284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MJNKA1
CASE # 51821
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # P5364

A. Number of Samples and Date of Receipt

17 Soil 01 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: 1.6^{o}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 laboratory received water sample MJNLC4 but this sample is not listed on the COC. Please advise on how the laboratory may proceed.

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, this sample was inadvertently left off of the original COC for the shipment. A corrected COC has been attached which includes sample MJNCL4. Please note the issue in the SDG Narrative and proceed with analysis of the sample.

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F. Analytical Techniques:

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

G. Calculation:

Calculation for ICP-MS Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :

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

Where,

C = Instrument value in ppb (The average of all replicate integrations)
Vf = 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 MJNKA1 For Copper:

If C = 290.08 ppb
Vf = 500 ml
W = 1.14 g
S = 0.788(78.8/100)
DF = 1

$$\text{Concentration (mg/kg)} = 290.08 \times \frac{500}{1.14 \times 0.788} \times 1 / 1000$$

$$= 161.4569 \text{ mg/kg}$$

= 160 mg/kg (Reported Result with Signification)

Calculation for ICP-MS Water Sample:

$$\text{Concentration or Result (µg/L)} = C \times \frac{Vf}{Vi} \times DF$$

Where,

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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:

If C = 0.18 ppb
Vf = 50 ml
Vi = 50 ml
DF = 1

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

$$= 0.18\ \mu g/L$$

= 0.18 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. 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

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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