

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the samples collected as part of the:

Allen Background Soil

Data Verification was performed in accordance with the Tennessee Valley Authority . This review was performed with guidance from the National Functional Guidelines for Inorganic Data Review (US EPA, October 2004); the US EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); and the US EPA Region IV Data Validation Standard Operating Procedures. These validation guidance documents specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the US EPA, SW-846, and Standard Methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the US EPA, SW-846, and Standard Methods utilized by the laboratory. This QA review was performed on the data associated with Job Number:

180939311

The findings offered in this report are based on a review of holding times and preservation, method blank results, field blank results, filter blank results, equipment blank results, tubing blank results, matrix spike/matrix spike duplicate recoveries and precision, laboratory control sample/laboratory control sample duplicate recoveries and precision, laboratory and field duplicate precision, total and dissolved results comparisons, and/or positive results between the method detection limit and quantitation limit.

The following results were qualified based on the data verification effort:

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Unit
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Antimony	T	0.0875	J	RL	0.0725	0.234	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Boron	T	1.89	J	RL	1.58	9.36	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Cadmium	T	0.0534	J	RL	0.0199	0.117	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Calcium	T	3080	J	M+	10.5	58.5	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Molybdenum	T	0.267	J	RL	0.191	0.585	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Selenium	T	0.340	J	RL	0.143	0.585	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Thallium	T	0.0950	J	RL	0.0293	0.117	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 6020A	Zinc	T	14.8	J	M+	0.391	0.585	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 9056A	Fluoride	N	0.959	J	RL	0.800	1.18	MG/KG
ALF-BS-BG03-31.5/33.5-20190808	ALF-BG03	N	SW-846 9056A	Sulfate	N	11.2	J	RL	7.99	11.8	MG/KG
ALF-BS-BG03-36.5/38.5-20190808	ALF-BG03	N	SW-846 6020A	Beryllium	T	0.105	J	RL	0.00813	0.108	MG/KG
ALF-BS-BG03-36.5/38.5-20190808	ALF-BG03	N	SW-846 6020A	Cadmium	T	0.0294	J	RL	0.0184	0.108	MG/KG
ALF-BS-BG03-36.5/38.5-20190808	ALF-BG03	N	SW-846 6020A	Calcium	T	1230	J	M+	9.70	54.2	MG/KG
ALF-BS-BG03-36.5/38.5-20190808	ALF-BG03	N	SW-846 6020A	Molybdenum	T	0.419	J	RL	0.177	0.542	MG/KG
ALF-BS-BG03-36.5/38.5-20190808	ALF-BG03	N	SW-846 6020A	Selenium	T	0.217	J	RL	0.132	0.542	MG/KG
ALF-BS-BG03-36.5/38.5-20190808	ALF-BG03	N	SW-846 6020A	Thallium	T	0.0476	J	RL	0.0271	0.108	MG/KG
ALF-BS-BG03-36.5/38.5-20190808	ALF-BG03	N	SW-846 6020A	Zinc	T	7.47	J	M+	0.362	0.542	MG/KG
ALF-BS-FB03-20190808		FB	SW-846 6020A	Copper	T	0.000887	J	RL	0.000627	0.00200	MG/L
ALF-BS-BG03-0.0/0.5-20190808	ALF-BG03	N	SW-846 6020A	Antimony	T	0.185	J	RL	0.0762	0.246	MG/KG
ALF-BS-BG03-0.0/0.5-20190808	ALF-BG03	N	SW-846 6020A	Boron	T	2.30	J	RL	1.66	9.83	MG/KG
ALF-BS-BG03-0.0/0.5-20190808	ALF-BG03	N	SW-846 6020A	Calcium	T	1800	J	M+	11.0	61.4	MG/KG

