Metropolitan Water Reclamation District of Greater Chicago

MONITORING AND RESEARCH DEPARTMENT

REPORT NO. 25-03

RESULTS OF ACUTE TOXICITY TESTING WITH *Ceriodaphnia dubia* AND *Pimephales promelas* ON A JANUARY 2025 EFFLUENT SAMPLE FROM THE JAMES C. KIRIE WATER RECLAMATION PLANT OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

February 2025

Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street Chicago, Illinois 60611-2803 (312) 751-5600

RESULTS OF ACUTE TOXICITY TESTING WITH *Ceriodaphnia dubia* AND *Pimephales promelas* ON A JANUARY 2025 EFFLUENT SAMPLE FROM THE JAMES C. KIRIE WATER RECLAMATION PLANT OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

By

EnviroScience, Incorporated
5070 Stow Road
Stow, Ohio 44224

Monitoring and Research Department
Edward W. Podczerwinski, Director

February 2025

Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago

CECIL LUE-HING RESEARCH AND DEVELOPMENT COMPLEX
6001 WEST PERSHING ROAD CICERO, ILLINOIS 60804-4112

Edward W. Podczerwinski, P.E.
Director of Monitoring and Research

February 11, 2025

Illinois Environmental Protection Agency
Compliance Assurance Section CAS #19
2520 W. Iles Ave.
P.O. Box 19276
Springfield, IL 62794-9276

Subject: Biomonitoring Report for 2025 – Acute Toxicity Test Results for the James C. Kirie Water Reclamation Plant, National Pollutant Discharge Elimination System Permit Number IL0047741

The subject biomonitoring report including acute whole effluent toxicity test results for *Pimephales promelas* and *Ceriodaphnia dubia* is submitted in compliance with National Pollutant Discharge Elimination System Permit Number IL0047741, Special Condition 11. The report covers the monitoring done for samples collected in the eighteenth month before the expiration of the permit.

The subject report prepared by EnviroScience, Inc., includes copies of all bench sheets, chain-of-custody forms, sample receipt, preparation forms, a summary of final results and test information, quality assurance record, and water quality results.

If you have any questions concerning this report, please contact Mr. Thomas Minarik, Principal Environmental Scientist, at (708) 588-4223.

Very truly yours,

Albert Cox

Albert Cox
Environmental Monitoring and Research
Manager
Monitoring and Research Department

AC:TM:NK:ek
Enclosure
cc: E. Podczerwinski/J. Murray
H. Zhang/T. Minarik/N. Kollias
Via electronic mail

RESULTS OF ACUTE TOXICITY TESTS

48 Hour - *Ceriodaphnia dubia* (water flea)
96 Hour - *Pimephales promelas* (fathead minnow)

Testing period: January 15-19, 2025
Sample collection dates: January 13-14, 2025
Report date: January 22, 2025

IL0047741

Conducted For:

KIRIE WRP
701 Oakton Street
Des Plains, IL 60018

Conducted and Prepared By:

ENVIROSCIENCE, INCORPORATED
5070 Stow Rd.
Stow, OH 44224
330-688-0111

EnviroScience
Excellence In Any Environment

_____, Aquatic Biologist

January 22, 2025

Mr. Nicholas Kollias
Kirie WRP
701 Oakton Street
Des Plains, IL 60018

Dear Mr. Kollias:

Enclosed is a copy of EnviroScience's report for the following whole effluent toxicity (WET) tests that were initiated on January 15, 2025 with effluent collected from outfall 001:

(1) 48-hour static acute bioassay using *Ceriodaphnia dubia* (water flea) and
(1) 96-hour static acute bioassay using *Pimephales promelas* (fathead minnow).

The effluent sample was not shown to be toxic to either species. Acute Toxicity Units (TUa) are listed below.

WET test endpoints for Kirie, 01/2025
sample collection period 01/13-14/25

Effluent:

Ceriodaphnia dubia (water flea)	48HR LC_{50} = >100% effluent;	TU_a = <1.0 ($TU_a = 100/LC_{50}$)
Pimephales promelas (fathead minnow)	96HR LC_{50} = >100% effluent;	TU_a = <1.0 ($TU_a = 100/LC_{50}$)

Please call me if you have any questions.

Sincerely,

Alexandria M. Tite, Aquatic Biologist

enclosures

EnviroScience
5070 Stow Road
Stow, OH 44224
Toll Free: 800-940-4025 | Office: 330-688-0111 | Fax: 330-688-3858

BIOMONITORING REPORT FORM FOR NPDES PERMIT REQUIREMENTS

Table 1. General Information

1. Facility: Kirie WRP

2. Address: 701 Oakton Street, Des Plains, Illinois 60018

3. NPDES Permit No.: IL0047741

4. Facility Contact: Nicholas Kollias 5. Phone No.: 708-588-4074

6. Testing Lab: EnviroScience, Inc., 5070 Stow Rd., Stow, OH 44224

7. Laboratory Contact: Alex Tite 8. Phone No.: 330-688-0111

9. Receiving Water(s) of Discharge: Higgins Creek

10. Outfall(s) Tested: 001

11. Test Species/Type: #1 *Ceriodaphnia dubia* (water flea) 48-hour definitive, static, non-renewal EPA 2002.0

#2 *Pimephales promelas* (fathead minnow) 96-hour definitive, static, non-renewal EPA 2000.0

12. Dechlorination?: no Original Chlorine Conc.:<0.02 mg/l

13. Report Contents:

General information	Table 1
Sampling information	Table 2
Test dates and times	Table 3
Initial chemistry	Table 4
Test conditions	Table 5
Test results Plant Effluent	Table 6
Additional Information	Table 7

Attachments

Chain-of-Custody, bench sheets/data analysis

SRT control charts

Signature of preparer — 01/22/25 Date

Alexandria M. Tite Name (typed or printed) — Aquatic Biologist Title

Table 2. Sampling summary.

Outfall	Sample Type	Volume Collected	Sample Collection		Comments
			Begin MM/DD/YY-Time	End or Grab MM/DD/YY-Time	
001	composite	1 gallon	01/13/25-0600	01/14/25-0600	

Table 3. Testing periods.

Ceriodaphnia dubia (water flea)		*Pimephales promelas* (fathead minnow)	
Start Date: MM/DD/YY	01/15/25	Start Date: MM/DD/YY	01/15/25
Start Time:	1250 hrs	Start Time:	1210 hrs
End Date: MM/DD/YY	01/17/25	End Date: MM/DD/YY	01/19/25
End Time:	1150 hrs	End Time:	1245 hrs

Notes: Sample receipt: 01/15/25-1000; 0.4 °C.

Table 4. Initial chemistry. DO = dissolved oxygen. TRC = total residual chlorine.

sample # (Plant Effluent)	collection date	DO mg/L	pH s.u.	conductivity µmho/cm	alkalinity mg/L $CaCO_3$	hardness mg/L $CaCO_3$	TRC mg/L	Ammonia mg/L
001	01/13-14/25	8.6	7.0	1510	170	276	<0.02	0.48

Methods or Instrumentation used in chemical analysis:

Dissolved Oxygen: APHA (1998, 20th ed.) 4500-O G., OX 4100L
pH: APHA (1998, 20th ed.) 4500-H^+ B., Orion Star A211
Conductivity: APHA (1998, 20th ed.) 2510 B., Orion Star A212
Total Alkalinity: APHA (1998, 20th ed.) 2320 B.
Total Hardness: APHA (1998, 20th ed.) 2340 C.
Total Residual Chlorine: APHA (1998, 20th ed.) 4500-Cl D., HACH TitraLab AT1000

Table 5. Summary of toxicity test conditions for testing with *Ceriodaphnia dubia* and *Pimephales promelas*.

