

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV65	Mercury	3.95	4.0	99	90 - 110	CV	10/09/2025	14:15	LB137478

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV10	Mercury	5.03	5.0	101	90 - 110	CV	10/09/2025	14:22	LB137478
CCV11	Mercury	4.76	5.0	95	90 - 110	CV	10/09/2025	14:59	LB137478
CCV12	Mercury	4.73	5.0	94	90 - 110	CV	10/09/2025	15:40	LB137478

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	7540	8000	94	90 - 110	P	10/10/2025	11:52	LB137500
	Antimony	4010	4000	100	90 - 110	P	10/10/2025	11:52	LB137500
	Arsenic	3890	4000	97	90 - 110	P	10/10/2025	11:52	LB137500
	Barium	7750	8000	97	90 - 110	P	10/10/2025	11:52	LB137500
	Beryllium	196	200	98	90 - 110	P	10/10/2025	11:52	LB137500
	Cadmium	1940	2000	97	90 - 110	P	10/10/2025	11:52	LB137500
	Calcium	19500	20000	98	90 - 110	P	10/10/2025	11:52	LB137500
	Chromium	820	800	102	90 - 110	P	10/10/2025	11:52	LB137500
	Cobalt	1960	2000	98	90 - 110	P	10/10/2025	11:52	LB137500
	Copper	1000	1000	100	90 - 110	P	10/10/2025	11:52	LB137500
	Iron	4140	4000	104	90 - 110	P	10/10/2025	11:52	LB137500
	Lead	3810	4000	95	90 - 110	P	10/10/2025	11:52	LB137500
	Magnesium	19400	20000	97	90 - 110	P	10/10/2025	11:52	LB137500
	Manganese	1930	2000	96	90 - 110	P	10/10/2025	11:52	LB137500
	Nickel	1970	2000	99	90 - 110	P	10/10/2025	11:52	LB137500
	Potassium	20300	20000	102	90 - 110	P	10/10/2025	11:52	LB137500
	Selenium	3900	4000	98	90 - 110	P	10/10/2025	11:52	LB137500
	Silver	984	1000	98	90 - 110	P	10/10/2025	11:52	LB137500
	Sodium	20000	20000	100	90 - 110	P	10/10/2025	11:52	LB137500
	Thallium	3730	4000	93	90 - 110	P	10/10/2025	11:52	LB137500
	Vanadium	1940	2000	97	90 - 110	P	10/10/2025	11:52	LB137500
	Zinc	2030	2000	101	90 - 110	P	10/10/2025	11:52	LB137500

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	91.1	100	91	80 - 120	P	10/10/2025	12:00	LB137500
	Antimony	52.2	50.0	104	80 - 120	P	10/10/2025	12:00	LB137500
	Arsenic	20.8	20.0	104	80 - 120	P	10/10/2025	12:00	LB137500
	Barium	106	100	106	80 - 120	P	10/10/2025	12:00	LB137500
	Beryllium	6.30	6.0	105	80 - 120	P	10/10/2025	12:00	LB137500
	Cadmium	5.95	6.0	99	80 - 120	P	10/10/2025	12:00	LB137500
	Calcium	2080	2000	104	80 - 120	P	10/10/2025	12:00	LB137500
	Chromium	10.8	10.0	108	80 - 120	P	10/10/2025	12:00	LB137500
	Cobalt	30.1	30.0	100	80 - 120	P	10/10/2025	12:00	LB137500
	Copper	22.5	20.0	112	80 - 120	P	10/10/2025	12:00	LB137500
	Iron	118	100	118	80 - 120	P	10/10/2025	12:00	LB137500
	Lead	12.6	12.0	105	80 - 120	P	10/10/2025	12:00	LB137500
	Magnesium	2180	2000	109	80 - 120	P	10/10/2025	12:00	LB137500
	Manganese	20.6	20.0	103	80 - 120	P	10/10/2025	12:00	LB137500
	Nickel	40.7	40.0	102	80 - 120	P	10/10/2025	12:00	LB137500
	Potassium	2110	2000	105	80 - 120	P	10/10/2025	12:00	LB137500
	Selenium	19.3	20.0	96	80 - 120	P	10/10/2025	12:00	LB137500
	Silver	10.7	10.0	107	80 - 120	P	10/10/2025	12:00	LB137500
	Sodium	2150	2000	108	80 - 120	P	10/10/2025	12:00	LB137500
	Thallium	41.3	40.0	103	80 - 120	P	10/10/2025	12:00	LB137500
	Vanadium	39.0	40.0	98	80 - 120	P	10/10/2025	12:00	LB137500
	Zinc	46.5	40.0	116	80 - 120	P	10/10/2025	12:00	LB137500

