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DATA PACKAGE

GENERAL CHEMISTRY
METALS

PROJECT NAME : PENNDOT - ONVO TRAVEL PLAZA #50040379

DEWBERRY ENGINEERS INC.

600 Parsippany Road

Suite 301

Parsippany, NJ - 07054-3715

Phone No: 973-739-9400

ORDER ID : Q1061

ATTENTION : Bill Pendexter

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q1061

Project ID : PennDOT - Onvo Travel Plaza #50040379

Client : Dewberry Engineers Inc.

Lab Sample Number	Client Sample Number
Q1061-01	MW-1
Q1061-02	MW-2
Q1061-03	MW-3
Q1061-04	MW-4
Q1061-05	MW-5
Q1061-06	MW-6
Q1061-07	MW-7
Q1061-08	MW-8
Q1061-09	MW-9
Q1061-10	MW-10

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : APPROVED
By Nimisha Pandya, QA/QC Supervisor at 8:27 am, Jan 24, 2025

Date: 1/24/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Dewberry Engineers Inc.
Project Name: PennDOT - Onvo Travel Plaza #50040379
Project # N/A
Chemtech Project # Q1061
Test Name: Metals ICP-Group1

A. Number of Samples and Date of Receipt:
10 Water samples were received on 01/09/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Anions, Anions Group1, Anions Group7, Mercury, Metals Group1, Metals ICP-Group, Metals ICP-Group1, Nitrate+Nitrite, Phosphorus-Total and TDS. This data package contains results for Metals ICP-Group1.

C. Analytical Techniques:
The analysis and digestion of Metals ICP-Group1 was based on method 200.7.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:
LLCCV & LLICV are not required for 200.7 method.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____ APPROVED
By Nimisha Pandya, QA/QC Supervisor at 8:27 am, Jan 24, 2025

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CASE NARRATIVE

Dewberry Engineers Inc.
Project Name: PennDOT - Onvo Travel Plaza #50040379
Project # N/A
Chemtech Project # Q1061
Test Name: Anions Group7,Phosphorus-Total,TDS

A. Number of Samples and Date of Receipt:
10 Water samples were received on 01/09/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Anions, Anions Group1, Anions Group7, Mercury, Metals Group1, Metals ICP-Group, Metals ICP-Group1, Nitrate+Nitrite, Phosphorus-Total and TDS. This data package contains results for Anions Group7,Phosphorus-Total,TDS.

C. Analytical Techniques:
The analysis of Anions Group7 was based on method 300.0, The analysis of Phosphorus-Total was based on method 365.3 and The analysis of TDS was based on method SM2540 C.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
Sample MW-1 was diluted due to high concentrations for Chloride & Sample MW-2 was diluted due to high concentrations for Chloride & Sample MW-3 was diluted due to high concentrations for Chloride & Sample MW-4 was diluted due to high concentrations for Chloride & Sample MW-5 was diluted due to high concentrations for Phosphorus, Total,Chloride,Nitrate,Sulfate & Sample MW-5DL was diluted due to high concentrations for Chloride & Sample MW-6 was diluted due to high concentrations for Chloride & Sample MW-7 was diluted due to high concentrations for Chloride,Sulfate & Sample MW-7DL was diluted due to high concentrations for Chloride & Sample MW-8 was diluted due to high concentrations for Chloride,Sulfate & Sample MW-8DL was diluted due to high concentrations for Chloride & Sample MW-9 was diluted due to high concentrations for Chloride,Sulfate & Sample MW-9DL was diluted due to high concentrations for Chloride & Sample MW-10 was diluted due to high concentrations for Phosphorus, Total,Chloride,Nitrate,Sulfate & Sample MW-10DL was diluted due to high concentrations for Chloride.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (MW-1MS) analysis met criteria for all samples except for Chloride due to sample matrix interference.
The Matrix Spike Duplicate (MW-1MSD) analysis met criteria for all samples except for Chloride due to sample matrix interference.

