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January 19, 2016

Arkansas Department of
Environmental Quality
NPDES Enforcement Section
5301 N. Shore DR.
North Little Rock, Arkansas 72118

RE: NPDES PERMIT NO. AR0021580
Biomonitoring: July 01, 2015 thru December 31, 2015

Enclosed is the Discharge Monitoring Report for the City of Osceola for the period of **July 01, 2015 thru December 31, 2015** on Biomonitoring test as required by our permit. The tests show that we passed all tests.

All tests were performed by Waypoint Analytical, formerly known as, Environmental Testing and Consulting, Inc., 2790 Whitten Rd. Memphis, TN. 38133. We are enclosing all summary forms and analysis sheets as required by our permit.

Thanks,

Brandon Haynes
WWTP SUPT.
Enclosure

03334
 Osceola Water Department
 Mr. Brandon Haynes
 303 W. Hale
 Osceola, AR 72370

Project Bioassay
 Information :

Report Date : 1/12/2016

Report Number : 15-350-0192

REPORT OF ANALYSIS

Received : 12/16/2015

Lab No : **90942**
 Sample ID : **Outfall 001 - Composite 1**

Matrix: **Aqueous**
 Sampled: **12/15/2015 7:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	191	mg/L	1	1	12/28/15 10:18	CJR	2320B-2011
Total Calcium	30.1	mg/L	0.100	1	12/19/15 08:08	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	104	mg/L	0.100	1	12/19/15 08:08		EPA-200.7
Total Magnesium	7.04	mg/L	0.100	1	12/19/15 08:08	BKN	EPA-200.7

Lab No : **90943**
 Sample ID : **River Water**

Matrix: **Aqueous**
 Sampled: **12/16/2015 8:30**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	126	mg/L	1	1	12/28/15 10:18	CJR	2320B-2011
Total Calcium	43.0	mg/L	0.100	1	12/19/15 08:13	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	161	mg/L	0.100	1	12/19/15 08:13		EPA-200.7
Total Magnesium	13.0	mg/L	0.100	1	12/19/15 08:13	BKN	EPA-200.7

Lab No : **90944**
 Sample ID : **Outfall 001 - Composite 2**

Matrix: **Aqueous**
 Sampled: **12/16/2015 7:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	187	mg/L	1	1	12/28/15 10:18	CJR	2320B-2011
Total Calcium	30.5	mg/L	0.100	1	12/19/15 08:28	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	105	mg/L	0.100	1	12/19/15 08:28		EPA-200.7
Total Magnesium	7.09	mg/L	0.100	1	12/19/15 08:28	BKN	EPA-200.7

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit



2790 Whitten Road, Memphis, TN 38133
 Main 901.213.2400 ° Fax 901.213.2440
 www.waypointanalytical.com

03334
 Osceola Water Department
 Mr. Brandon Haynes
 303 W. Hale
 Osceola , AR 72370

Project Bioassay
 Information :

Report Date : 1/12/2016

Report Number : **15-350-0192**

REPORT OF ANALYSIS

Received : 12/16/2015

Lab No : **90945**
 Sample ID : **River Water**

Matrix: **Aqueous**
 Sampled: **12/16/2015 8:30**

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	125	mg/L	1		12/28/15 10:18	CJR	2320B-2011
Total Calcium	43.8	mg/L	0.100		12/19/15 08:32	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	163	mg/L	0.100		12/19/15 08:32		EPA-200.7
Total Magnesium	13.0	mg/L	0.100		12/19/15 08:32	BKN	EPA-200.7

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

CETIS Test Evaluation Report

Report Date: 12 Jan-16 11:32 (1 of 1)

Test Code: DP 15-350-0192 | 16-2065-3192

Facility: Osceola Water Department
Sample Site:
Sample Code: 15-350-0192
Sample Date: 15 Dec-15 07:00
Sample Age: 32h (0.9 °C)
Project: WET Biannual Compliance Test (2nd)

