



United States Environmental Protection Agency  
Office of Enforcement and Compliance Assurance  
**DMR-QA Study 42**

**2022**

(This data is collected under the authority of Section 308 of the Clean Water Act.)

**NPDES Permittee Data Report Form**

Attention: Follow the instructions on the previous page to complete this form and submit data for evaluation.

**Due September 9, 2022**

NPDES Permit Number (State + 7-digit ID)

AR 0021806

Permit Extension

Permittee Name

LRWRA - Adams Field Water Reclamation Authority

Current Permittee Mailing Address

11 Clearwater Dr

City

Little Rock

State

AR

Zip Code

72204

Phone Number

501-688-1486

Fax Number

E-Mail Address

rebecca.burkman@lrwra.com

Optional: If WP Study was used, list PT Provider name(s):

Optional: If WP Study was used, list WP Study Number(s):

For DMR-QA Study 42, conducted in 2022, the Permittee ensured that their laboratory(ies) performing the required analyses:

Received PT Samples

YES  NO

Submitted Complete and  
Accurate Data by July 15, 2022

YES  NO

Received a Graded Report by  
August 12, 2022

YES  NO

**Certification by Permit Holder or Authorized Representative**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) permit. Neither I nor any of my subordinates compared our results with results from independent analyses conducted by us or any other laboratory before we reported our results to the U.S. EPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Certifying Official

Rebecca Burkman

Title

Director of Environmental Affairs

Signature

*Rebecca Burkman*

Date

09/06/2022

*Address, phone number and e-mail of certifying official are required if different from above.*

Address

Phone Number

City

State

Zip Code

E-Mail Address



United States Environmental Protection Agency  
Office of Enforcement and Compliance Assurance  
**DMR-QA Study 42**

**2022**

(This data is collected under the authority of Section 308 of the Clean Water Act.)

Permittee Name LRWRA - Adams Field Water Reclamation Authority	NPDES Permit Number (State + 7-digit ID) AR <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="2"/> <input type="text" value="1"/> <input type="text" value="8"/> <input type="text" value="0"/> <input type="text" value="6"/>	Permit Extension
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**Identification of all CHEM, MICRO and WET laboratories who performed analyses for this permit**

Laboratory Name	Laboratory Address	U.S. EPA Lab Code	Lab Analysis Check box(es) that apply			Lab Type*	State-certified Lab**
			Chem	Micro	WET		
Little Rock Water Reclamation Authority Laboratory	9500 Birdwood Drive, Little Rock, AR 72206	AR <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="9"/> <input type="text" value="4"/> <input type="text" value="8"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	G <input type="text" value=""/>	<input type="checkbox"/>
		<input type="text" value=""/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
		<input type="text" value=""/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
		<input type="text" value=""/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
		<input type="text" value=""/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
		<input type="text" value=""/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

\* Lab Types: C = Commercial; F = Federal; G = Local Government; I = Industrial; O = Other; S = State  
 \*\* See Footnote on page 5 (Frequently Asked Questions) for the current list of states with lab accreditation programs

*If you need additional space, please make a copy of this page for additional laboratories.*



## Chemistry/Microbiology Analyte Checklist

DMR-QA Study 42

# 2022

Analyte Test	Test Required	Method Number Used (Optional)	Laboratory's Graded Result		Analyte determined by state-certified lab*
			Acceptable	Not Acceptable (Corrective Action Required)	
<b>Microbiology</b>					
E. coli, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fecal Coliform, MF or MPN	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Trace Metals</b>					
Aluminum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antimony	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arsenic	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cadmium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, total	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, hexavalent	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cobalt	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Iron	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lead	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manganese	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury (Low Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nickel	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selenium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Silver	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thallium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vanadium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zinc	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Demands</b>					
5-day BOD	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5-day Carbonaceous BOD	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOC	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Minerals</b>					
Alkalinity, total (CaCO <sub>3</sub> )	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chloride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardness, total (CaCO <sub>3</sub> )	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific conductance (25°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfate	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Dissolved Solids (180°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Nutrients</b>					
Ammonia as N	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrate as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrite as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthophosphate as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Kjeldahl-Nitrogen as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phosphorus as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Misc. Analytes</b>					
Non-Filterable Residue (TSS)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil and Grease	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Cyanide	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phenolics (4-AAP)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine (Low-Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settleable Solids	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name Rebecca Burkman Signature *Rebecca Burkman* Date 09/06/2022

