

City of Hot Springs ATTN: Mr. Harold Mauldin 320 Davidson Drive Hot Springs, AR 71901

This report contains the analytical results and supporting information for samples received on July 26, 2022. Attached please find a copy of the Chain of Custody and/or other documents received. Note that any remaining sample will be discarded two weeks from the original report date unless other arrangements are made.

This report is intended for the sole use of the client listed above. Assessment of the data requires access to the entire document.

This report has been reviewed by the Chief Operating Officer or a qualified designee.

John Overbey

Chief Operating Officer

This document has been distributed to the following:

PDF cc: City of Hot Springs

ATTN: Mr. Dennis Brunson dbrunson@cityhs.net

City of Hot Springs

ATTN: Mr. Harold Mauldin

wwlab@cityhs.net

City of Hot Springs ATTN: Ms. Mandy King mking@cityhs.net



City of Hot Springs 320 Davidson Drive Hot Springs, AR 71901

SAMPLE INFORMATION

Project Description:

Three (3) water sample(s) received on July 26, 2022 Manhole 1750 P.O. No. 2022-247

Receipt Details:

A Chain of Custody was provided. The samples were delivered in two (2) ice chests.

Each sample container was checked for proper labeling, including date and time sampled. Sample containers were reviewed for proper type, adequate volume, integrity, temperature, preservation, and holding times. Any exceptions are noted below:

Sample Identification:

Laboratory ID	Client Sample ID	Sampled Date/Time Notes	
267535-1	Site 1	25-Jul-2022 1702	
267535-2	Site 2	25-Jul-2022 1710	
267535-3	Site 3	25-Jul-2022 1643	

Qualifiers:

D Result is from a secondary dilution factor

References:

"Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/5-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993).

[&]quot;Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)", Third Edition.

[&]quot;Standard Methods for the Examination of Water and Wastewaters", (SM).

[&]quot;American Society for Testing and Materials" (ASTM).

[&]quot;Association of Analytical Chemists" (AOAC).



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ANALYTICAL RESULTS

AIC No. 267535-1

Sample Identification: Site 1 25-Jul-2022 1702

Analyte		Result	RL	Units	Qualifier
Total Kjeldahl Nitrogen EPA 351.2	Prep: 27-Jul-2022 1624 by 376	4.2 Analyzed: 28-Jul	3 -2022 1258 by 352	mg/l Batch: W80325	D Dil: 10
Chlorophyll A SM 10200 H 2011		< 0.0050 Analyzed: 26-Jul	0.0050 -2022 1033 by 352	mg/l Batch: W80301	
Total Dissolved Solids SM 2540 C 2015	Prep: 26-Jul-2022 1101 by 100	89 Analyzed: 28-Jul	25 -2022 1609 by 100	mg/l Batch: W80302	
Chloride EPA 300.0	Prep: 26-Jul-2022 1428 by 330	9.9 Analyzed: 26-Jul	0.2 -2022 1823 by 330	mg/l Batch: C25493	
Nitrate + Nitrite as N EPA 300.0	Prep: 26-Jul-2022 1428 by 330	< 0.5 Analyzed: 26-Jul	0.5 -2022 1800 by 330	mg/l Batch: C25493	D Dil: 10

AIC No. 267535-2

Sample Identification: Site 2 25-Jul-2022 1710

Analyte		Result	RL	Units	Qualifier
Total Kjeldahl Nitrogen EPA 351.2	Prep: 27-Jul-2022 1624 by 376	0.78 Analyzed: 28-Ju	0.5 I-2022 1223 by 352	mg/l Batch: W80325	D Dil: 2
Chlorophyll A SM 10200 H 2011		< 0.0050 Analyzed: 26-Ju	0.0050 I-2022 1033 by 352	mg/l Batch: W80301	
Total Dissolved Solids SM 2540 C 2015	Prep: 26-Jul-2022 1101 by 100	63 Analyzed: 28-Ju	25 I-2022 1609 by 100	mg/l Batch: W80302	
Chloride EPA 300.0	Prep: 26-Jul-2022 1428 by 330	7.7 Analyzed: 26-Ju	0.2 I-2022 1906 by 330	mg/l Batch: C25493	
Nitrate + Nitrite as N EPA 300.0	Prep: 26-Jul-2022 1428 by 330	< 0.5 Analyzed: 26-Ju	0.5 I-2022 1845 by 330	mg/l Batch: C25493	D Dil: 10

