SDG COVER PAGE

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

Lab Code: ACE Case No.: 51943 MA No.: SDG No.: MC0B99

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MC0B99	Q1085-01	X	X	X	
MC0BA0	Q1085-02		X	X	
MC0BA1	Q1085-03		X	X	
MC0BA2	Q1085-04	X	X	X	
MC0BA2D	Q1085-05	X	X	X	
MC0BA2S	Q1085-06	X	X	X	
MC0BA4	Q1085-07	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 # MC0B99

USEPA CLP COC (LAB COPY)

DateShipped: 1/14/2025

CarrierName: FedEx

AirbillNo: 7712 4245 ~~2723~~ 2734

CHAIN OF CUSTODY RECORD

Case #: 51943

Case Complete: True

cooler 2 of 2

No: CLP_51943_Ship1

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_0125	C0B98	Groundwater/ Versar	Grab	TVOA(7)	1826 (HCl pH <2) (4)	SP-1166	01/14/2025 09:45	
SP120_0125	C0B99	Groundwater/ Versar	Grab	TVOA(7), 1,4-Diox SIM(7), 1,4-Diox(7)	1827 (HCl pH <2), 1829 (Ice), 1831 (Ice) (6)	SP-120	01/14/2025 10:30	
SP1720_0125	C0BA2	Groundwater/ Versar	Grab	TVOA(7), 1,4-Diox SIM(7), 1,4-Diox(7)	1834 (HCl pH <2), 1836 (Ice), 1838 (Ice) (18)	SP-1720	01/14/2025 09:00	
SP902_0125	C0BA3	Groundwater/ Versar	Grab	TVOA(7)	1839 (HCl pH <2) (4)	SP-902	01/14/2025 09:55	
SP91720_0125	C0BA4	Groundwater/ Versar	Grab	TVOA(7), 1,4-Diox SIM(7), 1,4-Diox(7)	1840 (HCl pH <2), 1842 (Ice), 1844 (Ice) (6)	SP-1720	01/14/2025 09:00	
TB001_0125	C0BA5	Blank/ Versar	Grab	TVOA(7)	1845 (HCl pH <2) (4)	BLANK	01/14/2025 08:00	
SP120_0125	MC0B99	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7), ICP-AES HARD(7)	1828 (HNO3 pH <2), 1830 (HNO3 pH <2) (2)	SP-120	01/14/2025 10:30	
SP1330_0125	MC0BA0	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7)	1832 (HNO3 pH <2) (1)	SP-1330	01/14/2025 09:35	
SP1340_0125	MC0BA1	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7)	1833 (HNO3 pH <2) (1)	SP-1340	01/14/2025 09:30	
SP1720_0125	MC0BA2	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7), ICP-AES HARD(7)	1835 (HNO3 pH <2), 1837 (HNO3 pH <2) (2)	SP-1720	01/14/2025 09:00	
SP91720_0125	MC0BA4	Groundwater/ Versar	Grab	ICP-MS MTL + Hg(7), ICP-AES HARD(7)	1841 (HNO3 pH <2), 1843 (HNO3 pH <2) (2)	SP-1720	01/14/2025 09:00	

Sample(s) to be used for Lab QC: SP1720_0125 Tag 1834, SP1720_0125 Tag 1836, SP1720_0125 Tag 1838, SP1720_0125 Tag 1835, SP1720_0125 Tag 1837

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	1/14/24 1230		1-15-25 1003	IR Gun #1
					Temp 3.1C
					Temp blank present
					Custody Seal intact

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 1
Received By (Print Name) [signature]		Log-in Date **1/15/2025**
Received By (Signature)		
Case Number 51943	SDG No. MC0B99	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.	771242452734 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	01/15/2025
12.Time Received	10:03

