msd
Safe, clean waterways

700 West Liberty Street | Louisville, KY 40203-1911
Phone: 502.540.6000 | LouisvilleMSD.org

January 24th, 2025

Crystal Dennis
300 Sower Blvd., 3rd Floor
Frankfort, Kentucky 40601

RE: SORF STP, KPDES No: KY0111716
Discharge Monitoring Report for December 2024.

Dear Ms. Dennis:

Attached are the Discharge Monitoring Report (DMR) for the SORF STP, for the month December 2024.

There were no bypasses or overflows. There was one exceedance. It was for daily max ammonia with a permit limit of 7.5mg/L and a result of 7.8 mg/L. Operational changes have been made to the blower run times. The ammonia was tested two days later with a result of 5.9 mg/L.

If you have any questions concerning the attached DMR's, please contact me at (502) 264-2804.

Sincerely,

Alex Smither
Process Supervisor

CAS/SORF 12/24.

Cc: V. Teague, B. Tinnel

DMR Copy of Record

Form Approved OMB No. 2040-0004 expires on 07/31/2026

EPA may make all the information submitted through this form (including all attachments) available to the public without further notice to you. Do not use this online form to submit personal information (e.g., non-business cell phone number or non-business email address), confidential business information (CBI), or if you intend to assert a CBI claim on any of the submitted information. Pursuant to 40 CFR 2.203(a), EPA is providing you with notice that all CBI claims must be asserted at the time of submission. EPA cannot accommodate a late CBI claim to cover previously submitted information because efforts to protect the information are not administratively practicable since it may already be disclosed to the public. Although we do not foresee a need for persons to assert a claim of CBI based on the types of information requested in this form, if persons wish to assert a CBI claim we direct submitters to contact the NPDES eReporting Help Desk for further guidance. Please note that EPA may contact you after you submit this report for more information.

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0004). Responses to this collection of information are mandatory in accordance with this permit and EPA NPDES regulations 40 CFR 122.41(l)(4)(i). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information are estimated to average 2 hours per outfall. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Permit

Permit #:	**KY0111716**	**Permittee:**	Louisville and Jefferson County MSD	**Facility:**	OLDHAM COUNTY ENVIRONMENTAL AUTHORITY REGIONAL WWTP
Major:	Yes	**Permittee Address:**	700 W Liberty St Louisville, KY 40203	**Facility Location:**	6115 HITT LN CRESTWOOD, KY 40241
Permitted Feature:	001 External Outfall	**Discharge:**	**001-1** Domestic Wastewater from Publicly Owned Treatment Works		

Report Dates & Status

Monitoring Period:	**From 12/01/24 to 12/31/24**	**DMR Due Date:**	**01/28/25**	**Status:**	**NetDMR Validated**

Considerations for Form Completion

Principal Executive Officer

First Name:	Tony	**Title:**	Executive Director	**Telephone:**	502-540-6533
Last Name:	Parrott				

No Data Indicator (NODI)

Form NODI: --

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00300	**Oxygen, dissolved [DO]**	1 - Effluent Gross	0	--	Sample						=	7.8					19 - mg/L		01/07 - Weekly	GR - Grab
					Permit Req.						>=	7.0 INST MIN					19 - mg/L	0	01/07 - Weekly	GR - Grab
					Value NODI															
00400	**pH**	1 - Effluent Gross	0	--	Sample						=	7.21			=	7.67	12 - SU		01/07 - Weekly	GR - Grab
					Permit Req.						>=	6.0 MINIMUM			<=	9.0 MAXIMUM	12 - SU	0	01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
00530	**Solids, total suspended**	1 - Effluent Gross	0	--	Sample	=	18.7	=	28.2	26 - lb/d			=	7.0	=	8.0	19 - mg/L		01/07 - Weekly	CP - Composite
					Permit Req.	<=	312.8 MO AVG	<=	469.1 MX WK AV	26 - lb/d			<=	30.0 MO AVG	<=	45.0 MX WK AV	19 - mg/L	0	01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
00530	**Solids, total suspended**	G - Raw Sewage Influent	0	--	Sample								=	112.0	=	205.0	19 - mg/L		01/07 - Weekly	CP - Composite
					Permit Req.									Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L	0	01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
00600	**Nitrogen, total [as N]**	1 - Effluent Gross	0	--	Sample								=	6.73	=	11.5	19 - mg/L		01/07 - Weekly	CP - Composite
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	0	01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
00600	**Nitrogen, total [as N]**	G - Raw Sewage Influent	0	--	Sample								=	22.48	=	27.7	19 - mg/L		01/07 - Weekly	CP - Composite
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	0	01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
X 00610	**Nitrogen, ammonia total [as N]**	1 - Effluent Gross	2	--	Sample								=	4.0	=	7.8	19 - mg/L		01/07 - Weekly	CP - Composite
					Permit Req.								<=	5.0 MO AVG	<=	7.5 DAILY MX	19 - mg/L	0	01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
00665	**Phosphorus, total [as P]**	1 - Effluent Gross	2	--	Sample								=	0.16	=	0.3	19 - mg/L		01/07 - Weekly	24 - 24 Hour Composite
					Permit Req.								<=	2.0 MO AVG	<=	3.0 DAILY MX	19 - mg/L		01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
00665	**Phosphorus, total [as P]**	G - Raw Sewage Influent	0	--	Sample								=	2.86	=	4.2	19 - mg/L		01/07 - Weekly	CP - Composite
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	0	01/07 - Weekly	24 - 24 Hour Composite
					Value NODI															
50050	**Flow, in conduit or thru treatment plant**	1 - Effluent Gross	0	--	Sample	=	0.381	=	0.9683	03 - MGD									99/99 - Continuous	RC - Recorder (auto)
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD								0	99/99 - Continuous	RC - Recorder (auto)

					Value NODI																
50050	**Flow, in conduit or thru treatment plant**	G - Raw Sewage Influent	0	--	Sample	=	0.4298	=	1.1705	03 - MGD								0	01/07 - Weekly	CA - Calculated
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD									99/99 - Continuous	RC - Recorder (auto)
					Value NODI																
51040	**E. coli**	1 - Effluent Gross	0	--	Sample								=	2.8	=	55.0	13 - #/100mL	0	01/07 - Weekly	GR - Grab
					Permit Req.								<=	130.0 30DA GEO	<=	240.0 7 DA GEO	13 - #/100mL		01/07 - Weekly	GR - Grab
					Value NODI																
80082	**BOD, carbonaceous [5 day, 20 C]**	1 - Effluent Gross	0	--	Sample	=	19.42	=	28.2	26 - lb/d			=	7.0	=	8.0	19 - mg/L	0	01/07 - Weekly	CP - Composite
					Permit Req.	<=	104.4 MO AVG	<=	156.4 MX WK AV	26 - lb/d			<=	10.0 MO AVG	<=	15.0 MX WK AV	19 - mg/L		01/07 - Weekly	24 - 24 Hour Composite
					Value NODI																
80082	**BOD, carbonaceous [5 day, 20 C]**	G - Raw Sewage Influent	0	--	Sample								=	90.0	=	122.0	19 - mg/L	0	01/07 - Weekly	CP - Composite
					Permit Req.									Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L		01/07 - Weekly	24 - 24 Hour Composite
					Value NODI																
80091	**BOD, carb-5 day, 20 deg C, percent removal**	K - Percent Removal	0	--	Sample						=	92.7					23 - %	0	01/30 - Monthly	CA - Calculated
					Permit Req.						>=	85.0 MO AV MN					23 - %		01/30 - Monthly	CA - Calculated
					Value NODI																
81011	**Solids, suspended percent removal**	K - Percent Removal	0	--	Sample						=	94.2					23 - %	0	01/30 - Monthly	CA - Calculated
					Permit Req.						>=	85.0 MO AV MN					23 - %		01/30 - Monthly	CA - Calculated
					Value NODI																

