



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1233

Contract: louie01

Lab Code: CHEM

Case No.: O1233

SAS No.: O1233

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
ICV12	Mercury	3.91	4.0	98	90 - 110	CV	01/23/2023	10:28	LB123763



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Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1233

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Lab Code: CHEM

Case No.: O1233

SAS No.: O1233

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
CCV93	Mercury	4.87	5.0	97	90 - 110	CV	01/23/2023	10:33	LB123763
CCV94	Mercury	4.70	5.0	94	90 - 110	CV	01/23/2023	11:00	LB123763
CCV95	Mercury	4.66	5.0	93	90 - 110	CV	01/23/2023	11:27	LB123763
CCV96	Mercury	4.90	5.0	98	90 - 110	CV	01/23/2023	11:54	LB123763
CCV97	Mercury	4.96	5.0	99	90 - 110	CV	01/23/2023	12:21	LB123763
CCV98	Mercury	4.71	5.0	94	90 - 110	CV	01/23/2023	12:35	LB123763



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Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233
Contract: louie01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233
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	2530	2500	101	90 - 110	P	01/20/2023	12:38	LB123754
	Antimony	999	1000	100	90 - 110	P	01/20/2023	12:38	LB123754
	Arsenic	1040	1000	104	90 - 110	P	01/20/2023	12:38	LB123754
	Barium	505	520	97	90 - 110	P	01/20/2023	12:38	LB123754
	Beryllium	512	510	100	90 - 110	P	01/20/2023	12:38	LB123754
	Cadmium	509	510	100	90 - 110	P	01/20/2023	12:38	LB123754
	Calcium	9870	10000	99	90 - 110	P	01/20/2023	12:38	LB123754
	Chromium	524	520	101	90 - 110	P	01/20/2023	12:38	LB123754
	Cobalt	502	520	97	90 - 110	P	01/20/2023	12:38	LB123754
	Copper	525	510	103	90 - 110	P	01/20/2023	12:38	LB123754
	Iron	10100	10000	101	90 - 110	P	01/20/2023	12:38	LB123754
	Lead	1020	1000	102	90 - 110	P	01/20/2023	12:38	LB123754
	Magnesium	5910	6000	98	90 - 110	P	01/20/2023	12:38	LB123754
	Manganese	514	520	99	90 - 110	P	01/20/2023	12:38	LB123754
	Nickel	506	530	95	90 - 110	P	01/20/2023	12:38	LB123754
	Potassium	9940	9900	100	90 - 110	P	01/20/2023	12:38	LB123754
	Selenium	1040	1000	104	90 - 110	P	01/20/2023	12:38	LB123754
	Silver	255	250	102	90 - 110	P	01/20/2023	12:38	LB123754
	Sodium	9970	10000	100	90 - 110	P	01/20/2023	12:38	LB123754
	Thallium	1040	1000	104	90 - 110	P	01/20/2023	12:38	LB123754
	Vanadium	493	500	99	90 - 110	P	01/20/2023	12:38	LB123754
	Zinc	1020	1000	102	90 - 110	P	01/20/2023	12:38	LB123754



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Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233
Contract: louie01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233
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	9850	10000	98	90 - 110	P	01/20/2023	13:42	LB123754
	Antimony	4950	5000	99	90 - 110	P	01/20/2023	13:42	LB123754
	Arsenic	5070	5000	101	90 - 110	P	01/20/2023	13:42	LB123754
	Barium	10600	10000	106	90 - 110	P	01/20/2023	13:42	LB123754
	Beryllium	238	250	95	90 - 110	P	01/20/2023	13:42	LB123754
	Cadmium	2490	2500	100	90 - 110	P	01/20/2023	13:42	LB123754
	Calcium	25100	25000	100	90 - 110	P	01/20/2023	13:42	LB123754
	Chromium	964	1000	96	90 - 110	P	01/20/2023	13:42	LB123754
	Cobalt	2440	2500	98	90 - 110	P	01/20/2023	13:42	LB123754
	Copper	1230	1250	99	90 - 110	P	01/20/2023	13:42	LB123754
	Iron	5090	5000	102	90 - 110	P	01/20/2023	13:42	LB123754
	Lead	4940	5000	99	90 - 110	P	01/20/2023	13:42	LB123754
	Magnesium	24400	25000	98	90 - 110	P	01/20/2023	13:42	LB123754
	Manganese	2520	2500	101	90 - 110	P	01/20/2023	13:42	LB123754
	Nickel	2500	2500	100	90 - 110	P	01/20/2023	13:42	LB123754
	Potassium	25300	25000	101	90 - 110	P	01/20/2023	13:42	LB123754
	Selenium	5020	5000	100	90 - 110	P	01/20/2023	13:42	LB123754
	Silver	1210	1250	97	90 - 110	P	01/20/2023	13:42	LB123754
	Sodium	24200	25000	97	90 - 110	P	01/20/2023	13:42	LB123754
	Thallium	5070	5000	101	90 - 110	P	01/20/2023	13:42	LB123754
	Vanadium	2530	2500	101	90 - 110	P	01/20/2023	13:42	LB123754
	Zinc	2510	2500	100	90 - 110	P	01/20/2023	13:42	LB123754



