

Arkansas Analytical, Inc.

Toxicity Test Results

CITY OF MONTICELLO-EAST PLANT
NPDES PERMIT NUMBER: AR0021831
Third Quarter 2023
AFIN # 22-00037

Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test
Test 1000.0

Ceriodaphnia dubia, Survival and Reproduction Test
Test 1002.0

Prepared for: **Jason Akers**
City of Monticello
P.O Box 505
Monticello, AR 71655

Prepared by: Arkansas Analytical, Inc.
8100 National Drive
Little Rock, Arkansas 72209
Lab Number K2307003

Tuesday, August 01, 2023

Plant Location

The plant is located in Monticello, Arkansas, North on Highway 83, approximately 1.5 miles to County Road 80 East in Section 18, Township 12 South, Range 6 West in Drew County Arkansas.

Test Methods

EPA Method 1000.0 *Pimephales promelas*, Larval survival and growth test

- Test chambers: 500 mL plastic cups
- Test solution volume: 250 mL
- Number of test organisms per chamber: 10
- Number of replicates per concentration: 5
- Test temperature 25°C ± 1°C
- Test concentrations: 0%, 19%, 25%, 33%, 44%, 59%
- Dilution water: Moderately hard synthetic
- No deviation from method

EPA Method 1002.0 *Ceriodaphnia dubia*, Survival and reproduction test

- Test chambers: 30 mL plastic cups
- Test solution volume: 15 mL
- Number of test organisms per chamber: 1
- Number of replicates per concentration: 10
- Test temperature 25°C ± 1°C
- Test concentrations: 0%, 19%, 25%, 33%, 44%, 59%
- Dilution water: Moderately hard synthetic
- No deviation from method

Note: Due to cessation of flow, only one sample was used for the duration of the test.

Reference Toxicant Data

REFERENCE TOXICANT (Potassium Chloride)

<i>Ceriodaphnia dubia</i> 6/26/23-7/3/23		<i>Pimephales promelas</i> 6/26/23-7/3/23	
NOEC Survival:	250 ppm KCl	NOEC Survival:	500 ppm KCl
LOEC Survival:	500 ppm KCl	LOEC Survival:	1000 ppm KCl
NOEC Reproduction:	250 ppm KCl	NOEC Growth:	500 ppm KCl
LOEC Reproduction:	500 ppm KCl	LOEC Growth:	1000 ppm KCl

Summary of Results

City of Monticello - East Plant

<i>Ceriodaphnia dubia</i>		<i>Pimephales promelas</i>	
NOEC Survival Parameter: TOP3B	59%	NOEC Survival Parameter: TOP6C	59%
Pass/Fail Survival Parameter: TLP3B	Pass	Pass/Fail Survival Parameter: TLP6C	Pass
NOEC Reproduction Parameter: TPP3B	59%	NOEC Growth Parameter: TPP6C	59%
Pass/Fail Reproduction Parameter: TGP3B	Pass	Pass/Fail Growth Parameter: TGP6C	Pass
%CV Reproduction Parameter: TQP3B	30.8%	%CV Growth Parameter: TQP6C	9.07%
PMSD Reproduction	43.2%	PMSD Growth	18.3%

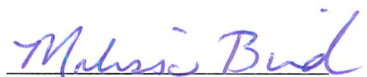
Conclusion

Pimephales promelas, (Method 1000.0): The permit issued to the City of Monticello, specifies that the **critical dilution is 44% effluent**. The effluent samples did not exhibit lethal or sublethal effects at the critical dilution, and, as such, passed both portions of the test.

Ceriodaphnia dubia, (Method 1002.0): The permit issued to the City of Monticello, specifies that the **critical dilution is 44% effluent**. The effluent samples **did not** exhibit lethal or sublethal effects at the critical dilution, and, as such, **passed** both portions of the test.

Biomonitoring Analysts: Melissa Bird, Jason Bird, Noah Limbaugh, Justin Yeatts

Reviewed by:


Melissa Bird

Appendices

Appendix A.....	Chains of custody
Appendix B.....	Fathead minnow data & statistics
Appendix C.....	<i>Ceriodaphnia dubia</i> data & statistics
Appendix D.....	Water chemistry data
Appendix E.....	Reference toxicant control charts



