

LAB CHRONICLE

OrderID:	Q3731	OrderDate:	11/26/2025 1:12:47 PM
Client:	JPCL Engineering	Project:	NYCDPR BGCY Playground - W 145th St
Contact:	Jim Lau	Location:	A11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3731-01	W1	Water			11/26/25			11/26/25
			Mercury	7470A		12/01/25	12/01/25	
			Metals ICP-Group1	6010D		12/01/25	12/01/25	
Q3731-02	W1	TCLP			11/26/25			11/26/25
			TCLP ICP Metals	6010D		12/01/25	12/01/25	
			TCLP Mercury	7470A		12/01/25	12/01/25	



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

Hit Summary Sheet
SW-846

SDG No.: Q3731

Order ID: Q3731

Client: JPCL Engineering

Project ID: NYCDPR BGCY Playground - W 145th St

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : W1								
Q3731-01	W1	Water	Arsenic	4.06	J	2.56	10.0	ug/L
Q3731-01	W1	Water	Barium	111		7.28	50.0	ug/L
Q3731-01	W1	Water	Chromium	15.5		1.06	5.00	ug/L
Q3731-01	W1	Water	Lead	31.4		1.15	6.00	ug/L
Q3731-01	W1	Water	Mercury	0.84		0.076	0.20	ug/L



SAMPLE DATA

Report of Analysis

Client:	JPCL Engineering	Date Collected:	11/26/25
Project:	NYCDPR BGCY Playground - W 145th St	Date Received:	11/26/25
Client Sample ID:	W1	SDG No.:	Q3731
Lab Sample ID:	Q3731-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	4.06	J	1	2.56	10.0	ug/L	12/01/25 11:20	12/01/25 14:38	6010D	M3010A
7440-39-3	Barium	111		1	7.28	50.0	ug/L	12/01/25 11:20	12/01/25 14:38	6010D	M3010A
7440-43-9	Cadmium	3.00	U	1	0.25	3.00	ug/L	12/01/25 11:20	12/01/25 14:38	6010D	M3010A
7440-47-3	Chromium	15.5		1	1.06	5.00	ug/L	12/01/25 11:20	12/01/25 14:38	6010D	M3010A
7439-92-1	Lead	31.4		1	1.15	6.00	ug/L	12/01/25 11:20	12/01/25 14:38	6010D	M3010A
7439-97-6	Mercury	0.84		1	0.076	0.20	ug/L	12/01/25 09:20	12/01/25 15:51	7470A	M7470A
7782-49-2	Selenium	10.0	U	1	4.82	10.0	ug/L	12/01/25 11:20	12/01/25 14:38	6010D	M3010A
7440-22-4	Silver	5.00	U	1	0.81	5.00	ug/L	12/01/25 11:20	12/01/25 14:38	6010D	M3010A

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: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV132	Mercury	3.68	4.0	92	90 - 110	CV	12/01/2025	14:54	1b138068

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV44	Mercury	4.92	5.0	98	90 - 110	CV	12/01/2025	15:02	1b138068
CCV45	Mercury	4.99	5.0	100	90 - 110	CV	12/01/2025	15:34	1b138068
CCV46	Mercury	4.99	5.0	100	90 - 110	CV	12/01/2025	16:06	1b138068
CCV47	Mercury	4.92	5.0	98	90 - 110	CV	12/01/2025	16:24	1b138068

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Arsenic	4020	4000	101	90 - 110	P	12/01/2025	13:16	LB138072
	Barium	7850	8000	98	90 - 110	P	12/01/2025	13:16	LB138072
	Cadmium	1940	2000	97	90 - 110	P	12/01/2025	13:16	LB138072
	Chromium	791	800	99	90 - 110	P	12/01/2025	13:16	LB138072
	Lead	3830	4000	96	90 - 110	P	12/01/2025	13:16	LB138072
	Selenium	4190	4000	105	90 - 110	P	12/01/2025	13:16	LB138072
	Silver	1000	1000	100	90 - 110	P	12/01/2025	13:16	LB138072