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

Parameter		Monitoring Location	Field	Type	Description	Acknowledge
Code	Name					
00610	Nitrogen, ammonia total [as N]	1 - Effluent Gross	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes

Comments

Attachments

Name	Type	Size
SORF_COVER_12_24.pdf	pdf	40690.0

Report Last Saved By

Louisville and Jefferson County MSD

User:	ALEX.SMITHER@LOUISVILLEMSD.ORG
Name:	Charles Smither
E-Mail:	alex.smither@louisvillemsd.org
Date/Time:	2025-01-24 11:06 (Time Zone: -05:00)

Report Last Signed By

User:	ALEX.SMITHER@LOUISVILLEMSD.ORG
Name:	Charles Smither
E-Mail:	alex.smither@louisvillemsd.org
Date/Time:	2025-01-24 11:06 (Time Zone: -05:00)

Chronic Toxicity Evaluation
for the
South Oldham Regional Facility
Wastewater Treatment Plant

December 2024

Prepared by:

Beckmar Environmental Laboratory
Biomonitoring Department
3251 Ruckriegel Parkway
Louisville, KY. 40299
(502) 266-6533

Submitted to:

South Oldham Regional Wastewater Treatment Plant
Hitt Lane
Crestwood, KY 40241

Released by: _____
Biomonitoring QA Officer

1-24-2025

Summary

Chronic definitive toxicity testing was performed on final effluent samples collected December 1 through 6, 2024 from the South Oldham Regional Facility Wastewater Treatment Plant. Testing was performed December 3 through August 10, 2024 and upon termination, the following conclusions were reached:

For the 7-day *Ceriodaphnia dubia* survival and reproduction test, the IC_{25} for reproduction was greater than 100%, yielding less than 1.0 chronic toxicity units ($TUc=100/IC_{25}$).

Introduction

At the request of South Oldham County Facility, chronic definitive toxicity testing was performed on 24 hour composite effluent samples collected December 1 through 6, 2024 from the South Oldham Regional Facility Wastewater Treatment Plant in Crestwood, KY. Information concerning plant and laboratory conditions can be found on the following pages.

The chronic toxicity testing was performed in accordance with the US EPA methodology as defined in the US EPA manual "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" fourth edition, 2002 (EPA-821-R-02-013). The actual methods used were "Daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test Method 1002.0". The chronic toxicity test was performed in order to ascertain the IC_{25} values for *Ceriodaphnia dubia* reproduction.

Test Type: Acute ___ Screen ___
Chronic X Definitive X

TOXICITY TEST REPORT SHEET

1) Facility/Discharger: South Oldham Regional Facility Wastewater Treatment Plant
Report Date: 1/21/2025

2) Address: Hitt Lane Crestwood Kentucky 40241

3) NPDES Permit #: KY0111716 4) Receiving Stream: UT of Hite Creek

5) Faciltiy Contact: Curt Otto 6) Phone #: _____

7) Conultant/Testing Lab Name: **Beckmar Environmental Laboratory**

8) Lab Contact: Becky Barker Phone #: (502) 266-6533

9) Outfall(s) Tested: 1

10) Average Daily flow on day sampled (MGD) 1) 0.28 2) 0.24
3) 0.23 4) _____ 5) _____ 6) _____ 7) _____

11) Test Species: 1) Ceriodaphnia dubia 2) _____

12) Species Age: 1) 15-22 hours old 2) _____

13) Organism Source: 1) brood board 12022024 2) _____

14) Acclimation Procedures: 1) Reared at test conditions in synthetic water
2) _____

15) Test Conditions: Static: ___ Static-Renewal: X

16) Dilution Water Type (Synthetic, Receiving Stream synthetic - mhsw

17) Aeration? (Before Test/During Test/None): no

18) Dechlorination? no Original Chlorine Level: <0.01 mg/L

(Signature of person filling out form)

1/21/2025
Date

Rhonda Baker
Name (Typed or Printed)

Biologist
Title

Materials and Methods

Sampling

Composite effluent samples were collected once every other 24 hours (Table I) and delivered to Beckmar Environmental Laboratory. Upon receipt, each sample went through standard log in procedures.

Control/Dilution Water

All chemicals used are reagent grade, obtained from Aldrich. 1.20 grams of $CaSO_4$, 1.2 grams of $MgSO_4$, 1.92 grams of $NaHCO_3$, and 0.080 grams of KCl were dissolved in distilled water provided by a Barnstead Thermolyne distillation system and aerated for a minimum of 24 hours.

Test Containers

C. dubia tests were performed in 1ounce plastic cups obtained from Plastics Inc. (St. Paul, MN).

Toxicity Testing

Samples were allowed to warm to room temperature (25°C) and were tested for residual chlorine immediately prior to dilution. Testing was then performed in accordance with US EPA methodology. Data was recorded on Beckmar generated lab sheets (Appendix I).

Chemical Analysis

All test dilutions as well as control/dilution water were tested to determine initial dissolved oxygen, temperature, and pH. At the end of 24 hours, the control/dilution water and test dilutions were again tested to determine final dissolved oxygen, temperature and pH. Also, specific conductance, hardness, and alkalinity analyses were performed on the initial control/dilution water and 100% effluent samples. Data was recorded on Beckmar generated lab sheet (Appendix I).

Statistical Analysis

Statistical data was generated using ToxCalc 5.0© (Tidepool Scientific software, McKinleyville, CA) and ToxStat© (USEPA, Cincinnati, OH) on a Pentium IV©, computer using Windows 98© Operating System.

Additional Toxicity Test Information

1) Submit copies of all bench sheets and statistical calculations/printouts obtained during the test(s). Data must be presented in tabular form and must include all physical and/or chemical measurements recorded during the test (e.g. temperature, conductivity, total residual chlorine, dissolved oxygen, etc.).

2) Methods/Instrumentation used in chemical analysis:

Dissolved Oxygen:	YSI Model 58
PH:	Thermo-Orion 720
Conductivity:	Oakton Conductivity Meter 300
Alkalinity:	Standard Methods Titration
Hardness:	Standard Methods Titration
Total Chlorine Residual:	Fisher-Porter Titration
EPA Acute/Chronic Manual:	4th Chronic Edition, 2002

3) Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from EPA methodology that was necessary for these tests as well as any sample manipulations that were performed, such as aeration, dechlorination with sodium thiosulfate, etc., and the justification for such manipulations or deviations. Attach additional pages as needed.

4) Sample temperature upon receipt may be greater than 4°C. Samples are picked up immediately after the 24 hours composite is completed. The sampler is cooled and the samples are refrigerated, however it may be impossible to rapidly drop the effluent to 4°C.