AIC No. 267535-3

Sample Identification: Site 3 25-Jul-2022 1643

Analyte		Result	RL	Units	Qualifier
Total Kjeldahl Nitrogen EPA 351.2	Prep: 27-Jul-2022 1624 by 376	1.2 Analyzed: 28-Jul-2	0.5 022 1224 by 352	mg/l Batch: W80325	D Dil: 2
Chlorophyll A SM 10200 H 2011		0.0053 Analyzed: 26-Jul-2	0.0050 022 1033 by 352	mg/l Batch: W80301	
Total Dissolved Solids SM 2540 C 2015	Prep: 26-Jul-2022 1101 by 100	67 Analyzed: 28-Jul-2	25 022 1609 by 100	mg/l Batch: W80302	
Chloride EPA 300.0	Prep: 26-Jul-2022 1428 by 330	7.9 Analyzed: 26-Jul-2	0.2 022 2029 by 330	mg/l Batch: C25493	
Nitrate + Nitrite as N EPA 300.0	Prep: 26-Jul-2022 1428 by 330	< 0.5 Analyzed: 26-Jul-2	0.5 022 2008 by 330	mg/l Batch: C25493	D Dil: 10



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DUPLICATE RESULTS

			- "		RPD			.	
Analyte		AIC No.	Result	RPD	Limit	Preparation Date	Analysis Date	Dil	Qual
Chlorophyll A		267535-1	< 0.0050 mg/l				26Jul22 1033 by 352		
	Batch: W80301	Duplicate	< 0.0050 mg/l	0.00	10.0		26Jul22 1033 by 352		
Total Dissolved Solids		267460-2	1300 mg/l			26Jul22 1101 by 100	28Jul22 1609 by 100		
	Batch: W80302	Duplicate	1400 mg/l	1.11	10.0	26Jul22 1102 by 100	28Jul22 1609 by 100		

LABORATORY CONTROL SAMPLE RESULTS

	Spike									
Analyte	Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Total Kjeldahl Nitrogen	1 mg/l	116	81.1-155			W80325	27Jul22 1625 by 376	28Jul22 1201 by 352		
Total Dissolved Solids	2000 mg/l	96.2	85.0-115			W80302	26Jul22 1102 by 100	28Jul22 1609 by 100		
Chloride	25 mg/l	100	90.0-110			C25493	26Jul22 1428 by 330	26Jul22 1606 by 330		
Nitrate + Nitrite as N	10 mg/l	101	90.0-110			C25493	26Jul22 1428 by 330	26Jul22 1606 by 330		

MATRIX SPIKE SAMPLE RESULTS

Analyte	Spike Sample Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Total Kjeldahl Nitrogen	267483-2 1 mg/l	86.0	19.5-172	W80325	27Jul22 1625 by 376	28Jul22 1250 by 352	5	D
	267483-2 1 mg/l	89.8	19.5-172	W80325	27Jul22 1625 by 376	28Jul22 1252 by 352	5	D
	Relative Percent Difference:	1.79	12.0	W80325				D
Chloride	267519-1 25 mg/l	97.4	80.0-120	C25493	26Jul22 1433 by 330	26Jul22 1628 by 330		
	267519-1 25 mg/l	97.5	80.0-120	C25493	26Jul22 1433 by 330	26Jul22 1651 by 330		
	Relative Percent Difference:	0.102	10.0	C25493				
Nitrate + Nitrite as N	267519-1 10 mg/l	98.6	80.0-120	C25493	26Jul22 1433 by 330	26Jul22 1628 by 330		
	267519-1 10 mg/l Relative Percent Difference:	98.8 0.223	80.0-120 10.0	C25493 C25493	26Jul22 1433 by 330	26Jul22 1651 by 330		