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Arsenic	23.8	20.0	119	80 - 120	P	12/01/2025	13:42	LB138072
	Barium	105	100	105	80 - 120	P	12/01/2025	13:42	LB138072
	Cadmium	6.23	6.0	104	80 - 120	P	12/01/2025	13:42	LB138072
	Chromium	9.35	10.0	94	80 - 120	P	12/01/2025	13:42	LB138072
	Lead	11.5	12.0	96	80 - 120	P	12/01/2025	13:42	LB138072
	Selenium	20.6	20.0	103	80 - 120	P	12/01/2025	13:42	LB138072
	Silver	9.97	10.0	100	80 - 120	P	12/01/2025	13:42	LB138072

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Arsenic	5040	5000	101	90 - 110	P	12/01/2025	14:30	LB138072
	Barium	9960	10000	100	90 - 110	P	12/01/2025	14:30	LB138072
	Cadmium	2470	2500	99	90 - 110	P	12/01/2025	14:30	LB138072
	Chromium	994	1000	99	90 - 110	P	12/01/2025	14:30	LB138072
	Lead	4970	5000	100	90 - 110	P	12/01/2025	14:30	LB138072
	Selenium	5140	5000	103	90 - 110	P	12/01/2025	14:30	LB138072
	Silver	1270	1250	102	90 - 110	P	12/01/2025	14:30	LB138072
CCV02	Arsenic	4990	5000	100	90 - 110	P	12/01/2025	15:26	LB138072
	Barium	10200	10000	102	90 - 110	P	12/01/2025	15:26	LB138072
	Cadmium	2410	2500	97	90 - 110	P	12/01/2025	15:26	LB138072
	Chromium	958	1000	96	90 - 110	P	12/01/2025	15:26	LB138072
	Lead	4870	5000	98	90 - 110	P	12/01/2025	15:26	LB138072
	Selenium	5090	5000	102	90 - 110	P	12/01/2025	15:26	LB138072
	Silver	1250	1250	100	90 - 110	P	12/01/2025	15:26	LB138072
CCV03	Arsenic	5100	5000	102	90 - 110	P	12/01/2025	16:33	LB138072
	Barium	10000	10000	100	90 - 110	P	12/01/2025	16:33	LB138072
	Cadmium	2450	2500	98	90 - 110	P	12/01/2025	16:33	LB138072
	Chromium	995	1000	100	90 - 110	P	12/01/2025	16:33	LB138072
	Lead	4940	5000	99	90 - 110	P	12/01/2025	16:33	LB138072
	Selenium	5180	5000	104	90 - 110	P	12/01/2025	16:33	LB138072
	Silver	1270	1250	102	90 - 110	P	12/01/2025	16:33	LB138072
CCV04	Arsenic	5140	5000	103	90 - 110	P	12/01/2025	17:25	LB138072
	Barium	10500	10000	104	90 - 110	P	12/01/2025	17:25	LB138072
	Cadmium	2500	2500	100	90 - 110	P	12/01/2025	17:25	LB138072
	Chromium	1010	1000	100	90 - 110	P	12/01/2025	17:25	LB138072
	Lead	5050	5000	101	90 - 110	P	12/01/2025	17:25	LB138072
	Selenium	5140	5000	103	90 - 110	P	12/01/2025	17:25	LB138072
	Silver	1310	1250	105	90 - 110	P	12/01/2025	17:25	LB138072
CCV05	Arsenic	5110	5000	102	90 - 110	P	12/01/2025	18:16	LB138072
	Barium	9960	10000	100	90 - 110	P	12/01/2025	18:16	LB138072
	Cadmium	2500	2500	100	90 - 110	P	12/01/2025	18:16	LB138072
	Chromium	1030	1000	103	90 - 110	P	12/01/2025	18:16	LB138072
	Lead	5020	5000	100	90 - 110	P	12/01/2025	18:16	LB138072
	Selenium	5160	5000	103	90 - 110	P	12/01/2025	18:16	LB138072

