



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



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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:

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Sampled Date/Time</u>	<u>Notes</u>
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).
"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. 267535-1

Sample Identification: Site 1 25-Jul-2022 1702

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

AIC No. 267535-2

Sample Identification: Site 2 25-Jul-2022 1710

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

AIC No. 267535-3

Sample Identification: Site 3 25-Jul-2022 1643

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

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DUPLICATE RESULTS

Analyte	AIC No.	Result	RPD	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

Analyte	Spike 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	Sample	Spike 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	98.8	80.0-120	C25493	26Jul22 1433 by 330	26Jul22 1651 by 330			
	Relative Percent Difference:		0.223	10.0	C25493					

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	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

Client: City of Hot Springs	PO No. 2022-247	NO OF BOTTLES	ANALYSES REQUESTED						AIC CONTROL NO: 267535
Project Reference: Manhole 1750	MATRIX: WATER		Chloride	Nitrate+Nitrite	TKN	Chlorophyll A		AIC PROPOSAL NO:	
Project Manager: Harold Mauldin	SOIL							Carrier: BILL G.	
Sampled By: AC SB/TM	GRA B							Received Temperature C 0.1/0.3	
AIC No. 1 Site 1	COMP	3	total dissolved solids	✓	✓	✓		Remarks	
Date/Time Collected 7-25-22 @ 1702				✓	✓	✓			
AIC No. 2 Site 2		3		✓	✓	✓			
Date/Time Collected 7-25-22 @ 1710				✓	✓	✓			
AIC No. 3 Site 3		3		✓	✓	✓			
Date/Time Collected 7-25-22 @ 1643									
Container Type Preservative									
G = Glass NO = none P = Plastic S = Sulfuric acid pH2									
V = VOA vials N = Nitric acid pH2									
H = HCl to pH2 B = NaOH to pH12									
T = Sodium Thiosulfate Z = Zinc acetate									
Turaround Time Requested: (Please circle) NORMAL or EXPEDITED IN ___ DAYS									
Expedited results requested by: _____									
Who should AIC contact with questions: _____									
Phone: _____ Fax: _____									
Report Attention to: _____									
Report Address to: _____									
Email Address: _____									
9/2014									