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Unit
ALF-BS-BG03-0.0/0.5-20190808	ALF-BG03	N	SW-846 6020A	Molybdenum	T	0.345	J	RL	0.200	0.614	MG/KG
ALF-BS-BG03-0.0/0.5-20190808	ALF-BG03	N	SW-846 6020A	Selenium	T	0.549	J	RL	0.150	0.614	MG/KG
ALF-BS-BG03-0.0/0.5-20190808	ALF-BG03	N	SW-846 6020A	Zinc	T	30.2	J	M+	0.410	0.614	MG/KG
ALF-BS-BG03-0.0/0.5-20190808	ALF-BG03	N	SW-846 7471B	Mercury	T	0.0151	J	RL	0.0151	0.0347	MG/KG
ALF-BS-BG03-1.0/3.0-20190808	ALF-BG03	N	SW-846 6020A	Antimony	T	0.0696	J	RL	0.0691	0.223	MG/KG
ALF-BS-BG03-1.0/3.0-20190808	ALF-BG03	N	SW-846 6020A	Cadmium	T	0.106	J	RL	0.0190	0.112	MG/KG
ALF-BS-BG03-1.0/3.0-20190808	ALF-BG03	N	SW-846 6020A	Calcium	T	845	J	M+	9.98	55.8	MG/KG
ALF-BS-BG03-1.0/3.0-20190808	ALF-BG03	N	SW-846 6020A	Selenium	T	0.272	J	RL	0.136	0.558	MG/KG
ALF-BS-BG03-1.0/3.0-20190808	ALF-BG03	N	SW-846 6020A	Thallium	T	0.0555	J	RL	0.0279	0.112	MG/KG
ALF-BS-BG03-1.0/3.0-20190808	ALF-BG03	N	SW-846 6020A	Zinc	T	11.3	J	M+	0.372	0.558	MG/KG
ALF-BS-BG03-1.0/3.0-20190808	ALF-BG03	N	SW-846 9056A	Sulfate	N	9.28	J	RL	7.40	10.9	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 6020A	Antimony	T	0.185	J	RL	0.0821	0.265	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 6020A	Boron	T	5.36	J	RL	1.79	10.6	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 6020A	Calcium	T	5370	J	M+	11.9	66.2	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 6020A	Molybdenum	T	0.417	J	RL	0.216	0.662	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 6020A	Silver	T	0.0395	J	RL	0.0358	0.132	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 6020A	Zinc	T	34.5	J	M+	0.442	0.662	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 7471B	Mercury	T	0.0196	J	RL	0.0161	0.0372	MG/KG
ALF-BS-BG03-11.4/13.4-20190808	ALF-BG03	N	SW-846 9056A	Sulfate	N	9.77	J	RL	8.60	12.7	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 6020A	Boron	T	1.63	J	RL	1.56	9.23	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 6020A	Cadmium	T	0.0790	J	RL	0.0196	0.115	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 6020A	Calcium	T	3630	J	M+	10.3	57.7	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 6020A	Molybdenum	T	0.218	J	RL	0.188	0.577	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 6020A	Selenium	T	0.463	J	RL	0.141	0.577	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 6020A	Thallium	T	0.0722	J	RL	0.0288	0.115	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 6020A	Zinc	T	16.4	J	M+	0.385	0.577	MG/KG
ALF-BS-BG03-21.5/23.5-20190808	ALF-BG03	N	SW-846 9056A	Fluoride	N	0.860	J	RL	0.814	1.20	MG/KG

Data Qualifiers

U*	This result should be considered "not-detected" because it was detected in a rinsate blank or laboratory blank at a similar level.
UR	Unreliable reporting limit; analyte may or may not be present in sample.
R	Unreliable positive result; analyte may or may not be present in sample.
J	Quantitation is approximate due to limitations identified during data validation.
UJ	This analyte was not detected, but the reporting limit may or may not be higher due to a bias identified during data validation.

Reason Codes and Explanations

BE	Equipment blank contamination. The result should be considered "not-detected."
BF	Field blank contamination. The result should be considered "not-detected."
BL	Laboratory blank contamination. The result should be considered "not-detected."
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
H	Holding time exceeded.
L	LCS and LCSD recoveries outside of acceptance limits, indeterminate bias.
L+	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased high.
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits, indeterminate bias.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.
MP	MS/MSD imprecision.
Q	Chemical Preservation issue.
RL	Reported Results between the MDL and RL.
T	Temperature preservation issue.
X	Percent solids < 50%.
Y+	Chemical Yield outside of acceptance limits. The result may be biased high.
Y-	Chemical yield outside of acceptance limits. The result may be biased low.

