

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.: MYDA73
 SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method			
		ICP-AES	ICP-MS	Mercury	Cyanide
MYDA73	P4298-01	X	X		
MYDA74	P4298-02	X	X		
MYDA75	P4298-03	X	X		
MYDA76	P4298-04	X	X		
MYDA77	P4298-05	X	X		
MYDA78	P4298-06	X	X		
MYDA79	P4298-07	X	X		
MYDA80	P4298-08	X	X		
MYDA81	P4298-09	X	X		
MYDA82	P4298-10	X	X		
MYDA83	P4298-11	X	X		
MYDA84	P4298-12	X	X		
MYDA85	P4298-13	X	X		
MYDA86	P4298-14	X	X		
MYDA87	P4298-15	X	X		
MYDA88	P4298-16	X	X		
MYDA88D	P4298-17	X	X		
MYDA88S	P4298-18	X	X		
MYDA89	P4298-19	X	X		
MYDA90	P4298-20	X	X		
MYDA91	P4298-21	X	X		
MYDA92	P4298-22	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: _____

USEPA CLP COC (LAB COPY)

Date Shipped: 10/3/2024

Carrier Name: FedEx

Airbill No: 7790 0057 3333

CHAIN OF CUSTODY RECORD

Case #: 51772

Cooler #: 51772-073

68HERH20D0011

SDG # MYDA73

No: 9-061924-140935-0073

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
90376-D-0007-01	MYDA62	Soil/ REAC	Grab	ICP-AES 11(21)	9-5020 (None) (1)	90376-D-0007	06/18/2024 14:40	
90376-E-0003-01	MYDA63	Soil/ REAC	Grab	ICP-AES 11(21)	9-5021 (None) (1)	90376-E-0003	06/18/2024 14:58	
90376-D-0012-01	MYDA64	Soil/ REAC	Grab	ICP-AES 11(21)	9-5022 (None) (1)	90376-D-0012	06/18/2024 14:45	
90376-D-0005-01	MYDA65	Soil/ REAC	Grab	ICP-AES 11(21)	9-5023 (None) (1)	90376-D-0005	06/18/2024 14:46	
90376-E-0008-03	MYDA66	Soil/ REAC	Grab	ICP-AES 11(21)	9-5024 (None) (1)	90376-E-0008	06/18/2024 14:48	✓
90376-D-0009-01	MYDA67	Soil/ REAC	Grab	ICP-AES 11(21)	9-5025 (None) (1)	90376-D-0009	06/18/2024 14:50	
90376-D-0011-01	MYDA68	Soil/ REAC	Grab	ICP-AES 11(21)	9-5026 (None) (1)	90376-D-0011	06/18/2024 14:52	
90376-D-0001-01	MYDA69	Soil/ REAC	Grab	ICP-AES 11(21)	9-5027 (None) (1)	90376-D-0001	06/18/2024 14:53	
90376-F-0009-01	MYDA70	Soil/ REAC	Grab	ICP-AES 11(21)	9-5028 (None) (1)	90376-F-0009	06/18/2024 14:39	
90376-D-0008-01	MYDA71	Soil/ REAC	Grab	ICP-AES 11(21)	9-5029 (None) (1)	90376-D-0008	06/18/2024 15:25	
90377-E-0001-01	MYDA72	Soil/ REAC	Grab	ICP-AES 11(21)	9-5030 (None) (1)	90377-E-0001	06/18/2024 15:25	
90377-C-0008-01	MYDA73	Soil/ REAC	Grab	ICP-AES 11(21)	9-5031 (None) (1)	90377-C-0008	06/18/2024 14:25	✓
90377-B-0002-01	MYDA74	Soil/ REAC	Grab	ICP-AES 11(21)	9-5032 (None) (1)	90377-B-0002	06/18/2024 16:00	✓
90377-A-0003-02	MYDA75	Soil/ REAC	Grab	ICP-AES 11(21)	9-5033 (None) (1)	90377-A-0003	06/18/2024 15:57	✓
90377-A-0003-01	MYDA76	Soil/ REAC	Grab	ICP-AES 11(21)	9-5034 (None) (1)	90377-A-0003	06/18/2024 15:56	✓
90377-A-S0001-01	MYDA77	Soil/ REAC	Grab	ICP-AES 11(21)	9-5035 (None) (1)	90377-A-S0001	06/18/2024 15:52	✓
90377-A-0010-01	MYDA78	Soil/ REAC	Grab	ICP-AES 11(21)	9-5036 (None) (1)	90377-A-0010	06/18/2024 15:50	✓
90377-E-0002-01	MYDA79	Soil/ REAC	Grab	ICP-AES 11(21)	9-5037 (None) (1)	90377-E-0002	06/18/2024 15:43	✓