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9770	10000	98	90 - 110	P	10/10/2025	12:52	LB137500
	Antimony	4920	5000	98	90 - 110	P	10/10/2025	12:52	LB137500
	Arsenic	4910	5000	98	90 - 110	P	10/10/2025	12:52	LB137500
	Barium	9650	10000	96	90 - 110	P	10/10/2025	12:52	LB137500
	Beryllium	255	250	102	90 - 110	P	10/10/2025	12:52	LB137500
	Cadmium	2440	2500	98	90 - 110	P	10/10/2025	12:52	LB137500
	Calcium	25000	25000	100	90 - 110	P	10/10/2025	12:52	LB137500
	Chromium	1000	1000	100	90 - 110	P	10/10/2025	12:52	LB137500
	Cobalt	2430	2500	97	90 - 110	P	10/10/2025	12:52	LB137500
	Copper	1230	1250	98	90 - 110	P	10/10/2025	12:52	LB137500
	Iron	4810	5000	96	90 - 110	P	10/10/2025	12:52	LB137500
	Lead	4860	5000	97	90 - 110	P	10/10/2025	12:52	LB137500
	Magnesium	24400	25000	98	90 - 110	P	10/10/2025	12:52	LB137500
	Manganese	2430	2500	97	90 - 110	P	10/10/2025	12:52	LB137500
	Nickel	2440	2500	97	90 - 110	P	10/10/2025	12:52	LB137500
	Potassium	23600	25000	94	90 - 110	P	10/10/2025	12:52	LB137500
	Selenium	4900	5000	98	90 - 110	P	10/10/2025	12:52	LB137500
	Silver	1240	1250	99	90 - 110	P	10/10/2025	12:52	LB137500
	Sodium	22900	25000	92	90 - 110	P	10/10/2025	12:52	LB137500
	Thallium	4810	5000	96	90 - 110	P	10/10/2025	12:52	LB137500
	Vanadium	2460	2500	98	90 - 110	P	10/10/2025	12:52	LB137500
	Zinc	2510	2500	100	90 - 110	P	10/10/2025	12:52	LB137500
CCV02	Aluminum	9590	10000	96	90 - 110	P	10/10/2025	14:04	LB137500
	Antimony	5060	5000	101	90 - 110	P	10/10/2025	14:04	LB137500
	Arsenic	5000	5000	100	90 - 110	P	10/10/2025	14:04	LB137500
	Barium	9440	10000	94	90 - 110	P	10/10/2025	14:04	LB137500
	Beryllium	235	250	94	90 - 110	P	10/10/2025	14:04	LB137500
	Cadmium	2400	2500	96	90 - 110	P	10/10/2025	14:04	LB137500
	Calcium	24100	25000	96	90 - 110	P	10/10/2025	14:04	LB137500
	Chromium	983	1000	98	90 - 110	P	10/10/2025	14:04	LB137500
	Cobalt	2410	2500	96	90 - 110	P	10/10/2025	14:04	LB137500
	Copper	1230	1250	98	90 - 110	P	10/10/2025	14:04	LB137500
	Iron	4980	5000	100	90 - 110	P	10/10/2025	14:04	LB137500
	Lead	4810	5000	96	90 - 110	P	10/10/2025	14:04	LB137500

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	23800	25000	95	90 - 110	P	10/10/2025	14:04	LB137500
	Manganese	2340	2500	94	90 - 110	P	10/10/2025	14:04	LB137500
	Nickel	2410	2500	96	90 - 110	P	10/10/2025	14:04	LB137500
	Potassium	24600	25000	98	90 - 110	P	10/10/2025	14:04	LB137500
	Selenium	5050	5000	101	90 - 110	P	10/10/2025	14:04	LB137500
	Silver	1240	1250	99	90 - 110	P	10/10/2025	14:04	LB137500
	Sodium	24100	25000	96	90 - 110	P	10/10/2025	14:04	LB137500
	Thallium	4750	5000	95	90 - 110	P	10/10/2025	14:04	LB137500
	Vanadium	2420	2500	97	90 - 110	P	10/10/2025	14:04	LB137500
	Zinc	2490	2500	100	90 - 110	P	10/10/2025	14:04	LB137500
CCV03	Aluminum	10100	10000	101	90 - 110	P	10/10/2025	15:37	LB137500
	Antimony	5040	5000	101	90 - 110	P	10/10/2025	15:37	LB137500
	Arsenic	4960	5000	99	90 - 110	P	10/10/2025	15:37	LB137500
	Barium	9930	10000	99	90 - 110	P	10/10/2025	15:37	LB137500
	Beryllium	239	250	96	90 - 110	P	10/10/2025	15:37	LB137500
	Cadmium	2460	2500	98	90 - 110	P	10/10/2025	15:37	LB137500
	Calcium	24400	25000	98	90 - 110	P	10/10/2025	15:37	LB137500
	Chromium	1010	1000	101	90 - 110	P	10/10/2025	15:37	LB137500
	Cobalt	2480	2500	99	90 - 110	P	10/10/2025	15:37	LB137500
	Copper	1260	1250	101	90 - 110	P	10/10/2025	15:37	LB137500
	Iron	5170	5000	103	90 - 110	P	10/10/2025	15:37	LB137500
	Lead	4900	5000	98	90 - 110	P	10/10/2025	15:37	LB137500
	Magnesium	24800	25000	99	90 - 110	P	10/10/2025	15:37	LB137500
	Manganese	2450	2500	98	90 - 110	P	10/10/2025	15:37	LB137500
	Nickel	2470	2500	99	90 - 110	P	10/10/2025	15:37	LB137500
	Potassium	25900	25000	104	90 - 110	P	10/10/2025	15:37	LB137500
	Selenium	4950	5000	99	90 - 110	P	10/10/2025	15:37	LB137500
	Silver	1260	1250	101	90 - 110	P	10/10/2025	15:37	LB137500
	Sodium	25700	25000	103	90 - 110	P	10/10/2025	15:37	LB137500
	Thallium	4890	5000	98	90 - 110	P	10/10/2025	15:37	LB137500
	Vanadium	2500	2500	100	90 - 110	P	10/10/2025	15:37	LB137500
	Zinc	2500	2500	100	90 - 110	P	10/10/2025	15:37	LB137500
CCV04	Aluminum	10500	10000	105	90 - 110	P	10/10/2025	16:29	LB137500
	Antimony	5320	5000	106	90 - 110	P	10/10/2025	16:29	LB137500

