

GUARDIAN SYSTEMS, INC.

1108 Ashville Road
P.O. Box 190
Leeds, Alabama 35094

Telephone (205) 699-6647
Toll Free (866) 729-7211
Fax (205) 699-3882

Page 1 of 9

City of Leeds
City of Leeds
1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 001
Sampler : DL
Sample ID: LC-MP-1

Sample Date: 11/12/2018
Sample Time: 10:23

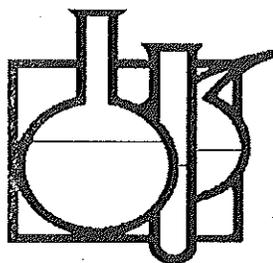
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	7.70	SU	DL	11/12/2018	10:23	150.1	(1)
Turbidity, Nephelometric	12.0	NTU	DL	11/12/2018	10:23	180.1	
Conductance, Sp. (field)	542	umhos	DL	11/12/2018	10:23	120.1	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Color, APHA	292.	PCU	AH	11/13/2018	13:15	110.2	(1)
Hardness, Total	121.	mg/L	DRH	11/15/2018	10:00	200.7	
Calcium	41.4	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	4.36	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	1.88	mg/L	DRH	11/15/2018	10:00	200.7	(1)

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012
3. Test Methods for Evaluating Solid Wastes Physical Chemical Method SW-846, 3rd Edition, Updated IV December 1996
4. 1987 ASTM Annual Standards
5. Code of Federal Regulations, Title 40, Part 136, Appendix A, Revised July 1995
6. Methods for the Determination of Organic Compounds in Drinking Water, EPA-600/4-88/039, Revised July 1991, August 1995
7. NIOSH Manual of Analytical Methods, 4th Edition, May 1996



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1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 002
Sampler : DL
Sample ID: LC-MP-2

Sample Date: 11/12/2018
Sample Time: 10:19

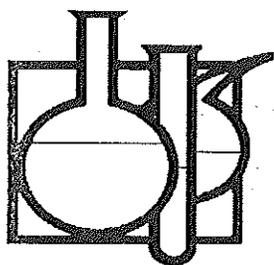
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	7.78	SU	DL	11/12/2018	10:19	150.1	(1)
Turbidity, Nephelometric	14.4	NTU	DL	11/12/2018	10:19	180.1	
Conductance, Sp. (field)	502	umhos	DL	11/12/2018	10:19	120.1	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Color, APHA	191.	PCU	AH	11/13/2018	13:15	110.2	(1)
Hardness, Total	123.	mg/L	DRH	11/15/2018	10:00	200.7	
Calcium	41.8	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	4.57	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	2.12	mg/L	DRH	11/15/2018	10:00	200.7	(1)

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012
3. Test Methods for Evaluating Solid Wastes Physical Chemical Method SW-846, 3rd Edition, Updated IV December 1996
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1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 003
Sampler : DL
Sample ID: LC-MP-3

Sample Date: 11/12/2018
Sample Time: 10:12

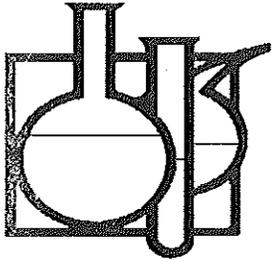
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	7.64	SU	DL	11/12/2018	10:12	150.1	(1)
Turbidity, Nephelometric	38.7	NTU	DL	11/12/2018	10:12	180.1	
Conductance, Sp. (field)	524	umhos	DL	11/12/2018	10:12	120.1	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Color, APHA	205.	PCU	AH	11/13/2018	13:15	110.2	(1)
Hardness, Total	129.	mg/L	DRH	11/15/2018	10:00	200.7	
Calcium	43.8	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	4.88	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	2.17	mg/L	DRH	11/15/2018	10:00	200.7	(1)

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012.
3. Test Methods for Evaluating Solid Wastes Physical Chemical Method SW-846, 3rd Edition, Updated IV December 1996
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1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 004
Sampler : DL
Sample ID: LC-SS-6