	Ceriodaphnia dubia	*Pimephales promelas*
1. Test dates:	01/15/25-1250 to 01/17/25-1150	01/15/25-1210 to 01/19/25-1245
2. Test type and duration:	static, non-renewal, 48 hours	static, non-renewal, 96-hours
3. Age and source of organisms:	<24 hours, EnviroScience 01/14/25-1600	8 days, ES 01/06/25-1530
4. Photoperiod/ Light quality:	16 hours light / 8 hours dark fluorescent light, 50-100fc	16 hours light / 8 hours dark fluorescent light, 50-100fc
5. Test temperature:	25±1 °C	25±1 °C
6. Feeding regime:	fed alga *Selenastrum capricornutum* and YAT prior to test only	fed <500 brine shrimp/vessel at 48-hours
7. Size of test vessel:	30 ml plastic cup	600 ml glass beaker
8. Volume and depth of test solutions:	15 ml and 24 mm	250 ml and 42 mm
9. No. of test organisms per vessel:	5	10
10. No. of vessels per solution:	4	2
11. Total no. of organisms per test level:	20	20
12. Test concentrations as % effluent:	6.25, 12.5, 25, 50, and 100	6.25, 12.5, 25, 50, and 100
13. Dilution and primary control water:	moderately hard reconstituted water, MHRW	moderately hard reconstituted water, MHRW
14. Secondary control:	moderately hard dilute mineral water, DMW	moderately hard dilute mineral water, DMW
15. Aeration:	none	none
16. Endpoints:	mortality - no movement with gentle prodding (LC_{50}); plus behavioral effects such as atypical swimming (EC_{50})	mortality - no movement with gentle prodding (LC_{50}); plus behavioral effects such as atypical swimming (EC_{50})
17. No. of consecutive tests conducted with an alternate source of primary control water:	NA	NA

Table 6. Percent cumulative mortality, LC_{50}, EC_{50}, and 95% confidence intervals for acute toxicity tests using *Ceriodaphnia dubia* and *Pimephales promelas* using effluent collected from **Outfall 001.**

Concentration	***C. dubia* (water flea)** 01/14/25 to 01/16/25		***P. promelas* (fathead minnow)** 01/14/25 to 01/18/25			
	24-hours % mortality	48-hours % mortality	24-hours % mortality	48-hours % mortality	72-hours % mortality	96-hours % mortality
MHRW lab water, **diluent**	0	5	0	0	0	0
DMW, lab water	0	5	5	5	5	5
6.25% effluent	0	10	0	0	0	0
12.5% effluent	0	15	0	0	0	0
25% effluent	0	0	0	0	0	0
50% effluent	0	5	0	0	0	0
100% effluent	0	0	0	0	0	0
LC_{50}	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent
95% C.I.						
EC_{50}	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent
95% C.I.						
TUa ($100 \div LC_{50}$)		**<1.0**				**<1.0**
Methods:	Cetis 2.1.5.					

Table 7. Additional Information:

Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from current SOP that were necessary. Attach additional pages as needed.

7.1 Deviations/relevant information.

7.2 Terms.

LC_{50} = median lethal concentration. A mathematical estimate of the effluent concentration that would kill 50% of the exposed specimens during the specified exposure period.

TU_a = Acute Toxicity Unit; $TU_a = 100 \div LC_{50}$ (usually 48-hour LC_{50} for water fleas and 96-hour LC_{50} for FHM)

ATTACHMENTS

Chain-of-Custody/Sample Submission
Bench sheets
Standard Reference Toxicant Control Charts

EnviroScience
Excellence In Any Environment

EnviroScience, Inc.
5070 Stow Road
Stow, OH 44224
Phone (330) 688-0111
Fax (330) 688-3858
1-800-940-4025

Client:	Kirie
Address:	6001 West Pershing Road Cicero, IL 60804
Contact:	Nicholas Kollias
Phone:	708-588-4074
Permit #:	IL

SAMPLE SUBMISSION AND CHAIN OF CUSTODY FORM

Test(s) to be performed:
( ) Chronic Definitive
(✓) Acute Definitive
( ) 48 hr. Screening
( ) 24 hr. Stormwater
( ) Pass/Fail ______

Test Species
(✓) P. promelas and C. dubia
( ) P. promelas
( ) C. dubia
( ) D. magna
( ) ______

Wastewater Type (Circle One)
Industrial Other
Municipal (circled)
Other ______

When listing a composite sample in the table below, please provide the start and end time of the composite period.

Start Date	Start Time	End Date	End Time	Station No.	Sample Site	Sample Type: Comp	Sample Type: Grab	Number of Cubitainers	Chemistry: TRC	Cond	D.O.	pH	Temp. °C
1/13/25	0600	1/14/25	0600		Kirie WRP	✓		1	0	1446	9.38	7.27	5.6

Comp. = Composite, D.O. = Dissolved Oxygen measured in mg/l, pH measured in s.u., Conductivity measured in uohm/cm

Sampling Collector's Information: please ✓ all appropriate boxes

✓	Effluent	Collectors Name:	Jorge Abreu
	Upstream	Collectors Signature:	[signature]
	Near Field	M.G.D. =	
	Far Field	Weather Conditions:	
Plume Determined By What Method?			

EnviroScience Personnel Only

	Effluent	Collected By:	
	Upstream	Collectors Signature:	
	Near Field		
	Far Field		

Comments:

Received from:	Received by:	Date	Time	Shipping Information		EnviroScience Use Only	
	[signature]	011525	1000	Date Shipped	1/14/25	Client	Kirie WRP
		~~01~~	~~1000~~	Time Shipped	1100	Sample ID's	~~KIRIE~~ KIRI 011525 EFF
				Method Shipped	UPS	Cond. Of Container	Good
				ES Vehicle		Temp. °C	0.4

EnviroScience, Inc. Cooler Receipt Form (Form 7050-2 rev. 03/30/22)

Client Kirie

ES Sample ID KTRI ~~KTRG~~ 011525 GPF

Cooler Received by: HO

Date Cooler Received and Opened 011525

Received from: FedEx___ UPS ✓ Client Drop Off___ ES Courier___

1. Were custody seals on the outside of cooler? Yes___ No ✓
   Were custody seals signed, dated and intact? Yes___ No ✓
2. Did Chain of Custody (COC) accompany the samples? Yes ✓ No___
3. Were the COC's signed in the appropriate places? Yes ✓ No___
   If No explain___
4. Was the sample time and date filled in correctly? Yes ✓ No___
5. Sample Temperature upon receipt 0.4 °C
6. Did all sample container labels match the samples written on the COC? Yes ✓ No___
   Were the sample containers in good condition? Yes ✓ No___
7. Was sufficient quantity received to perform indicated tests? Yes ✓ No___
8. Was this sample received within required holding time? Yes ✓ No___
9. EPA method code: 1000.0: ___ 1002.0: ___ 2000.0: ✓ 2002.0: ✓

