32 Shand Street
 Stafford
 Brisbane QLD 4053
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QC CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	pH-MS23 Final pH 0.1	ME-MS23 Ag ppb 0.1	ME-MS23 As ppb 2	ME-MS23 Au ppb 0.02	ME-MS23 Ba ppb 10	ME-MS23 Be ppb 0.2	ME-MS23 Bi ppb 3	ME-MS23 Br ppm 0.05	ME-MS23 Ca ppm 0.2	ME-MS23 Cd ppb 1	ME-MS23 Ce ppb 0.1	ME-MS23 Co ppb 0.3	ME-MS23 Cr ppb 1	ME-MS23 Cs ppb 0.1	ME-MS23 Cu ppb 1
DUPLICATES																
CPS33		9.0	0.3	4	0.02	1910	<0.2	<3	0.10	25.5	<1	125.0	102.5	1	2.6	267
DUP		9.0	0.3	4	0.02	1920	<0.2	<3	0.10	25.7	<1	125.5	103.0	1	2.6	268
Target Range - Lower Bound		8.5	0.2	<2	<0.02	1810	<0.2	<3	<0.05	24.1	<1	119.0	97.3	<1	2.4	253
Upper Bound		9.6	0.4	6	0.04	2020	0.4	6	0.16	27.1	2	131.5	108.0	2	2.8	282
CPS57		9.0	0.3	8	0.02	1530	0.6	<3	0.09	33.5	1	82.6	127.5	4	0.8	176
DUP		9.0	0.3	8	0.02	1510	0.6	<3	0.09	33.1	1	81.6	126.0	4	0.8	174
Target Range - Lower Bound		8.5	0.2	6	<0.02	1430	0.4	<3	<0.05	31.4	<1	77.9	120.0	3	0.7	165
Upper Bound		9.6	0.4	10	0.04	1610	0.8	6	0.10	35.2	2	86.3	133.5	5	0.9	185
CPS67		9.0	1.1	3	0.09	1890	0.3	<3	0.18	89.5	2	76.6	310	2	1.3	453
DUP		8.3	1.2	9	0.10	1800	0.2	<3	0.16	83.5	2	63.7	307	2	1.3	411
Target Range - Lower Bound		8.1	1.0	4	0.07	1740	<0.2	<3	0.11	82.0	<1	66.5	293	<1	1.1	409
Upper Bound		9.2	1.3	8	0.12	1950	0.4	6	0.23	91.0	3	73.8	324	3	1.5	455
CPS77		8.3	2.0	7	0.11	2480	0.2	<3	0.17	49.2	2	77.9	653	1	1.4	872
DUP		8.3	1.9	11	0.10	2590	0.3	<3	0.15	49.0	2	79.1	639	1	1.4	848
Target Range - Lower Bound		7.8	1.8	7	0.08	2400	<0.2	<3	0.10	46.4	<1	74.5	613	<1	1.2	816
Upper Bound		8.8	2.1	11	0.13	2670	0.4	6	0.22	51.8	3	82.5	679	2	1.6	904
CPS101		8.3	1.5	3	0.06	1250	<0.2	<3	0.11	61.7	1	39.0	300	1	0.9	475
DUP		8.3	1.5	3	0.06	1250	<0.2	<3	0.11	61.8	1	39.1	300	1	0.9	476
Target Range - Lower Bound		7.8	1.3	<2	0.04	1180	<0.2	<3	<0.05	58.5	<1	37.0	285	<1	0.8	451
Upper Bound		8.8	1.7	4	0.08	1320	0.4	6	0.17	65.0	2	41.1	315	2	1.0	500
CPS111		9.0	0.2	<2	0.07	840	<0.2	<3	<0.05	22.3	<1	55.4	63.6	1	0.9	193
DUP		9.0	0.2	<2	0.07	820	0.2	<3	<0.05	20.0	<1	56.3	69.3	1	0.9	193
Target Range - Lower Bound		8.5	<0.1	<2	0.05	780	<0.2	<3	<0.05	19.9	<1	53.0	62.8	<1	0.8	182
Upper Bound		9.6	0.3	4	0.09	880	0.4	6	0.10	22.4	2	58.7	70.1	2	1.0	204
CPS121		7.7	5.1	6	0.08	1750	0.3	<3	0.25	110.5	2	56.4	616	1	1.2	1190
DUP		7.7	5.0	3	0.10	1650	0.2	<3	0.25	106.0	2	61.6	618	1	1.3	1150
