



**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # MJNLB3

CASE # 51956

CONTRACT # 68HERH20D0011

SOW# SFAM01.1

LAB NAME: Alliance Technical Group, LLC

LAB CODE: ACE

LAB ORDER ID # Q1127

A. Number of Samples and Date of Receipt

09 Water samples were delivered to the laboratory intact on 01/17/2025.

B. Parameter

Test requested for Metals CLP12= Arsenic, Barium, Cadmium, Lead, Selenium, Silver & Mercury.

Test requested for Metals CLP MS-CLP4 = Arsenic, Copper, Lead, Zinc.

C. Cooler Temp

Indicator Bottle: Presence/Absence

Cooler: 3.0°C

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

Issue 1 : A "P" or "M" prefix was listed at the beginning of a CLP sample ID.

Issue 2: The COC indicates that these samples are for Case 51821, but this Case completed on 12/20/2024.

Issue 3: The laboratory requires one sample to be designated for QC per every twenty samples, but there are two samples (MJNLB5 and MJNLB9) listed on the COC for laboratory QC. The laboratory would like to proceed by performing laboratory QC on sample MJNLB5 and regular analysis for sample MJNLB9. Please advise on how the laboratory may proceed.

Issue 4: The laboratory has received two SDGs without samples designated for laboratory QC for ICP-AES, Hg, and TCLP ICP-AES. The laboratory has selected samples MJNLE5 and MJNLA3 for laboratory QC and confirms that these are not blanks, rinsates, or PT samples.



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E. Corrective Action taken for above:

Resolution 1 : To maintain COC integrity, ASB requests no changes to the Sample IDs. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Resolution 2: Per Region 10, the COC references the incorrect Case number and samples in this shipment are for Case 51956. A corrected COC will be provided once it is available. Please note the issue in the SDG Narrative and proceed with analysis of the samples.

Resolution 3: Per Region 10, the laboratory may proceed with performing laboratory QC on sample MJNLB5 and regular analysis for sample MJNLB9. Please note the issue in the SDG Narrative and proceed with analysis of the samples.

Resolution 4: Per SFAM01.1 Exhibit A, Section 5.5.4.1., the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

F. Analytical Techniques:

All analyses were based on CLP Methodology by method SFAM01.1.

Inter Element correction factors (IECs) are determined annually and correction factor are applied during ICP-AES analysis.

G. Calculation:

Calculation for ICP-AES Water Sample:

$$\text{Concentration or Result } (\mu\text{g/L}) = C \times \frac{V_f}{V_i} \times \text{DF} \times 1000$$

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 For Sample MJNLE5 For Arsenic:

If C = 0.0409909 ppm

V_f = 50 ml

V_i = 50 ml

DF = 1



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$$\begin{aligned}\text{Concentration or Result } (\mu\text{g/L}) &= 0.0409909 \times \frac{50}{50} \times 1 \times 1000 \\ &= 40.9909 \mu\text{g/L} \\ &= 41 \mu\text{g/L} \text{ (Reported Result with Signification)}\end{aligned}$$

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

Example Calculation For Sample MJNLB5 For Arsenic:

If C = 15.20 ppb

Vf = 50 ml

Vi = 50 ml

DF = 1

$$\begin{aligned}\text{Concentration or Result } (\mu\text{g/L}) &= 15.20 \times \frac{50}{50} \times 1 \\ &= 15.20 \mu\text{g/L} \\ &= 15 \mu\text{g/L} \text{ (Reported Result with Signification)}\end{aligned}$$

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 For MJNLE5:

If C = 0.034 ppb

DF = 1



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$$\begin{aligned}\text{Concentration or Result } (\mu\text{g/L}) &= 0.034 \times 1 \\ &= 0.034 \mu\text{g/L} \\ &= 0.034 \mu\text{g/L (Reported Result with Signification)}\end{aligned}$$

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. Duplicate sample did meet requirements. Serial Dilution did meet requirements.

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.

Internal Standard Association for ICP-MS analysis.

Target Analyte	Associated Internal Standard
Arsenic	89Y
Copper	45Sc
Lead	209Bi
Zinc	45Sc

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