					Lab Sample ID	180-93931-1								
					Sys Sample Code	ALF-BS-BG03-31.5/33.5-20190808								
					Sample Name	ALF-BS-BG03-31.5/33.5-20190808								
					Sample Date	8/8/2019 1:12:00 PM								
					Location	ALF-BG03								
					Sample Type	N								
					Parent Sample									
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
	Percent Moisture:			%	16.2									
ASTM D2974-87	Fractional Organic	FOC	N	%	1.1			0.5	0.5	0.5	Y	Yes	1	NA
SW-846 6020A	Antimony	7440-36-0	T	MG/KG	0.0875	J	RL	0.0725	0.0725	0.234	Y	Yes	1	DRY
	Arsenic	7440-38-2	T	MG/KG	1.17			0.0304	0.0304	0.117	Y	Yes	1	DRY
	Barium	7440-39-3	T	MG/KG	35.1			0.150	0.150	1.17	Y	Yes	1	DRY
	Beryllium	7440-41-7	T	MG/KG	0.192			0.00878	0.00878	0.117	Y	Yes	1	DRY
	Boron	7440-42-8	T	MG/KG	1.89	J	RL	1.58	1.58	9.36	Y	Yes	1	DRY
	Cadmium	7440-43-9	T	MG/KG	0.0534	J	RL	0.0199	0.0199	0.117	Y	Yes	1	DRY
	Calcium	7440-70-2	T	MG/KG	3080	J	M+	10.5	10.5	58.5	Y	Yes	1	DRY
	Chromium	7440-47-3	T	MG/KG	3.74			0.0971	0.0971	0.234	Y	Yes	1	DRY
	Cobalt	7440-48-4	T	MG/KG	2.92			0.00971	0.00971	0.0585	Y	Yes	1	DRY
	Copper	7440-50-8	T	MG/KG	2.02			0.132	0.132	0.234	Y	Yes	1	DRY
	Lead	7439-92-1	T	MG/KG	3.36			0.0410	0.0410	0.117	Y	Yes	1	DRY
	Lithium	7439-93-2	T	MG/KG	2.79			0.323	0.323	0.585	Y	Yes	1	DRY
	Molybdenum	7439-98-7	T	MG/KG	0.267	J	RL	0.191	0.191	0.585	Y	Yes	1	DRY
	Nickel	7440-02-0	T	MG/KG	7.02			0.0714	0.0714	0.117	Y	Yes	1	DRY
	Selenium	7782-49-2	T	MG/KG	0.340	J	RL	0.143	0.143	0.585	Y	Yes	1	DRY
	Silver	7440-22-4	T	MG/KG		U		0.0316	0.0316	0.117	N	Yes	1	DRY
	Thallium	7440-28-0	T	MG/KG	0.0950	J	RL	0.0293	0.0293	0.117	Y	Yes	1	DRY
	Vanadium	7440-62-2	T	MG/KG	6.21			0.0749	0.0749	0.117	Y	Yes	1	DRY
	Zinc	7440-66-6	T	MG/KG	14.8	J	M+	0.391	0.391	0.585	Y	Yes	1	DRY
SW-846 7471B	Mercury	7439-97-6	T	MG/KG		U		0.0158	0.0158	0.0364	N	Yes	1	DRY
SW-846 9045D	pH at 25 Degrees C	PH	N	SU	8.6			0.1	0.1	0.1	Y	Yes	1	NA
SW-846 9056A	Chloride	16887-00-6	N	MG/KG		U		4.57	4.57	11.8	N	Yes	1	DRY
	Fluoride	16984-48-8	N	MG/KG	0.959	J	RL	0.800	0.800	1.18	Y	Yes	1	DRY
	Sulfate	14808-79-8	N	MG/KG	11.2	J	RL	7.99	7.99	11.8	Y	Yes	1	DRY