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Silver	1300	1250	104	90 - 110	P	12/01/2025	18:16	LB138072
CCV06	Arsenic	5230	5000	105	90 - 110	P	12/01/2025	19:07	LB138072
	Barium	10300	10000	102	90 - 110	P	12/01/2025	19:07	LB138072
	Cadmium	2540	2500	102	90 - 110	P	12/01/2025	19:07	LB138072
	Chromium	1020	1000	102	90 - 110	P	12/01/2025	19:07	LB138072
	Lead	5110	5000	102	90 - 110	P	12/01/2025	19:07	LB138072
	Selenium	5320	5000	106	90 - 110	P	12/01/2025	19:07	LB138072
	Silver	1310	1250	105	90 - 110	P	12/01/2025	19:07	LB138072
CCV07	Arsenic	5410	5000	108	90 - 110	P	12/01/2025	19:24	LB138072
	Barium	10300	10000	103	90 - 110	P	12/01/2025	19:24	LB138072
	Cadmium	2630	2500	105	90 - 110	P	12/01/2025	19:24	LB138072
	Chromium	1040	1000	104	90 - 110	P	12/01/2025	19:24	LB138072
	Lead	5280	5000	106	90 - 110	P	12/01/2025	19:24	LB138072
	Selenium	5530	5000	110	90 - 110	P	12/01/2025	19:24	LB138072
	Silver	1340	1250	107	90 - 110	P	12/01/2025	19:24	LB138072



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

Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

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	Arsenic	22.7	20.0	114	65 - 135	P	12/01/2025	13:50	LB138072
	Barium	102	100	102	65 - 135	P	12/01/2025	13:50	LB138072
	Cadmium	6.21	6.0	104	65 - 135	P	12/01/2025	13:50	LB138072
	Chromium	9.87	10.0	99	65 - 135	P	12/01/2025	13:50	LB138072
	Lead	13.2	12.0	110	65 - 135	P	12/01/2025	13:50	LB138072
	Selenium	22.4	20.0	112	65 - 135	P	12/01/2025	13:50	LB138072
	Silver	10.2	10.0	102	65 - 135	P	12/01/2025	13:50	LB138072
CRA	Mercury	0.15	0.2	73	70 - 130	CV	12/01/2025	15:09	lb138068



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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB132	Mercury	0.076	+/-0.2	U	0.20	CV	12/01/2025	14:56	lb138068

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB44	Mercury	0.076	+/-0.2	U	0.20	CV	12/01/2025	15:04	lb138068
CCB45	Mercury	0.076	+/-0.2	U	0.20	CV	12/01/2025	15:37	lb138068
CCB46	Mercury	0.076	+/-0.2	U	0.20	CV	12/01/2025	16:08	lb138068
CCB47	Mercury	0.076	+/-0.2	U	0.20	CV	12/01/2025	16:26	lb138068

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	13:46	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	13:46	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	13:46	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	13:46	LB138072
	Lead	2.30	+/-6	U	12.0	P	12/01/2025	13:46	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	13:46	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	13:46	LB138072

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	14:34	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	14:34	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	14:34	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	14:34	LB138072
	Lead	2.30	+/-6	U	12.0	P	12/01/2025	14:34	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	14:34	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	14:34	LB138072
CCB02	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	15:31	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	15:31	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	15:31	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	15:31	LB138072
	Lead	2.30	+/-6	U	12.0	P	12/01/2025	15:31	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	15:31	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	15:31	LB138072
CCB03	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	16:38	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	16:38	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	16:38	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	16:38	LB138072
	Lead	2.30	+/-6	U	12.0	P	12/01/2025	16:38	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	16:38	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	16:38	LB138072
CCB04	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	17:29	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	17:29	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	17:29	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	17:29	LB138072
	Lead	2.30	+/-6	U	12.0	P	12/01/2025	17:29	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	17:29	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	17:29	LB138072
CCB05	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	18:20	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	18:20	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	18:20	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	18:20	LB138072
	Lead	2.30	+/-6	U	12.0	P	12/01/2025	18:20	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	18:20	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	18:20	LB138072
CCB06	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	19:11	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	19:11	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	19:11	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	19:11	LB138072

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	2.30	+/-6	U	12.0	P	12/01/2025	19:11	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	19:11	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	19:11	LB138072
CCB07	Arsenic	5.12	+/-10	U	20.0	P	12/01/2025	19:28	LB138072
	Barium	14.6	+/-50	U	100	P	12/01/2025	19:28	LB138072
	Cadmium	0.50	+/-3	U	6.00	P	12/01/2025	19:28	LB138072
	Chromium	2.12	+/-5	U	10.0	P	12/01/2025	19:28	LB138072
	Lead	2.30	+/-6	U	12.0	P	12/01/2025	19:28	LB138072
	Selenium	9.64	+/-10	U	20.0	P	12/01/2025	19:28	LB138072
	Silver	1.62	+/-5	U	10.0	P	12/01/2025	19:28	LB138072