Test Name: Daphnia pulex 48-h Acute Survival Test
Organism: Daphnia pulex (Water Flea)
Protocol: EPA/821/R-02-012 (2002)
Start Date: 16 Dec-15 15:20
End Date: 18 Dec-15 15:45
Duration: 48h **Organism Age:** < 24

Permittee: Osceola Water Department
Address: 303 W. Hale
 PO Box 443
 Osceola, AR 72370
Contact: Mr. Brandon Haynes
Phone: 870-563-2628
Email: bhaynes58@yahoo.com

Laboratory: Waypoint Analytical, Inc.
Address: 2790 Whitten Road
 Memphis, TN 38133
Contact: Ms. Connie Cook, Lab Supervisor
Phone: 901-213-2454, 901-213-2440(fax)
Email: ccook@etcmemphis

Comments:

Acute Toxicity Evaluation

Endpoint	Criteria	Conc-%	IWC	Decision	Method
48h Survival Rate	NOEL/LOEL	0.17/>0.17	0.13	Passes IWC	Steel Many-One Rank Sum Test

Test Acceptability Criteria

Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
			Lower	Upper		
48h Survival Rate	Control Resp	1	0.9	>>	Yes	Passes Acceptability Criteria

48h Survival Rate Data Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	R	5	1	1	1	1	1	0	0	0.00%	0.0%
0.05		5	1	1	1	1	1	0	0	0.00%	0.0%
0.07		5	1	1	1	1	1	0	0	0.00%	0.0%
0.1		5	1	1	1	1	1	0	0	0.00%	0.0%
0.13		5	1	1	1	1	1	0	0	0.00%	0.0%
0.17		5	1	1	1	1	1	0	0	0.00%	0.0%

CETIS Summary Report

Report Date: 12 Jan-16 11:32 (p 1 of 1)
Test Code: DP 15-350-0192 | 16-2065-3192

Daphnia pulex 48-h Acute Survival Test **Waypoint Analytical , Inc.**

Batch ID: 02-0991-3098	Test Type: Survival (48h)	Analyst: Connie Cook
Start Date: 16 Dec-15 15:20	Protocol: EPA/821/R-02-012 (2002)	Diluent: Receiving Water
Ending Date: 18 Dec-15 15:45	Species: Daphnia pulex	Brine: Not Applicable
Duration: 48h	Source: In-House Culture	Age: < 24
Sample ID: 06-5918-8728	Code: 15-350-0192	Client: Osceola Water Department
Sample Date: 15 Dec-15 07:00	Material: POTW Effluent	Project: WET Biannual Compliance Test (2nd)
Receipt Date: 15 Dec-15 13:15	Source: Osceola Water Department (AR0021580)	
Sample Age: 32h (0.9 °C)	Station:	

Sample Renewals

Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	15-350-0192	16 Dec-15 07:00	16 Dec-15 13:15	17 Dec-15 00:00	1.9

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	TU	PMSD ✓
19-5066-6945	48h Survival Rate	Steel Many-One Rank Sum Test	0.17	> 0.17	n/a	588.2	n/a

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
19-5066-6945	48h Survival Rate	Control Resp	1	0.9	>>	Yes	Passes Acceptability Criteria

48h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	R	5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0	L	5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.05		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.07		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.1		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.13		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.17		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	R	1.0000	1.0000	1.0000	1.0000	1.0000
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
0.05		1.0000	1.0000	1.0000	1.0000	1.0000
0.07		1.0000	1.0000	1.0000	1.0000	1.0000
0.1		1.0000	1.0000	1.0000	1.0000	1.0000
0.13		1.0000	1.0000	1.0000	1.0000	1.0000
0.17		1.0000	1.0000	1.0000	1.0000	1.0000

48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	R	8/8	8/8	8/8	8/8	8/8
0	L	8/8	8/8	8/8	8/8	8/8
0.05		8/8	8/8	8/8	8/8	8/8
0.07		8/8	8/8	8/8	8/8	8/8
0.1		8/8	8/8	8/8	8/8	8/8
0.13		8/8	8/8	8/8	8/8	8/8
0.17		8/8	8/8	8/8	8/8	8/8

CETIS Measurement Report

Report Date: 12 Jan-16 11:32 (p 1 of 3)
Test Code: DP 15-350-0192 | 16-2065-3192

Daphnia pulex 48-h Acute Survival Test

Waypoint Analytical, Inc.