LABORATORY BLANK RESULTS

				QC			
Analyte	Result	RL	LOQ	Sample	Preparation Date	Analysis Date	Qual
Total Kjeldahl Nitrogen	< 0.5 mg/l	0.5	0.5	W80325-1	27Jul22 1625 by 376	28Jul22 1159 by 352	D
Chlorophyll A	< 0.0050 mg/l	0.0050	0.005	W80301-1		26Jul22 1033 by 352	
Total Dissolved Solids	< 25 mg/l	25	25	W80302-1	26Jul22 1102 by 100	28Jul22 1609 by 100	
Chloride	< 0.2 mg/l	0.2	0.2	C25493-1	26Jul22 1428 by 330	26Jul22 1543 by 330	
Nitrate + Nitrite as N	< 0.03 mg/l	0.03	0.05	C25493-1	26Jul22 1428 by 330	26Jul22 1543 by 330	



CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

PAGE 1. OF 1	AIC CONTROL NO:	Z 6 7 3 3 AIC PROPOSAL NO:	Carrier BILL G.	Received Temperature C	Remarks						Field pH callbratton	on@	Buffer:	A=(NH,	Date/Time 22	100 00 10 10 10 10 10 10 10 10 10 10 10	7.26.22 MA 0921		FORM 0060
				; ;				•	-					f = Sodium Thiosulfate	Rec By:	0. × 02	By: B 70 W		
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IO I SOO LO NIRED		2022-247 OF	MATRIX O	00		1 3 1	7	7						V = VOA vials N = Nitric acid nH2	Relin By:		By:	Com	
5	PC	2000		00	¥ @	26 1	7 2 0	7				Гуре	lve	P = Plastic S = Suffuric acid pH2	circle) DAYS				
		ر ا ا	Nove 115	7 7	Date/Time Collected		2 7-28	3 7-25-23				Container Type	Preservative	G = Glass P = NO = none S =	lease	quested by:	ntact with questions: Fax:	-	
i	(Client: (1+1) c	Reference: 7/01/2 Project	poled	AIC Sample No. Identification	1	z 3; te	3 5:40				`			Turnaround Time Requested: (F NORMAL or EXPEDITED IN	Expedited results requested by:	who should Alc contact with questions:	Report Address to:	Email Address: 9/2014

SSO WATER QUALITY ASSESSMENT

Date of overflow: 7/24/22-7/25/22

Sample collection date: 7/25/22

Sample collection time at Site #1: 1702

Site #2: 1710 Site #3: 1643

	Overflow		
	location	Upstream	Downstream
	Site 1	Site 2	Site 3
pH SU	7.5	8.06	7.4
Temperature C	30.8	30.8	31.2
DO ppm	7	8.65	6.3
Conductivity uS/cm	143.1	124.2	130.2
Turbidity NTU	18.7	13.6	4.12
Alkalinity mg/L	45	40	40
BOD mg/L	8.23	1.58	3.23
TSS mg/L	9.4	11.1	4.7
Ammonia mg/L	1.87	0.07	0.43
Total Phosphorus mg/L	0.42	0.1	0.11
Ortho-phosphate mg/L	0.7	0.11	0.12
Sulfate mg/L	24.5	20.7	17.8
TDS mg/L	89	63	67
Chloride mg/L	9.9	7.7	7.9
Nitrate/Nitrite mg/L	<0.5	<0.5	<0.5
TKN mg/L	4.2	0.78	1.2
Chlorophyll A mg/L	<0.005	<0.005	0.0053
Fecal Coliforms/100ml	11,250	7,063	4,333
E. Coli cfu/100ml	>2419.6	>2419.6	>2419.6