

November 4, 2022

Arkansas Energy and Environment
Yvette Wilkins
5301 Northshore Drive
North Little Rock, AR 72118-5317

Wastewater Department
Kathryn Catlin
Wastewater Systems Manager
1508 Silver Valley Road
Harrison, Arkansas 72601
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RE: Corrective Actions DMR-QA 42
NPDES Permit No.: AR0034321

The purpose of this correspondence is to provide the a summary of the “Not Acceptable” results and follow-up analysis in the City of Harrison’s DMR-QA analysis, corrective actions taken, and determinations of the causes for the “Not Acceptable” analytical results (*see attached spreadsheet*). Sulfate, chloride, and Total Dissolved Solids (TDS) analysis were included in the new NPDES permit, which went into effect August 1, 2021. As such, 2022 was the first year the analysis were required in the DRM-QA testing.

Analysis of the DMR-QA 42 results found “Not Acceptable” included Ammonia as N, Chloride, and TDS. The attached spreadsheet is a summary of reported and actual results, causes, and the corrective actions taken for each study. An expanded explanation is provided below:

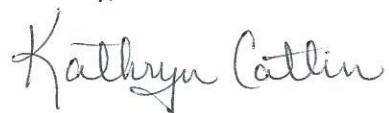
1. The Ammonia as N failure was due to the spectrophotometer being set for high range when the results were in the low range. For WP-331 Ammonia was analyzed in both high and low ranges settings and the results were acceptable.
2. With a change from aluminum to porcelain evaporating dishes for the TDS analysis, the results in WP-332 were acceptable. The cause for the TDS failures in DMR-QA 42 and WP-331 were determined to be due to the use of aluminum evaporating dishes.
3. The chloride failures for DMR-QA 42 and WP-331 are due to difficulty of determining an endpoint in SM 4500-Cl B-2011. Following the DMR-QA 42 failure, I and two lab technicians reviewed multiple videos demonstrations of the titration procedure to determine what constituted the titration endpoint. In the WP-331 Study all three of us agreed on the titration endpoint and the reported chloride result.

A change in analytical methods from silver nitrate titration to chloride ion selective electrode was made prior to analysis of chloride in WP-332. Following the chloride failure in the WP-332 Study, a review of the procedure, electrode, and meter was conducted. The meter was found to be factory set on one (1) significant digit. The meter was reset to three (3) significant digits and a Quick Response unknown was ordered for chloride. With the meter significant digits set at 3, the chloride results from the Quick Response Study are acceptable (see attached report).

Corrective Action cont.

If you have any questions or require any additional information, please feel free to contact me.
Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Kathryn Catlin".

Kathryn Catlin
Wastewater Systems Manager

Attachments

**City of Harrison DMR-QA 2022
NPDES Permit No.: AR0034321**

ERA Study	Parameter	Reported	Actual	Range	Cause	Corrective Actions
DMR-QA 42	Ammonia as N	2.015	1.12	0.698-1.64	Analysis conducting with spectrophotometer set in high range setting and unknown was in low range	Analyze analyte in high and low range settings
	TDS	446.4	288	223-313	Evaporating oven temperature	Purchased additional drying oven for 108° C drying of sample
	Chloride	43.5	67.4	58.8-76.2	Difficulty with titration endpoint determination	Viewed multiple online videos of titration endpoint added standards & spike
W/P-331	Ammonia as N	16.7	16.4	13.2-19.5	Passed	NA
	TDS	565.3	409	364-454	Aluminum evaporating dish	Purchased porcelain evaporating dishes
	Chloride	70.2	49.9	43.2-56.7	Difficulty with titration endpoint determination	Changed method from SM 4500-Cl-B-2011 to ASTM D512-1(C) Ion Selective Electrode
W/P-332	TDS	394	392	347-437	Passed	NA
	Chloride	100	80.5	70.4-90.8	Significant digits on meter set to 1.	Adjusted meter significant digits to 3 and ordered Quick Response chloride analyte
Quick Response 110122L	Chloride	116	106	93.0-119	Passed	NA



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Kathryn Catlin
Harrison Municipal Pollution Control Plant
PO Box 1715
Harrison, AR 72601-8196
USA

110122L  *Final Report*

QuiK™ Response Proficiency Testing



November 2, 2022

Kathryn Catlin
Harrison Municipal Pollution Control Plant
PO Box 1715
Harrison, AR 72601-8196

Fax: 870-741-5022

Enclosed is your final report for ERA's QuiK™ Response program. Your final report includes an evaluation of all results submitted by your laboratory to ERA. The assigned value(s) and acceptance limits were not available to your laboratory at or before the time of reporting.