Shipment for Case Complete? N

Sample(s) to be used for Lab QC: 90376-E-0008-03 Tag 9-5024 - 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

Samples Transferred From Chain of Custody #

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
SHP TO LAB	Cheri Harmon Weston	10/3/24 @ 1600		9:39 10-4-24	IR-Gown #1 20.3 Custody Seal Intact no temp Blank no TCE

No: 9-061924-140935-0073

Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed

Lab Contact: Mohammad Ahmed
Lab Phone: 908-728-3151

Lab Contact: Mohammad Ahmed
Lab Phone: 908-728-3151

[illegible]Shipment for Case Complete? ☐ N[illegible]

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,Te,Ti,V,Zn ICP-MS 11+ Metals: Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Te,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
SHIP TO LAB	<i>Adrian Harrison WESTON</i>	10/13/24 1600	<i>[Signature]</i>	939 10-14-24	IR-Gentle 1 20.3° Custody Seal Intact
					No Temp Blank
					No ICE

USEPA CLP COC (LAB COPY)

CHAIN OF CUSTODY RECORD

No: 9-061924-140938-0074

Date Shipped: 10/3/2024

Carrier Name: FedEx

Airbill No: 7790 0057 3653

Case #: 51772

Cooler #: 51772-074

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
90377-E-0004-01	MYDA87	Soil/ REAC	Grab	ICP-AES 11(21)	9-5045 (None) (1)	90377-E-0004	06/18/2024 15:21	15
90377-C-0004-03	MYDA88	Soil/ REAC	Grab	ICP-AES 11(21)	9-5046 (None) (1)	90377-C-0004	06/18/2024 15:19	✓ 15
90377-D-0004-01	MYDA89	Soil/ REAC	Grab	ICP-AES 11(21)	9-5047 (None) (1)	90377-D-0004	06/18/2024 14:50	15
90377-D-0005-01	MYDA90	Soil/ REAC	Grab	ICP-AES 11(21)	9-5048 (None) (1)	90377-D-0005	06/18/2024 14:47	14
90377-D-0008-01	MYDA91	Soil/ REAC	Grab	ICP-AES 11(21)	9-5049 (None) (1)	90377-D-0008	06/18/2024 14:43	14
90377-D-0001-01	MYDA92	Soil/ REAC	Grab	ICP-AES 11(21)	9-5050 (None) (1)	90377-D-0001	06/18/2024 14:39	20
90377-D-0006-01	MYDA93	Soil/ REAC	Grab	ICP-AES 11(21)	9-5051 (None) (1)	90377-D-0006	06/18/2024 14:35	
90377-D-0003-01	MYDA94	Soil/ REAC	Grab	ICP-AES 11(21)	9-5052 (None) (1)	90377-D-0003	06/18/2024 14:34	
90377-D-0007-01	MYDA95	Soil/ REAC	Grab	ICP-AES 11(21)	9-5053 (None) (1)	90377-D-0007	06/18/2024 14:31	
90377-D-0002-01	MYDA96	Soil/ REAC	Grab	ICP-AES 11(21)	9-5054 (None) (1)	90377-D-0002	06/18/2024 14:29	
90377-E-0007-01	MYDA97	Soil/ REAC	Grab	ICP-AES 11(21)	9-5055 (None) (1)	90377-E-0007	06/18/2024 15:30	
90377-A-0005-01	MYDA98	Soil/ REAC	Grab	ICP-AES 11(21)	9-5056 (None) (1)	90377-A-0005	06/18/2024 16:40	
90377-C-0005-01	MYDA99	Soil/ ERT	Grab	ICP-AES 11(21)	9-5057 (None) (1)	90377-C-0005	06/18/2024 17:08	
90377-C-0002-01	MYDA00	Soil/ REAC	Grab	ICP-AES 11(21)	9-5058 (None) (1)	90377-C-0002	06/18/2024 17:06	
90377-C-0007-01	MYDA01	Soil/ REAC	Grab	ICP-AES 11(21)	9-5059 (None) (1)	90377-C-0007	06/18/2024 17:03	
90377-C-0003-01	MYDA02	Soil/ ERT	Grab	ICP-AES 11(21)	9-5060 (None) (1)	90377-C-0003	06/18/2024 17:03	
90377-B-0008-01	MYDA03	Soil/ REAC	Grab	ICP-AES 11(21)	9-5061 (None) (1)	90377-B-0008	06/18/2024 16:58	
90377-B-0003-01	MYDA04	Soil/ REAC	Grab	ICP-AES 11(21)	9-5062 (None) (1)	90377-B-0003	06/18/2024 16:57	
90377-A-0001-01	MYDA05	Soil/ ERT	Grab	ICP-AES 11(21)	9-5063 (None) (1)	90377-A-0001	06/18/2024 16:56	

