

LAB CHRONICLE

OrderID:	Q1216	OrderDate:	1/29/2025 11:54:00 AM
Client:	RU2 Engineering, LLC	Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Contact:	Rutu Manani	Location:	E11,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1216-03	JPP-18.1-012825	SOIL			01/28/25			01/29/25
			Mercury	7471B		01/30/25	01/31/25	
			Metals ICP-TAL	6010D		01/30/25	01/30/25	
Q1216-07	JPP-21.1-012825	SOIL			01/28/25			01/29/25
			Mercury	7471B		01/30/25	01/31/25	
			Metals ICP-TAL	6010D		01/30/25	01/30/25	
Q1216-11	JPP-21.2-012825	SOIL			01/28/25			01/29/25
			Mercury	7471B		01/30/25	01/31/25	
			Metals ICP-TAL	6010D		01/30/25	01/30/25	
Q1216-15	JPP-26.1-012825	SOIL			01/28/25			01/29/25
			Mercury	7471B		01/30/25	01/31/25	
			Metals ICP-TAL	6010D		01/30/25	01/30/25	
Q1216-19	JPP-26.2-012825	SOIL			01/28/25			01/29/25
			Mercury	7471B		01/30/25	01/31/25	
			Metals ICP-TAL	6010D		01/30/25	01/30/25	

Hit Summary Sheet SW-846

SDG No.:	Q1216	Order ID:	Q1216
Client:	RU2 Engineering, LLC	Project ID:	NYCDDC SANTWOBR Brooklyn Bridge

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : JPP-18.1-012825								
Q1216-03	JPP-18.1-012825	SOIL	Aluminum	5160		2.86	5.94	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Antimony	0.72	J	0.18	2.97	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Arsenic	6.99		0.35	1.19	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Barium	80.5		0.76	5.94	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Beryllium	0.39		0.014	0.36	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Cadmium	0.17	J	0.019	0.36	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Calcium	48300		3.33	119	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Chromium	17.4		0.064	0.59	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Cobalt	6.13		0.069	1.78	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Copper	68.6		0.56	1.19	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Iron	12700		3.20	5.94	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Lead	298		0.18	0.71	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Magnesium	8860		4.08	119	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Manganese	195		0.084	1.19	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Mercury	0.49		0.0070	0.015	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Nickel	18.3		0.11	2.38	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Potassium	1400		34.1	119	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Silver	0.37	J	0.062	0.59	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Sodium	7210		42.9	119	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Vanadium	17.2		0.32	2.38	mg/Kg
Q1216-03	JPP-18.1-012825	SOIL	Zinc	120		0.13	2.38	mg/Kg
Client ID : JPP-21.1-012825								
Q1216-07	JPP-21.1-012825	SOIL	Aluminum	3520		2.24	4.65	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Antimony	0.47	J	0.14	2.32	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Arsenic	5.24		0.27	0.93	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Barium	69.7		0.60	4.65	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Beryllium	0.29		0.011	0.28	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Cadmium	0.19	J	0.015	0.28	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Calcium	48300		2.60	93.0	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Chromium	18.6		0.050	0.47	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Cobalt	4.70		0.054	1.39	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Copper	41.0		0.44	0.93	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Iron	9070		2.50	4.65	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Lead	180		0.14	0.56	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Magnesium	4620		3.19	93.0	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Manganese	132		0.066	0.93	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Mercury	0.31		0.0060	0.014	mg/Kg

Hit Summary Sheet
SW-846

SDG No.:	Q1216	Order ID:	Q1216
Client:	RU2 Engineering, LLC	Project ID:	NYCDDC SANTWOBR Brooklyn Bridge

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Q1216-07	JPP-21.1-012825	SOIL	Nickel	20.6		0.084	1.86	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Potassium	916		26.7	93.0	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Silver	0.20	J	0.048	0.47	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Sodium	2410		33.6	93.0	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Vanadium	11.8		0.25	1.86	mg/Kg
Q1216-07	JPP-21.1-012825	SOIL	Zinc	133		0.10	1.86	mg/Kg

Client ID : JPP-21.2-012825

Q1216-11	JPP-21.2-012825	SOIL	Aluminum	4920		2.72	5.65	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Antimony	0.22	J	0.17	2.82	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Arsenic	4.57		0.33	1.13	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Barium	50.1		0.72	5.65	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Beryllium	0.43		0.014	0.34	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Cadmium	0.11	J	0.018	0.34	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Calcium	23300		3.16	113	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Chromium	15.2		0.061	0.56	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Cobalt	4.69		0.066	1.69	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Copper	56.4		0.53	1.13	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Iron	11700		3.04	5.65	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Lead	134		0.17	0.68	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Magnesium	7990		3.88	113	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Manganese	160		0.080	1.13	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Mercury	0.28		0.0070	0.017	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Nickel	15.6		0.10	2.26	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Potassium	1190		32.4	113	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Silver	0.27	J	0.059	0.56	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Sodium	2830		40.8	113	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Vanadium	17.5		0.31	2.26	mg/Kg
Q1216-11	JPP-21.2-012825	SOIL	Zinc	111		0.12	2.26	mg/Kg

Client ID : JPP-26.1-012825

Q1216-15	JPP-26.1-012825	SOIL	Aluminum	2940		2.77	5.75	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Antimony	1.45	J	0.17	2.88	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Arsenic	8.64		0.33	1.15	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Barium	69.4		0.74	5.75	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Beryllium	0.38		0.014	0.35	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Calcium	8230		3.22	115	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Chromium	9.13		0.062	0.57	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Cobalt	4.24		0.067	1.73	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Copper	65.4		0.54	1.15	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Iron	10000		3.09	5.75	mg/Kg

Hit Summary Sheet
SW-846

SDG No.:	Q1216	Order ID:	Q1216
Client:	RU2 Engineering, LLC	Project ID:	NYCDDC SANTWOBR Brooklyn Bridge

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Q1216-15	JPP-26.1-012825	SOIL	Lead	191		0.17	0.69	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Magnesium	2840		3.95	115	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Manganese	115		0.082	1.15	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Mercury	0.50		0.0070	0.016	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Nickel	13.9		0.10	2.30	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Potassium	823		33.0	115	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Silver	0.29	J	0.060	0.57	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Sodium	2690		41.5	115	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Vanadium	12.2		0.31	2.30	mg/Kg
Q1216-15	JPP-26.1-012825	SOIL	Zinc	102		0.13	2.30	mg/Kg
Client ID : JPP-26.2-012825								
Q1216-19	JPP-26.2-012825	SOIL	Aluminum	5550		2.54	5.27	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Antimony	0.95	J	0.16	2.64	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Arsenic	5.77		0.31	1.05	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Barium	64.6		0.68	5.27	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Beryllium	0.43		0.013	0.32	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Cadmium	0.29	J	0.017	0.32	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Calcium	41200		2.95	105	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Chromium	16.4		0.057	0.53	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Cobalt	5.99		0.061	1.58	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Copper	60.2		0.50	1.05	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Iron	12400		2.84	5.27	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Lead	208		0.16	0.63	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Magnesium	6960		3.62	105	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Manganese	231		0.075	1.05	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Mercury	1.72	D	0.033	0.076	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Nickel	17.4		0.095	2.11	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Potassium	1460		30.3	105	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Silver	0.25	J	0.055	0.53	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Sodium	3120		38.1	105	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Vanadium	17.8		0.28	2.11	mg/Kg
Q1216-19	JPP-26.2-012825	SOIL	Zinc	199		0.12	2.11	mg/Kg



SAMPLE DATA

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/28/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	JPP-18.1-012825	SDG No.:	Q1216
Lab Sample ID:	Q1216-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	83.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	5160		1	2.86	5.94	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-36-0	Antimony	0.72	JN	1	0.18	2.97	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-38-2	Arsenic	6.99		1	0.35	1.19	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-39-3	Barium	80.5	N	1	0.76	5.94	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-41-7	Beryllium	0.39		1	0.014	0.36	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-43-9	Cadmium	0.17	J	1	0.019	0.36	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-70-2	Calcium	48300		1	3.33	119	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-47-3	Chromium	17.4	N	1	0.064	0.59	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-48-4	Cobalt	6.13	N	1	0.069	1.78	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-50-8	Copper	68.6	N	1	0.56	1.19	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7439-89-6	Iron	12700		1	3.20	5.94	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7439-92-1	Lead	298		1	0.18	0.71	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7439-95-4	Magnesium	8860		1	4.08	119	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7439-96-5	Manganese	195		1	0.084	1.19	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7439-97-6	Mercury	0.49		1	0.0070	0.015	mg/Kg	01/30/25 16:50	01/31/25 13:35	SW7471B	
7440-02-0	Nickel	18.3		1	0.11	2.38	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-09-7	Potassium	1400	N	1	34.1	119	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7782-49-2	Selenium	1.19	U	1	0.39	1.19	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-22-4	Silver	0.37	J	1	0.062	0.59	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-23-5	Sodium	7210	N	1	42.9	119	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-28-0	Thallium	2.38	U	1	0.52	2.38	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-62-2	Vanadium	17.2	N	1	0.32	2.38	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050
7440-66-6	Zinc	120	N	1	0.13	2.38	mg/Kg	01/30/25 10:15	01/30/25 16:41	SW6010	SW3050

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	
Comments:	METALS-TAL			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/28/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	JPP-21.1-012825	SDG No.:	Q1216
Lab Sample ID:	Q1216-07	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	3520		1	2.24	4.65	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-36-0	Antimony	0.47	JN	1	0.14	2.32	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-38-2	Arsenic	5.24		1	0.27	0.93	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-39-3	Barium	69.7	N	1	0.60	4.65	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-41-7	Beryllium	0.29		1	0.011	0.28	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-43-9	Cadmium	0.19	J	1	0.015	0.28	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-70-2	Calcium	48300		1	2.60	93.0	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-47-3	Chromium	18.6	N	1	0.050	0.47	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-48-4	Cobalt	4.70	N	1	0.054	1.39	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-50-8	Copper	41.0	N	1	0.44	0.93	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7439-89-6	Iron	9070		1	2.50	4.65	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7439-92-1	Lead	180		1	0.14	0.56	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7439-95-4	Magnesium	4620		1	3.19	93.0	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7439-96-5	Manganese	132		1	0.066	0.93	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7439-97-6	Mercury	0.31		1	0.0060	0.014	mg/Kg	01/30/25 16:50	01/31/25 13:38	SW7471B	
7440-02-0	Nickel	20.6		1	0.084	1.86	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-09-7	Potassium	916	N	1	26.7	93.0	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7782-49-2	Selenium	0.93	U	1	0.31	0.93	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-22-4	Silver	0.20	J	1	0.048	0.47	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-23-5	Sodium	2410	N	1	33.6	93.0	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-28-0	Thallium	1.86	U	1	0.41	1.86	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-62-2	Vanadium	11.8	N	1	0.25	1.86	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050
7440-66-6	Zinc	133	N	1	0.10	1.86	mg/Kg	01/30/25 10:15	01/30/25 16:45	SW6010	SW3050

