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LAB CHRONICLE

OrderID:	Q1061	**OrderDate:**	1/10/2025 9:58:27 AM
Client:	Dewberry Engineers Inc.	**Project:**	PennDOT - Onvo Travel Plaza #50040379
Contact:	Bill Pendexter	**Location:**	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1061-01	**MW-1**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-02	**MW-2**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-03	**MW-3**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-04	**MW-4**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-05	**MW-5**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-06	**MW-6**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-07	**MW-7**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-08	**MW-8**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-09	**MW-9**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	
Q1061-10	**MW-10**	**Water**			**01/09/25**			**01/09/25**
			Metals ICP-Group1	200.7		01/13/25	01/20/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1061 **Order ID:** Q1061

Client: Dewberry Engineers Inc. **Project ID:** PennDOT - Onvo Travel Plaza #50040379

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : MW-1								
Q1061-01	MW-1	Water	Potassium	9040		281	1000	ug/L
Q1061-01	MW-1	Water	Sodium	27900		448	1000	ug/L
Client ID : MW-2								
Q1061-02	MW-2	Water	Potassium	7220		281	1000	ug/L
Q1061-02	MW-2	Water	Sodium	29100		448	1000	ug/L
Client ID : MW-3								
Q1061-03	MW-3	Water	Potassium	21900		281	1000	ug/L
Q1061-03	MW-3	Water	Sodium	88500		448	1000	ug/L
Client ID : MW-4								
Q1061-04	MW-4	Water	Potassium	16000		281	1000	ug/L
Q1061-04	MW-4	Water	Sodium	74800		448	1000	ug/L
Client ID : MW-5								
Q1061-05	MW-5	Water	Potassium	35900		281	1000	ug/L
Q1061-05	MW-5	Water	Sodium	128000		448	1000	ug/L
Client ID : MW-6								
Q1061-06	MW-6	Water	Potassium	26100		281	1000	ug/L
Q1061-06	MW-6	Water	Sodium	79300		448	1000	ug/L
Client ID : MW-7								
Q1061-07	MW-7	Water	Potassium	12000		281	1000	ug/L
Q1061-07	MW-7	Water	Sodium	64700		448	1000	ug/L
Client ID : MW-8								
Q1061-08	MW-8	Water	Potassium	14300		281	1000	ug/L
Q1061-08	MW-8	Water	Sodium	58100		448	1000	ug/L
Client ID : MW-9								
Q1061-09	MW-9	Water	Potassium	28500		281	1000	ug/L
Q1061-09	MW-9	Water	Sodium	96100		448	1000	ug/L
Client ID : MW-10								
Q1061-10	MW-10	Water	Potassium	28100		281	1000	ug/L
Q1061-10	MW-10	Water	Sodium	103000		448	1000	ug/L

SAMPLE DATA

Alliance TECHNICAL GROUP
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-1	SDG No.:	Q1061
Lab Sample ID:	Q1061-01	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.
7440-09-7	Potassium	9040		1	281	1000	ug/L	01/13/25 10:30	01/20/25 15:50	EPA 200.7	
7440-23-5	Sodium	27900		1	448	1000	ug/L	01/13/25 10:30	01/20/25 15:50	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-2	SDG No.:	Q1061
Lab Sample ID:	Q1061-02	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.
7440-09-7	Potassium	7220		1	281	1000	ug/L	01/13/25 10:30	01/20/25 15:54	EPA 200.7	
7440-23-5	Sodium	29100		1	448	1000	ug/L	01/13/25 10:30	01/20/25 15:54	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-3	SDG No.:	Q1061
Lab Sample ID:	Q1061-03	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.
7440-09-7	Potassium	21900		1	281	1000	ug/L	01/13/25 10:30	01/20/25 15:58	EPA 200.7	
7440-23-5	Sodium	88500		1	448	1000	ug/L	01/13/25 10:30	01/20/25 15:58	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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LOD = Limit of Detection
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-4	SDG No.:	Q1061
Lab Sample ID:	Q1061-04	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.
7440-09-7	Potassium	16000		1	281	1000	ug/L	01/13/25 10:30	01/20/25 16:03	EPA 200.7	
7440-23-5	Sodium	74800		1	448	1000	ug/L	01/13/25 10:30	01/20/25 16:03	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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LOD = Limit of Detection
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N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-5	SDG No.:	Q1061
Lab Sample ID:	Q1061-05	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.
7440-09-7	Potassium	35900		1	281	1000	ug/L	01/13/25 10:30	01/20/25 16:07	EPA 200.7	
7440-23-5	Sodium	128000		1	448	1000	ug/L	01/13/25 10:30	01/20/25 16:07	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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LOD = Limit of Detection
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-6	SDG No.:	Q1061
Lab Sample ID:	Q1061-06	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.
7440-09-7	Potassium	26100		1	281	1000	ug/L	01/13/25 10:30	01/20/25 16:12	EPA 200.7	
7440-23-5	Sodium	79300		1	448	1000	ug/L	01/13/25 10:30	01/20/25 16:12	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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LOD = Limit of Detection
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-7	SDG No.:	Q1061
Lab Sample ID:	Q1061-07	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.
7440-09-7	Potassium	12000		1	281	1000	ug/L	01/13/25 10:30	01/20/25 16:16	EPA 200.7	
7440-23-5	Sodium	64700		1	448	1000	ug/L	01/13/25 10:30	01/20/25 16:16	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-8	SDG No.:	Q1061
Lab Sample ID:	Q1061-08	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.
7440-09-7	Potassium	14300		1	281	1000	ug/L	01/13/25 10:30	01/20/25 16:21	EPA 200.7	
7440-23-5	Sodium	58100		1	448	1000	ug/L	01/13/25 10:30	01/20/25 16:21	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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

