

*Protecting Our Water Environment*



*Metropolitan Water Reclamation District of Greater Chicago*

***MONITORING AND RESEARCH  
DEPARTMENT***

REPORT NO. 24-43

RESULTS OF ACUTE TOXICITY TESTING WITH *Ceriodaphnia dubia*  
AND *Pimephales promelas* ON AN OCTOBER 2024 EFFLUENT  
SAMPLE FROM THE METROPOLITAN WATER RECLAMATION  
DISTRICT OF GREATER CHICAGO

*November 2024*

**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 AN OCTOBER 2024 EFFLUENT SAMPLE FROM METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**By**

**EnviroScience, Incorporated  
5070 Stow Road  
Stow, Ohio 44224**

**Monitoring and Research Department  
Edward W. Podczewinski, Director**

**November 2024**

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

November 8, 2024

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Illinois Environmental Protection Agency  
Compliance Assurance Section CAS # 19  
1021 North Grand Avenue  
P.O. Box 19276  
Springfield, IL 62794-9276

Subject: Biomonitoring Report for 2024 – Acute Toxicity Test Results for the  
Hanover Park Water Reclamation Plant, National Pollutant Discharge  
Elimination System Permit Number IL0036137

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 IL0036137, Special Condition 15. 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  
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: October 8-12, 2024  
Sample collection dates: October 6-7, 2024  
Report date: October 22, 2024

Conducted For:

HANOVER PARK WRP  
1200 Sycamore Avenue  
Hanover Park, IL 60133

Conducted and Prepared By:

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



\_\_\_\_\_, Aquatic Biologist

October 22, 2024

Mr. Nicholas Kollias  
Hanover Park WRP  
1200 Sycamore Avenue  
Hanover Park, IL 60133

Dear Mr. Kollias:

Enclosed is a copy of EnviroScience's report for the following whole effluent toxicity (WET) tests that were initiated on October 8, 2024 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 (TU<sub>a</sub>) are listed below.

**WET test endpoints for Hanover Park WRP, 10/2024**  
sample collection period 10/06-07/24

Effluent:

<i>Ceriodaphnia dubia</i> (water flea)	48HR LC <sub>50</sub> = >100% effluent;	TU <sub>a</sub> = <1.0 (TU <sub>a</sub> = 100/LC <sub>50</sub> )
<i>Pimephales promelas</i> (fathead minnow)	96HR LC <sub>50</sub> = >100% effluent;	TU <sub>a</sub> = <1.0 (TU <sub>a</sub> = 100/LC <sub>50</sub> )

Please call me if you have any questions.

Sincerely,



Alexandria M. Tite, Aquatic Biologist

enclosures



5070 Stow Road  
Stow, OH 44224

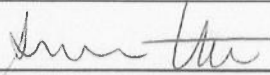
BIOMONITORING REPORT FORM FOR NPDES PERMIT REQUIREMENTS

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Table 1. General Information

- 1. Facility: Hanover Park WRP
- 2. Address: 1200 Sycamore Ave., Hanover Park, IL, 60133
- 3. NPDES Permit No.: \_\_\_\_\_
- 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: West Branch DuPage River
- 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

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 \_\_\_\_\_  
 Signature of preparer

10/22/24  
 \_\_\_\_\_  
 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	10/06/24-0600	10/07/24-0600	

**Table 3. Testing periods.**

<i>Ceriodaphnia dubia</i> (water flea)		<i>Pimephales promelas</i> (fathead minnow)	
Start Date: MM/DD/YY	10/08/24	Start Date: MM/DD/YY	10/08/24
Start Time:	1330 hrs	Start Time:	1230 hrs
End Date: MM/DD/YY	10/10/24	End Date: MM/DD/YY	10/12/24
End Time:	1240 hrs	End Time:	1330 hrs

Notes: Sample receipt: 10/08/24-0935; 0.6 °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 <sub>3</sub>	hardness mg/L CaCO <sub>3</sub>	TRC mg/L	Ammonia mg/L
001	10/06-07/24	8.6	6.8	797	74	192	<0.02	0.24

**Methods or Instrumentation used in chemical analysis:**

Dissolved Oxygen: APHA (1998, 20<sup>th</sup> ed.) 4500-O G., OX 4100L

pH: APHA (1998, 20<sup>th</sup> ed.) 4500-H<sup>+</sup> B., Orion Star A211

Conductivity: APHA (1998, 20<sup>th</sup> ed.) 2510 B., Orion Star A212

Total Alkalinity: APHA (1998, 20<sup>th</sup> ed.) 2320 B.

Total Hardness: APHA (1998, 20<sup>th</sup> ed.) 2340 C.

Total Residual Chlorine: APHA (1998, 20<sup>th</sup> ed.) 4500-Cl D., HACH TitraLab AT1000

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

	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
1. Test dates:	10/08/24-1330 to 10/10/24-1240	10/08/24-1230 to 10/12/24-1330
2. Test type and duration:	static, non-renewal, 48 hours	static, non-renewal, 96-hours
3. Age and source of organisms:	<24 hours, EnviroScience 10/07/24-2400	7 days, ABS 09/30/24-1600
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 <i>Selenastrum capricornutum</i> 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 <sub>50</sub> ); plus behavioral effects such as atypical swimming (EC <sub>50</sub> )	mortality - no movement with gentle prodding (LC <sub>50</sub> ); plus behavioral effects such as atypical swimming (EC <sub>50</sub> )
17. No. of consecutive tests conducted with an alternate source of primary control water:	NA	NA



<b>Table 6.</b> Percent cumulative mortality, LC <sub>50</sub> , EC <sub>50</sub> , and 95% confidence intervals for acute toxicity tests using <i>Ceriodaphnia dubia</i> and <i>Pimephales promelas</i> using effluent collected from <b>Outfall 001</b> .						
Concentration	<i>C. dubia</i> (water flea) 10/08/24 to 10/10/24		<i>P. promelas</i> (fathead minnow) 10/08/24 to 10/12/24			
	24-hours % mortality	48-hours % mortality	24-hours % mortality	48-hours % mortality	72-hours % mortality	96-hours % mortality
MHRW lab water, diluent	0	0	0	0	0	0
DMW, lab water	0	0	5	5	5	5
6.25% effluent	0	0	0	0	0	5
12.5% effluent	0	0	0	0	0	0
25% effluent	0	0	0	0	0	5
50% effluent	5	5	0	0	0	5
100% effluent	5	5	0	0	0	0
LC <sub>50</sub>	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent
95% C.I.						
EC <sub>50</sub>	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent	>100% effluent
95% C.I.						
TUa (100+LC <sub>50</sub> )		<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<sub>50</sub>** = median lethal concentration. A mathematical estimate of the effluent concentration that would kill 50% of the exposed specimens during the specified exposure period.

