284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MBHH78
CASE # 51879
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # P4880

A. Number of Samples and Date of Receipt

19 Soil & 01 Water samples were delivered to the laboratory intact on 11/15/2024.

B. Parameters

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

C. Cooler Temp

Indicator Bottle**: <u>Presence/</u>**Absence

Cooler: 2.6°C

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

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

E. Corrective Action taken for above:

Resolution: 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.

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

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G. Calculation:

Calculation for ICP-AES Soil Sample:

Conversion of Results from mg/L or ppm to mg/kg (Dry Weight Basis):

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

Where,

        C = Instrument value in ppm (The average of all replicate exposures)
        Vf = Final digestion volume (mL)
        W = Initial aliquot amount (g) (Sample amount taken in prep)
        S   = % Solids / 100 (Fraction of Percent Solids)
        DF = Dilution Factor

Example Calculation For Sample MBHH78 For Arsenic:

        If C   = 0.0492566 ppm
          Vf = 100 ml
          W = 1.22 g
          S   = 0.774(77.4/100)
          DF = 1

$$\text{Concentration (mg/kg)} = 0.0492566 \times \frac{100}{1.22 \times 0.774} \times 1$$

$$= 5.2163 \text{ mg/kg}$$

$$= 5.2 \text{ mg/kg (Reported Result with Signification}$$

Calculation for ICP-AES Water Sample:

$$\text{Concentration or Result (μg/L)} = C \times \frac{Vf}{Vi} \times DF \times 1000$$

Where,

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

Example Calculation For Sample MBHH97 For Iron:

If C = 0.5715670 ppm
Vf = 50 ml
Vi = 50 ml
DF = 1

Concentration or Result (μg/L) = $\dfrac{0.5705670 \times \underline{\ 50\ } \times 1 \times 1000}{50}$

= 570.5670 μg/L

= 570 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 Selenium, Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Cobalt.

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.

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
MBHH96	48.3

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