The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____ APPROVED
By Nimisha Pandya, QA/QC Supervisor at 8:28 am, Jan 24, 2025

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"NR"** for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1061

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

QA Review Signature: SOHIL JODHANI **Date:** 01/24/2025

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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

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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				

U = Not Detected
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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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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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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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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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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				

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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-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
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OR = Over Range
N =Spiked sample recovery not within control limits

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Fax : 908 789 8922

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				

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

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-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
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

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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
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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
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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
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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

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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

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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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Metals

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

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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
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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
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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
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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
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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
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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
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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
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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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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

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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 11:00**			**01/09/25**
			Anions Group7	300.0			01/10/25 10:34	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:06	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-01DL	**MW-1DL**	**WATER**			**01/09/25 11:00**			**01/09/25**
			Anions Group7	300.0			01/10/25 15:35	
Q1061-02	**MW-2**	**WATER**			**01/09/25 11:20**			**01/09/25**
			Anions Group7	300.0			01/10/25 11:38	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:08	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-02DL	**MW-2DL**	**WATER**			**01/09/25 11:20**			**01/09/25**
			Anions Group7	300.0			01/10/25 15:56	
Q1061-03	**MW-3**	**WATER**			**01/09/25 11:41**			**01/09/25**
			Anions Group7	300.0			01/10/25 12:00	

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LAB CHRONICLE

			Phosphorus-Total	365.3		01/15/25	01/15/25 14:09	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-03DL	**MW-3DL**	**WATER**			**01/09/25 11:41**			**01/09/25**
			Anions Group7	300.0			01/10/25 16:18	
Q1061-04	**MW-4**	**WATER**			**01/09/25 12:02**			**01/09/25**
			Anions Group7	300.0			01/10/25 12:21	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:09	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-04DL	**MW-4DL**	**WATER**			**01/09/25 12:02**			**01/09/25**
			Anions Group7	300.0			01/10/25 16:39	
Q1061-05	**MW-5**	**WATER**			**01/09/25 12:26**			**01/09/25**
			Anions Group7	300.0			01/10/25 12:43	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:10	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-05DL	**MW-5DL**	**WATER**			**01/09/25 12:26**			**01/09/25**
			Anions Group7	300.0			01/10/25 17:01	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:14	
Q1061-05DL 2	**MW-5DL2**	**WATER**			**01/09/25 12:26**			**01/09/25**

LAB CHRONICLE

			Anions Group7	300.0			01/10/25 17:22	
Q1061-06	**MW-6**	**WATER**			**01/09/25 12:52**			**01/09/25**
			Anions Group7	300.0			01/10/25 13:05	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:11	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-06DL	**MW-6DL**	**WATER**			**01/09/25 12:52**			**01/09/25**
			Anions Group7	300.0			01/10/25 18:27	
Q1061-07	**MW-7**	**WATER**			**01/09/25 13:42**			**01/09/25**
			Anions Group7	300.0			01/10/25 14:09	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:12	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-07DL	**MW-7DL**	**WATER**			**01/09/25 13:42**			**01/09/25**
			Anions Group7	300.0			01/10/25 18:48	
Q1061-07DL2	**MW-7DL2**	**WATER**			**01/09/25 13:42**			**01/09/25**
			Anions Group7	300.0			01/10/25 19:09	
Q1061-08	**MW-8**	**WATER**			**01/09/25 13:14**			**01/09/25**
			Anions Group7	300.0			01/10/25 14:30	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:12	

