

SDG COVER PAGE

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
 Lab Code: ACE Case No.: 51772 MA No.: 3225.1,3226.1 SDG No.: MYDAX3
 SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method			
		ICP-AES	ICP-MS	Mercury	Cyanide
MYDAX3	P4311-01	X	X		
MYDAX4	P4311-02	X	X		
MYDAX5	P4311-03	X	X		
MYDAX6	P4311-04	X	X		
MYDAX7	P4311-05	X	X		
MYDAX8	P4311-06	X	X		
MYDAX9	P4311-07	X	X		
MYDAY0	P4311-08	X	X		
MYDAY1	P4311-09	X	X		
MYDAY2	P4311-10	X	X		
MYDAY3	P4311-11	X	X		
MYDAY4	P4311-12	X	X		
MYDAY5	P4311-13	X	X		
MYDAY6	P4311-14	X	X		
MYDAY7	P4311-15	X	X		
MYDAY8	P4311-16	X	X		
MYDAY9	P4311-17	X	X		
MYDAZ0	P4311-18	X	X		
MYDAZ1	P4311-19	X	X		
MYDB06	P4311-20	X	X		
MYDB06D	P4311-21	X	X		
MYDB06S	P4311-22	X	X		

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. All edits and manual integrations have been peer-reviewed. Release of the data contained in this hardcopy Complete SDG File and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____
 Date: _____ Title: _____

68HERH20D0011

SDG # MYDAX3

USEPA CLP COC (LAB COPY)**CHAIN OF CUSTODY RECORD****No: 9-062124-085536-0078**

Date Shipped: 10/3/2024

Carrier Name: FedEx

Airbill No: 7790 0057 6067

Case #: 51772

Cooler #: 51772-078

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 908-728-3151

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
1108-J-0005-01	MYDAX3	Soil/ REAC	Grab	ICP-AES 11(21)	9-5251 (None) (1)	1108-J-0005	06/20/2024 11:16	✓
1108-A-0003-01	MYDAX4	Soil/ REAC	Grab	ICP-AES 11(21)	9-5252 (None) (1)	1108-A-0003	06/20/2024 08:49	✓
1108-B-0007-01	MYDAX5	Soil/ REAC	Grab	ICP-AES 11(21)	9-5253 (None) (1)	1108-B-0007	06/20/2024 08:48	✓
1108-E-0005-01	MYDAX6	Soil/ REAC	Grab	ICP-AES 11(21)	9-5254 (None) (1)	1108-E-0005	06/20/2024 09:31	✓
1108-I-0006-01	MYDAX7	Soil/ REAC	Grab	ICP-AES 11(21)	9-5255 (None) (1)	1108-I-0006	06/20/2024 10:41	✓
1108-I-0007-01	MYDAX8	Soil/ REAC	Grab	ICP-AES 11(21)	9-5256 (None) (1)	1108-I-0007	06/20/2024 10:42	✓
1108-I-0004-01	MYDAX9	Soil/ REAC	Grab	ICP-AES 11(21)	9-5257 (None) (1)	1108-I-0004	06/20/2024 10:43	✓
1108-I-0002-01	MYDAY0	Soil/ REAC	Grab	ICP-AES 11(21)	9-5258 (None) (1)	1108-I-0002	06/20/2024 10:45	✓
1108-K-0001-01	MYDAY1	Soil/ REAC	Grab	ICP-AES 11(21)	9-5259 (None) (1)	1108-K-0001	06/20/2024 10:44	✓
1108-I-0005-01	MYDAY2	Soil/ REAC	Grab	ICP-AES 11(21)	9-5260 (None) (1)	1108-I-0005	06/20/2024 10:46	✓
1108-K-0005-01	MYDAY3	Soil/ REAC	Grab	ICP-AES 11(21)	9-5261 (None) (1)	1108-K-0005	06/20/2024 10:49	✓
1108-K-0004-01	MYDAY4	Soil/ REAC	Grab	ICP-AES 11(21)	9-5262 (None) (1)	1108-K-0004	06/20/2024 10:51	✓
1108-K-0003-01	MYDAY5	Soil/ REAC	Grab	ICP-AES 11(21)	9-5263 (None) (1)	1108-K-0003	06/20/2024 10:53	✓
1108-H-0008-01	MYDAY6	Soil/ REAC	Grab	ICP-AES 11(21)	9-5264 (None) (1)	1108-H-0008	06/20/2024 13:40	✓
1108-K-0002-01	MYDAY7	Soil/ REAC	Grab	ICP-AES 11(21)	9-5265 (None) (1)	1108-K-0002	06/20/2024 11:17	✓
1108-A-0001-01	MYDAY8	Soil/ REAC	Grab	ICP-AES 11(21)	9-5266 (None) (1)	1108-A-0001	06/20/2024 08:43	✓
1108-K-0006-01	MYDAY9	Soil/ REAC	Grab	ICP-AES 11(21)	9-5267 (None) (1)	1108-K-0006	06/20/2024 11:20	✓
1108-I-0001-01	MYDAZ0	Soil/ REAC	Grab	ICP-AES 11(21)	9-5268 (None) (1)	1108-I-0001	06/20/2024 11:21	✓
1108-J-0002-01	MYDAZ1	Soil/ REAC	Grab	ICP-AES 11(21)	9-5269 (None) (1)	1108-J-0002	06/20/2024 11:23	✓

