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## **CASE NARRATIVE**

### **Weston Solutions**

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

**Project # N/A**

**Chemtech Project # Q1109**

**Test Name: Metals ICP-TAL,Mercury**

### **A. Number of Samples and Date of Receipt:**

3 Water samples were received on 01/16/2025.

### **B. Parameters:**

According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group5, Diesel Range Organics, Gasoline Range Organics, Hardness, Total, Hexavalent Chromium, Mercury, Metals ICP-TAL, METALS-TAL, Oil and Grease, PESTICIDE Group1, PESTICIDE Group3, SVOC-TCL BNA -20, TOC and VOC-TCLVOA-10. 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 (TAPIAL1-MW04S-011525-00-T2MSD) analysis met criteria for all samples except for Silver due to Chemical Interference during Digestion Process.

The Matrix Spike (427MS) analysis met criteria for all samples except for Mercury due to sample matrix interference. The Matrix Spike (TAPIAL1-MW04S-011525-00-T2MS) analysis met criteria for all samples except for Aluminum, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Iron, Potassium, Silver, Sodium and Vanadium due to Chemical Interference during Digestion process.

The Matrix Spike Duplicate (427MSD) analysis met criteria for all samples except for Mercury due to sample matrix interference. The Matrix Spike Duplicate (TAPIAL1-MW04S-011525-00-T2MSD) analysis met criteria for all samples except for Aluminum, Arsenic, Barium, Cadmium, Calcium, Chromium, Iron, Potassium, Silver and Sodium due to Chemical Interference during Digestion process.

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. Additional Comments:**

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.

#### **Calculation for ICP-MS Water Sample:**

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

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

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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\_\_\_\_\_