CHEMTECH

284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MF9D58
CASE # 48955
CONTRACT # EPW14030
SOW# ISM02.4
LAB NAME: CHEMTECH CONSULTING GROUP
LAB CODE: CHM
CHEMTECH PROJECT #L2919

A. Number of Samples and Date of Receipt

02 Water samples were delivered to the laboratory intact on   06/04/2020.

B. Parameters

Test requested for Metals CLP12 = Aluminum, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium.

Test requested for Metals CLP MS = Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Silver, Thallium, Vanadium & Zinc.

C. Cooler Temp

Indicator Bottle**: Presence**/Absence
Cooler: 3.4^{o}C

D. Detail Documentation (related to Sample Handling
Shipping, Analytical Problem, Temp of Cooler etc):

Issue: Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the COC.

E. Corrective Action taken for above:

Resolution: In accordance with previous direction from [Region 6], the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

F. Analytical Techniques:

All analyses were based on CLP Methodology by method ISM02.4.

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Inter Element correction factors (IECs) are determined annually and correction factor are applied during ICP-AES analysis. ICP-AES Interelement Correction Factors Form 10A-IN & 10B-IN are included in the hardcopy.

G. Calculation:

Calculation for ICP-AES Water:

Concentration or Result (μg/L) = $C \times \dfrac{V_f}{V_i} \times DF \times 1000$

Where,

C = Instrument value in ppm (The average of all replicate exposures)
V_f = Final digestion volume (mL)
V_i = Initial aliquot amount (mL) (Sample amount taken in prep)
DF = Dilution Factor

Example Calculation Sample For MF9D58 for Manganese:

If C = 1.429665 ppm
V_f = 50 ml
V_i = 50 ml
DF = 1

Concentration or Result (μg/L) = $1.429665 \times \dfrac{50}{50} \times 1 \times 1000$

= 1429.665 μg/L

= 1430 μg/L (Reported Result with Signification)

Calculation for ICP-MS Water :

Concentration or Result (μg/L) = $C \times \dfrac{V_f}{V_i} \times DF$

Where,

C = Instrument value in ppb (The average of all replicate integrations)
V_f = Final digestion volume (mL)
V_i = Initial aliquot amount (mL) (Sample amount taken in prep)

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        DF = Dilution Factor

Example Calculation Sample For MF9D58 for Arsenic:

    If C = 4.50 ppb
      Vf =50 ml
      Vi =50 ml
      DF = 1

$$\text{Concentration or Result (μg/L)} = 4.50 \ \times \frac{50}{50} \ \times \ 1$$

$$= \ 4.50 \ \text{μg/L}$$

$$= \ 4.5 \ \text{μg/L (Reported Result with Signification)}$$

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements except for Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Potassium & Copper.

Chemical or physical interference effect was suspected and the data for all affected analytes in the sample received and associated with this serial dilution were flagged.

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. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signature_____   Name: Nimisha Pandya

Date _____   Title: Document Control Officer