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N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-9	SDG No.:	Q1061
Lab Sample ID:	Q1061-09	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.
7440-09-7	Potassium	28500		1	281	1000	ug/L	01/13/25 10:30	01/20/25 16:25	EPA 200.7	
7440-23-5	Sodium	96100		1	448	1000	ug/L	01/13/25 10:30	01/20/25 16:25	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-10	SDG No.:	Q1061
Lab Sample ID:	Q1061-10	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.
7440-09-7	Potassium	28100		1	281	1000	ug/L	01/13/25 10:30	01/20/25 16:55	EPA 200.7	
7440-23-5	Sodium	103000		1	448	1000	ug/L	01/13/25 10:30	01/20/25 16:55	EPA 200.7	

Color Before:	Brown	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

U = Not Detected
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MDL = Method Detection Limit
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N =Spiked sample recovery not within control limits

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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	Potassium	9610	9900	97	95 - 105	P	01/20/2025	10:47	LB134350
	Sodium	9680	10000	97	95 - 105	P	01/20/2025	10:47	LB134350

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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	Potassium	1890	2000	95	80 - 120	P	01/20/2025	10:53	LB134350
	Sodium	1940	2000	97	80 - 120	P	01/20/2025	10:53	LB134350

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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	Potassium	24200	25000	97	90 - 110	P	01/20/2025	11:31	LB134350
	Sodium	24700	25000	99	90 - 110	P	01/20/2025	11:31	LB134350
CCV02	Potassium	23900	25000	96	90 - 110	P	01/20/2025	12:29	LB134350
	Sodium	24300	25000	97	90 - 110	P	01/20/2025	12:29	LB134350
CCV03	Potassium	23600	25000	94	90 - 110	P	01/20/2025	13:35	LB134350
	Sodium	23800	25000	95	90 - 110	P	01/20/2025	13:35	LB134350
CCV04	Potassium	24000	25000	96	90 - 110	P	01/20/2025	14:38	LB134350
	Sodium	23900	25000	96	90 - 110	P	01/20/2025	14:38	LB134350
CCV05	Potassium	24600	25000	98	90 - 110	P	01/20/2025	15:37	LB134350
	Sodium	24300	25000	97	90 - 110	P	01/20/2025	15:37	LB134350
CCV06	Potassium	23100	25000	92	90 - 110	P	01/20/2025	16:47	LB134350
	Sodium	22800	25000	91	90 - 110	P	01/20/2025	16:47	LB134350
CCV07	Potassium	23700	25000	95	90 - 110	P	01/20/2025	17:33	LB134350
	Sodium	23800	25000	95	90 - 110	P	01/20/2025	17:33	LB134350
CCV08	Potassium	23700	25000	95	90 - 110	P	01/20/2025	17:52	LB134350
	Sodium	23500	25000	94	90 - 110	P	01/20/2025	17:52	LB134350