Sample(s) to be used for Lab QC: 90377-C-0004-03 Tag 9-5046 - 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, Si, Ti, V, Zn
Cu, Ni, Pb, Sb, Se, Ti, V, Zn

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

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
SHIP TO LAB	Oliver Herman WESTON	10/3/24 @ 1600	OR	9:39 10-4-24	216 Custody Seal Intact No Tag Blk No TCE

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page <u>1</u> of <u>2</u>
Received By (Print Name) <u>Assawa Perre</u>		Log-in Date 10/4/2024
Received By (Signature) <u>[Signature]</u>		
Case Number 51772	SDG No. MYDA73	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>779000573333</u> <u>1</u>
6. Shipping Container Temperature Indicator Bottle	Absent
7. Shipping Container Temperature	<u>20.3</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	MYDA73	N/A	9-5031	P4298-01	Intact
2	MYDA74	N/A	9-5032	P4298-02	Intact
3	MYDA75	N/A	9-5033	P4298-03	Intact
4	MYDA76	N/A	9-5034	P4298-04	Intact
5	MYDA77	N/A	9-5035	P4298-05	Intact
6	MYDA78	N/A	9-5036	P4298-06	Intact
7	MYDA79	N/A	9-5037	P4298-07	Intact
8	MYDA80	N/A	9-5038	P4298-08	Intact
9	MYDA81	N/A	9-5039	P4298-09	Intact
10	MYDA82	N/A	9-5040	P4298-10	Intact
11	MYDA83	N/A	9-5041	P4298-11	Intact
12	MYDA84	N/A	9-5042	P4298-12	Intact
13	MYDA85	N/A	9-5043	P4298-13	Intact
14	MYDA86	N/A	9-5044	P4298-14	Intact
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
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-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC	Page <u>2</u> of <u>2</u>
Received By (Print Name) <u>Cassandra Rene</u>	Log-in Date 10/4/2024
Received By (Signature) <u>[Signature]</u>	
Case Number 51772	SDG No. MYDA73 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>779000573653</u> <u>2</u>
6. Shipping Container Temperature Indicator Bottle	Absent
7. Shipping Container Temperature	<u>21.6</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	MYDA87	N/A	9-5045	P4298-15	Intact
2	MYDA88	N/A	9-5046	P4298-16	Intact
3	MYDA88D	N/A	9-5046	P4298-17	Intact
4	MYDA88S	N/A	9-5046	P4298-18	Intact
5	MYDA89	N/A	9-5047	P4298-19	Intact
6	MYDA90	N/A	9-5048	P4298-20	Intact
7	MYDA91	N/A	9-5049	P4298-21	Intact
8	MYDA92	N/A	9-5050	P4298-22	Intact
9	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
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.	MYDA73
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	4	✓	
3. Sample Log-In Sheet (DC-1)	5	6	✓	
4. CSF Inventory Sheet (DC-2)	7	9	✓	
5. SDG Narrative	10	19	✓	
6. Communication Logs	NA	NA	✓	
7. Percent Solids Log	20	22	✓	
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	23	42	✓	
9. Instrument raw data by instrument in analysis order	43	922	✓	
Other Data				
10. Standard and Reagent Preparation Logs	923	1074	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	1075	1076	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	1077	1099	✓	
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	1100	1119	✓	
18. Instrument raw data by instrument in analysis order	1120	2805	✓	
Other Data				
19. Standard and Reagent Preparation Logs	2806	2946	✓	
20. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	2947	2948	✓	
21. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	2949	2965	✓	
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 2)

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

(Signature)

(Print Name & Title)

(Date)

(Signature)

(Print Name & Title)

(Date)

PAGE NOs:		CHECK	
FROM	TO	LAB	REGION
2966	2967	✓	
NA	NA	✓	
2968	2970	✓	
NA	NA	✓	
2971	2974	✓	
NA	NA	✓	



**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # MYDA73

CASE # 51772

CONTRACT # 68HERH20D0011

SOW# SFAM01.1

LAB NAME: Alliance Technical Group, LLC

LAB CODE: ACE

LAB ORDER ID # P4298

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: 20.3°C, 21.6°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.