Target Range - Lower Bound		7.2	4.7	<2	0.07	1610	<0.2	<3	0.19	102.5	<1	56.0	586	<1	1.1	1110
Upper Bound		8.2	5.4	7	0.11	1800	0.4	6	0.31	114.0	3	62.1	648	2	1.4	1230
CPS145		9.0	0.5	5	0.03	1980	0.4	<3	0.09	107.5	2	23.2	136.0	1	0.9	567
DUP		9.0	0.5	4	0.02	1970	<0.2	<3	0.06	97.3	2	22.1	141.0	1	1.0	553
Target Range - Lower Bound		8.5	0.4	<2	<0.02	1870	<0.2	<3	<0.05	97.1	<1	21.4	131.5	<1	0.8	531
Upper Bound		9.6	0.6	7	0.04	2080	0.4	6	0.10	107.5	3	23.9	145.5	2	1.1	589



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 Stafford
 Brisbane QLD 4053
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QC CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23 Dy ppb 0.1	ME-MS23 Er ppb 0.1	ME-MS23 Eu ppb 0.1	ME-MS23 Fe ppm 0.1	ME-MS23 Ga ppb 0.5	ME-MS23 Gd ppb 0.1	ME-MS23 Ge ppb 0.1	ME-MS23 Hf ppm 0.5	ME-MS23 Hg ppb 0.1	ME-MS23 Ho ppb 0.1	ME-MS23 I ppm 0.01	ME-MS23 In ppb 0.1	ME-MS23 La ppb 0.1	ME-MS23 Li ppb 0.2	ME-MS23 Lu ppb 0.1
DUPLICATES																
CPS33		7.8	3.3	5.1	3.1	46.9	19.2	0.5	<0.5	0.1	1.4	0.11	<0.1	32.6	<0.2	0.2
DUP		7.8	3.3	5.1	3.1	47.1	19.3	0.5	<0.5	0.1	1.4	0.11	<0.1	32.7	<0.2	0.2
Target Range - Lower Bound		7.3	3.0	4.7	2.8	44.2	18.2	0.4	<0.5	<0.1	1.2	0.09	<0.1	30.9	<0.2	<0.1
Upper Bound		8.3	3.6	5.5	3.4	49.9	20.3	0.6	1.0	0.2	1.6	0.13	0.2	34.4	0.4	0.3
CPS57		8.5	3.9	4.3	4.0	47.6	16.3	0.5	<0.5	0.1	1.5	0.04	<0.1	24.2	0.7	0.3
DUP		8.4	3.8	4.2	3.9	47.0	16.1	0.5	<0.5	0.1	1.5	0.04	<0.1	23.9	0.7	0.3
Target Range - Lower Bound		7.9	3.6	3.9	3.7	44.4	15.3	0.4	<0.5	<0.1	1.3	0.03	<0.1	22.7	0.5	0.2
Upper Bound		9.0	4.1	4.6	4.2	50.2	17.1	0.6	1.0	0.2	1.7	0.05	0.2	25.4	0.9	0.4
CPS67		14.8	6.6	8.4	2.2	61.0	30.8	0.8	<0.5	0.1	2.7	0.19	<0.1	26.1	2.0	0.5
DUP		13.0	5.5	7.4	2.2	59.1	27.8	0.6	<0.5	0.2	2.3	0.19	<0.1	21.1	2.1	0.5
Target Range - Lower Bound		13.1	5.6	7.4	2.0	56.5	27.7	0.6	<0.5	<0.1	2.3	0.17	<0.1	22.3	1.7	0.4
Upper Bound		14.7	6.5	8.4	2.4	63.6	30.9	0.8	1.0	0.2	2.7	0.21	0.2	24.9	2.4	0.6
CPS77		13.4	5.9	8.1	2.0	81.4	26.4	0.6	<0.5	0.2	2.5	0.18	<0.1	19.6	2.4	0.5
DUP		13.2	5.8	7.7	2.5	85.2	25.9	0.6	<0.5	0.3	2.4	0.17	<0.1	19.9	2.8	0.5
Target Range - Lower Bound		12.5	5.5	7.4	2.0	78.6	24.7	0.5	<0.5	<0.1	2.2	0.16	<0.1	18.7	2.3	0.4
Upper Bound		14.1	6.2	8.4	2.5	88.0	27.6	0.7	1.0	0.4	2.7	0.19	0.2	20.8	2.9	0.6
CPS101		4.5	2.1	3.2	2.2	42.7	9.7	0.2	<0.5	0.2	0.9	0.10	<0.1	10.8	1.8	0.2
