

ANALYTICAL RESULTS SUMMARY

GENERAL CHEMISTRY
METALS

PROJECT NAME : FT MEADE TIPTON AIRFIELD PARCEL RI - PO 0111169

WESTON SOLUTIONS

1400 Weston Way

PO Box 2653

West Chester, PA - 19380

Phone No: 610-701-7400

ORDER ID : Q1201

ATTENTION : Nathan Fretz



Laboratory Certification ID # 20012



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Cover Page

Order ID : Q1201

Project ID : Ft Meade Tipton Airfield Parcel RI - PO 0111169

Client : Weston Solutions

Lab Sample Number

Q1201-01

Client Sample Number

TAPHHA-MW12-012725-00-T2

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 10:36 am, Feb 11, 2025

Date: 2/10/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

Weston Solutions

Project Name: Ft Meade Tipton Airfield Parcel RI - PO 0111169

Project # N/A

Chemtech Project # Q1201

Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:

1 Water sample was received on 01/28/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL and TOC. This data package contains results for Metals ICP-TAL,Mercury.

C. Analytical Techniques:

The analysis of Metals ICP-TAL was based on method 6020B, digestion based on method 3010 (waters). The analysis and digestion of Mercury was based on method 7470A.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate (TAPIAL2-MW03-012825-00-T3DUP) analysis met criteria for all samples except for Aluminum due to matrix interference.

The Matrix Spike (TAPIAL2-MW03-012825-00-T3MS) analysis met criteria for all samples except for Aluminum, Arsenic, Calcium, Iron, Potassium, Silver due to matrix interference.

The Matrix Spike Duplicate (TAPHHA-MW12-012725-00-T2MSD) analysis met criteria for all samples except for Mercury due to matrix interference.

The Matrix Spike Duplicate (TAPIAL2-MW03-012825-00-T3MSD) analysis met criteria for all samples except for Aluminum, Arsenic, Calcium, Iron, Potassium, Silver due to matrix interference.

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

The Calibration met the requirements.

The Serial Dilution met criteria for all samples.

E. Calculations:

Calculation for ICP-MS Water Sample:

$$\text{Concentration or Result } (\mu\text{g/L}) = \frac{C \times V_f}{V_i} \times \text{DF}$$

Where,

C = Instrument value in ppb (The average of all replicate integrations)

Vf = Final digestion volume (mL)

Vi = Initial aliquot amount (mL) (Sample amount taken in prep)

DF = Dilution Factor

Calculation for Hg Water Sample:

$$\text{Concentration or Result } (\mu\text{g/L}) = C \times \text{DF}$$

Where,

C = Instrument response in $\mu\text{g/L}$ from the calibration curve.

DF = Dilution Factor

F. Additional Comments:

In analytical sequence LB134616, The % recovery was outside of acceptance limit for Nickel of LLCCV, Recovery failing marginally so no corrective action was taken.

Collision cell is being used to remove potential interferences. The analytes Na, Mg, Al, K, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As are being analyzed with collision cell and analytes Be, B, Ca, Ti, Se, Sr, Zr, Mo, Ag, Cd, Sn, Sb, Ba, Tl, Pb, U are being analyzed with Non-Collision Cell. Helium gas is used for the Collision Cell analysis.

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 10:37 am, Feb 11, 2025



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

CASE NARRATIVE

Weston Solutions

Project Name: Ft Meade Tipton Airfield Parcel RI - PO 0111169

Project # N/A

Chemtech Project # Q1201

Test Name: TOC

A. Number of Samples and Date of Receipt:

1 Water sample was received on 01/28/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL and TOC. This data package contains results for TOC.

C. Analytical Techniques:

The analysis of TOC was based on method 9060A.

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.

