

Chemtech Consulting Group

Analytical Summary Report

Analysis Method: 9038 Sulfate
 Parameter: Sulfate
 Run Number: LB88048
 Instrument: Turbidimeter
 Analyst: AK

Supervisor Review:

Intercept (x): 0.3761
 Slope (b): 3.2742
 Regression (r): 1.0000

Reagent/Standard	Lot/Log Number

Seq	Lab ID	Sample Type	DF	Initial Vol (ml/gm)	Final Vol (ml)	Difference NTU	* Result	QC Batch	Analytical Date	Time/Seq
1	CAL1	CAL	1	50.00	50.00	0.185	-0.060		6/13/2017	001
2	CAL2	CAL	1	50.00	50.00	16.862	5.040		6/13/2017	002
3	CAL3	CAL	1	50.00	50.00	33.034	9.970		6/13/2017	003
4	CAL4	CAL	1	50.00	50.00	49.715	15.070		6/13/2017	004
5	CAL5	CAL	1	50.00	50.00	65.901	20.010		6/13/2017	005
6	CAL6	CAL	1	50.00	50.00	82.749	25.160		6/13/2017	006
7	CAL7	CAL	1	50.00	50.00	97.861	29.770		6/13/2017	007
8	CAL8	CAL	1	50.00	50.00	114.835	34.960		6/13/2017	008
9	CAL9	CAL	1	50.00	50.00	131.599	40.080		6/13/2017	009
10	ICV	ICV	1	50.00	50.00	64.559	19.600		6/13/2017	010
11	ICB	ICB	1	50.00	50.00	0.166	-0.060		6/13/2017	011
12	CCV	CCV	1	50.00	50.00	67.899	20.620		6/13/2017	012
13	CCB	CCB	1	50.00	50.00	0.191	-0.060		6/13/2017	013
14	LB88048BLW	MB	1	50.00	50.00	0.177	-0.060		6/13/2017	014
15	LB88048BSW	LCS	1	50.00	50.00	64.360	19.540		6/13/2017	015
16	I3528-02	SAM	1	50.00	50.00	761.550	232.480		6/13/2017	016
17	I3528-04	SAM	1	50.00	50.00	103.649	31.540		6/13/2017	017
18	I3528-06	SAM	1	50.00	50.00	261.689	79.810		6/13/2017	018
19	I3530-02	SAM	1	50.00	50.00	988.570	301.810		6/13/2017	019
20	I3530-04	SAM	1	50.00	50.00	82.170	24.980		6/13/2017	020
21	I3530-06	SAM	1	50.00	50.00	225.656	68.800		6/13/2017	021
22	I3531-02	SAM	1	50.00	50.00	684.520	208.950		6/13/2017	022
23	I3531-04	SAM	1	50.00	50.00	54.211	16.440		6/13/2017	023
24	CCV	CCV	1	50.00	50.00	67.841	20.610		6/13/2017	024
25	CCB	CCB	1	50.00	50.00	0.194	-0.060		6/13/2017	025
26	I3531-04D	DUP	1	50.00	50.00	54.410	16.500		6/13/2017	026
27	I3531-04S	MS	1	50.00	50.00	107.700	32.780		6/13/2017	027
28	I3531-04SD	MSD	1	50.00	50.00	107.702	32.780		6/13/2017	028
29	I3531-06	SAM	1	50.00	50.00	175.783	53.570		6/13/2017	029
30	I3532-02	SAM	1	50.00	50.00	554.676	169.290		6/13/2017	030
31	I3532-04	SAM	1	50.00	50.00	59.944	18.190		6/13/2017	031
32	I3532-06	SAM	1	50.00	50.00	211.522	64.490		6/13/2017	032
33	I3533-02	SAM	1	50.00	50.00	563.406	171.960		6/13/2017	033
34	I3533-04	SAM	1	50.00	50.00	54.086	16.400		6/13/2017	034
35	I3533-06	SAM	1	50.00	50.00	224.550	68.470		6/13/2017	035
36	CCV	CCV	1	50.00	50.00	67.945	20.640		6/13/2017	036