DUP		4.5	2.2	3.2	2.2	42.8	9.8	0.2	<0.5	0.2	0.9	0.10	<0.1	10.8	1.9	0.2
Target Range - Lower Bound		4.2	1.9	2.9	2.0	40.1	9.2	<0.1	<0.5	<0.1	0.8	0.09	<0.1	10.2	1.6	<0.1
Upper Bound		4.8	2.4	3.5	2.4	45.4	10.3	0.3	1.0	0.3	1.0	0.12	0.2	11.4	2.1	0.3
CPS111		4.7	2.5	2.4	2.5	28.5	8.2	0.3	<0.5	0.1	1.0	0.03	<0.1	14.4	1.2	0.2
DUP		4.9	2.5	2.5	2.6	27.8	8.7	0.3	<0.5	<0.1	1.0	0.04	<0.1	13.9	1.0	0.2
Target Range - Lower Bound		4.5	2.3	2.2	2.3	26.2	7.9	0.2	<0.5	<0.1	0.9	0.02	<0.1	13.3	0.8	<0.1
Upper Bound		5.1	2.7	2.7	2.8	30.1	9.0	0.4	1.0	0.2	1.2	0.05	0.2	15.0	1.4	0.3
CPS121		13.4	6.6	8.1	2.2	61.3	25.9	0.6	<0.5	0.3	2.8	0.24	<0.1	22.4	3.9	0.6
DUP		14.6	7.2	8.4	2.3	58.2	27.4	0.8	<0.5	0.2	2.9	0.23	<0.1	25.1	3.5	0.6
Target Range - Lower Bound		13.2	6.5	7.7	2.0	56.3	25.2	0.6	<0.5	<0.1	2.6	0.21	<0.1	22.5	3.3	0.5
Upper Bound		14.8	7.3	8.8	2.5	63.2	28.1	0.8	1.0	0.4	3.1	0.26	0.2	25.0	4.1	0.7
CPS145		3.0	1.4	2.4	2.5	75.3	6.4	0.2	<0.5	0.1	0.6	0.04	<0.1	8.1	3.1	0.1
DUP		2.7	1.4	2.2	2.3	77.1	6.0	0.2	<0.5	0.1	0.6	0.04	<0.1	7.8	2.8	0.1
Target Range - Lower Bound		2.6	1.2	2.1	2.2	71.9	5.8	<0.1	<0.5	<0.1	0.5	0.03	<0.1	7.5	2.6	<0.1
Upper Bound		3.1	1.6	2.5	2.6	80.5	6.6	0.3	1.0	0.2	0.7	0.05	0.2	8.4	3.3	0.2



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32 Shand Street
Stafford
Brisbane QLD 4053
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QC CERTIFICATE OF ANALYSIS PH10173276

Method	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
Analyte	Mg	Mn	Mo	Nb	Nd	Ni	Pb	Pb 206	Pb 207	Pb 208	Pd	Pr	Rb	Re	Sb
Units	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
LOR	0.01	0.01	0.5	0.1	0.1	1	1	1	1	1	0.1	0.1	0.1	0.1	0.5
Sample Description															
	DUPLICATES														
CPS33	46.4	7.03	1.0	0.1	101.0	36	22	5	4	12	0.5	17.2	306	<0.1	<0.5
DUP	46.6	7.06	1.0	0.1	101.5	36	22	5	4	12	0.5	17.3	308	<0.1	<0.5
Target Range - Lower Bound	44.2	6.68	<0.5	<0.1	96.1	33	20	4	3	10	0.4	16.3	292	<0.1	<0.5
Upper Bound	48.8	7.41	1.6	0.2	106.5	39	24	6	5	14	0.6	18.2	322	0.2	1.0
CPS57	32.1	8.73	1.4	<0.1	73.9	35	10	2	2	5	0.4	12.9	88.8	<0.1	<0.5
DUP	31.7	8.62	1.3	<0.1	73.0	35	9	2	2	5	0.4	12.7	87.7	<0.1	<0.5
Target Range - Lower Bound	30.3	8.23	0.8	<0.1	69.7	32	8	<1	<1	4	0.3	12.1	83.7	<0.1	<0.5
Upper Bound	33.5	9.12	1.9	0.2	77.2	38	11	3	3	6	0.5	13.5	92.8	0.2	1.0
CPS67	162.0	8.12	1.1	<0.1	109.5	67	9	2	2	5	0.7	16.0	362	<0.1	<0.5
