United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
DMR-QA Study 43
(This data is collected under the authority of Section 308 of the Clean Water Act.)

OMB Control No. 2080-0021
Approval expires 05/31/2023

2023

NPDES Permittee Data Report Form

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

Due September 29, 2023

NPDES Permit Number (State + 7-digit ID): TN - 0057461

Permit Extension

RECEIVED
SEP 25 2023
By

Permittee Name
Town of Collierville

Current Permittee Mailing Address
500 KEough Rd.

City	State	Zip Code
Collierville	TN	38017

Phone Number	Fax Number	E-mail Address
901-457-2833		ddavis@ColliervilleTN.gov

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 43, conducted in 2023, the Permittee ensured that their laboratory(ies) performing the required analyses:

Received PT Samples	Submitted Complete and Accurate Data by August 4, 2023	Received a Graded Report by September 1, 2023
YES ☑ NO ☐	YES ☑ NO ☐	YES ☑ NO ☐

Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data under our 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 U.S. EPA.
YES ☑ NO ☐	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. 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	Title
Donal L. Davis	Wastewater Treatment Manager
Signature	Date
	9/20/2023

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 43

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2023

Permittee Name	NPDES Permit Number (State + 7-digit ID)	Permit Extension
Town of Collierville	TN 0057461	

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		
Town of Collierville	500 Keough Rd., Collierville, TN	TN00927	☒	☒	☐	O	☐
Waypoint Analytical, LLC	2790 Whitten Road Memphis, TN 38133	TN00012	☒	☒	☐	C	☐
			☐	☐	☐		☐
			☐	☐	☐		☐
			☐	☐	☐		☐
			☐	☐	☐		☐

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

** See Footnotes 2, 3, and 4 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.

Permittee Name Town of Collierville WWTP NPDES Permit No. TN 0 0 5 7 4 6 1 EPA Lab Code TN00927

EPA

Chemistry/Microbiology Analyte Checklist

DMR-QA Study 43

2023

Analyte Test	Test Required	Method Number Used (Optional)	Laboratory's Graded Result: Acceptable	Laboratory's Graded Result: Not Acceptable (Corrective Action Required)	Analyte determined by state-certified lab*
Microbiology					
E. coli, MF or MPN	☒		☒	☐	☐
Fecal Coliform, MF or MPN	☐		☐	☐	☐
Total Coliform, MF or MPN	☐		☐	☐	☐
Trace Metals					
Aluminum	☐		☐	☐	☐
Antimony	☐		☐	☐	☐
Arsenic	☐		☐	☐	☐
Barium	☐		☐	☐	☐
Beryllium	☐		☐	☐	☐
Cadmium	☐		☐	☐	☐
Chromium, total	☐		☐	☐	☐
Chromium, hexavalent	☐		☐	☐	☐
Cobalt	☐		☐	☐	☐
Copper	☐		☐	☐	☐
Iron	☐		☐	☐	☐
Lead	☐		☐	☐	☐
Manganese	☐		☐	☐	☐
Mercury	☐		☐	☐	☐
Mercury (Low-Level)	☐		☐	☐	☐
Molybdenum	☐		☐	☐	☐
Nickel	☐		☐	☐	☐
Selenium	☐		☐	☐	☐
Silver	☐		☐	☐	☐
Thallium	☐		☐	☐	☐
Vanadium	☐		☐	☐	☐
Zinc	☐		☐	☐	☐
Demands					
5-day BOD	☐		☐	☐	☐
5-day Carbonaceous BOD	☐		☐	☐	☐
COD	☐		☐	☐	☐
TOC	☐		☐	☐	☐
Minerals					
Alkalinity, total ($CaCO_3$)	☐		☐	☐	☐
Chloride	☐		☐	☐	☐
Fluoride	☐		☐	☐	☐
Hardness, total ($CaCO_3$)	☐		☐	☐	☐
Specific conductance (25°C)	☐		☐	☐	☐
Sulfate	☐		☐	☐	☐
Total Dissolved Solids (180°C)	☐		☐	☐	☐
Nutrients					
Ammonia as N	☒		☒	☐	☐
Nitrate as N	☐		☐	☐	☐
Nitrite as N	☐		☐	☐	☐
Orthophosphate as P	☐		☐	☐	☐
Total Kjeldahl-Nitrogen as N	☐		☐	☐	☐
Total Phosphorus as P	☐		☐	☐	☐
Misc. Analytes					
Non-Filterable Residue (TSS)	☒		☒	☐	☐
Oil and Grease	☐		☐	☐	☐
pH	☒		☒	☐	☐
Total Cyanide	☐		☐	☐	☐
Total Phenolics (4-AAP)	☐		☐	☐	☐
Total Residual Chlorine	☒		☒	☐	☐
Total Residual Chlorine (Low-Level)	☐		☐	☐	☐
Settleable Solids	☐		☐	☐	☐
Turbidity	☐		☐	☐	☐