TABLE I
Sampling Summary

Outfall	Sample Type	Volume	Collection Period			Rainfall	Sample Temp
1	Composite	1 gallon	12/01/24 @ 9:50 a.m.	=	12/02/24 @ 9:50 a.m.	0	1.0 degrees C
	Composite	1 gallon	12/03/24 @ 3:26 p.m.	=	12/04/24 @ 2:41 p.m.	0	2.0 degrees C
	Composite	2 gallon	12/05/24 @ 8:00 a.m.	=	12/06/24 @ 8:00 a.m.	0	1.0 degrees C

Dates/Times of Test Performance

Species #1: *Ceriodaphnia dubia*

Initiated: 12/03/24 @ 3:00 P.M.
Renewed Daily @ 3:00 P.M.
Terminated 12/10/24 @ 3:00 P.M.

Results

Ceriodaphnia dubia exhibited 100% survival in the control, 100% survival in the 20% dilution, 100% survival in the 40% dilution, 100% survival in the 60% dilution, 100% survival in the 80% dilution, and 100% survival in the 100% dilution with reproduction occurring in all of the dilutions (Table II).

For the 7-day *Ceriodaphnia dubia* survival and reproduction test, the IC_{25} for reproduction was greater than 100%, generating a chronic toxicity value of less than 1.0 TUc.

Table II: *Ceriodaphnia dubia* Reproduction Results

C	20%	40%	60%	80%	100%
25	28	25	21	32	30
22	27	25	28	25	23
25	25	22	24	25	27
27	27	25	29	30	28
26	22	23	29	26	26
26	24	28	27	24	24
24	29	23	26	29	27
30	28	29	25	29	30
23	21	23	27	24	30
26	25	22	24	26	27
254	256	245	260	270	272

Appendix I

Ceriodaphnia dubia
Data Sheets

Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	12/3/2024	Test ID:	Sorf1224	Sample ID:	Sorf122024
End Date:	12/10/2024	Lab ID:	0044: Beckmar Lab	Sample Type:	EFF1-POTW
Sample Date:	12/2/2024	Protocol:	EPAF 94-EPA Freshwater	Test Species:	CD-Ceriodaphnia dubia
Comments:	Sorf Cerio Chronic December 2024				

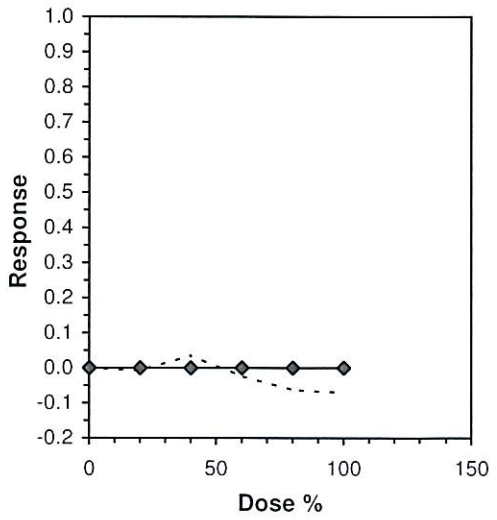
Conc-%	1	2	3	4	5	6	7	8	9	10
B-Control	25.000	22.000	25.000	27.000	26.000	26.000	24.000	30.000	23.000	26.000
20	28.000	27.000	25.000	27.000	22.000	24.000	29.000	28.000	21.000	25.000
40	25.000	25.000	22.000	25.000	23.000	28.000	23.000	29.000	23.000	22.000
60	21.000	28.000	24.000	29.000	29.000	27.000	26.000	25.000	27.000	24.000
80	32.000	25.000	25.000	30.000	26.000	24.000	29.000	29.000	24.000	26.000
100	30.000	23.000	27.000	28.000	26.000	24.000	27.000	30.000	30.000	27.000

			Transform: Untransformed					Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Mean	N-Mean
B-Control	25.400	1.0000	25.400	22.000	30.000	8.745	10	25.950	1.0000
20	25.600	1.0079	25.600	21.000	29.000	10.449	10	25.950	1.0000
40	24.500	0.9646	24.500	22.000	29.000	9.858	10	25.950	1.0000
60	26.000	1.0236	26.000	21.000	29.000	9.764	10	25.950	1.0000
80	27.000	1.0630	27.000	24.000	32.000	10.329	10	25.950	1.0000
100	27.200	1.0709	27.200	23.000	30.000	8.972	10	25.950	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Kolmogorov D Test indicates normal distribution (p > 0.01)	0.49652	1.035	0.0485	-0.6678
Bartlett's Test indicates equal variances (p = 0.99)	0.55579	15.0863		

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



Reviewed by:

Grab # ___

Toxicity Test Results

Results of *Ceriodaphnia* (Genus) *dubia* (Species) 7 day chronic definitive (Type / Duration) Toxicity Test

Conducted: 12/03/24 (mm/dd/yy) -- 12/10/24 (mm/dd/yy) Using Effluent from Outfall # 1

Test Solution	Percent Survival (time intervals used:- DAY) 1	2	3	4	5	6	7	8	# of Young Total	# of Young Mean	Dry Weight Total	Dry Weight Mean
Control	100	100	100	100	100	100	100		254	25.4		
20% Effluent	100	100	100	100	100	100	100		256	25.6		
40% Effluent	100	100	100	100	100	100	100		245	24.5		
60% Effluent	100	100	100	100	100	100	100		260	26		
80% Effluent	100	100	100	100	100	100	100		270	27		
100% Effluent	100	100	100	100	100	100	100		272	27.2		

LC_{50} / IC_{25} Value: >100%

95% Confidence Limits

UL: na

LL: na

UL = Upper Limit
LL = Lower Limit

Calculated TU Estimate * <1.0 Tuc (indicate acute/chronic)

Permit Limits: 1.00 TUc (Indicate TU_a / TU_c)

If acute test, method used to determine LC50 and Confidence Limit Valued: ____

Note: $TU_a = 100/LC_{50}$; $TU_c = 100/IC_{25}$

Reference Toxicant Test Results

Species	Date	Time	Duration	Toxicant	Results (LC_{50} / IC_{25})
Ceriodaphnia dubia	11/10/24	3:00 P.M.	7 days	NaCl	IC25=1.0254g/l

[redacted]

Client: Surf Analyst: Ch Basile

Test Start -- Date/Time: 12-3-2024 3P

Test Stop -- Date/Time: 12-10-2024 3P

Brood Board Batch: 12022024 A

Neonate Age: 15-22 hrs old

Data form for *Ceriodaphia dubia* survival and reproduction test

Control	Replicate										No. Of Young	No. Of Adults	Analyst
Day	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0		CH
2	0	0	0	0	0	0	0	0	0	0	0		CH
3	4	3	4	3	4	4	3	3	2	3	33		CH
4	0	0	0	0	0	0	0	0	0	0	0		CH
5	9	8	8	8	10	10	7	10	8	8	86		CH
6	0	0	0	0	0	0	0	0	0	0	0		CH
7	12	11	13	16	12	12	14	17	13	15	135		CH
8													
Total	25	22	25	27	26	26	24	30	23	26	254		BS