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MC0B99	1.3	1828,30	Q1085-01	Intact
2	MC0BA0	1.3	1832	Q1085-02	Intact
3	MC0BA1	1.3	1833	Q1085-03	Intact
4	MC0BA2	1.3	1835,37	Q1085-04	Intact
5	MC0BA2D	1.3	1835,37	Q1085-05	Intact
6	MC0BA2S	1.3	1835,37	Q1085-06	Intact
7	MC0BA4	1.3	1841,43	Q1085-07	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	[signature]	Logbook No.	N/A
Date	1/15/25	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.	**51943**	SDG NO.	**MC0B99**
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	12	15	✓	
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	16	18	✓	
9 . Instrument raw data by instrument in analysis order	19	97	✓	
Other Data				
10 . Standard and Reagent Preparation Logs	98	231	✓	
11 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	232	233	✓	
12 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	234	235	✓	
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	236	240	✓	
18 . Instrument raw data by instrument in analysis order	241	1004	✓	
Other Data				
19 . Standard and Reagent Preparation Logs	1005	1146	✓	
20 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	1147	1148	✓	
21 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	1149	1155	✓	
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	1156	1160	✓	
27. Instrument raw data by instrument in analysis order	1161	1162	✓	
Other Data				
28. Standard and Reagent Preparation Logs	1163	1189	✓	
29. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	1190	1191	✓	
30. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	1192	1193	✓	
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)	1194	1194	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	1195	1196	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	1197	1199	✓	
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 # MC0B99
CASE # 51943
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # Q1085

A. Number of Samples and Date of Receipt

05 Water samples were delivered to the laboratory intact on 01/15/2025.

B. Parameters

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

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.

Issue 2: Hardness is not scheduled for this Case, but the COC analysis key indicates that hardness is required.

Issue 3: A 7-day TAT is scheduled for this Case, but the COC analysis key indicates a 14-day TAT.

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: As per Region 3, there are nine aqueous samples scheduled for ICP-AES 1-4 Metals; the nine samples are to be analyzed for Ca, Mg, and hardness. Hardness will be scheduled for the nine samples. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Resolution 3: As per Region 3, please make note of the issue in the SDG Narrative and proceed with the analysis of the samples as scheduled (7-Day TAT).

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.

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 MC0B99 For Calcium:

If C = 68.10030 ppm
Vf = 50 ml
Vi = 50 ml
DF = 1

$$\text{Concentration or Result (µg/L)} = 68.10030 \times \frac{50}{50} \times 1 \times 1000$$

$$= 68100.30 \text{ µg/L}$$

= 68000 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 MC0B99 For Arsenic:

If C = 0.35 ppb
Vf = 50 ml
Vi = 50 ml
DF = 1

$$\text{Concentration or Result (µg/L)} = 0.35 \times \frac{50}{50} \times 1$$

$$= 0.35 \text{ µg/L}$$

$$= 0.35 \text{ µg/L (Reported Result with Signification)}$$

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 For Sample MC0B99:

If C = 0.0534 ppb
DF = 1

$$\text{Concentration or Result (µg/L)} = 0.0534 \times 1$$

$$= 0.0534 \text{ µg/L}$$

$$= 0.053 \text{ µg/L (Reported Result with Signification)}$$

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.

284 Sheffield Street
Mountainside, NJ 07092

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

284 Sheffield Street
Mountainside, NJ 07092

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

From: DeBerry, Eric <Eric.Deberry@gdit.com>
Sent: Wednesday, January 15, 2025 5:10 PM
To: Deepak Parmar; Sohil Jodhani; Mohammad Ahmed
Cc: Bauer, Heather E; Johnson, Matthew; Burman, Jarmael
Subject: Region 03 | Case 51943 | Lab ACE | Issue Documentation | FINAL

Good afternoon ACE,

Scheduling
Issue 1: Hardness is not scheduled for this Case, but the COC analysis key indicates that hardness is required.

Resolution 1: As per Region 3, there are nine aqueous samples scheduled for ICP-AES 1-4 Metals; the nine samples are to be analyzed for Ca, Mg, and hardness. Hardness will be scheduled for the nine samples. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Discrepancies with tags, jars, and/or COC
Issue 2: A 7-day TAT is scheduled for this Case, but the COC analysis key indicates a 14-day TAT.

Resolution 2: As per Region 3, please make note of the issue in the SDG Narrative and proceed with the analysis of the samples as scheduled (7-Day TAT).

