



1702 East Central Avenue Suite 10
Bentonville, AR 72712
479-271-7996 phone
479-271-8394 fax

Analytical Report

12/23/20 12:29

Client: City of Siloam Springs
PO Box 80
Siloam Springs AR, 72761

Work Order: 20L0075
Project Name: Effluent-Influent
Project Number: Effluent-Influent

Attn: Anthony Brown

Date Received: 12/16/20

Sample ID	Laboratory ID	Date and Time Sampled	Sampled By	Sample Type
Effluent, Outfall 001	20L0075-01	12/15/20 10:00 - 12/16/20 09:00	Tony Brown	Composite
Influent	20L0075-02	12/15/20 10:00 - 12/16/20 09:00	Tony Brown	Composite
Influent	20L0075-03	12/12/20 14:26	Tony Brown	Composite

Comments: No CBOD analysis, see attached letter.

Samples were received into laboratory at a temperature of 1.40 °C

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at (479)271-7996. Any opinions, if expressed, are outside the scope of the laboratory's accreditation.

This report and any attachment(s) contains information from Environmental Testing Group, Inc ("ETG"), and is confidential and privileged. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, be aware that any review, disclosure, printing, copying, distribution, retransmission, dissemination or other use of the information and/or contents of this message is prohibited. If you receive this message in error, please contact the sender immediately and delete any and all copies of this message from your computer(s).

These results relate only to the items tested. Estimated uncertainty is available upon request. This report has been electronically signed. Results are reported on a wet weight basis unless otherwise noted.

David D'Amico
Laboratory Director



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Environmental Testing Group

Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	Analyst	Method	Batch
20L0075-01 (Water) Sampled: 12/16/20 09:00					Client Sample Name: Effluent, Outfall 001				
Ammonia as N	0.898		mg/L	0.100	1	12/21/20 14:14	DAD	EPA 350.1	2012062
Nitrate/Nitrite as N	10.4		"	0.500	5	12/17/20 14:06	DAD	EPA 353.2	2012054
Phosphorus, Total as P	0.190		"	0.0500	1	12/22/20 14:08	DAD	EPA 365.1	2012064
Total Suspended Solids	2.59		"	1.00	"	12/17/20 08:01	JD	USGS 1-3765-85	2012052
20L0075-02 (Water) Sampled: 12/16/20 09:00					Client Sample Name: Influent				
Ammonia as N	30.6		mg/L	1.25	12.5	12/21/20 14:14	DAD	EPA 350.1	2012062
Biochemical Oxygen Demand	356		"	1.00	1	12/18/20 08:45	RC	SM 5210B	2012057
Nitrate/Nitrite as N	0.231		"	0.100	"	12/17/20 14:06	DAD	EPA 353.2	2012054
Phosphorus, Total as P	7.96		"	0.500	10	12/22/20 14:08	DAD	EPA 365.1	2012064
Total Suspended Solids	565		"	1.00	1	12/17/20 08:01	JD	USGS 1-3765-85	2012052

Arkansas Analytical, Inc.

Wet Chemistry

Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	Analyst	Method	Batch
20L0075-03 (Water) Sampled: 12/12/20 14:26					Client Sample Name: Influent				
Oil and Grease	31.8		mg/L	10.2	1	12/18/20 07:35	SP	EPA1664 Mod, Rev. B 2010	B012360



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Chemistry Parameters by APHA/EPA Methods - Quality Control Environmental Testing Group

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2012052 - Wet Prep

Blank (2012052-BLK1)				Prepared & Analyzed: 12/17/20						
Total Suspended Solids	ND	1.00	mg/L							
Blank (2012052-BLK2)				Prepared & Analyzed: 12/17/20						
Total Suspended Solids	ND	1.00	mg/L							
LCS (2012052-BS1)				Prepared & Analyzed: 12/17/20						
Total Suspended Solids	38.2	1.00	mg/L	40.0		95.5	80-120			
LCS Dup (2012052-BSD1)				Prepared & Analyzed: 12/17/20						
Total Suspended Solids	38.8	1.00	mg/L	40.0		97.0	80-120	1.56	20	
Duplicate (2012052-DUP1)				Source: 20L0061-01		Prepared & Analyzed: 12/17/20				
Total Suspended Solids	12.0	1.00	mg/L		14.0			15.4	30	
Duplicate (2012052-DUP2)				Source: 20L0064-01		Prepared & Analyzed: 12/17/20				
Total Suspended Solids	37.0	1.00	mg/L		43.0			15.0	30	
Duplicate (2012052-DUP3)				Source: 20L0071-01		Prepared & Analyzed: 12/17/20				
Total Suspended Solids	2010	1.00	mg/L		2580			24.8	30	