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170772BL		WATER		Batch Number:	PB170772		Prep Date:	12/01/2025	
	Mercury	0.076	<0.2	U	0.20	CV	12/01/2025	15:41	lb138068

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170768BL	WATER			Batch Number:	PB170768		Prep Date:	12/01/2025	
	Arsenic	2.56	<5	U	10.0	P	12/01/2025	17:08	LB138072
	Barium	7.28	<25	U	50.0	P	12/01/2025	17:08	LB138072
	Cadmium	0.25	<1.5	U	3.00	P	12/01/2025	17:08	LB138072
	Chromium	1.06	<2.5	U	5.00	P	12/01/2025	17:08	LB138072
	Lead	1.15	<3	U	6.00	P	12/01/2025	17:08	LB138072
	Selenium	4.82	<5	U	10.0	P	12/01/2025	17:08	LB138072
	Silver	0.81	<2.5	U	5.00	P	12/01/2025	17:08	LB138072

Metals
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INTERFERENCE CHECK SAMPLE

Client: <u>JPCL Engineering</u>	SDG No.: <u>Q3731</u>
Contract: <u>JPCL01</u>	Lab Code: <u>ACE</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	Arsenic	4.50			-20	20	12/01/2025	13:55	LB138072
	Barium	4.98	6.0	83	-94	106	12/01/2025	13:55	LB138072
	Cadmium	4.78	1.0	478	-5	7	12/01/2025	13:55	LB138072
	Chromium	59.8	52.0	115	42	62	12/01/2025	13:55	LB138072
	Lead	2.07			-12	12	12/01/2025	13:55	LB138072
	Selenium	-14.4			-20	20	12/01/2025	13:55	LB138072
	Silver	-8.77			-10	10	12/01/2025	13:55	LB138072
ICSAB01	Arsenic	106	104	102	88.4	120	12/01/2025	14:09	LB138072
	Barium	515	537	96	437	637	12/01/2025	14:09	LB138072
	Cadmium	979	972	101	826	1120	12/01/2025	14:09	LB138072
	Chromium	528	542	97	460	624	12/01/2025	14:09	LB138072
	Lead	53.1	49.0	108	37	61	12/01/2025	14:09	LB138072
	Selenium	41.4	46.0	90	26	66	12/01/2025	14:09	LB138072
	Silver	174	201	87	170	232	12/01/2025	14:09	LB138072



METAL QC DATA

metals
- 5a -
MATRIX SPIKE SUMMARY

client: <u>JPCL Engineering</u>	level: <u>low</u>	sdg no.: <u>Q3731</u>
contract: <u>JPCL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3731-01</u>	client id: <u>W1MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3731-01MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	4.09		0.84		4.0	81		CV

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>JPCL Engineering</u>	level: <u>low</u>	sdg no.: <u>Q3731</u>
contract: <u>JPCL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3731-01</u>	client id: <u>W1MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3731-01MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	4.00		0.84		4.0	79		CV

metals
- 5a -
MATRIX SPIKE SUMMARY

client: <u>JPCL Engineering</u>	level: <u>low</u>	sdg no.: <u>Q3731</u>
contract: <u>JPCL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3737-02</u>	client id: <u>MW4MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3737-02MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	435		10.0	U	400	109		P
Barium	ug/L	75 - 125	209		115		100	94		P
Cadmium	ug/L	75 - 125	103		0.32	J	100	103		P
Chromium	ug/L	75 - 125	216		20.8		200	98		P
Lead	ug/L	75 - 125	498		6.12		500	98		P
Selenium	ug/L	75 - 125	1130		10.0	U	1000	113		P
Silver	ug/L	75 - 125	38.9		5.00	U	37.5	104		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>JPCL Engineering</u>	level: <u>low</u>	sdg no.: <u>Q3731</u>
contract: <u>JPCL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3737-02</u>	client id: <u>MW4MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3737-02MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	433		10.0	U	400	108		P
Barium	ug/L	75 - 125	211		115		100	95		P
Cadmium	ug/L	75 - 125	102		0.32	J	100	102		P
Chromium	ug/L	75 - 125	208		20.8		200	94		P
Lead	ug/L	75 - 125	494		6.12		500	98		P
Selenium	ug/L	75 - 125	1130		10.0	U	1000	113		P
Silver	ug/L	75 - 125	38.6		5.00	U	37.5	103		P