DUP	154.0	7.50	1.2	<0.1	93.2	68	36	8	7	20	0.5	13.3	355	<0.1	<0.5
Target Range - Lower Bound	150.0	7.41	0.6	<0.1	96.2	63	20	4	3	11	0.5	13.8	340	<0.1	<0.5
Upper Bound	166.0	8.21	1.7	0.2	106.5	72	25	6	6	14	0.7	15.5	377	0.2	1.0
CPS77	186.0	10.70	0.9	<0.1	95.4	101	19	5	4	10	0.5	13.5	400	<0.1	<0.5
DUP	195.0	10.60	0.7	0.1	91.7	96	19	5	4	10	0.6	13.4	392	<0.1	<0.5
Target Range - Lower Bound	181.0	10.10	<0.5	<0.1	88.8	93	17	4	3	9	0.4	12.7	376	<0.1	<0.5
Upper Bound	200	11.20	1.0	0.2	98.3	104	21	6	5	12	0.7	14.2	416	0.2	1.0
CPS101	89.1	5.14	0.9	<0.1	36.2	64	22	5	4	12	0.3	6.2	288	<0.1	<0.5
DUP	89.3	5.16	0.9	<0.1	36.3	65	22	5	4	12	0.3	6.2	289	<0.1	<0.5
Target Range - Lower Bound	84.7	4.88	<0.5	<0.1	34.3	60	20	4	3	10	0.2	5.8	274	<0.1	<0.5
Upper Bound	93.7	5.42	1.0	0.2	38.2	69	24	6	5	14	0.4	6.6	303	0.2	1.0
CPS111	17.70	4.32	0.8	<0.1	36.5	25	13	3	3	7	0.4	7.8	77.5	<0.1	<0.5
DUP	17.65	4.44	1.0	<0.1	37.8	27	15	4	3	8	0.4	7.9	79.6	<0.1	<0.5
Target Range - Lower Bound	16.80	4.15	<0.5	<0.1	35.2	24	12	2	2	6	0.3	7.4	74.5	<0.1	<0.5
Upper Bound	18.55	4.61	1.0	0.2	39.1	28	16	5	4	9	0.5	8.3	82.6	0.2	1.0
CPS121	169.5	11.00	1.4	<0.1	81.1	125	32	8	6	17	0.8	13.9	358	<0.1	<0.5
DUP	161.5	11.00	1.5	<0.1	85.7	125	29	7	6	16	0.9	15.1	355	<0.1	<0.5
Target Range - Lower Bound	157.0	10.45	0.9	<0.1	79.1	118	28	6	5	15	0.7	13.7	339	<0.1	<0.5
Upper Bound	174.0	11.55	2.0	0.2	87.7	132	33	9	7	18	1.0	15.3	374	0.2	1.0
CPS145	66.3	4.56	2.2	<0.1	25.1	63	19	5	4	10	0.3	4.1	175.5	<0.1	<0.5
DUP	61.0	4.14	2.2	<0.1	23.2	62	19	5	4	10	0.3	3.8	177.5	<0.1	<0.5
Target Range - Lower Bound	60.5	4.12	1.6	<0.1	22.8	58	17	4	3	9	0.2	3.7	167.5	<0.1	<0.5
Upper Bound	66.8	4.58	2.8	0.2	25.5	67	21	6	5	12	0.4	4.2	185.5	0.2	1.0

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Sample Description	Method Analyte Units LOR	ME-MS23 Sc ppb 1	ME-MS23 Se ppb 2	ME-MS23 Sm ppb 0.1	ME-MS23 Sn ppb 0.2	ME-MS23 Sr ppb 1	ME-MS23 Ta ppb 1	ME-MS23 Tb ppb 0.1	ME-MS23 Te ppb 1	ME-MS23 Th ppb 0.02	ME-MS23 Ti ppb 5	ME-MS23 Tl ppb 0.5	ME-MS23 Tm ppb 0.1	ME-MS23 U ppb 0.1	ME-MS23 W ppb 1	ME-MS23 Y ppb 0.1
DUPLICATES																
CPS33		4	2	22.7	6.1	161	<1	2.2	<1	8.02	47	0.8	0.3	5.4	<1	31.6
DUP		4	2	22.8	6.1	162	<1	2.2	<1	8.06	47	0.8	0.3	5.5	<1	31.8
Target Range - Lower Bound		3	<2	21.5	5.6	152	<1	2.0	<1	7.62	40	<0.5	0.2	5.1	<1	30.0
Upper Bound		5	4	24.0	6.6	171	2	2.4	2	8.46	54	1.0	0.4	5.8	2	33.4