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Special Instructions: ICP-AES 11+Metals:Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Ti,V,Zn ICP-MS 11+ Metals: Ag, As, Ba,Be, Cd, Co, Cr, Cu, Ni, Pb, Sb, Se, Ti, V, Zn

Analysis Key: ICP-AES 11=ICP-AES 11+Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
Shipped LMS	<i>[Signature]</i> Weston	10/3/24 16:00	<i>[Signature]</i> E. Melendez	10/4/24 9:39	IL GUN #1 22.3
					Custody Seal intact
					NO Temp / no ICE

68HERH20D0011

SDG # MYDAX3

USEPA CLP COC (LAB COPY)**CHAIN OF CUSTODY RECORD****No: 9-062124-085536-0078**

Date Shipped: 10/3/2024

Carrier Name: FedEx

Airbill No: 7790 0057 6067

Case #: 51772

Cooler #: 51772-078

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed


Lab Phone: 908-728-3151

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
1108-J-0001-01	MYDAZ2	Soil/ REAC	Grab	ICP-AES 11(21)	9-5270 (None) (1)	1108-J-0001	06/20/2024 11:25	
1108-L-0003-01	MYDAZ3	Soil/ REAC	Grab	ICP-AES 11(21)	9-5271 (None) (1)	1108-L-0003	06/20/2024 11:25	
1108-J-0003-01	MYDAZ4	Soil/ REAC	Grab	ICP-AES 11(21)	9-5272 (None) (1)	1108-J-0003	06/20/2024 11:29	
1108-J-0004-01	MYDAZ5	Soil/ REAC	Grab	ICP-AES 11(21)	9-5273 (None) (1)	1108-J-0004	06/20/2024 11:37	
1108-H-0003-01	MYDAZ6	Soil/ REAC	Grab	ICP-AES 11(21)	9-5274 (None) (1)	1108-H-0003	06/20/2024 13:19	
1108-G-0009-01	MYDAZ7	Soil/ REAC	Grab	ICP-AES 11(21)	9-5275 (None) (1)	1108-G-0009	06/20/2024 13:20	
1108-G-0006-01	MYDAZ8	Soil/ REAC	Grab	ICP-AES 11(21)	9-5276 (None) (1)	1108-G-0006	06/20/2024 13:22	
1108-H-0010-01	MYDAZ9	Soil/ REAC	Grab	ICP-AES 11(21)	9-5277 (None) (1)	1108-H-0010	06/20/2024 13:23	
1108-G-0008-01	MYDB00	Soil/ REAC	Grab	ICP-AES 11(21)	9-5278 (None) (1)	1108-G-0008	06/20/2024 13:24	
1108-L-0003-01	MYDB01	Soil/ REAC	Grab	ICP-AES 11(21)	9-5279 (None) (1)	1108-L-0003	06/20/2024 10:54	
1108-C-0005-01	MYDB02	Soil/ REAC	Grab	ICP-AES 11(21)	9-5280 (None) (1)	1108-C-0005	06/20/2024 08:29	
1108-G-0011-01	MYDB03	Soil/ REAC	Grab	ICP-AES 11(21)	9-5281 (None) (1)	1108-G-0011	06/20/2024 13:39	
1108-G-0001-01	MYDB04	Soil/ REAC	Grab	ICP-AES 11(21)	9-5282 (None) (1)	1108-G-0001	06/20/2024 13:41	
1108-G-0005-01	MYDB05	Soil/ REAC	Grab	ICP-AES 11(21)	9-5283 (None) (1)	1108-G-0005	06/20/2024 13:43	
1108-H-0007-03	MYDB06	Soil/ REAC	Grab	ICP-AES 11(21)	9-5284 (None) (1)	1108-H-0007	06/20/2024 13:44	
1108-M-0001-01	MYDB07	Soil/ REAC	Grab	ICP-AES 11(21)	9-5285 (None) (1)	1108-M-0001	06/20/2024 13:44	
1108-H-0011-01	MYDB08	Soil/ REAC	Grab	ICP-AES 11(21)	9-5286 (None) (1)	1108-H-0011	06/20/2024 13:47	
1108-M-0006-01	MYDB09	Soil/ REAC	Grab	ICP-AES 11(21)	9-5287 (None) (1)	1108-M-0006	06/20/2024 13:47	
1108-H-0005-01	MYDB10	Soil/ REAC	Grab	ICP-AES 11(21)	9-5288 (None) (1)	1108-H-0005	06/20/2024 13:49	