Batch ID: 02-0991-3098	Test Type: Survival (48h)	Analyst: Connie Cook
Start Date: 16 Dec-15 15:20	Protocol: EPA/821/R-02-012 (2002)	Diluent: Receiving Water
Ending Date: 18 Dec-15 15:45	Species: Daphnia pulex	Brine: Not Applicable
Duration: 48h	Source: In-House Culture	Age: < 24

Sample ID: 06-5918-8728	Code: 15-350-0192	Client: Osceola Water Department
Sample Date: 15 Dec-15 07:00	Material: POTW Effluent	Project: WET Biannual Compliance Test (2nd)
Receipt Date: 15 Dec-15 13:15	Source: Osceola Water Department (AR0021580)	
Sample Age: 32h (0.9 °C)	Station:	

CETIS Measurement Report

Report Date: 12 Jan-16 11:32 (p 2 of 3)

Test Code: DP 15-350-0192 | 16-2065-3192

Daphnia pulex 48-h Acute Survival Test

Waypoint Analytical, Inc.

Alkalinity (CaCO3)-mg/L

Conc-%	Code	1	2
0	R		
0	L	59	59
0.05			
0.07			
0.1			
0.13			
0.17			

Total Residual Chlorine-mg/L

Conc-%	Code	1	2
0	R	0	0
0	L	0	0
0.05			
0.07			
0.1			
0.13			
0.17		0	0

Conductivity-µS/cm

Conc-%	Code	1	2
0	R	383	403
0	L	174	179
0.05			
0.07			
0.1			
0.13			
0.17		532	546

Final Dissolved Oxygen-mg/L

Conc-%	Code	1	2
0	R	7.8	7.6
0	L	7.8	7.6
0.05		7.8	7.7
0.07		7.6	7.5
0.1		7.7	7.6
0.13		7.7	7.7
0.17		7.6	7.6

Initial Dissolved Oxygen-mg/L

Conc-%	Code	1	2
0	R	8.9	8.6
0	L	8.5	8.8
0.05		10.1	8.7
0.07		10.1	8.9
0.1		10.1	8.9
0.13		10.1	8.7
0.17		10.2	8.9

CETIS Measurement Report

Report Date: 12 Jan-16 11:32 (p 3 of 3)

Test Code: DP 15-350-0192 | 16-2065-3192

Daphnia pulex 48-h Acute Survival Test

Waypoint Analytical, Inc.

Hardness (CaCO3)-mg/L

Conc-%	Code	1	2
0	R	89	92
0	L		
0.05			
0.07			
0.1			
0.13			
0.17			

Final pH-Units

Conc-%	Code	1	2
0	R	7.9	7.6
0	L	7.9	7.6
0.05		7.9	7.7
0.07		7.8	7.7
0.1		7.8	7.6
0.13		7.8	7.6
0.17		7.6	7.6

Initial pH-Units

Conc-%	Code	1	2
0	R	7.6	7.7
0	L	7.6	7.7
0.05		7.6	7.7
0.07		7.7	7.7
0.1		7.7	7.7
0.13		7.7	7.7
0.17		7.7	7.7

Final Temperature-°C

Conc-%	Code	1	2
0	R	23	23
0	L	23	23
0.05		23	23
0.07		23	23
0.1		23	23
0.13		23	23
0.17		23	23

Initial Temperature-°C

Conc-%	Code	1	2
0	R	23	23
0	L	23	23
0.05		23	23
0.07		23	23
0.1		23	23
0.13		23	23
0.17		23	23