Explain any discrepancies or client notifications that occurred regarding this sample:___

EnviroScience
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5070 Stow Road
Stow, Ohio 44224
Phone (330) 688-0111; 1-800-940-4025
Fax (330) 688-3858

Acute, 48-hour, non-renewal Bioassay:
Project: KIRI
No.:
Start Date: 011525 Time: 1250
End Date: 011725 Time: 1150

Organism: C. Dubia
Source: BB010525 A
Hatch/Age: 011425 1600 <24 hrs
Diluent: MHR
Sample #: KIRI 011525 EFF

test levels	Rep	n	Biological Parameters: Dead / Affected 24 hr	Biological Parameters: Dead / Affected 48 hr	Temperature (Celsius) 0	Temperature (Celsius) 24	Temperature (Celsius) 48	Dissolved Oxygen (mg/L) 0	Dissolved Oxygen (mg/L) 24	Dissolved Oxygen (mg/L) 48	pH (s.u.) 0	pH (s.u.) 24	pH (s.u.) 48	Conductivity (µmhos/cm) 0	Conductivity (µmhos/cm) 24	Conductivity (µmhos/cm) 48
MHR	A	5	0	1	24.7	24.0	24.0	8.6		8.6	7.3		7.9	288		376
	B	5	0	0												
	C	5	0	0												
	D	5	0	0												
DMW	A	5	0	0	24.5	24.0	24.1	8.6		8.6	7.0		7.5	191		267
	B	5	0	0												
	C	5	0	1												
	D	5	0	0												
6.25	A	5	0	1	24.6	24.3	24.0	8.6		8.6	7.3		7.5	365		431
	B	5	0	0												
	C	5	0	1												
	D	5	0	0												
12.5	A	5	0	0	24.6	24.5	24.1	8.6		8.6	7.2		7.5	450		495
	B	5	0	1												
	C	5	0	1												
	D	5	0	1												
25	A	5	0	0	24.6	24.2	24.1	8.6		8.6	7.2		7.6	599		628
	B	5	0	0												
	C	5	0	0												
	D	5	0	0												
50	A	5	0	0	24.6	24.2	24.1	8.6		8.6	7.1		7.7	915		948
	B	5	0	0												
	C	5	0	0												
	D	5	0	1												
100	A	5	0	0	24.4	24.2	24.2	8.6		8.6	7.1		7.9	1523		1582
	B	5	0	0												
	C	5	0	0												
	D	5	0	0												
Time	1250		1355	1150	1250	1355	1150	1105		1230	1105		1240	1105		1230
Tech	JM		RL	CE	JM	RL	CE	RL		CE	RL		CE	RL		CE
					11	1	11	OX4100L			Orion StarA211 A			Orion StarA212		
					ID or ✓ instrument used			✓		✓	✓		✓	✓		✓
								Other:			Orion StarA211 B					

USEPA Method: 2002.0

JM

CETIS Analytical Report

Test Code/ID: 15B2594D / 03-6400-9805

Ceriodaphnia 48-h Acute Survival Test

EnviroScience

Analysis ID:	04-7807-0852	Endpoint:	48h Survival Rate	CETIS Version:	CETIS v2.1.5
Analyzed:	22 Jan-25 14:07	Analysis:	Linear Interpolation (ICPIN)	Status Level:	1
Edit Date:	22 Jan-25 0:00	MD5 Hash:	D72E500785D0A5116B26556679E18027	Editor ID:	007-869-049-5
Batch ID:	19-0954-0645	Test Type:	Survival (48h)	Analyst:	
Start Date:	15 Jan-25 12:50	Protocol:	EPA/821/R-02-012 (2002)	Diluent:	Upstream of Discharge
Ending Date:	17 Jan-25 10:00	Species:	Ceriodaphnia dubia	Brine:	
Test Length:	45h	Taxon:	Branchiopoda	Source:	In-House Culture Age:
Sample ID:	14-2609-0582	Code:	55006A56	Project:	
Sample Date:	14 Jan-25 06:00	Material:	POTW Effluent	Source:	Discharge Monitoring Report
Receipt Date:	15 Jan-25 10:00	CAS (PC):		Station:	001
Sample Age:	31h	Client:	Kirie		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1962486	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.95	0.9	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
LC50	>100	---	---	<1	---	---

48h Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	D	4	0.9500	1.0000	0.8000	1.0000	10.53%	0.00%	19/20	0.9500	0.00%
6.25		4	0.9000	0.9000	0.8000	1.0000	12.83%	5.26%	18/20	0.9400	1.05%
12.5		4	0.8500	0.8000	0.8000	1.0000	11.76%	10.53%	17/20	0.9400	1.05%
25		4	1.0000	1.0000	1.0000	1.0000	0.00%	-5.26%	20/20	0.9400	1.05%
50		4	0.9500	1.0000	0.8000	1.0000	10.53%	0.00%	19/20	0.9400	1.05%
100		4	1.0000	1.0000	1.0000	1.0000	0.00%	-5.26%	20/20	0.9400	1.05%

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.8000	1.0000	1.0000	1.0000
6.25		0.8000	1.0000	0.8000	1.0000
12.5		1.0000	0.8000	0.8000	0.8000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	0.8000
100		1.0000	1.0000	1.0000	1.0000

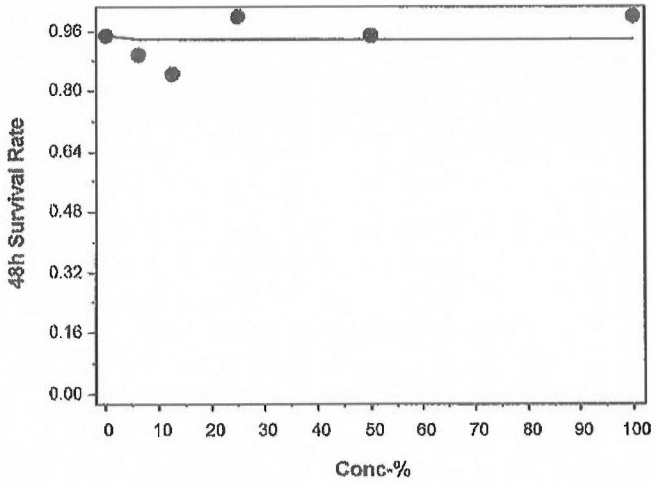
48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	4/5	5/5	5/5	5/5
6.25		4/5	5/5	4/5	5/5
12.5		5/5	4/5	4/5	4/5
25		5/5	5/5	5/5	5/5
50		5/5	5/5	5/5	4/5
100		5/5	5/5	5/5	5/5

Ceriodaphnia 48-h Acute Survival Test — EnviroScience

Analysis ID:	04-7807-0852	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETIS v2.1.5
Analyzed:	22 Jan-25 14:07	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	22 Jan-25 0:00	**MD5 Hash:**	D72E500785D0A5116B26556679E18027	**Editor ID:**	007-869-049-5

Graphics



ACUTE, 96 HOUR, NON- RENEWAL BIOASSAY:
Project: KIRI
No.: VM 1-15
Start Date: 011525 Time: 1210
End Date: 011925 Time: 1245