Shipment for Case Complete? N**Samples Transferred From Chain of Custody #**

Sample(s) to be used for Lab QC: 1108-H-0007-03 Tag 9-5284 - Special Instructions: ICP-AES 11+Metals: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Ti, V, Zn ICP-MS 11+ Metals: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Ti, V, Zn ICP-AES 11+ Metals: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Ni, Pb, Sb, Se, Ti, V, Zn

Analysis Key: ICP-AES 11=ICP-AES 11+Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
5140 TD LABS		10/3/24 1600	R. McRendell	10/4/24 9:39	IR Gun #1 72.3°C
					Custody seal intact
					No Temp / no ICE

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC	Page <u>1</u> of <u>1</u>
Received By (Print Name) <u>Cayanan Riva</u>	Log-in Date 10/4/2024
Received By (Signature) <u>[Signature]</u>	
Case Number 51772	SDG No. MYDAX3 MA No. 3225.1,3226.1

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	<u>n/a</u>
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	<u>779000576067</u> <u>1</u>
6. Shipping Container Temperature Indicator Bottle	Absent
7. Shipping Container Temperature	<u>22.3</u> Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	<u>10/04/2024</u>
12. Time Received	<u>09:39</u>

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	MYDAX3	N/A	9-5251	P4311-01	Intact
2	MYDAX4	N/A	9-5252	P4311-02	Intact
3	MYDAX5	N/A	9-5253	P4311-03	Intact
4	MYDAX6	N/A	9-5254	P4311-04	Intact
5	MYDAX7	N/A	9-5255	P4311-05	Intact
6	MYDAX8	N/A	9-5256	P4311-06	Intact
7	MYDAX9	N/A	9-5257	P4311-07	Intact
8	MYDAY0	N/A	9-5258	P4311-08	Intact
9	MYDAY1	N/A	9-5259	P4311-09	Intact
10	MYDAY2	N/A	9-5260	P4311-10	Intact
11	MYDAY3	N/A	9-5261	P4311-11	Intact
12	MYDAY4	N/A	9-5262	P4311-12	Intact
13	MYDAY5	N/A	9-5263	P4311-13	Intact
14	MYDAY6	N/A	9-5264	P4311-14	Intact
15	MYDAY7	N/A	9-5265	P4311-15	Intact
16	MYDAY8	N/A	9-5266	P4311-16	Intact
17	MYDAY9	N/A	9-5267	P4311-17	Intact
18	MYDAZ0	N/A	9-5268	P4311-18	Intact
19	MYDAZ1	N/A	9-5269	P4311-19	Intact
20	MYDB06	N/A	9-5284	P4311-20	Intact
21	MYDB06D	N/A	9-5284	P4311-21	Intact
22	MYDB06S	N/A	9-5284	P4311-22	Intact
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By <u>[Signature]</u>	Logbook No. N/A
Date <u>10/4/24</u>	Logbook Page No. N/A

FORM DC-2
COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	Alliance Technical Group, LLC		
LAB CODE	ACE		
CONTRACT NO.	68HERH20D0011		
CASE NO.	51772	SDG NO.	MYDAX3
MA NO.	3225.1, 3226.1	SOW NO.	SFAM01.1