CETIS Test Evaluation Report

Report Date: 12 Jan-16 11:33 (1 of 1)
Test Code: FH 15-350-0192 | 05-3985-8416

Facility: Osceola Water Department	Test Name: Fathead Minnow 48-h Acute Survival Test
Sample Site:	Organism: Pimephales promelas (Fathead Minnow)
Sample Code: 15-350-0192	Protocol: EPA/821/R-02-012 (2002)
Sample Date: 15 Dec-15 07:00	Start Date: 16 Dec-15 14:55
Sample Age: 32h (0.9 °C)	End Date: 18 Dec-15 16:00
Project: WET Biannual Compliance Test (2nd)	Duration: 49h Organism Age: < 24
Permitee: Osceola Water Department	Laboratory: Waypoint Analytical , Inc.
Address: 303 W. Hale PO Box 443 Osceola, AR 72370	Address: 2790 Whitten Road Memphis, TN 38133
Contact: Mr. Brandon Haynes	Contact: Ms. Connie Cook, Lab Supervisor
Phone: 870-563-2628	Phone: 901-213-2454, 901-213-2440(fax)
Email: bhaynes58@yahoo.com	Email: ccook@etcmemphis

Comments:

Acute Toxicity Evaluation

Endpoint	Criteria	Conc-%	IWC	Decision	Method
48h Survival Rate	NOEL/LOEL	0.17/>0.17	0.13	Passes IWC	Steel Many-One Rank Sum Test

48h Survival Rate Data Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	R	5	1	1	1	1	1	0	0	0.00%	0.0%
0.05		5	1	1	1	1	1	0	0	0.00%	0.0%
0.07		5	1	1	1	1	1	0	0	0.00%	0.0%
0.1		5	1	1	1	1	1	0	0	0.00%	0.0%
0.13		5	1	1	1	1	1	0	0	0.00%	0.0%
0.17		5	1	1	1	1	1	0	0	0.00%	0.0%

CETIS Summary Report

Report Date: 12 Jan-16 11:34 (p 1 of 1)
Test Code: FH 15-350-0192 | 05-3985-8416

Fathead Minnow 48-h Acute Survival Test

Waypoint Analytical, Inc.

Batch ID: 06-7864-4913 **Test Type:** Survival (48h) **Analyst:** Connie Cook
Start Date: 16 Dec-15 14:55 **Protocol:** EPA/821/R-02-012 (2002) **Diluent:** Receiving Water
Ending Date: 18 Dec-15 16:00 **Species:** Pimephales promelas **Brine:** Not Applicable
Duration: 49h **Source:** Aquatic Biosystems, CO **Age:** < 24

Sample ID: 06-5918-8728 **Code:** 15-350-0192 **Client:** Osceola Water Department
Sample Date: 15 Dec-15 07:00 **Material:** POTW Effluent **Project:** WET Biannual Compliance Test (2nd)
Receipt Date: 15 Dec-15 13:15 **Source:** Osceola Water Department (AR0021580)
Sample Age: 32h (0.9 °C) **Station:**

Sample Renewals

Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	15-350-0192	16 Dec-15 07:00	16 Dec-15 13:15	17 Dec-15 00:00	1.9

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	TU	PMSD ✓
16-0799-9269	48h Survival Rate	Steel Many-One Rank Sum Test	0.17	> 0.17	n/a	588.2	n/a

48h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	R	5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0	L	5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.05		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.07		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.1		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.13		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.17		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	R	1.0000	1.0000	1.0000	1.0000	1.0000
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
0.05		1.0000	1.0000	1.0000	1.0000	1.0000
0.07		1.0000	1.0000	1.0000	1.0000	1.0000
0.1		1.0000	1.0000	1.0000	1.0000	1.0000
0.13		1.0000	1.0000	1.0000	1.0000	1.0000
0.17		1.0000	1.0000	1.0000	1.0000	1.0000

48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	R	8/8	8/8	8/8	8/8	8/8
0	L	8/8	8/8	8/8	8/8	8/8
0.05		8/8	8/8	8/8	8/8	8/8
0.07		8/8	8/8	8/8	8/8	8/8
0.1		8/8	8/8	8/8	8/8	8/8
0.13		8/8	8/8	8/8	8/8	8/8
0.17		8/8	8/8	8/8	8/8	8/8

CETIS Measurement Report

Report Date: 12 Jan-16 11:33 (p 1 of 3)

Test Code: FH 15-350-0192 | 05-3985-8416

Fathead Minnow 48-h Acute Survival Test

Waypoint Analytical, Inc.