**TU<sub>a</sub>** = Acute Toxicity Unit;  $TU_a = 100+LC_{50}$  (usually 48-hour LC<sub>50</sub> for water fleas and 96-hour LC<sub>50</sub> for FHM)

# ATTACHMENTS

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



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

Client: Hanover Park WRP  
 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
  - Other

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

Start Date	End Date	Time	Station No.	Sample Site	Sample Type		Number of Colbitainers	Chemistry				
					Comp	Grab		TRC	Cond	D.O.	pH	Temp. °C
10/6/24	10/7/24	0600	BMDT-H Hanover Park WRP		<input checked="" type="checkbox"/>		1	0	757	9.16	7.22	5.9

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 check all appropriate boxes**

	Effluent	Upstream	Near Field	Far Field	Plume Determined By What Method?	Collectors Name:		Effluent	Upstream	Near Field	Far Field
						Collectors Signature:	MGD =				
<input checked="" type="checkbox"/>						Nick Kollias		Collected By:			
						Just Kellin		Collectors Signature:			

**EnviroScience Personnel Only**

Received from:	Received by:	Date	Time	Shipping Information	EnviroScience Use Only
MWRD	NKAL	10/08/24	0935	Date Shipped: 10/7/24 Time Shipped: 1030 Method Shipped: FedEx ES Vehicle:	Client: Hanover Park Sample ID's: HAA 100824 gr Cond. Of Container: Good Temp. °C: 0.6

Comments:

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

Client Harbor Park

ES Sample ID HAPA 100824 GF

Cooler Received by: HD

Date Cooler Received and Opened 100824

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 0.6 °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: \_\_\_\_\_



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: HAPA

No.: \_\_\_\_\_

Start Date: 100804 Time: 1330

End Date: 101004 Time: 1240

Organism: C. dubia

Source: ES cultures

Hatch/Age: 100724 2400 24 hr ISO

Diluent: MHW

Sample #: HAPA EFF 100804

test levels	Biological Parameters				Chemistry and Physical Parameters											
	Rep	n	Dead / Affected		Temperature (Celsius)			Dissolved Oxygen (mg/L)			pH (s.u.)			Conductivity (umhos/cm)		
			24 hr	48 hr	0	24	48	0	24	48	0	24	48	0	24	48
MHR	A	5	0 / 0	0 / 0	24.0	24.1	24.3	8.6		8.6	7.1		7.5	289		325
	B	5	0 / 0	0 / 0												
	C	5	0 / 0	0 / 0												
	D	5	0 / 0	0 / 0												
DMW	A	5	0 / 0	0 / 0	24.0	24.3	24.6	8.6		8.6	7.2		7.3	174		203
	B	5	0 / 0	0 / 0												
	C	5	0 / 0	0 / 0												
	D	5	0 / 0	0 / 0												
G.25	A	5	0 / 0	0 / 0	24.0	24.5	24.7	8.6		8.6	7.4		7.3	317		339
	B	5	0 / 0	0 / 0												
	C	5	0 / 0	0 / 0												
	D	5	0 / 0	0 / 0												
12.5	A	5	0 / 0	0 / 0	24.0	24.5	24.8	8.6		8.6	7.3		7.3	356		379
	B	5	0 / 0	0 / 0												
	C	5	0 / 0	0 / 0												
	D	5	0 / 0	0 / 0												
25	A	5	0 / 0	0 / 0	24.0	24.5	24.7	8.6		8.6	7.1		7.2	420		442
	B	5	0 / 0	0 / 0												
	C	5	0 / 0	0 / 0												
	D	5	0 / 0	0 / 0												
50	A	5	1 / 1	1 / 1	24.0	24.7	24.6	8.6		8.6	6.9		7.2	548		567
	B	5	0 / 0	0 / 0												
	C	5	0 / 0	0 / 0												
	D	5	0 / 0	0 / 0												
100	A	5	1 / 1	1 / 1	24.0	24.7	24.6	8.6		8.6	6.7		7.1	803		826
	B	5	0 / 0	0 / 0												
	C	5	0 / 0	0 / 0												
	D	5	0 / 0	0 / 0												
Time	1330	1310	1240	1330	1310	1240	1205		1250	1205		1350	1205		1350	
Tech	TM	CE	TM	TM	CE	TM	RL		CE	RL		CE	RL		CE	
				6	6	6	OX4100L			Orion StarA211 A			Orion StarA212			
				ID or ✓ instrument used			✓		✓				✓		✓	
				Other:			Orion StarA211 B									
												✓		✓		