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 10:37 am, Feb 11, 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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1201

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 Custody

✓

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: 02/10/2025

Hit Summary Sheet SW-846

SDG No.:	Q1201	Order ID:	Q1201
Client:	Weston Solutions	Project ID:	Ft Meade Tipton Airfield Parcel RI - PO 01

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : TAPHHA-MW12-012725-00-T2									
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Aluminum	9.37	J	0.99	5.00	10.0	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Antimony	0.065	J	0.055	0.13	1.00	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Arsenic	0.67		0.045	0.13	0.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Barium	22.5		0.15	0.63	5.00	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Beryllium	0.16	J	0.080	0.13	0.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Calcium	4980		31.3	95.0	250	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Cobalt	2.98		0.031	0.13	0.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Copper	0.34	J	0.20	0.75	1.00	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Iron	3590		4.80	12.5	25.0	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Lead	0.17	J	0.055	0.38	0.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Magnesium	4180		13.3	95.0	250	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Manganese	2050		0.12	0.38	0.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Nickel	9.46		0.090	0.13	0.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Potassium	1110		23.1	95.0	250	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Sodium	1690		42.9	95.0	250	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Vanadium	0.14	J	0.036	0.13	2.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Zinc	5.82		0.28	0.75	2.50	ug/L
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Hardness, Total	29600		133	628	1650	ug/L



SAMPLE DATA

Report of Analysis

Client:	Weston Solutions	Date Collected:	01/27/25
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	01/28/25
Client Sample ID:	TAPHHA-MW12-012725-00-T2	SDG No.:	Q1201
Lab Sample ID:	Q1201-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	9.37	JN*	1	0.99	5.00	10.0	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-36-0	Antimony	0.065	J	1	0.055	0.13	1.00	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-38-2	Arsenic	0.67	N	1	0.045	0.13	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-39-3	Barium	22.5		1	0.15	0.63	5.00	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-41-7	Beryllium	0.16	J	1	0.080	0.13	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-43-9	Cadmium	0.25	U	1	0.15	0.25	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-70-2	Calcium	4980	N	1	31.3	95.0	250	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-47-3	Chromium	0.38	U	1	0.20	0.38	1.00	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-48-4	Cobalt	2.98		1	0.031	0.13	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-50-8	Copper	0.34	J	1	0.20	0.75	1.00	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
Hardness	Hardness, Total	29600		1	133	628	1650	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7439-89-6	Iron	3590	N	1	4.80	12.5	25.0	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7439-92-1	Lead	0.17	J	1	0.055	0.38	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7439-95-4	Magnesium	4180		1	13.3	95.0	250	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7439-96-5	Manganese	2050		1	0.12	0.38	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7439-97-6	Mercury	0.16	UN	1	0.081	0.16	0.20	ug/L	02/06/25 08:55	02/06/25 12:10	SW7470A	
7440-02-0	Nickel	9.46		1	0.090	0.13	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-09-7	Potassium	1110	N	1	23.1	95.0	250	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7782-49-2	Selenium	2.25	U	1	0.69	2.25	2.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-22-4	Silver	0.25	UN	1	0.039	0.25	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-23-5	Sodium	1690		1	42.9	95.0	250	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-28-0	Thallium	0.25	U	1	0.043	0.25	0.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-62-2	Vanadium	0.14	J	1	0.036	0.13	2.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A
7440-66-6	Zinc	5.82		1	0.28	0.75	2.50	ug/L	01/30/25 10:30	02/06/25 18:28	SW6020	3010A

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	METALS-TAL			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N = Spiked sample recovery not within control limits

LAB CHRONICLE

OrderID:	Q1201	OrderDate:	1/28/2025 10:00:00 AM
Client:	Weston Solutions	Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169
Contact:	Nathan Fretz	Location:	N31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1201-01	TAPHHA-MW12-01272 5-00-T2	Water			01/27/25			01/28/25
			Mercury	7470A		02/06/25	02/06/25	
			Metals ICP-TAL	6020B		01/30/25	02/06/25	



SAMPLE DATA

Report of Analysis

Client:	Weston Solutions	Date Collected:	01/27/25 14:52
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	01/28/25
Client Sample ID:	TAPHHA-MW12-012725-00-T2	SDG No.:	Q1201
Lab Sample ID:	Q1201-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	4.20		1	0.19	0.50	1.00	mg/L		01/28/25 15:43	9060A

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

LAB CHRONICLE

OrderID:	Q1201	OrderDate:	1/28/2025 10:00:00 AM
Client:	Weston Solutions	Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169
Contact:	Nathan Fretz	Location:	N31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1201-01	TAPHHA-MW12-01272 5-00-T2	WATER	TOC	9060A	01/27/25 14:52		01/28/25 15:43	01/28/25



SHIPPING DOCUMENTS



WESTON PUBLISHING

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