Insufficient/inappropriate designation of laboratory QC
Issue 3: Laboratory QC is not scheduled for TVOA or 1,4-Dioxane for Case 51943, however the COC lists a QC sample for both TVOA and 1,4-Dioxane.

Resolution 3: As per SOW SFAM01.1 Exhibit A, Section 5.5.4.2, note the issue in the SDG Narrative and proceed with the analysis of the samples based on the scheduling instructions.

Please note that the laboratory may contact the appropriate CLP PM should any defects need to be waived for this issue.

Thanks,

Eric DeBerry

Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 1 & 3

Under contract to the EPA

T: (571) 833-5166

Eric.DeBerry@GDIT.com
15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com

From: Burman, Jarmael <Burman.Jarmael@epa.gov>
Sent: Wednesday, January 15, 2025 4:10 PM
To: DeBerry, Eric <Eric.Deberry@gdit.com>
Cc: Bauer, Heather E <Heather.Bauer@gdit.com>; Johnson, Matthew <Matthew.Johnson32@gdit.com>
Subject: RE: Region 03 | Case 51943 | Lab ACE | Issue Multiple

From: DeBerry, Eric <Eric.Deberry@gdit.com>
Sent: Wednesday, January 15, 2025 3:39 PM
To: Burman, Jarmael <Burman.Jarmael@epa.gov>
Cc: Bauer, Heather E <Heather.Bauer@gdit.com>; Johnson, Matthew <Matthew.Johnson32@gdit.com>
Subject: Region 03 | Case 51943 | Lab ACE | Issue Multiple

Good afternoon Jay, Please advise on issue 1 and 2 from ACE, please note that issue 3 was able to be resolved using the SOW

Discrepancies with tags, jars, and/or COC

Issue 1 Hardness is not scheduled for this Case, but the COC analysis key indicates that hardness is required. **Response** – There are Nine Aqueous Samples scheduled for ICP-AES 1-4 Metals; the Nine Samples are to be analyzed for Calcium and Magnesium Hardness. Please have ACE calculate Hardness from the Calcium and Magnesium recoveries from these samples.

Issue 2: A 7-day TAT is scheduled for this Case, but the COC analysis key indicates a 14-day TAT. **Response** – Have ACE make note of the issue in their SDG Narrative and proceed with the analysis of the samples as scheduled (7-Day TAT).

Insufficient/inappropriate designation of laboratory QC

Issue 3: Laboratory QC is not scheduled for TVOA or 1,4-Dioxane for Case 51943, however the COC lists a QC sample for both TVOA and 1,4-Dioxane.

Resolution 3: As per SOW SFAM01.1 Exhibit A, Section 5.5.4.2, note the issue in the SDG Narrative and proceed with the analysis of the samples based on the scheduling instructions.

Thanks,

Eric DeBerry

Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 1 & 3

Under contract to the EPA

T: (571) 833-5166
Eric.DeBerry@GDIT.com
15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>
Sent: Wednesday, January 15, 2025 11:50 AM
To: DeBerry, Eric <Eric.Deberry@gdit.com>
Cc: Sohil Jodhani <Sohil.Jodhani@AllianceTG.com>
Subject: RE: Region 03 | Case 51943 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

Hello,
One more issue Qc is not schedule for TVOA , 1,4- Dioxane in this case however, qc sample mentioned on COC. Therefor Lab like to know how to process ?

Thanks & Regards,

Deepak Parmar
QA/QC
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3154
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

From: Deepak Parmar
Sent: Wednesday, January 15, 2025 11:19 AM
To: DeBerry, Eric <Eric.Deberry@gdit.com>

Cc: Sohil Jodhani <Sohil.Jodhani@AllianceTG.com>
Subject: Region 03 | Case 51943 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

Good morning,

As per ASR Hardness analysis not required however, received COC is not mentioned Hardness and Analysis key mentioned 14 days TAT but this case is for 7 days TAT. Therefor Lab like to know how to process ?

Please see attachment for your reference.

Thanks & Regards,

Deepak Parmar
QA/QC
An Alliance Technical Group Company
Main: 908-789-8900
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Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
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