Organism: Pimephales promelas (FHM)
Source: ES cultures
Hatch/Age: ~~46~~ 010625 1530, 8 Days
Diluent: MHR
Sample #: KIRI 011525 EFF

Biological Parameters: # Mortalities / # Affected												
test levels→					MHR	DMW	6.25	12.5	25	50	100
0 hours set-up	Tech	VM	n	A	10	10	10	10	10	10	10
	Time	1210	n	B	10	10	10	10	10	10	10
24 hours	Tech	CE	A		0/0	0/0	0/0	0/0	0/0	0/0	0/0
	Time	1410	B		0/0	1/1	0/0	0/0	0/0	0/0	0/0
48 hours	Tech	TM	A		0/0	0/0	0/0	0/0	0/0	0/0	0/0
	Time	1120	B		0/0	1/1	0/0	0/0	0/0	0/0	0/0
72 hours	Tech	LB	A		0/0	0/0	0/0	0/0	0/0	0/0	0/0
	Time	1335	B		0/0	1/1	0/0	0/0	0/0	0/0	0/0
96 hours	Tech	HO	A		0/0	0/0	0/0	0/0	0/0	0/0	0/0
	Time	1245	B		0/0	1/1	0/0	0/0	0/0	0/0	0/0

Chemical and Physical Data											
		Tech	Time	Instr.#	MHR	DMW	6.25	12.5	25	50	100
Temp. °C HO 1-19	0 hr	VM	1210	6	24.0	24.0	24.0	24.0	24.0	24.0	24.0
	24 hr	CE	1410	6	24.0	24.0	24.0	24.0	24.0	24.0	24.0
	48 hr	TM	1120	10	24.0	24.0	24.0	24.0	24.0	24.0	24.0
	72 hr	LB	1335	11	24.0	24.0	24.0	24.0	24.0	24.0	24.0
	96 hr	HO	~~1245~~ 1255	7	24.0	24.0	24.0	24.0	24.0	24.0	24.0
cond. µmhos/cm	0 hr	RL	1105	A212	288	191	305	450	599	915	1523
	24hr	TM	1120	A212	291	195	378	462	612	930	1555
	48 hr	CE	0930	A212	299	198	371	454	612	912	1538
	72 hr	DA	1030	A212	310	199	372	457	614	918	1519
	96 hr	VM	1015	A212	310	198	368	450	605	898	1529
DO mg/L	0 hr	RL	1105	OX 4100L	8.6	8.6	8.6	8.6	8.6	8.6	8.6
	24 hr	TM	1125	OX 4100L	8.0	8.0	8.3	8.3	8.3	8.3	8.4
	48 hr	CE	0930	OX 4100L	6.9	7.2	7.5	7.5	7.6	7.8	7.8
	72 hr	DA	1050	OX 4100L	8.6	8.6	8.6	8.6	8.6	8.6	8.6
	96 hr	VM	1020	OX 4100L	8.6	8.6	8.6	8.6	8.6	8.6	8.6
pH s.u.	0 hr	RL	1105	*AZ11A	7.3	7.0	7.3	7.2	7.2	7.1	7.1
	24 hr	TM	1215	*AZ11A	6.9	6.8	7.0	7.1	7.3	7.4	7.6
	48 hr	CE	1010	*AZ11A	6.8	6.7	6.9	7.0	7.2	7.4	7.6
	72 hr	DA	1100	AZ11A	7.1	6.8	7.1	7.2	7.3	7.5	7.8
	96 hr	VM	1040	AZ11B	7.4	6.9	7.1	7.1	7.2	7.4	7.6

USEPA method 2000.0 rev. 04/18/2024

VMJ

CETIS Analytical Report

Fathead Minnow 96-h Acute Survival Test

EnviroScience

Analysis ID:	08-7052-7064	Endpoint:	96h Survival Rate	CETIS Version:	CETIS v2.1.5
Analyzed:	22 Jan-25 14:09	Analysis:	Linear Interpolation (ICPIN)	Status Level:	1
Edit Date:	22 Jan-25 0:00	MD5 Hash:	509FC2E8BA2BA32D9479C7B479A5A46A	Editor ID:	007-869-049-5
Batch ID:	21-3378-3467	Test Type:	Survival (96h)	Analyst:	
Start Date:	15 Jan-25 12:10	Protocol:	EPA/821/R-02-012 (2002)	Diluent:	Upstream of Discharge
Ending Date:	19 Jan-25 12:45	Species:	Pimephales promelas	Brine:	
Test Length:	4d 1h	Taxon:	Actinopterygii	Source:	In-House Culture Age:
Sample ID:	13-6977-4057	Code:	51A517E9	Project:	
Sample Date:	14 Jan-25 06:00	Material:	POTW Effluent	Source:	Discharge Monitoring Report
Receipt Date:	15 Jan-25 10:00	CAS (PC):		Station:	001
Sample Age:	30h	Client:	Kirie		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	102766	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.9	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
LC50	>100	---	---	<1	---	---

96h Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	D	2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
6.25		2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
12.5		2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
25		2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
50		2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
100		2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%

96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2
0	D	1.0000	1.0000
6.25		1.0000	1.0000
12.5		1.0000	1.0000
25		1.0000	1.0000
50		1.0000	1.0000
100		1.0000	1.0000

96h Survival Rate Binomials

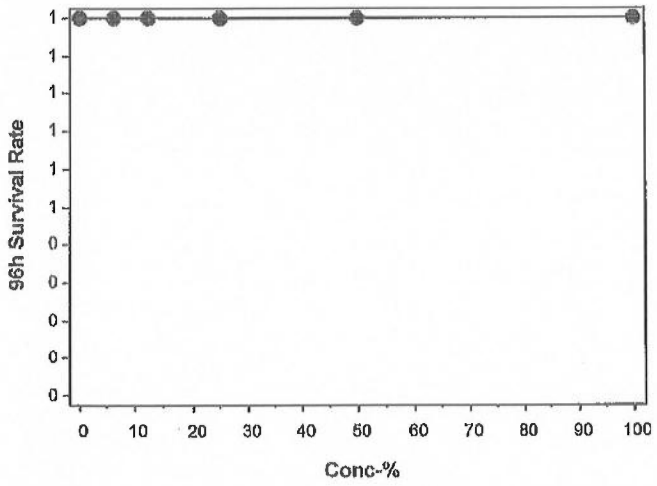
Conc-%	Code	Rep 1	Rep 2
0	D	10/10	10/10
6.25		10/10	10/10
12.5		10/10	10/10
25		10/10	10/10
50		10/10	10/10
100		10/10	10/10

Fathead Minnow 96-h Acute Survival Test

EnviroScience

Analysis ID:	08-7052-7064	Endpoint:	96h Survival Rate	CETIS Version:	CETIS v2.1.5
Analyzed:	22 Jan-25 14:09	Analysis:	Linear Interpolation (ICPIN)	Status Level:	1
Edit Date:	22 Jan-25 0:00	MD5 Hash:	509FC2E8BA2BA32D9479C7B479A5A46A	Editor ID:	007-869-049-5

Graphics



Acute, Static Bioassay:
Initial Water Quality Checks (DO, pH, conductivity, chlorine, alkalinity, hardness) and Dilution Record