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Slope (b): 3.2742

Regression (r): 1.0000

Reagent/Standard	Lot/Log Number

Seq	Lab ID	Sample Type	DF	Initial Vol (ml/gm)	Final Vol (ml)	Difference NTU	* Result	QC Batch	Analytical Date	Time/Seq
37	CCB	CCB	1	50.00	50.00	0.180	-0.060		6/13/2017	037
38	I3534-02	SAM	1	50.00	50.00	1335.454	407.760		6/13/2017	038
39	I3534-04	SAM	1	50.00	50.00	64.907	19.710		6/13/2017	039
40	I3534-04D	DUP	1	50.00	50.00	64.608	19.620		6/13/2017	040
41	I3534-06	SAM	1	50.00	50.00	266.330	81.230		6/13/2017	041
42	I3528-02	SAM	10	50.00	50.00	65.746	199.650		6/13/2017	042
43	I3528-06	SAM	5	50.00	50.00	55.852	84.720		6/13/2017	043
44	I3530-02	SAM	10	50.00	50.00	79.880	242.820		6/13/2017	044
45	I3530-06	SAM	2	50.00	50.00	116.849	71.150		6/13/2017	045
46	I3531-02	SAM	10	50.00	50.00	62.120	188.580		6/13/2017	046
47	I3531-06	SAM	2	50.00	50.00	89.690	54.560		6/13/2017	047
48	CCV	CCV	1	50.00	50.00	68.342	20.760		6/13/2017	048
49	CCB	CCB	1	50.00	50.00	0.152	-0.070		6/13/2017	049
50	I3532-02	SAM	10	50.00	50.00	52.535	159.300		6/13/2017	050
51	I3532-06	SAM	2	50.00	50.00	106.741	64.970		6/13/2017	051
52	I3533-02	SAM	10	50.00	50.00	53.701	162.860		6/13/2017	052
53	I3533-06	SAM	2	50.00	50.00	109.787	66.830		6/13/2017	053
54	I3534-02	SAM	20	50.00	50.00	49.495	300.040		6/13/2017	054
55	I3534-06	SAM	2	50.00	50.00	121.657	74.080		6/13/2017	055
56	CCV	CCV	1	50.00	50.00	67.944	20.640		6/13/2017	056
57	CCB	CCB	1	50.00	50.00	0.198	-0.050		6/13/2017	057

* Calibration result unit is NTU

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Data File : LB88048.MDB

Approved By : 

Approved Date : 6/21/17

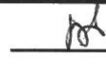
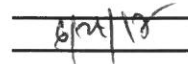
Worksheet # :

Lab Sample ID	Client ID		Raw Amt	Dil	Matrix	A. Date	Prep	Analysis		Line 1
Parameter			PPB		Final Conc	%Rec	Method	Method		Line 2
Sulfate										
CAL1	CAL1				W	6/13/17				
Sulfate		PASS	-0.060		-0.060					mg/L
CAL2	CAL2				W	6/13/17				
Sulfate		PASS	5.040		5.040					mg/L
CAL3	CAL3				W	6/13/17				
Sulfate		PASS	9.970		9.970					mg/L
CAL4	CAL4				W	6/13/17				
Sulfate		PASS	15.070		15.00					mg/L
CAL5	CAL5				W	6/13/17				
Sulfate		PASS	20.010		20.00					mg/L
CAL6	CAL6				W	6/13/17				
Sulfate		PASS	25.160		25.00					mg/L
CAL7	CAL7				W	6/13/17				
Sulfate		PASS	29.770		30.00					mg/L
CAL8	CAL8				W	6/13/17				
Sulfate		PASS	34.960		35.00					mg/L
CAL9	CAL9				W	6/13/17				
Sulfate		PASS	40.080		40.00					mg/L
ICV1	ICV1				W	6/13/17				
Sulfate		PASS	19.600		19.60	98.0	90	110		mg/L
ICB1	ICB1				W	6/13/17				
Sulfate		PASS	-0.060		-0.060			+/-0.3390		mg/L
CCV1	CCV1				W	6/13/17				
Sulfate		PASS	20.620		20.60	103.0	90	110		mg/L
CCB1	CCB1				W	6/13/17				
Sulfate		PASS	-0.060		-0.060			+/-0.3390		mg/L
LB88048BLW	LB88048BLW				W	6/13/17				
Sulfate		PASS	-0.060		-0.060			+/-0.3390		mg/L
LB88048BSW	LB88048BSW				W	6/13/17				
Sulfate		PASS	19.540		19.50	98.0	90	110		mg/L
I3528-02	FLY-ASH			1	W	6/13/17				
Sulfate		OR	232.480		230.00					mg/L
I3528-04	BOTTOM-ASH			1	W	6/13/17				
Sulfate		PASS	31.540		32.00					mg/L
I3528-06	60-40-ASH-BLEND			1	W	6/13/17				
Sulfate		OR	79.810		80.00					mg/L
I3530-02	FLY-ASH			1	W	6/13/17				
Sulfate		OR	301.810		300.00					mg/L
I3530-04	BOTTOM-ASH			1	W	6/13/17				
Sulfate		PASS	24.980		25.00					mg/L