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LAB CHRONICLE

			TDS	SM2540 C			01/10/25 12:30	
Q1061-08DL	**MW-8DL**	**WATER**			**01/09/25 13:14**			**01/09/25**
			Anions Group7	300.0			01/10/25 19:31	
Q1061-08DL2	**MW-8DL2**	**WATER**			**01/09/25 13:14**			**01/09/25**
			Anions Group7	300.0			01/10/25 19:53	
Q1061-09	**MW-9**	**WATER**			**01/09/25 14:06**			**01/09/25**
			Anions Group7	300.0			01/10/25 14:52	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:13	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-09DL	**MW-9DL**	**WATER**			**01/09/25 14:06**			**01/09/25**
			Anions Group7	300.0			01/10/25 20:14	
Q1061-09DL2	**MW-9DL2**	**WATER**			**01/09/25 14:06**			**01/09/25**
			Anions Group7	300.0			01/10/25 20:36	
Q1061-10	**MW-10**	**WATER**			**01/09/25 14:20**			**01/09/25**
			Anions Group7	300.0			01/10/25 15:13	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:13	
			TDS	SM2540 C			01/10/25 12:30	
Q1061-10DL	**MW-10DL**	**WATER**			**01/09/25 14:20**			**01/09/25**

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LAB CHRONICLE

			Anions Group7	300.0			01/10/25 20:57	
			Phosphorus-Total	365.3		01/15/25	01/15/25 14:15	
Q1061-10DL2	**MW-10DL2**	**WATER**			**01/09/25 14:20**			**01/09/25**
			Anions Group7	300.0			01/10/25 22:02	

SAMPLE DATA

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 11:00
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	32.4	OR	1	0.011	0.60	mg/L		01/10/25 10:34	300.0
Nitrite	0.011	U	1	0.011	0.60	mg/L		01/10/25 10:34	300.0
Nitrate	0.0034	U	1	0.0034	0.50	mg/L		01/10/25 10:34	300.0
Sulfate	10.1		1	0.032	3.00	mg/L		01/10/25 10:34	300.0
Phosphorus, Total	0.26		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:06	365.3
TDS	251		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

U = Not Detected
LOQ = Limit of Quantitation
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LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
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 11:00
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-1DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	27.7	D	10	0.11	6.00	mg/L		01/10/25 15:35	300.0

Comments:

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 11:20
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	43.9	OR	1	0.011	0.60	mg/L		01/10/25 11:38	300.0
Nitrite	0.011	U	1	0.011	0.60	mg/L		01/10/25 11:38	300.0
Nitrate	0.0034	U	1	0.0034	0.50	mg/L		01/10/25 11:38	300.0
Sulfate	9.80		1	0.032	3.00	mg/L		01/10/25 11:38	300.0
Phosphorus, Total	0.28		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:08	365.3
TDS	187		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 11:20
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-2DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-02DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	38.2	D	10	0.11	6.00	mg/L		01/10/25 15:56	300.0

Comments:

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 11:41
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	159	OR	1	0.011	0.60	mg/L		01/10/25 12:00	300.0
Nitrite	0.011	U	1	0.011	0.60	mg/L		01/10/25 12:00	300.0
Nitrate	0.0034	U	1	0.0034	0.50	mg/L		01/10/25 12:00	300.0
Sulfate	16.9		1	0.032	3.00	mg/L		01/10/25 12:00	300.0
Phosphorus, Total	0.24		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:09	365.3
TDS	595		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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J = Estimated Value
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 11:41
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-3DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	122	D	50	0.55	30.0	mg/L		01/10/25 16:18	300.0

Comments:

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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 12:02
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	145	OR	1	0.011	0.60	mg/L		01/10/25 12:21	300.0
Nitrite	0.22	J	1	0.011	0.60	mg/L		01/10/25 12:21	300.0
Nitrate	0.21	J	1	0.0034	0.50	mg/L		01/10/25 12:21	300.0
Sulfate	22.3		1	0.032	3.00	mg/L		01/10/25 12:21	300.0
Phosphorus, Total	1.01		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:09	365.3
TDS	482		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 12:02
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-4DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-04DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	114	D	50	0.55	30.0	mg/L		01/10/25 16:39	300.0

Comments:

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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 12:26
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	335	OR	1	0.011	0.60	mg/L		01/10/25 12:43	300.0
Nitrite	0.33	J	1	0.011	0.60	mg/L		01/10/25 12:43	300.0
Nitrate	16.9	OR	1	0.0034	0.50	mg/L		01/10/25 12:43	300.0
Sulfate	46.5	OR	1	0.032	3.00	mg/L		01/10/25 12:43	300.0
Phosphorus, Total	2.06	OR	1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:10	365.3
TDS	288		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 12:26
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-5DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-05DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	277	OR	5	0.055	3.00	mg/L		01/10/25 17:01	300.0
Nitrate	16.0	D	5	0.017	2.50	mg/L		01/10/25 17:01	300.0
Sulfate	48.6	D	5	0.16	15.0	mg/L		01/10/25 17:01	300.0
Phosphorus, Total	5.66	D	20	0.094	1.00	mg/L	01/15/25 11:45	01/15/25 14:14	365.3

Comments:

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H = Sample Analysis Out Of Hold Time

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 12:26
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-5DL2	SDG No.:	Q1061
Lab Sample ID:	Q1061-05DL2	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	234	D	100	1.10	60.0	mg/L		01/10/25 17:22	300.0

Comments:

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H = Sample Analysis Out Of Hold Time

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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 12:52
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	146	OR	1	0.011	0.60	mg/L		01/10/25 13:05	300.0
Nitrite	0.26	J	1	0.011	0.60	mg/L		01/10/25 13:05	300.0
Nitrate	0.0034	U	1	0.0034	0.50	mg/L		01/10/25 13:05	300.0
Sulfate	31.5		1	0.032	3.00	mg/L		01/10/25 13:05	300.0
Phosphorus, Total	0.20		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:11	365.3
TDS	527		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

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N =Spiked sample recovery not within control limits

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

Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 12:52
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-6DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-06DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	112	D	50	0.55	30.0	mg/L		01/10/25 18:27	300.0

Comments:

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
H = Sample Analysis Out Of Hold Time
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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Fax : 908 789 8922

Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 13:42
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	153	OR	1	0.011	0.60	mg/L		01/10/25 14:09	300.0
Nitrite	0.011	U	1	0.011	0.60	mg/L		01/10/25 14:09	300.0
Nitrate	0.0034	U	1	0.0034	0.50	mg/L		01/10/25 14:09	300.0
Sulfate	40.0	OR	1	0.032	3.00	mg/L		01/10/25 14:09	300.0
Phosphorus, Total	0.39		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:12	365.3
TDS	742		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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
H = Sample Analysis Out Of Hold Time
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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Fax : 908 789 8922

Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 13:42
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-7DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-07DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	140	OR	2	0.022	1.20	mg/L		01/10/25 18:48	300.0
Sulfate	39.9	D	2	0.064	6.00	mg/L		01/10/25 18:48	300.0

Comments:

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
H = Sample Analysis Out Of Hold Time

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 13:42
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-7DL2	SDG No.:	Q1061
Lab Sample ID:	Q1061-07DL2	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	116	D	50	0.55	30.0	mg/L		01/10/25 19:09	300.0

Comments:

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
H = Sample Analysis Out Of Hold Time
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 13:14
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	131	OR	1	0.011	0.60	mg/L		01/10/25 14:30	300.0
Nitrite	0.30	J	1	0.011	0.60	mg/L		01/10/25 14:30	300.0
Nitrate	2.00		1	0.0034	0.50	mg/L		01/10/25 14:30	300.0
Sulfate	48.7	OR	1	0.032	3.00	mg/L		01/10/25 14:30	300.0
Phosphorus, Total	0.20		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:12	365.3
TDS	483		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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
H = Sample Analysis Out Of Hold Time
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 13:14
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-8DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-08DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	119	OR	2	0.022	1.20	mg/L		01/10/25 19:31	300.0
Sulfate	47.9	D	2	0.064	6.00	mg/L		01/10/25 19:31	300.0

Comments:

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
H = Sample Analysis Out Of Hold Time