Client: KIRI Permit No.: _____
Date: 011525

Initial Water Quality Data:

Sample Id	D. Oxygen (mg/L-%sat) >4 & <100%?	pH (s.u) 6-9?	Conductivity (µmhos/cm)	TRC_I (mg/L) <0.02?	TRC_A (mg/L)	Alkalinity (mg/L $CaCO_3$) MDL = 20 mg/l	Hardness-EDTA (mg/L $CaCO_3$) MDL = 5 mg/l
MHRW batch# MHR011225	8.6	7.0	288	<0.02	NA	(3.7)74	(2.1)84
KIRI 011525 EFF	8.6	7.0	1510	<0.02	—	(8.5)170	(6.9)276
INITIALS →	RL	RL	RL	RL	RL	RL	RL

Dilution Record:

SAMPLE ID	Composited	60µm Filtered
KIRI 011525 EFF	☐Yes ☒No	☐Yes ☒No
	☐Yes ☐No	☐Yes ☐No
	☐Yes ☐No	☐Yes ☐No

Comments:
ammonia: 0.48 mg/L

Methods/Instrumentation :
DO: APHA (1998) 4500-O G, OX4100L
pH: APHA (1998) 4500-H B, Star A211
Conductivity: APHA (1998) 2510-B, Orion Star A212
Hardness: APHA (1998) 2340-C
Alkalinity: APHA (1998) 2320-B
TRC: APHA (1998) 4500-Cl D, TitraLab At 1000
USEPA Methods: 2000.0; 2002.0

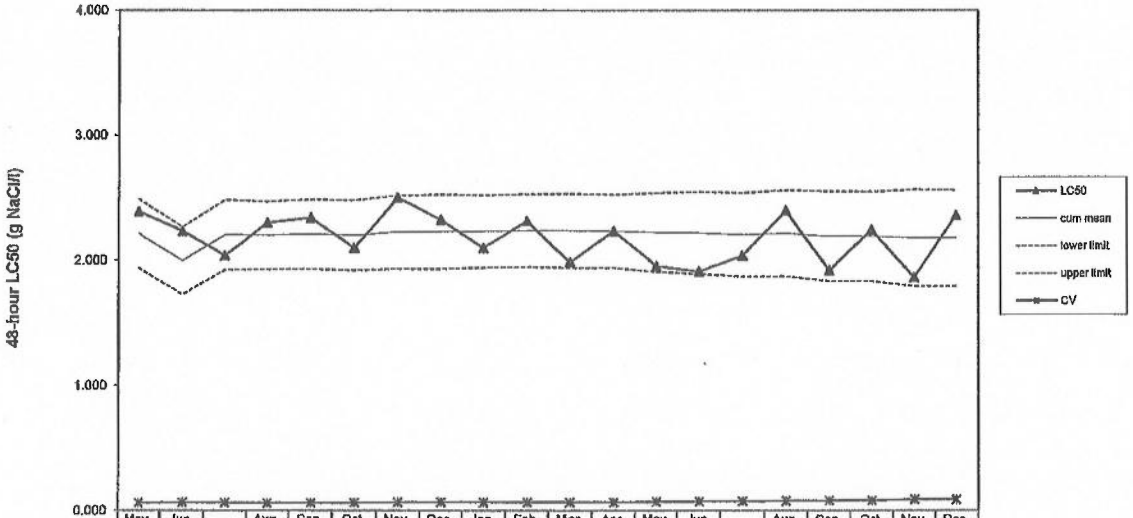
% DILUTION	INITIATION		RENEWAL ☒No	
	Effluent (mL)	Final (mL)	Effluent (mL)	Final (mL)
6.25	62.5	1000		
12.5	125			
25	250			
50	500	↓		
Dilution Water:	☐ Upstream ☒MHR		☐ Upstream ☐ MHR	
MHR Batch:				

TRC_I = total residual chlorine, initial value
TRC_A = total residual chlorine, after dechlorination

Dechlorination procedure: Sodium thiosulfate is used to reduce Total Residual Chlorine by dosing with 6.7 mg $Na_2S_2O_3$ per mg TRC. A 6.7 mg/ml $Na_2S_2O_3$ solution is used; dose mL = X mg/L * liters in sample container being treated.

VMJ

EnviroScience QC Chart - *Ceriodaphnia dubia*
Acute Toxicity endpoint - 25 C



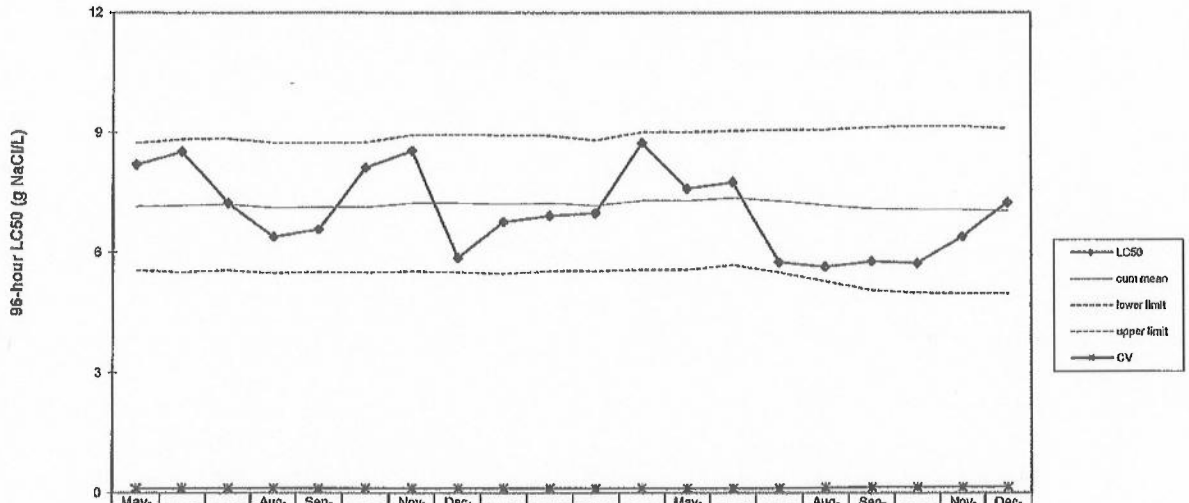
	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-25
LC50	2.392	2.235	2.040	2.301	2.341	2.101	2.502	2.325	2.101	2.315	1.986	2.235	1.955	1.911	2.038	2.400	1.921	2.246	1.866	2.358
cum mean	2.216	1.999	2.205	2.201	2.210	2.201	2.227	2.231	2.234	2.239	2.236	2.233	2.224	2.221	2.208	2.218	2.195	2.193	2.180	2.178
lower limit	1.94	1.729	1.926	1.93	1.932	1.921	1.933	1.934	1.944	1.947	1.942	1.94	1.908	1.893	1.872	1.874	1.837	1.836	1.794	1.795
upper limit	2.492	2.269	2.485	2.472	2.487	2.482	2.52	2.527	2.524	2.531	2.533	2.526	2.54	2.549	2.54	2.562	2.553	2.551	2.566	2.562
CV	0.062	0.067	0.063	0.062	0.063	0.064	0.066	0.066	0.065	0.065	0.066	0.066	0.071	0.074	0.076	0.078	0.082	0.081	0.088	0.088