All documents delivered in the Complete SDG File must be original documents where possible.
(Reference - Exhibit B Section 2.4)

	PAGE NOs:		CHECK	
	FROM	TO	LAB	REGION
1. SDG Cover Page	1	1	✓	
2. Traffic Report/Chain of Custody Record(s)	2	3	✓	
3. Sample Log-In Sheet (DC-1)	4	4	✓	
4. CSF Inventory Sheet (DC-2)	5	7	✓	
5. SDG Narrative	8	17	✓	
6. Communication Logs	NA	NA	✓	
7. Percent Solids Log	18	20	✓	
Analysis Forms and Data (ICP-AES)				
8. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	21	40	✓	
9. Instrument raw data by instrument in analysis order	41	391	✓	
Other Data				
10. Standard and Reagent Preparation Logs	392	543	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	544	545	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	546	554	✓	
13. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
14. Extraction Logs for TCLP and SPLP	NA	NA	✓	
15. Raw GPC Data	NA	NA	✓	
16. Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (ICP-MS)				
17. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	555	574	✓	
18. Instrument raw data by instrument in analysis order	575	2476	✓	
Other Data				
19. Standard and Reagent Preparation Logs	2477	2617	✓	
20. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	2618	2619	✓	
21. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	2620	2638	✓	
22. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

	PAGE NOS:		CHECK	
	FROM	TO	LAB	REGION
23 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
24 . Raw GPC Data	NA	NA	✓	
25 . Raw Florisil Data	NA	NA	✓	

Analysis Forms and Data (Mercury)

26 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
27 . Instrument raw data by instrument in analysis order	NA	NA	✓	

Other Data

28 . Standard and Reagent Preparation Logs	NA	NA	✓	
29 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
30 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
31 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
32 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
33 . Raw GPC Data	NA	NA	✓	
34 . Raw Florisil Data	NA	NA	✓	

Analysis Forms and Data (Cyanide)

35 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
36 . Instrument raw data by instrument in analysis order	NA	NA	✓	

Other Data

37 . Standard and Reagent Preparation Logs	NA	NA	✓	
38 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
39 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
40 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
41 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
42 . Raw GPC Data	NA	NA	✓	
43 . Raw Florisil Data	NA	NA	✓	

Additional

44. EPA Shipping/Receiving Documents

Airbill (No. of Shipments 1)

Sample Tags

Sample Log-In Sheet (Lab)

45. Misc. Shipping/Receiving Records (list all individual records)

46. Internal Lab Sample Transfer Records and Tracking Sheets
(describe or list)47. Other Records and related Communication Logs
(describe or list)

48. Comments:

Completed by:
(CLP Lab)Audited by:
(EPA)

Nimisha Pandya, Document Control Officer

PAGE NOs:		CHECK	
FROM	TO	LAB	REGION
2639	2639	✓	
NA	NA	✓	
2640	2642	✓	
NA	NA	✓	
2643	2646	✓	
NA	NA	✓	



**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # MYDAX3

CASE # 51772

CONTRACT # 68HERH20D0011

SOW# SFAM01.1

LAB NAME: Alliance Technical Group, LLC

LAB CODE: ACE

LAB ORDER ID # P4311

MODIFIED ANALYSIS #3225.1, 3226.1

A. Number of Samples and Date of Receipt

20 Soil samples were delivered to the laboratory intact on 10/04/2024.

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.

Test requested for Metals CLP MS FULL = Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

C. Cooler Temp

Indicator Bottle: Presence/**Absence**

Cooler: 22.3°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.



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Mountainside, NJ 07092**

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

G. Calculation:

Calculation for ICP-AES Soil Sample:

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

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

Where,

C = Instrument value in ppm (The average of all replicate exposures)

V_f = 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 MYDAX3 For Arsenic:

If C = 0.1485018 ppm

V_f = 100 ml

W = 1.42g

S = 0.973(97.3/100)

DF = 2

$$\begin{aligned} \text{Concentration (mg/kg)} &= 0.1485018 \times \frac{100}{1.42 \times 0.973} \times 2 \\ &= 21.4961 \text{ mg/kg} \\ &= 22 \text{ mg/kg (Reported Result with Signification)} \end{aligned}$$

Calculation for ICP-MS Soil Sample:

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

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

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)