Conc. 20%	Replicate										No. Of Young	No. Of Adults	Analyst
Day	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0		CH
2	0	0	0	0	0	0	0	0	0	0	0		CH
3	3	3	4	4	3	3	3	4	3	3	33		CH
4	0	0	0	0	0	0	0	0	0	0	0		CH
5	11	10	9	9	8	7	11	8	6	8	87		CH
6	0	0	0	0	0	0	0	0	0	0	0		CH
7	14	14	12	14	11	14	15	16	12	14	136		CH
8													
Total	28	27	25	27	22	24	29	28	21	25	256		BS

Conc. 40%	Replicate										No. Of Young	No. Of Adults	Analyst
Day	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0		CH
2	0	0	0	0	0	0	0	0	0	0	0		CH
3	3	2	2	4	3	3	3	4	3	2	29		CH
4	0	0	0	0	0	0	0	0	0	0	0		CH
5	8	10	8	7	9	8	7	10	8	6	81		CH
6	0	0	0	0	0	0	0	0	0	0	0		CH
7	14	13	12	14	11	17	13	15	12	14	135		CH
8													
Total	25	25	22	25	23	28	23	29	23	22	245		BS

Client: Soft Analyst: Eli Barker

Test Start -- Date/Time: 12-3-2024 3P

Test Stop -- Date/Time: 12-10-2024 3P

Data form for *Ceriodaphia dubia* survival and reproduction test

Conc.	Replicate										No. Of Young	No. Of Adults	Analyst
	Day	1	2	3	4	5	6	7	8	9	10			
60%	1	0	0	0	0	0	0	0	0	0	0	0		US
	2	0	0	0	0	0	0	0	0	0	0	0		US
	3	3	4	3	4	3	3	3	2	4	3	32		US
	4	0	0	0	0	0	0	0	0	0	0	0		US
	5	7	10	8	13	6	7	10	9	8	9	91		US
	6	0	0	0	0	0	0	0	0	0	0	0		US
	7	11	14	13	12	16	17	13	14	15	12	137		US
	8													
	Total	21	28	24	29	29	27	26	25	27	24	260		US

Conc.	Replicate										No. Of Young	No. Of Adults	Analyst
	Day	1	2	3	4	5	6	7	8	9	10			
80%	1	0	0	0	0	0	0	0	0	0	0	0		US
	2	0	0	0	0	0	0	0	0	0	0	0		US
	3	4	3	3	4	3	3	2	4	3	3	32		US
	4	0	0	0	0	0	0	0	0	0	0	0		US
	5	12	8	10	10	11	7	10	9	8	8	93		US
	6	0	0	0	0	0	0	0	0	0	0	0		US
	7	16	14	12	16	12	14	17	16	13	15	145		US
	8													
	Total	32	25	25	30	26	24	29	29	24	26	270		US

Conc.	Replicate										No. Of Young	No. Of Adults	Analyst
	Day	1	2	3	4	5	6	7	8	9	10			
100%	1	0	0	0	0	0	0	0	0	0	0	0		US
	2	0	0	0	0	0	0	0	0	0	0	0		US
	3	4	2	3	4	3	3	2	4	3	2	30		US
	4	0	0	0	0	0	0	0	0	0	0	0		US
	5	12	9	11	9	11	7	8	10	12	13	102		US
	6	0	0	0	0	0	0	0	0	0	0	0		US
	7	14	12	13	15	12	14	17	16	15	12	140		US
	8													
	Total	30	23	27	28	26	24	27	30	30	27	272		US

O = daphnid Alive, no reproduction

= number of neonates released

X = Daphnid dead

X# = Daphnid dead but (#) of neonates released

ND = near death

Data form for the *Ceriodaphnia dubia* survival and reproduction test.
Routine chemical and physical determinations.

Client: SORF
Test Start: 12-3-2024 3P
Test Stop: 12-10-2024 3P

Analyst: B. Burke
Analyst:
Analyst:

Control:		Day 1	2	3	4	5	6	7	Remarks
Temp. Degree C.	Initial	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
	Final	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
D. O. mg/l	Initial	8.1	8.1	8.1	8.1	8.1	8.1	8.1	
	Final	8.8	8.8	8.9	8.8	8.8	8.8	8.8	
pH S.U.	Initial	7.80	7.80	7.80	7.78	7.79	7.81	7.81	
	Final	8.48	8.51	8.53	8.56	8.54	8.51	8.46	
Alkalinity (mg/l)		81.3	81.3	80.5	81.3	80.9	81.3	80.9	
Hardness (mg/l)		114.2	114.6	114.6	115.3	115.0	115.0	114.6	
Conductivity (µmhos)		404	404	406	406	406	405	405	
Chlorine (mg/l)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Analyst (init.)		BB	BB	BB	BB	BB	BB	BB	

Conc. 20%		Day 1	2	3	4	5	6	7	Remarks
Temp. Degree C.	Initial	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
	Final	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
D. O. mg/l	Initial	8.2	8.2	8.0	8.0	7.9	7.9	7.9	
	Final	8.8	8.8	8.8	8.8	8.7	8.5	8.7	
pH S.U.	Initial	7.69	7.70	7.69	7.68	7.64	7.66	7.68	
	Final	8.60	8.63	8.58	8.64	8.58	8.59	8.52	
Analyst (init.)		BB	BB	BB	BB	BB	BB	BB	

Conc. 40%		Day 1	2	3	4	5	6	7	Remarks
Temp. Degree C.	Initial	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
	Final	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
D. O. mg/l	Initial	8.3	8.4	7.9	7.9	7.7	7.7	7.8	
	Final	8.8	8.8	8.7	8.8	7.9	8.1	8.5	
pH S.U.	Initial	7.57	7.59	7.56	7.55	7.43	7.47	7.51	
	Final	8.62	8.66	8.63	8.67	8.59	8.61	8.56	
Analyst (init.)		BB	BB	BB	BB	BB	BB	BB	

Data form for the *Ceriodaphnia dubia* survival and reproduction test.
Routine chemical and physical determinations.

Client: SORF
Test Start: 12-3-2024
Test Stop: 12-10-2024

Analyst: B. Barker
Analyst:
Analyst:

Conc. 60%		Day 1	2	3	4	5	6	7	Remarks
Temp. Degree C.	Initial	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
	Final	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
D. O. mg/l	Initial	8.4	8.6	7.8	7.9	7.3	7.4	7.5	
	Final	8.8	8.9	8.5	8.6	7.4	7.6	8.1	
pH S.U.	Initial	7.44	7.47	7.39	7.42	7.23	7.27	7.30	
	Final	8.66	8.71	8.65	8.69	8.56	8.55	8.59	
Analyst (init.)		BM	BM	BM	BM	BM	BM	BM	

Conc. 80%		Day 1	2	3	4	5	6	7	Remarks
Temp. Degree C.	Initial	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
	Final	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
D. O. mg/l	Initial	8.5	8.8	7.7	7.8	6.8	6.9	7.1	
	Final	8.8	8.9	8.3	8.4	7.0	7.4	7.7	
pH S.U.	Initial	7.31	7.33	7.21	7.25	6.99	7.04	7.06	
	Final	8.56	8.60	8.48	8.52	8.25	8.37	8.35	
Analyst (init.)		BM	BM	BM	BM	BM	BM	BM	