Test Date (MM.YY)

Tests conducted at Stow, OH facility

EnviroScience QC/SRT Chart rev. 01/08/25

EnviroScience QC Chart - *Pimephales promelas*
Acute Toxicity Endpoint - 25 C



	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-25
LC50	8.208	8.523	7.233	6.399	6.563	8.125	8.548	5.868	6.772	6.928	6.996	8.746	7.605	7.762	5.757	5.65	5.784	5.741	6.403	7.256
cum mean	7.1518	7.1762	7.2052	7.1219	7.1301	7.1345	7.2409	7.237	7.2125	7.2388	7.1782	7.3009	7.3041	7.3721	7.2951	7.1867	7.105	7.0859	7.0765	7.0444
lower limit	5.5606	5.5146	5.5622	5.4937	5.5152	5.5086	5.5354	5.5186	5.4816	5.5441	5.5436	5.5804	5.5815	5.5926	5.5129	5.2924	5.0667	5.0024	4.9618	4.9833
upper limit	8.7428	8.8376	8.8482	8.75	8.7449	8.7604	8.9464	8.9554	8.9434	8.9334	8.8126	9.0213	9.0266	9.0515	9.0774	9.0809	9.1432	9.1694	9.1711	9.1054
CV	0.1112	0.1168	0.114	0.1143	0.1132	0.1139	0.1178	0.1167	0.12	0.1171	0.1138	0.1178	0.1179	0.1139	0.1222	0.1318	0.1434	0.147	0.148	0.1463

Test Date (MM.YY)

Tests conducted at Stow, OH facility

EnviroScience QC/SRT Chart rev. 01/08/25

KIRIE WRP

WET-L COC
Revision 1.2
1/18/2011

The WET Sample Chain-of-Custody

SAMPLE COLLECTION DATE	TIME	PERSONNEL INITIALS	SAMPLE TYPE	SAMPLE LOCATION	SAMPLE Temp °C	ON-SITE SAMPLE STORAGE (0.1-6 °C)	PRINT NAME & SIGNATURE
1/13/25	0600	AS	Grab	KWRP final effluent	13	YES/NO	Alexandra Stavri
1/13/25	1200	DE	Grab	KWRP Final Effluent	12.5	YES/NO	Dagael Erickson
1/13/25	1800	FB	Grab	KWRP FINAL EFFL	12.5	YES/NO	FLORIN BEEA
1/14/25	0000	AS	Grab	KWRP final effl.	12	YES/NO	alexandra Stavri
1/14/25	0600	AS	Grab	KWRP final effl.	12	YES/NO	alexandra Stavri

Note: Sample container should be rinsed and should be filled completely leaving no air space between contents & lid. Preserve samples on ice or refrigerator (0.1-6°C) immediately after collection. Transport samples in ice-packed coolers to the WET Laboratory. The WET laboratory is located in Room LE-100, Lue-Hing R&D Complex.

Indicate if the final effluent was chlorinated/dechlorinated: Yes / (No) / NA

SAMPLES RELINQUISHED BY: Name BERT GIESEMAN Signature: Bert Gieseman Date/Time: 1/14 0735

SAMPLES TRANSPORTED TO WET LAB. BY Name Cameron Mccoy Signature: Date/Time: 1/14/25 0905

FOR WET LABORATORY USE ONLY:

Sample Received by: Name Jorge Abarca Signature Jorge A Date/Time 1/14/25 0945

1. Samples received with prescribed holding time (within 4 h of collection)? (Not Applicable, if chronic test) — 1. (Yes) / No / (NA)
2. Samples logged in by JA Date 1/14/25 Time 0945 — 2. (Yes) / No
3. Each sample container labeled with a unique ID? — 3. (Yes) / No
4. Were collection times for effluent and receiving water within 1 h of each other? — 4. Yes / No (NA)
5. Did samples have sufficient volume for analysis? — 5. (Yes) / No
6. Samples accepted — 6. (Yes) / No

Special Observations

LIMS #	Sample Type/ID	Temp °C	pH	Residual Chlorine (mg/L) Initials	Sodium-thio-sulfate Added YES/NO	Sample Custodian Signature
9743085-A	BMOUT_KR A	1.1	7.2	0	Indicate Total 0 ml of 5% Sodium-thio-sulfate added Initial JA . Final Residual Cl_2 reading = N/A mg/l Initial JA	Jorge Abarca
9743085-B	BMOUT_KR B	2.1	6.96	Total Ammonia (mg-L) ALD Results		
9743085-C	BMOUT_KR C	1.3	6.91			
9743085-D	BMOUT_KR D	2.7	6.87	0.674 >0.300		
9743085-E	BMOUT_KR E	2.9	7.11			

Note: Set aside one cubitainer for metals and chemical analyses

Sample Release for Disposal

Sample released for disposal following analysis on (Date) 1/16/25 by

Samples Discarded by Date/Time 1000 1/16/25

Metropolitan Water Reclamation District of Greater Chicago

OCAL CHAIN OF CUSTODY RECORD

From: Nick Kollias **Office Location:** Stickney

To: ORGANIC COMPOUNDS ANALYTICAL LABORATORY, EGAN WRP

COLLECTED			SAMPLE SOURCE/LOCATION	PARAMETER or CFR CATEGORY	LIMS ID	# of CONTAINERS				LAB ID (Lab Use Only)	Temp °C
DATE	TIME (Military)	BY FULL NAME (PRINT)				Vials	Gallons	Quarts	Pints		
1/14/25 ~~1/13/25~~ NK 1/27/25	1120	Nick Kollias	BMOUT KR		9743085-5	3	1			25-013	3.6
1/14/25 ~~1/13/25~~ NK 1/27/25	1120	Nick Kollias	Trip Blanks		9747954-1	2				25-012	3.9

Samples listed above were stored on site at 0.1 - 6°C immediately after collection, and remained in custody of collector(s) until relinquished.

Container Type (specify vial, gallon, pint, or quart)	Case ID (copy from case label)
Gallon	24-095 G
Vials	24-082 V

Container Type (specify vial, gallon, pint, or quart)	Case ID (copy from case label)

ITEMS TRANSFERRED	RELINQUISHED BY			RECEIVED BY		
	FULL NAME or COOLER	DATE	TIME (Military)	FULL NAME or COOLER	DATE	TIME (Military)
Indicated above	Jorge Abreu	1/14/25 HZ	1130	Cooler D	1/14/25	1130
Indicated above	Cooler D	1-15-25	0830	Jeff Moen	1-15-25	0830
Indicated above	Jeff Moen	1-15-25	0955	Hanna Karic	1/15/25	1007
Indicated above						
Indicated above						

Metropolitan Water Reclamation District of Greater Chicago

Custody Transfer Record for Environmental Monitoring and Research Division Samples

(STFORMSR)

To: Stickney Analytical Lab Year: 2024

Collection Date: 1/14/2025
Collected By: Nick Kollias
Preparation Date: 1/14/2025

From: Nick Kollias
Project Number/Support Request#: 4652-126-1, SR 06-25
Sample Type (grab/composite): Composite