Lab Sample ID	180-93931-2									
Sys Sample Code	ALF-BS-BG03-36.5/38.5-20190808									
Sample Name	ALF-BS-BG03-36.5/38.5-20190808									
Sample Date	8/8/2019 1:33:00 PM									
Location	ALF-BG03									
Sample Type	N									
Parent Sample										
Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
%	12.2									
%		U		0.5	0.5	0.5	N	Yes	1	NA
MG/KG		U		0.0672	0.0672	0.217	N	Yes	1	DRY
MG/KG	0.833			0.0282	0.0282	0.108	Y	Yes	1	DRY
MG/KG	15.8			0.139	0.139	1.08	Y	Yes	1	DRY
MG/KG	0.105	J	RL	0.00813	0.00813	0.108	Y	Yes	1	DRY
MG/KG		U		1.46	1.46	8.67	N	Yes	1	DRY
MG/KG	0.0294	J	RL	0.0184	0.0184	0.108	Y	Yes	1	DRY
MG/KG	1230	J	M+	9.70	9.70	54.2	Y	Yes	1	DRY
MG/KG	3.03			0.0900	0.0900	0.217	Y	Yes	1	DRY
MG/KG	1.66			0.00900	0.00900	0.0542	Y	Yes	1	DRY
MG/KG	1.30			0.123	0.123	0.217	Y	Yes	1	DRY
MG/KG	1.60			0.0379	0.0379	0.108	Y	Yes	1	DRY
MG/KG	1.32			0.299	0.299	0.542	Y	Yes	1	DRY
MG/KG	0.419	J	RL	0.177	0.177	0.542	Y	Yes	1	DRY
MG/KG	4.27			0.0661	0.0661	0.108	Y	Yes	1	DRY
MG/KG	0.217	J	RL	0.132	0.132	0.542	Y	Yes	1	DRY
MG/KG		U		0.0293	0.0293	0.108	N	Yes	1	DRY
MG/KG	0.0476	J	RL	0.0271	0.0271	0.108	Y	Yes	1	DRY
MG/KG	3.06			0.0694	0.0694	0.108	Y	Yes	1	DRY
MG/KG	7.47	J	M+	0.362	0.362	0.542	Y	Yes	1	DRY
MG/KG		U		0.0158	0.0158	0.0364	N	Yes	1	DRY
SU	8.6			0.1	0.1	0.1	Y	Yes	1	NA
MG/KG		U		4.35	4.35	11.2	N	Yes	1	DRY
MG/KG		U		0.763	0.763	1.12	N	Yes	1	DRY
MG/KG		U		7.62	7.62	11.2	N	Yes	1	DRY

	Lab Sample ID	180-93931-3												
	Sys Sample Code	ALF-BS-FB03-20190808												
	Sample Name	ALF-BS-FB03-20190808												
	Sample Date	8/8/2019 1:51:00 PM												
	Location													
	Sample Type	FB												
	Parent Sample													
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
SW-846 6020A	Antimony	7440-36-0	T	MG/L		U		0.000378	0.000378	0.00200	N	Yes	1	NA
	Arsenic	7440-38-2	T	MG/L		U		0.000323	0.000323	0.00100	N	Yes	1	NA
	Barium	7440-39-3	T	MG/L		U		0.00160	0.00160	0.0100	N	Yes	1	NA
	Beryllium	7440-41-7	T	MG/L		U		0.000182	0.000182	0.00100	N	Yes	1	NA
	Boron	7440-42-8	T	MG/L		U		0.0386	0.0386	0.0800	N	Yes	1	NA
	Cadmium	7440-43-9	T	MG/L		U		0.000125	0.000125	0.00100	N	Yes	1	NA
	Calcium	7440-70-2	T	MG/L		U		0.127	0.127	0.500	N	Yes	1	NA
	Chromium	7440-47-3	T	MG/L		U		0.00153	0.00153	0.00200	N	Yes	1	NA
	Cobalt	7440-48-4	T	MG/L		U		0.0000750	0.0000750	0.000500	N	Yes	1	NA
	Copper	7440-50-8	T	MG/L	0.000887	J	RL	0.000627	0.000627	0.00200	Y	Yes	1	NA
	Lead	7439-92-1	T	MG/L		U		0.000128	0.000128	0.00100	N	Yes	1	NA
	Lithium	7439-93-2	T	MG/L		U		0.00339	0.00339	0.00500	N	Yes	1	NA
	Molybdenum	7439-98-7	T	MG/L		U		0.000610	0.000610	0.00500	N	Yes	1	NA
	Nickel	7440-02-0	T	MG/L		U		0.000336	0.000336	0.00100	N	Yes	1	NA
	Selenium	7782-49-2	T	MG/L		U		0.00151	0.00151	0.00500	N	Yes	1	NA
	Silver	7440-22-4	T	MG/L		U		0.000177	0.000177	0.00100	N	Yes	1	NA
	Thallium	7440-28-0	T	MG/L		U		0.000148	0.000148	0.00100	N	Yes	1	NA
	Vanadium	7440-62-2	T	MG/L		U		0.000991	0.000991	0.00100	N	Yes	1	NA
	Zinc	7440-66-6	T	MG/L	0.00558			0.00322	0.00322	0.00500	Y	Yes	1	NA
SW-846 7470A	Mercury	7439-97-6	T	MG/L		U		0.000101	0.000101	0.000200	N	Yes	1	NA
SW-846 9056A	Chloride	16887-00-6	N	MG/L		U		0.715	0.715	1.00	N	Yes	1	NA
	Fluoride	16984-48-8	N	MG/L		U		0.0263	0.0263	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	MG/L		U		0.380	0.380	1.00	N	Yes	1	NA