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Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233

Contract: louie01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233

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
LLCCV01	Aluminum	105	100	105	80 - 120	P	01/20/2023	13:46	LB123754
	Antimony	52.1	50.0	104	80 - 120	P	01/20/2023	13:46	LB123754
	Arsenic	20.6	20.0	103	80 - 120	P	01/20/2023	13:46	LB123754
	Barium	102	100	102	80 - 120	P	01/20/2023	13:46	LB123754
	Beryllium	6.28	6.0	105	80 - 120	P	01/20/2023	13:46	LB123754
	Cadmium	6.60	6.0	110	80 - 120	P	01/20/2023	13:46	LB123754
	Calcium	2000	2000	100	80 - 120	P	01/20/2023	13:46	LB123754
	Chromium	9.74	10.0	97	80 - 120	P	01/20/2023	13:46	LB123754
	Cobalt	29.3	30.0	98	80 - 120	P	01/20/2023	13:46	LB123754
	Copper	22.4	20.0	112	80 - 120	P	01/20/2023	13:46	LB123754
	Iron	112	100	112	80 - 120	P	01/20/2023	13:46	LB123754
	Lead	11.7	12.0	98	80 - 120	P	01/20/2023	13:46	LB123754
	Magnesium	2130	2000	107	80 - 120	P	01/20/2023	13:46	LB123754
	Manganese	21.5	20.0	108	80 - 120	P	01/20/2023	13:46	LB123754
	Nickel	39.9	40.0	100	80 - 120	P	01/20/2023	13:46	LB123754
	Potassium	2070	2000	104	80 - 120	P	01/20/2023	13:46	LB123754
	Selenium	19.2	20.0	96	80 - 120	P	01/20/2023	13:46	LB123754
	Silver	11.8	10.0	118	80 - 120	P	01/20/2023	13:46	LB123754
	Sodium	1990	2000	100	80 - 120	P	01/20/2023	13:46	LB123754
	Thallium	42.0	40.0	105	80 - 120	P	01/20/2023	13:46	LB123754
	Vanadium	36.3	40.0	91	80 - 120	P	01/20/2023	13:46	LB123754
	Zinc	43.0	40.0	108	80 - 120	P	01/20/2023	13:46	LB123754