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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	Potassium	1880	2000	94	40 - 160	P	01/20/2025	11:06	LB134350
	Sodium	1920	2000	96	40 - 160	P	01/20/2025	11:06	LB134350

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Potassium	2000	+/-2000	U	2000	P	01/20/2025	11:01	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	11:01	LB134350

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Potassium	2000	+/-2000	U	2000	P	01/20/2025	11:36	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	11:36	LB134350
CCB02	Potassium	2000	+/-2000	U	2000	P	01/20/2025	12:33	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	12:33	LB134350
CCB03	Potassium	2000	+/-2000	U	2000	P	01/20/2025	13:39	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	13:39	LB134350
CCB04	Potassium	2000	+/-2000	U	2000	P	01/20/2025	14:43	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	14:43	LB134350
CCB05	Potassium	2000	+/-2000	U	2000	P	01/20/2025	15:41	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	15:41	LB134350
CCB06	Potassium	2000	+/-2000	U	2000	P	01/20/2025	16:50	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	16:50	LB134350
CCB07	Potassium	2000	+/-2000	U	2000	P	01/20/2025	17:37	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	17:37	LB134350
CCB08	Potassium	2000	+/-2000	U	2000	P	01/20/2025	17:56	LB134350
	Sodium	2000	+/-2000	U	2000	P	01/20/2025	17:56	LB134350

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166036BL		**WATER**		**Batch Number:**	**PB166036**		**Prep Date:**	**01/13/2025**	
	Potassium	1000	<1000	U	1000	P	01/20/2025	17:25	LB134350
	Sodium	1000	<1000	U	1000	P	01/20/2025	17:25	LB134350

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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
ICSA01	Potassium	-66.9			0	0	01/20/2025	11:10	LB134350
	Sodium	-12.1			0	0	01/20/2025	11:10	LB134350
ICSAB01	Potassium	-22.6			0	0	01/20/2025	11:19	LB134350
	Sodium	-18.5			0	0	01/20/2025	11:19	LB134350
ICSA	Potassium	-1700			0	0	01/20/2025	11:23	LB134350
	Sodium	-926			0	0	01/20/2025	11:23	LB134350
ICSAB	Potassium	-2090			0	0	01/20/2025	11:27	LB134350
	Sodium	-1000			0	0	01/20/2025	11:27	LB134350

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Dewberry Engineers Inc. **level:** low **sdg no.:** Q1061

contract: DEWB01 **lab code:** CHEM **case no.:** Q1061 **sas no.:** Q1061

matrix: Water **sample id:** Q1061-10 **client id:** MW-10MS

Percent Solids for Sample: NA **Spiked ID:** Q1061-10MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Potassium	ug/L	75 - 125	33500		28100		5000	109		P
Sodium	ug/L	75 - 125	104000		103000		1500	64		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Dewberry Engineers Inc. **level:** low **sdg no.:** Q1061

contract: DEWB01 **lab code:** CHEM **case no.:** Q1061 **sas no.:** Q1061

matrix: Water **sample id:** Q1061-10 **client id:** MW-10MSD

Percent Solids for Sample: NA **Spiked ID:** Q1061-10MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Potassium	ug/L	75 - 125	33300		28100		5000	105		P
Sodium	ug/L	75 - 125	102000		103000		1500	-40		P

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Metals
- 5b -

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Dewberry Engineers Inc. **Level:** LOW **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

Matrix: Water **Sample ID:** Q1061-10 **Client ID:** MW-10DUP

Percent Solids for Sample: NA **Duplicate ID** Q1061-10DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Potassium	ug/L	20	28100		27800		1		P
Sodium	ug/L	20	103000		101000		2		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Dewberry Engineers Inc. **Level:** LOW **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

Matrix: Water **Sample ID:** Q1061-10MS **Client ID:** MW-10MSD

Percent Solids for Sample: NA **Duplicate ID** Q1061-10MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Potassium	ug/L	20	33500		33300		1		P
Sodium	ug/L	20	104000		102000		2		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166036BS							
Potassium	ug/L	5000	4580		92	85 - 115	P
Sodium	ug/L	1500	1420		95	85 - 115	P

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Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

MW-10L

Lab Name: Chemtech Consulting Group **Contract:** DEWB01

Lab Code: CHEM **Lb No.:** lb134350 **Lab Sample ID :** Q1061-10L **SDG No.:** Q1061