CPS57		7	22	17.7	7.2	137	<1	2.1	<1	4.96	31	<0.5	0.4	6.9	<1	40.5
DUP		7	21	17.5	7.1	135	<1	2.0	<1	4.90	31	<0.5	0.4	6.8	<1	40.0
Target Range - Lower Bound		6	18	16.6	6.6	128	<1	1.8	<1	4.66	24	<0.5	0.3	6.4	<1	38.1
Upper Bound		8	25	18.6	7.7	144	2	2.3	2	5.20	38	1.0	0.5	7.3	2	42.4
CPS67		11	13	33.6	1.3	168	<1	3.7	1	4.98	33	0.6	0.6	9.3	<1	74.9
DUP		10	17	29.0	1.5	158	<1	3.3	1	4.18	36	0.6	0.5	8.7	<1	67.4
Target Range - Lower Bound		9	12	29.6	1.1	154	<1	3.2	<1	4.33	28	<0.5	0.4	8.5	<1	67.5
Upper Bound		12	18	33.0	1.7	172	2	3.8	2	4.83	41	1.0	0.7	9.6	2	74.8
CPS77		14	33	29.1	1.3	151	<1	3.2	1	3.65	30	0.5	0.6	6.7	<1	66.5
DUP		13	10	27.9	1.4	159	<1	3.2	1	3.38	55	0.5	0.6	6.0	<1	65.6
Target Range - Lower Bound		12	18	27.0	1.1	146	<1	2.9	<1	3.32	35	<0.5	0.5	5.9	<1	62.6
Upper Bound		15	25	30.0	1.6	164	2	3.5	2	3.71	50	1.0	0.7	6.8	2	69.5
CPS101		6	23	10.0	1.6	166	<1	1.3	<1	1.42	41	<0.5	0.2	4.0	<1	22.9
DUP		6	23	10.0	1.6	166	<1	1.3	<1	1.43	41	<0.5	0.2	4.0	<1	23.0
Target Range - Lower Bound		5	20	9.4	1.3	157	<1	1.1	<1	1.33	34	<0.5	<0.1	3.7	<1	21.7
Upper Bound		7	26	10.6	1.9	175	2	1.5	2	1.52	48	1.0	0.3	4.3	2	24.2
CPS111		5	<2	8.2	9.0	73	<1	1.3	1	2.45	43	<0.5	0.3	3.2	<1	24.3
DUP		5	<2	8.5	11.5	73	<1	1.3	1	2.52	48	<0.5	0.3	3.5	<1	25.0
Target Range - Lower Bound		4	<2	7.8	9.5	68	<1	1.1	<1	2.34	38	<0.5	0.2	3.1	<1	23.3
Upper Bound		6	4	8.9	11.0	78	2	1.5	2	2.63	53	1.0	0.4	3.6	2	26.0
CPS121		13	31	25.9	0.4	365	<1	3.5	2	2.92	32	<0.5	0.7	8.2	<1	70.5
DUP		14	16	27.1	0.4	348	<1	3.8	2	3.44	31	<0.5	0.7	8.6	<1	76.5
Target Range - Lower Bound		12	20	25.1	<0.2	338	<1	3.4	<1	3.00	25	<0.5	0.6	7.9	<1	69.7
Upper Bound		15	27	27.9	0.6	375	2	3.9	3	3.36	38	1.0	0.8	8.9	2	77.3
CPS145		4	<2	6.2	4.2	126	<1	0.8	<1	0.74	20	<0.5	0.1	6.9	<1	15.5
DUP		3	<2	5.5	4.8	124	<1	0.8	<1	0.57	18	<0.5	0.1	6.3	<1	14.6
Target Range - Lower Bound		2	<2	5.5	4.1	118	<1	0.7	<1	0.60	13	<0.5	<0.1	6.2	<1	14.2
Upper Bound		5	4	6.2	4.9	132	2	0.9	2	0.71	25	1.0	0.2	7.0	2	15.9



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 Stafford
 Brisbane QLD 4053
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QC CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23 Yb ppb 0.1	ME-MS23 Zn ppb 10	ME-MS23 Zr ppb 0.1
DUPLICATES				
CPS33		1.8	50	3.2
DUP		1.8	50	3.2
Target Range - Lower Bound		1.6	40	2.9
Upper Bound		2.0	60	3.5
CPS57		2.3	80	2.5
DUP		2.3	70	2.5