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	
Comments:	METALS-TAL			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/28/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	JPP-21.2-012825	SDG No.:	Q1216
Lab Sample ID:	Q1216-11	Matrix:	SOIL
Level (low/med):	low	% Solid:	84.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	4920		1	2.72	5.65	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-36-0	Antimony	0.22	JN	1	0.17	2.82	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-38-2	Arsenic	4.57		1	0.33	1.13	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-39-3	Barium	50.1	N	1	0.72	5.65	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-41-7	Beryllium	0.43		1	0.014	0.34	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-43-9	Cadmium	0.11	J	1	0.018	0.34	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-70-2	Calcium	23300		1	3.16	113	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-47-3	Chromium	15.2	N	1	0.061	0.56	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-48-4	Cobalt	4.69	N	1	0.066	1.69	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-50-8	Copper	56.4	N	1	0.53	1.13	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7439-89-6	Iron	11700		1	3.04	5.65	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7439-92-1	Lead	134		1	0.17	0.68	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7439-95-4	Magnesium	7990		1	3.88	113	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7439-96-5	Manganese	160		1	0.080	1.13	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7439-97-6	Mercury	0.28		1	0.0070	0.017	mg/Kg	01/30/25 16:50	01/31/25 13:40	SW7471B	
7440-02-0	Nickel	15.6		1	0.10	2.26	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-09-7	Potassium	1190	N	1	32.4	113	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7782-49-2	Selenium	1.13	U	1	0.37	1.13	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-22-4	Silver	0.27	J	1	0.059	0.56	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-23-5	Sodium	2830	N	1	40.8	113	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-28-0	Thallium	2.26	U	1	0.50	2.26	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-62-2	Vanadium	17.5	N	1	0.31	2.26	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050
7440-66-6	Zinc	111	N	1	0.12	2.26	mg/Kg	01/30/25 10:15	01/30/25 16:49	SW6010	SW3050

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	
Comments:	METALS-TAL			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/28/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	JPP-26.1-012825	SDG No.:	Q1216
Lab Sample ID:	Q1216-15	Matrix:	SOIL
Level (low/med):	low	% Solid:	82.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	2940		1	2.77	5.75	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-36-0	Antimony	1.45	JN	1	0.17	2.88	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-38-2	Arsenic	8.64		1	0.33	1.15	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-39-3	Barium	69.4	N	1	0.74	5.75	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-41-7	Beryllium	0.38		1	0.014	0.35	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-43-9	Cadmium	0.35	U	1	0.018	0.35	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-70-2	Calcium	8230		1	3.22	115	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-47-3	Chromium	9.13	N	1	0.062	0.57	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-48-4	Cobalt	4.24	N	1	0.067	1.73	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-50-8	Copper	65.4	N	1	0.54	1.15	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7439-89-6	Iron	10000		1	3.09	5.75	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7439-92-1	Lead	191		1	0.17	0.69	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7439-95-4	Magnesium	2840		1	3.95	115	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7439-96-5	Manganese	115		1	0.082	1.15	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7439-97-6	Mercury	0.50		1	0.0070	0.016	mg/Kg	01/30/25 16:50	01/31/25 13:42	SW7471B	
7440-02-0	Nickel	13.9		1	0.10	2.30	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-09-7	Potassium	823	N	1	33.0	115	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7782-49-2	Selenium	1.15	U	1	0.38	1.15	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-22-4	Silver	0.29	J	1	0.060	0.57	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-23-5	Sodium	2690	N	1	41.5	115	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-28-0	Thallium	2.30	U	1	0.51	2.30	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-62-2	Vanadium	12.2	N	1	0.31	2.30	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050
7440-66-6	Zinc	102	N	1	0.13	2.30	mg/Kg	01/30/25 10:15	01/30/25 16:54	SW6010	SW3050

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	
Comments:	METALS-TAL			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/28/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	JPP-26.2-012825	SDG No.:	Q1216
Lab Sample ID:	Q1216-19	Matrix:	SOIL
Level (low/med):	low	% Solid:	85.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	5550		1	2.54	5.27	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-36-0	Antimony	0.95	JN	1	0.16	2.64	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-38-2	Arsenic	5.77		1	0.31	1.05	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-39-3	Barium	64.6	N	1	0.68	5.27	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-41-7	Beryllium	0.43		1	0.013	0.32	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-43-9	Cadmium	0.29	J	1	0.017	0.32	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-70-2	Calcium	41200		1	2.95	105	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-47-3	Chromium	16.4	N	1	0.057	0.53	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-48-4	Cobalt	5.99	N	1	0.061	1.58	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-50-8	Copper	60.2	N	1	0.50	1.05	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7439-89-6	Iron	12400		1	2.84	5.27	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7439-92-1	Lead	208		1	0.16	0.63	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7439-95-4	Magnesium	6960		1	3.62	105	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7439-96-5	Manganese	231		1	0.075	1.05	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7439-97-6	Mercury	1.72	D	5	0.033	0.076	mg/Kg	01/30/25 16:50	01/31/25 14:47	SW7471B	
7440-02-0	Nickel	17.4		1	0.095	2.11	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-09-7	Potassium	1460	N	1	30.3	105	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7782-49-2	Selenium	1.05	U	1	0.35	1.05	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-22-4	Silver	0.25	J	1	0.055	0.53	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-23-5	Sodium	3120	N	1	38.1	105	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-28-0	Thallium	2.11	U	1	0.46	2.11	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-62-2	Vanadium	17.8	N	1	0.28	2.11	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050
7440-66-6	Zinc	199	N	1	0.12	2.11	mg/Kg	01/30/25 10:15	01/30/25 16:58	SW6010	SW3050

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	
Comments:	METALS-TAL			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits



METAL CALIBRATION DATA

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216
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
ICV77	Mercury	3.97	4.0	99	90 - 110	CV	01/31/2025	13:15	LB134501

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216
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
CCV92	Mercury	4.92	5.0	98	90 - 110	CV	01/31/2025	13:19	LB134501
CCV93	Mercury	4.98	5.0	100	90 - 110	CV	01/31/2025	13:47	LB134501
CCV94	Mercury	5.01	5.0	100	90 - 110	CV	01/31/2025	14:15	LB134501
CCV95	Mercury	5.00	5.0	100	90 - 110	CV	01/31/2025	14:42	LB134501
CCV96	Mercury	5.03	5.0	100	90 - 110	CV	01/31/2025	14:52	LB134501

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1216

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216

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	2350	2500	94	90 - 110	P	01/30/2025	11:49	LB134493
	Antimony	1000	1000	100	90 - 110	P	01/30/2025	11:49	LB134493
	Arsenic	1040	1000	104	90 - 110	P	01/30/2025	11:49	LB134493
	Barium	470	520	90	90 - 110	P	01/30/2025	11:49	LB134493
	Beryllium	472	510	92	90 - 110	P	01/30/2025	11:49	LB134493
	Cadmium	502	510	98	90 - 110	P	01/30/2025	11:49	LB134493
	Calcium	9280	10000	93	90 - 110	P	01/30/2025	11:49	LB134493
	Chromium	522	520	100	90 - 110	P	01/30/2025	11:49	LB134493
	Cobalt	504	520	97	90 - 110	P	01/30/2025	11:49	LB134493
	Copper	523	510	103	90 - 110	P	01/30/2025	11:49	LB134493
	Iron	9560	10000	96	90 - 110	P	01/30/2025	11:49	LB134493
	Lead	1000	1000	100	90 - 110	P	01/30/2025	11:49	LB134493
	Magnesium	5450	6000	91	90 - 110	P	01/30/2025	11:49	LB134493
	Manganese	519	520	100	90 - 110	P	01/30/2025	11:49	LB134493
	Nickel	507	530	96	90 - 110	P	01/30/2025	11:49	LB134493
	Potassium	9440	9900	95	90 - 110	P	01/30/2025	11:49	LB134493
	Selenium	1040	1000	104	90 - 110	P	01/30/2025	11:49	LB134493
	Silver	252	250	101	90 - 110	P	01/30/2025	11:49	LB134493
	Sodium	9500	10000	95	90 - 110	P	01/30/2025	11:49	LB134493
	Thallium	1020	1000	102	90 - 110	P	01/30/2025	11:49	LB134493
	Vanadium	455	500	91	90 - 110	P	01/30/2025	11:49	LB134493
	Zinc	1010	1000	101	90 - 110	P	01/30/2025	11:49	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC SDG No.: Q1216
Contract: RUTW01 Lab Code: CHEM Case No.: Q1216 SAS No.: Q1216
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	89.2	100	89	80 - 120	P	01/30/2025	11:56	LB134493
	Antimony	49.5	50.0	99	80 - 120	P	01/30/2025	11:56	LB134493
	Arsenic	21.3	20.0	107	80 - 120	P	01/30/2025	11:56	LB134493
	Barium	83.9	100	84	80 - 120	P	01/30/2025	11:56	LB134493
	Beryllium	5.55	6.0	92	80 - 120	P	01/30/2025	11:56	LB134493
	Cadmium	5.60	6.0	93	80 - 120	P	01/30/2025	11:56	LB134493
	Calcium	1830	2000	92	80 - 120	P	01/30/2025	11:56	LB134493
	Chromium	9.80	10.0	98	80 - 120	P	01/30/2025	11:56	LB134493
	Cobalt	28.7	30.0	96	80 - 120	P	01/30/2025	11:56	LB134493
	Copper	21.6	20.0	108	80 - 120	P	01/30/2025	11:56	LB134493
	Iron	106	100	106	80 - 120	P	01/30/2025	11:56	LB134493
	Lead	12.2	12.0	102	80 - 120	P	01/30/2025	11:56	LB134493
	Magnesium	1970	2000	99	80 - 120	P	01/30/2025	11:56	LB134493
	Manganese	18.0	20.0	90	80 - 120	P	01/30/2025	11:56	LB134493
	Nickel	38.6	40.0	97	80 - 120	P	01/30/2025	11:56	LB134493
	Potassium	1920	2000	96	80 - 120	P	01/30/2025	11:56	LB134493
	Selenium	19.1	20.0	96	80 - 120	P	01/30/2025	11:56	LB134493
	Silver	10.4	10.0	104	80 - 120	P	01/30/2025	11:56	LB134493
	Sodium	1920	2000	96	80 - 120	P	01/30/2025	11:56	LB134493
	Thallium	39.0	40.0	98	80 - 120	P	01/30/2025	11:56	LB134493
	Vanadium	34.8	40.0	87	80 - 120	P	01/30/2025	11:56	LB134493
	Zinc	38.3	40.0	96	80 - 120	P	01/30/2025	11:56	LB134493