Matrix (soil/water): Water **Level (low/med):** LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Potassium	28100		27500		2		P
Sodium	103000		102000		0		P

METAL PREPARATION & INSTRUMENT DATA

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Case No.:** Q1061 **SAS No.:** Q1061

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
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Dewberry Engineers Inc. **SDG No.:** Q1061

Contract: DEWB01 **Lab Code:** CHEM **Method:**

Case No.: Q1061 **SAS No.:** Q1061

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166036**						
PB166036BL	PB166036BL	MB	WATER	01/13/2025	50.0	25.0	
PB166036BS	PB166036BS	LCS	WATER	01/13/2025	50.0	25.0	
Q1061-01	MW-1	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-02	MW-2	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-03	MW-3	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-04	MW-4	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-05	MW-5	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-06	MW-6	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-07	MW-7	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-08	MW-8	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-09	MW-9	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-10	MW-10	SAM	WATER	01/13/2025	50.0	25.0	
Q1061-10DUP	MW-10DUP	DUP	WATER	01/13/2025	50.0	25.0	
Q1061-10MS	MW-10MS	MS	WATER	01/13/2025	50.0	25.0	
Q1061-10MSD	MW-10MSD	MSD	WATER	01/13/2025	50.0	25.0	

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metals
- 14 -
ANALYSIS RUN LOG

Client: Dewberry Engineers Inc. **Contract:** DEWB01

Lab code: CHEM **Case no.:** Q1061 **Sas no.:** Q1061 **Sdg no.:** Q1061

Instrument id number: **Method:** **Run number:** LB134350

Start date: 01/20/2025 **End date:** 01/20/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1021	K,Na
S1	S1	1	1026	K,Na
S2	S2	1	1030	K,Na
S3	S3	1	1034	K,Na
S4	S4	1	1039	K,Na
S5	S5	1	1043	K,Na
ICV01	ICV01	1	1047	K,Na
LLICV01	LLICV01	1	1053	K,Na
ICB01	ICB01	1	1101	K,Na
CRI01	CRI01	1	1106	K,Na
ICSA01	ICSA01	1	1110	K,Na
ICSAB01	ICSAB01	1	1119	K,Na
ICSA	ICSA	20	1123	K,Na
ICSAB	ICSAB	20	1127	K,Na
CCV01	CCV01	1	1131	K,Na
CCB01	CCB01	1	1136	K,Na
CCV02	CCV02	1	1229	K,Na
CCB02	CCB02	1	1233	K,Na
CCV03	CCV03	1	1335	K,Na
CCB03	CCB03	1	1339	K,Na
CCV04	CCV04	1	1438	K,Na
CCB04	CCB04	1	1443	K,Na
CCV05	CCV05	1	1537	K,Na
CCB05	CCB05	1	1541	K,Na
Q1061-01	MW-1	1	1550	K,Na
Q1061-02	MW-2	1	1554	K,Na
Q1061-03	MW-3	1	1558	K,Na
Q1061-04	MW-4	1	1603	K,Na
Q1061-05	MW-5	1	1607	K,Na
Q1061-06	MW-6	1	1612	K,Na
Q1061-07	MW-7	1	1616	K,Na
Q1061-08	MW-8	1	1621	K,Na
Q1061-09	MW-9	1	1625	K,Na
CCV06	CCV06	1	1647	K,Na
CCB06	CCB06	1	1650	K,Na
Q1061-10	MW-10	1	1655	K,Na
Q1061-10DUP	MW-10DUP	1	1659	K,Na
Q1061-10L	MW-10L	5	1703	K,Na
Q1061-10MS	MW-10MS	1	1708	K,Na
Q1061-10MSD	MW-10MSD	1	1712	K,Na
PB166036BL	PB166036BL	1	1725	K,Na

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metals
- 14 -
ANALYSIS RUN LOG

Client: Dewberry Engineers Inc. **Contract:** DEWB01

Lab code: CHEM **Case no.:** Q1061 **Sas no.:** Q1061 **Sdg no.:** Q1061

Instrument id number: **Method:** **Run number:** LB134350

Start date: 01/20/2025 **End date:** 01/20/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
PB166036BS	PB166036BS	1	1729	K,Na
CCV07	CCV07	1	1733	K,Na
CCB07	CCB07	1	1737	K,Na
CCV08	CCV08	1	1752	K,Na
CCB08	CCB08	1	1756	K,Na