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Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233
Contract: louie01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233
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	Aluminum	10500	10000	105	90 - 110	P	01/20/2023	14:37	LB123754
	Antimony	5270	5000	105	90 - 110	P	01/20/2023	14:37	LB123754
	Arsenic	5370	5000	108	90 - 110	P	01/20/2023	14:37	LB123754
	Barium	10900	10000	109	90 - 110	P	01/20/2023	14:37	LB123754
	Beryllium	245	250	98	90 - 110	P	01/20/2023	14:37	LB123754
	Cadmium	2610	2500	104	90 - 110	P	01/20/2023	14:37	LB123754
	Calcium	26000	25000	104	90 - 110	P	01/20/2023	14:37	LB123754
	Chromium	1030	1000	103	90 - 110	P	01/20/2023	14:37	LB123754
	Cobalt	2560	2500	102	90 - 110	P	01/20/2023	14:37	LB123754
	Copper	1290	1250	104	90 - 110	P	01/20/2023	14:37	LB123754
	Iron	5370	5000	107	90 - 110	P	01/20/2023	14:37	LB123754
	Lead	5170	5000	103	90 - 110	P	01/20/2023	14:37	LB123754
	Magnesium	25700	25000	103	90 - 110	P	01/20/2023	14:37	LB123754
	Manganese	2570	2500	103	90 - 110	P	01/20/2023	14:37	LB123754
	Nickel	2620	2500	105	90 - 110	P	01/20/2023	14:37	LB123754
	Potassium	26700	25000	107	90 - 110	P	01/20/2023	14:37	LB123754
	Selenium	5250	5000	105	90 - 110	P	01/20/2023	14:37	LB123754
	Silver	1290	1250	103	90 - 110	P	01/20/2023	14:37	LB123754
	Sodium	25100	25000	101	90 - 110	P	01/20/2023	14:37	LB123754
	Thallium	5390	5000	108	90 - 110	P	01/20/2023	14:37	LB123754
	Vanadium	2660	2500	106	90 - 110	P	01/20/2023	14:37	LB123754
	Zinc	2700	2500	108	90 - 110	P	01/20/2023	14:37	LB123754
CCV03	Aluminum	10100	10000	101	90 - 110	P	01/20/2023	15:29	LB123754
	Antimony	5210	5000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Arsenic	5270	5000	106	90 - 110	P	01/20/2023	15:29	LB123754
	Barium	10500	10000	105	90 - 110	P	01/20/2023	15:29	LB123754
	Beryllium	235	250	94	90 - 110	P	01/20/2023	15:29	LB123754
	Cadmium	2570	2500	103	90 - 110	P	01/20/2023	15:29	LB123754
	Calcium	25100	25000	100	90 - 110	P	01/20/2023	15:29	LB123754
	Chromium	994	1000	99	90 - 110	P	01/20/2023	15:29	LB123754
	Cobalt	2540	2500	102	90 - 110	P	01/20/2023	15:29	LB123754
	Copper	1280	1250	103	90 - 110	P	01/20/2023	15:29	LB123754
	Iron	5210	5000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Lead	5110	5000	102	90 - 110	P	01/20/2023	15:29	LB123754



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233
Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233
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
CCV03	Magnesium	24500	25000	98	90 - 110	P	01/20/2023	15:29	LB123754
	Manganese	2480	2500	99	90 - 110	P	01/20/2023	15:29	LB123754
	Nickel	2580	2500	103	90 - 110	P	01/20/2023	15:29	LB123754
	Potassium	25900	25000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Selenium	5200	5000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Silver	1240	1250	99	90 - 110	P	01/20/2023	15:29	LB123754
	Sodium	25100	25000	100	90 - 110	P	01/20/2023	15:29	LB123754
	Thallium	5300	5000	106	90 - 110	P	01/20/2023	15:29	LB123754
	Vanadium	2560	2500	102	90 - 110	P	01/20/2023	15:29	LB123754
	Zinc	2570	2500	103	90 - 110	P	01/20/2023	15:29	LB123754
CCV04	Aluminum	10000	10000	100	90 - 110	P	01/20/2023	16:15	LB123754
	Antimony	5240	5000	105	90 - 110	P	01/20/2023	16:15	LB123754
	Arsenic	5290	5000	106	90 - 110	P	01/20/2023	16:15	LB123754
	Barium	10300	10000	103	90 - 110	P	01/20/2023	16:15	LB123754
	Beryllium	238	250	95	90 - 110	P	01/20/2023	16:15	LB123754
	Cadmium	2590	2500	104	90 - 110	P	01/20/2023	16:15	LB123754
	Calcium	24900	25000	100	90 - 110	P	01/20/2023	16:15	LB123754
	Chromium	997	1000	100	90 - 110	P	01/20/2023	16:15	LB123754
	Cobalt	2560	2500	102	90 - 110	P	01/20/2023	16:15	LB123754
	Copper	1290	1250	103	90 - 110	P	01/20/2023	16:15	LB123754
	Iron	5180	5000	104	90 - 110	P	01/20/2023	16:15	LB123754
	Lead	5140	5000	103	90 - 110	P	01/20/2023	16:15	LB123754
	Magnesium	24600	25000	98	90 - 110	P	01/20/2023	16:15	LB123754
	Manganese	2460	2500	98	90 - 110	P	01/20/2023	16:15	LB123754
	Nickel	2600	2500	104	90 - 110	P	01/20/2023	16:15	LB123754
	Potassium	25800	25000	103	90 - 110	P	01/20/2023	16:15	LB123754
	Selenium	5220	5000	104	90 - 110	P	01/20/2023	16:15	LB123754
	Silver	1250	1250	100	90 - 110	P	01/20/2023	16:15	LB123754
	Sodium	25300	25000	101	90 - 110	P	01/20/2023	16:15	LB123754
	Thallium	5320	5000	106	90 - 110	P	01/20/2023	16:15	LB123754
	Vanadium	2530	2500	101	90 - 110	P	01/20/2023	16:15	LB123754
	Zinc	2580	2500	103	90 - 110	P	01/20/2023	16:15	LB123754
CCV05	Aluminum	9970	10000	100	90 - 110	P	01/20/2023	17:11	LB123754
	Antimony	4970	5000	99	90 - 110	P	01/20/2023	17:11	LB123754