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 13:14
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-8DL2	SDG No.:	Q1061
Lab Sample ID:	Q1061-08DL2	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	103	D	50	0.55	30.0	mg/L		01/10/25 19:53	300.0

Comments:

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
H = Sample Analysis Out Of Hold Time

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 14:06
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	214	OR	1	0.011	0.60	mg/L		01/10/25 14:52	300.0
Nitrite	0.34	J	1	0.011	0.60	mg/L		01/10/25 14:52	300.0
Nitrate	0.0034	U	1	0.0034	0.50	mg/L		01/10/25 14:52	300.0
Sulfate	38.2	OR	1	0.032	3.00	mg/L		01/10/25 14:52	300.0
Phosphorus, Total	0.24		1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:13	365.3
TDS	577		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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
H = Sample Analysis Out Of Hold Time
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 14:06
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-9DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-09DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	198	OR	2	0.022	1.20	mg/L		01/10/25 20:14	300.0
Sulfate	38.4	D	2	0.064	6.00	mg/L		01/10/25 20:14	300.0

Comments:

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
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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 14:06
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-9DL2	SDG No.:	Q1061
Lab Sample ID:	Q1061-09DL2	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	155	D	50	0.55	30.0	mg/L		01/10/25 20:36	300.0

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
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B = Analyte Found in Associated Method Blank
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Report of Analysis

Client:	Dewberry Engineers Inc.	Date Collected:	01/09/25 14:20
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
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	232	OR	1	0.011	0.60	mg/L		01/10/25 15:13	300.0
Nitrite	0.30	J	1	0.011	0.60	mg/L		01/10/25 15:13	300.0
Nitrate	29.0	OR	1	0.0034	0.50	mg/L		01/10/25 15:13	300.0
Sulfate	49.3	OR	1	0.032	3.00	mg/L		01/10/25 15:13	300.0
Phosphorus, Total	1.31	OR	1	0.0050	0.050	mg/L	01/15/25 11:45	01/15/25 14:13	365.3
TDS	725		1	1.00	10.0	mg/L		01/10/25 12:30	SM 2540 C-15

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
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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 14:20
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-10DL	SDG No.:	Q1061
Lab Sample ID:	Q1061-10DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	186	OR	5	0.055	3.00	mg/L		01/10/25 20:57	300.0
Nitrate	25.5	D	5	0.017	2.50	mg/L		01/10/25 20:57	300.0
Sulfate	51.0	D	5	0.16	15.0	mg/L		01/10/25 20:57	300.0
Phosphorus, Total	2.56	D	5	0.024	0.25	mg/L	01/15/25 11:45	01/15/25 14:15	365.3

Comments:

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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H = Sample Analysis Out Of Hold Time
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.
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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 14:20
Project:	PennDOT - Onvo Travel Plaza #50040379	Date Received:	01/09/25
Client Sample ID:	MW-10DL2	SDG No.:	Q1061
Lab Sample ID:	Q1061-10DL2	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	167	D	50	0.55	30.0	mg/L		01/10/25 22:02	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time
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

QC RESULT SUMMARY

Alliance TECHNICAL GROUP
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Initial and Continuing Calibration Verification