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC SDG No.: Q1216
 Contract: RUTW01 Lab Code: CHEM Case No.: Q1216 SAS No.: Q1216
 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	9490	10000	95	90 - 110	P	01/30/2025	12:41	LB134493
	Antimony	5010	5000	100	90 - 110	P	01/30/2025	12:41	LB134493
	Arsenic	4950	5000	99	90 - 110	P	01/30/2025	12:41	LB134493
	Barium	9130	10000	91	90 - 110	P	01/30/2025	12:41	LB134493
	Beryllium	237	250	95	90 - 110	P	01/30/2025	12:41	LB134493
	Cadmium	2420	2500	97	90 - 110	P	01/30/2025	12:41	LB134493
	Calcium	23200	25000	93	90 - 110	P	01/30/2025	12:41	LB134493
	Chromium	988	1000	99	90 - 110	P	01/30/2025	12:41	LB134493
	Cobalt	2420	2500	97	90 - 110	P	01/30/2025	12:41	LB134493
	Copper	1250	1250	100	90 - 110	P	01/30/2025	12:41	LB134493
	Iron	4690	5000	94	90 - 110	P	01/30/2025	12:41	LB134493
	Lead	4840	5000	97	90 - 110	P	01/30/2025	12:41	LB134493
	Magnesium	23200	25000	93	90 - 110	P	01/30/2025	12:41	LB134493
	Manganese	2260	2500	90	90 - 110	P	01/30/2025	12:41	LB134493
	Nickel	2420	2500	97	90 - 110	P	01/30/2025	12:41	LB134493
	Potassium	23700	25000	95	90 - 110	P	01/30/2025	12:41	LB134493
	Selenium	5010	5000	100	90 - 110	P	01/30/2025	12:41	LB134493
	Silver	1210	1250	97	90 - 110	P	01/30/2025	12:41	LB134493
	Sodium	24100	25000	96	90 - 110	P	01/30/2025	12:41	LB134493
	Thallium	5080	5000	102	90 - 110	P	01/30/2025	12:41	LB134493
CCV02	Vanadium	2350	2500	94	90 - 110	P	01/30/2025	12:41	LB134493
	Zinc	2460	2500	98	90 - 110	P	01/30/2025	12:41	LB134493
	Aluminum	9600	10000	96	90 - 110	P	01/30/2025	13:33	LB134493
	Antimony	5060	5000	101	90 - 110	P	01/30/2025	13:33	LB134493
	Arsenic	5000	5000	100	90 - 110	P	01/30/2025	13:33	LB134493
	Barium	9200	10000	92	90 - 110	P	01/30/2025	13:33	LB134493
	Beryllium	232	250	93	90 - 110	P	01/30/2025	13:33	LB134493
	Cadmium	2420	2500	97	90 - 110	P	01/30/2025	13:33	LB134493
	Calcium	23300	25000	93	90 - 110	P	01/30/2025	13:33	LB134493
	Chromium	988	1000	99	90 - 110	P	01/30/2025	13:33	LB134493
	Cobalt	2410	2500	96	90 - 110	P	01/30/2025	13:33	LB134493
	Copper	1250	1250	100	90 - 110	P	01/30/2025	13:33	LB134493
	Iron	4770	5000	96	90 - 110	P	01/30/2025	13:33	LB134493
	Lead	4830	5000	97	90 - 110	P	01/30/2025	13:33	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC SDG No.: Q1216
 Contract: RUTW01 Lab Code: CHEM Case No.: Q1216 SAS No.: Q1216
 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	23300	25000	93	90 - 110	P	01/30/2025	13:33	LB134493
	Manganese	2250	2500	90	90 - 110	P	01/30/2025	13:33	LB134493
	Nickel	2420	2500	97	90 - 110	P	01/30/2025	13:33	LB134493
	Potassium	24400	25000	97	90 - 110	P	01/30/2025	13:33	LB134493
	Selenium	5050	5000	101	90 - 110	P	01/30/2025	13:33	LB134493
	Silver	1200	1250	96	90 - 110	P	01/30/2025	13:33	LB134493
	Sodium	25000	25000	100	90 - 110	P	01/30/2025	13:33	LB134493
	Thallium	5120	5000	102	90 - 110	P	01/30/2025	13:33	LB134493
	Vanadium	2360	2500	94	90 - 110	P	01/30/2025	13:33	LB134493
	Zinc	2450	2500	98	90 - 110	P	01/30/2025	13:33	LB134493
CCV03	Aluminum	9650	10000	96	90 - 110	P	01/30/2025	14:34	LB134493
	Antimony	4780	5000	96	90 - 110	P	01/30/2025	14:34	LB134493
	Arsenic	4880	5000	98	90 - 110	P	01/30/2025	14:34	LB134493
	Barium	9430	10000	94	90 - 110	P	01/30/2025	14:34	LB134493
	Beryllium	231	250	92	90 - 110	P	01/30/2025	14:34	LB134493
	Cadmium	2490	2500	100	90 - 110	P	01/30/2025	14:34	LB134493
	Calcium	23500	25000	94	90 - 110	P	01/30/2025	14:34	LB134493
	Chromium	985	1000	98	90 - 110	P	01/30/2025	14:34	LB134493
	Cobalt	2440	2500	98	90 - 110	P	01/30/2025	14:34	LB134493
	Copper	1200	1250	96	90 - 110	P	01/30/2025	14:34	LB134493
	Iron	4870	5000	97	90 - 110	P	01/30/2025	14:34	LB134493
	Lead	4910	5000	98	90 - 110	P	01/30/2025	14:34	LB134493
	Magnesium	23400	25000	94	90 - 110	P	01/30/2025	14:34	LB134493
	Manganese	2300	2500	92	90 - 110	P	01/30/2025	14:34	LB134493
	Nickel	2450	2500	98	90 - 110	P	01/30/2025	14:34	LB134493
	Potassium	24900	25000	100	90 - 110	P	01/30/2025	14:34	LB134493
	Selenium	5010	5000	100	90 - 110	P	01/30/2025	14:34	LB134493
	Silver	1210	1250	97	90 - 110	P	01/30/2025	14:34	LB134493
	Sodium	25200	25000	101	90 - 110	P	01/30/2025	14:34	LB134493
	Thallium	5070	5000	102	90 - 110	P	01/30/2025	14:34	LB134493
	Vanadium	2380	2500	95	90 - 110	P	01/30/2025	14:34	LB134493
	Zinc	2450	2500	98	90 - 110	P	01/30/2025	14:34	LB134493
CCV04	Aluminum	9670	10000	97	90 - 110	P	01/30/2025	15:25	LB134493
	Antimony	4980	5000	100	90 - 110	P	01/30/2025	15:25	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC SDG No.: Q1216
 Contract: RUTW01 Lab Code: CHEM Case No.: Q1216 SAS No.: Q1216
 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	4890	5000	98	90 - 110	P	01/30/2025	15:25	LB134493
	Barium	9350	10000	94	90 - 110	P	01/30/2025	15:25	LB134493
	Beryllium	231	250	92	90 - 110	P	01/30/2025	15:25	LB134493
	Cadmium	2370	2500	95	90 - 110	P	01/30/2025	15:25	LB134493
	Calcium	23400	25000	94	90 - 110	P	01/30/2025	15:25	LB134493
	Chromium	1000	1000	100	90 - 110	P	01/30/2025	15:25	LB134493
	Cobalt	2370	2500	95	90 - 110	P	01/30/2025	15:25	LB134493
	Copper	1230	1250	98	90 - 110	P	01/30/2025	15:25	LB134493
	Iron	4940	5000	99	90 - 110	P	01/30/2025	15:25	LB134493
	Lead	4750	5000	95	90 - 110	P	01/30/2025	15:25	LB134493
	Magnesium	23400	25000	94	90 - 110	P	01/30/2025	15:25	LB134493
	Manganese	2280	2500	91	90 - 110	P	01/30/2025	15:25	LB134493
	Nickel	2380	2500	95	90 - 110	P	01/30/2025	15:25	LB134493
	Potassium	25200	25000	101	90 - 110	P	01/30/2025	15:25	LB134493
	Selenium	4950	5000	99	90 - 110	P	01/30/2025	15:25	LB134493
	Silver	1220	1250	98	90 - 110	P	01/30/2025	15:25	LB134493
	Sodium	25700	25000	103	90 - 110	P	01/30/2025	15:25	LB134493
	Thallium	5090	5000	102	90 - 110	P	01/30/2025	15:25	LB134493
	Vanadium	2390	2500	95	90 - 110	P	01/30/2025	15:25	LB134493
	Zinc	2480	2500	99	90 - 110	P	01/30/2025	15:25	LB134493
CCV05	Aluminum	9750	10000	98	90 - 110	P	01/30/2025	16:24	LB134493
	Antimony	4910	5000	98	90 - 110	P	01/30/2025	16:24	LB134493
	Arsenic	4830	5000	97	90 - 110	P	01/30/2025	16:24	LB134493
	Barium	9330	10000	93	90 - 110	P	01/30/2025	16:24	LB134493
	Beryllium	234	250	94	90 - 110	P	01/30/2025	16:24	LB134493
	Cadmium	2370	2500	95	90 - 110	P	01/30/2025	16:24	LB134493
	Calcium	23700	25000	95	90 - 110	P	01/30/2025	16:24	LB134493
	Chromium	991	1000	99	90 - 110	P	01/30/2025	16:24	LB134493
	Cobalt	2370	2500	95	90 - 110	P	01/30/2025	16:24	LB134493
	Copper	1220	1250	98	90 - 110	P	01/30/2025	16:24	LB134493
	Iron	4830	5000	96	90 - 110	P	01/30/2025	16:24	LB134493
	Lead	4740	5000	95	90 - 110	P	01/30/2025	16:24	LB134493
	Magnesium	23700	25000	95	90 - 110	P	01/30/2025	16:24	LB134493
	Manganese	2310	2500	92	90 - 110	P	01/30/2025	16:24	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC SDG No.: Q1216
 Contract: RUTW01 Lab Code: CHEM Case No.: Q1216 SAS No.: Q1216
 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	2370	2500	95	90 - 110	P	01/30/2025	16:24	LB134493
	Potassium	24500	25000	98	90 - 110	P	01/30/2025	16:24	LB134493
	Selenium	4860	5000	97	90 - 110	P	01/30/2025	16:24	LB134493
	Silver	1210	1250	97	90 - 110	P	01/30/2025	16:24	LB134493
	Sodium	24900	25000	100	90 - 110	P	01/30/2025	16:24	LB134493
	Thallium	4980	5000	100	90 - 110	P	01/30/2025	16:24	LB134493
	Vanadium	2410	2500	96	90 - 110	P	01/30/2025	16:24	LB134493
	Zinc	2450	2500	98	90 - 110	P	01/30/2025	16:24	LB134493
CCV06	Aluminum	9690	10000	97	90 - 110	P	01/30/2025	17:19	LB134493
	Antimony	5050	5000	101	90 - 110	P	01/30/2025	17:19	LB134493
	Arsenic	4970	5000	99	90 - 110	P	01/30/2025	17:19	LB134493
	Barium	9260	10000	93	90 - 110	P	01/30/2025	17:19	LB134493
	Beryllium	235	250	94	90 - 110	P	01/30/2025	17:19	LB134493
	Cadmium	2440	2500	98	90 - 110	P	01/30/2025	17:19	LB134493
	Calcium	23500	25000	94	90 - 110	P	01/30/2025	17:19	LB134493
	Chromium	1010	1000	101	90 - 110	P	01/30/2025	17:19	LB134493
	Cobalt	2440	2500	98	90 - 110	P	01/30/2025	17:19	LB134493
	Copper	1260	1250	100	90 - 110	P	01/30/2025	17:19	LB134493
	Iron	4800	5000	96	90 - 110	P	01/30/2025	17:19	LB134493
	Lead	4880	5000	98	90 - 110	P	01/30/2025	17:19	LB134493
	Magnesium	23700	25000	95	90 - 110	P	01/30/2025	17:19	LB134493
	Manganese	2290	2500	92	90 - 110	P	01/30/2025	17:19	LB134493
	Nickel	2440	2500	98	90 - 110	P	01/30/2025	17:19	LB134493
	Potassium	24300	25000	97	90 - 110	P	01/30/2025	17:19	LB134493
	Selenium	4970	5000	100	90 - 110	P	01/30/2025	17:19	LB134493
	Silver	1230	1250	99	90 - 110	P	01/30/2025	17:19	LB134493
	Sodium	24900	25000	100	90 - 110	P	01/30/2025	17:19	LB134493
	Thallium	5010	5000	100	90 - 110	P	01/30/2025	17:19	LB134493
	Vanadium	2380	2500	95	90 - 110	P	01/30/2025	17:19	LB134493
	Zinc	2470	2500	99	90 - 110	P	01/30/2025	17:19	LB134493
CCV07	Aluminum	9880	10000	99	90 - 110	P	01/30/2025	18:11	LB134493
	Antimony	5060	5000	101	90 - 110	P	01/30/2025	18:11	LB134493
	Arsenic	4970	5000	99	90 - 110	P	01/30/2025	18:11	LB134493
	Barium	9620	10000	96	90 - 110	P	01/30/2025	18:11	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1216