Prepared By: Nick Kollias

COC Prepared By: Nick Kollias

Collection Information												For Lab Use Only				
Collection Time	Sample Point	LIMS ID	Trace Metals	Ammonia								Temperature °C	Proper Container	Proper Label	Adequate Volume	Comments
1115	BMOUT_KR	9743085	X	X												
ALD Specified Holding Time (in Days)																

Chilling process of samples started immediately after collection Y / N

Relinquished By	Date	Time	Received By	Date	Time
Jorge Alonso	1/14/2025	1130			

The relinquisher has read and fully understands the M&R Departments-Environmental Monitoring and Research Division's "Ethical and Legal Responsibilities - Version 1, dated March 13, 2019"

Additonal Comments:

Metropolitan Water Reclamation District of Greater Chicago

Custody Transfer Record for Environmental Monitoring and Research Division Samples

(STFORMSR)

To: IWAL Year: 2024

Collection Date: 1/14/2025
Collected By: Nick Kollias
Preparation Date: 1/14/2025

From: Nick Kollias
Project Number/Support Request#: 4652-126-1, SR 06-25
Sample Type (grab/composite): Composite

Prepared By: Nick Kollias

COC Prepared By: Nick Kollias

Collection Information												For Lab Use Only				
Collection Time	Sample Point	LIMS ID	TCN									Temperature °C	Proper Container	Proper Label	Adequate Volume	Comments
1115	BMOUT_KR	9743085	X													
ALD Specified Holding Time (in Days)																

Chilling process of samples started immediately after collection: Y / N

Relinquished By	Date	Time	Received By	Date	Time
Jorge Abarca	1/14/25	1130			

The relinquisher has read and fully understands the M&R Departments-Environmental Monitoring and Research Division's "Ethical and Legal Responsibilities - Version 1, dated March 13, 2019"

Additonal Comments:

Metropolitan Water Reclamation District of Greater Chicago

Custody Transfer Record for Environmental Monitoring and Research Division Samples

(STFORMSR)

To: EAL Year: 2024

Collection Date: 1/14/2025
Collected By: Nick Kollias
Preparation Date: 1/14/2025

From: Nick Kollias
Project Number/Support Request#: 4652-126-1, SR 06-25
Sample Type (grab/composite): Composite

Prepared By: Nick Kollias

COC Prepared By: Nick Kollias

Collection Information												For Lab Use Only				
Collection Time	Sample Point	LIMS ID	Alkalinity	Chloride								Temperature °C	Proper Container	Proper Label	Adequate Volume	Comments
1115	BMOUT_KR	9743085	X	X												
ALD Specified Holding Time (in Days)																

Chilling process of samples started immediately after collection: (Y) / N

Relinquished By	Date	Time	Received By	Date	Time
Jorge Abreu	1/14/25	1130	Cooler D	1/14/25	1139

The relinquisher has read and fully understands the M&R Departments-Environmental Monitoring and Research Division's "Ethical and Legal Responsibilities - Version 1, dated March 13, 2019"

Additonal Comments:

Metropolitan Water Reclamation District of Greater Chicago

Custody Transfer Record for Environmental Monitoring and Research Division Samples

(STFORMSR)

To: CAL Year: 2024

Collection Date: 1/14/2025
Collected By: Nick Kollias
Preparation Date: 1/14/2025

From: Nick Kollias
Project Number/Support Request#: 4652-126-1, SR 06-25
Sample Type (grab/composite): Composite

Prepared By: Nick Kollias

COC Prepared By: Nick Kollias

Collection Information			Total Hg									For Lab Use Only				
Collection Time	Sample Point	LIMS ID										Temperature °C	Proper Container	Proper Label	Adequate Volume	Comments
1115	BMOUT_KR	9743085	X													
ALD Specified Holding Time (in Days)																

Chilling process of samples started immediately after collection: (Y) / N

Relinquished By	Date	Time	Received By	Date	Time
Jorge Abreu	1/14/2025	1130	Coolers D	1/14/25	1130

The relinquisher has read and fully understands the M&R Departments-Environmental Monitoring and Research Division's "Ethical and Legal Responsibilities - Version 1, dated March 13, 2019"

Additonal Comments:

TABLE 8: WATER QUALITY RESULTS OF A JAMES C.KIRIE WATER RECLAMATION PLANT FINAL EFFLUENT COMPOSITE SAMPLE COLLECTED JANUARY 13 - JANUARY 14, 2025, USED FOR WHOLE EFFLUENT TOXICITY TESTING

Sampling point	Analysis	Units	Result
BMOUTKR	Ag	mg/L	<0.00400
BMOUTKR	As	mg/L	<0.00200
BMOUTKR	Ba	mg/L	0.02475
BMOUTKR	Be	mg/L	<0.00200
BMOUTKR	Cd	mg/L	<0.00200
BMOUTKR	Co	mg/L	<0.00200
BMOUTKR	Cr	mg/L	<0.00400
BMOUTKR	Cu	mg/L	0.00496
BMOUTKR	Fe	mg/L	0.05909
BMOUTKR	Mn	mg/L	0.03414
BMOUTKR	Mo	mg/L	0.00764
BMOUTKR	Ni	mg/L	0.0063
BMOUTKR	Pb	mg/L	<0.00200
BMOUTKR	Sb	mg/L	<0.00200
BMOUTKR	Se	mg/L	<0.00400
BMOUTKR	Zn	mg/L	0.032
BMOUTKR	NH3_N	mg/L	<0.300
BMOUTKR	Al	mg/L	<1.00
BMOUTKR	Ca	mg/L	69.34
BMOUTKR	Hardness	mg/L	26.11
BMOUTKR	Mg	mg/L	281
BMOUTKR	CN	mg/L	<0.0050
BMOUTKR	ALKALINITY	mg/L	184.4
BMOUTKR	Cl	mg/L	298.251
BMOUTKR	Final Hg	ug/L	<0.500
BMOUTKR	1,1,1-Trichloroethane	ug/L	<5.000
BMOUTKR	1,1,2,2-Tetrachloroethane	ug/L	<5.000
BMOUTKR	1,1,2-Trichloroethane	ug/L	<5.000
BMOUTKR	1,1-Dichloroethane	ug/L	<5.000
BMOUTKR	1,1-Dichloroethylene	ug/L	<5.000
BMOUTKR	1,2,4-Trichlorobenzene	ug/L	<5.000
BMOUTKR	1,2-Dichlorobenzene	ug/L	<5.000
BMOUTKR	1,2-Dichloroethane	ug/L	<5.000
BMOUTKR	1,2-Dichloropropane	ug/L	<5.000
BMOUTKR	1,2-Diphenylhydrazine	ug/L	<5.000
BMOUTKR	1,3-Dichlorobenzene	ug/L	<5.000
BMOUTKR	1,3-Dichloropropylene	ug/L	<5.000
BMOUTKR	1,4-Dichlorobenzene	ug/L	<5.000
BMOUTKR	2,4,6-Trichlorophenol	ug/L	<10.000
BMOUTKR	2,4-Dichlorophenol	ug/L	<5.000
BMOUTKR	2,4-Dimethylphenol	ug/L	<10.000
BMOUTKR	2,4-Dinitrophenol	ug/L	<40.000
BMOUTKR	2,4-Dinitrotoluene	ug/L	<10.000
BMOUTKR	2,6-Dinitrotoluene	ug/L	<5.000
BMOUTKR	2-Chloroethyl vinyl ether	ug/L	<5.000