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

Project: PennDOT - Onvo Travel Plaza #50040379 **RunNo.:** LB134248

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: CCV1						
Bromide	mg/L	10.5	10	105	90-110	01/10/2025
Chloride	mg/L	3.1	3	103	90-110	01/10/2025
Fluoride	mg/L	2.1	2	105	90-110	01/10/2025
Nitrite	mg/L	3.1	3	103	90-110	01/10/2025
Nitrate	mg/L	2.6	2.5	104	90-110	01/10/2025
Sulfate	mg/L	15.9	15	106	90-110	01/10/2025
Orthophosphate as P	mg/L	5.5	5	110	90-110	01/10/2025
Sample ID: CCV2						
Bromide	mg/L	10.5	10	105	90-110	01/10/2025
Chloride	mg/L	3.1	3	103	90-110	01/10/2025
Fluoride	mg/L	2.1	2	105	90-110	01/10/2025
Nitrite	mg/L	3.1	3	103	90-110	01/10/2025
Nitrate	mg/L	2.6	2.5	104	90-110	01/10/2025
Sulfate	mg/L	15.6	15	104	90-110	01/10/2025
Orthophosphate as P	mg/L	5.4	5	108	90-110	01/10/2025
Sample ID: CCV3						
Bromide	mg/L	10.4	10	104	90-110	01/10/2025
Chloride	mg/L	3.1	3	103	90-110	01/10/2025
Fluoride	mg/L	2.1	2	105	90-110	01/10/2025
Nitrite	mg/L	3.1	3	103	90-110	01/10/2025
Nitrate	mg/L	2.6	2.5	104	90-110	01/10/2025
Sulfate	mg/L	15.4	15	103	90-110	01/10/2025
Orthophosphate as P	mg/L	5.4	5	108	90-110	01/10/2025
Sample ID: CCV4						
Bromide	mg/L	10.4	10	104	90-110	01/10/2025
Chloride	mg/L	3.1	3	103	90-110	01/10/2025
Fluoride	mg/L	2.1	2	105	90-110	01/10/2025
Nitrite	mg/L	3.1	3	103	90-110	01/10/2025
Nitrate	mg/L	2.6	2.5	104	90-110	01/10/2025
Sulfate	mg/L	15.5	15	103	90-110	01/10/2025
Orthophosphate as P	mg/L	5.5	5	110	90-110	01/10/2025
Sample ID: ICV1						
Bromide	mg/L	10.3	10	103	90-110	12/18/2024
Chloride	mg/L	3.1	3	103	90-110	12/18/2024
Fluoride	mg/L	2	2	100	90-110	12/18/2024
Nitrite	mg/L	3.1	3	103	90-110	12/18/2024
Nitrate	mg/L	2.6	2.5	104	90-110	12/18/2024
Sulfate	mg/L	15.3	15	102	90-110	12/18/2024

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Initial and Continuing Calibration Verification

Client:	Dewberry Engineers Inc.	**SDG No.:**	Q1061
Project:	PennDOT - Onvo Travel Plaza #50040379	**RunNo.:**	LB134248

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Orthophosphate as P	mg/L	5.1	5	102	90-110	12/18/2024

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Initial and Continuing Calibration Verification

Client:	Dewberry Engineers Inc.	**SDG No.:**	Q1061
Project:	PennDOT - Onvo Travel Plaza #50040379	**RunNo.:**	LB134293

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Phosphorus, Total	mg/L	0.482	0.50	96	90-110	01/15/2025
Sample ID: CCV1						
Phosphorus, Total	mg/L	0.488	0.50	98	90-110	01/15/2025
Sample ID: CCV2						
Phosphorus, Total	mg/L	0.482	0.50	96	90-110	01/15/2025
Sample ID: CCV3						
Phosphorus, Total	mg/L	0.488	0.50	98	90-110	01/15/2025

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Initial and Continuing Calibration Blank Summary

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

Project: PennDOT - Onvo Travel Plaza #50040379 **RunNo.:** LB134248

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/10/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/10/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/10/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/10/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/10/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/10/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/10/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/10/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/10/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/10/2025
Sample ID: CCB3							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/10/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/10/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/10/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/10/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/10/2025
Sample ID: CCB4							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/10/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/10/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/10/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/10/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/10/2025
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	12/18/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	12/18/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	12/18/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	12/18/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	12/18/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	12/18/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	12/18/2024

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Initial and Continuing Calibration Blank Summary

Client:	Dewberry Engineers Inc.	**SDG No.:**	Q1061
Project:	PennDOT - Onvo Travel Plaza #50040379	**RunNo.:**	LB134293

