REVIEW OF TOXICITY BIOMONITORING REPORT Environmental Toxicology, NPDES Permitting Program/OWQ

Biomonitoring Re	view Report	: IDEM	/100/29	/334/13	9/2024		Docume	ent Date:	03/20/	2024
CenterPoint Energy-SIGECO FB Culley										
	enterPoint Ener enerating, Stati		COFBC	uney	NPDES	No.	IN0	002259		
~ -	ewburgh	<u></u>	Co	unty:	Warric		Stat		Zip:	47702
ολ. <b>)</b> . <u>λ.</u>	<u> </u>					<u></u>	Siai	<u>113</u>	zip.	11102
T.	Background	Inform	ation: (	To be C	omplete	ed hv tl	ie Testii	ng Lah )		
A. Test Material	_			1000	, citi i i i i	ca oj a	10 105111	6 2		
Effluent/W. Wa		e Effluen	ıt.				(	Outfall No	(s)·	001
Grab/Composi			_	(s) Effi	nent Co	allected				03/08/2024
Concentrations		trol, 6.25						lution Fact		).5
Dilution Water:		ceiving \		770, 2,37		onstitut			Ē	<del>).5</del>
Name of Receivi		_	io River						1.	 03/11/2024
INAMIC OF IXECTIVE	ng water boo	uy. <u>⊻n</u>	110 1(170)			1.0	est Date	03/057	2024 - 22024	03/11/2024
B. Testing Labor	ratory: P	ace Analy	vtical (F	ormerly	McCov	& McCo	ov Labor	atories, Inc.		33/12/1202-1
zi xusing ziisoi	-		,				-,	,	· /-	
	City:	Madisonvi	ille				State	KY	Zip	42431
	le Person(s):						State	11.1	ыp	72,731
•	• • • • • • • • • • • • • • • • • • • •									
	ing Team Lea	ider:		<u>Wilkes</u>						
	nnical Staff:		<u>Initial</u>	_						
	ne No.		<u>270 6</u>	<u>21 7376</u>						
C. Toxicity Test						_				
	e Test:			_				erm Chro		st:
	hnia dubia/			<b>✓</b>	1.		_	dubia / ret		
	magna or Da			<b></b>				production		
3. Pimephales promelas (Fathead Minnow) 2. Pimephales promelas (Fathead Minnow)										
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4. Other:	-	(1 attions		** <i>)</i>		_	_	r <i>omeius</i> (r al & Grow		2*3111110***)
	-	(1 atticad		w)	<u> </u>	Larval	Surviva	•	th test	·
	-	(Tatricad		w)	<u> </u>	Larval Selena	Surviva <i>istrum c</i>	al & Grow	th test <i>tum</i> Gi	owth
				W)	3.	Larval Selena	Surviva <i>istrum c</i>	al & Grow <i>capricornu</i>	th test <i>tum</i> Gi	owth
4. Other:		dist:		Day	3. 4.	Larval Selena	Surviva ustrum c	al & Grow <i>capricornu</i>	th test <i>tum</i> Gi	owth
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4. Other:	alyses Checl	dist:		Day	3. 4.	Larval Selena Other:	Surviva ustrum c	al & Grow capricornu	th test tum Gi	owth
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D. Chemical An  Parameter  1. Control:    D.O. Init    Fin    pH Initia    Final    Alkalinit;    Hardness    Conducti    Chlorine  2. Test Sample:    D.O. Init    Fin    pH Initia    Final    Alkalinit;    Hardness	alyses Check $ \begin{array}{ccc}  & 1 \\  & & \\$	2	3 <u>*</u> <u>*</u> <u>*</u> <u>*</u> <u>*</u> <u>*</u> <u>*</u> <u>*</u> <u>*</u> <u>*</u>	Day 4	3. 4. 5 <u>√</u> <u>√</u> <u>√</u> <u>√</u> <u>√</u> <u>√</u> <u>√</u>	Larval   Selena   Other:	7	al & Grow capricornu	th test tum Gi	owth
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## II. Daphnia or <u>Ceriodaphnia</u> Toxicity Test Information (To be completed by the testing lab)