Batch ID: 06-7864-4913	Test Type: Survival (48h)	Analyst: Connie Cook
Start Date: 16 Dec-15 14:55	Protocol: EPA/821/R-02-012 (2002)	Diluent: Receiving Water
Ending Date: 18 Dec-15 16:00	Species: Pimephales promelas	Brine: Not Applicable
Duration: 49h	Source: Aquatic Biosystems, CO	Age: < 24

Sample ID: 06-5918-8728	Code: 15-350-0192	Client: Osceola Water Department
Sample Date: 15 Dec-15 07:00	Material: POTW Effluent	Project: WET Biannual Compliance Test (2nd)
Receipt Date: 15 Dec-15 13:15	Source: Osceola Water Department (AR0021580)	
Sample Age: 32h (0.9 °C)	Station:	

CETIS Measurement Report

Report Date: 12 Jan-16 11:34 (p 2 of 3)
 Test Code: FH 15-350-0192 | 05-3985-8416

Fathead Minnow 48-h Acute Survival Test

Waypoint Analytical, Inc.

Alkalinity (CaCO3)-mg/L

Conc-%	Code	1	2
0	R		
0	L	59	59
0.05			
0.07			
0.1			
0.13			
0.17			

Total Residual Chlorine-mg/L

Conc-%	Code	1	2
0	R	0	0
0	L	0	0
0.05			
0.07			
0.1			
0.13			
0.17		0	0

Conductivity-µS/cm

Conc-%	Code	1	2
0	R	383	403
0	L	174	179
0.05			
0.07			
0.1			
0.13			
0.17		532	546

Final Dissolved Oxygen-mg/L

Conc-%	Code	1	2
0	R	7.9	7.6
0	L	7.6	7.6
0.05		7.9	7.7
0.07		7.8	7.6
0.1		7.9	7.7
0.13		7.9	7.6
0.17		7.8	7.6

Initial Dissolved Oxygen-mg/L

Conc-%	Code	1	2
0	R	8.9	8.6
0	L	8.5	8.8
0.05		10.1	8.7
0.07		10.1	8.9
0.1		10.1	8.9
0.13		10.1	8.7
0.17		10.2	8.9

CETIS Measurement Report

Report Date: 12 Jan-16 11:34 (p 3 of 3)
Test Code: FH 15-350-0192 | 05-3985-8416

Fathead Minnow 48-h Acute Survival Test

Waypoint Analytical , Inc.

Hardness (CaCO3)-mg/L

Conc-%	Code	1	2
0	R	89	92
0	L		
0.05			
0.07			
0.1			
0.13			
0.17			

Final pH-Units

Conc-%	Code	1	2
0	R	7.7	7.9
0	L	7.6	7.9
0.05		7.8	7.6
0.07		7.7	7.6
0.1		7.7	7.6
0.13		7.6	7.9
0.17		7.6	7.8

Initial pH-Units

Conc-%	Code	1	2
0	R	7.6	7.7
0	L	7.6	7.7
0.05		7.6	7.7
0.07		7.7	7.7
0.1		7.7	7.7
0.13		7.7	7.7
0.17		7.7	7.7

Final Temperature-°C

Conc-%	Code	1	2
0	R	23	23
0	L	23	23
0.05		23	23
0.07		23	23
0.1		23	23
0.13		23	23
0.17		23	23

Initial Temperature-°C

Conc-%	Code	1	2
0	R	23	23
0	L	23	23
0.05		23	23
0.07		23	23
0.1		23	23
0.13		23	23
0.17		23	23