Target Range - Lower Bound		2.1	60	2.3
Upper Bound		2.5	90	2.7
CPS67		3.8	140	2.5
DUP		3.3	140	2.2
Target Range - Lower Bound		3.3	120	2.1
Upper Bound		3.8	160	2.6
CPS77		3.5	230	2.1
DUP		3.5	230	2.8
Target Range - Lower Bound		3.2	210	2.2
Upper Bound		3.8	250	2.7
CPS101		1.4	190	1.3
DUP		1.4	190	1.3
Target Range - Lower Bound		1.2	170	1.1
Upper Bound		1.6	210	1.5
CPS111		1.4	120	1.5
DUP		1.6	130	1.5
Target Range - Lower Bound		1.3	110	1.3
Upper Bound		1.7	140	1.7
CPS121		3.8	570	2.4
DUP		4.2	530	2.5
Target Range - Lower Bound		3.7	510	2.2
Upper Bound		4.3	590	2.7
CPS145		0.9	250	1.0
DUP		0.8	240	0.8
Target Range - Lower Bound		0.7	220	0.8
Upper Bound		1.0	270	1.0



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Sample Description	Method Analyte Units LOR	pH-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Final pH	Ag	As	Au	Ba	Be	Bi	Br	Ca	Cd	Ce	Co	Cr	Cs	Cu
		Unity	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb
		0.1	0.1	2	0.02	10	0.2	3	0.05	0.2	1	0.1	0.3	1	0.1	1
		DUPLICATES														
CPS155		8.3	3.0	4	0.03	1000	0.2	<3	0.16	69.7	3	109.0	825	2	2.1	848
DUP		8.3	2.9	4	0.06	980	0.5	<3	0.15	67.3	2	115.5	765	1	2.2	844
Target Range - Lower Bound		7.8	2.7	<2	<0.02	930	<0.2	<3	0.10	64.9	<1	106.5	755	<1	1.9	803
Upper Bound		8.8	3.2	6	0.07	1050	0.4	6	0.21	72.1	4	118.0	835	2	2.4	889
CPS165		8.3	5.5	6	0.12	1420	0.5	<3	0.22	143.0	1	30.6	391	<1	1.1	1220
DUP		8.3	5.5	6	0.12	1410	0.5	<3	0.22	142.0	1	30.3	387	<1	1.1	1200
Target Range - Lower Bound		7.8	5.1	4	0.09	1330	0.3	<3	0.16	135.0	<1	28.8	369	<1	0.9	1150
Upper Bound		8.8	5.9	8	0.15	1500	0.7	6	0.28	150.0	2	32.1	409	2	1.3	1270



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Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	
		Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	Li	Lu	
		ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
		0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.5	0.1	0.1	0.01	0.1	0.1	0.2	0.1	
		DUPLICATES															
CPS155		21.5	10.8	9.4	7.3	37.8	35.0	0.8	0.5	0.3	4.3	0.22	<0.1	38.1	1.8	1.0	
DUP		20.9	10.3	9.3	7.5	36.9	34.5	0.8	0.5	0.5	4.0	0.21	<0.1	40.6	1.6	0.9	
Target Range - Lower Bound		20.0	9.9	8.8	6.9	35.0	32.9	0.7	<0.5	0.3	3.8	0.19	<0.1	37.3	1.4	0.8	
Upper Bound		22.4	11.2	9.9	7.9	39.7	36.6	0.9	1.0	0.5	4.5	0.24	0.2	41.4	2.0	1.1	
CPS165		12.1	5.2	6.2	1.7	54.3	22.6	0.5	<0.5	0.9	2.2	0.19	<0.1	14.0	1.2	0.4	