\* See Footnote on page 5



## Whole Effluent Toxicity (WET) Analyte Checklist

### DMR-QA Study 42

# 2022

Analyte Number	Organism / Conditions	Endpoint	Test Required	Laboratory's Graded Result		Analyte determined by state-certified lab*
				Acceptable	Not Acceptable (Corrective Action Required)	
<b>Test Code 13 (refer to EPA Method 2000.0)</b>						
754	Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 14 (refer to EPA Method 2000.0)</b>						
755	Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 15 (refer to EPA Method 1000.0)</b>						
756	Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
808	Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF	IC25** (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
810	Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 16 (refer to EPA Method 1000.0)</b>						
759	Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
812	Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW	IC25** (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
814	Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 19 (refer to EPA Method 2002.0)</b>						
764	<i>Ceriodaphnia dubia</i> - MHSF 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 20 (refer to EPA Method 2002.0)</b>						
765	<i>Ceriodaphnia dubia</i> - 20% DMW 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 21 (refer to EPA Method 1002.0)</b>						
766	<i>Ceriodaphnia dubia</i> - MHSF	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
767	<i>Ceriodaphnia dubia</i> - MHSF	IC25** REPRODUCTION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
768	<i>Ceriodaphnia dubia</i> - MHSF	NOEC REPRODUCTION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 22 (refer to EPA Method 1002.0)</b>						
769	<i>Ceriodaphnia dubia</i> - 20% DMW	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
770	<i>Ceriodaphnia dubia</i> - 20% DMW	IC25** REPRODUCTION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
771	<i>Ceriodaphnia dubia</i> - 20% DMW	NOEC REPRODUCTION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 32 (refer to EPA Method 2021.0)</b>						
788	<i>Daphnia magna</i> - MHSF 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 38 (refer to EPA Method 2021.0)</b>						
794	<i>Daphnia pulex</i> - MHSF 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 42 (refer to EPA Method 2007.0)</b>						
798	Mysid ( <i>Americamysis bahia</i> , <i>Mysidopsis bahia</i> ) 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 43 (refer to EPA Method 1007.0)</b>						
799	Mysid ( <i>Americamysis bahia</i> , <i>Mysidopsis bahia</i> )	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
816	Mysid ( <i>Americamysis bahia</i> , <i>Mysidopsis bahia</i> )	IC25** (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
818	Mysid ( <i>Americamysis bahia</i> , <i>Mysidopsis bahia</i> )	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 44 (refer to EPA Method 2006.0)</b>						
803	Inland silverside ( <i>Menidia beryllina</i> ) 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 45 (refer to EPA Method 1006.0)</b>						
824	Inland silverside ( <i>Menidia beryllina</i> )	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
825	Inland silverside ( <i>Menidia beryllina</i> )	IC25** (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
826	Inland silverside ( <i>Menidia beryllina</i> )	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 46 (refer to EPA Method 2004.0)</b>						
804	Sheepshead minnow ( <i>Cyprinodon variegatus</i> ) 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Test Code 47 (refer to EPA Method 1004.0)</b>						
805	Sheepshead minnow ( <i>Cyprinodon variegatus</i> )	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
820	Sheepshead minnow ( <i>Cyprinodon variegatus</i> )	IC25** (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
822	Sheepshead minnow ( <i>Cyprinodon variegatus</i> )	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name Rebecca Burkman

Signature

RWBURKMAN

Date

09/06/2022

\* See Footnote on page 5

\*\* Preferred endpoint for DMR-QA performance test reporting

**Complete a separate checklist for EACH lab.**



Hallie Freyaldenhoven  
Little Rock Water Reclamation Authority - AF-WRF  
9500 Birdwood Drive  
Little Rock, AR 72206-3861  
USA

*DMR-QA 42*  *Final Report*

**DMR-QA Proficiency Testing**

**NPDES Permit: AR0021806**

**DMR-QA Study**

**Open Date: 04/15/2022**

**Close Date: 07/15/2022**

**Report Issued Date: 08/12/2022**



A Waters Company

August 12, 2022

Hallie Freyaldenhoven  
Little Rock Water Reclamation Authority - AF-WRF  
9500 Birdwood Drive  
Little Rock, AR 72206-3861

Enclosed is your final report for ERA's DMR-QA 42 Proficiency Testing study. Please note that reports were sent on your behalf to your state or regional DMR-QA coordinator. As the permit holder, you are required to review and sign the attached EPA forms and checklists and forward them to your DMR-QA coordinator by September 9, 2022. Your coordinator's contact information is provided below.