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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233
Contract: loui01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233
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	Arsenic	5020	5000	100	90 - 110	P	01/20/2023	17:11	LB123754
	Barium	10100	10000	101	90 - 110	P	01/20/2023	17:11	LB123754
	Beryllium	236	250	94	90 - 110	P	01/20/2023	17:11	LB123754
	Cadmium	2460	2500	98	90 - 110	P	01/20/2023	17:11	LB123754
	Calcium	24600	25000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Chromium	980	1000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Cobalt	2430	2500	97	90 - 110	P	01/20/2023	17:11	LB123754
	Copper	1230	1250	98	90 - 110	P	01/20/2023	17:11	LB123754
	Iron	5130	5000	103	90 - 110	P	01/20/2023	17:11	LB123754
	Lead	4900	5000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Magnesium	24300	25000	97	90 - 110	P	01/20/2023	17:11	LB123754
	Manganese	2420	2500	97	90 - 110	P	01/20/2023	17:11	LB123754
	Nickel	2470	2500	99	90 - 110	P	01/20/2023	17:11	LB123754
	Potassium	25100	25000	100	90 - 110	P	01/20/2023	17:11	LB123754
	Selenium	4930	5000	99	90 - 110	P	01/20/2023	17:11	LB123754
	Silver	1220	1250	98	90 - 110	P	01/20/2023	17:11	LB123754
	Sodium	24600	25000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Thallium	5040	5000	101	90 - 110	P	01/20/2023	17:11	LB123754
	Vanadium	2480	2500	99	90 - 110	P	01/20/2023	17:11	LB123754
	Zinc	2530	2500	101	90 - 110	P	01/20/2023	17:11	LB123754
CCV06	Aluminum	10000	10000	100	90 - 110	P	01/20/2023	18:47	LB123754
	Antimony	5000	5000	100	90 - 110	P	01/20/2023	18:47	LB123754
	Arsenic	5190	5000	104	90 - 110	P	01/20/2023	18:47	LB123754
	Barium	11000	10000	110	90 - 110	P	01/20/2023	18:47	LB123754
	Beryllium	229	250	92	90 - 110	P	01/20/2023	18:47	LB123754
	Cadmium	2480	2500	99	90 - 110	P	01/20/2023	18:47	LB123754
	Calcium	25200	25000	101	90 - 110	P	01/20/2023	18:47	LB123754
	Chromium	965	1000	96	90 - 110	P	01/20/2023	18:47	LB123754
	Cobalt	2380	2500	95	90 - 110	P	01/20/2023	18:47	LB123754
	Copper	1210	1250	97	90 - 110	P	01/20/2023	18:47	LB123754
	Iron	5370	5000	108	90 - 110	P	01/20/2023	18:47	LB123754
	Lead	4910	5000	98	90 - 110	P	01/20/2023	18:47	LB123754
	Magnesium	24600	25000	99	90 - 110	P	01/20/2023	18:47	LB123754
	Manganese	2530	2500	101	90 - 110	P	01/20/2023	18:47	LB123754



