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



NPDES Permit: IL0027839

DMR-QA Study

Open Date: 04/15/2022

Close Date: 07/15/2022

Report Issued Date: 08/12/2022

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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,

Matthew Seebeck Quality Officer

attachments





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DMR-QA 42 Definitions & Study Discussion

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

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 Descr	intion is the method the laboratory reporte

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

Report Issued: 08/12/2022

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.





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

Inorganic Results



Study # : DMR-QA 42





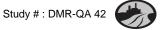
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DMR-QA 42 Final Report

NPDES Permit #: IL0027839 Permit Holder: Joseph R. Carruthers Chief Operator POTW City of Canton STP 309-224-7100 ERA Customer Number: Report Issued: Study Dates: C009625 08/12/2022 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	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	 DMRQA pH (cat# 577, lot# Q042-977)										
1900	рН	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-CI G-2011 2011	1.61	0.114	IL00958	DMRQA42





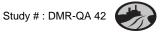
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Study: DMR-QA 42 NPDES Permit #: IL0027839 Laboratory Name: City of Canton STP

Microbiology Results





16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com





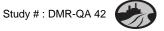
A Waters Company

DMR-QA 42 Final Report

NPDES Permit #: IL0027839 Permit Holder: Joseph R. Carruthers Chief Operator POTW City of Canton STP 309-224-7100 ERA Customer Number: Report Issued: Study Dates: C009625 08/12/2022 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	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





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NPDES PERMITTEE DATA REPORT FORM



A Waters Company

Due Sentemb	or 0, 2022	USEPA NPDES	IL002783	39		
Due Septemb	Der 9, 2022	Permit #:			Permit Ext:	
Permittee Name:	City of Canton STP					
Facility Address:						
City:			S	State:	Postal Code:	
						-
Phone Number:	309-224-7100		Fax Nun	nber: 309-647-13	91	
	-	-				
E-mail address:	jcarruthers@cantonc	ityhall.org				
Optional: If WP st	udy was used, list PT p	provider name:		Optional: WP s	study number(s):	
For DMROA-42 cor	ducted in 2022 the Be	rmittee ensured that th	heir laborat	tory(s) performin	q the required analyses	
	,					
Received PT S	amples	Submitted Complet by July 15, 2022	te and Acc	urate Data	Received a Gra August 12, 202	
Yes 🗌 No		Yes 🗌 No [Yes 🔲 No	
	C	Certification by Permit			sentative	
I certify under penalty o	f law that this document and	d all attachments were prepa	0 C.F.R. Sec ared under m	y direction or superv	ision in accordance with a sy	vstem designed to assure that
responsible for gatherin	g the information, the inform	nation submitted is, to the be	est of my kno	wledge and belief, tr	ue, accurate and complete.	
Pollutant Discharge Elin	nination System (NPDES) F	Permit. Neither I nor any of	my subordina	ates compared our re	sults from independent analy	data required under our National yses conducted by us or any
other laboratory before and imprisonment for kr		ne USEPA. Tam aware that	t there are sig	gnificant penalties for	submitting false information,	, including the possibility of fine
Name of Certifying Official:	Joseph R. Carruthers	5		Title: Chi	ef Operator POTW	
Signature:					Date Signed:	
	350 W. Hickory Street					/
(enter only if different						
from address above)						
City:	Canton		S	State: IL	Postal Code: 61520	
Sity.						
Phone Number:	309-224-7100		F-mail a	ddress: icarruth	ers@cantoncityhall.org	
i none number:	-]_			ers e cantonenynan.org	

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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		b Analy k box(es apply		Lab	State- certified	
		0000	CHEM	MICRO	тох	Type*	Lab**	
City of Canton STP	350 W Hickory Canton,IL 61520	IL00958						

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

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Chemistry/Microbiology Analyte Checklist

DMRQA Study 42

		Laborator		
Analyte Test / Method	Test Required	Acceptable	Not Acceptable (Corrective Action Required)	Analyte determined by state-certified lab
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		\boxtimes		
Calcium Magnesium Calcium Hardness as CaCO3 Total Hardness as CaCO3				
<u>рН</u>				
рН SM4500H+ B		X		
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		\boxtimes		
Nitrate + Nitrite as N Nitrate as N ortho-Phosphate as P Total Nitrogen				
<u>Complex Nutrients</u> Total Kjeldahl Nitrogen Total phosphorus as P				
Nitrite Nitrite as N				