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DF = Dilution Factor

Example Calculation For Sample MYDAX3 For Antimony:

If C = 1.04 ppb

Vf = 500 ml

W = 1.42 g

S = 0.973(97.3/100)

DF = 1

$$\text{Concentration (mg/kg)} = 1.04 \times \frac{500}{1.42 \times 0.973} \times 1 / 1000$$

$$= 0.3763 \text{ mg/kg}$$

$$= 0.38 \text{ mg/kg (Reported Result with Signification)}$$

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 Antimony, Selenium. Spike sample(MYDB06SRE) did meet requirements except for Silver. Spike sample (MYDB06)did meet requirements except for Beryllium. Duplicate sample did meet requirements. Serial Dilution did meet requirements.

Internal standard 89Y(1) was out Side qc limit for samples MYDAX7, MYDAY3, MYDAY6 in Original so for these samples affected parameters are reported from 2X Dilution.

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
Antimony	159Tb
Arsenic	89Y
Barium	159Tb
Beryllium	6Li
Cadmium	159Tb



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Chromium	45Sc
Cobalt	45Sc
Copper	45Sc
Lead	209Bi
Nickel	45Sc
Selenium	89Y
Silver	159Tb
Thallium	209Bi
Vanadium	45Sc
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

Date: 09/11/2024	MA: 3225.1	Title: ICP-MS with Modified Preparation Method and Analysis of Soils with Additional Laboratory QC
Method Source: SFAM01.1	Method: ICP-MS	
Matrix: Soil/Sediment		
Summary of Modification		
<p>The purpose of this modified analysis is to prepare samples by EPA Draft Method 3050C (see below) with additional modified LCS and Matrix Spikes and analyze for the scheduled target analytes by ICP-MS. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in the SOW listed in your current EPA agreement remain unchanged and in full force and effect.</p>		
I. Analyte Modifications		Not applicable <input checked="" type="checkbox"/>
II. Calibration and QC Requirements		Not applicable <input type="checkbox"/>
<p>The Laboratory shall:</p> <ul style="list-style-type: none"> • Use the Method Detection Limits (MDLs) determined for routine soil analyses (i.e., Method 200.8) to report the results for these analyses. The Laboratory is NOT required to perform an MDL study for Draft Method 3050C. • Prepare and analyze an additional Laboratory Control Sample (LCS) spiked at the CRQL. Percent Recovery limits do NOT apply to this LCS and no corrective actions are required. • Prepare a Matrix Spike spiked at three times the levels specified in the SOW. • Prepare and analyze an additional Matrix Spike sample spiked at five times the levels specified for this Modified Analysis (i.e., 15x the levels specified in the SOW). • Post-Digestion Spike requirements apply to the 5x Matrix Spike only. • Post-Digestion Spike corrective actions apply to Sb. 		
III. Preparation and Method Modifications		Not applicable <input type="checkbox"/>
<p>The Laboratory shall:</p> <ul style="list-style-type: none"> • Prepare and analyze the sample by EPA Draft Method 3050C as follows: <ul style="list-style-type: none"> ○ Mix sample thoroughly and transfer 1.00 – 1.50 g to a digestion vessel. ○ Add 10 mL 1:1 HNO₃ and 5 mL 1:1 HCl, heat the sample at 95°C (±3°C) and reflux 10-15 minutes. ○ Add 5 mL concentrated HNO₃ and reflux for 30 minutes at 95°C (±3°C), repeat until digestion complete. ○ Concentrate sample to 5 mL or reflux without boiling for 2 hours at 95°C (±3°C). ○ Cool sample, add 2mL water and 3 mL 30% H₂O₂. Heat at 95°C (±3°C) and add additional 1 mL aliquots of 30% H₂O₂ until effervescence is minimal. ○ Reduce volume to 5 mL or reflux without boiling for 2 hours at 95°C (±3°C). ○ Dilute to 100 mL with water, centrifuge or filter as necessary prior to analysis. • The same sample extracts can be used for ICP-AES analysis. Separate Matrix Spikes and LCS will need to be prepared for both ICP-AES and ICP-MS analyses. • Analyze the samples starting at an initial 5x dilution. Subsequently, dilute samples as necessary to bring the analyte concentrations within the calibration range of the instrument per the SOW. • Method Blanks, both LCSs, and all instrument QC are to be analyzed undiluted. 		