All analytes in ERA's DMR-QA 42 Proficiency Testing study have been evaluated by comparing the reported result to the acceptance limits generated using the criteria contained in the most current TNI Non-Potable Water and Whole Effluent Toxicity Testing-Non Potable Water Fields of Proficiency Testing (FoPT) tables.

If you have any "Not Acceptable" evaluations for the DMR-QA 42 study, a letter of corrective action and an order form for the required remedial samples are attached for your convenience. If you have a "Not Acceptable" evaluation, but there is not an order form or a list of standards for your in-house or outside laboratories, ERA recommends that you contact your DMR-QA coordinator for their corrective action requirements, if any.

Thank you for your participation in ERA's DMR-QA 42 Proficiency Testing study. If you have any questions, please contact the Proficiency Testing Department at 1-800-372-0122, option 2.

Your DMR-QA coordinator is:

Arkansas Department of Energy and Environment  
Yvette Wilkins  
5301 Northshore Dr.  
North Little Rock, AR 72118  
Phone: 501-682-0637  
waterlab@adeq.state.ar.us

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew Seebeck".

Matthew Seebeck  
Quality Officer

attachments





# DMR-QA 42 Definitions & Study Discussion

**Study Dates: 04/15/2022 - 07/15/2022**

**Report Issued: 08/12/2022**

## DMRQA Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current TNI Fields of Proficiency Testing (FoPT) table. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2016 TNI Standard. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the criteria contained in the most current TNI FoPT table or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.
- Not Acceptable = Reported Value falls outside the Acceptance Limits.
- No Evaluation = Reported Value cannot be evaluated.
- Not Reported = No Value reported.

The Method Description is the method the laboratory reported to ERA.

## DMRQA Study Discussion

ERA's DMR-QA 42 Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2016 TNI Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) table.

ERA's DMR-QA 42 study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the 2016 TNI Standard and the criteria contained in the most current TNI FoPT table.

All analytes are included in ERA's A2LA accreditation, certification number 1539.01.

All activities associated with this proficiency testing study were performed by Waters/ERA with the exception of those noted below. The following physical samples/products were manufactured for Waters/ERA by a subcontractor:

Microbiology products with the following catalog numbers: 880, 935, 079, 077, 080, 595, 595A, 576, 576A

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's DMR-QA 42 study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

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

If you have any questions or concerns regarding your assessment in ERA's DMRQA Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122, option 2.





Study: **DMR-QA 42**

NPDES Permit #: **AR0021806**

Laboratory Name: **Little Rock Water  
Reclamation Authority -  
AF-WRF**

## Inorganic Results

Study # : DMR-QA 42





# DMR-QA 42 Final Report



A Waters Company

**NPDES Permit #: AR0021806**  
**Permit Holder: Hallie Freyaldenhoven**  
**QA Specialist**  
**Little Rock Water Reclamation**  
**Authority - AF-WRF**  
**Zina Rhodes**  
**1001 Temple Street**  
**Little Rock, AR 72202-3363**  
**(501)490-5407**

**ERA Customer Number: L327956**  
**Report Issued: 08/12/2022**  
**Study Dates: 04/15/2022 - 07/15/2022**

TNI Analyte Code	Analyte	Units	Performance Evaluation	Reported Value	Assigned Value	Acceptance Limits	Method Description	Study Mean	Study Standard Deviation	USEPA Lab Code	Study
<b>DMRQA Hardness (cat# 580, lot# Q042-507)</b>											
1960	Total Suspended Solids	mg/L	Acceptable	52.5	51.7	40.3 - 59.1	SM 2540 D-2011 2011	50.5	3.10	AR00948	DMRQA42
<b>DMRQA pH (cat# 577, lot# Q042-977)</b>											
1900	pH	S.U.	Acceptable	7.92	7.83	7.63 - 8.03	USGS I-1586-85 1985	7.88	0.0752	AR00948	DMRQA42
<b>DMRQA Simple Nutrients (cat# 584, lot# Q042-505)</b>											
1515	Ammonia as N	mg/L	Acceptable	1.37	1.12	0.698 - 1.64	SM 4500-NH3 B-2011 2011	1.15	0.0984	AR00948	DMRQA42
<b>DMRQA Demand (cat# 578, lot# Q042-516)</b>											
1530	BOD	mg/L	Acceptable	94.75	95.5	51.2 - 140	SM 5210 B-2011 2011	94.6	18.2	AR00948	DMRQA42
1555	CBOD	mg/L	Acceptable	79.15	86.5	40.0 - 133	SM 5210 B-2011 2011	89.7	19.4	AR00948	DMRQA42
<b>DMRQA Total Residual Chlorine (cat# 587, lot# Q042-501)</b>											
1940	Total Residual Chlorine	mg/L	Acceptable	1.69	1.72	1.27 - 2.02	SM 4500-Cl G-2011 2011	1.61	0.114	AR00948	DMRQA42