USEPA Method: 2002.0

VWJ

**CETIS Analytical Report**

Report Date: 17 Oct-24 14:37 (p 1 of 2)  
 Test Code/ID: 7F2FE04A / 21-3384-4042

<b>Ceriodaphnia 48-h Acute Survival Test</b>			<b>EnviroScience</b>		
Analysis ID: 09-5817-0692	Endpoint: 48h Survival Rate	CETIS Version: CETIS v2.1.5			
Analyzed: 17 Oct-24 14:37	Analysis: Linear Interpolation (ICPIN)	Status Level: 1			
Edit Date: 17 Oct-24 0:00	MD5 Hash: 0834B6AE86CCBDC8F0ECAE0C02A24B9	Editor ID: 007-869-049-5			
Batch ID: 17-5807-5589	Test Type: Survival (48h)	Analyst:			
Start Date: 08 Oct-24 13:30	Protocol: EPA/821/R-02-012 (2002)	Diluent: Upstream of Discharge			
Ending Date: 10 Oct-24 12:40	Species: Ceriodaphnia dubia	Brine:			
Test Length: 47h	Taxon: Branchiopoda	Source: In-House Culture      Age:			
Sample ID: 01-5532-1546	Code: 94204CA	Project:			
Sample Date: 07 Oct-24 06:00	Material: POTW Effluent	Source: Discharge Monitoring Report			
Receipt Date: 08 Oct-24 09:35	CAS (PC):	Station: 001			
Sample Age: 32h	Client: Hanover Park, IL				

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1901281	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	---	---

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	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
12.5		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
50		4	0.9500	1.0000	0.8000	1.0000	10.53%	5.00%	19/20	0.9500	5.00%
100		4	0.9500	1.0000	0.8000	1.0000	10.53%	5.00%	19/20	0.9500	5.00%

48h Survival Rate Detail					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.8000	1.0000	1.0000	1.0000
100		0.8000	1.0000	1.0000	1.0000

48h Survival Rate Binomials					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	5/5	5/5	5/5	5/5
6.25		5/5	5/5	5/5	5/5
12.5		5/5	5/5	5/5	5/5
25		5/5	5/5	5/5	5/5
50		4/5	5/5	5/5	5/5
100		4/5	5/5	5/5	5/5

# CETIS Analytical Report

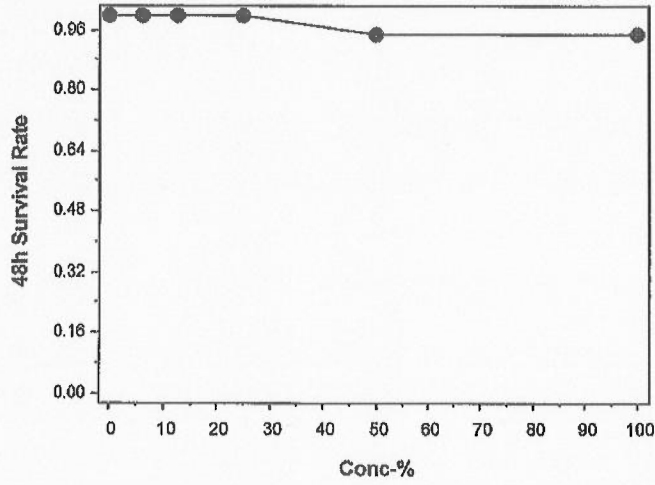
Report Date: 17 Oct-24 14:37 (p 2 of 2)  
Test Code/ID: 7F2FE04A / 21-3384-4042

## Ceriodaphnia 48-h Acute Survival Test

EnviroScience

Analysis ID: 09-5817-0692	Endpoint: 48h Survival Rate	CETIS Version: CETIS v2.1.5
Analyzed: 17 Oct-24 14:37	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 17 Oct-24 0:00	MD5 Hash: 0834B6AE86CCBDC8F0ECAE0C02A24B9	Editor ID: 007-869-049-5

### Graphics







ACUTE, 96 HOUR, NON- RENEWAL BIOASSAY:

Organism: Pimephales promelas (FHM)

Project: HAPA

Source: ABS

No.:

Hatch/Age: 0930241600 7 days old

Start Date: 10/8/21

Time: 1230

Diluent: MHR

End Date: 10/12/21

Time: 101330  
CE 10/12

Sample #: HAPD 100824 EFF

Biological Parameters: # Mortalities / # Affected

test levels →			MHR	DMW	6.25%	12.5%	25%	50%	100%	
0 hours set-up	Tech	TM	n	A	10	10	10	10	10	10
	Time	1230	n	B	10	10	10	10	10	10
24 hours	Tech	RL	A		0/0	0/0	0/0	0/0	0/0	0/0
	Time	1345	B		0/0	1/1	0/0	0/0	0/0	0/0
48 hours	Tech	W	A		0/0	0/0	0/0	0/0	0/0	0/0
	Time	1425	B		0/0	1/1	0/0	0/0	0/0	0/0
72 hours	Tech	UB	A		0/0	0/0	0/0	0/0	0/0	0/0
	Time	1405	B		0/0	1/1	0/0	0/0	0/0	0/0
96 hours	Tech	CE	A		0/0	0/0	0/0	0/0	1/1	0/0
	Time	1330	B		0/0	1/1	1/1	0/0	1/1	0/0

Chemical and Physical Data

	Tech	Time	Instr.#	MHR	DMW	6.25%	12.5%	25%	50%	100%
Temp. °C	0 hr	TM	1230	5	24.0	24.0	24.0	24.0	24.0	24.0
	24 hr	RL	1345	9	24.3	24.2	24.3	24.7	24.8	25.2
	48 hr	W	1425	9	24.6	24.4	24.9	24.7	24.9	25.0
	72 hr	UB	1405	9	24.2	24.4	24.9	24.8	25.0	25.0
	96 hr	CE	1330	5	24.2	24.6	24.7	24.6	24.6	24.7
cond. µmhos/cm	0 hr	RL	1205	0160 AZ12	289	174	317	356	420	548
	24 hr	HP	1145	0160	305	212	343	376	445	579
	48 hr	CE	1030	0160	319	210	343	376	448	582
	72 hr	TM	1015	0160	317	216	346	381	454	584
	96 hr	CE	0955	0160	318	208	332	369	453	558
DO mg/L	0 hr	RL	1205	OX 4100L	8.6	8.6	8.6	8.6	8.6	8.6
	24 hr	HP	1145	OX 4100L	8.6	8.1	8.0	7.7	8.6	8.5
	48 hr	CE	1030	OX 4100L	7.9	7.9	8.0	7.8	7.7	8.0
	72 hr	TM	1015	OX 4100L	8.6	8.6	8.6	8.6	8.6	8.6
	96 hr	CE	0955	OX 4100L	8.3	8.3	8.4	8.3	8.3	8.3
pH s.u.	0 hr	RL	1205	AZ11B	7.1	7.2	7.4	7.3	7.1	6.9
	24 hr	HP	1145	AZ11A	7.0	6.9	7.0	7.1	7.1	7.0
	48 hr	CE	1030	AZ11B	7.2	7.1	7.1	7.1	7.1	7.1
	72 hr	TM	1015	AZ11A	7.2	7.1	7.0	7.1	7.0	7.1
	96 hr	CE	0955	AZ11A	7.4	7.3	7.3	7.2	7.2	7.2