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216

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
CCV07	Beryllium	237	250	95	90 - 110	P	01/30/2025	18:11	LB134493
	Cadmium	2440	2500	98	90 - 110	P	01/30/2025	18:11	LB134493
	Calcium	24100	25000	96	90 - 110	P	01/30/2025	18:11	LB134493
	Chromium	1020	1000	102	90 - 110	P	01/30/2025	18:11	LB134493
	Cobalt	2450	2500	98	90 - 110	P	01/30/2025	18:11	LB134493
	Copper	1250	1250	100	90 - 110	P	01/30/2025	18:11	LB134493
	Iron	5050	5000	101	90 - 110	P	01/30/2025	18:11	LB134493
	Lead	4880	5000	98	90 - 110	P	01/30/2025	18:11	LB134493
	Magnesium	24100	25000	96	90 - 110	P	01/30/2025	18:11	LB134493
	Manganese	2360	2500	94	90 - 110	P	01/30/2025	18:11	LB134493
	Nickel	2450	2500	98	90 - 110	P	01/30/2025	18:11	LB134493
	Potassium	25700	25000	103	90 - 110	P	01/30/2025	18:11	LB134493
	Selenium	5000	5000	100	90 - 110	P	01/30/2025	18:11	LB134493
	Silver	1270	1250	101	90 - 110	P	01/30/2025	18:11	LB134493
	Sodium	26300	25000	105	90 - 110	P	01/30/2025	18:11	LB134493
	Thallium	5060	5000	101	90 - 110	P	01/30/2025	18:11	LB134493
	Vanadium	2450	2500	98	90 - 110	P	01/30/2025	18:11	LB134493
	Zinc	2520	2500	101	90 - 110	P	01/30/2025	18:11	LB134493
CCV08	Aluminum	9710	10000	97	90 - 110	P	01/30/2025	18:45	LB134493
	Antimony	5060	5000	101	90 - 110	P	01/30/2025	18:45	LB134493
	Arsenic	5000	5000	100	90 - 110	P	01/30/2025	18:45	LB134493
	Barium	9470	10000	95	90 - 110	P	01/30/2025	18:45	LB134493
	Beryllium	234	250	94	90 - 110	P	01/30/2025	18:45	LB134493
	Cadmium	2430	2500	97	90 - 110	P	01/30/2025	18:45	LB134493
	Calcium	23600	25000	95	90 - 110	P	01/30/2025	18:45	LB134493
	Chromium	1010	1000	101	90 - 110	P	01/30/2025	18:45	LB134493
	Cobalt	2430	2500	97	90 - 110	P	01/30/2025	18:45	LB134493
	Copper	1250	1250	100	90 - 110	P	01/30/2025	18:45	LB134493
	Iron	4940	5000	99	90 - 110	P	01/30/2025	18:45	LB134493
	Lead	4860	5000	97	90 - 110	P	01/30/2025	18:45	LB134493
	Magnesium	23700	25000	95	90 - 110	P	01/30/2025	18:45	LB134493
	Manganese	2310	2500	92	90 - 110	P	01/30/2025	18:45	LB134493
	Nickel	2430	2500	97	90 - 110	P	01/30/2025	18:45	LB134493
	Potassium	25100	25000	100	90 - 110	P	01/30/2025	18:45	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216
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	Selenium	5030	5000	101	90 - 110	P	01/30/2025	18:45	LB134493
	Silver	1250	1250	100	90 - 110	P	01/30/2025	18:45	LB134493
	Sodium	25600	25000	102	90 - 110	P	01/30/2025	18:45	LB134493
	Thallium	5060	5000	101	90 - 110	P	01/30/2025	18:45	LB134493
	Vanadium	2410	2500	96	90 - 110	P	01/30/2025	18:45	LB134493
	Zinc	2450	2500	98	90 - 110	P	01/30/2025	18:45	LB134493

Metals

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CRDL STANDARD FOR AA & ICP

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216
Initial Calibration Source: _____
Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Aluminum	84.9	100	85	40 - 160	P	01/30/2025	12:05	LB134493
	Antimony	47.1	50.0	94	40 - 160	P	01/30/2025	12:05	LB134493
	Arsenic	21.5	20.0	107	40 - 160	P	01/30/2025	12:05	LB134493
	Barium	90.1	100	90	40 - 160	P	01/30/2025	12:05	LB134493
	Beryllium	5.61	6.0	93	40 - 160	P	01/30/2025	12:05	LB134493
	Cadmium	5.56	6.0	93	40 - 160	P	01/30/2025	12:05	LB134493
	Calcium	1880	2000	94	40 - 160	P	01/30/2025	12:05	LB134493
	Chromium	9.97	10.0	100	40 - 160	P	01/30/2025	12:05	LB134493
	Cobalt	28.5	30.0	95	40 - 160	P	01/30/2025	12:05	LB134493
	Copper	21.8	20.0	109	40 - 160	P	01/30/2025	12:05	LB134493
	Iron	81.5	100	82	40 - 160	P	01/30/2025	12:05	LB134493
	Lead	10.9	12.0	91	40 - 160	P	01/30/2025	12:05	LB134493
	Magnesium	2010	2000	101	40 - 160	P	01/30/2025	12:05	LB134493
	Manganese	18.2	20.0	91	40 - 160	P	01/30/2025	12:05	LB134493
	Nickel	38.1	40.0	95	40 - 160	P	01/30/2025	12:05	LB134493
	Potassium	2030	2000	101	40 - 160	P	01/30/2025	12:05	LB134493
	Selenium	18.4	20.0	92	40 - 160	P	01/30/2025	12:05	LB134493
	Silver	11.1	10.0	111	40 - 160	P	01/30/2025	12:05	LB134493
	Sodium	2020	2000	101	40 - 160	P	01/30/2025	12:05	LB134493
	Thallium	40.0	40.0	100	40 - 160	P	01/30/2025	12:05	LB134493
	Vanadium	34.7	40.0	87	40 - 160	P	01/30/2025	12:05	LB134493
	Zinc	39.3	40.0	98	40 - 160	P	01/30/2025	12:05	LB134493
CRA	Mercury	0.18	0.2	91	40 - 160	CV	01/31/2025	13:24	LB134501