Conc. 100%		Day 1	2	3	4	5	6	7	Remarks
Temp. Degree C.	Initial	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
	Final	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
D. O. mg/l	Initial	8.6	9.0	7.7	7.8	6.2	6.5	6.7	
	Final	8.8	8.9	8.1	8.3	6.7	7.1	7.4	
pH S.U.	Initial	7.10	7.13	6.98	7.00	6.74	6.78	6.82	
	Final	8.37	8.42	8.27	8.33	8.09	8.14	8.13	
Alkalinity (mg/l)		211.2	212.1	183.8	183.8	161.8	162.7	163.1	
Hardness (mg/l)		270.0	269.3	251.2	252.0	270.8	271.5	272.2	
Conductivity (µmhos)		649	650	683	683	708	710	711	
Chlorine (mg/l)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Analyst (init.)		BM	BM	BM	BM	BM	BM	BM	

24120201B 24120405D 24120601I

Appendix II

Chain of Custody
Data Sheets

Beckmar Environmental Laboratory
3251 Ruckriegel Parkway
Louisville, KY 40299
Phone: (502) 266-6533
Fax: (502) 266-6446
www.beckmarlab.com

Beckmar

CHAIN OF CUSTODY
AND ANALYTICAL REQUEST

*Job ID:241202018

Metropolitan Sewer District - OC

Month: DEC **Year:** 2024

Special Instructions: * Days 1 & 2 - 2 containers, Day 3 - 3 containers

Calibration ID: _____

Facility Location & Contact Information		Send Results To: (same as client info ☐ yes ☐ no)		Billing Information (same as client info ☐ yes ☐ no)	
Client Name	South Oldham WQTC	**Client Name**	Metropolitan Sewer District	**Client Name**	Metropolitan Sewer District
Address	6115 Hitt Lane	**Address**	P.O. Box 740011	**Address**	P.O. Box 740011
City, St, ZIP	Louisville, KY 40241	**City, State, ZIP**	Louisville, KY 40201	**City, State, ZIP**	Louisville, KY 40201
Phone		**Phone / Fax**	502-540-6735	**Contact Name**	
Contact		**E-mail**	david.radke@louisvillemsd.org	**A.P. Email**	accountspayable@louisvillemsd.org

Permit ID (if applicable) KY0111716

Compliance (Y/N) Y State: KY

Samples chlorinated (Y/N) 0

Collected by (please print): C. TRAVIS **(signature):**

P.O. Number:

Sample Frequency Quarterly

Project ID: South Oldham WQTC - Bio

Bottle ID (Lab Use Only)	Collection Day	Collection Time	Sample Point / Description	Analysis Requested	Field Data pH (S.U.)	Field Data DO (Mg/L)	Field Data Cl_2 (mg/L) Free	Field Data Cl_2 (mg/L) Total	Field Data Temp. (°C)	Collection Type (See Bottom Right)	Number of Containers	Type of Container (See Bottom Center)	Matrix Code (See Bottom Right)	Preservative Code (See Bottom Right)	Initial Laboratory Location	Preservative Added in-house (Y/N)
01	01/02	0950/0950	T414EFF / South Oldham WQTC EFF (Day 1)	Ceriodaphnia Dubia Chronic						C24	* 1	4LC	WW	R	RH	N
			1	R: 0 EF: .28												
			3	0 .24												
			5	0 .23												

Relinquished by:	Received by:	Date	Time
	Clayton	02DEC24	1325

Comments: TEMP @ P/U: 6°C
TEMP @ D/O: 1°C

IRT s/n: 201907014970
correction factor: 0.0°C

Type of Container

- G10 = 1000ml Glass
- G5 = 500ml Glass
- P10 = 1000ml Plastic
- H40c = 40ml Headspace Clear
- H40a = 40ml Headspace Amber
- SG = 16 Oz Glass - Soil
- W1 = 120ml Plastic Sterile
- D1 = 120ml Plastic Sterile
- P25 = 250ml Plastic
- P1 = 100ml Plastic
- 4LC = 4 Liter Cube
- 1LC = 1 Liter Cube
- G2 = 250ml Glass
- VA = 1000ml Virgin Amber Glass
- A8 = 8oz Glass Amber

Sample rejection : Reason: _____

Temp. At Receipt 1 °C

Check Applicable Field Wet Ice X Blue Ice ____

Sample Integrity

	Yes	No	N/A
Broken Containers	____	X	____
Custody Seals Intact	X	____	____
COC / Sample Label Agreement	X	____	____
Proper Containers	X	____	____
Samples Within Holding Times	X	____	____
All Samples on COC Received	X	____	____
W1 & D1 Filled to 100ml mark	____	____	X
Headspace acceptable	____	____	X

Preservative Added ***(Date/Time)*** _____

Matrix Codes

DW = Drinking Water S = Soil O = Other
WW = Wastewater SL = Sludge P = Paint
GW = Groundwater PW = Process Water
SW = Surface Water V = Vegetation

Collection Types	Preservative Codes
G - Grab	Ni = Nitric Acid (HNO_3)
C8 - 8Hr Composite	SA = Sulfuric Acid (H_2SO_4)
C12 - 12Hr Composite	HA = Hydrochloric Acid (HCl_3)
C24 - 24Hr Composite	SH = Sodium Hydroxide (NaOH)
C - Composite	ST = Sodium Thiosulfate
	R = Refrigerated
	SS = Sodium Sulfite
	AA = Ascorbic Acid
	ZN = Zinc Acetate
	AC = Ammonium Chloride

Initial: JM

Beckmar Environmental Laboratory
3251 Ruckriegel Parkway
Louisville, KY 40299
Phone: (502) 266-6533
Fax: (502) 266-6446
www.beckmarlab.com

Beckmar

CHAIN OF CUSTODY
AND ANALYTICAL REQUEST

*Job ID:241204050

Metropolitan Sewer District - OC

Month: 12 **Year:** 2024

Special Instructions: * Days 1 & 2 - 2 containers, Day 3 - 3 containers

Calibration ID: _____

Facility Location & Contact Information		Send Results To: (same as client info ☐ yes ☐ no)		Billing Information (same as client info ☐ yes ☐ no)	
Client Name	South Oldham WQTC	**Client Name**	Metropolitan Sewer District	**Client Name**	Metropolitan Sewer District
Address	6115 Hitt Lane	**Address**	P.O. Box 740011	**Address**	P.O. Box 740011
City, St, ZIP	Louisville, KY 40241	**City, State, ZIP**	Louisville, KY 40201	**City, State, ZIP**	Louisville, KY 40201
Phone		**Phone / Fax**	502-540-6735	**Contact Name**	
Contact		**E-mail**	david.radke@louisvillemsd.org	**A.P. Email**	accountspayable@louisvillemsd.org

Permit ID (if applicable) KY0111716

Compliance (Y/N) Y State: KY

Samples chlorinated (Y/N) (N)

Collected by (please print): Daniel Kidd **(signature):** Daniel Kidd **P.O. Number:** Sample Frequency Quarterly

Bottle ID (Lab Use Only)	Collection Day	Collection Time	Project ID: South Oldham WQTC - Bio / Sample Point / Description	Analysis Requested	Field Data pH (S.U.)	Field Data DO (Mg/L)	Field Data Cl_2 (mg/L) Free	Field Data Cl_2 (mg/L) Total	Field Data Temp. (°C)	Collection Type (See Bottom Right)	Number of Containers	Type of Container (See Bottom Center)	Matrix Code (See Bottom Right)	Preservative Code (See Bottom Right)	Initial Laboratory Location	Preservative Added in-house (Y/N)
01	3/4	1526/1441	T414EFF / South Oldham WQTC EFF (Day 2)	Ceriodaphnia Dubia Chronic						C24	* 1	4LC	WW	R	RM 14	N