JMJ

# CETIS Analytical Report

Report Date: 17 Oct-24 14:40 (p 1 of 2)  
 Test Code/ID: 51C0B893 / 13-7158-4659

## Fathead Minnow 96-h Acute Survival Test

EnviroScience

Analysis ID: 00-3845-1766      Endpoint: 96h Survival Rate      CETIS Version: CETIS v2.1.5  
 Analyzed: 17 Oct-24 14:40      Analysis: Linear Interpolation (ICPIN)      Status Level: 1  
 Edit Date: 17 Oct-24 0:00      MD5 Hash: D5DFB1A8A0F0CC425EDEE71B4F834BA      Editor ID: 007-869-049-5

Batch ID: 00-6214-9916      Test Type: Survival (96h)      Analyst:  
 Start Date: 08 Oct-24 12:30      Protocol: EPA/821/R-02-012 (2002)      Diluent: Upstream of Discharge  
 Ending Date: 12 Oct-24 13:30      Species: Pimephales promelas      Brine:  
 Test Length: 4d 1h      Taxon: Actinopterygii      Source: In-House Culture      Age:

Sample ID: 04-4745-5911      Code: 1AABA2A7      Project:  
 Sample Date: 07 Oct-24 06:00      Material: POTW Effluent      Source: Discharge Monitoring Report  
 Receipt Date: 08 Oct-24 09:35      CAS (PC):      Station: 001  
 Sample Age: 31h      Client: Hanover Park, IL

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1022113	1000	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
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

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			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	0.9500	0.9500	0.9000	1.0000	7.44%	5.00%	19/20	0.9750	2.50%
12.5		2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	0.9750	2.50%
25		2	0.9500	0.9500	0.9000	1.0000	7.44%	5.00%	19/20	0.9667	3.33%
50		2	0.9500	0.9500	0.9000	1.0000	7.44%	5.00%	19/20	0.9667	3.33%
100		2	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	0.9667	3.33%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2
0	D	1.0000	1.0000
6.25		1.0000	0.9000
12.5		1.0000	1.0000
25		0.9000	1.0000
50		1.0000	0.9000
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	9/10
12.5		10/10	10/10
25		9/10	10/10
50		10/10	9/10
100		10/10	10/10

**CETIS Analytical Report**

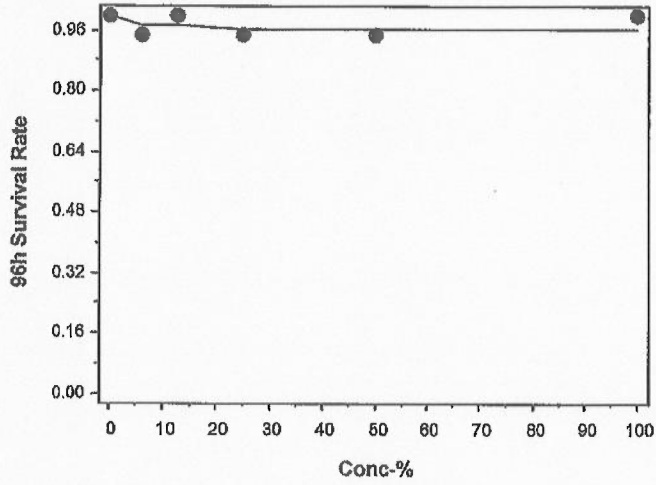
Report Date: 17 Oct-24 14:40 (p 2 of 2)  
Test Code/ID: 51C0B893 / 13-7158-4659

**Fathead Minnow 96-h Acute Survival Test**

EnviroScience

Analysis ID: 00-3845-1766      Endpoint: 96h Survival Rate      CETIS Version: CETIS v2.1.5  
Analyzed: 17 Oct-24 14:40      Analysis: Linear Interpolation (ICPIN)      Status Level: 1  
Edit Date: 17 Oct-24 0:00      MD5 Hash: D5DFB1A8A0F0CC425EDEE71B4F834BA      Editor ID: 007-869-049-5

**Graphics**





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

Client: HAPA  
Date: 100824

Permit No.: \_\_\_\_\_

Initial Water Quality Data:

Sample Id	D. Oxygen (mg/L-%sat) >4 & <100%?	pH (s.u) 6-9?	Conductivity (µmhos/cm)	TRC <sub>I</sub> (mg/L) <0.02?	TRC <sub>A</sub> (mg/L)	Alkalinity (mg/L CaCO <sub>3</sub> ) MDL = 20 mg/l	Hardness-EDTA (mg/L CaCO <sub>3</sub> ) MDL = 5 mg/l
MHRW batch# <u>MHR100824</u>	<u>8.6</u>	<u>7.1</u>	<u>285</u>	<u>0.02</u>	<u>NA</u>	<u>(3.5) 70</u>	<u>(2.1) 84</u>
<u>HAPA 100824 EFF</u>	<u>8.6</u>	<u>6.8</u>	<u>797</u>	<u>0.02</u>	<u>-</u>	<u>(3.7) 74</u>	<u>(4.8) 192</u>
INITIALS →	<u>RL</u>	<u>RL</u>	<u>RL</u>	<u>RL</u>	<u>RL</u>	<u>RL</u>	<u>RL</u>

Dilution Record:

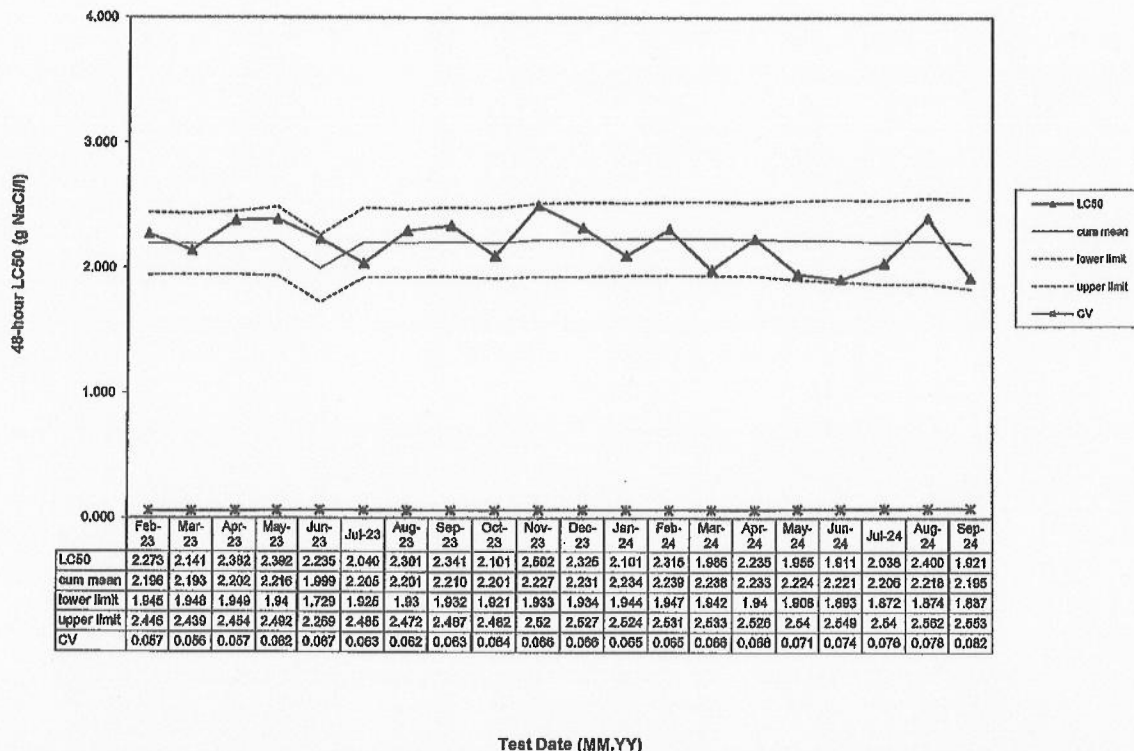
SAMPLE ID	Composited <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	60µm Filtered <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	% DILUTION	INITIATION		RENEWAL		<input type="checkbox"/> No
				Effluent (mL)	Final (mL)	Effluent (mL)	Final (mL)	
<u>HAPA 100824 EFF</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>6.25</u>	<u>62.5</u>	<u>1000</u>			
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>12.5</u>	<u>125</u>	↓			
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>25</u>	<u>250</u>				
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>50</u>	<u>500</u>				
Comments: <u>Ammonia: 0.24 mg/L</u>								
Methods/Instrumentation: DO: APHA (1998) 4500-O G, OX4100L pH: APHA (1998) 4500-H B, Star A211 A/B 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 Water: <input type="checkbox"/> Upstream <input checked="" type="checkbox"/> MHR			<input type="checkbox"/> Upstream <input type="checkbox"/> MHR		
			MHR Batch: <u>MHR100824</u>					

TRC<sub>I</sub> = total residual chlorine, initial value  
TRC<sub>A</sub> = total residual chlorine, after dechlorination

Dechlorination procedure: Sodium thiosulfate is used to reduce Total Residual Chlorine by dosing with 6.7 mg Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> per mg TRC. A 6.7 mg/ml Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> solution is used; dose mL = X mg/L \* liters in sample container being treated.

*Handwritten initials/signature*

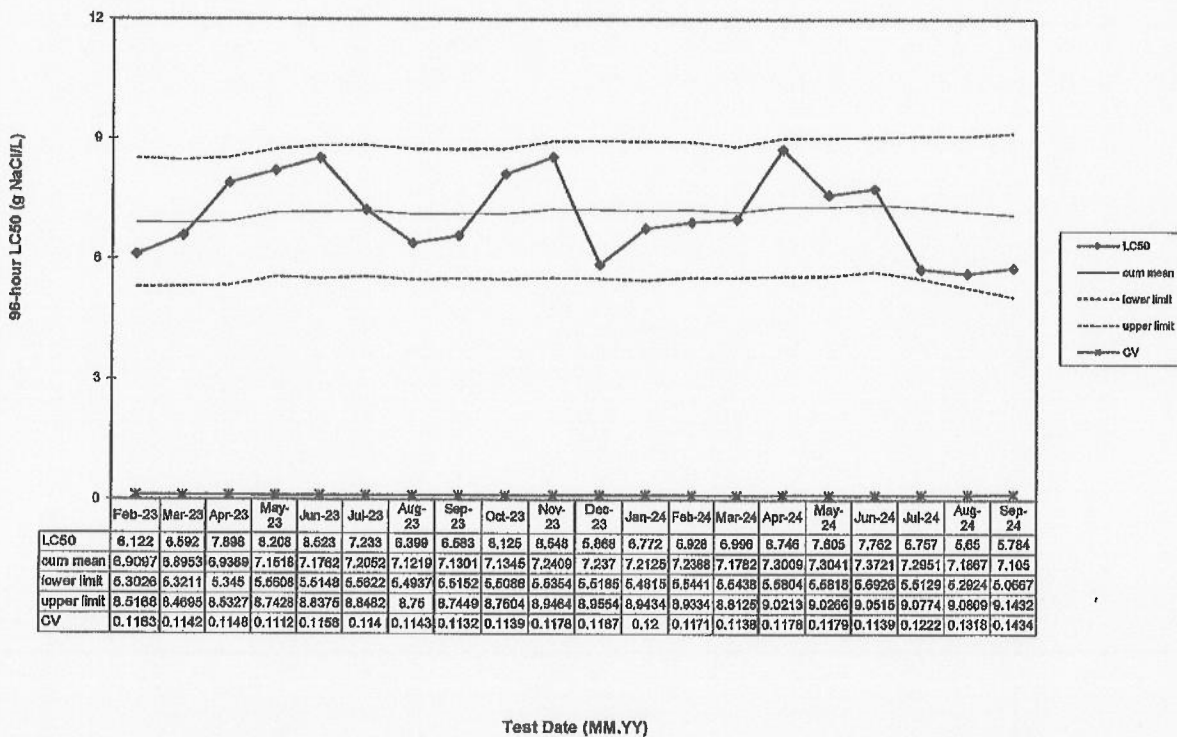
**EnviroScience QC Chart - *Ceriodaphnia dubia***  
Acute Toxicity endpoint - 25 C



