



**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # MJNKA0

CASE # 51821

CONTRACT # 68HERH20D0011

SOW# SFAM01.1

LAB NAME: Alliance Technical Group, LLC

LAB CODE: ACE

LAB ORDER ID # P5363

A. Number of Samples and Date of Receipt

11 Soil 03 Water samples was delivered to the laboratory intact on 12/20/2024

B. Parameters

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

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

C. Cooler Temp

Indicator Bottle: Presence/Absence

Cooler: 2.8°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.

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.

F. Analytical Techniques:

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



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G. Calculation:

Calculation for ICP-MS Soil Sample:

Conversion of Results from $\mu\text{g/L}$ or ppb to mg/kg :

$$\text{Concentration (mg/kg)} = C \times \frac{V_f}{W \times S} \times \text{DF} / 1000$$

Where,

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

V_f = Final digestion volume (mL)

W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)

S = % Solids / 100 (Fraction of Percent Solids)

DF = Dilution Factor

Example Calculation For Sample MJNKA0 For Arsenic:

If C = 500.96 ppb

V_f = 500 ml

W = 1.25 g

S = 0.798(79.8/100)

DF = 1

$$\text{Concentration (mg/kg)} = 500.96 \times \frac{500}{1.25 \times 0.798} \times 1 / 1000$$

$$= 251.1077 \text{ mg/kg}$$

$$= 250 \text{ mg/kg (Reported Result with Signification)}$$

Calculation for ICP-MS Water Sample:

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

V_i

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



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Example Calculation For Sample MJNLE3 For Arsenic:

If C = 0.18 ppb

Vf = 50 ml

Vi = 50 ml

DF = 1

$$\text{Concentration or Result } (\mu\text{g/L}) = 0.18 \times \frac{50}{50} \times 1$$

$$= 0.18 \mu\text{g/L}$$

$$= 0.18 \mu\text{g/L (Reported Result with Signification)}$$

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. Duplicate sample did meet requirements except for Arsenic, Lead. Serial Dilution did meet requirements.

Internal standard 209Bi(1) was out Side qc limit for sample MJNKA5 in Original so for this sample affected parameters are reported from 2X dilution.

Some samples have % solids results less than 50% but more than 30%. Please see below table for detail. Laboratory has processed these samples according to the SFAM01.1 SOW, Exhibit D, sections 10.1.1.8.

EPA Sample ID	% Solid
MJNKJ0	49.1

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



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Zinc	45Sc
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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. 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