

SSO WATER QUALITY ASSESSMENT

Date of overflow: 4/21/22

Sample collection date: 4/21/22

Sample collection time at

Site #1: 1346

Site #2: 1351

Site #3: 1330

	Overflow location Site 1	Upstream Site 2	Downstream Site 3
pH SU	6.99	6.81	6.85
Temperature C	16.3	16.3	16.6
DO ppm	9.91	10.03	9.82
Conductivity uS/cm	42.27	41.65	42.09
Turbidity NTU	13	12.7	12.3
Alkalinity mg/L	10	10	10
BOD mg/L	1.65	1.24	1.52
TSS mg/L	4.5	3.4	4.7
Ammonia mg/L	0.02	0.01	0.02
Total Phosphorus mg/L	0.08	0.03	0.02
Ortho-phosphate mg/L	0.02	0.02	0.03
Sulfate mg/L	14.8	16.8	16.7
TDS mg/L	46	41	48
Chloride mg/L	2.2	2.2	2.2
Nitrate/Nitrite mg/L	<0.5	<0.5	<0.5
TKN mg/L	<0.5	<0.5	0.63
Chlophyll A mg/L	<0.0050	0.01	<0.0050
Fecal Coliforms/100ml	43.75	100	25
E. Coli cfu/100ml	206.4	186	162.4



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 April 22, 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.


_____ by LP
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
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City of Hot Springs
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mking@cityhs.net

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320 Davidson Drive
Hot Springs, AR 71901

SAMPLE INFORMATION

Project Description:

Three (3) water sample(s) received on April 22, 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:

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Sampled Date/Time</u>	<u>Notes</u>
264953-1	Site 1	21-Apr-2022 1346	
264953-2	Site 2	21-Apr-2022 1351	
264953-3	Site 3	21-Apr-2022 1330	

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).
"Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)", Third Edition.
"Standard Methods for the Examination of Water and Wastewaters", (SM).
"American Society for Testing and Materials" (ASTM).
"Association of Analytical Chemists" (AOAC).

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ANALYTICAL RESULTS

AIC No. 264953-1

Sample Identification: Site 1 21-Apr-2022 1346

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
Total Kjeldahl Nitrogen EPA 351.2	< 0.5	0.5	mg/l	
Prep: 26-Apr-2022 1055 by 330	Analyzed: 29-Apr-2022 1016 by 352		Batch: W79363	
Chlorophyll A SM 10200 H 2011	< 0.0050	0.0050	mg/l	
Prep: 22-Apr-2022 1346 by 330	Analyzed: 22-Apr-2022 1630 by 330		Batch: W79297	
Total Dissolved Solids SM 2540 C 2011	46	25	mg/l	
Prep: 26-Apr-2022 1407 by 100	Analyzed: 28-Apr-2022 1317 by 100		Batch: W79368	
Chloride EPA 300.0	2.2	0.2	mg/l	
Prep: 27-Apr-2022 1412 by 338	Analyzed: 27-Apr-2022 1811 by 338		Batch: C25280	
Nitrate + Nitrite as N EPA 300.0	< 0.5	0.5	mg/l	D
Prep: 27-Apr-2022 1412 by 338	Analyzed: 27-Apr-2022 1750 by 338		Batch: C25280	Dil: 10

AIC No. 264953-2

Sample Identification: Site 2 21-Apr-2022 1351

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
Total Kjeldahl Nitrogen EPA 351.2	< 0.5	0.5	mg/l	
Prep: 26-Apr-2022 1055 by 330	Analyzed: 29-Apr-2022 1039 by 352		Batch: W79363	
Chlorophyll A SM 10200 H 2011	0.010	0.0050	mg/l	
Prep: 22-Apr-2022 1346 by 330	Analyzed: 22-Apr-2022 1630 by 330		Batch: W79297	
Total Dissolved Solids SM 2540 C 2011	41	25	mg/l	
Prep: 26-Apr-2022 1407 by 100	Analyzed: 28-Apr-2022 1317 by 100		Batch: W79368	
Chloride EPA 300.0	2.2	0.2	mg/l	
Prep: 27-Apr-2022 1412 by 338	Analyzed: 27-Apr-2022 1934 by 338		Batch: C25280	
Nitrate + Nitrite as N EPA 300.0	< 0.5	0.5	mg/l	D
Prep: 27-Apr-2022 1412 by 338	Analyzed: 27-Apr-2022 1913 by 338		Batch: C25280	Dil: 10

AIC No. 264953-3

Sample Identification: Site 3 21-Apr-2022 1330

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
Total Kjeldahl Nitrogen EPA 351.2	0.63	0.5	mg/l	
Prep: 26-Apr-2022 1055 by 330	Analyzed: 29-Apr-2022 1041 by 352		Batch: W79363	
Chlorophyll A SM 10200 H 2011	< 0.0050	0.0050	mg/l	
Prep: 22-Apr-2022 1346 by 330	Analyzed: 22-Apr-2022 1630 by 330		Batch: W79297	
Total Dissolved Solids SM 2540 C 2011	48	25	mg/l	
Prep: 26-Apr-2022 1407 by 100	Analyzed: 28-Apr-2022 1317 by 100		Batch: W79368	
Chloride EPA 300.0	2.2	0.2	mg/l	
Prep: 27-Apr-2022 1412 by 338	Analyzed: 27-Apr-2022 2015 by 338		Batch: C25280	
Nitrate + Nitrite as N EPA 300.0	< 0.5	0.5	mg/l	D
Prep: 27-Apr-2022 1412 by 338	Analyzed: 27-Apr-2022 1955 by 338		Batch: C25280	Dil: 10