Lab Sample ID	180-93931-4										
Sys Sample Code	ALF-BS-BG03-0.0/0.5-20190808										
Sample Name	ALF-BS-BG03-0.0/0.5-20190808										
Sample Date	8/8/2019 2:29:00 PM										
Location	ALF-BG03										
Sample Type	N										
Parent Sample											
n	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
	%	18.6									
	%	3.6			0.5	0.5	0.5	Y	Yes	1	NA
	MG/KG	0.185	J	RL	0.0762	0.0762	0.246	Y	Yes	1	DRY
	MG/KG	3.13			0.0319	0.0319	0.123	Y	Yes	1	DRY
	MG/KG	67.4			0.157	0.157	1.23	Y	Yes	1	DRY
	MG/KG	0.306			0.00921	0.00921	0.123	Y	Yes	1	DRY
	MG/KG	2.30	J	RL	1.66	1.66	9.83	Y	Yes	1	DRY
	MG/KG	0.159			0.0209	0.0209	0.123	Y	Yes	1	DRY
	MG/KG	1800	J	M+	11.0	11.0	61.4	Y	Yes	1	DRY
	MG/KG	5.91			0.102	0.102	0.246	Y	Yes	1	DRY
	MG/KG	3.62			0.0102	0.0102	0.0614	Y	Yes	1	DRY
	MG/KG	5.92			0.139	0.139	0.246	Y	Yes	1	DRY
	MG/KG	11.2			0.0430	0.0430	0.123	Y	Yes	1	DRY
	MG/KG	4.11			0.339	0.339	0.614	Y	Yes	1	DRY
	MG/KG	0.345	J	RL	0.200	0.200	0.614	Y	Yes	1	DRY
	MG/KG	8.50			0.0749	0.0749	0.123	Y	Yes	1	DRY
	MG/KG	0.549	J	RL	0.150	0.150	0.614	Y	Yes	1	DRY
	MG/KG		U		0.0332	0.0332	0.123	N	Yes	1	DRY
	MG/KG	0.131			0.0307	0.0307	0.123	Y	Yes	1	DRY
	MG/KG	9.56			0.0786	0.0786	0.123	Y	Yes	1	DRY
	MG/KG	30.2	J	M+	0.410	0.410	0.614	Y	Yes	1	DRY
	MG/KG	0.0151	J	RL	0.0151	0.0151	0.0347	Y	Yes	1	DRY
	SU	6.6			0.1	0.1	0.1	Y	Yes	1	NA
	MG/KG		U		4.71	4.71	12.1	N	Yes	1	DRY
	MG/KG	1.79			0.825	0.825	1.21	Y	Yes	1	DRY
	MG/KG		U		8.24	8.24	12.1	N	Yes	1	DRY