IV. Special Reporting Requirements**Not applicable**☐

The Laboratory shall:

- Ensure the SDG Narrative is updated as stated in the SOW, including any technical and administrative problems encountered and the resolution or corrective actions taken. These problems may include interference problems encountered during analysis, dilutions, re-analyses and/or re-preparations performed, and problems with the analysis of samples. Also include a discussion of any SOW Modified Analyses, including a copy of the approved modification form with the SDG Narrative.
- Initial analysis data are reported with a dilution factor of 1.0 and a final volume of 500 mL, per the SOW.
- Report the additional LCS as "LCSD" in the raw data and in the EDD with QCType "Laboratory_Control_Sample_Duplicate".
- Report the additional Matrix Spike with an "SRE" suffix in the raw data and EDD.
- Report any Post-Digestion Spike of the additional 5x Matrix Spike with an "ARE" suffix.

Date: 09/11/2024	MA: 3226.1	Title: ICP-AES with Modified Preparation Method and Analysis of Soils with Additional Laboratory QC
Method Source: SFAM01.1	Method: ICP-AES	
Matrix: Soil/Sediment		
Summary of Modification		
<p>The purpose of this modified analysis is to prepare samples by EPA Draft Method 3050C (see below) with additional modified LCS and Matrix Spikes and analyze for the scheduled target analytes by ICP-AES. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in the SOW listed in your current EPA agreement remain unchanged and in full force and effect.</p>		
I. Analyte Modifications		Not applicable <input checked="" type="checkbox"/>
II. Calibration and QC Requirements		Not applicable <input type="checkbox"/>
<p>The Laboratory shall:</p> <ul style="list-style-type: none"> • Use the Method Detection Limits determined for routine soil analyses (i.e., Method 3050B) to report the results for these analyses. The Laboratory is NOT required to perform an MDL study for Draft Method 3050C. • Prepare and analyze an additional Laboratory Control Sample (LCS) spiked at the CRQL. Percent Recovery limits do NOT apply to this LCS and no corrective actions are required. • Prepare a Matrix Spike spiked at two times the levels specified in the SOW. • Post-Digestion Spike requirements apply to the 2x Matrix Spike. • Post-Digestion Spike corrective actions apply to Sb. 		
III. Preparation and Method Modifications		Not applicable <input type="checkbox"/>
<p>The Laboratory shall:</p> <ul style="list-style-type: none"> • Prepare and analyze the sample by EPA Draft Method 3050C as follows: <ul style="list-style-type: none"> ○ Mix sample thoroughly and transfer 1.00 – 1.50 g to a digestion vessel. ○ Add 10 mL 1:1 HNO₃ and 5 mL 1:1 HCl, heat the sample at 95°C (±3°C) and reflux 10 -15 minutes. ○ Add 5 mL concentrated HNO₃ and reflux for 30 minutes at 95°C (±3°C), repeat until digestion complete. ○ Concentrate sample to 5 mL or reflux without boiling for 2 hours at 95°C (±3°C). ○ Cool sample, add 2mL water and 3 mL 30% H₂O₂. Heat at 95°C (±3°C) and add additional 1 mL aliquots of 30% H₂O₂ until effervescence is minimal. ○ Reduce volume to 5 mL or reflux without boiling for 2 hours at 95°C (±3°C). ○ Dilute to 100 mL with water, centrifuge or filter as necessary prior to analysis. • The same sample extracts can also be used for ICP-MS analysis. Separate Matrix Spikes and LCS will need to be prepared for both ICP-AES and ICP-MS analyses. • Analyze the samples starting at an initial 2x dilution. Subsequently, dilute samples as necessary to bring the analyte concentrations within the calibration range of the instrument per the SOW. • Verify that the dilution was adequate to reduce interferences to within the method calibration range. This can optionally be verified by visual verification of the spectrogram or by analysis of a serial dilution. There are other acceptable means to provide assurance, e.g. some software may automatically provide guidance to the analyst. • Method Blanks, both LCS, and all instrument QC are to be analyzed undiluted. 		