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

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	RU2 Engineering, LLC				SDG No.:	Q1216			
Contract:	RUTW01	Lab Code:	CHEM	Case No.:	Q1216	SAS No.:	Q1216		
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB77	Mercury	0.20	+/-0.20	U	0.20	CV	01/31/2025	13:17	LB134501

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB92	Mercury	0.20	+/-0.20	U	0.20	CV	01/31/2025	13:21	LB134501
CCB93	Mercury	0.20	+/-0.20	U	0.20	CV	01/31/2025	13:49	LB134501
CCB94	Mercury	0.20	+/-0.20	U	0.20	CV	01/31/2025	14:17	LB134501
CCB95	Mercury	0.20	+/-0.20	U	0.20	CV	01/31/2025	14:45	LB134501
CCB96	Mercury	0.20	+/-0.20	U	0.20	CV	01/31/2025	14:54	LB134501

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	100	+/-100	U	100	P	01/30/2025	12:00	LB134493
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	12:00	LB134493
	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	12:00	LB134493
	Barium	100	+/-100	U	100	P	01/30/2025	12:00	LB134493
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	12:00	LB134493
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	12:00	LB134493
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	12:00	LB134493
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	12:00	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	12:00	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	12:00	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	12:00	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	12:00	LB134493
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	12:00	LB134493
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	12:00	LB134493
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	12:00	LB134493
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	12:00	LB134493
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	12:00	LB134493
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	12:00	LB134493
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	12:00	LB134493
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	12:00	LB134493
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	12:00	LB134493
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	12:00	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: <u>RU2 Engineering, LLC</u>		SDG No.: <u>Q1216</u>							
Contract: <u>RUTW01</u>	Lab Code: <u>CHEM</u>	Case No.: <u>Q1216</u>	SAS No.: <u>Q1216</u>						
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	100	+/-100	U	100	P	01/30/2025	12:47	LB134493
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	12:47	LB134493
	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	12:47	LB134493
	Barium	100	+/-100	U	100	P	01/30/2025	12:47	LB134493
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	12:47	LB134493
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	12:47	LB134493
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	12:47	LB134493
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	12:47	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	12:47	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	12:47	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	12:47	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	12:47	LB134493
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	12:47	LB134493
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	12:47	LB134493
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	12:47	LB134493
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	12:47	LB134493
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	12:47	LB134493
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	12:47	LB134493
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	12:47	LB134493
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	12:47	LB134493
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	12:47	LB134493
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	12:47	LB134493
CCB02	Aluminum	100	+/-100	U	100	P	01/30/2025	13:37	LB134493
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	13:37	LB134493
	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	13:37	LB134493
	Barium	100	+/-100	U	100	P	01/30/2025	13:37	LB134493
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	13:37	LB134493
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	13:37	LB134493
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	13:37	LB134493
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	13:37	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	13:37	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	13:37	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	13:37	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	13:37	LB134493
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	13:37	LB134493
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	13:37	LB134493
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	13:37	LB134493
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	13:37	LB134493
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	13:37	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: <u>RU2 Engineering, LLC</u>		SDG No.: <u>Q1216</u>							
Contract: <u>RUTW01</u>	Lab Code: <u>CHEM</u>	Case No.: <u>Q1216</u>	SAS No.: <u>Q1216</u>						
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	13:37	LB134493
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	13:37	LB134493
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	13:37	LB134493
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	13:37	LB134493
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	13:37	LB134493
CCB03	Aluminum	100	+/-100	U	100	P	01/30/2025	14:38	LB134493
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	14:38	LB134493
	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	14:38	LB134493
	Barium	100	+/-100	U	100	P	01/30/2025	14:38	LB134493
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	14:38	LB134493
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	14:38	LB134493
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	14:38	LB134493
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	14:38	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	14:38	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	14:38	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	14:38	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	14:38	LB134493
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	14:38	LB134493
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	14:38	LB134493
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	14:38	LB134493
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	14:38	LB134493
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	14:38	LB134493
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	14:38	LB134493
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	14:38	LB134493
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	14:38	LB134493
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	14:38	LB134493
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	14:38	LB134493
CCB04	Aluminum	100	+/-100	U	100	P	01/30/2025	15:29	LB134493
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	15:29	LB134493
	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	15:29	LB134493
	Barium	100	+/-100	U	100	P	01/30/2025	15:29	LB134493
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	15:29	LB134493
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	15:29	LB134493
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	15:29	LB134493
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	15:29	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	15:29	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	15:29	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	15:29	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	15:29	LB134493



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Client:	RU2 Engineering, LLC		SDG No.:	Q1216	
Contract:	RUTW01	Lab Code:	CHEM	Case No.:	Q1216
				SAS No.:	Q1216

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number	
CCB04	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	15:29	LB134493	
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	15:29	LB134493	
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	15:29	LB134493	
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	15:29	LB134493	
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	15:29	LB134493	
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	15:29	LB134493	
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	15:29	LB134493	
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	15:29	LB134493	
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	15:29	LB134493	
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	15:29	LB134493	
CCB05	Aluminum	100	+/-100	U	100	P	01/30/2025	16:28	LB134493	
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	16:28	LB134493	
	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	16:28	LB134493	
	Barium	100	+/-100	U	100	P	01/30/2025	16:28	LB134493	
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	16:28	LB134493	
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	16:28	LB134493	
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	16:28	LB134493	
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	16:28	LB134493	
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	16:28	LB134493	
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	16:28	LB134493	
	Iron	100	+/-100	U	100	P	01/30/2025	16:28	LB134493	
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	16:28	LB134493	
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	16:28	LB134493	
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	16:28	LB134493	
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	16:28	LB134493	
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	16:28	LB134493	
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	16:28	LB134493	
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	16:28	LB134493	
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	16:28	LB134493	
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	16:28	LB134493	
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	16:28	LB134493	
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	16:28	LB134493	
	CCB06	Aluminum	100	+/-100	U	100	P	01/30/2025	17:24	LB134493
		Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	17:24	LB134493
		Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	17:24	LB134493
Barium		100	+/-100	U	100	P	01/30/2025	17:24	LB134493	
Beryllium		6.00	+/-6.00	U	6.00	P	01/30/2025	17:24	LB134493	
Cadmium		6.00	+/-6.00	U	6.00	P	01/30/2025	17:24	LB134493	
Calcium		2000	+/-2000	U	2000	P	01/30/2025	17:24	LB134493	

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: <u>RU2 Engineering, LLC</u>		SDG No.: <u>Q1216</u>							
Contract: <u>RUTW01</u>	Lab Code: <u>CHEM</u>	Case No.: <u>Q1216</u>	SAS No.: <u>Q1216</u>						
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	17:24	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	17:24	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	17:24	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	17:24	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	17:24	LB134493
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	17:24	LB134493
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	17:24	LB134493
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	17:24	LB134493
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	17:24	LB134493
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	17:24	LB134493
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	17:24	LB134493
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	17:24	LB134493
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	17:24	LB134493
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	17:24	LB134493
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	17:24	LB134493
CCB07	Aluminum	100	+/-100	U	100	P	01/30/2025	18:15	LB134493
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	18:15	LB134493
	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	18:15	LB134493
	Barium	100	+/-100	U	100	P	01/30/2025	18:15	LB134493
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	18:15	LB134493
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	18:15	LB134493
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	18:15	LB134493
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	18:15	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	18:15	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	18:15	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	18:15	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	18:15	LB134493
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	18:15	LB134493
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	18:15	LB134493
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	18:15	LB134493
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	18:15	LB134493
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	18:15	LB134493
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	18:15	LB134493
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	18:15	LB134493
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	18:15	LB134493
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	18:15	LB134493
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	18:15	LB134493
CCB08	Aluminum	100	+/-100	U	100	P	01/30/2025	18:51	LB134493
	Antimony	50.0	+/-50.0	U	50.0	P	01/30/2025	18:51	LB134493

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	<u>RU2 Engineering, LLC</u>	SDG No.:	<u>Q1216</u>
Contract:	<u>RUTW01</u>	Lab Code:	<u>CHEM</u>
		Case No.:	<u>Q1216</u>
		SAS No.:	<u>Q1216</u>

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB08	Arsenic	20.0	+/-20.0	U	20.0	P	01/30/2025	18:51	LB134493
	Barium	100	+/-100	U	100	P	01/30/2025	18:51	LB134493
	Beryllium	6.00	+/-6.00	U	6.00	P	01/30/2025	18:51	LB134493
	Cadmium	6.00	+/-6.00	U	6.00	P	01/30/2025	18:51	LB134493
	Calcium	2000	+/-2000	U	2000	P	01/30/2025	18:51	LB134493
	Chromium	10.0	+/-10.0	U	10.0	P	01/30/2025	18:51	LB134493
	Cobalt	30.0	+/-30.0	U	30.0	P	01/30/2025	18:51	LB134493
	Copper	20.0	+/-20.0	U	20.0	P	01/30/2025	18:51	LB134493
	Iron	100	+/-100	U	100	P	01/30/2025	18:51	LB134493
	Lead	12.0	+/-12.0	U	12.0	P	01/30/2025	18:51	LB134493
	Magnesium	2000	+/-2000	U	2000	P	01/30/2025	18:51	LB134493
	Manganese	20.0	+/-20.0	U	20.0	P	01/30/2025	18:51	LB134493
	Nickel	40.0	+/-40.0	U	40.0	P	01/30/2025	18:51	LB134493
	Potassium	2000	+/-2000	U	2000	P	01/30/2025	18:51	LB134493
	Selenium	20.0	+/-20.0	U	20.0	P	01/30/2025	18:51	LB134493
	Silver	10.0	+/-10.0	U	10.0	P	01/30/2025	18:51	LB134493
	Sodium	2000	+/-2000	U	2000	P	01/30/2025	18:51	LB134493
	Thallium	40.0	+/-40.0	U	40.0	P	01/30/2025	18:51	LB134493
	Vanadium	40.0	+/-40.0	U	40.0	P	01/30/2025	18:51	LB134493
	Zinc	40.0	+/-40.0	U	40.0	P	01/30/2025	18:51	LB134493