Additional Toxicity Test Information

1. Methods/Instrumentation used in chemical analysis:
 - Dissolved oxygen: 4500-O G YSI MODEL - 58
 - pH: 4500-H + B JENCO METER 6072
 - Temperature: 2550 B JENCO METER 6072
 - Conductivity: 2510 B CORNING METER 441
 - Alkalinity: 2320 B
 - Hardness: 200.7
 - Total Residual Chlorine: 4500-Cl G - REPORTED VALUE OF "0" INDICATES RESULT BELOW DETECTION LIMIT OF 0.02 mg/L
 - EPA Acute/Chronic Manual Edition and Date: EPA-821-R-02-012
OCT 2002 (Fifth edition)

2. Laboratory
 - Temperature: Average - 25 C Range - 23 - 26
 - Light Cycle: 16 hours light/ 8 hours dark
 - Light intensity: 100 foot-candles, average
 - Control Water: Dilute mineral water made with 20 % Perrier in Nanopure
 - Dilution Water: Laboratory control water
 - Pretreatment: none


3. Method 2002.0
 - Test chambers: 30 mL disposable plastic beakers
 - Volume per chamber: 15 mL
 - Number of organisms per chamber: 8
 - Number of replicates: 5
 - Food: Organisms are not fed during test.

4. Method 2000.0
 - Test chambers: 20 oz. Disposable plastic cups
 - Volume per chamber: 200 mL
 - Average number of organisms per chamber: 8
 - Number of replicates per concentration: 5
 - Food: Artemia brine shrimp hatched in laboratory during holding, prior to test.
 - Acclimation of organisms: Organisms are allowed to reach test temperature. Dilution water is added at half-hour intervals until organisms are contained in a culture media that consists of 80% dilution water.

5. Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from EPA methodology that were necessary for these tests as well as any sample manipulations which were performed, such as aeration, dechlorination with sodium thiosulfate, etc. and the justification for such manipulations or deviations. Attach additional pages as needed.
 - None

CHAIN-OF-CUSTODY

Kit ID: 0000058290
 Initiated By: Connie Cook



15-350-0192
 03334
 Osceola Water Department
 Bioassay
 12-16-2015
 14:02:07

Company Name		Company Number		Client Project Manager/Contact			Purchase Order Number		
Osceola Water Department		03334		Osceola Water Dept.			222911		
Site Name		Project Number		<input type="checkbox"/> RUSH - Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed			Method of Shipment		
Semi-annual 2 Bioassay Kit 1							<input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Courier <input type="checkbox"/> Client Drop Off Other		
LIMS Project ID		Project Manager Phone #		Project Manager Email			Site/Facility ID #		
Osceola Water - Bioassay		(870) 563-2628		b.haynes@osceolawater.com					
Date	Time	Sample ID	Matrix	Grab/Comp	# of Cont	Container Type	Preservation	Analyses	
12/14/15 12/15/15	7 ⁰⁰ AM	Outfall 001 - Composite 1	Aqueous	C	1	Plastic - Pint	HNO3 - Nitric Acid	hardness	
12/14/15 12/15/15	7 ⁰⁰ AM	Outfall 001 - Composite 1	Aqueous	C	1	Plastic - Pint	NONE	Alkalinity	
12/14/15 12/15/15	7 ⁰⁰ AM	Outfall 001 - Composite 1	Aqueous	C	1	Plastic - Quart	NONE	48 hr bioassay - renewal	
12/16/15	8 ³⁰ AM	River Water	Aqueous	C	1	Plastic - Pint	HNO3 - Nitric Acid	hardness	
12/16/15	8 ³⁰ AM	river water	Aqueous	C	1	Plastic - Pint	NONE	Alkalinity	
12/16/15	8 ³⁰ AM	river water	Aqueous	C	2	Plastic - Gallon	NONE	dilution water	