Study # : DMR-QA 42



# USEPA DMR-QA 42

## NPDES PERMITTEE DATA REPORT FORM



A Waters Company

**Due September 9, 2022**

USEPA NPDES AR0021806

Permit #:

Permit Ext:

Permittee Name: Little Rock Water Reclamation Authority - AF-WRF

Facility Address: Zina Rhodes

1001 Temple Street

City: Little Rock

State: AR

Postal Code: 72202-3363

Phone Number: (501)490-5407

Fax Number:

E-mail address: Hallie.Freyaldenhoven@lrwra.com

Optional: If WP study was used, list PT provider name:

Optional: WP study number(s):

For DMRQA-42, conducted in 2022, the Permittee ensured that their laboratory(s) performing the required analyses:

Received PT Samples

Submitted Complete and Accurate Data  
by July 15, 2022

Received a Graded Report by  
August 12, 2022

Yes  No

Yes  No

Yes  No

### Certification by Permit Holder or Authorized Representative

(as per 40 C.F.R. Section 122.22)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) Permit. Neither I nor any of my subordinates compared our results from independent analyses conducted by us or any other laboratory before we reported our results to the USEPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of

Certifying Official: Hallie Freyaldenhoven

Title: QA Specialist

Signature: \_\_\_\_\_

Date Signed: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Mailing Address: 9500 Birdwood Drive

(enter only if different from address above)

City: Little Rock

State: AR

Postal Code: 72206-3861

Phone Number: (501)490-5407

E-mail address: Hallie.Freyaldenhoven@lrwra.com

**United States**  
**ENVIRONMENTAL PROTECTION AGENCY**

Laboratory Performance Evaluation  
Laboratory DMR-QA Evaluation Study 42

USEPA NPDES Permit #: AR0021806

Permit Ext:

**Identification of all CHEM, MICRO and TOX laboratories who did analyses for this permit**

Name of Laboratory	Address of Laboratory	U.S. EPA Lab Code	Lab Analysis			Lab Type*	State-certified Lab**
			Check box(es) that apply				
			CHEM	MICRO	TOX		
Little Rock Water Reclamation Authority - FC-WRF	Hallie Freyaldenhoven 9500 Birdwood Drive Little Rock, AR 72206-3861	AR00948	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

\* Lab Types: C = Commercial F = Federal G = Local Government I = Industrial O = Other S = State

\*\* See Footnote 2 on DMRQA-42, Frequently Asked Questions page

Permittee Name: Little Rock Water Reclamation Authority - AF-WRF

Permit Number: AR0021806

EPA Lab Code: AR00948

### Chemistry/Microbiology Analyte Checklist

#### DMRQA Study 42

Analyte Test / Method	Test Required	Laboratory's Graded Result		Analyte determined by state-certified lab
		Acceptable	Not Acceptable (Corrective Action Required)	
<b>Minerals</b> Alkalinity as CaCO3 Chloride Conductivity at 25°C Fluoride Potassium Sodium Sulfate Total Dissolved Solids at 180°C Total Solids at 105°C				
<b>Hardness</b> Total Suspended Solids SM 2540 D-2011 Calcium Magnesium Calcium Hardness as CaCO3 Total Hardness as CaCO3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>pH</b> pH USGS I-1586-85	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Settleable Solids</b> Settleable Solids				
<b>Solids Concentrate</b> Total Suspended Solids Total Dissolved Solids at 180°C Total Solids at 105°C				
<b>Solids</b> Total Suspended Solids Total Dissolved Solids at 180°C Total Solids at 105°C				
<b>Simple Nutrients</b> Ammonia as N SM 4500-NH3 B-2011 Nitrate + Nitrite as N Nitrate as N ortho-Phosphate as P Total Nitrogen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Complex Nutrients</b> Total Kjeldahl Nitrogen Total phosphorus as P				
<b>Nitrite</b> Nitrite as N				