Name Donal L. Davis Signature [signature] Date 9/20/2023

* See Footnotes 2 through 4 on page 5

Complete a separate checklist for EACH lab.

Permittee Name Town of Collierville WWTP NPDES Permit No. TN 0 0 5 7 4 6 1 EPA Lab Code TN00927

EPA

Whole Effluent Toxicity (WET) Analyte Checklist

DMR-QA Study 43

2023

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

Name Donal L. Davis Signature [signature] Date 9/20/2023

* See Footnotes 2 through 4 on page 5

** Preferred endpoint for DMR-QA performance test reporting

Complete a separate checklist for EACH lab.

Permittee Name: Collierville Shelton Road STP **Permit Number:** TN0057461 **EPA Lab Code:** TN00012

Chemistry/Microbiology Analyte Checklist

WP Study 337

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 Calcium Magnesium Calcium Hardness as CaCO3 Total Hardness as CaCO3				
pH				
pH				
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 Nitrate + Nitrite as N Nitrate as N EPA 300.0 ortho-Phosphate as P Total Nitrogen	☐	☒	☐	☐
Complex Nutrients				
Total Kjeldahl Nitrogen SM 4500-Norg D-2011	☐	☒	☐	☐
Total phosphorus as P EPA 365.4	☐	☒	☐	☐
Nitrite				
Nitrite as N EPA 300.0	☐	☒	☐	☐

Permittee Name: Collierville Shelton Road STP **Permit Number:** TN0057461 **EPA Lab Code:** TN00012

Chemistry/Microbiology Analyte Checklist

WP Study 337

Analyte Test / Method	Test Required	Laboratory's Graded Result		Analyte determined by state-certified lab
		Acceptable	Not Acceptable (Corrective Action Required)	
Demand				
BOD SM 5210 B-2016 CBOD COD TOC	☐	☒	☐	☐
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				

Permittee Name: Collierville Shelton Road STP **Permit Number:** TN0057461 **EPA Lab Code:** TN00012

Chemistry/Microbiology Analyte Checklist

WP Study 337

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				
Low-Level Total Residual Chlorine Low Level Total Residual Chlorine				
WasteWatR™ Coliform MicrobE™ Total Coliforms (MF) Fecal Coliforms (MF) 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)				

Donal L. Davis
Print Name

Signature/Title

9/20/2023
Date

Use a separate checklist for EACH lab used

PROFICIENCY TESTING

NPDES Laboratory Performance Evaluation Report

MilliporeSigma

Analyzing Laboratory:
Town of Colliervill

US EPA Lab Code:
TN00927

Study	**DMRQA 43**
Study Type	WPCHEM_MICRO
Open Date	2023-01-11
Close Date	2023-08-04
Report Generated	2023-08-31
NPDES Permit #	**TN0057461**

Town of Collierville WWTP
Donal Davis
500 Keough Rd
COLLIERVILLE TN 38017-2671 US

Provider of the proficiency test

Sigma-Aldrich RTC, Inc.
2931 Soldier Springs Road
Laramie, WY 82070 USA
ptservice@milliporesigma.com

Statistical analysis and reporting powered by

QuoData GmbH Quality & Statistics!

Authorized release of the report

Alexus Horton
(PT coordinator)

Sign:

If you have any questions about your report, please call 800-576-5690 or email ptservice@milliporesigma.com. This report shall not be reproduced except in full, without written approval of the laboratory. A laboratory may not claim endorsement by ANAB, TNI or any other federal agency.

Sigma-Aldrich RTC, Inc. is accredited by ANAB to provide PT programs for the scope of accreditation under ANAB Certificate # AP-1469.