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: RU2 Engineering, LLC

SDG No.: Q1216

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB166402BL		SOLID		Batch Number:	PB166402		Prep Date:	01/30/2025	
	Mercury	0.013	<0.013	U	0.013	CV	01/31/2025	13:31	LB134501

Metals
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PREPARATION BLANK SUMMARY

Client: RU2 Engineering, LLC

SDG No.: Q1216

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB166376BL	SOLID			Batch Number:	PB166376		Prep Date:	01/30/2025	
	Aluminum	4.72	<4.72	U	4.72	P	01/30/2025	16:32	LB134493
	Antimony	2.36	<2.36	U	2.36	P	01/30/2025	16:32	LB134493
	Arsenic	0.94	<0.94	U	0.94	P	01/30/2025	16:32	LB134493
	Barium	4.72	<4.72	U	4.72	P	01/30/2025	16:32	LB134493
	Beryllium	0.28	<0.28	U	0.28	P	01/30/2025	16:32	LB134493
	Cadmium	0.28	<0.28	U	0.28	P	01/30/2025	16:32	LB134493
	Calcium	94.3	<94.3	U	94.3	P	01/30/2025	16:32	LB134493
	Chromium	0.47	<0.47	U	0.47	P	01/30/2025	16:32	LB134493
	Cobalt	1.42	<1.42	U	1.42	P	01/30/2025	16:32	LB134493
	Copper	0.94	<0.94	U	0.94	P	01/30/2025	16:32	LB134493
	Iron	4.72	<4.72	U	4.72	P	01/30/2025	16:32	LB134493
	Lead	0.57	<0.57	U	0.57	P	01/30/2025	16:32	LB134493
	Magnesium	94.3	<94.3	U	94.3	P	01/30/2025	16:32	LB134493
	Manganese	0.94	<0.94	U	0.94	P	01/30/2025	16:32	LB134493
	Nickel	1.89	<1.89	U	1.89	P	01/30/2025	16:32	LB134493
	Potassium	94.3	<94.3	U	94.3	P	01/30/2025	16:32	LB134493
	Selenium	0.94	<0.94	U	0.94	P	01/30/2025	16:32	LB134493
	Silver	0.47	<0.47	U	0.47	P	01/30/2025	16:32	LB134493
	Sodium	94.3	<94.3	U	94.3	P	01/30/2025	16:32	LB134493
	Thallium	1.89	<1.89	U	1.89	P	01/30/2025	16:32	LB134493
	Vanadium	1.89	<1.89	U	1.89	P	01/30/2025	16:32	LB134493
	Zinc	1.89	<1.89	U	1.89	P	01/30/2025	16:32	LB134493

Metals
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INTERFERENCE CHECK SAMPLE

Client: <u>RU2 Engineering, LLC</u>	SDG No.: <u>Q1216</u>
Contract: <u>RUTW01</u> Lab Code: <u>CHEM</u>	Case No.: <u>Q1216</u> SAS No.: <u>Q1216</u>
ICS Source: <u>EPA</u>	Instrument ID: <u>P4</u>

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	235000	255000	92	216000	294000	01/30/2025	12:10	LB134493
	Antimony	-3.14			-50	50	01/30/2025	12:10	LB134493
	Arsenic	-3.20			-20	20	01/30/2025	12:10	LB134493
	Barium	1.95	6.0	32	-94	106	01/30/2025	12:10	LB134493
	Beryllium	1.36			-6	6	01/30/2025	12:10	LB134493
	Cadmium	-0.88	1.0	88	-5	7	01/30/2025	12:10	LB134493
	Calcium	218000	245000	89	208000	282000	01/30/2025	12:10	LB134493
	Chromium	56.0	52.0	108	42	62	01/30/2025	12:10	LB134493
	Cobalt	0.92			-30	30	01/30/2025	12:10	LB134493
	Copper	21.7	2.0	1085	-18	22	01/30/2025	12:10	LB134493
	Iron	92700	101000	92	85600	116500	01/30/2025	12:10	LB134493
	Lead	6.67			-12	12	01/30/2025	12:10	LB134493
	Magnesium	234000	255000	92	216000	294000	01/30/2025	12:10	LB134493
	Manganese	3.50	7.0	50	-13	27	01/30/2025	12:10	LB134493
	Nickel	2.07	2.0	104	-38	42	01/30/2025	12:10	LB134493
	Potassium	133			0	0	01/30/2025	12:10	LB134493
	Selenium	-14.4			-20	20	01/30/2025	12:10	LB134493
	Silver	-0.54			-10	10	01/30/2025	12:10	LB134493
	Sodium	23.8			0	0	01/30/2025	12:10	LB134493
	Thallium	11.1			-40	40	01/30/2025	12:10	LB134493
	Vanadium	5.11			-40	40	01/30/2025	12:10	LB134493
	Zinc	1.05			-40	40	01/30/2025	12:10	LB134493
ICSAB01	Aluminum	243000	247000	98	209000	285000	01/30/2025	12:28	LB134493
	Antimony	644	618	104	525	711	01/30/2025	12:28	LB134493
	Arsenic	118	104	114	88.4	120	01/30/2025	12:28	LB134493
	Barium	456	537	85	437	637	01/30/2025	12:28	LB134493
	Beryllium	475	495	96	420	570	01/30/2025	12:28	LB134493
	Cadmium	1020	972	105	826	1120	01/30/2025	12:28	LB134493
	Calcium	224000	235000	95	199000	271000	01/30/2025	12:28	LB134493
	Chromium	583	542	108	460	624	01/30/2025	12:28	LB134493
	Cobalt	514	476	108	404	548	01/30/2025	12:28	LB134493
	Copper	526	511	103	434	588	01/30/2025	12:28	LB134493
	Iron	99900	99300	101	84400	114500	01/30/2025	12:28	LB134493
	Lead	57.1	49.0	116	37	61	01/30/2025	12:28	LB134493
	Magnesium	241000	248000	97	210000	286000	01/30/2025	12:28	LB134493
	Manganese	448	507	88	430	584	01/30/2025	12:28	LB134493
	Nickel	1020	954	107	810	1100	01/30/2025	12:28	LB134493
	Potassium	109			0	0	01/30/2025	12:28	LB134493
	Selenium	36.8	46.0	80	26	66	01/30/2025	12:28	LB134493
	Silver	222	201	110	170	232	01/30/2025	12:28	LB134493
	Sodium	7.13			0	0	01/30/2025	12:28	LB134493
	Thallium	104	108	96	68	148	01/30/2025	12:28	LB134493

Metals

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INTERFERENCE CHECK SAMPLE

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216
ICS Source: EPA **Instrument ID:** P4

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	463	491	94	417	565	01/30/2025	12:28	LB134493
	Zinc	1080	952	113	809	1095	01/30/2025	12:28	LB134493



METAL QC DATA

metals
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MATRIX SPIKE SUMMARY

client: <u>RU2 Engineering, LLC</u>	level: <u>low</u>	sdg no.: <u>Q1216</u>
contract: <u>RUTW01</u>	lab code: <u>CHEM</u>	case no.: <u>Q1216</u> sas no.: <u>Q1216</u>
matrix: <u>Solid</u>	sample id: <u>Q1221-01</u>	client id: <u>CHESTNUT-CONCRETEMS</u>
Percent Solids for Sample: 100	Spiked ID: Q1221-01MS	Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	6050		3760		93.5	2448		P
Antimony	mg/Kg	75 - 125	16.5		2.28	U	37.4	44	N	P
Arsenic	mg/Kg	75 - 125	44.0		0.84	J	37.4	116		P
Barium	mg/Kg	75 - 125	38.0		17.3		9.3	222	N	P
Beryllium	mg/Kg	75 - 125	8.56		0.21	J	9.3	90		P
Cadmium	mg/Kg	75 - 125	9.30		0.27	U	9.3	100		P
Calcium	mg/Kg	75 - 125	50100		39700		46.7	22209		P
Chromium	mg/Kg	75 - 125	44.4		7.31		18.7	199	N	P
Cobalt	mg/Kg	75 - 125	12.6		0.92	J	9.3	126	N	P
Copper	mg/Kg	75 - 125	19.9		1.90		14.0	129	N	P
Iron	mg/Kg	75 - 125	18000		3860		140	10106		P
Lead	mg/Kg	75 - 125	52.3		1.47		46.7	109		P
Magnesium	mg/Kg	75 - 125	2180		1670		93.5	543		P
Manganese	mg/Kg	75 - 125	123		79.4		9.3	466		P
Nickel	mg/Kg	75 - 125	29.0		2.47		23.4	114		P
Potassium	mg/Kg	75 - 125	1270		380		470	190	N	P
Selenium	mg/Kg	75 - 125	85.4		0.91	U	93.5	91		P
Silver	mg/Kg	75 - 125	3.45		0.051	J	3.5	97		P
Sodium	mg/Kg	75 - 125	401		76.8	J	140	232	N	P
Thallium	mg/Kg	75 - 125	89.7		1.83	U	93.5	96		P
Vanadium	mg/Kg	75 - 125	29.6		6.31		14.0	166	N	P
Zinc	mg/Kg	75 - 125	58.4		5.90		9.3	565	N	P

metals
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MATRIX SPIKE DUPLICATE SUMMARY

client:	<u>RU2 Engineering, LLC</u>	level:	<u>low</u>	sdg no.:	<u>Q1216</u>
contract:	<u>RUTW01</u>	lab code:	<u>CHEM</u>	case no.:	<u>Q1216</u>
matrix:	<u>Solid</u>	sample id:	<u>Q1221-01</u>	client id:	<u>CHESTNUT-CONCRETEMSD</u>
Percent Solids for Sample:	100	Spiked ID:	Q1221-01MSD	Percent Solids for Spike Sample:	100