TABLE 8: WATER QUALITY RESULTS OF A JAMES C.KIRIE WATER RECLAMATION PLANT FINAL EFFLUENT COMPOSITE SAMPLE COLLECTED JANUARY 13 - JANUARY 14, 2025, USED FOR WHOLE EFFLUENT TOXICITY TESTING

Sampling point	Analysis	Units	Result
BMOUTKR	2-Chloronaphthalene	ug/L	<5.000
BMOUTKR	2-Chlorophenol	ug/L	<10.000
BMOUTKR	2-Nitrophenol	ug/L	<10.000
BMOUTKR	3,3'-Dichlorobenzidine	ug/L	<15.000
BMOUTKR	3,4-Benzofluoranthene	ug/L	<10.000
BMOUTKR	4,4'-DDD	ug/L	<0.050
BMOUTKR	4,4'-DDE	ug/L	<0.130
BMOUTKR	4,4'-DDT	ug/L	<0.050
BMOUTKR	4,6-Dinitro-o-cresol	ug/L	<25.000
BMOUTKR	4-Bromophenyl phenyl ether	ug/L	<5.000
BMOUTKR	4-Chlorophenyl phenyl ether	ug/L	<5.000
BMOUTKR	4-Nitrophenol	ug/L	<20.000
BMOUTKR	Acenaphthene	ug/L	<5.000
BMOUTKR	Acenaphthylene	ug/L	<5.000
BMOUTKR	Acrolein	ug/L	<50.000
BMOUTKR	Acrylonitrile	ug/L	<10.000
BMOUTKR	Aldrin	ug/L	<0.050
BMOUTKR	Anthracene	ug/L	<5.000
BMOUTKR	Benzene	ug/L	<2.000
BMOUTKR	Benzo(a)anthracene	ug/L	<5.000
BMOUTKR	Benzo(a)pyrene	ug/L	<10.000
BMOUTKR	Benzo(g,h,i)perylene	ug/L	<10.000
BMOUTKR	Benzo(k)fluoranthene	ug/L	<5.000
BMOUTKR	Bis(2-chloro-iso-propyl)ether	ug/L	<10.000
BMOUTKR	Bis(2-chloroethoxy)methane	ug/L	<10.000
BMOUTKR	Bis(2-chloroethyl)ether	ug/L	<10.000
BMOUTKR	Bis(2-ethylhexyl)phthalate	ug/L	<18.000
BMOUTKR	Bromoform	ug/L	<5.000
BMOUTKR	Butyl benzyl phthalate	ug/L	<10.000
BMOUTKR	Carbon tetrachloride	ug/L	<5.000
BMOUTKR	Chlorobenzene	ug/L	<5.000
BMOUTKR	Chlorodibromomethane	ug/L	<2.000
BMOUTKR	Chloroethane	ug/L	<5.000
BMOUTKR	Chloroform	ug/L	<2.000
BMOUTKR	Chrysene	ug/L	<5.000
BMOUTKR	Di-n-butyl phthalate	ug/L	<10.000
BMOUTKR	Di-n-octyl phthalate	ug/L	<15.000
BMOUTKR	Dibenzo(a,h)anthracene	ug/L	<15.000
BMOUTKR	Dichlorobromomethane	ug/L	<2.000
BMOUTKR	Dieldrin	ug/L	<0.050
BMOUTKR	Diethyl phthalate	ug/L	<10.000
BMOUTKR	Dimethyl phthalate	ug/L	<5.000
BMOUTKR	Endosulfan I	ug/L	<0.050
BMOUTKR	Endosulfan II	ug/L	<0.050
BMOUTKR	Endosulfan sulfate	ug/L	<0.050

TABLE 8: WATER QUALITY RESULTS OF A JAMES C.KIRIE WATER RECLAMATION PLANT FINAL EFFLUENT COMPOSITE SAMPLE COLLECTED JANUARY 13 - JANUARY 14, 2025, USED FOR WHOLE EFFLUENT TOXICITY TESTING

Sampling point	Analysis	Units	Result
BMOUTKR	Endrin	ug/L	<0.050
BMOUTKR	Endrin aldehyde	ug/L	<0.050
BMOUTKR	Ethylbenzene	ug/L	<2.000
BMOUTKR	Fluoranthene	ug/L	<5.000
BMOUTKR	Fluorene	ug/L	<5.000
BMOUTKR	Heptachlor	ug/L	<0.070
BMOUTKR	Heptachlor epoxide	ug/L	<0.050
BMOUTKR	Hexachlorobenzene	ug/L	<5.000
BMOUTKR	Hexachlorobutadiene	ug/L	<5.000
BMOUTKR	Hexachlorocyclopentadiene	ug/L	<25.000
BMOUTKR	Hexachloroethane	ug/L	<10.000
BMOUTKR	Indeno(1,2,3-cd)pyrene	ug/L	<15.000
BMOUTKR	Isophorone	ug/L	<10.000
BMOUTKR	Methyl bromide	ug/L	<5.000
BMOUTKR	Methyl chloride	ug/L	<5.000
BMOUTKR	Methylene chloride	ug/L	<5.000
BMOUTKR	N-Nitrosodi-n-propylamine	ug/L	<10.000
BMOUTKR	N-Nitrosodimethylamine	ug/L	<5.000
BMOUTKR	N-Nitrosodiphenylamine	ug/L	<5.000
BMOUTKR	Naphthalene	ug/L	<5.000
BMOUTKR	Nitrobenzene	ug/L	<10.000
BMOUTKR	PCB-1016	ug/L	<0.800
BMOUTKR	PCB-1221	ug/L	<0.800
BMOUTKR	PCB-1232	ug/L	<0.800
BMOUTKR	PCB-1242	ug/L	<0.800
BMOUTKR	PCB-1248	ug/L	<0.800
BMOUTKR	PCB-1254	ug/L	<0.800
BMOUTKR	PCB-1260	ug/L	<1.160
BMOUTKR	Pentachlorophenol	ug/L	<30.000
BMOUTKR	Phenanthrene	ug/L	<5.000
BMOUTKR	Phenol	ug/L	<5.000
BMOUTKR	Pyrene	ug/L	<5.000
BMOUTKR	Technical chlordane	ug/L	<0.500
BMOUTKR	Tetrachloroethylene	ug/L	<5.000
BMOUTKR	Toluene	ug/L	<2.000
BMOUTKR	Toxaphene	ug/L	<1.000
BMOUTKR	Trichloroethylene	ug/L	<5.000
BMOUTKR	Trichlorofluoromethane	ug/L	<5.000
BMOUTKR	Vinyl chloride	ug/L	<5.000
BMOUTKR	alpha-BHC	ug/L	<0.050
BMOUTKR	beta-BHC	ug/L	<0.070
BMOUTKR	delta-BHC	ug/L	<0.050
BMOUTKR	gamma-BHC (lindane)	ug/L	<0.050
BMOUTKR	p-Chloro-m-cresol	ug/L	<5.000
BMOUTKR	trans-1,2-Dichloroethylene	ug/L	<5.000