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Lab Sample ID	Client ID	Raw Amt	Dil	Matrix	A. Date	Prep	Analysis				Line 1
Parameter		PPB		Final Conc	%Rec	LCL	UCL	RPD	Max RPD	Units	Line 2
Sulfate											
I3530-06	60-40-ASH-BLEND		1	W	6/13/17						
Sulfate	OR	68.800		69.00						mg/L	
I3531-02	FLY-ASH		1	W	6/13/17						
Sulfate	OR	208.950		210.00						mg/L	
I3531-04	BOTTOM-ASH		1	W	6/13/17						
Sulfate	PASS	16.440		16.00						mg/L	
CCV2	CCV2			W	6/13/17						
Sulfate	PASS	20.610		20.60	103.0	90	110			mg/L	
CCB2	CCB2			W	6/13/17						
Sulfate	PASS	-0.060		-0.060			+/-0.3390			mg/L	
I3531-04D	BOTTOM-ASHD		1	W	6/13/17						
Sulfate	PASS	16.500		16.00				0	20	mg/L	
I3531-04S	BOTTOM-ASHS		1	W	6/13/17						
Sulfate	PASS	32.780		33.000	85.0	75	125			mg/L	
I3531-04SD	BOTTOM-ASHSD		1	W	6/13/17						
Sulfate	PASS	32.780		33.000	85.0	75	125	0	20	mg/L	
I3531-06	60-40-ASH-BLEND		1	W	6/13/17						
Sulfate	OR	53.570		54.00						mg/L	
I3532-02	FLY-ASH		1	W	6/13/17						
Sulfate	OR	169.290		170.00						mg/L	
I3532-04	BOTTOM-ASH		1	W	6/13/17						
Sulfate	PASS	18.190		18.00						mg/L	
I3532-06	60-40-ASH-BLEND		1	W	6/13/17						
Sulfate	OR	64.490		64.00						mg/L	
I3533-02	FLY-ASH		1	W	6/13/17						
Sulfate	OR	171.960		170.00						mg/L	
I3533-04	BOTTOM-ASH		1	W	6/13/17						
Sulfate	PASS	16.400		16.00						mg/L	
I3533-06	60-40-ASH-BLEND		1	W	6/13/17						
Sulfate	OR	68.470		68.00						mg/L	
CCV3	CCV3			W	6/13/17						
Sulfate	PASS	20.640		20.60	103.0	90	110			mg/L	
CCB3	CCB3			W	6/13/17						
Sulfate	PASS	-0.060		-0.060			+/-0.3390			mg/L	
I3534-02	FLY-ASH		1	W	6/13/17						
Sulfate	OR	407.760		410.00						mg/L	
I3534-04	BOTTOM-ASH		1	W	6/13/17						
Sulfate	PASS	19.710		20.00						mg/L	
I3534-04D	BOTTOM-ASHD		1	W	6/13/17						
Sulfate	PASS	19.620		20.00				0	20	mg/L	

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Lab Sample ID	Client ID	Raw Amt	Dil	Matrix	A. Date	Prep	Analysis			Line 1
Parameter		PPB	Final Conc		%Rec	LCL	UCL	RPD	Max RPD	Units
Sulfate										
I3534-06	60-40-ASH-BLEND		1	W	6/13/17					
Sulfate	OR	81.230	81.00							mg/L
I3528-02DL	FLY-ASHDL		10	W	6/13/17					
Sulfate	PASS	199.650	200.00							mg/L
I3528-06DL	60-40-ASH-BLEND DL		5	W	6/13/17					
Sulfate	PASS	84.720	85.00							mg/L
I3530-02DL	FLY-ASHDL		10	W	6/13/17					
Sulfate	PASS	242.820	240.00							mg/L
I3530-06DL	60-40-ASH-BLEND DL		2	W	6/13/17					
Sulfate	PASS	71.150	71.00							mg/L
I3531-02DL	FLY-ASHDL		10	W	6/13/17					
Sulfate	PASS	188.580	190.00							mg/L
I3531-06DL	60-40-ASH-BLEND DL		2	W	6/13/17					
Sulfate	PASS	54.560	55.00							mg/L
CCV4	CCV4			W	6/13/17					
Sulfate	PASS	20.760	20.80		104.0	90	110			mg/L
CCB4	CCB4			W	6/13/17					
Sulfate	PASS	-0.070	-0.070				+/-0.3390			mg/L
I3532-02DL	FLY-ASHDL		10	W	6/13/17					
Sulfate	PASS	159.300	160.00							mg/L
I3532-06DL	60-40-ASH-BLEND DL		2	W	6/13/17					
Sulfate	PASS	64.970	65.00							mg/L
I3533-02DL	FLY-ASHDL		10	W	6/13/17					
Sulfate	PASS	162.860	160.00							mg/L
I3533-06DL	60-40-ASH-BLEND DL		2	W	6/13/17					
Sulfate	PASS	66.830	67.00							mg/L
I3534-02DL	FLY-ASHDL		20	W	6/13/17					
Sulfate	PASS	300.040	300.00							mg/L
I3534-06DL	60-40-ASH-BLEND DL		2	W	6/13/17					
Sulfate	PASS	74.080	74.00							mg/L
CCV5	CCV5			W	6/13/17					
Sulfate	PASS	20.640	20.60		103.0	90	110			mg/L
CCB5	CCB5			W	6/13/17					
Sulfate	PASS	-0.050	-0.050				+/-0.3390			mg/L