IV. Special Reporting Requirements	Not applicable <input type="checkbox"/>
<p>The Laboratory shall:</p> <ul style="list-style-type: none">• Ensure the SDG Narrative is updated as stated in the SOW, including any technical and administrative problems encountered and the resolution or corrective actions taken. These problems may include interference problems encountered during analysis, dilutions, re-analyses and/or re-preparations performed, and problems with the analysis of samples. Also include a discussion of any SOW Modified Analyses, including a copy of the approved modification form with the SDG Narrative.• Initial analysis data are reported with a dilution factor of 2.0 and a final volume of 100 mL, per the SOW.• Report the additional LCS as "LCSD" in the raw data and in the EDD with QCType "Laboratory_Control_Sample_Duplicate".• Ensure that up-to-date Interelement Correction Factors (IECs) are provided with the data package.	

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
As 189.042 {479}	<input checked="" type="checkbox"/>	1	Fe	-0.000064	0.000000	No
Ti 190.856 {477}	<input checked="" type="checkbox"/>	5	Mo	-0.002450	0.000000	No
			Co	0.002248	0.000000	No
			Ti	-0.000500	0.000000	No
			Mn	0.000370	0.000000	No
			V	-0.012340	0.000000	No
Pb 220.353 {453}	<input checked="" type="checkbox"/>	6	Mo	-0.001480	0.000000	No
			Al	-0.000075	0.000000	No
			Cu	0.001400	0.000000	No
			Fe	0.000030	0.000000	No
			Mn	0.000340	0.000000	No
			Ni	0.000630	0.000000	No
Se 196.090 {472}	<input checked="" type="checkbox"/>	3	Fe	-0.000308	0.000000	No
			Mn	0.000470	0.000000	No
			Co	-0.000630	0.000000	No
Sb 206.833 {463}	<input checked="" type="checkbox"/>	4	Cr	0.010700	0.000000	No
			V	-0.001168	0.000000	No
			Mo	-0.002850	0.000000	No
			Ni	-0.000440	0.000000	No
Al 396.152 { 85}	<input checked="" type="checkbox"/>	1	Mo	0.037230	0.000000	No
Ba 493.409 { 68}	<input type="checkbox"/>	None				
Be 234.861 {144}	<input checked="" type="checkbox"/>	3	Mo	-0.000320	0.000000	No
			Fe	0.000010	0.000000	No
			Mn	-0.000047	0.000000	No
Cd 214.438 {457}	<input checked="" type="checkbox"/>	1	Fe	0.000040	0.000000	No
Ca 373.690 { 90}	<input type="checkbox"/>	None				
Cr 267.716 {126}	<input checked="" type="checkbox"/>	1	Mn	0.000160	0.000000	No
Co 228.616 {448}	<input checked="" type="checkbox"/>	2	Ti	0.001840	0.000000	No
			Mo	-0.001230	0.000000	No
Cu 324.754 {104}	<input checked="" type="checkbox"/>	4	Co	-0.000796	0.000000	No
			Fe	-0.000100	0.000000	No
			Mn	0.000345	0.000000	No
			Ni	0.000895	0.000000	No
Fe 259.837 {130}	<input type="checkbox"/>	None				
Mn 257.610 {131}	<input checked="" type="checkbox"/>	1	Ni	0.000897	0.000000	No
Mg 279.079 {121}	<input type="checkbox"/>	None				
Ni 231.604 {446}	<input type="checkbox"/>	None				
Ag 328.068 {103}	<input checked="" type="checkbox"/>	3	Fe	-0.000100	0.000000	No
			Mn	0.000146	0.000000	No
			V	-0.000889	0.000000	No
Na 818.326 { 41}	<input type="checkbox"/>	None				
V 292.402 {115}	<input checked="" type="checkbox"/>	2	Mo	-0.008480	0.000000	No
			Cr	-0.002220	0.000000	No
Zn 206.200 {464}	<input type="checkbox"/>	None				
Zn 213.856 {158}	<input checked="" type="checkbox"/>	1	Ni	0.007280	0.000000	No
K 769.896 { 44}	<input type="checkbox"/>	None				
P 177.495 {490}	<input checked="" type="checkbox"/>	2	Ni	0.001640	0.000000	No
			Cu	-0.012530	0.000000	No
B 249.678 {135}	<input checked="" type="checkbox"/>	3	Co	0.002880	0.000000	No
			V	-0.002000	0.000000	No
			Fe	-0.001360	0.000000	No
Mo 202.030 {467}	<input type="checkbox"/>	None				
S 182.034 {485}	<input checked="" type="checkbox"/>	2	Mo	-0.008000	0.000000	No
			Mn	0.002700	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-In-fit?
Si 251.611 {134}	<input checked="" type="checkbox"/>	2	Mo	0.010520	0.000000	No
			Ti	0.005650	0.000000	No
Sn 189.989 {478}	<input type="checkbox"/>	None				
Ti 336.121 {100}	<input checked="" type="checkbox"/>	1	Ni	-0.001000	0.000000	No
Li 670.784 { 50}	<input type="checkbox"/>	None				
Y 224.306 {450}*	<input type="checkbox"/>	None				
Y 360.073 { 94}*	<input type="checkbox"/>	None				
Y 371.030 { 91}*	<input type="checkbox"/>	None				
Y 224.306 {150}*	<input type="checkbox"/>	None				
In 230.606 {446}*	<input type="checkbox"/>	None				
Sr 407.771 { 83}	<input type="checkbox"/>	None				