Relinquished by:	Received by:	Date	Time
Daniel Kidd	Clayton	12/4/24	1516

Comments: 2° @ pour off 2° @ D/B

IRT s/n: 201907014970
correction factor: 0.0°C

Type of Container

- **G10** = 1000ml Glass
- **G5** = 500ml Glass
- **P10** = 1000ml Plastic
- **H40c** = 40ml Headspace Clear
- **H40a** = 40ml Headspace Amber
- **SG** = 16 Oz Glass - Soil
- **W1** = 120ml Plastic Sterile
- **D1** = 120ml Plastic Sterile
- **P25** = 250ml Plastic
- **P1** = 100ml Plastic
- **4LC** = 4 Liter Cube
- **1LC** = 1 Liter Cube
- **G2** = 250ml Glass
- **VA** = 1000ml Virgin Amber Glass
- **A8** = 8oz Glass Amber

Sample rejection : Reason: _____

Temp. At Receipt 2 °C

Check Applicable Field Wet Ice ☒ Blue Ice ☐

Sample Integrity

	Yes	No	N/A
Broken Containers	___	☒	___
Custody Seals Intact	___	☒	___
COC / Sample Label Agreement	☒	___	___
Proper Containers	☒	___	___
Samples Within Holding Times	☒	___	___
All Samples on COC Received	☒	___	___
W1 & D1 Filled to 100ml mark	___	___	☒
Headspace acceptable	___	___	☒

Preservative Added ***(Date/Time)*** _____

Matrix Codes

DW = Drinking Water **S** = Soil **O** = Other
WW = Wastewater **SL** = Sludge **P** = Paint
GW = Groundwater **PW** = Process Water
SW = Surface Water **V** = Vegetation

Collection Types	Preservative Codes
G - Grab	Ni = Nitric Acid (HNO_3)
C8 - 8Hr Composite	SA = Sulfuric Acid (H_2SO_4)
C12 - 12Hr Composite	HA = Hydrochloric Acid (HCl_3)
C24 - 24Hr Composite	SH = Sodium Hydroxide (NaOH)
C - Composite	ST = Sodium Thiosulfate
	R = Refrigerated
	SS = Sodium Sulfite
	AA = Ascorbic Acid
	ZN = Zinc Acetate
	AC = Ammonium Chloride

Initial: JML

Beckmar Environmental Laboratory
3251 Ruckriegel Parkway
Louisville, KY 40299
Phone: (502) 266-6533
Fax: (502) 266-6446
www.beckmarlab.com

Beckmar

CHAIN OF CUSTODY
AND ANALYTICAL REQUEST

*Job ID:241206011

Metropolitan Sewer District - OC

Month: DEC **Year:** 2024

Special Instructions: * Days 1 & 2 - 2 containers, Day 3 - 3 containers

Calibration ID: _____

Facility Location & Contact Information		Send Results To: (same as client info ☐ yes ☐ no)		Billing Information (same as client info ☐ yes ☐ no)	
Client Name	South Oldham WQTC	**Client Name**	Metropolitan Sewer District	**Client Name**	Metropolitan Sewer District
Address	6115 Hitt Lane	**Address**	P.O. Box 740011	**Address**	P.O. Box 740011
City, St, ZIP	Louisville, KY 40241	**City, State, ZIP**	Louisville, KY 40201	**City, State, ZIP**	Louisville, KY 40201
Phone		**Phone / Fax**	502-540-6735	**Contact Name**	
Contact		**E-mail**	david.radke@louisvillemsd.org	**A.P. Email**	accountspayable@louisvillemsd.org

Permit ID (if applicable) KY0111716

Compliance (Y/N) Y State: KY

Samples chlorinated (Y/N) 0

Collected by (please print): C. TRAVIS **(signature):**

P.O. Number:

Sample Frequency Quarterly

Bottle ID (Lab Use Only)	Collection Day	Collection Time	Project ID: South Oldham WQTC - Bio / Sample Point / Description	Analysis Requested	Field Data pH (S.U.)	Field Data DO (Mg/L)	Field Data Cl_2 (mg/L) Free	Field Data Cl_2 (mg/L) Total	Field Data Temp. (°C)	Collection Type (See Bottom Right)	Number of Containers	Type of Container (See Bottom Center)	Matrix Code (See Bottom Right)	Preservative Code (See Bottom Right)	Initial Laboratory Location	Preservative Added in-house (Y/N)
01	12/6/24	800 0800	T414EFF / South Oldham WQTC EFF (Day 3)	Ceriodaphnia Dubia Chronic						C24	* 2	4LC	WW	R	RH 12/4	N

Relinquished by:	Received by:	Date	Time
	Clayton	12-06-24	1515

Comments:
TEMP @ P/U: 10°C
TEMP @ D/O: 1°C

IRT s/n: 201907014970
correction factor: 0.0°C

Type of Container

- **G10** = 1000ml Glass
- **G5** = 500ml Glass
- **P10** = 1000ml Plastic
- **H40c** = 40ml Headspace Clear
- **H40a** = 40ml Headspace Amber
- **SG** = 16 Oz Glass - Soil
- **W1** = 120ml Plastic Sterile
- **D1** = 120ml Plastic Sterile
- **P25** = 250ml Plastic
- **P1** = 100ml Plastic
- **4LC** = 4 Liter Cube
- **1LC** = 1 Liter Cube
- **G2** = 250ml Glass
- **VA** = 1000ml Virgin Amber Glass
- **A8** = 8oz Glass Amber

Sample rejection : Reason: _____

Temp. At Receipt 1 °C

Check Applicable Field Wet Ice X Blue Ice ____

Sample Integrity

	Yes	No	N/A
Broken Containers	___	X	___
Custody Seals Intact	X	___	___
COC / Sample Label Agreement	X	___	___
Proper Containers	X	___	___
Samples Within Holding Times	X	___	___
All Samples on COC Received	X	___	___
W1 & D1 Filled to 100ml mark	___	___	X
Headspace acceptable	___	___	X

Preservative Added (Date/Time) _____

Matrix Codes

DW = Drinking Water **S** = Soil **O** = Other
WW = Wastewater **SL** = Sludge **P** = Paint
GW = Groundwater **PW** = Process Water
SW = Surface Water **V** = Vegetation

Collection Types

- G - Grab
- C8 - 8Hr Composite
- C12 - 12Hr Composite
- C24 - 24Hr Composite
- C - Composite

