

CHEMTECH

**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # MC0AN9

CASE # 48100

CONTRACT # EPW14030

SOW# ISM02.4

LAB NAME: CHEMTECH CONSULTING GROUP

LAB CODE: CHM

CHEMTECH PROJECT #K1584

A. Number of Samples and Date of Receipt

02 Water samples were delivered to the laboratory intact on 02/22/2019.

B. Parameters

Test requested for Metals CLP MS = Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc & HG.

C. Cooler Temp

Indicator Bottle: **Presence**/Absence

Cooler: 2.6°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 3], 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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G. Calculation:

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)

V_f = Final digestion volume (mL)

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

DF = Dilution Factor

Example Calculation:

If C = 12.34 ppb

V_f = 50 ml

V_i = 50 ml

DF = 1

$$\begin{aligned}\text{Concentration or Result } (\mu\text{g/L}) &= 12.34 \times \frac{50}{50} \times 1 \\ &= 12.34 \mu\text{g/L} \\ &= 12.3 \mu\text{g/L} \text{ (Reported Result with Signification)}\end{aligned}$$

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

Example Calculation:

If C = 12.34 ppb

DF = 1

$$\begin{aligned}\text{Concentration or Result } (\mu\text{g/L}) &= 12.34 \times 1 \\ &= 12.34 \mu\text{g/L} \\ &= 12.3 \mu\text{g/L} \text{ (Reported Result with Signification)}\end{aligned}$$

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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. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Zinc.

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: Mildred V. Reyes

Date _____

Title: Document Control Officer