DUP		12.0	5.2	6.1	1.7	53.7	22.4	0.5	<0.5	0.9	2.2	0.18	<0.1	13.8	1.2	0.4	
Target Range - Lower Bound		11.3	4.8	5.7	1.5	50.8	21.3	0.4	<0.5	0.8	2.0	0.17	<0.1	13.1	0.9	0.3	
Upper Bound		12.8	5.6	6.6	1.9	57.2	23.7	0.6	1.0	1.0	2.4	0.20	0.2	14.7	1.5	0.5	



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Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Mg	Mn	Mo	Nb	Nd	Ni	Pb	Pb 206	Pb 207	Pb 208	Pd	Pr	Rb	Re	Sb
		ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
		0.01	0.01	0.5	0.1	0.1	1	1	1	1	1	0.1	0.1	0.1	0.1	0.5
		DUPLICATES														
CPS155		139.0	27.4	2.3	0.1	111.0	195	8	2	2	4	1.5	20.0	351	<0.1	<0.5
DUP		131.5	24.3	2.2	<0.1	114.5	188	8	2	2	4	1.5	21.2	345	<0.1	<0.5
Target Range - Lower Bound		128.5	24.5	1.6	<0.1	107.0	181	7	<1	<1	3	1.3	19.5	331	<0.1	<0.5
Upper Bound		142.0	27.2	2.9	0.2	118.5	202	9	3	3	5	1.7	21.7	366	0.2	1.0
CPS165		251	7.05	1.8	<0.1	62.5	254	5	1	1	3	0.8	9.2	256	<0.1	<0.5
DUP		248	6.98	1.7	<0.1	61.9	251	5	1	1	3	0.8	9.1	253	<0.1	<0.5
Target Range - Lower Bound		237	6.65	1.2	<0.1	59.0	239	4	<1	<1	2	0.7	8.6	242	<0.1	<0.5
Upper Bound		262	7.38	2.3	0.2	65.4	266	6	2	2	4	0.9	9.7	267	0.2	1.0



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Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm	U	W	Y
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
		1	2	0.1	0.2	1	1	0.1	1	0.02	5	0.5	0.1	0.1	1	0.1
		DUPLICATES														
CPS155		17	12	29.8	0.6	111	<1	4.7	<1	6.94	52	<0.5	1.1	13.1	<1	96.4
DUP		17	16	30.0	0.6	111	<1	4.5	<1	7.16	53	<0.5	1.1	12.1	<1	93.2
Target Range - Lower Bound		15	11	28.3	0.4	104	<1	4.3	<1	6.68	45	<0.5	0.9	11.9	<1	90.0
Upper Bound		19	17	31.5	0.8	118	2	4.9	2	7.42	60	1.0	1.3	13.3	2	99.6
CPS165		7	29	19.3	<0.2	143	<1	2.9	<1	1.39	19	<0.5	0.5	7.3	<1	59.1
DUP		7	29	19.1	<0.2	141	<1	2.9	<1	1.38	19	<0.5	0.5	7.2	<1	58.5
Target Range - Lower Bound		6	26	18.1	<0.2	134	<1	2.7	<1	1.30	13	<0.5	0.4	6.8	<1	55.8
Upper Bound		8	32	20.3	0.4	150	2	3.1	2	1.47	25	1.0	0.6	7.7	2	61.8



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Sample Description	Method Analyte Units LOR	ME-MS23 Yb ppb 0.1	ME-MS23 Zn ppb 10	ME-MS23 Zr ppb 0.1
DUPLICATES				
CPS155		6.4	290	5.7
DUP		6.1	290	5.1
Target Range - Lower Bound		5.8	270	5.0
Upper Bound		6.7	310	5.8
CPS165		2.9	130	1.7
DUP		2.9	130	1.7
Target Range - Lower Bound		2.7	110	1.5
Upper Bound		3.1	150	1.9