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DUPLICATE RESULTS

Analyte	AIC No.	Result	RPD	RPD Limit	Preparation Date	Analysis Date	Dil	Qual
Chlorophyll A	264798-1	< 0.0050 mg/l			18Apr22 1646 by 347	22Apr22 1630 by 330		
	Batch: W79297 Duplicate	< 0.0050 mg/l	0.00	10.0	18Apr22 1646 by 347	22Apr22 1630 by 330		
Total Dissolved Solids	264998-1	1000 mg/l			26Apr22 1407 by 100	28Apr22 1317 by 100		
	Batch: W79368 Duplicate	1000 mg/l	0.983	10.0	26Apr22 1407 by 100	28Apr22 1317 by 100		

LABORATORY CONTROL SAMPLE RESULTS

Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Total Kjeldahl Nitrogen	1 mg/l	132	99.6-146			W79363	26Apr22 1055 by 330	29Apr22 1014 by 352		
Total Dissolved Solids	2000 mg/l	97.4	85.0-115			W79368	26Apr22 1407 by 100	28Apr22 1317 by 100		
Chloride	25 mg/l	106	90.0-110			C25280	27Apr22 1413 by 338	27Apr22 1606 by 338		
Nitrate + Nitrite as N	10 mg/l	103	90.0-110			C25280	27Apr22 1413 by 338	27Apr22 1606 by 338		

MATRIX SPIKE SAMPLE RESULTS

Analyte	Sample	Spike Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Total Kjeldahl Nitrogen	264953-1	1 mg/l	120	49.4-153	W79363	26Apr22 1055 by 330	29Apr22 1018 by 352		
	264953-1	1 mg/l	126	49.4-153	W79363	26Apr22 1055 by 330	29Apr22 1020 by 352		
	Relative Percent Difference:		4.37	11.6	W79363				
Chloride	265028-1	25 mg/l	106	80.0-120	C25280	27Apr22 1413 by 338	27Apr22 1627 by 338		
	265028-1	25 mg/l	106	80.0-120	C25280	27Apr22 1413 by 338	27Apr22 1648 by 338		
	Relative Percent Difference:		0.0314	10.0	C25280				
Nitrate + Nitrite as N	265028-1	10 mg/l	101	80.0-120	C25280	27Apr22 1413 by 338	27Apr22 1627 by 338		
	265028-1	10 mg/l	101	80.0-120	C25280	27Apr22 1413 by 338	27Apr22 1648 by 338		
	Relative Percent Difference:		0.00659	10.0	C25280				

LABORATORY BLANK RESULTS

Analyte	Result	RL	LOQ	QC Sample	Preparation Date	Analysis Date	Qual
Total Kjeldahl Nitrogen	< 0.5 mg/l	0.5	0.5	W79363-1	26Apr22 1055 by 330	29Apr22 1012 by 352	
Total Dissolved Solids	< 25 mg/l	25	25	W79368-1	26Apr22 1407 by 100	28Apr22 1317 by 100	
Chloride	< 0.2 mg/l	0.2	0.2	C25280-1	27Apr22 1413 by 338	27Apr22 1545 by 338	
Nitrate + Nitrite as N	< 0.03 mg/l	0.03	0.05	C25280-1	27Apr22 1413 by 338	27Apr22 1545 by 338	

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client: <u>City of Hot Springs</u>		PO No. <u>2022-217</u>		NO OF BOTTLES		ANALYSES REQUESTED		AIC CONTROL NO: <u>264953</u>	
Project Reference: <u>Manhole 1750</u>		SAMPLE MATRIX		WATER		SOIL		AIC PROPOSAL NO:	
Project Manager: <u>Harold Mauldin</u>		G R A B		C O M P		S O I L		Carrier:	
Sampled By: <u>TM, SK</u>		Date/Time Collected		Date/Time Collected		Date/Time Collected		Received Temperature C	
AIC No. 1		04-21-2016		04-21-2016		04-21-2016		0.8	
AIC No. 2		04-21-2016		04-21-2016		04-21-2016		Remarks	
AIC No. 3		04-21-2016		04-21-2016		04-21-2016		DB 22APR22	
AIC No. 4									
Container Type		Preservative		Relinquished		Relinquished		Field pH calibration	
G = Glass		P = Plastic		By: <u>Z. M. P.</u>		By: <u>B. HARRIS</u>		on _____ @ _____	
NO = none		S = Sulfuric acid pH2		Date/Time <u>4/22/22 0740</u>		Date/Time <u>4-22-22</u>		Buffer:	
V = VOA vials		N = Nitric acid pH2		By: <u>B. HARRIS</u>		By: <u>D. BROWN</u>		T = Sodium Thiosulfate	
H = HCl to pH2		B = NaOH to pH12		Date/Time <u>4-22-22</u>		Date/Time <u>4-22-22</u>		Z = Zinc acetate	
Turnaround Time Requested: (Please circle)		Relinquished		By: <u>B. HARRIS</u>		By: <u>D. BROWN</u>			
NORMAL or EXPEDITED <u>8</u> DAYS		By: <u>B. HARRIS</u>		Date/Time <u>4-22-22</u>		Date/Time <u>4-22-22</u>			
Expedited results requested by: <u>AMANDA CATES</u>		Relinquished		By: <u>B. HARRIS</u>		By: <u>D. BROWN</u>			
Who should AIC contact with questions: <u>AMANDA CATES</u>		Comments:		Date/Time <u>4-22-22</u>		Date/Time <u>4-22-22</u>			
Phone: <u>501-262-1125</u> Fax:				By: <u>B. HARRIS</u>		By: <u>D. BROWN</u>			
Report Attention to:				Date/Time <u>4-22-22</u>		Date/Time <u>4-22-22</u>			
Report Address to:				By: <u>B. HARRIS</u>		By: <u>D. BROWN</u>			