All analytes in ERA's QuiK™ Response program are evaluated using the following tiered approach. If the analyte is listed in the most current TNI Fields of Proficiency Testing (FoPT) tables the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the tables and the evaluation criteria contained in the 2016 TNI Standard, Volume 3. If the analyte is not included in the TNI FoPT tables, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 730002268). All analytes are included in ERA's A2LA accreditation, certification number 1539.01.

The Study Dates listed for each standard in the report are the project ship date (open date) and the date the data was submitted for evaluation (close date). Please note there may be different close dates for different standards within a project.

All activities associated with this QuiK™ Response project were performed by Waters/ERA with the exception of these samples/products which were manufactured for Waters/ERA by a subcontractor: Microbiology products with the following catalog numbers; 081, 084, 085, 078, 078A, 083, 083A and Volatiles in Gas Cylinder, catalog number 1100.

As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a supplemental (QuiK™ Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting the quality of your routine data.

The data contained herein are confidential and intended for your use only.

If you are using this report for DMRQA Corrective Action, please note the following: permittees must submit a copy of this report to your DMR-QA Coordinator, along with your corrective action documentation. Contract Laboratories should send a copy of this report to your permittees upon receipt.

Thank you for your participation in ERA's QuiK™ Response program. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

Craig Huff
Senior Technical Manager

cc: Project File Number 110122L





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Report Recipient	Contact/Phone Number	Reporting Type
No Recipients Selected		



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110122L Laboratory Exception Report

Kathryn Catlin
Wastewater Systems Manager
Harrison Municipal Pollution Control Plant
PO Box 1715
Harrison, AR 72601-8196
870-741-5527

EPA ID: AR00940
ERA Customer Number: H062101

Not Acceptable Evaluations

There were no Not Acceptable evaluations for this study.



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Project # : 110122L



Final Report Results For Laboratory Harrison Municipal Pollution Control Plant



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Project #: 110122L



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Final Evaluation Report

Project Number: **110122L**

ERA Customer Number: **H062101**

Laboratory Name: **Harrison Municipal
Pollution Control Plant**

Inorganic Results



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Project #: 110122L



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110122L Final Evaluation Report

Kathryn Catlin
Wastewater Systems Manager
Harrison Municipal Pollution Control Plant
PO Box 1715
Harrison, AR 72601-8196
870-741-5527

EPA ID: AR00940
ERA Customer Number: H062101

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
<i>WP Minerals (cat# 506, lot# 110122L) Study Dates: 11/01/2022 - 11/02/2022</i>												
1505	Alkalinity as CaCO3	mg/L		35.5	28.4 - 42.6	Not Reported				35.2	2.23	
1575	Chloride	mg/L	116	106	93.0 - 119	Acceptable	ASTM D512-12(D) 2012	11/2/2022	1.64	108	4.90	
1610	Conductivity at 25°C	µmhos/cm		485	437 - 534	Not Reported				492	11.9	
1730	Fluoride	mg/L		3.01	2.43 - 3.47	Not Reported				3.01	0.199	
1125	Potassium	mg/L		19.8	15.8 - 23.8	Not Reported				19.9	0.986	
1155	Sodium	mg/L		83.5	66.8 - 100	Not Reported				84.4	4.48	
2000	Sulfate	mg/L		16.7	12.9 - 19.6	Not Reported				16.8	1.09	
1955	Total Dissolved Solids at 180°C	mg/L		290	245 - 335	Not Reported				289	27.1	
1950	Total Solids at 105°C	mg/L		297	252 - 342	Not Reported				303	14.6	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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