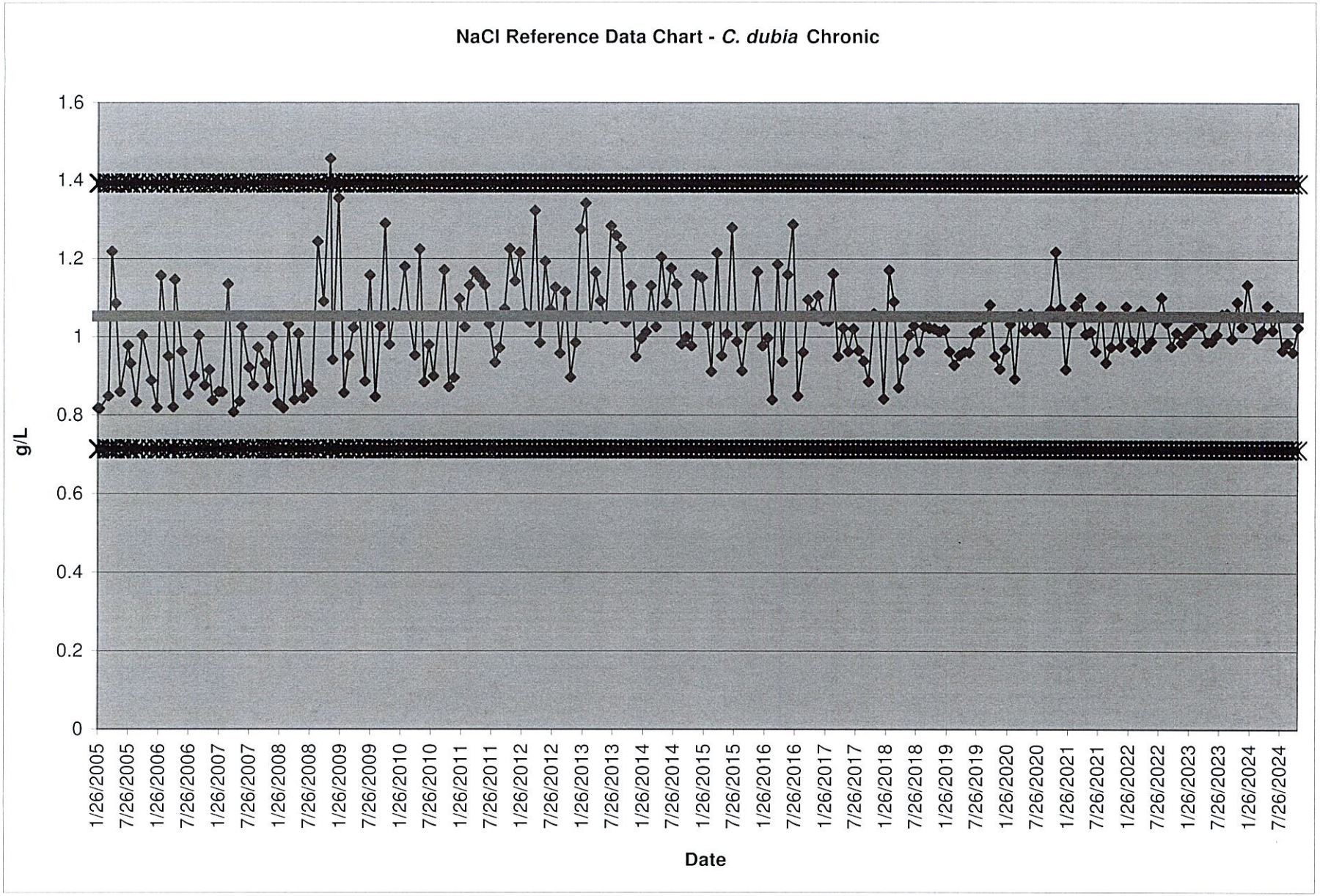
Preservative Codes

Ni = Nitric Acid (HNO_3)
SA = Sulfuric Acid (H_2SO_4)
HA = Hydrochloric Acid (HCl_3)
SH = Sodium Hydroxide (NaOH)
ST = Sodium Thiosulfate
R = Refrigerated
SS = Sodium Sulfite
AA = Ascorbic Acid
ZN = Zinc Acetate
AC = Ammonium Chloride

Initial: JML

Appendix III

NaCl Reference
Data Sheets


NaCl Reference Data Chart - C. dubia Chronic
g/L
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1/26/2005
7/26/2005
1/26/2006
7/26/2006
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7/26/2020
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7/26/2021
1/26/2022
7/26/2022
1/26/2023
7/26/2023
1/26/2024
7/26/2024
Date

Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	11/10/2024	Test ID:	nacl1124	Sample ID:	nacl112024
End Date:	11/17/2024	Lab ID:	0044:beckmar lab	Sample Type:	NACL-Sodium chloride
Sample Date:		Protocol:	EPAF 94-EPA Freshwater	Test Species:	CD-Ceriodaphnia dubia
Comments:	nacl cerio chronic november 2024				

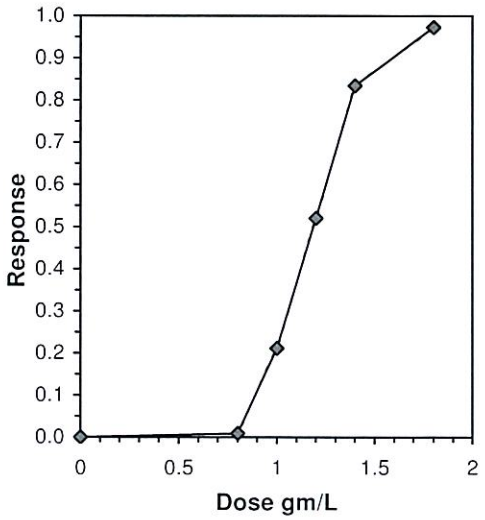
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
B-Control	18.000	17.000	20.000	25.000	23.000	27.000	25.000	25.000	24.000	19.000
0.8	19.000	19.000	21.000	25.000	25.000	26.000	24.000	24.000	21.000	17.000
1	16.000	18.000	14.000	21.000	22.000	15.000	16.000	23.000	18.000	13.000
1.2	12.000	14.000	8.000	10.000	9.000	7.000	17.000	15.000	14.000	1.000
1.4	6.000	7.000	5.000	8.000	4.000	0.000	0.000	5.000	2.000	0.000
1.8	1.000	0.000	2.000	0.000	1.000	0.000	0.000	0.000	1.000	1.000

			Transform: Untransformed					Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Mean	N-Mean
B-Control	22.300	1.0000	22.300	17.000	27.000	15.684	10	22.300	1.0000
0.8	22.100	0.9910	22.100	17.000	26.000	14.060	10	22.100	0.9910
1	17.600	0.7892	17.600	13.000	23.000	19.536	10	17.600	0.7892
1.2	10.700	0.4798	10.700	1.000	17.000	44.068	10	10.700	0.4798
1.4	3.700	0.1659	3.700	0.000	8.000	81.630	10	3.700	0.1659
1.8	0.600	0.0269	0.600	0.000	2.000	116.534	10	0.600	0.0269

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Kolmogorov D Test indicates normal distribution (p > 0.01)	0.55802	1.035	-0.3752	0.13588
Bartlett's Test indicates unequal variances (p = 6.13E-04)	21.6411	15.0863		

Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL		Skew
IC05	0.8407	0.1453	0.3658	0.8856	-1.8588
IC10	0.8902	0.0556	0.7316	0.9714	-1.9849
IC15	0.9398	0.0431	0.8575	1.0176	0.1356
IC20	0.9893	0.0385	0.9046	1.0407	-0.2211
IC25	1.0254	0.0333	0.9441	1.0713	-0.4297
IC40	1.1223	0.0333	1.0660	1.1907	0.2047
IC50	1.1870	0.0339	1.1179	1.2455	-0.0806



Client: NaCl Analyst: B. Bank

Test Start -- Date/Time: 11-10-2024 3P.