Tests conducted at Stow, OH facility

EnviroScience QC/SRT Chart rev. 10/16/24

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



Tests conducted at Stow, OH facility

EnviroScience QC/SRT Chart rev. 10/16/24

The WET Sample Chain-of-Custody

SAMPLE COLLECTION			SAMPLE TYPE	SAMPLE LOCATION	SAMPLE Temp °C	ON-SITE SAMPLE STORAGE (0.1-6 °C)	PRINT NAME & SIGNATURE
DATE	TIME	PERSONNEL INITIALS					
10/6/2024	0600	MB	Grab	Tert 007 sample tap	22°C	<input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO	Manuel Borowicz MB
10/6/2024	1200	EH	Grab	Tert. 007 sample tap	22°C	<input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO	Erik Handrickson LH
10/6/2024	1800	PK	Grab	Tert. 007 sample tap	22°C	<input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO	Paul Kuzminski Paul Kuzminski
10/7/2024	0000	MB	Grab	Tert 007 sample tap	22°C	<input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO	Manuel Borowicz Manuel B.
10/7/2024	0600	MB	Grab	TERT. 007 sample tap	22°C	<input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO	Manuel Borowicz Manuel B.

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 Aman Madani Signature: Aman Madani Date/Time: 10/7 0718  
 SAMPLES TRANSPORTED TO WET LAB. BY Name \_\_\_\_\_ Signature: \_\_\_\_\_ Date/Time: \_\_\_\_\_

FOR WET LABORATORY USE ONLY:

Sample Received by: Name Nick Kolias Signature NK Date/Time 10/7/24 8:56

1. Samples received with prescribed holding time (within 4 h of collection)? (Not Applicable, if chronic test)	1. <input checked="" type="checkbox"/> Yes / No / (NA)
2. Samples logged in by <u>NK</u> Date <u>10/7/24</u> Time <u>8:56</u>	2. <input checked="" type="checkbox"/> Yes / No
3. Each sample container labeled with a unique ID?	3. <input checked="" type="checkbox"/> Yes / No
4. Were collection times for effluent and receiving water within 1 h of each other?	4. <input checked="" type="checkbox"/> Yes / No <input checked="" type="checkbox"/> (NA)
5. Did samples have sufficient volume for analysis?	5. <input checked="" type="checkbox"/> Yes / No
6. Samples accepted	6. <input checked="" type="checkbox"/> 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
9688728-A	BMOUT_HP A	3.0	7.05	0 NK	Indicate Total ml of 5% Sodium-thio-sulfate added. Initial _____ Final Residual Cl <sub>2</sub> reading = _____ mg/l Initial <u>NK</u>	<u>NK</u>
9688728-B	BMOUT_HP B	3.2	7.24	Total Ammonia (mg-L)ALD Results		
9688728-C	BMOUT_HP C	3.0	7.27			
9688728-D	BMOUT_HP D	7.3	7.27			
9688728-E	BMOUT_HP E	5.0	7.18	< 0.3		

Note: Set aside one cubitainer for metals and chemical analyses

Sample Release for Disposal

Sample released for disposal following analysis on (Date) 10/9/24 by NK

Samples Discarded by NK Date/Time 10/9/24 1000

Metropolitan Water Reclamation District of Greater Chicago  
 LOCAL 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)
DATE	TIME (Military)	BY FULL NAME (PRINT)				Vials	Gallons	Quarts	Pints	
10/7/24	0955	Nick Kollias	BMOUT HP		9688728	3	1			
10/7/24		Nick Kollias	Trip Blanks			2				

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	24-08567
Vials	24-040 ✓

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	<i>Nick Kollias</i>	10/7/24	1020	Cooler D	10/7/24	1020
Indicated above	Cooler D					
Indicated above						
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: 10/7/2024

Collected By: Nick Kollias

Preparation Date: 10/7/2024

From: Nick Kollias

Project Number/Support Request#: 4652-126-1, SR 15-24

Sample Type (grab/composite): Composite

Prepared By: Nick Kollias

COC Prepared By: Nick Kollias

**For Lab Use Only**

Collection Information			Trace Metals	Ammonia									Temperature °C	Proper Container	Proper Label	Adequate Volume	Comments
Collection Time	Sample Point	LIMS ID															
0955	BMOUT_HP	9688728	X	X									11.1	✓	✓	✓	
/																	
ALD Specified Holding Time (in Days)																	

Chilling process of samples started immediately after collection: Y N

Relinquished By	Date	Time	Received By	Date	Time
<u>NS Kollias</u>	<u>10/7/24</u>	<u>10:45</u>	<u>Gung</u>	<u>10/7/24</u>	<u>1045</u>

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"

Additional 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: 10/7/2024  
 Collected By: Nick Kollias  
 Preparation Date: 10/7/2024  
 Prepared By: Nick Kollias

From: **Nick Kollias**  
 Project Number/Support Request#: **4652-126-1, SR 15-24**  
 Sample Type (grab/composite): **Composite**

