



Joseph R. Carruthers
City of Canton STP
350 W. Hickory Street
Canton, IL 61520
USA

DMR-QA 42  *Final Report*

DMR-QA Proficiency Testing

NPDES Permit: IL0027839

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

Joseph R. Carruthers
City of Canton STP
350 W. Hickory Street
Canton, IL 61520

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:

Illinois EPA
Michelle Rousey
Bureau of Water
1021 North Grand Avenue East
PO Box 19276 (Mail Code 15)
Springfield, IL 62794-9276
Phone: 217-785-3944
michelle.rousey@illinois.gov

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew Seebeck", is written over a white background.

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 #: **IL0027839**
Laboratory Name: **City of Canton STP**

Inorganic Results

Study # : DMR-QA 42



DMR-QA 42 Final Report



A Waters Company

NPDES Permit #: IL0027839
Permit Holder: Joseph R. Carruthers
Chief Operator POTW
City of Canton STP
309-224-7100

ERA Customer Number: C009625
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
DMRQA Hardness (cat# 580, lot# Q042-507)											
1960	Total Suspended Solids	mg/L	Acceptable	50	51.7	40.3 - 59.1	SM 2540 D-2011 2011	50.5	3.10	IL00958	DMRQA42
DMRQA pH (cat# 577, lot# Q042-977)											
1900	pH	S.U.	Acceptable	7.84	7.83	7.63 - 8.03	SM4500H+ B online	7.88	0.0752	IL00958	DMRQA42
DMRQA Simple Nutrients (cat# 584, lot# Q042-505)											
1515	Ammonia as N	mg/L	Acceptable	1.15	1.12	0.698 - 1.64	SM 4500-NH3 D-2011 2011	1.15	0.0984	IL00958	DMRQA42
DMRQA Demand (cat# 578, lot# Q042-516)											
1530	BOD	mg/L	Not Reported		95.5	51.2 - 140		94.6	18.2	IL00958	DMRQA42
1555	CBOD	mg/L	Acceptable	83	86.5	40.0 - 133	SM 5210 B-2016 2016	89.7	19.4	IL00958	DMRQA42
DMRQA Total Residual Chlorine (cat# 587, lot# Q042-501)											
1940	Total Residual Chlorine	mg/L	Acceptable	1.6	1.72	1.27 - 2.02	SM 4500-Cl G-2011 2011	1.61	0.114	IL00958	DMRQA42

Study # : DMR-QA 42





Study: **DMR-QA 42**
NPDES Permit #: **IL0027839**
Laboratory Name: **City of Canton STP**

Microbiology Results

Study # : DMR-QA 42



DMR-QA 42 Final Report



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TNI Analyte Code	Analyte	Units	Performance Evaluation	Reported Value	Assigned Value	Acceptance Limits	Method Description	Study Mean	Study Standard Deviation	USEPA Lab Code	Study
DMRQA WasteWatR™ Coliform MicrobE™ (cat# 576, lot# Q042-083)											
2530	Fecal Coliforms (MF)	CFU/100mL	Acceptable	140	109	34.0 - 344	SM 9222 D (m-FC)-2006 2006	109	51.7	IL00958	DMRQA42

Study # : DMR-QA 42



USEPA DMR-QA 42

NPDES PERMITTEE DATA REPORT FORM



A Waters Company

Due September 9, 2022

USEPA NPDES IL0027839

Permit #:

Permit Ext:

Permittee Name: City of Canton STP

Facility Address:

City:

State:

Postal Code:

Phone Number: 309-224-7100

Fax Number: 309-647-1391

E-mail address: jcarruthers@cantonlyhall.org

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

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

(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: Joseph R. Carruthers

Title: Chief Operator POTW

Signature: _____

Date Signed: _____ / _____ / _____

Mailing Address: 350 W. Hickory Street

(enter only if different from address above)

City: Canton

State: IL

Postal Code: 61520

Phone Number: 309-224-7100

E-mail address: jcarruthers@cantonlyhall.org

United States
ENVIRONMENTAL PROTECTION AGENCY
Laboratory Performance Evaluation
Laboratory DMR-QA Evaluation Study 42

USEPA NPDES Permit #: IL0027839 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		
City of Canton STP	350 W Hickory Canton, IL 61520	IL00958	<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: City of Canton STP

Permit Number: IL0027839

EPA Lab Code: IL00958

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)	
Minerals Alkalinity as CaCO3 Chloride Conductivity at 25°C Fluoride Potassium Sodium Sulfate Total Dissolved Solids at 180°C Total Solids at 105°C				
Hardness 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"/>
pH pH SM4500H+ B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settleable Solids Settleable Solids				
Solids Concentrate Total Suspended Solids Total Dissolved Solids at 180°C Total Solids at 105°C				
Solids Total Suspended Solids Total Dissolved Solids at 180°C Total Solids at 105°C				
Simple Nutrients Ammonia as N SM 4500-NH3 D-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"/>
Complex Nutrients Total Kjeldahl Nitrogen Total phosphorus as P				
Nitrite Nitrite as N				

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Permit Number: IL0027839

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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)	
Demand BOD CBOD SM 5210 B-2016 COD TOC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil & Grease Concentrate n-Hexane Extractable Material(O&G) (Grav)				
Oil & Grease n-Hexane Extractable Material(O&G) (Grav) n-Hexane Extractable Material(O&G) (IR)				
Trace Metals Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Copper Iron Lead Manganese Molybdenum Nickel Selenium Silver Strontium Thallium Vanadium Zinc				
Mercury Mercury				
Low-Level Mercury Low Level Mercury				
Hexavalent Chromium Hexavalent Chromium				
Turbidity Turbidity				

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Permit Number: IL0027839

EPA Lab Code: IL00958

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)	
Total Cyanide Cyanide, total Amenable Cyanide Available Cyanide				
Total Phenolics (4-AAP) Phenolics, total				
Total Residual Chlorine Free Residual Chlorine Total Residual Chlorine SM 4500-Cl G-2011	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low-Level Total Residual Chlorine Low Level Total Residual Chlorine				
WasteWatR™ Coliform MicrobE™ Total Coliforms (MF) Fecal Coliforms (MF) SM 9222 D (m-FC)-2006 E.coli (MF) Total Coliform (MPN-Multiple Well) Fecal Coliform (MPN-Multiple Well) E.coli (MPN-Multiple Well)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WasteWatR™ Coliform MicrobE™ - SM 9221 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

CERTIFICATE OF RECOGNITION

*ERA congratulates
CITY OF CANTON STP*

for your participation and successful evaluation in DMR-QA 42. We recognize the performance of this laboratory for achieving acceptable evaluations for the following analytes.

Ammonia as N
CBOD

Fecal Coliforms (MF)
pH

Total Residual Chlorine
Total Suspended Solids



Matthew Seebeck
Quality Officer

C009625