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB							
Phosphorus, Total	mg/L	0.011	0.0250	J	0.0047	0.05	01/15/2025
Sample ID: CCB1							
Phosphorus, Total	mg/L	0.011	0.0250	J	0.0047	0.05	01/15/2025
Sample ID: CCB2							
Phosphorus, Total	mg/L	0.011	0.0250	J	0.0047	0.05	01/15/2025
Sample ID: CCB3							
Phosphorus, Total	mg/L	0.011	0.0250	J	0.0047	0.05	01/15/2025

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Preparation Blank Summary

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

Project: PennDOT - Onvo Travel Plaza #50040379

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB134233BL							
TDS	mg/L	1	5.0000	J	1.0	10	01/10/2025
Sample ID: LB134248BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/10/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/10/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/10/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/10/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/10/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/10/2025
Sample ID: PB166041BL							
Phosphorus, Total	mg/L	0.011	0.0250	J	0.005	0.05	01/15/2025

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Matrix Spike Summary

Client: Dewberry Engineers Inc.
SDG No.: Q1061
Project: PennDOT - Onvo Travel Plaza #50040379
Sample ID: Q1061-01
Client ID: MW-1MS
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	10.1		0.034	U	10	1	101		01/10/2025
Phosphorus, Total	mg/L	90-110	0.73		0.26		0.5	1	94		01/15/2025
Chloride	mg/L	80-120	32.1	OR	32.4	OR	3	1	-10	*	01/10/2025
Fluoride	mg/L	80-120	2.20		0.057	U	2	1	110		01/10/2025
Nitrite	mg/L	80-120	3.00		0.011	U	3	1	100		01/10/2025
Nitrate	mg/L	80-120	2.50		0.0034	U	2.5	1	100		01/10/2025
Sulfate	mg/L	80-120	24.2		10.1		15	1	94		01/10/2025
Orthophosphate as P	mg/L	80-120	4.90		0.079	U	5	1	98		01/10/2025

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Matrix Spike Summary

Client: Dewberry Engineers Inc.
SDG No.: Q1061
Project: PennDOT - Onvo Travel Plaza #50040379
Sample ID: Q1061-01
Client ID: MW-1MSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	10.0		0.034	U	10	1	100		01/10/2025
Phosphorus, Total	mg/L	90-110	0.72		0.26		0.5	1	93		01/15/2025
Chloride	mg/L	80-120	32.1	OR	32.4	OR	3	1	-10	*	01/10/2025
Fluoride	mg/L	80-120	2.20		0.057	U	2	1	110		01/10/2025
Nitrite	mg/L	80-120	3.00		0.011	U	3	1	100		01/10/2025
Nitrate	mg/L	80-120	2.50		0.0034	U	2.5	1	100		01/10/2025
Sulfate	mg/L	80-120	24.0		10.1		15	1	93		01/10/2025
Orthophosphate as P	mg/L	80-120	4.70		0.079	U	5	1	94		01/10/2025

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Duplicate Sample Summary

Client: Dewberry Engineers Inc.
SDG No.: Q1061
Project: PennDOT - Onvo Travel Plaza #50040379
Sample ID: Q1061-01
Client ID: MW-1DUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Phosphorus, Total	mg/L	+/-20	0.26		0.26		1	0.39		01/15/2025

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Duplicate Sample Summary

Client: Dewberry Engineers Inc.
SDG No.: Q1061
Project: PennDOT - Onvo Travel Plaza #50040379
Sample ID: Q1061-01
Client ID: MW-1MSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Fluoride	mg/L	+/-20	2.20		2.20		1	0		01/10/2025
Nitrate	mg/L	+/-20	2.50		2.50		1	0		01/10/2025
Nitrite	mg/L	+/-20	3.00		3.00		1	0		01/10/2025
Chloride	mg/L	+/-20	32.1	OR	32.1	OR	1	0		01/10/2025
Bromide	mg/L	+/-20	10.1		10.0		1	1		01/10/2025
Sulfate	mg/L	+/-20	24.2		24.0		1	1		01/10/2025
Orthophosphate as P	mg/L	+/-20	4.90		4.70		1	4		01/10/2025
Phosphorus, Total	mg/L	+/-20	0.73		0.72		1	0.41		01/15/2025