Lab Sample ID	180-93931-5									
Sys Sample Code	ALF-BS-BG03-1.0/3.0-20190808									
Sample Name	ALF-BS-BG03-1.0/3.0-20190808									
Sample Date	8/8/2019 2:58:00 PM									
Location	ALF-BG03									
Sample Type	N									
Parent Sample										
Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
%	10.3									
%	0.9			0.5	0.5	0.5	Y	Yes	1	NA
MG/KG	0.0696	J	RL	0.0691	0.0691	0.223	Y	Yes	1	DRY
MG/KG	1.62			0.0290	0.0290	0.112	Y	Yes	1	DRY
MG/KG	24.1			0.143	0.143	1.12	Y	Yes	1	DRY
MG/KG	0.145			0.00836	0.00836	0.112	Y	Yes	1	DRY
MG/KG		U		1.51	1.51	8.92	N	Yes	1	DRY
MG/KG	0.106	J	RL	0.0190	0.0190	0.112	Y	Yes	1	DRY
MG/KG	845	J	M+	9.98	9.98	55.8	Y	Yes	1	DRY
MG/KG	3.02			0.0925	0.0925	0.223	Y	Yes	1	DRY
MG/KG	2.40			0.00925	0.00925	0.0558	Y	Yes	1	DRY
MG/KG	2.24			0.126	0.126	0.223	Y	Yes	1	DRY
MG/KG	3.72			0.0390	0.0390	0.112	Y	Yes	1	DRY
MG/KG	1.88			0.308	0.308	0.558	Y	Yes	1	DRY
MG/KG		U		0.182	0.182	0.558	N	Yes	1	DRY
MG/KG	5.94			0.0680	0.0680	0.112	Y	Yes	1	DRY
MG/KG	0.272	J	RL	0.136	0.136	0.558	Y	Yes	1	DRY
MG/KG		U		0.0301	0.0301	0.112	N	Yes	1	DRY
MG/KG	0.0555	J	RL	0.0279	0.0279	0.112	Y	Yes	1	DRY
MG/KG	5.75			0.0714	0.0714	0.112	Y	Yes	1	DRY
MG/KG	11.3	J	M+	0.372	0.372	0.558	Y	Yes	1	DRY
MG/KG		U		0.0128	0.0128	0.0294	N	Yes	1	DRY
SU	7.8			0.1	0.1	0.1	Y	Yes	1	NA
MG/KG		U		4.23	4.23	10.9	N	Yes	1	DRY
MG/KG	1.58			0.741	0.741	1.09	Y	Yes	1	DRY
MG/KG	9.28	J	RL	7.40	7.40	10.9	Y	Yes	1	DRY