All batch numbers of proficiency testing samples, including microbiological materials, are manufactured and tested in accordance with ISO/IEC 17043 requirements. For further information on proficiency testing samples, please check the PT product code information on each product detail page located on our website.

This report may contain data that are not covered by the ANAB accreditation.

Laboratory Performance Evaluation Summary

Summary Results for DMRQA43

MIC003-2EA E. coli in Water - Quantitative WP - Intended use Water Pollution/Waste Water - BCCH2004

This proficiency testing sample was produced in accordance with ISO/IEC 17043:2010.

Analyte	Reported Value	Assigned Value	Acceptance Window	Evaluation
Colilert® Quanti-Tray® 60002644				
Microbiology				
Escherichia coli, MPN 2525	344.8 MPN/100 mL	249 MPN/100 mL	30.9 - 2020 MPN/100 mL	Acceptable

** Unable to calculate a study mean due to <4 data points being received, therefore an effective evaluation could not be performed.

Summary Results for DMRQA43
PE1210-20ML pH - WP - 20ML
- Intended use Water Pollution/Waste Water - LRAD3673

This proficiency testing sample was produced in accordance with ISO/IEC 17043:2010.

Analyte	Reported Value	Assigned Value	Acceptance Window	Evaluation
SM 4500 H B 23rd Ed				
Miscellaneous Analytes				
pH 1900	6.91 Units	6.93 Units	6.24 - 7.62 Units	Acceptable

** Unable to calculate a study mean due to <4 data points being received, therefore an effective evaluation could not be performed.

Summary Results for DMRQA43
PE3050-500ML Residue - WP - Intended use Water Pollution/Waste Water - LRAD5718

This proficiency testing sample was produced in accordance with ISO/IEC 17043:2010.

Analyte	Reported Value	Assigned Value	Acceptance Window	Evaluation
SM 2540 D 23rd Ed 990001475				
Miscellaneous Analytes				
Residue-nonfilterable (TSS) 1960	95 mg/L	87.4 mg/L	74.5 - 100 mg/L	Acceptable

** Unable to calculate a study mean due to <4 data points being received, therefore an effective evaluation could not be performed.

Summary Results for DMRQA43

PE1195-20ML Simple Nutrients - WP - Intended use Water Pollution/Waste Water - LRAD4000

This proficiency testing sample was produced in accordance with ISO/IEC 17043:2010.

Analyte	Reported Value	Assigned Value	Acceptance Window	Evaluation
SM 4500 NH3 D Ed. 23(2017) 990001515				
Nutrients				
Ammonia as N 1515	11.85 mg/L	11.0 mg/L	8.77 - 13.2 mg/L	Acceptable

** Unable to calculate a study mean due to <4 data points being received, therefore an effective evaluation could not be performed.

Supelco®

Analytical Products

MilliporeSigma
400 Summit Drive
Burlington, MA 01803

EMDMillipore.com

To place an order or receive technical assistance in the U.S. and Canada, call toll-free 1-800-645-5476
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For Technical Service, please visit: **EMDMillipore.com/techservice**

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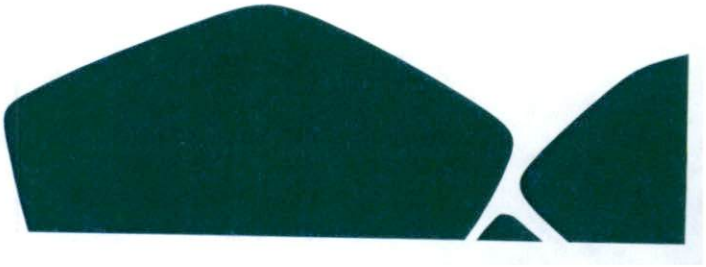
06/2018



Summary Results for DMRQA43

PE1065-2ML Total Residual Chlorine - WP - Intended use Water Pollution/Waste Water - LRAD4078-A

This proficiency testing sample was produced in accordance with ISO/IEC 17043:2010.

Analyte	Reported Value	Assigned Value	Acceptance Window	Evaluation
SM 4500 CL G 23rd Ed 990001476				
Miscellaneous Analytes				
Total residual chlorine 1940	1.20 mg/L	1.20 mg/L	0.920 - 1.48 mg/L	Acceptable

** Unable to calculate a study mean due to <4 data points being received, therefore an effective evaluation could not be performed.