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Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233
Contract: lou01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233
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
CCV06	Nickel	2510	2500	100	90 - 110	P	01/20/2023	18:47	LB123754
	Potassium	26900	25000	108	90 - 110	P	01/20/2023	18:47	LB123754
	Selenium	5070	5000	102	90 - 110	P	01/20/2023	18:47	LB123754
	Silver	1220	1250	98	90 - 110	P	01/20/2023	18:47	LB123754
	Sodium	23700	25000	95	90 - 110	P	01/20/2023	18:47	LB123754
	Thallium	5190	5000	104	90 - 110	P	01/20/2023	18:47	LB123754
	Vanadium	2580	2500	103	90 - 110	P	01/20/2023	18:47	LB123754
	Zinc	2580	2500	103	90 - 110	P	01/20/2023	18:47	LB123754
CCV07	Aluminum	9640	10000	96	90 - 110	P	01/20/2023	19:44	LB123754
	Antimony	4890	5000	98	90 - 110	P	01/20/2023	19:44	LB123754
	Arsenic	5060	5000	101	90 - 110	P	01/20/2023	19:44	LB123754
	Barium	10600	10000	106	90 - 110	P	01/20/2023	19:44	LB123754
	Beryllium	251	250	100	90 - 110	P	01/20/2023	19:44	LB123754
	Cadmium	2400	2500	96	90 - 110	P	01/20/2023	19:44	LB123754
	Calcium	24200	25000	97	90 - 110	P	01/20/2023	19:44	LB123754
	Chromium	935	1000	94	90 - 110	P	01/20/2023	19:44	LB123754
	Cobalt	2300	2500	92	90 - 110	P	01/20/2023	19:44	LB123754
	Copper	1170	1250	94	90 - 110	P	01/20/2023	19:44	LB123754
	Iron	5220	5000	104	90 - 110	P	01/20/2023	19:44	LB123754
	Lead	4750	5000	95	90 - 110	P	01/20/2023	19:44	LB123754
	Magnesium	23700	25000	95	90 - 110	P	01/20/2023	19:44	LB123754
	Manganese	2440	2500	97	90 - 110	P	01/20/2023	19:44	LB123754
	Nickel	2440	2500	98	90 - 110	P	01/20/2023	19:44	LB123754
	Potassium	25500	25000	102	90 - 110	P	01/20/2023	19:44	LB123754
	Selenium	4950	5000	99	90 - 110	P	01/20/2023	19:44	LB123754
	Silver	1180	1250	95	90 - 110	P	01/20/2023	19:44	LB123754
	Sodium	23300	25000	93	90 - 110	P	01/20/2023	19:44	LB123754
	Thallium	5060	5000	101	90 - 110	P	01/20/2023	19:44	LB123754
	Vanadium	2510	2500	100	90 - 110	P	01/20/2023	19:44	LB123754
	Zinc	2490	2500	100	90 - 110	P	01/20/2023	19:44	LB123754
CCV08	Aluminum	9870	10000	99	90 - 110	P	01/20/2023	20:30	LB123754
	Antimony	5000	5000	100	90 - 110	P	01/20/2023	20:30	LB123754
	Arsenic	5200	5000	104	90 - 110	P	01/20/2023	20:30	LB123754
	Barium	10700	10000	107	90 - 110	P	01/20/2023	20:30	LB123754



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233

Contract: loui01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233

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
CCV08	Beryllium	257	250	103	90 - 110	P	01/20/2023	20:30	LB123754
	Cadmium	2460	2500	99	90 - 110	P	01/20/2023	20:30	LB123754
	Calcium	24700	25000	99	90 - 110	P	01/20/2023	20:30	LB123754
	Chromium	941	1000	94	90 - 110	P	01/20/2023	20:30	LB123754
	Cobalt	2360	2500	94	90 - 110	P	01/20/2023	20:30	LB123754
	Copper	1200	1250	96	90 - 110	P	01/20/2023	20:30	LB123754
	Iron	5230	5000	105	90 - 110	P	01/20/2023	20:30	LB123754
	Lead	4890	5000	98	90 - 110	P	01/20/2023	20:30	LB123754
	Magnesium	24200	25000	97	90 - 110	P	01/20/2023	20:30	LB123754
	Manganese	2470	2500	99	90 - 110	P	01/20/2023	20:30	LB123754
	Nickel	2510	2500	100	90 - 110	P	01/20/2023	20:30	LB123754
	Potassium	25100	25000	100	90 - 110	P	01/20/2023	20:30	LB123754
	Selenium	5060	5000	101	90 - 110	P	01/20/2023	20:30	LB123754
	Silver	1190	1250	95	90 - 110	P	01/20/2023	20:30	LB123754
	Sodium	23100	25000	92	90 - 110	P	01/20/2023	20:30	LB123754
	Thallium	5190	5000	104	90 - 110	P	01/20/2023	20:30	LB123754
	Vanadium	2540	2500	102	90 - 110	P	01/20/2023	20:30	LB123754
	Zinc	2510	2500	101	90 - 110	P	01/20/2023	20:30	LB123754
CCV09	Aluminum	9620	10000	96	90 - 110	P	01/20/2023	21:16	LB123754
	Antimony	4940	5000	99	90 - 110	P	01/20/2023	21:16	LB123754
	Arsenic	5120	5000	102	90 - 110	P	01/20/2023	21:16	LB123754
	Barium	10500	10000	105	90 - 110	P	01/20/2023	21:16	LB123754
	Beryllium	255	250	102	90 - 110	P	01/20/2023	21:16	LB123754
	Cadmium	2430	2500	97	90 - 110	P	01/20/2023	21:16	LB123754
	Calcium	24100	25000	96	90 - 110	P	01/20/2023	21:16	LB123754
	Chromium	929	1000	93	90 - 110	P	01/20/2023	21:16	LB123754
	Cobalt	2320	2500	93	90 - 110	P	01/20/2023	21:16	LB123754
	Copper	1180	1250	94	90 - 110	P	01/20/2023	21:16	LB123754
	Iron	5100	5000	102	90 - 110	P	01/20/2023	21:16	LB123754
	Lead	4820	5000	96	90 - 110	P	01/20/2023	21:16	LB123754
	Magnesium	23800	25000	95	90 - 110	P	01/20/2023	21:16	LB123754
	Manganese	2410	2500	96	90 - 110	P	01/20/2023	21:16	LB123754
	Nickel	2480	2500	99	90 - 110	P	01/20/2023	21:16	LB123754
	Potassium	24700	25000	99	90 - 110	P	01/20/2023	21:16	LB123754