Permittee Name: Little Rock Water Reclamation Authority - AF-WRF

Permit Number: AR0021806

EPA Lab Code: AR00948

### Chemistry/Microbiology Analyte Checklist DMRQA Study 42

Analyte Test / Method	Test Required	Laboratory's Graded Result		Analyte determined by state-certified lab
		Acceptable	Not Acceptable (Corrective Action Required)	
<b>Demand</b>				
BOD SM 5210 B-2011	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CBOD SM 5210 B-2011	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COD TOC				
<b>Oil &amp; Grease Concentrate</b>				
n-Hexane Extractable Material(O&G) (Grav)				
<b>Oil &amp; Grease</b>				
n-Hexane Extractable Material(O&G) (Grav)				
n-Hexane Extractable Material(O&G) (IR)				
<b>Trace Metals</b>				
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Manganese				
Molybdenum				
Nickel				
Selenium				
Silver				
Strontium				
Thallium				
Vanadium				
Zinc				
<b>Mercury</b>				
Mercury				
<b>Low-Level Mercury</b>				
Low Level Mercury				
<b>Hexavalent Chromium</b>				
Hexavalent Chromium				

Permittee Name: Little Rock Water Reclamation Authority - AF-WRF

Permit Number: AR0021806

EPA Lab Code: AR00948

### Chemistry/Microbiology Analyte Checklist DMRQA Study 42

Analyte Test / Method	Test Required	Laboratory's Graded Result		Analyte determined by state-certified lab
		Acceptable	Not Acceptable (Corrective Action Required)	
<u>Turbidity</u> Turbidity				
<u>Total Cyanide</u> Cyanide, total Amenable Cyanide Available Cyanide				
<u>Total Phenolics (4-AAP)</u> Phenolics, total				
<u>Total Residual Chlorine</u> Free Residual Chlorine Total Residual Chlorine SM 4500-Cl G-2011	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Low-Level Total Residual Chlorine</u> Low Level Total Residual Chlorine				
<u>WasteWatR™ Coliform MicrobE™</u> Total Coliforms (MF) Fecal Coliforms (MF) E.coli (MF) Total Coliform (MPN-Multiple Well) Fecal Coliform (MPN-Multiple Well) E.coli (MPN-Multiple Well)				
<u>WasteWatR™ Coliform MicrobE™ - SM 9221</u> Total Coliform (MPN-Multiple Tube) Fecal Coliform (MPN-Multiple Tube) E.coli (MPN-Multiple Tube)				

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature/Title

**Use a separate checklist for EACH lab used**



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# DMRQA42 Graded Results Report

## Study: DMRQA42-CHEM

Opening Date: April 15, 2022 - Closing Date: July 15, 2022

EPA Lab ID: AR00948

NPDES Permit ID: AR0021806

Laboratory: Little Rock Water Reclamation Authority-EAD Compliance Lab

Permittee Name: Little Rock Water Reclamation Authority-AF-WRF

9500 Birdwood Drive

Little Rock, Arkansas 72206

USA

Ms. Hallie Freyaldenhoven, Quality Assurance Specialist

5014905407

### Micro (Fecal, E. Coli & Total) (PT-MIC-DMRQA)

Lot #: 8554-12

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
2530	Fecal Coliform, MPN		IDEXXX	MPN/100 mL	1010	1203		453 - 2240	Acceptable

### Chemistry/Microbiology Analyte Checklist DMRQA42

Analyte Test	Test Required	Method Number Used (optional)	Laboratory's Graded Result		Analyte determined by state-certified Lab*
			Acceptable	Not Acceptable (Corrective Action Required)	
<b>Microbiology</b>					
E. Coli., MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fecal Coliform, MF or MPN	<input checked="" type="checkbox"/>	IDEXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Trace Metals</b>					
Aluminum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antimony	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arsenic	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cadmium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, total	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, hexavalent	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cobalt	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Iron	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lead	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manganese	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nickel	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selenium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Silver	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thallium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vanadium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zinc	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Demands</b>					
5-day BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5-day Carbonaceous BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOC	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Minerals</b>					
Alkalinity, total (CaCO3)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chloride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardness, total (CaCO3)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific conductance (25°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfate	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Dissolved Solids (180°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Nutrients</b>					
Ammonia as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrate as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrite as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthophosphate as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Kjeldahl-Nitrogen as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phosphorous as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Misc. Analytes</b>					
Non-Filterable Residue (TSS)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil and Grease	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Cyanide	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phenolics (4-AAP)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settleable Solids	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name Rebecca Burkman

Signature RWBURKMAN

Date 9-7-22