Sample Date: 11/12/2018
Sample Time: 10:28

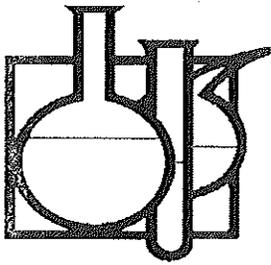
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	7.64	SU	DL	11/12/2018	10:28	150.1	(1)
Turbidity, Nephelometric	21.6	NTU	DL	11/12/2018	10:28	180.1	
Conductance, Sp. (field)	453	umhos	DL	11/12/2018	10:28	120.1	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Color, APHA	792.	PCU	AH	11/13/2018	13:15	110.2	(1)
Hardness, Total	104.	mg/L	DRH	11/15/2018	10:00	200.7	
Calcium	35.8	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	3.61	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	2.35	mg/L	DRH	11/15/2018	10:00	200.7	(1)

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012
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City of Leeds
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1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 005
Sampler : DL
Sample ID: LC-SS-7

Sample Date: 11/12/2018
Sample Time: 10:36

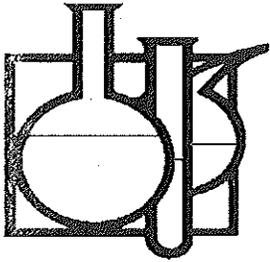
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	7.59	SU	DL	11/12/2018	10:36	150.1	(1)
Turbidity, Nephelometric	22.7	NTU	DL	11/12/2018	10:36	180.1	
Conductance, Sp. (field)	453	umhos	DL	11/12/2018	10:36	120.1	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Color, APHA	774.	PCU	AH	11/13/2018	13:15	110.2	(1)
Hardness, Total	108.	mg/L	DRH	11/15/2018	10:00	200.7	
Calcium	37.3	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	3.54	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	2.28	mg/L	DRH	11/15/2018	10:00	200.7	(1)

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012
3. Test Methods for Evaluating Solid Wastes Physical Chemical Method SW-846, 3rd Edition, Updated IV December 1996
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1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 006
Sampler : DL
Sample ID: LC-SS-9

Sample Date: 11/12/2018
Sample Time: 10:49

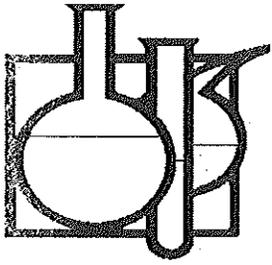
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	7.80	SU	DL	11/12/2018	10:49	150.1	(1)
Turbidity, Nephelometric	53.2	NTU	DL	11/12/2018	10:49	180.1	
Conductance, Sp. (field)	292	umhos	DL	11/12/2018	10:49	120.1	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Color, APHA	840.	PCU	AH	11/13/2018	13:15	110.2	(1)
Hardness, Total	76.	mg/L	DRH	11/15/2018	10:00	200.7	
Calcium	25.8	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	2.71	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	1.91	mg/L	DRH	11/15/2018	10:00	200.7	(1)

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012
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City of Leeds
City of Leeds
1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 007
Sampler : DL
Sample ID: LC-SS-10

Sample Date: 11/12/2018
Sample Time: 10:54

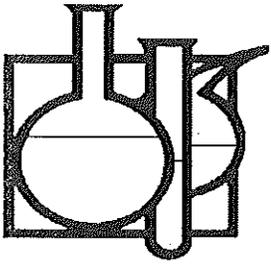
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	7.79	SU	DL	11/12/2018	10:54	150.1	(1)
Turbidity, Nephelometric	59.6	NTU	DL	11/12/2018	10:54	180.1	
Conductance, Sp. (field)	285	umhos	DL	11/12/2018	10:54	120.1	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Color, APHA	780.	PCU	AH	11/13/2018	13:15	110.2	(1)
Hardness, Total	75.	mg/L	DRH	11/15/2018	10:00	200.7	
Calcium	25.5	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	2.72	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	1.98	mg/L	DRH	11/15/2018	10:00	200.7	(1)

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012
3. Test Methods for Evaluating Solid Wastes Physical Chemical Method SW-846, 3rd Edition, Updated IV December 1996
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Page 8 of 9

City of Leeds
City of Leeds
1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 008
Sampler : DL
Sample ID: DC-SS-3

Sample Date: 11/12/2018
Sample Time: 9:58

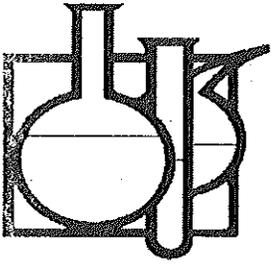
Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	8.49	SU	DL	11/12/2018	9:58	150.1	(1)
Turbidity, Nephelometric	22.6	NTU	DL	11/12/2018	9:58	180.1	
Conductance, Sp. (field)	186	umhos	DL	11/12/2018	9:58	120.1	(1)
Color, APHA	192.	PCU	AH	11/13/2018	13:15	110.2	(1)
Nitrogen, Ammonia	<0.1	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Calcium	10.0	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	<1.0	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	1.13	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Hardness, Total	27.	mg/L	DRH	11/15/2018	10:00	200.7	

This Certificate is Continued On Next Page.