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV04	Arsenic	5210	5000	104	90 - 110	P	10/10/2025	16:29	LB137500
	Barium	10800	10000	108	90 - 110	P	10/10/2025	16:29	LB137500
	Beryllium	265	250	106	90 - 110	P	10/10/2025	16:29	LB137500
	Cadmium	2580	2500	103	90 - 110	P	10/10/2025	16:29	LB137500
	Calcium	26200	25000	105	90 - 110	P	10/10/2025	16:29	LB137500
	Chromium	1050	1000	105	90 - 110	P	10/10/2025	16:29	LB137500
	Cobalt	2620	2500	105	90 - 110	P	10/10/2025	16:29	LB137500
	Copper	1320	1250	106	90 - 110	P	10/10/2025	16:29	LB137500
	Iron	5410	5000	108	90 - 110	P	10/10/2025	16:29	LB137500
	Lead	5150	5000	103	90 - 110	P	10/10/2025	16:29	LB137500
	Magnesium	26000	25000	104	90 - 110	P	10/10/2025	16:29	LB137500
	Manganese	2680	2500	107	90 - 110	P	10/10/2025	16:29	LB137500
	Nickel	2600	2500	104	90 - 110	P	10/10/2025	16:29	LB137500
	Potassium	26300	25000	105	90 - 110	P	10/10/2025	16:29	LB137500
	Selenium	5230	5000	105	90 - 110	P	10/10/2025	16:29	LB137500
	Silver	1330	1250	107	90 - 110	P	10/10/2025	16:29	LB137500
	Sodium	26500	25000	106	90 - 110	P	10/10/2025	16:29	LB137500
	Thallium	5410	5000	108	90 - 110	P	10/10/2025	16:29	LB137500
	Vanadium	2650	2500	106	90 - 110	P	10/10/2025	16:29	LB137500
	Zinc	2650	2500	106	90 - 110	P	10/10/2025	16:29	LB137500
CCV05	Aluminum	10200	10000	102	90 - 110	P	10/10/2025	17:04	LB137500
	Antimony	5240	5000	105	90 - 110	P	10/10/2025	17:04	LB137500
	Arsenic	5090	5000	102	90 - 110	P	10/10/2025	17:04	LB137500
	Barium	10400	10000	104	90 - 110	P	10/10/2025	17:04	LB137500
	Beryllium	244	250	98	90 - 110	P	10/10/2025	17:04	LB137500
	Cadmium	2530	2500	101	90 - 110	P	10/10/2025	17:04	LB137500
	Calcium	24600	25000	98	90 - 110	P	10/10/2025	17:04	LB137500
	Chromium	1010	1000	100	90 - 110	P	10/10/2025	17:04	LB137500
	Cobalt	2570	2500	103	90 - 110	P	10/10/2025	17:04	LB137500
	Copper	1300	1250	104	90 - 110	P	10/10/2025	17:04	LB137500
	Iron	5240	5000	105	90 - 110	P	10/10/2025	17:04	LB137500
	Lead	5050	5000	101	90 - 110	P	10/10/2025	17:04	LB137500
	Magnesium	25000	25000	100	90 - 110	P	10/10/2025	17:04	LB137500
	Manganese	2560	2500	102	90 - 110	P	10/10/2025	17:04	LB137500

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Langan Engineering and Environmental Services.

SDG No.: Q3310

Contract: LANG01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Nickel	2550	2500	102	90 - 110	P	10/10/2025	17:04	LB137500
	Potassium	25700	25000	103	90 - 110	P	10/10/2025	17:04	LB137500
	Selenium	5140	5000	103	90 - 110	P	10/10/2025	17:04	LB137500
	Silver	1270	1250	102	90 - 110	P	10/10/2025	17:04	LB137500
	Sodium	26100	25000	104	90 - 110	P	10/10/2025	17:04	LB137500
	Thallium	5430	5000	109	90 - 110	P	10/10/2025	17:04	LB137500
	Vanadium	2550	2500	102	90 - 110	P	10/10/2025	17:04	LB137500
	Zinc	2520	2500	101	90 - 110	P	10/10/2025	17:04	LB137500