Metals
- 5b -

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Matrix: _____

Level: LOW

Client ID: _____

Sample ID: _____

Spiked ID: _____

Analyte	Units	Acceptance Limit %R	C	Sample Result	C	Spike Added	% Recovery	Qual	M
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A
B
C
D
E
F
G
H

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client:	<u>JPCL Engineering</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q3731</u>
Contract:	<u>JPCL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q3731-01</u>	Client ID:	<u>W1DUP</u>
Percent Solids for Sample:	NA	Duplicate ID	Q3731-01DUP	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	0.84		0.82		2		CV

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>JPCL Engineering</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q3731</u>
Contract:	<u>JPCL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q3731-01MS</u>	Client ID:	<u>W1MSD</u>
Percent Solids for Sample:	NA	Duplicate ID	Q3731-01MSD	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	4.09		4.00		2		CV

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client:	<u>JPCL Engineering</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q3731</u>
Contract:	<u>JPCL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q3737-02</u>	Client ID:	<u>MW4DUP</u>
Percent Solids for Sample:	NA	Duplicate ID	Q3737-02DUP	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	10.0	U	10.0	U			P
Barium	ug/L	20	115		112		3		P
Cadmium	ug/L	20	0.32	J	0.37	J	13		P
Chromium	ug/L	20	20.8		21.8		5		P
Lead	ug/L	20	6.12		4.67	J	27		P
Selenium	ug/L	20	10.0	U	10.0	U			P
Silver	ug/L	20	5.00	U	5.00	U			P

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client:	<u>JPCL Engineering</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q3731</u>
Contract:	<u>JPCL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q3737-02MS</u>	Client ID:	<u>MW4MSD</u>
Percent Solids for Sample:	NA	Duplicate ID	Q3737-02MSD	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	435		433		0		P
Barium	ug/L	20	209		211		1		P
Cadmium	ug/L	20	103		102		1		P
Chromium	ug/L	20	216		208		4		P
Lead	ug/L	20	498		494		1		P
Selenium	ug/L	20	1130		1130		0		P
Silver	ug/L	20	38.9		38.6		1		P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client:	<u>JPCL Engineering</u>	SDG No.:	<u>Q3731</u>
Contract:	<u>JPCL01</u>	Lab Code:	<u>ACE</u>

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB170768BS							
Arsenic	ug/L	400	402		100	80 - 120	P
Barium	ug/L	100	96.9		97	80 - 120	P
Cadmium	ug/L	100	96.9		97	80 - 120	P
Chromium	ug/L	200	196		98	80 - 120	P
Lead	ug/L	500	474		95	80 - 120	P
Selenium	ug/L	1000	1060		106	80 - 120	P
Silver	ug/L	37.5	38.3		102	80 - 120	P

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB170772BS Mercury	ug/L	4.0	4.04		101	80 - 120	CV

Metals
-9 -
ICP SERIAL DILUTIONS

SAMPLE NO.

W1L

Lab Name: Alliance **Contract:** JPCL01
Lab Code: ACE **Lb No.:** lb138068 **Lab Sample ID :** Q3731-01L **SDG No.:** Q3731
Matrix (soil/water): Water **Level (low/med):** LOW
Concentration Units: ug/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	M
Mercury	0.84	1.00 U	100.0		CV

Metals
-9 -
ICP SERIAL DILUTIONS

SAMPLE NO.

MW4L

Lab Name: Alliance **Contract:** JPCL01
Lab Code: ACE **Lb No.:** lb138072 **Lab Sample ID :** Q3737-02L **SDG No.:** Q3731
Matrix (soil/water): Water **Level (low/med):** LOW
Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
Arsenic	10.0	U	50.0	U			P
Barium	115		113	J	2		P
Cadmium	0.32	J	15.0	U	100.0		P
Chromium	20.8		21.5	J	3		P
Lead	6.12		30.0	U	100.0		P
Selenium	10.0	U	50.0	U			P
Silver	5.00	U	25.0	U			P



METAL PREPARATION & INSTRUMENT DATA

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Instrument ID:

Date:

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Al	Ca	Fe	Mg	Ag
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
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	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

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Instrument ID:

Date:

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		As	Ba	Be	Cd	Co
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	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

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
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

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
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

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

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
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
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	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

METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Method: _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB170768							
PB170768BL	PB170768BL	MB	WATER	12/01/2025	50.0	25.0	
PB170768BS	PB170768BS	LCS	WATER	12/01/2025	50.0	25.0	
Q3731-01	W1	SAM	WATER	12/01/2025	50.0	25.0	
Q3737-02DUP	MW4DUP	DUP	WATER	12/01/2025	50.0	25.0	
Q3737-02MS	MW4MS	MS	WATER	12/01/2025	50.0	25.0	
Q3737-02MSD	MW4MSD	MSD	WATER	12/01/2025	50.0	25.0	

Metals

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SAMPLE PREPARATION SUMMARY

Client: JPCL Engineering

SDG No.: Q3731

Contract: JPCL01

Lab Code: ACE

Method:

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB170772							
PB170772BL	PB170772BL	MB	WATER	12/01/2025	30.0	30.0	
PB170772BS	PB170772BS	LCS	WATER	12/01/2025	30.0	30.0	
Q3731-01	W1	SAM	WATER	12/01/2025	30.0	30.0	
Q3731-01DUP	W1DUP	DUP	WATER	12/01/2025	30.0	30.0	
Q3731-01MS	W1MS	MS	WATER	12/01/2025	30.0	30.0	
Q3731-01MSD	W1MSD	MSD	WATER	12/01/2025	30.0	30.0	

metals
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ANALYSIS RUN LOG

Client: JPCL Engineering

Contract: JPCL01

Lab code: ACE

Sdg no.: Q3731

Instrument id number: _____

Method: _____

Run number: lb138068

Start date: 12/01/2025

End date: 12/01/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1438	HG
S0.2	S0.2	1	1441	HG
S2.5	S2.5	1	1443	HG
S5	S5	1	1445	HG
S7.5	S7.5	1	1447	HG
S10	S10	1	1450	HG
ICV132	ICV132	1	1454	HG
ICB132	ICB132	1	1456	HG
CCV44	CCV44	1	1502	HG
CCB44	CCB44	1	1504	HG
CRA	CRA	1	1509	HG
CCV45	CCV45	1	1534	HG
CCB45	CCB45	1	1537	HG
PB170772BL	PB170772BL	1	1541	HG
PB170772BS	PB170772BS	1	1544	HG
Q3731-01	W1	1	1551	HG
Q3731-01DUP	W1DUP	1	1556	HG
Q3731-01MS	W1MS	1	1601	HG
Q3731-01MSD	W1MSD	1	1604	HG
CCV46	CCV46	1	1606	HG
CCB46	CCB46	1	1608	HG
Q3731-01L	W1L	5	1619	HG
CCV47	CCV47	1	1624	HG
CCB47	CCB47	1	1626	HG

metals
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ANALYSIS RUN LOG

Client: JPCL Engineering

Contract: JPCL01

Lab code: ACE

Sdg no.: Q3731

Instrument id number: _____

Method: _____

Run number: LB138072

Start date: 12/01/2025

End date: 12/01/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1235	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1239	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1243	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1247	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1251	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1256	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1316	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1342	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1346	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1350	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1355	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1409	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1430	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1434	Ag,As,Ba,Cd,Cr,Pb,Se
Q3731-01	W1	1	1438	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1526	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1531	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1633	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1638	Ag,As,Ba,Cd,Cr,Pb,Se
PB170768BL	PB170768BL	1	1708	Ag,As,Ba,Cd,Cr,Pb,Se
PB170768BS	PB170768BS	1	1713	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1725	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1729	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1816	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1820	Ag,As,Ba,Cd,Cr,Pb,Se
Q3737-02DUP	MW4DUP	1	1850	Ag,As,Ba,Cd,Cr,Pb,Se
Q3737-02L	MW4L	5	1855	Ag,As,Ba,Cd,Cr,Pb,Se
Q3737-02MS	MW4MS	1	1859	Ag,As,Ba,Cd,Cr,Pb,Se
Q3737-02MSD	MW4MSD	1	1903	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1907	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1911	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	1924	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	1928	Ag,As,Ba,Cd,Cr,Pb,Se