For Laboratory Use Only			Sampled by (Name - Print)		Client Remarks/Comments			
Ice	Custody Seals	Lab Comments	Brandon Haynes					
Y/N	Y/N		Relinquished by: (SIGNATURE)	Date Time	Received by: (SIGNATURE)	Date Time		
				12/16/15 1030		12/16/15 1030		
Blank/Cooler Temp			Relinquished by: (SIGNATURE)	Date Time	Received by: (SIGNATURE)	Date Time		
0.9				12/16/15 1315		12/15/16 1315		



CHAIN-OF-CUSTODY

Kit ID: 000058291
 Initiated By: Connie Cook



15-350-0192
 03334
 12-16-2015
 14:02:07

Osceola Water Department
 Bioassay

Company Name Osceola Water Department		Company Number 03334		Client Project Manager/Contact Osceola Water Dept.			Purchase Order Number 222911	
Site Name Semi-annual 2 Bioassay Kit 2		Project Number		<input type="checkbox"/> RUSH - Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed			Method of Shipment <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Courier <input type="checkbox"/> Client Drop Off Other	
LIMS Project ID Osceola Water - Bioassay		Project Manager Phone # (870) 563-2628		Project Manager Email bhaynes58@yahoo.com			Site/Facility ID #	
Date	Time	Sample ID	Matrix	Grab/Comp	# of Cont	Container Type	Preservation	Analyses
12/15/15 12/16/15	7:00 AM	Outfall 001 composite 2	Aqueous	C	1	Plastic - Pint	HNO3 - Nitric Acid	hardness
12/15/15 12/16/15	7:00 AM	Outfall 001 Composite 2	Aqueous	C	1	Plastic - Pint	NONE	Alkalinity
12/15/15 12/16/15	7:00 AM	Outfall 001 Composite 2	Aqueous	C	1	Plastic - Quart	NONE	48 hr bioassay - renewal
12/16/15	8:30 AM	River Water	Aqueous	C	1	Plastic - Pint	HNO3 - Nitric Acid	hardness
12/16/15	8:30 AM	river water	Aqueous	C	1	Plastic - Pint	NONE	Alkalinity
12/16/15	8:30 AM	river water	Aqueous	C	2	Plastic - Gallon	NONE	dilution water

For Laboratory Use Only			Sampled by (Name - Print)		Client Remarks/Comments			
Ice	Custody	Lab Comments	Brandon Haynes					
Seals	Y/N		Relinquished by: (SIGNATURE)		Date Time	Received by: (SIGNATURE)	Date Time	
Blank/ Cooler Temp			BCH		12/16/15 10:30	Felton	12/16/15 10:30	
			Relinquished by: (SIGNATURE)		Date Time	Received by: (SIGNATURE)	Date Time	
			Relinquished by: (SIGNATURE)		Date Time	Received by: (SIGNATURE)	Date Time	
			Felton		12/16/15 13:15	Felton	12/16/15 13:15	

01/12/2016

Osceola Water Department
Mr. Brandon Haynes
PO Box 443
Osceola, AR, 72370

Ref: Analytical Testing
ETC Report Number: 15—350-0192
Client Project Description: Bioassay

Dear Mr. Brandon Haynes

The results of this WET (Whole Effluent Toxicity) test are acceptable according to test review criteria. There were no significant deficiencies found in sample handling, test performance, or reporting. The test results are within the limits established by your NPDES permit and were entered into the permittee's records in the database.

Results: NOEL/CV = 0.17%
Permit Limit: 0.13%

All statistical interpretations generated by CETIS - Comprehensive Environmental Toxicity Information System (v.1.8.6.1). CETIS created by Tidepool Scientific Software


Respectfully,



Connie Cook
Lab Supervisor

City of Osceola
@ Brandon Haynes
P.O. Box 443
303 West Hale
Osceola, AR 72370



Hasler
01/20/2016
US POSTAGE \$08.11⁰

ZIP 72370
011D11627215



ADEQ
Arkansas Department of Environmental Quality
Water Enforcement Branch
5301 N. Shore Drive
North Little Rock, Arkansas 72118-5317