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Permit Number: IL0027839

Chemistry/Microbiology Analyte Checklist

DMRQA Study 42

Analyte Test / Method Test Required Acceptable Not Acceptable Analyte determined by state-certified lab BOD CSD0 BOD Image: Concentrate Imag			Laborato		
BOD CBOD SM 5210 B-2016 Image: Comparison of the second of the secon	Analyte Test / Method	Test Required	Acceptable	Not Acceptable (Corrective Action Required)	Analyte determined by state-certified lab
CBOD Image: Constraint of the second secon	Demand			•	
SM 52108-2016 Image: Constraint of the second of the s					
COD			X		
Oil & Grease Concentrate n-Hexane Extractable Material(O&G) (Grav) -Hexane Extractable Material(O&G) (Grav) -Hexane Extractable Material(O&G) (R) ITace Material Aluminum Anterion Arsenic Barium Beryllium Boron Cadmium Chomium Chomium Copper Iron Lead Maganese Molybdenum Nickel Selenium Silver Strontium Thallium Zinc Mercury Lew-Level Mercury Low-Level Mercury Hexavalent Chromium Hexavalent Chromium Hexavalent Chromium			_		
n-Hexane Extractable Material(0&G) (Grav)	Oil & Grease Concentrate				
n-Hexane Extractable Material(O&G) (Grav) n-Hexane Extractable Material(O&G) (IR)	n-Hexane Extractable Material(O&G) (Grav)				
(Grav) Hexane Extractable Material(O&G) (IR) Irace Metals Aluminum Antinony Arsenic Barium Barium Beryllium Boron Cadmium Chromium Cobalt Cobalt Cobalt Cobalt Cobalt Reseine Storon Storon Cobalt Cobalt Storon Storon Cobalt Storon Cobalt Storon Cobalt Storon Cobalt Manganese Molybdenum Mickel Storotium Storotium Thallium Vanadium Zillen Vandium Zillen Mercury Image: Storotium Mercury Image: Storotium Mercury Image: Storotium Hexavalent Chromium Image: Storotium <td>Oil & Grease</td> <td></td> <td></td> <td></td> <td></td>	Oil & Grease				
Trace Metals Aluminum Aluminum Antimony Arsenic Barium Barium Boron Cadmium Chromium Cobalt Copper Copper Intervention Iron Lead Manganese Molybdenum Nickel Selenium Silver Silver Strontium Coptation Vanadium Intervention Zinc Intervention Mercury Intervention Low Level Mercury Intervention Hexavalent Chromium Intervention Turbidity Intervention	(Grav) n-Hexane Extractable Material(O&G) (IR)				
Antimony Arsenic Image: market in the imarket in the image: market in the imarket in the image: market in	Trace Metals				
Mercury Mercury Mercury Image: Constraint of the second o	Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Copper Iron Lead Manganese Molybdenum Nickel Selenium Silver Strontium Thallium Vanadium				
Low-Level Mercury Image: Constraint of the second	Zinc <u>Mercury</u>				
Low Level Mercury Image: Constraint of the second	Mercury				
Hexavalent Chromium Image: Chromium Turbidity Image: Chromium	Low-Level Mercury				
Hexavalent Chromium Image: Chromium Turbidity Image: Chromium	Low Level Mercury				
Hexavalent Chromium Image: Chromium Turbidity Image: Chromium	Hexavalent Chromium				
	Hexavalent Chromium				
	Turbidity				

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Chemistry/Microbiology Analyte Checklist

DMRQA Study 42

		Laborate		
Analyte Test / Method	Test Required	Acceptable	Not Acceptable (Corrective Action Required)	Analyte determined by state-certified lab
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		X	Π	П
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		X		
E.coli (MF) Total Coliform (MPN-Multiple Well) Fecal Coliform (MPN-Multiple Well) E.coli (MPN-Multiple Well)				
WasteWatR™ Coliform MicrobE™ - SM				
9221 Total Coliform (MPN-Multiple Tube)				
Fecal Coliform (MPN-Multiple Tube) E.coli (MPN-Multiple Tube)				

Print Name

Date

Use a separate checklist for EACH lab used

Signature/Title

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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