**284 Sheffield Street
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 MYDA73 For Antimony:

If C = 0.0083542 ppm

V_f = 100 ml

W = 1.43g

S = 0.977(97.7/100)

DF = 2

$$\begin{aligned} \text{Concentration (mg/kg)} &= 0.0083542 \times \frac{100}{1.43 \times 0.977} \times 2 \\ &= 1.18380 \text{ mg/kg} \\ &= 1.2 \text{ mg/kg (Reported Result with Signification)} \end{aligned}$$

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)



**284 Sheffield Street
Mountainside, NJ 07092**

$S = \% \text{ Solids} / 100$ (Fraction of Percent Solids)

DF = Dilution Factor

Example Calculation For Sample MYDA73 For Antimony :

If C = 2.44 ppb

Vf = 500 ml

W = 1.43 g

S = 0.977(97.7/100)

DF = 1

$$\text{Concentration (mg/kg)} = 2.44 \times \frac{500}{1.43 \times 0.977} \times 1 / 1000$$

$$= 0.87323 \text{ mg/kg}$$

$$= 0.87 \text{ mg/kg (Reported Result with Signification)}$$

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. . MS Spike sample (MYDA88SRE) did meet requirements except for Arsenic, Silver. . MS Spike sample (MYDA88S) did meet requirements except for Copper, Vanadium. Duplicate sample did meet requirements except for Cobalt, Zinc. 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
Antimony	159Tb
Arsenic	89Y
Barium	159Tb
Beryllium	6Li
Cadmium	159Tb
Chromium	45Sc



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Mountainside, NJ 07092**

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: 09/04/2024	MA: 3225.0	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. ○ 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: 09/04/2024	MA: 3226.0	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. ○ 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 interferents 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: 10/8/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 12:25
In Date: 10/07/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:20
Out Date: 10/08/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB132797

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
P4298-01	MYDA73	1	1.15	8.65	9.8	9.6	97.7	
P4298-02	MYDA74	2	1.16	8.40	9.56	9.39	98.0	
P4298-03	MYDA75	3	1.15	8.42	9.57	9.38	97.7	
P4298-04	MYDA76	4	1.16	8.80	9.96	9.77	97.8	
P4298-05	MYDA77	5	1.14	8.58	9.72	9.5	97.4	
P4298-06	MYDA78	6	1.15	8.83	9.98	9.75	97.4	
P4298-07	MYDA79	7	1.15	8.33	9.48	9.35	98.4	
P4298-08	MYDA80	8	1.14	8.81	9.95	9.77	98.0	
P4298-09	MYDA81	9	1.15	8.34	9.49	9.28	97.5	
P4298-10	MYDA82	10	1.16	8.80	9.96	9.77	97.8	
P4298-11	MYDA83	11	1.18	8.73	9.91	9.74	98.1	
P4298-12	MYDA84	12	1.18	8.41	9.59	9.4	97.7	
P4298-13	MYDA85	13	1.18	8.61	9.79	9.66	98.5	
P4298-14	MYDA86	14	1.14	8.67	9.81	9.7	98.7	
P4298-15	MYDA87	15	1.18	8.64	9.82	9.65	98.0	
P4298-16	MYDA88	16	1.17	8.53	9.7	9.55	98.2	
P4298-17	MYDA88D	17	1.17	8.53	9.7	9.55	98.2	
P4298-18	MYDA88S	18	1.17	8.53	9.7	9.55	98.2	
P4298-19	MYDA89	19	1.15	8.80	9.95	9.74	97.6	
P4298-20	MYDA90	20	1.18	8.61	9.79	9.62	98.0	
P4298-21	MYDA91	21	1.18	8.43	9.61	9.5	98.7	
P4298-22	MYDA92	22	1.18	8.54	9.72	9.51	97.5	

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

WORKLIST(Hardcopy Internal Chain)

132797

WorkList Name : %1-p4298

WorkList ID : 184184

Department : Wet-Chemistry

Date : 10-07-2024 08:46:14

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4298-01	MYDA73	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-02	MYDA74	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-03	MYDA75	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-04	MYDA76	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-05	MYDA77	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-06	MYDA78	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-07	MYDA79	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-08	MYDA80	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-09	MYDA81	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-10	MYDA82	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-11	MYDA83	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-12	MYDA84	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-13	MYDA85	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-14	MYDA86	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-15	MYDA87	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-16	MYDA88	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-17	MYDA88D	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-18	MYDA88S	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-19	MYDA89	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-20	MYDA90	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO
P4298-21	MYDA91	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO

Date/Time 10/07/24 12:00

Raw Sample Received by: 10/07/24

Raw Sample Relinquished by: 10/07/24

Date/Time 10/07/24

Raw Sample Received by: 10/07/24

Raw Sample Relinquished by: 10/07/24

WORKLIST(Hardcopy Internal Chain)

NR 132797

WorkList Name : %1-p4298 WorkList ID : 184184 Department : Wet-Chemistry Date : 10-07-2024 08:46:14

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4298-22	MYDA92	Solid	Percent Solids	Cool 4 deg C	USEP01	A11	06/18/2024	Chemtech -SO

Date/Time 10/07/24 12:00
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

Date/Time 10/07/24 12:30
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]