

November 10, 2015

Arkansas Department of Environmental Quality 5301 Northshore Drive North Little Rock, AR 72118-5317

RE: AR0022187

To whom it may concern:

Clarksville Light and Water is asking for a reduction in our biomonitoring sampling. I certify under penalty of law that we have passed every criteria of this biomonitoring test over the last four consecutive quarters. In addition, I have enclosed the results of the sampling for these quarters. If you have any questions call (479) 754-6241 Ext. 302

Sincerely:

Gregg Rainey

Wastewater Superintendent

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Enclosures

TOXICITY TEST REPORT - CHRONIC

Results: Pass Ceriodaphnia dubia survival and reproduction and Pimephales promelas survival and growth at the critical low flow concentration (100% effluent).

SAMPLE COLLECTION

Composite effluent samples from Environmental Enterprise Group, City of Clarksville WWTP were delivered by United Parcel Service courier to Huther & Associates on October 20, October 22, and October 24, 2015. Effluent samples were collected and composited from Outfall 001 using an automatic sampler by facility personnel. Two toxicity tests were requested: a seven-day Ceriodaphnia dubia survival and reproduction test (EPA Method 1002.0), and a seven-day Pimephales promelas larval survival and growth test (EPA Method 1000.0). Test organisms, procedures and quality assurance requirements were in accordance with the EPA manual, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013).

The effluent and receiving water samples were analyzed for total residual chlorine (Standard Methods, 22nd Edition, 4500-CI D) and contained <0.01 mg/L, <0.01 mg/L, and <0.01 mg/L, respectively. Effluent and receiving dilution water hardness, alkalinity, conductivity, pH, and dissolved oxygen data were collected and recorded.

TEST SETUP Ceriodaphnia dubia



A true control of ten replicate chambers containing one neonate each in receiving water was conducted concurrently with the test. There was 100% survival in the true control. In addition, a performance control of ten replicate chambers containing one neonate each in synthetic laboratory water was conducted concurrently with the test. The purpose of the performance control was to assess the health of the test organisms and to identify receiving water toxicity. The performance control data was not used in the statistical analysis of the test data. There was 100% survival in the performance control. The test ended at 1500 hours, October 27, 2015. Survival and reproduction data were statistically analyzed (p = 0.05) according to EPA procedures to determine the Lowest Observable Effect Concentration (LOEC) and the No Observable Effect Concentration (NOEC).

SURVIVAL Ceriodaphnia dubia

There was 100% survival to *C. dubia* in all of the effluent concentrations tested. Therefore, statistical analyses were not required to determine a no effect concentration.

LOEC: Not Applicable NOEC: 100% Effluent

REPRODUCTION Ceriodaphnia dubia

C. dubia reproduction data were normally distributed at the 0.01 alpha level (13.277) using Chi-Square test for normality. Reproduction data were homogeneous using Bartlett's test at the 0.01 alpha level (15.09) without data transformations. Therefore, a parametric test was performed on the homogeneous data. Dunnett's test on C. dubia reproduction data demonstrated that there were no statistically significant differences between the control and any of the effluent concentrations.

LOEC: Not Applicable NOEC: 100% Effluent

PMSD: 6.6%

TEST SETUP
Pimephales promelas



A true control of five replicate chambers of eight larvae each in receiving water was conducted currently with the test. There was 100% survival in the true control. In addition, a performance control of five replicate chambers of eight larvae each in synthetic laboratory water was conducted concurrently with the test. The purpose of the performance control was to assess the health of the test larvae and to identify receiving water toxicity. The performance control data was not used in the statistical analysis of the test data. There was 100% survival in the performance control. At the end of the test, all larvae were sacrificed, dried, and weighed. The test ended at 1615 hours, October 27, 2015. Survival and growth (weight) data were statistically analyzed (p = 0.05) according to EPA procedures to determine the Lowest Observable Effect Concentration (LOEC) and the No Observable Effect Concentration (NOEC).

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GROWTH Pimephales promelas

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PMSD: 10.0%

SUMMARY



environmental toxicologists, biologists, and consultants

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Change of Mailing Address Form

Arkansas Department of Environmental Quality Water Division – Permits 5301 Northshore Drive North Little Rock, AR 72118-5317

P: 501-682-0656 F: 501-682-0910

RE: NPDES Permit No: AR 00 221	87 AFIN No: _	36-00038	
Name on Permit: <u>Clarksv:11e L:g</u>	ht + Water		
Responsible Official: Gregg			
Phone: (479-979-5509 cell) (419-754	-6241 EXT 302	2)
	- 1		
Please update facility mailing address	to (If Applicable):		
Address:	<u> </u>		
City:	State:	Zip:	
Please update the Discharge Monitorin			licable):
Address:			
City:			
Email (If Applicable): gregg · rainey @	Q c/arksville 1.	ght water . com	
Sincerely,			
Juney Raines Signature (Responsible Official)		10-2015	
Signature (Responsible Official)	Date		



7013 2630 0000 6571 0144



CLARKSVILLE LIGHT & WATER CO.

400 WEST MAIN • P.O. BOX 1807 CLARKSVILLE, AR 72830 PHONE (479) 754-3148

ADEQ

Attn: Kyle Barber 5301 Northshore Drive North Little Rock, AR 72118