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Duplicate Sample Summary

Client: Dewberry Engineers Inc.
SDG No.: Q1061
Project: PennDOT - Onvo Travel Plaza #50040379
Sample ID: Q1070-01
Client ID: 1 EFFLUENT COMPOSITEDUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
TDS	mg/L	+/-5	4120		4210		1	2.19		01/10/2025

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Laboratory Control Sample Summary

Client:	Dewberry Engineers Inc.	**SDG No.:**	Q1061
Project:	PennDOT - Onvo Travel Plaza #50040379	**Run No.:**	LB134233

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB134233BS								
TDS	mg/L	100	95.0		95	1	90-110	01/10/2025

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Laboratory Control Sample Summary

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

Project: PennDOT - Onvo Travel Plaza #50040379 **Run No.:** LB134248

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB134248BSW								
Bromide	mg/L	10	10.2		102	1	90-110	01/10/2025
Chloride	mg/L	3	3.00		100	1	90-110	01/10/2025
Fluoride	mg/L	2	2.00		100	1	90-110	01/10/2025
Nitrite	mg/L	3	3.00		100	1	90-110	01/10/2025
Nitrate	mg/L	2.5	2.60		104	1	90-110	01/10/2025
Sulfate	mg/L	15	15.5		103	1	90-110	01/10/2025
Orthophosphate as P	mg/L	5	5.30		106	1	90-110	01/10/2025

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Laboratory Control Sample Summary

Client:	Dewberry Engineers Inc.	**SDG No.:**	Q1061
Project:	PennDOT - Onvo Travel Plaza #50040379	**Run No.:**	LB134293

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB166041BS								
Phosphorus, Total	**mg/L**	**0.50**	**0.48**		**96**	**1**	**90-110**	**01/15/2025**

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO: Q1056 / Q1061
QUOTE NO.
COC Number 2041662

7
7.1

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Dewberry Engineers Inc.
ADDRESS: 600 Parsippany Rd.
CITY Parsippany STATE: NJ ZIP: 07054
ATTENTION: Bill Pendleton
PHONE: 973-576-9648 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: PennDOT ONVO Travel Plaza
PROJECT NO.: 50040379 LOCATION: Gibson PA.
PROJECT MANAGER: Bill Pendleton
e-mail: wpendleton@dewberry.com
PHONE: 973-576-9648 FAX:

CLIENT BILLING INFORMATION

BILL TO: Same as client. PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): Standard. DAYS*
EDD: " DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 4 (QC + Full Raw Data)
- ☒ Level 2 (Results + QC)
- ☐ NJ Reduced
- ☐ US EPA CLP
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ NYS ASP A
- ☐ NYS ASP B
- ☐ Other
- ☐ EDD FORMAT

ANALYSIS

1 Total Phosphorus
2 TDS
3 Nitrate-Nitrogen
4 Chloride
5 Sodium, Total Potassium
6 Total Coliforms
7 Fecal Coliforms
8
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								C	E	E	E	B	F	F			← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER
1.	Mw-1	GW		✓	1-9-25	1100	7	X	X	X	X	X	X	X			
2.	Mw-2					1120	7	X	X	X	X	X	X	X			
3.	Mw-3					1141	7										
4.	Mw-4					1202	7										
5.	Mw-5					1226	7										
6.	Mw-6					1252	7										
7.	Mw-7					1342	7										
8.	Mw-8					1314	7										
9.	Mw-9					1406	7										
10.	Mw-10					1420	7										

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	1-9-25 17:13	1. 1-9-25 17:13
2.		2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.5, 2.6, 4.8 °C
Comments: Short hold on Total/Fecal coliforms
48 hr hold on Nitrate-Nitrite

Page 1 of 1

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

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Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488