Test Stop -- Date/Time: 11-17-2024 3P

Brood Board Batch: 11092024

Neonate Age: _____

Data form for *Ceriodaphia dubia* survival and reproduction test

Control	Replicate										No. Of Young	No. Of Adults	Analyst
Day	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0		BB
2	0	0	0	0	0	0	0	0	0	0	0		BB
3	3	3	3	4	3	4	4	4	4	3	35		BB
4	0	0	0	0	0	0	0	0	0	0	0		BB
5	6	6	7	9	8	9	8	8	8	6	75		BB
6	0	0	0	0	0	0	0	0	0	0	0		BB
7	9	8	10	12	12	14	13	13	12	10	113		BB
8													
Total	18	17	20	25	23	27	25	25	24	19	223		BB

Conc. 0.8gm/L	Replicate										No. Of Young	No. Of Adults	Analyst
Day	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0		BB
2	0	0	0	0	0	0	0	0	0	0	0		BB
3	3	4	3	4	4	4	4	4	3	3	36		BB
4	0	0	0	0	0	0	0	0	0	0	0		BB
5	6	6	8	8	9	8	7	7	8	5	72		BB
6	0	0	0	0	0	0	0	0	0	0	0		BB
7	10	9	10	13	12	14	13	13	10	9	113		BB
8													
Total	19	19	21	25	25	26	24	24	21	17	221		BB

Conc. 1.0gm/L	Replicate										No. Of Young	No. Of Adults	Analyst
Day	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0		BB
2	0	0	0	0	0	0	0	0	0	0	0		BB
3	3	3	2	3	3	2	3	4	3	2	28		BB
4	0	0	0	0	0	0	0	0	0	0	0		BB
5	5	6	5	7	7	5	5	8	6	4	58		BB
6	0	0	0	0	0	0	0	0	0	0	0		BB
7	8	9	7	11	12	8	8	11	9	7	90		BB
8													
Total	16	18	14	21	22	15	16	23	18	13	176		BB

Client: NaCl Analyst: B. Black

Test Start -- Date/Time: 11-10-2024 3P

Test Stop -- Date/Time: 11-17-2024 3P

Data form for *Ceriodaphnia dubia* survival and reproduction test

Conc.	Replicate										No. Of Young	No. Of Adults	Analyst
	Day	1	2	3	4	5	6	7	8	9	10			
1.25g/L	1	0	0	0	0	0	0	0	0	0	0	0		BB
	2	0	0	0	0	0	0	0	0	0	0	0		BB
	3	3	2	2	0	0	0	2	0	0	1	10		BB
	4	0	0	0	3	2	2	0	3	2	X0	12		BB
	5	5	5	3	0	0	0	7	0	0	X	20		BB
	6	0	0	0	5	4	5	0	6	4	X	24		BB
	7	4	7	3	X2	3	0	8	6	8	X	41		BB
	8													
	Total	12	14	8	10	9	7	17	15	14	1	107		BB

Conc.	Replicate										No. Of Young	No. Of Adults	Analyst
	Day	1	2	3	4	5	6	7	8	9	10			
1.4g/L	1	0	0	0	0	0	0	0	0	0	0	0		BB
	2	0	0	0	0	0	0	0	0	0	0	0		BB
	3	0	0	0	0	0	0	X0	0	0	0	0		BB
	4	2	1	2	3	0	X0	X	0	0	0	8		BB
	5	0	0	0	0	2	X	X	3	0	0	5		BB
	6	4	6	1	5	0	X	X	0	2X	0	18		BB
	7	0	0	2	0	2	X	X	2	X	0	6		BB
	8													
	Total	6	7	5	8	4	0	0	5	2	0	37		BB

Conc.	Replicate										No. Of Young	No. Of Adults	Analyst
	Day	1	2	3	4	5	6	7	8	9	10			
1.75g/L	1	0	0	0	0	0	0	0	0	0	0	0		BB
	2	0	X0	0	X0	0	0	0	0	0	0	0		BB
	3	0	X	0	X	0	0	0	0	0	0	0		BB
	4	0	X	0	X	0	0	X0	X0	0	0	0		BB
	5	0	X	0	X	X1	0	X	X	1	0	2		BB
	6	1	X	0	X	X	0	X	X	0	X1	2		BB
	7	0	X	2	X	X	0	X	X	0	X	2		BB
	8													
	Total	1	0	2	0	1	0	0	0	1	1	6		BB

O = daphnid Alive, no reproduction
# = number of neonates released

X = Daphnid dead
X# = Daphnid dead but (#) of neonates released

ND = near death

DMR Copy of Record

Form Approved OMB No. 2040-0004 expires on 07/31/2026

EPA may make all the information submitted through this form (including all attachments) available to the public without further notice to you. Do not use this online form to submit personal information (e.g., non-business cell phone number or non-business email address), confidential business information (CBI), or if you intend to assert a CBI claim on any of the submitted information. Pursuant to 40 CFR 2.203(a), EPA is providing you with notice that all CBI claims must be asserted at the time of submission. EPA cannot accommodate a late CBI claim to cover previously submitted information because efforts to protect the information are not administratively practicable since it may already be disclosed to the public. Although we do not foresee a need for persons to assert a claim of CBI based on the types of information requested in this form, if persons wish to assert a CBI claim we direct submitters to contact the NPDES eReporting Help Desk for further guidance. Please note that EPA may contact you after you submit this report for more information.

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Permit

Permit #:	**KY0111716**	**Permittee:**	Louisville and Jefferson County MSD	**Facility:**	OLDHAM COUNTY ENVIRONMENTAL AUTHORITY REGIONAL WWTP
Major:	Yes	**Permittee Address:**	700 W Liberty St Louisville, KY 40203	**Facility Location:**	6115 HITT LN CRESTWOOD, KY 40241
Permitted Feature:	001 External Outfall	**Discharge:**	**001-2** Domestic Wastewater from Publicly Owned Treatment Works		

Report Dates & Status

Monitoring Period:	**From 10/01/24 to 12/31/24**	**DMR Due Date:**	**01/28/25**	**Status:**	**NetDMR Validated**

Considerations for Form Completion

Principal Executive Officer

First Name:	Tony	**Title:**	Executive Director	**Telephone:**	502-540-6533
Last Name:	Parrott				

No Data Indicator (NODI)

Form NODI: --

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
61406	**Toxicity, final conc toxicity units**	1 - Effluent Gross	0	--	Sample										=	1.0	2G - tox chronic		01/90 - Quarterly	24 - 24 Hour Composite
					Permit Req.										<=	1.0 MAXIMUM	2G - tox chronic		01/90 - Quarterly	24 - 24 Hour Composite
					Value NODI															

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

Name	Type	Size
sorf_bio_rpt_december_2024.pdf	pdf	8375052.0

Report Last Saved By

Louisville and Jefferson County MSD

User:	ALEX.SMITHER@LOUISVILLEMSD.ORG
Name:	Charles Smither
E-Mail:	alex.smither@louisvillemsd.org
Date/Time:	2025-01-24 13:08 (Time Zone: -05:00)

Report Last Signed By

User:	ALEX.SMITHER@LOUISVILLEMSD.ORG
Name:	Charles Smither
E-Mail:	alex.smither@louisvillemsd.org
Date/Time:	2025-01-24 13:09 (Time Zone: -05:00)