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1233

Contract: lou01

Lab Code: CHEM

Case No.: O1233

SAS No.: O1233

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
CCV09	Selenium	5000	5000	100	90 - 110	P	01/20/2023	21:16	LB123754
	Silver	1180	1250	94	90 - 110	P	01/20/2023	21:16	LB123754
	Sodium	22900	25000	92	90 - 110	P	01/20/2023	21:16	LB123754
	Thallium	5120	5000	102	90 - 110	P	01/20/2023	21:16	LB123754
	Vanadium	2490	2500	100	90 - 110	P	01/20/2023	21:16	LB123754
	Zinc	2490	2500	99	90 - 110	P	01/20/2023	21:16	LB123754



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233
Contract: louie01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233
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	2520	2500	101	90 - 110	P	01/24/2023	13:12	LB123785
	Antimony	1000	1000	100	90 - 110	P	01/24/2023	13:12	LB123785
	Arsenic	1050	1000	105	90 - 110	P	01/24/2023	13:12	LB123785
	Barium	497	520	96	90 - 110	P	01/24/2023	13:12	LB123785
	Beryllium	507	510	100	90 - 110	P	01/24/2023	13:12	LB123785
	Cadmium	511	510	100	90 - 110	P	01/24/2023	13:12	LB123785
	Calcium	9880	10000	99	90 - 110	P	01/24/2023	13:12	LB123785
	Chromium	519	520	100	90 - 110	P	01/24/2023	13:12	LB123785
	Cobalt	504	520	97	90 - 110	P	01/24/2023	13:12	LB123785
	Copper	528	510	104	90 - 110	P	01/24/2023	13:12	LB123785
	Iron	9840	10000	98	90 - 110	P	01/24/2023	13:12	LB123785
	Lead	1020	1000	102	90 - 110	P	01/24/2023	13:12	LB123785
	Magnesium	6000	6000	100	90 - 110	P	01/24/2023	13:12	LB123785
	Manganese	510	520	98	90 - 110	P	01/24/2023	13:12	LB123785
	Nickel	508	530	96	90 - 110	P	01/24/2023	13:12	LB123785
	Potassium	9640	9900	97	90 - 110	P	01/24/2023	13:12	LB123785
	Selenium	1050	1000	105	90 - 110	P	01/24/2023	13:12	LB123785
	Silver	252	250	101	90 - 110	P	01/24/2023	13:12	LB123785
	Sodium	9740	10000	97	90 - 110	P	01/24/2023	13:12	LB123785
	Thallium	1050	1000	105	90 - 110	P	01/24/2023	13:12	LB123785
	Vanadium	503	500	101	90 - 110	P	01/24/2023	13:12	LB123785
	Zinc	1010	1000	101	90 - 110	P	01/24/2023	13:12	LB123785