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5670		3760		86.2	2222		P
Antimony	mg/Kg	75 - 125	15.1		2.28	U	34.5	44	N	P
Arsenic	mg/Kg	75 - 125	40.1		0.84	J	34.5	114		P
Barium	mg/Kg	75 - 125	36.6		17.3		8.6	224	N	P
Beryllium	mg/Kg	75 - 125	7.94		0.21	J	8.6	90		P
Cadmium	mg/Kg	75 - 125	8.40		0.27	U	8.6	98		P
Calcium	mg/Kg	75 - 125	47800		39700		43.1	18807		P
Chromium	mg/Kg	75 - 125	41.0		7.31		17.2	196	N	P
Cobalt	mg/Kg	75 - 125	11.6		0.92	J	8.6	124		P
Copper	mg/Kg	75 - 125	17.9		1.90		12.9	124		P
Iron	mg/Kg	75 - 125	17200		3860		130	10286		P
Lead	mg/Kg	75 - 125	48.1		1.47		43.1	108		P
Magnesium	mg/Kg	75 - 125	2070		1670		86.2	468		P
Manganese	mg/Kg	75 - 125	118		79.4		8.6	448		P
Nickel	mg/Kg	75 - 125	26.6		2.47		21.6	112		P
Potassium	mg/Kg	75 - 125	1220		380		430	195	N	P
Selenium	mg/Kg	75 - 125	77.7		0.91	U	86.2	90		P
Silver	mg/Kg	75 - 125	3.28		0.051	J	3.2	101		P
Sodium	mg/Kg	75 - 125	382		76.8	J	130	235	N	P
Thallium	mg/Kg	75 - 125	83.2		1.83	U	86.2	96		P
Vanadium	mg/Kg	75 - 125	28.1		6.31		12.9	169	N	P
Zinc	mg/Kg	75 - 125	54.0		5.90		8.6	560	N	P

metals
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MATRIX SPIKE SUMMARY

client: RU2 Engineering, LLC level: low sdg no.: Q1216
contract: RUTW01 lab code: CHEM case no.: Q1216 sas no.: Q1216
matrix: Solid sample id: Q1235-07 client id: JPP-16.1-012925MS
Percent Solids for Sample: 89.2 Spiked ID: Q1235-07MS Percent Solids for Spike Sample: 89.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.55		0.31		0.27	87		CV

metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: <u>RU2 Engineering, LLC</u>	level: <u>low</u>	sdg no.: <u>Q1216</u>
contract: <u>RUTW01</u>	lab code: <u>CHEM</u>	case no.: <u>Q1216</u> sas no.: <u>Q1216</u>
matrix: <u>Solid</u>	sample id: <u>Q1235-07</u>	client id: <u>JPP-16.1-012925MSD</u>
Percent Solids for Sample: 89.2	Spiked ID: Q1235-07MSD	Percent Solids for Spike Sample: 89.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.60		0.31		0.27	106		CV

Metals
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POST DIGEST SPIKE SUMMARY

Client: <u>RU2 Engineering, LLC</u>	SDG No.: <u>Q1216</u>	
Contract: <u>RUTW01</u>	Lab Code: <u>CHEM</u>	Case No.: <u>Q1216</u> SAS No.: <u>Q1216</u>
Matrix: <u>Solid</u>	Level: <u>LOW</u>	Client ID: <u>CHESTNUT-CONCRETEA</u>
Sample ID: <u>Q1221-01</u>	Spiked ID: <u>Q1221-01A</u>	

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	75 - 125	15.7		2.28	U	36.5	43		P
Barium	mg/Kg	75 - 125	37.2		17.3		9.10	219		P
Chromium	mg/Kg	75 - 125	43.2		7.31		18.3	196		P
Cobalt	mg/Kg	75 - 125	12.2		0.92	J	9.10	124		P
Copper	mg/Kg	75 - 125	19.1		1.90		13.7	125		P
Potassium	mg/Kg	75 - 125	1260		380		460	191		P
Sodium	mg/Kg	75 - 125	395		76.8	J	140	228		P
Vanadium	mg/Kg	75 - 125	28.9		6.31		13.7	165		P
Zinc	mg/Kg	75 - 125	57.1		5.90		9.10	562		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client: RU2 Engineering, LLC **Level:** LOW **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216
Matrix: Solid **Sample ID:** Q1221-01 **Client ID:** CHESTNUT-CONCRETEDUP
Percent Solids for Sample: 100 **Duplicate ID** Q1221-01DUP **Percent Solids for Spike Sample:** 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	3760		3500		7		P
Antimony	mg/Kg	20	2.28	U	2.19	U			P
Arsenic	mg/Kg	20	0.84	J	0.73	J	14		P
Barium	mg/Kg	20	17.3		16.4		5		P
Beryllium	mg/Kg	20	0.21	J	0.20	J	7		P
Cadmium	mg/Kg	20	0.27	U	0.26	U			P
Calcium	mg/Kg	20	39700		37100		7		P
Chromium	mg/Kg	20	7.31		6.74		8		P
Cobalt	mg/Kg	20	0.92	J	0.84	J	9		P
Copper	mg/Kg	20	1.90		1.73		9		P
Iron	mg/Kg	20	3860		3640		6		P
Lead	mg/Kg	20	1.47		1.39		6		P
Magnesium	mg/Kg	20	1670		1550		7		P
Manganese	mg/Kg	20	79.4		74.7		6		P
Nickel	mg/Kg	20	2.47		2.29		8		P
Potassium	mg/Kg	20	380		360		5		P
Selenium	mg/Kg	20	0.91	U	0.88	U			P
Silver	mg/Kg	20	0.051	J	0.056	J	9		P
Sodium	mg/Kg	20	76.8	J	71.2	J	8		P
Thallium	mg/Kg	20	1.83	U	1.75	U			P
Vanadium	mg/Kg	20	6.31		5.92		6		P
Zinc	mg/Kg	20	5.90		5.50		7		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client: RU2 Engineering, LLC **Level:** LOW **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216
Matrix: Solid **Sample ID:** Q1221-01MS **Client ID:** CHESTNUT-CONCRETEMSD
Percent Solids for Sample: 100 **Duplicate ID** Q1221-01MSD **Percent Solids for Spike Sample:** 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	6050		5670		6		P
Antimony	mg/Kg	20	16.5		15.1		9		P
Arsenic	mg/Kg	20	44.0		40.1		9		P
Barium	mg/Kg	20	38.0		36.6		4		P
Beryllium	mg/Kg	20	8.56		7.94		8		P
Cadmium	mg/Kg	20	9.30		8.40		10		P
Calcium	mg/Kg	20	50100		47800		5		P
Chromium	mg/Kg	20	44.4		41.0		8		P
Cobalt	mg/Kg	20	12.6		11.6		8		P
Copper	mg/Kg	20	19.9		17.9		11		P
Iron	mg/Kg	20	18000		17200		5		P
Lead	mg/Kg	20	52.3		48.1		8		P
Magnesium	mg/Kg	20	2180		2070		5		P
Manganese	mg/Kg	20	123		118		4		P
Nickel	mg/Kg	20	29.0		26.6		9		P
Potassium	mg/Kg	20	1270		1220		4		P
Selenium	mg/Kg	20	85.4		77.7		9		P
Silver	mg/Kg	20	3.45		3.28		5		P
Sodium	mg/Kg	20	401		382		5		P
Thallium	mg/Kg	20	89.7		83.2		8		P
Vanadium	mg/Kg	20	29.6		28.1		5		P
Zinc	mg/Kg	20	58.4		54.0		8		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>RU2 Engineering, LLC</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q1216</u>
Contract:	<u>RUTW01</u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>Q1216</u>
Matrix:	<u>Solid</u>	Sample ID:	<u>Q1235-07</u>	Client ID:	<u>JPP-16.1-012925DUP</u>
Percent Solids for Sample:	89.2	Duplicate ID	Q1235-07DUP	Percent Solids for Spike Sample:	89.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.31		0.32		2		CV

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>RU2 Engineering, LLC</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q1216</u>
Contract:	<u>RUTW01</u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>Q1216</u>
Matrix:	<u>Solid</u>	Sample ID:	<u>Q1235-07MS</u>	Client ID:	<u>JPP-16.1-012925MSD</u>
Percent Solids for Sample:	89.2	Duplicate ID	Q1235-07MSD	Percent Solids for Spike Sample:	89.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.55		0.60		9		CV

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166376BS							
Aluminum	mg/Kg	94.3	83.5		88	80 - 120	P
Antimony	mg/Kg	37.7	36.5		97	80 - 120	P
Arsenic	mg/Kg	37.7	37.1		98	80 - 120	P
Barium	mg/Kg	9.4	8.00		85	80 - 120	P
Beryllium	mg/Kg	9.4	8.32		88	80 - 120	P
Cadmium	mg/Kg	9.4	8.79		94	80 - 120	P
Calcium	mg/Kg	47.2	42.5	J	90	80 - 120	P
Chromium	mg/Kg	18.9	18.4		97	80 - 120	P
Cobalt	mg/Kg	9.4	8.80		94	80 - 120	P
Copper	mg/Kg	14.2	14.1		99	80 - 120	P
Iron	mg/Kg	140	134		96	80 - 120	P
Lead	mg/Kg	47.2	44.0		93	80 - 120	P
Magnesium	mg/Kg	94.3	82.1	J	87	80 - 120	P
Manganese	mg/Kg	9.4	8.25		88	80 - 120	P
Nickel	mg/Kg	23.6	22.2		94	80 - 120	P
Potassium	mg/Kg	470	443		94	80 - 120	P
Selenium	mg/Kg	94.3	91.8		97	80 - 120	P
Silver	mg/Kg	3.5	3.32		95	80 - 120	P
Sodium	mg/Kg	140	138		99	80 - 120	P
Thallium	mg/Kg	94.3	92.2		98	80 - 120	P
Vanadium	mg/Kg	14.2	12.6		89	80 - 120	P
Zinc	mg/Kg	9.4	9.04		96	80 - 120	P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1216
Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1216 **SAS No.:** Q1216

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166402BS Mercury	mg/Kg	0.25	0.28		114	80 - 120	CV

Metals
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ICP SERIAL DILUTIONS

SAMPLE NO.