Batch 2012054 - Wet Prep

Blank (2012054-BLK1)				Prepared & Analyzed: 12/17/20						
Nitrate/Nitrite as N	ND	0.100	mg/L							
LCS (2012054-BS1)				Prepared & Analyzed: 12/17/20						
Nitrate/Nitrite as N	3.78	0.100	mg/L	4.00		94.5	90-110			



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Chemistry Parameters by APHA/EPA Methods - Quality Control Environmental Testing Group

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2012054 - Wet Prep

Matrix Spike (2012054-MS1)		Source: 20L0056-01			Prepared & Analyzed: 12/17/20					
Nitrate/Nitrite as N	2.10	0.100	mg/L	2.00	0.190	95.5	90-110			
Matrix Spike Dup (2012054-MSD1)		Source: 20L0056-01			Prepared & Analyzed: 12/17/20					
Nitrate/Nitrite as N	2.10	0.100	mg/L	2.00	0.190	95.5	90-110	0.00	10	

Batch 2012057 - Wet Prep

Blank (2012057-BLK1)		Prepared & Analyzed: 12/18/20								
Biochemical Oxygen Demand	ND	1.00	mg/L							
LCS (2012057-BS1)		Prepared & Analyzed: 12/18/20								
Biochemical Oxygen Demand	196		mg/L	198		99.0	84.6-115.4			
Duplicate (2012057-DUP1)		Source: 20L0072-01			Prepared & Analyzed: 12/18/20					
Biochemical Oxygen Demand	20.0	1.00	mg/L		21.0			4.88	15	
Duplicate (2012057-DUP2)		Source: 20L0075-02			Prepared & Analyzed: 12/18/20					
Biochemical Oxygen Demand	315	1.00	mg/L		356			12.2	15	

Batch 2012062 - Wet Prep

Blank (2012062-BLK1)		Prepared & Analyzed: 12/21/20								
Ammonia as N	ND	0.100	mg/L							
LCS (2012062-BS1)		Prepared & Analyzed: 12/21/20								
Ammonia as N	5.21	0.100	mg/L	5.00		104	90-110			



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Chemistry Parameters by APHA/EPA Methods - Quality Control Environmental Testing Group

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2012062 - Wet Prep

Matrix Spike (2012062-MS1)		Source: 20L0066-01			Prepared & Analyzed: 12/21/20					
Ammonia as N	2.20	0.100	mg/L	2.00	0.113	104	90-110			
Matrix Spike (2012062-MS2)		Source: 20L0077-01			Prepared & Analyzed: 12/21/20					
Ammonia as N	2.43	0.100	mg/L	2.00	0.504	96.3	90-110			
Matrix Spike Dup (2012062-MSD1)		Source: 20L0066-01			Prepared & Analyzed: 12/21/20					
Ammonia as N	2.28	0.100	mg/L	2.00	0.113	108	90-110	3.57	10	
Matrix Spike Dup (2012062-MSD2)		Source: 20L0077-01			Prepared & Analyzed: 12/21/20					
Ammonia as N	2.49	0.100	mg/L	2.00	0.504	99.3	90-110	2.44	10	

Batch 2012064 - Wet Prep

Blank (2012064-BLK1)					Prepared & Analyzed: 12/22/20					
Phosphorus, Total as P	ND	0.0500	mg/L							
Blank (2012064-BLK2)					Prepared & Analyzed: 12/22/20					
Phosphorus, Total as P	ND	0.0500	mg/L							
LCS (2012064-BS1)					Prepared & Analyzed: 12/22/20					
Phosphorus, Total as P	0.974	0.0500	mg/L	1.00		97.4	90-110			
LCS Dup (2012064-BSD1)					Prepared & Analyzed: 12/22/20					
Phosphorus, Total as P	0.980	0.0500	mg/L	1.00		98.0	90-110	0.614	4.52	
Matrix Spike (2012064-MS1)		Source: 20L0072-01			Prepared & Analyzed: 12/22/20					
Phosphorus, Total as P	0.708		mg/L	0.500	0.208	100	90-110			