METHOD REFERENCES

1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
2. Standard Methods for the Examination of Water and Waste Water, 18th, 19th, 20th, and 22nd Edition, 2012
3. Test Methods for Evaluating Solid Wastes Physical Chemical Method SW-846, 3rd Edition, Updated IV December 1996
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Page 9 of 9

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1040 Park Drive
Leeds, AL 35094
Attention: Mr. Brad Watson

Report Date: 11/15/2018
Receive Date: 11/12/2018
Receive Time: 14:55

Control No : 1811-00252 Sample # 009
Sampler : DL
Sample ID: DC-SS-4

Sample Date: 11/12/2018
Sample Time: 10:04

Laboratory Certificate

PARAMETER	RESULTS	UNITS	ANALYST	DATE	TIME	METHOD	REF
pH	8.04	SU	DL	11/12/2018	10:04	150.1	(1)
Turbidity, Nephelometric	122	NTU	DL	11/12/2018	10:04	180.1	
Conductance, Sp. (field)	397	umhos	DL	11/12/2018	10:04	120.1	(1)
Color, APHA	1570.	PCU	AH	11/13/2018	13:15	110.2	(1)
Nitrogen, Ammonia	0.39	mg/L	TLB	11/14/2018	13:22	350.2	(1)
Calcium	36.5	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Magnesium	5.80	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Potassium	4.05	mg/L	DRH	11/15/2018	10:00	200.7	(1)
Hardness, Total	115.	mg/L	DRH	11/15/2018	10:00	200.7	

Approved By:


TMB

METHOD REFERENCES

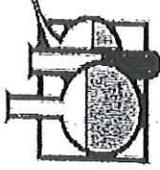
1. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, revised March 1983, August 1993 May 1994
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Chain of Custody Record/ Analysis Report

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 www.gsilab.com



Client: Brad Watson Phone: _____
 Company: City of Leeds Fax: _____
 Address: 1947 Park Drive P.O.#: _____
 Address: Leeds, AL 35094 Email Address: _____
 Project: 2V18 and Transfer Stirrer

Sample ID	Sample Description	Sample Date	Sample Time	Sample				Sample Preservative				Analysis Requested							
				Comp.*	Grab	Glass	Plastic	HCl	HNO ₃	H ₂ SO ₄	NaOH	Cool 40C	Other*						
LCMP3		11/10	11/12	X	X	X	X	X	X	X	X	X	X	X	Field pH 7.64				
				X	X	X	X	X	X	X	X	X	X	X	Field Turbidity 38.7 NTU				
				X	X	X	X	X	X	X	X	X	X	X	Field Conductivity 524 uS				
				X	X	X	X	X	X	X	X	X	X	X	APHA Color				
				X	X	X	X	X	X	X	X	X	X	X	Ammunition				
				X	X	X	X	X	X	X	X	X	X	X	Hardness Ca/Mg/K				
LC556		11/12	11/28	X	X	X	X	X	X	X	X	X	X	X	Field pH 7.64				
				X	X	X	X	X	X	X	X	X	X	X	Field Turbidity 21.6 NTU				
				X	X	X	X	X	X	X	X	X	X	X	Field Conductivity 433 uS				
				X	X	X	X	X	X	X	X	X	X	X	APHA Color				
				X	X	X	X	X	X	X	X	X	X	X	Ammunition				
				X	X	X	X	X	X	X	X	X	X	X	Hardness Ca/Mg/K				

Sampled by: Dennis P. Givins Date: 11/18 Time: 1415
 Relinquished by: Dennis P. Givins Date: 11/18 Time: _____
 Received by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____
 Received for Laboratory by: Don Brymer Date: 12/01/18 Time: 1455
 Was Shipped Container intact when received? Yes No Initials Seals intact? Yes No
 Were all samples properly preserved? Yes No Initials Sample temp. 25 °C
 Comments: _____

Time On Site - _____
 Time Off Site - _____

Put an "X" in the appropriate column for sample type and sample preservative. Write in analysis requested.
 * For composite samples include start and stop date and time in comments section **Write in preservative used in comments