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233
Contract: louie01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233
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	9760	10000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Antimony	4880	5000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Arsenic	4860	5000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Barium	9840	10000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Beryllium	241	250	96	90 - 110	P	01/24/2023	13:33	LB123785
	Cadmium	2420	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Calcium	24300	25000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Chromium	984	1000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Cobalt	2420	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Copper	1230	1250	98	90 - 110	P	01/24/2023	13:33	LB123785
	Iron	5000	5000	100	90 - 110	P	01/24/2023	13:33	LB123785
	Lead	4840	5000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Magnesium	24200	25000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Manganese	2440	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Nickel	2420	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Potassium	24800	25000	99	90 - 110	P	01/24/2023	13:33	LB123785
	Selenium	4880	5000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Silver	1220	1250	98	90 - 110	P	01/24/2023	13:33	LB123785
	Sodium	24800	25000	99	90 - 110	P	01/24/2023	13:33	LB123785
	Thallium	4880	5000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Vanadium	2440	2500	98	90 - 110	P	01/24/2023	13:33	LB123785
	Zinc	2460	2500	98	90 - 110	P	01/24/2023	13:33	LB123785



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233
Contract: louie01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233
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
LLCCV01	Aluminum	90.7	100	91	80 - 120	P	01/24/2023	13:41	LB123785
	Antimony	48.3	50.0	97	80 - 120	P	01/24/2023	13:41	LB123785
	Arsenic	21.7	20.0	109	80 - 120	P	01/24/2023	13:41	LB123785
	Barium	100	100	100	80 - 120	P	01/24/2023	13:41	LB123785
	Beryllium	6.49	6.0	108	80 - 120	P	01/24/2023	13:41	LB123785
	Cadmium	6.42	6.0	107	80 - 120	P	01/24/2023	13:41	LB123785
	Calcium	1930	2000	97	80 - 120	P	01/24/2023	13:41	LB123785
	Chromium	10.7	10.0	107	80 - 120	P	01/24/2023	13:41	LB123785
	Cobalt	29.7	30.0	99	80 - 120	P	01/24/2023	13:41	LB123785
	Copper	23.0	20.0	115	80 - 120	P	01/24/2023	13:41	LB123785
	Iron	88.9	100	89	80 - 120	P	01/24/2023	13:41	LB123785
	Lead	11.4	12.0	95	80 - 120	P	01/24/2023	13:41	LB123785
	Magnesium	2150	2000	107	80 - 120	P	01/24/2023	13:41	LB123785
	Manganese	19.9	20.0	100	80 - 120	P	01/24/2023	13:41	LB123785
	Nickel	39.0	40.0	98	80 - 120	P	01/24/2023	13:41	LB123785
	Potassium	1960	2000	98	80 - 120	P	01/24/2023	13:41	LB123785
	Selenium	21.8	20.0	109	80 - 120	P	01/24/2023	13:41	LB123785
	Silver	10.5	10.0	105	80 - 120	P	01/24/2023	13:41	LB123785
	Sodium	2040	2000	102	80 - 120	P	01/24/2023	13:41	LB123785
	Thallium	40.2	40.0	100	80 - 120	P	01/24/2023	13:41	LB123785
	Vanadium	39.1	40.0	98	80 - 120	P	01/24/2023	13:41	LB123785
	Zinc	42.2	40.0	106	80 - 120	P	01/24/2023	13:41	LB123785



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233
Contract: lou01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233
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	Aluminum	9780	10000	98	90 - 110	P	01/24/2023	14:35	LB123785
	Antimony	5010	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Arsenic	4980	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Barium	9860	10000	99	90 - 110	P	01/24/2023	14:35	LB123785
	Beryllium	259	250	103	90 - 110	P	01/24/2023	14:35	LB123785
	Cadmium	2460	2500	98	90 - 110	P	01/24/2023	14:35	LB123785
	Calcium	24300	25000	97	90 - 110	P	01/24/2023	14:35	LB123785
	Chromium	1010	1000	101	90 - 110	P	01/24/2023	14:35	LB123785
	Cobalt	2440	2500	98	90 - 110	P	01/24/2023	14:35	LB123785
	Copper	1250	1250	100	90 - 110	P	01/24/2023	14:35	LB123785
	Iron	4980	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Lead	4970	5000	99	90 - 110	P	01/24/2023	14:35	LB123785
	Magnesium	24200	25000	97	90 - 110	P	01/24/2023	14:35	LB123785
	Manganese	2420	2500	97	90 - 110	P	01/24/2023	14:35	LB123785
	Nickel	2470	2500	99	90 - 110	P	01/24/2023	14:35	LB123785
	Potassium	25000	25000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Selenium	5000	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Silver	1260	1250	101	90 - 110	P	01/24/2023	14:35	LB123785
	Sodium	25100	25000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Thallium	5000	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Vanadium	2440	2500	98	90 - 110	P	01/24/2023	14:35	LB123785
	Zinc	2520	2500	101	90 - 110	P	01/24/2023	14:35	LB123785
CCV03	Aluminum	9370	10000	94	90 - 110	P	01/24/2023	17:46	LB123785
	Antimony	4930	5000	98	90 - 110	P	01/24/2023	17:46	LB123785
	Arsenic	4940	5000	99	90 - 110	P	01/24/2023	17:46	LB123785
	Barium	10200	10000	102	90 - 110	P	01/24/2023	17:46	LB123785
	Beryllium	234	250	94	90 - 110	P	01/24/2023	17:46	LB123785
	Cadmium	2320	2500	93	90 - 110	P	01/24/2023	17:46	LB123785
	Calcium	23700	25000	95	90 - 110	P	01/24/2023	17:46	LB123785
	Chromium	959	1000	96	90 - 110	P	01/24/2023	17:46	LB123785
	Cobalt	2500	2500	100	90 - 110	P	01/24/2023	17:46	LB123785
	Copper	1160	1250	93	90 - 110	P	01/24/2023	17:46	LB123785
	Iron	5200	5000	104	90 - 110	P	01/24/2023	17:46	LB123785
	Lead	4930	5000	99	90 - 110	P	01/24/2023	17:46	LB123785