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Date Received: 12/16/20

Chemistry Parameters by APHA/EPA Methods - Quality Control Environmental Testing Group

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2012064 - Wet Prep

Matrix Spike (2012064-MS2)		Source: 20L0075-02		Prepared & Analyzed: 12/22/20						
Phosphorus, Total as P	1.25		mg/L	0.500	0.796	90.8	90-110			
Matrix Spike (2012064-MS3)		Source: 20L0076-01		Prepared & Analyzed: 12/22/20						
Phosphorus, Total as P	1.06		mg/L	0.500	0.583	95.4	90-110			
Matrix Spike Dup (2012064-MSD1)		Source: 20L0072-01		Prepared & Analyzed: 12/22/20						
Phosphorus, Total as P	0.687		mg/L	0.500	0.208	95.8	90-110	3.01	6.01	
Matrix Spike Dup (2012064-MSD2)		Source: 20L0075-02		Prepared & Analyzed: 12/22/20						
Phosphorus, Total as P	1.28		mg/L	0.500	0.796	96.8	90-110	2.37	6.01	
Matrix Spike Dup (2012064-MSD3)		Source: 20L0076-01		Prepared & Analyzed: 12/22/20						
Phosphorus, Total as P	1.06		mg/L	0.500	0.583	95.4	90-110	0.00	6.01	



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Attn: Anthony Brown

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Wet Chemistry - Quality Control Arkansas Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B012360 - NO PREP

Blank (B012360-BLK1)

Prepared & Analyzed: 12/18/20

Oil and Grease ND 5.00 mg/L

LCS (B012360-BS1)

Prepared & Analyzed: 12/18/20

Oil and Grease 31.6 5.00 mg/L 40.0 79.0 78-114

LCS Dup (B012360-BSD1)

Prepared & Analyzed: 12/18/20

Oil and Grease 33.2 5.00 mg/L 40.0 83.0 78-114 4.94 18

Matrix Spike (B012360-MS1)

Source: 2012317-01

Prepared & Analyzed: 12/18/20

Oil and Grease 33.3 5.00 mg/L 40.0 ND 83.2 78-114

Notes and Definitions

ND	Analyte NOT DETECTED at PQL	ug/L	Micrograms/Liter (PPB)
PQL	Practical Quantitation Limit	ug/Kg	Micrograms/Kilogram (PPB)
mg/L	Milligrams/Liter (PPM)	dry	Sample results reported on a dry weight basis
mg/Kg	Milligrams/Kilogram (PPM)		



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Attn: Anthony Brown

Date Received: 12/16/20

CERTIFICATIONS

Certified Analyses included in this Report

Analysis	Certifications
Ammonia as N	ADEQ,NELAP
Nitrate/Nitrite as N	ADEQ,NELAP
Phosphorus, Total as P	ADEQ,NELAP
Biochemical Oxygen Demand	ADEQ,NELAP
Total Suspended Solids	ADEQ,NELAP

The laboratory at Environmental Testing Group Inc. operates under the following certifications and accreditations:

The accredited report results were obtained in compliance with 2009 TNI standards unless otherwise noted. For a complete list of accredited analytes, please contact your project manager.

Code	Description	Number	Expires
ADEQ	State of Arkansas	04-0574/09-071-0	10/19/2021
NELAP	FL DOH	E871035	06/30/2021



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Effluent - Influent CHAIN OF CUSTODY RECORD

CLIENT INFORMATION

City of Siloam Springs
 PO BOX 80
 SILOAM SPRINGS AR 72761

Reporting Information

Project Name: Effluent Influent
 E-Mail: edc@etg.com
 Telephone: 479-524-5623
 Fax: 479-524-4653
 Bill to P.O.#:

Bottle Type:

- A) 1 Liter Poly
- B) 500 mL Poly
- C) 0.5 L W/M Glass
- D) 1 L Amber Glass
- E) 300 mL Amber Glass
- F) 120 mL Vessel
- G) 40 mL VOA
- H) 1 L W/M Glass
- I) Half Gallon Poly

Preservative Codes:

- 1. Cool, 6 Degrees Centigrade
- 2. Non-preserved
- 3. Sulfuric Acid (H₂SO₄), pH < 2
- 4. Nitric Acid (HNO₃), pH < 2
- 5. Thiosulfate for Dechlorination
- 6. Hydrochloric Acid (HCl)
- 7. Sodium Hydroxide (NaOH), pH > 12
- 8. H₃PO₄, Phosphoric Acid

Customer Number: 1745

Project Manager: Tony Brown

Sampler(s) Signature: *Tony Brown*

Sampler(s) Printed: *Tony Brown*

LAB ID #	SAMPLE COLLECTION Dates	Times	Grab Cont.	Number of bottles	Sample Matrix S-Solid W-Water	SAMPLE IDENTIFICATION, DESCRIPTION	TEST PARAMETERS				REMARKS / COMMENTS
							1,2	1,3	1,2	1,3	
0095-01	12-15-20	1000	X	1	W	Effluent, Outfall 001	X				
	12-16-20	1000	X	1	W	Effluent, Outfall 001		X			
	12-16-20	0900	X	1	W	Influent			X		
	12-16-20	0800	X	1	W	Influent				X	
	12-16-20	0700	X	1	W	Influent					
	12-16-20	0600	X	1	W	Influent					
	12-16-20	0500	X	1	W	Influent					
	12-16-20	0400	X	1	W	Influent					
	12-16-20	0300	X	1	W	Influent					

20L0075-01 A
 Effluent, Outfall 001
 Water-Work Order Label
 Sampled: 12/16/20 09:00
 City of Siloam Springs

SAMPLE CONDITION UPON RECEIPT IN LAB

1. CUSTODY SEALS: Yes No
 2. CONTAINERS CORRECT: Yes No
 3. COULABELS AGREE: Yes No
 4. PRESERVATION CONFIRMED: Yes No
 5. RECEIVED ON ICE: Yes No
 6. TEMPERATURE UPON RECEIPT: 12°C

FOR COMPLETION BY LAB ONLY

REMARKS / COMMENTS

IR Temperature Gun #6
 Tester: Chae Jimba
 HJL613 pH Paper

Parmed to Amber Glass 500 mL Jar 12/16/20

Received in 500ml poly H2SO4

upon receipt

Receipt of samples by Environmental Testing Group, Inc. acknowledges acceptance of Standard Terms and Conditions (available upon request).



SUBCONTRACT ORDER

Sending Laboratory:

Environmental Testing Group
1702 East Central Avenue, Suite 10
Bentonville, AR 72712
Phone: 479-271-7996
Fax: 479-271-8394

Project Manager: David A. Damico

Subcontracted Laboratory:

Arkansas Analytical, Inc
8100 National Dr.
Little Rock, AR 72209
Phone: (501) 455-3233
Fax: (501) 455-6118

Work Order: 20L0075

Analysis	Comments
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Sample ID: 20L0075-03 Water Sampled: 12/12/2020 14:26

2012365
01

O&G-1664 A

Containers Supplied:

50ml Centrifuge Tube
 500ml NaOH
 500ml HNO3
 500ml H2SO4
 500ml Amber Glass
H2SO4

	Yes	No
Custody Seals:	X	
Containers Correct:	X	
COC/Labels Agree:	X	
Received on Ice:	X	
Temperature on Receipt:	4°C	
Temperature Gun ID:	1111 #2	

<u>[Signature]</u>	<u>12-16-2020</u>	<u>13:53</u>	<u>FedEx</u>	<u>12-16-2020</u>	<u>13:53</u>
Relinquished By		Date/Time	Received By		Date/Time
<u>[Signature]</u>	<u>FedEx</u>	<u>12-17-20</u>	<u>Jammy Riddle</u>	<u>12-17-20</u>	<u>14:00</u>
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time



Environmental Testing Group, Inc.
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December 17, 2020

City of Siloam Springs
Tony Brown
P.O. Box 80
Siloam Springs, AR 72761

Tony,

Due to a lab error on the bench, there was not enough sample remaining in the NP container after running TSS to run a CBOD analysis for your 12-16-20 Effluent Composite. Our apologies for the error and please let us know what we need to do.

If you have any questions, please contact our lab @ 479-271-7996.

Sincerely,

Dave D'Amico
Environmental Testing Group