CHESTNUT-CONCRETEL

Lab Name: Chemtech Consulting Group

Contract: RUTW01

Lab Code: CHEM Lb No.: lb134493 Lab Sample ID : Q1221-01L SDG No.: Q1216

Matrix (soil/water): Solid Level (low/med): LOW

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ-ence	Q	M
Aluminum	3760		3880		3		P
Antimony	2.28	U	11.4	U			P
Arsenic	0.84	J	4.57	U	100.0		P
Barium	17.3		18.4	J	7		P
Beryllium	0.21	J	0.23	J	8		P
Cadmium	0.27	U	1.37	U			P
Calcium	39700		43100		9		P
Chromium	7.31		7.69		5		P
Cobalt	0.92	J	0.87	J	5		P
Copper	1.90		2.16	J	14		P
Iron	3860		4040		5		P
Lead	1.47		1.16	J	22		P
Magnesium	1670		1810		8		P
Manganese	79.4		87.6		10		P
Nickel	2.47		2.41	J	2		P
Potassium	380		371	J	2		P
Selenium	0.91	U	4.57	U			P
Silver	0.051	J	2.28	U	100.0		P
Sodium	76.8	J	457	U	100.0		P
Thallium	1.83	U	9.13	U			P
Vanadium	6.31		6.59	J	4		P
Zinc	5.90		5.33	J	10		P

Metals
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ICP SERIAL DILUTIONS

SAMPLE NO.

JPP-16.1-012925L

Lab Name: Chemtech Consulting Group

Contract: RUTW01

Lab Code: CHEM

Lb No.: lb134501

Lab Sample ID : Q1235-07L

SDG No.: Q1216

Matrix (soil/water): Solid

Level (low/med): LOW

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	M
Mercury	0.31	0.33	7		CV



METAL PREPARATION & INSTRUMENT DATA

Metals

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ICP INTERELEMEN CORRECTION FACTORS

Client: RU2 Engineering, LLC

SDG No.: Q1216

Contract: RUTW01

Lab Code: CHEM

Case No.: Q1216

SAS No.: Q1216

Instrument ID: _____

Date: _____

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Al	Ca	Fe	Mg	Ag
Aluminum	396.100	0.0000000	-0.0002060	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	-0.0075970	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0001050	0.0000000	0.0000000

Metals

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ICP INTERELEMEN CORRECTION FACTORS

Client: RU2 Engineering, LLC

SDG No.: Q1216

Contract: RUTW01

Lab Code: CHEM

Case No.: Q1216

SAS No.: Q1216

Instrument ID: _____

Date: _____

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		As	Ba	Be	Cd	Co
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0039600
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0054900
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC

SDG No.: Q1216

Contract: RUTW01

Lab Code: CHEM

Case No.: Q1216

SAS No.: Q1216

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Cr	Cu	K	Mn	Mo
Aluminum	396.100	0.0000000	0.0000000	0.0000590	0.0000000	0.0396900
Antimony	206.833	0.0122000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	-0.0000710	-0.0003400
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007860
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Iron	240.488	0.0000000	0.0000000	0.0000730	0.0000000	-0.0015250
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0017400	-0.0100400
Vanadium	292.402	-0.0025100	0.0000000	0.0000000	0.0000000	-0.0072000
Zinc	213.800	0.0000000	0.0009010	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC

SDG No.: Q1216

Contract: RUTW01

Lab Code: CHEM

Case No.: Q1216

SAS No.: Q1216

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Aluminum	396.100	0.0000000	0.0000000	0.0012800	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Iron	240.488	0.0000000	-0.0017000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0067600	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC

SDG No.: Q1216

Contract: RUTW01

Lab Code: CHEM

Case No.: Q1216

SAS No.: Q1216

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	-0.0035600	-0.0007970	0.0000000	-0.0018900	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Cobalt	228.616	0.0000000	0.0018800	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	-0.0039700	0.0000000	-0.0115600	0.0000000
Vanadium	292.402	0.0000000	0.0005320	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client:	<u>RU2 Engineering, LLC</u>	SDG No.:	<u>Q1216</u>
Contract:	<u>RUTW01</u>	Lab Code:	<u>CHEM</u>
		Method:	<u></u>
		Case No.:	<u>Q1216</u>
		SAS No.:	<u>Q1216</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB166376							
PB166376BL	PB166376BL	MB	SOLID	01/30/2025	2.12	100.0	100.00
PB166376BS	PB166376BS	LCS	SOLID	01/30/2025	2.12	100.0	100.00
Q1216-03	JPP-18.1-012825	SAM	SOLID	01/30/2025	2.02	100.0	83.30
Q1216-07	JPP-21.1-012825	SAM	SOLID	01/30/2025	2.38	100.0	90.40
Q1216-11	JPP-21.2-012825	SAM	SOLID	01/30/2025	2.10	100.0	84.30
Q1216-15	JPP-26.1-012825	SAM	SOLID	01/30/2025	2.10	100.0	82.80
Q1216-19	JPP-26.2-012825	SAM	SOLID	01/30/2025	2.21	100.0	85.80
Q1221-01DUP	CHESTNUT-CONCRETEDUP	DUP	SOLID	01/30/2025	2.28	100.0	100.00
Q1221-01MS	CHESTNUT-CONCRETEMS	MS	SOLID	01/30/2025	2.14	100.0	100.00
Q1221-01MSD	CHESTNUT-CONCRETEMSD	MSD	SOLID	01/30/2025	2.32	100.0	100.00

Metals

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SAMPLE PREPARATION SUMMARY

Client:	<u>RU2 Engineering, LLC</u>	SDG No.:	<u>Q1216</u>
Contract:	<u>RUTW01</u>	Lab Code:	<u>CHEM</u>
		Method:	<u></u>
		Case No.:	<u>Q1216</u>
		SAS No.:	<u>Q1216</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB166402							
PB166402BL	PB166402BL	MB	SOLID	01/30/2025	0.54	35.0	100.00
PB166402BS	PB166402BS	LCS	SOLID	01/30/2025	0.55	35.0	100.00
Q1216-03	JPP-18.1-012825	SAM	SOLID	01/30/2025	0.56	35.0	83.30
Q1216-07	JPP-21.1-012825	SAM	SOLID	01/30/2025	0.54	35.0	90.40
Q1216-11	JPP-21.2-012825	SAM	SOLID	01/30/2025	0.50	35.0	84.30
Q1216-15	JPP-26.1-012825	SAM	SOLID	01/30/2025	0.52	35.0	82.80
Q1216-19	JPP-26.2-012825	SAM	SOLID	01/30/2025	0.54	35.0	85.80
Q1235-07DUP	JPP-16.1-012925DUP	DUP	SOLID	01/30/2025	0.56	35.0	89.20
Q1235-07MS	JPP-16.1-012925MS	MS	SOLID	01/30/2025	0.59	35.0	89.20
Q1235-07MSD	JPP-16.1-012925MSD	MSD	SOLID	01/30/2025	0.58	35.0	89.20

metals
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ANALYSIS RUN LOG

Client: RU2 Engineering, LLC **Contract:** RUTW01

Lab code: CHEM **Case no.:** Q1216 **Sas no.:** Q1216 **Sdg no.:** Q1216

Instrument id number: **Method:** **Run number:** LB134493

Start date: 01/30/2025 **End date:** 01/30/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1107	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1112	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1116	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1120	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1125	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1129	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1149	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1156	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1200	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1205	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1210	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1228	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1241	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1247	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1333	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1337	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV03	CCV03	1	1434	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1438	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV04	CCV04	1	1525	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB04	CCB04	1	1529	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV05	CCV05	1	1624	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB05	CCB05	1	1628	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB166376BL	PB166376BL	1	1632	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB166376BS	PB166376BS	1	1637	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1216-03	JPP-18.1-012825	1	1641	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1216-07	JPP-21.1-012825	1	1645	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1216-11	JPP-21.2-012825	1	1649	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1216-15	JPP-26.1-012825	1	1654	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1216-19	JPP-26.2-012825	1	1658	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV06	CCV06	1	1719	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB06	CCB06	1	1724	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1221-01DUP	CHESTNUT-CONCRETEDUP	1	1733	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1221-01L	CHESTNUT-CONCRETEL	5	1737	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1221-01MS	CHESTNUT-CONCRETEMS	1	1741	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1221-01MSD	CHESTNUT-CONCRETEMSD	1	1746	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1221-01A	CHESTNUT-CONCRETEA	1	1750	Ba,Co,Cr,Cu,K,Na,Sb,V,Zn
CCV07	CCV07	1	1811	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB07	CCB07	1	1815	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV08	CCV08	1	1845	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB08	CCB08	1	1851	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

metals
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ANALYSIS RUN LOG

Client: RU2 Engineering, LLC **Contract:** RUTW01

Lab code: CHEM **Case no.:** Q1216 **Sas no.:** Q1216 **Sdg no.:** Q1216

Instrument id number: **Method:** **Run number:** LB134501

Start date: 01/31/2025 **End date:** 01/31/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1247	HG
S0.2	S0.2	1	1249	HG
S2.5	S2.5	1	1252	HG
S5	S5	1	1254	HG
S7.5	S7.5	1	1256	HG
S10	S10	1	1301	HG
ICV77	ICV77	1	1315	HG
ICB77	ICB77	1	1317	HG
CCV92	CCV92	1	1319	HG
CCB92	CCB92	1	1321	HG
CRA	CRA	1	1324	HG
PB166402BL	PB166402BL	1	1331	HG
PB166402BS	PB166402BS	1	1333	HG
Q1216-03	JPP-18.1-012825	1	1335	HG
Q1216-07	JPP-21.1-012825	1	1338	HG
Q1216-11	JPP-21.2-012825	1	1340	HG
Q1216-15	JPP-26.1-012825	1	1342	HG
CCV93	CCV93	1	1347	HG
CCB93	CCB93	1	1349	HG
CCV94	CCV94	1	1415	HG
CCB94	CCB94	1	1417	HG
Q1235-07DUP	JPP-16.1-012925DUP	1	1422	HG
Q1235-07MS	JPP-16.1-012925MS	1	1424	HG
Q1235-07MSD	JPP-16.1-012925MSD	1	1426	HG
Q1235-07L	JPP-16.1-012925L	5	1438	HG
CCV95	CCV95	1	1442	HG
CCB95	CCB95	1	1445	HG
Q1216-19	JPP-26.2-012825	5	1447	HG
CCV96	CCV96	1	1452	HG
CCB96	CCB96	1	1454	HG