SDG COVER PAGE

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51850 MA No.: SDG No.: MC0B82

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MC0B82	P4730-01	X	X	X	
MC0B83	P4730-02		X	X	
MC0B84	P4730-03		X	X	
MC0B86	P4730-04	X	X	X	
MC0B86D	P4730-05	X	X	X	
MC0B86S	P4730-06	X	X	X	
MC0B88	P4730-07	X	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 # MC0B82

USEPA CLP COC (LAB COPY)

DateShipped: 11/5/2024

CarrierName: FedEx

AirbillNo: 7795 6356 ~~5653~~ 5664

CHAIN OF CUSTODY RECORD

Case #: 51850

Case Complete: True

cooler 2 of 2

No: CLP_Ship1_1124

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
SP1166_1124	C0B81	Groundwater/ Versar	Grab	TVOA(7)	1785 (HCl pH <2) (4)	SP-1166	11/05/2024 09:15	
SP120_1124	C0B82	Groundwater/ Versar	Grab	TVOA(7), 1,4-Diox SIM(7), 1,4-Diox(7)	1786 (HCl pH <2), 1788 (Ice), 1790 (Ice) (6)	SP-120	11/05/2024 10:00	✓
SP1720_1124	C0B86	Groundwater/ Versar	Grab	TVOA(7), 1,4-Diox SIM(7), 1,4-Diox(7)	1794 (HCl pH <2), 1796 (Ice), 1798 (Ice) (18)	SP-1720	11/05/2024 08:00	
SP902_1124	C0B87	Groundwater/ Versar	Grab	TVOA(7)	1799 (HCl pH <2) (4)	SP-902	11/05/2024 09:30	
SP91720_1124	C0B88	Groundwater/ Versar	Grab	TVOA(7), 1,4-Diox SIM(7), 1,4-Diox(7)	1800 (HCl pH <2), 1802 (Ice), 1804 (Ice) (6)	SP-1720	11/05/2024 08:00	✓
TB001_1124	C0B89	Blank/ Versar	Grab	TVOA(7)	1805 (HCl pH <2) (4)	BLANK	11/05/2024 08:00	
SP120_1124	MC0B82	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7), ICP-AES HARD(7)	1787 (HNO3 pH <2), 1789 (HNO3 pH <2) (2)	SP-120	11/05/2024 10:00	
SP1330_1124	MC0B83	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7)	1791 (HNO3 pH <2) (1)	SP-1330	11/05/2024 09:05	
SP1340_1124	MC0B84	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7)	1792 (HNO3 pH <2) (1)	SP-1340	11/05/2024 09:00	
SP1720_1124	MC0B86	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7), ICP-AES HARD(7)	1795 (HNO3 pH <2), 1797 (HNO3 pH <2) (2)	SP-1720	11/05/2024 08:00	
SP91720_1124	MC0B88	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7), ICP-AES HARD(7)	1801 (HNO3 pH <2), 1803 (HNO3 pH <2) (2)	SP-1720	11/05/2024 08:00	

Sample(s) to be used for Lab QC: SP1720_1124 Tag 1794, SP1720_1124 Tag 1796, SP1720_1124 Tag 1798, SP1720_1124 Tag 1795, SP1720_1124 Tag 1797

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: TVOA=CLP Volatiles (Trace), 1,4-Diox SIM=CLP 1,4-Dioxane-SIM, 1,4-Diox=CLP 1,4-Dioxane Full, ICP-MS MTL + Hg=CLP ICP-MS Metals (+11) + Mercury, ICP-AES HARD=CLP ICP-AES 1-4 Metals + Hardness (TAT 14 Days)

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
Samples for analysis	Versar	11/5/24 12:20		11-6-24 1015	3.1°C IR gun #4
					custody seals intact
					Temp Blk present

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 1
Received By (Print Name) GOASE NEGUON		Log-in Date **11/6/2024**
Received By (Signature)		
Case Number 51850	SDG No. MC0B82	MA No. N/A

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	n/a
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	779563565664 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	3.1 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	11/06/2024
12.Time Received	10:15