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company SDG No.: O1233
Contract: louie01 Lab Code: CHEM Case No.: O1233 SAS No.: O1233
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
CCV03	Magnesium	23600	25000	95	90 - 110	P	01/24/2023	17:46	LB123785
	Manganese	2440	2500	98	90 - 110	P	01/24/2023	17:46	LB123785
	Nickel	2380	2500	95	90 - 110	P	01/24/2023	17:46	LB123785
	Potassium	25300	25000	101	90 - 110	P	01/24/2023	17:46	LB123785
	Selenium	5070	5000	101	90 - 110	P	01/24/2023	17:46	LB123785
	Silver	1250	1250	100	90 - 110	P	01/24/2023	17:46	LB123785
	Sodium	24000	25000	96	90 - 110	P	01/24/2023	17:46	LB123785
	Thallium	4890	5000	98	90 - 110	P	01/24/2023	17:46	LB123785
	Vanadium	2420	2500	97	90 - 110	P	01/24/2023	17:46	LB123785
	Zinc	2400	2500	96	90 - 110	P	01/24/2023	17:46	LB123785
CCV04	Aluminum	10800	10000	108	90 - 110	P	01/24/2023	18:37	LB123785
	Antimony	4850	5000	97	90 - 110	P	01/24/2023	18:37	LB123785
	Arsenic	4820	5000	96	90 - 110	P	01/24/2023	18:37	LB123785
	Barium	10200	10000	102	90 - 110	P	01/24/2023	18:37	LB123785
	Beryllium	235	250	94	90 - 110	P	01/24/2023	18:37	LB123785
	Cadmium	2260	2500	90	90 - 110	P	01/24/2023	18:37	LB123785
	Calcium	23700	25000	95	90 - 110	P	01/24/2023	18:37	LB123785
	Chromium	953	1000	95	90 - 110	P	01/24/2023	18:37	LB123785
	Cobalt	2730	2500	109	90 - 110	P	01/24/2023	18:37	LB123785
	Copper	1290	1250	103	90 - 110	P	01/24/2023	18:37	LB123785
	Iron	5140	5000	103	90 - 110	P	01/24/2023	18:37	LB123785
	Lead	4850	5000	97	90 - 110	P	01/24/2023	18:37	LB123785
	Magnesium	23800	25000	95	90 - 110	P	01/24/2023	18:37	LB123785
	Manganese	2450	2500	98	90 - 110	P	01/24/2023	18:37	LB123785
	Nickel	2340	2500	94	90 - 110	P	01/24/2023	18:37	LB123785
	Potassium	25100	25000	100	90 - 110	P	01/24/2023	18:37	LB123785
	Selenium	4930	5000	99	90 - 110	P	01/24/2023	18:37	LB123785
	Silver	1250	1250	100	90 - 110	P	01/24/2023	18:37	LB123785
	Sodium	23600	25000	94	90 - 110	P	01/24/2023	18:37	LB123785
	Thallium	4820	5000	96	90 - 110	P	01/24/2023	18:37	LB123785
	Vanadium	2430	2500	97	90 - 110	P	01/24/2023	18:37	LB123785
	Zinc	2380	2500	95	90 - 110	P	01/24/2023	18:37	LB123785