COC Prepared By: Nick Kollias

**For Lab Use Only**

Collection Information			TCN	Temperature °C	Proper Container	Proper Label	Adequate Volume	Comments
Collection Time	Sample Point	LIMS ID						
0955	BMOUT_HP	9688728	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
<i>Nick Kollias</i>	10/7/24	10:43	<i>[Signature]</i>	10/7/24	10:43

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"

Additional 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: 10/7/2024  
 Collected By: Nick Kollias  
 Preparation Date: 10/7/2024

From: Nick Kollias  
 Project Number/Support Request#: 4652-126-1, SR 15-24  
 Sample Type (grab/composite): Composite

Prepared By: Nick Kollias

COC Prepared By: Nick Kollias

For Lab Use Only				
Temperature °C	Proper Container	Proper Label	Adequate Volume	Comments

Collection Information			Alkalinity	Chloride												
Collection Time	Sample Point	LIMS ID														
0955	BMOUT_HP	9688728	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
<i>Nick Kollias</i> Coker D	10/7/24	1020	Coker D	10/7/24	1020

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"

Additional 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: 10/7/2024  
 Collected By: Nick Kollias  
 Preparation Date: 10/7/2024

From: **Nick Kollias**  
 Project Number/Support Request#: **4652-126-1, SR 15-24**  
 Sample Type (grab/composite): **Composite**

Prepared By: Nick Kollias

COC Prepared By: **Nick Kollias**

Collection Information			Total Hg	For Lab Use Only				Comments
Collection Time	Sample Point	LIMS ID		Temperature °C	Proper Container	Proper Label	Adequate Volume	
0955	BMOUT_HP	9688728	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
<i>[Signature]</i> Cooker D	10/7/24	1020	Cooker D	10/7/24	1020

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"

Additional Comments:

**TABLE 8: WATER QUALITY RESULTS OF A HANOVER PARK WATER RECLAMATION PLANT FINAL EFFLUENT COMPOSITE  
SAMPLE COLLECTED OCTOBER 6 - OCTOBER 7, 2024, USED FOR WHOLE EFFLUENT TOXICITY TESTING**

Sampling point	Analysis	Units	Result
BMOUTHHP	Ag	mg/L	<0.00400
BMOUTHHP	As	mg/L	<0.00200
BMOUTHHP	Ba	mg/L	0.02185
BMOUTHHP	Be	mg/L	<0.00200
BMOUTHHP	Cd	mg/L	<0.00200
BMOUTHHP	Co	mg/L	<0.00200
BMOUTHHP	Cr	mg/L	<0.00400
BMOUTHHP	Cu	mg/L	0.00486
BMOUTHHP	Fe	mg/L	0.04337
BMOUTHHP	Mn	mg/L	0.01561
BMOUTHHP	Mo	mg/L	<0.00200
BMOUTHHP	Ni	mg/L	<0.00200
BMOUTHHP	Pb	mg/L	<0.00200
BMOUTHHP	Sb	mg/L	<0.00200
BMOUTHHP	Se	mg/L	<0.00400
BMOUTHHP	Zn	mg/L	0.03301
BMOUTHHP	NH3_N	mg/L	<0.300
BMOUTHHP	Al	mg/L	<1.00
BMOUTHHP	Hardness	mg/L	0
BMOUTHHP	CN	mg/L	<0.0050
BMOUTHHP	ALKALINITY	mg/L	82.2
BMOUTHHP	Cl	mg/L	89.275
BMOUTHHP	Final Hg	ug/L	<0.500
BMOUTHHP	1,1,1-Trichloroethane	ug/L	<5.000
BMOUTHHP	1,1,2,2-Tetrachloroethane	ug/L	<5.000
BMOUTHHP	1,1,2-Trichloroethane	ug/L	<5.000
BMOUTHHP	1,1-Dichloroethane	ug/L	<5.000
BMOUTHHP	1,1-Dichloroethylene	ug/L	<5.000
BMOUTHHP	1,2,4-Trichlorobenzene	ug/L	<5.000
BMOUTHHP	1,2-Dichlorobenzene	ug/L	<5.000
BMOUTHHP	1,2-Dichloroethane	ug/L	<5.000
BMOUTHHP	1,2-Dichloropropane	ug/L	<5.000
BMOUTHHP	1,2-Diphenylhydrazine	ug/L	<5.000
BMOUTHHP	1,3-Dichlorobenzene	ug/L	<5.000
BMOUTHHP	1,3-Dichloropropylene	ug/L	<5.000
BMOUTHHP	1,4-Dichlorobenzene	ug/L	<5.000
BMOUTHHP	2,4,6-Trichlorophenol	ug/L	<10.000
BMOUTHHP	2,4-Dichlorophenol	ug/L	<5.000
BMOUTHHP	2,4-Dimethylphenol	ug/L	<10.000
BMOUTHHP	2,4-Dinitrophenol	ug/L	<40.000
BMOUTHHP	2,4-Dinitrotoluene	ug/L	<5.000
BMOUTHHP	2,6-Dinitrotoluene	ug/L	<5.000
BMOUTHHP	2-Chloroethyl vinyl ether	ug/L	<5.000
BMOUTHHP	2-Chloronaphthalene	ug/L	<5.000
BMOUTHHP	2-Chlorophenol	ug/L	<10.000
BMOUTHHP	2-Nitrophenol	ug/L	<10.000

**TABLE 8: WATER QUALITY RESULTS OF A HANOVER PARK WATER RECLAMATION PLANT FINAL EFFLUENT COMPOSITE  
SAMPLE COLLECTED OCTOBER 6 - OCTOBER 7, 2024, USED FOR WHOLE EFFLUENT TOXICITY TESTING**