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MC0B82	1.6	1787,89	P4730-01	Intact
2	MC0B83	1.6	1791	P4730-02	Intact
3	MC0B84	1.6	1792	P4730-03	Intact
4	MC0B86	1.6	1795,97	P4730-04	Intact
5	MC0B86D	1.6	1795,97	P4730-05	Intact
6	MC0B86S	1.6	1795,97	P4730-06	Intact
7	MC0B88	1.6	1801,03	P4730-07	Intact
8	N/A	N/A	N/A	N/A	N/A
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		Logbook No.	N/A
Date	11/6/24	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.	**51850**	SDG NO.	**MC0B82**
MA NO.		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: FROM	PAGE NOs: TO	CHECK LAB	CHECK REGION
1 . SDG Cover Page	1	1	✓	
2 . Traffic Report/Chain of Custody Record(s)	2	2	✓	
3 . Sample Log-In Sheet (DC-1)	3	3	✓	
4 . CSF Inventory Sheet (DC-2)	4	6	✓	
5 . SDG Narrative	7	11	✓	
6 . Communication Logs	NA	NA	✓	
7 . Percent Solids Log	NA	NA	✓	
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	12	14	✓	
9 . Instrument raw data by instrument in analysis order	15	435	✓	
Other Data				
10 . Standard and Reagent Preparation Logs	436	571	✓	
11 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	572	573	✓	
12 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	574	585	✓	
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	586	590	✓	
18 . Instrument raw data by instrument in analysis order	591	2096	✓	
Other Data				
19 . Standard and Reagent Preparation Logs	2097	2236	✓	
20 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	2237	2238	✓	
21 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	2239	2257	✓	
22 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK 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	2258	2262	✓	
27. Instrument raw data by instrument in analysis order	2263	2264	✓	
Other Data				
28. Standard and Reagent Preparation Logs	2265	2296	✓	
29. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	2297	2298	✓	
30. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	2299	2300	✓	
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	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
Additional				
44. EPA Shipping/Receiving Documents				
Airbill (No. of Shipments 1)	2301	2301	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	2302	2303	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	2304	2306	✓	
47. Other Records and related Communication Logs (describe or list)				
	NA	NA	✓	

48. Comments:

Completed by: (CLP Lab)		Nimisha Pandya, Document Control Officer	
	(Signature)	(Print Name & Title)	(Date)
Audited by: (EPA)			
	(Signature)	(Print Name & Title)	(Date)

284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MC0B82
CASE # 51850
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID #P4730

A. Number of Samples and Date of Receipt

05 Water samples were delivered to the laboratory intact on 11/06/2024.

B. Parameters

Test requested for Metals CLP4 =, Calcium, Magnesium, Hardness Total, Hg.

Test requested for Metals CLP MS = 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**: Presence/**Absence

Cooler: 3.1^{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.

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

G. Calculation:

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 MC0B82 For Calcium:

If C = 84.31627ppm
Vf = 50 ml
Vi = 50 ml
DF = 1

$$\text{Concentration or Result (µg/L)} = 84.31627 \times \frac{50}{50} \times 1 \times 1000$$

$$= 84316.27 \text{ µg/L}$$

$$= 84000 \text{ µg/L (Reported Result with Signification)}$$

Calculation for ICP-MS Water Sample:

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

Where,

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 For Sample MC0B82 For Arsenic:

If C = 0.30 ppb
Vf = 50 ml

Vi = 50 ml
DF = 1

Concentration or Result (µg/L) = $0.30 \times \frac{50}{50} \times 1$

= 0.30 µg/L

= 0.30 µg/L (Reported Result with Signification)

Calculation for Hg Water Sample:

Concentration or Result (µg/L) = C x DF

Where,
C = Instrument response in µg/L from the calibration curve.
DF = Dilution Factor

Example Calculation:

If C = 4.3309 ppb
DF = 1

Concentration or Result (µg/L) = 4.3309 x 1

= 4.3309 µg/L

= 4.3 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.

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Internal Standard Association for ICP-MS analysis.

Target Analyte	Associated Internal Standard
Aluminum	45Sc
Antimony	159Tb
Arsenic	89Y
Barium	159Tb
Beryllium	6Li
Cadmium	159Tb
Calcium	45Sc
Chromium	45Sc
Cobalt	45Sc
Copper	45Sc
Iron	45Sc
Lead	209Bi
Magnesium	45Sc
Manganese	45Sc
Nickel	45Sc
Potassium	45Sc
Selenium	89Y
Silver	159Tb
Sodium	45Sc
Thallium	209Bi
Vanadium	45Sc
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