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 10/10/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 12:45
In Date: 10/09/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:40
Out Date: 10/10/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB132840

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P4311-01	MYDAX3	1	1.13	8.66	9.79	9.56	97.3	
P4311-02	MYDAX4	2	1.18	8.49	9.67	9.55	98.6	
P4311-03	MYDAX5	3	1.16	8.48	9.64	9.51	98.5	
P4311-04	MYDAX6	4	1.15	8.63	9.78	9.53	97.1	
P4311-05	MYDAX7	5	1.15	8.43	9.58	9.32	96.9	
P4311-06	MYDAX8	6	1.15	8.35	9.5	9.27	97.2	
P4311-07	MYDAX9	7	1.15	8.83	9.98	9.72	97.1	
P4311-08	MYDAY0	8	1.19	8.61	9.8	9.5	96.5	
P4311-09	MYDAY1	9	1.15	8.65	9.8	9.52	96.8	
P4311-10	MYDAY2	10	1.15	8.65	9.8	9.35	94.8	
P4311-11	MYDAY3	11	1.12	8.70	9.82	9.5	96.3	
P4311-12	MYDAY4	12	1.15	8.44	9.59	9.34	97.0	
P4311-13	MYDAY5	13	1.16	8.61	9.77	9.63	98.4	
P4311-14	MYDAY6	14	1.15	8.36	9.51	9.21	96.4	
P4311-15	MYDAY7	15	1.17	8.60	9.77	9.69	99.1	
P4311-16	MYDAY8	16	1.17	8.56	9.73	9.57	98.1	
P4311-17	MYDAY9	17	1.15	8.67	9.82	9.75	99.2	
P4311-18	MYDAZ0	18	1.18	8.40	9.58	9.32	96.9	
P4311-19	MYDAZ1	19	1.18	8.78	9.96	9.68	96.8	
P4311-20	MYDB06	20	1.18	8.42	9.6	9.44	98.1	
P4311-21	MYDB06D	21	1.18	8.42	9.6	9.44	98.1	
P4311-22	MYDB06S	22	1.18	8.42	9.6	9.44	98.1	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

132840

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-p4311 WorkList ID : 184272 Department : Wet-Chemistry Date : 10-09-2024 10:13:46

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4311-01	MYDAX3	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-02	MYDAX4	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-03	MYDAX5	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-04	MYDAX6	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-05	MYDAX7	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-06	MYDAX8	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-07	MYDAX9	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-08	MYDAY0	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-09	MYDAY1	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-10	MYDAY2	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-11	MYDAY3	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-12	MYDAY4	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-13	MYDAY5	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-14	MYDAY6	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-15	MYDAY7	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-16	MYDAY8	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-17	MYDAY9	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-18	MYDAZ0	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-19	MYDAZ1	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-20	MYDB06	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO
P4311-21	MYDB06D	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO

Date/Time 10/09/24 12:20

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 10/09/24

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

12:50

10/09/24

12:50

WORKLIST(Hardcopy Internal Chain)

✓ 132840

WorkList Name : %1-p4311 WorkList ID : 184272 Department : Wet-Chemistry Date : 10-09-2024 10:13:46

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4311-22	MYDB06S	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/20/2024	Chemtech -SO

Date/Time 10/09/24 12:12:00
Raw Sample Received by: SDWLC
Raw Sample Relinquished by: SDWLC

Date/Time 10/09/24 12:15:00
Raw Sample Received by: SDWLC
Raw Sample Relinquished by: SDWLC