Lab Sample ID	180-93931-6										
Sys Sample Code	ALF-BS-BG03-11.4/13.4-20190808										
Sample Name	ALF-BS-BG03-11.4/13.4-20190808										
Sample Date	8/8/2019 3:35:00 PM										
Location	ALF-BG03										
Sample Type	N										
Parent Sample											
n	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
	%	22.9									
	%	1.1			0.5	0.5	0.5	Y	Yes	1	NA
	MG/KG	0.185	J	RL	0.0821	0.0821	0.265	Y	Yes	1	DRY
	MG/KG	4.01			0.0344	0.0344	0.132	Y	Yes	1	DRY
	MG/KG	99.0			0.170	0.170	1.32	Y	Yes	1	DRY
	MG/KG	0.470			0.00993	0.00993	0.132	Y	Yes	1	DRY
	MG/KG	5.36	J	RL	1.79	1.79	10.6	Y	Yes	1	DRY
	MG/KG	0.198			0.0225	0.0225	0.132	Y	Yes	1	DRY
	MG/KG	5370	J	M+	11.9	11.9	66.2	Y	Yes	1	DRY
	MG/KG	9.16			0.110	0.110	0.265	Y	Yes	1	DRY
	MG/KG	4.60			0.0110	0.0110	0.0662	Y	Yes	1	DRY
	MG/KG	8.12			0.150	0.150	0.265	Y	Yes	1	DRY
	MG/KG	8.61			0.0463	0.0463	0.132	Y	Yes	1	DRY
	MG/KG	7.70			0.365	0.365	0.662	Y	Yes	1	DRY
	MG/KG	0.417	J	RL	0.216	0.216	0.662	Y	Yes	1	DRY
	MG/KG	12.0			0.0808	0.0808	0.132	Y	Yes	1	DRY
	MG/KG	0.784			0.162	0.162	0.662	Y	Yes	1	DRY
	MG/KG	0.0395	J	RL	0.0358	0.0358	0.132	Y	Yes	1	DRY
	MG/KG	0.169			0.0331	0.0331	0.132	Y	Yes	1	DRY
	MG/KG	15.8			0.0848	0.0848	0.132	Y	Yes	1	DRY
	MG/KG	34.5	J	M+	0.442	0.442	0.662	Y	Yes	1	DRY
	MG/KG	0.0196	J	RL	0.0161	0.0161	0.0372	Y	Yes	1	DRY
	SU	8.1			0.1	0.1	0.1	Y	Yes	1	NA
	MG/KG		U		4.91	4.91	12.7	N	Yes	1	DRY
	MG/KG	2.74			0.861	0.861	1.27	Y	Yes	1	DRY
	MG/KG	9.77	J	RL	8.60	8.60	12.7	Y	Yes	1	DRY

Lab Sample ID	180-93931-7									
Sys Sample Code	ALF-BS-BG03-21.5/23.5-20190808									
Sample Name	ALF-BS-BG03-21.5/23.5-20190808									
Sample Date	8/8/2019 3:55:00 PM									
Location	ALF-BG03									
Sample Type	N									
Parent Sample										
Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
%	17.4									
%	0.7			0.5	0.5	0.5	Y	Yes	1	NA
MG/KG		U		0.0715	0.0715	0.231	N	Yes	1	DRY
MG/KG	2.14			0.0300	0.0300	0.115	Y	Yes	1	DRY
MG/KG	46.1			0.148	0.148	1.15	Y	Yes	1	DRY
MG/KG	0.173			0.00865	0.00865	0.115	Y	Yes	1	DRY
MG/KG	1.63	J	RL	1.56	1.56	9.23	Y	Yes	1	DRY
MG/KG	0.0790	J	RL	0.0196	0.0196	0.115	Y	Yes	1	DRY
MG/KG	3630	J	M+	10.3	10.3	57.7	Y	Yes	1	DRY
MG/KG	3.95			0.0957	0.0957	0.231	Y	Yes	1	DRY
MG/KG	3.18			0.00957	0.00957	0.0577	Y	Yes	1	DRY
MG/KG	1.94			0.130	0.130	0.231	Y	Yes	1	DRY
MG/KG	4.00			0.0404	0.0404	0.115	Y	Yes	1	DRY
MG/KG	2.83			0.318	0.318	0.577	Y	Yes	1	DRY
MG/KG	0.218	J	RL	0.188	0.188	0.577	Y	Yes	1	DRY
MG/KG	7.80			0.0704	0.0704	0.115	Y	Yes	1	DRY
MG/KG	0.463	J	RL	0.141	0.141	0.577	Y	Yes	1	DRY
MG/KG		U		0.0311	0.0311	0.115	N	Yes	1	DRY
MG/KG	0.0722	J	RL	0.0288	0.0288	0.115	Y	Yes	1	DRY
MG/KG	6.71			0.0738	0.0738	0.115	Y	Yes	1	DRY
MG/KG	16.4	J	M+	0.385	0.385	0.577	Y	Yes	1	DRY
MG/KG		U		0.0189	0.0189	0.0436	N	Yes	1	DRY
SU	8.5			0.1	0.1	0.1	Y	Yes	1	NA
MG/KG		U		4.65	4.65	12.0	N	Yes	1	DRY
MG/KG	0.860	J	RL	0.814	0.814	1.20	Y	Yes	1	DRY
MG/KG		U		8.13	8.13	12.0	N	Yes	1	DRY