Sampling point	Analysis	Units	Result
BMOUTH	3,3'-Dichlorobenzidine	ug/L	<15.000
BMOUTH	3,4-Benzofluoranthene	ug/L	<10.000
BMOUTH	4,4'-DDD	ug/L	<0.050
BMOUTH	4,4'-DDE	ug/L	<0.130
BMOUTH	4,4'-DDT	ug/L	<0.050
BMOUTH	4,6-Dinitro-o-cresol	ug/L	<25.000
BMOUTH	4-Bromophenyl phenyl ether	ug/L	<5.000
BMOUTH	4-Chlorophenyl phenyl ether	ug/L	<5.000
BMOUTH	4-Nitrophenol	ug/L	<20.000
BMOUTH	Acenaphthene	ug/L	<5.000
BMOUTH	Acenaphthylene	ug/L	<5.000
BMOUTH	Acrolein	ug/L	<50.000
BMOUTH	Acrylonitrile	ug/L	<10.000
BMOUTH	Aldrin	ug/L	<0.050
BMOUTH	Anthracene	ug/L	<5.000
BMOUTH	Benzene	ug/L	<2.000
BMOUTH	Benzo(a)anthracene	ug/L	<5.000
BMOUTH	Benzo(a)pyrene	ug/L	<10.000
BMOUTH	Benzo(g,h,i)perylene	ug/L	<10.000
BMOUTH	Benzo(k)fluoranthene	ug/L	<5.000
BMOUTH	Bis(2-chloro-iso-propyl)ether	ug/L	<10.000
BMOUTH	Bis(2-chloroethoxy)methane	ug/L	<10.000
BMOUTH	Bis(2-chloroethyl)ether	ug/L	<10.000
BMOUTH	Bis(2-ethylhexyl)phthalate	ug/L	<20.000
BMOUTH	Bromoform	ug/L	<5.000
BMOUTH	Butyl benzyl phthalate	ug/L	<10.000
BMOUTH	Carbon tetrachloride	ug/L	<5.000
BMOUTH	Chlorobenzene	ug/L	<5.000
BMOUTH	Chlorodibromomethane	ug/L	<2.000
BMOUTH	Chloroethane	ug/L	<5.000
BMOUTH	Chloroform	ug/L	6.8922
BMOUTH	Chrysene	ug/L	<5.000
BMOUTH	Di-n-butyl phthalate	ug/L	<5.000
BMOUTH	Di-n-octyl phthalate	ug/L	<15.000
BMOUTH	Dibenzo(a,h)anthracene	ug/L	<15.000
BMOUTH	Dichlorobromomethane	ug/L	<2.000
BMOUTH	Dieldrin	ug/L	<0.050
BMOUTH	Diethyl phthalate	ug/L	<10.000
BMOUTH	Dimethyl phthalate	ug/L	<5.000
BMOUTH	Endosulfan I	ug/L	<0.050
BMOUTH	Endosulfan II	ug/L	<0.050
BMOUTH	Endosulfan sulfate	ug/L	<0.050
BMOUTH	Endrin	ug/L	<0.050
BMOUTH	Endrin aldehyde	ug/L	<0.050
BMOUTH	Ethylbenzene	ug/L	<2.000
BMOUTH	Fluoranthene	ug/L	<5.000

**TABLE 8: WATER QUALITY RESULTS OF A HANOVER PARK WATER RECLAMATION PLANT FINAL EFFLUENT COMPOSITE  
SAMPLE COLLECTED OCTOBER 6 - OCTOBER 7, 2024, USED FOR WHOLE EFFLUENT TOXICITY TESTING**

Sampling point	Analysis	Units	Result
BMOUTH	Fluorene	ug/L	<5.000
BMOUTH	Heptachlor	ug/L	<0.070
BMOUTH	Heptachlor epoxide	ug/L	<0.050
BMOUTH	Hexachlorobenzene	ug/L	<5.000
BMOUTH	Hexachlorobutadiene	ug/L	<5.000
BMOUTH	Hexachlorocyclopentadiene	ug/L	<30.000
BMOUTH	Hexachloroethane	ug/L	<10.000
BMOUTH	Indeno(1,2,3-cd)pyrene	ug/L	<15.000
BMOUTH	Isophorone	ug/L	<10.000
BMOUTH	Methyl bromide	ug/L	<5.000
BMOUTH	Methyl chloride	ug/L	<5.000
BMOUTH	Methylene chloride	ug/L	<5.000
BMOUTH	N-Nitrosodi-n-propylamine	ug/L	<10.000
BMOUTH	N-Nitrosodimethylamine	ug/L	<5.000
BMOUTH	N-Nitrosodiphenylamine	ug/L	<5.000
BMOUTH	Naphthalene	ug/L	<5.000
BMOUTH	Nitrobenzene	ug/L	<10.000
BMOUTH	PCB-1016	ug/L	<0.800
BMOUTH	PCB-1221	ug/L	<0.800
BMOUTH	PCB-1232	ug/L	<0.800
BMOUTH	PCB-1242	ug/L	<0.800
BMOUTH	PCB-1248	ug/L	<0.800
BMOUTH	PCB-1254	ug/L	<0.800
BMOUTH	PCB-1260	ug/L	<1.160
BMOUTH	Pentachlorophenol	ug/L	<30.000
BMOUTH	Phenanthrene	ug/L	<5.000
BMOUTH	Phenol	ug/L	<5.000
BMOUTH	Pyrene	ug/L	<5.000
BMOUTH	Technical chlordane	ug/L	<0.500
BMOUTH	Tetrachloroethylene	ug/L	<5.000
BMOUTH	Toluene	ug/L	<2.000
BMOUTH	Toxaphene	ug/L	<1.000
BMOUTH	Trichloroethylene	ug/L	<5.000
BMOUTH	Trichlorofluoromethane	ug/L	<5.000
BMOUTH	Vinyl chloride	ug/L	<5.000
BMOUTH	alpha-BHC	ug/L	<0.050
BMOUTH	beta-BHC	ug/L	<0.070
BMOUTH	delta-BHC	ug/L	<0.170
BMOUTH	gamma-BHC (lindane)	ug/L	<0.050
BMOUTH	p-Chloro-m-cresol	ug/L	<5.000
BMOUTH	trans-1,2-Dichloroethylene	ug/L	<5.000