A.	Data	Analyses:
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Statistical Test	Method Used	Comment					
Normality test:	Shapiro Wilk's Test	Failed. Indicates Non-Normal Distribution for Reprod.					
Homogeneity test:	Bartlett's Test	Passed. Indicates Equal Varia	nce for Reprod.				
Significance test:							
1. Parametric:	Dunnett's Test		- D100 C D 1				
2. Non-Parametric	: Steels Many-One Rank Fisher Exact Test		nt Difference for Reprod				
<ul><li>3. Are the Critical</li><li>4. Other:</li></ul>	Values of Significance		nt Difference for Survival				
B. Toxicity Test Results	:						
1. Acute:							
LC50 (48-hr):	>100% Effluent (<1 TU	J <u>a)</u>					
2. Chronic:							
NOEL: Su	rvival <u>100% (1 TUc)</u>	Reproduction 100% (1 TU	(Jc) Growth				
LOEL: Su	rvival	Reproduction	Growth				
Chronic Value: Su	rvival	Reproduction	Growth				
C. Permit Limits Requi	rement:						
1. Acute:							
LC50 (48-hr):	100% Effluent (1 TU <sub>a</sub>	Ù					
2. Chronic:							
NOEL: Survival LOEL: Survival	-	production 14.3% (7 TUc) production	Growth				
D. Reference Toxicant I	Data:						
1. Reference Toxica	nt: Sodium chloride	(NaCl) Reagent Grade from Fi	scher.				
2. Test Date:	February 6 - 13, 20						
3. Results:		$g/L$ , $IC_{25} = 0.90 g/L$ .					
4. Acceptable Rang	e: <u>Within Laborator</u>	y Control Limits.					
E. Permit Limits Comp	liance: (To be comp	oleted by IDEM Staff only)					
Pass (LC <sub>50</sub> [48-1	ır]) <u>(1 TUa)</u>	Fail (LC <sub>50</sub> [48-hr])					
Pass (NOEL/Su		Fail (NOEL/Survival)					
✓ Pass (NOEL/Re		Fail (NOEL/Reprod.)					
Pass (NOEL/Gr		Fail (NOEL/Growth)					
Is the Test Acceptabl							

## III. Fathead Minnow (Pimephales promelas) Toxicity Test Information (To be completed by the testing lab)

Α.	Data	Anal	lyses:
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Statistical Test M	ethod Used	Comment				
Normality test: Homogeneity test: Significance test:	Shapiro Wilk's Test Bartlett's Test	Failed. Indicates Non-Normal Distribution for Growth. Indicates Indeterminable Variances for Growth.				
<ol> <li>Parametric:</li> <li>Non-Parametric:</li> </ol>		ant Difference for Growth ant Difference for Survival				
4 Oth an	alues of Significance Pr	rovided? Yes.				
B. Toxicity Test Results:						
1. Acute: LC <sub>50</sub> (96-hr): ≥1	00% Effluent (<1 TU <sub>a</sub> )					
2. Chronic:						
NOEL: Surv LOEL: Surv Chronic Value: Surv	ival	Reproduction Reproduction Reproduction	Growth			
C. Permit Limits Require	ment:					
<ol> <li>Acute:         LC<sub>50</sub> (96-hr): 10     </li> <li>Chronic:</li> </ol>	0% Effluent (1 TU <sub>a</sub> )					
NOEL: Survival LOEL: Survival		eproduction	Growth 14.3% (7 TUc) Growth			
D. Reference Toxicant Da	ta:					
<ol> <li>Reference Toxicant</li> <li>Test Date:</li> <li>Results:</li> <li>Acceptable Range:</li> <li>Permit Limits Compliant</li> </ol>	March 6 $-$ 13, 2024 96-hr LC <sub>50</sub> $=$ 2.96 g/I Within Laboratory	<del>-</del>	<u>ı SFisher</u>			
Pass (LC <sub>50</sub> [96-hr] Pass (NOEL/Surv Pass (NOEL/Repr Pass (NOEL/Grov Is the Test Acceptable?	ival) (1 TUc) od.) vth) (1 TUc)	Fail (LC <sub>50</sub> [96-hr]) Fail (NOEL/Survival Fail (NOEL/Reprod.) Fail (NOEL/Growth) Reason	)			

## IV. GLP and QA/QC Compliance:

(To be completed by IDEM Staff only)

A.	Does the Biomonitoring Report provide?  1. GLP Compliance Statement: 2. QA/QC Compliance Statement: 3. Were the required GLPs followed? 4. If not, the Report lacks what major inform	Yes Yes Yes ation:	<u>√</u> <u>√</u> <u>√</u>	No No No		
В.	Laboratory Raw Data Sheets: 1. Does the Report enclose raw data sheets? 2. Does the raw data sheets provide essential information? 3. If not, the Report lacks what major information.	Yes Yes ation:	<u>√</u>	No No		_
Gene Fathe speci Surv (1 T	V. Comments and Recommentary (To be completed by IDEM States) (To be completed by IDEM States) (To be completed by IDEM States) (The Service Practing Station did not demonstrate any acute or chromatom (Pimephales promelas). The 48-hr Les was >100% effluent (<1 TUa), respectively. Like ival and Reproduction and for Pimephales promelas (Uc) and acceptable as compared to 14.3% effluent ty NPDES permit.	aff only)  Int from ronic tox  C <sub>50</sub> and rewise, to Surviva	Cente cicity to the NO land C	o <i>Ceriodo</i> 6-hr LC EL for <i>C</i> Growth w	aphnia dubi <sub>50</sub> to both t eriodaphnia vas 100% e	a or to he test dubia
Reviewed Signature:	Son Amar Date	O Conmenta			202	4

Electronic copy:

Jerry Dittmer, BC, NPDES Permitting Branch, OWQ
Richard Hamilton, SC, NPDES Permitting Branch, OWQ

Updated: SMG: 00/2016