8100 National Dr.
 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:			
City of Monticello		City of Monticello		East Pond Effluent Sample		1 Day (100%)		1. Cool, 6 Degrees Centigrade			
203 West Gaines		P.O. Box 505		AR0021831 -- Toxicity Sample		2 Day (50%)		2. Sulfuric Acid (H ₂ SO ₄), pH < 2			
Monticello, AR 71657		Monticello, AR 71655		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO ₃), pH < 2			
Attn: Jason Akers		Telephone: 870-723-2898		Routine		TEST PARAMETERS		6. Sodium Hydroxide (NaOH), pH > 12			
Email: jakers@cityofmonticelloar.com		Preservative Code: P		Bottle Type: P		1		Arkansas Analytical Work Order Number: K1307003A			
Bottle Type: P		V = Septum; A = Amber		Sampler(s) Signature: <i>Kevin R. Donaldson Jr.</i>		Sampler(s) Printed: Kevin R. Donaldson Jr.		Chronic Toxicity			
Field Number	SAMPLE COLLECTION Dates/	Times	Grab	Comp	Number of Bottles	Sample Matrix	Water	Outfall	IDENTIFICATION/ DESCRIPTION	SAMPLE	REMARKS / SAMPLE COMMENTS
	7-13-23	9:00am	X		3			001			
1. Relinquished by: (Signature) <i>Kevin R. Donaldson Jr.</i>		Date/Time 7-13-23 12:00pm		2. Received by: (Signature) <i>Kyle Jackson</i>		Date/Time 7-13-23 1520		3. Relinquished by: (Signature) <i>Kyle Jackson</i>		Date/Time 7-13-23 1520	
4. Received by lab: (Signature) <i>Kataraka Howard</i>		5. RECEIVED ON ICE: Yes ___ No ___		6. TEMPERATURE ON RECEIPT: 5 °C		7. TEMPERATURE GUN ID: HHT#		8. SAMPLE CONDITION UPON RECEIPT IN LAB		9. SAMPLE CONDITION UPON RECEIPT IN LAB	
1. CUSTODY SEALS: Yes ___ No ___		2. CONTAINERS CORRECT: Yes ___ No ___		3. COC/LABELS AGREE: Yes ___ No ___		4. RECEIVED ON ICE: Yes ___ No ___		5. TEMPERATURE ON RECEIPT: 5 °C		6. TEMPERATURE GUN ID: HHT#	
7. SAMPLE CONDITION UPON RECEIPT IN LAB		8. SAMPLE CONDITION UPON RECEIPT IN LAB		9. SAMPLE CONDITION UPON RECEIPT IN LAB		10. SAMPLE CONDITION UPON RECEIPT IN LAB		11. SAMPLE CONDITION UPON RECEIPT IN LAB		12. SAMPLE CONDITION UPON RECEIPT IN LAB	

CETIS Summary Report

Report Date: 01 Aug-23 13:58 (p 1 of 2)
 Test Code/ID: K2307003FH / 00-6626-9215

Fathead Minnow 7-d Larval Survival and Growth Test

Arkansas Analytical

Batch ID: 16-0979-7073	Test Type: Growth-Survival (7d)	Analyst: Melissa Bird
Start Date: 14 Jul-23 14:20	Protocol: EPA/821/R-02-013 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 21 Jul-23 14:30	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 0h	Taxon: Actinopterygii	Source: Aquatox, AR Age: <24
Sample ID: 20-7287-1939	Code: K2307003FH	Project: WET Quarterly Compliance Test (3Q)
Sample Date: 13 Jul-23 09:00	Material: Industrial Effluent	Source: Monticello East (AR0021831)
Receipt Date: 13 Jul-23 15:20	CAS (PC):	Station:
Sample Age: 29h (1 °C)	Client: Monticello East	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	TU	PMSD	S
03-1929-4041	7d Survival Rate	Dunnett Multiple Comparison Test	59	>59	n/a	1.695	11.4%	1
00-7431-7731	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	59	>59	n/a	1.695	18.3%	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
03-1929-4041	7d Survival Rate	Control Resp	0.94	0.8	>>	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	L	5	0.9400	0.8720	1.0000	0.9000	1.0000	0.0245	0.0548	5.83%	0.00%
19		5	0.9400	0.8289	1.0000	0.8000	1.0000	0.0400	0.0894	9.52%	0.00%
25		5	0.9400	0.8720	1.0000	0.9000	1.0000	0.0245	0.0548	5.83%	0.00%
33		5	0.9200	0.8161	1.0000	0.8000	1.0000	0.0374	0.0837	9.09%	2.13%
44		5	0.9800	0.9245	1.0000	0.9000	1.0000	0.0200	0.0447	4.56%	-4.26%
59		5	0.9200	0.8161	1.0000	0.8000	1.0000	0.0374	0.0837	9.09%	2.13%

Mean Dry Weight-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	L	5	0.4848	0.4462	0.5234	0.451	0.534	0.0139	0.03108	6.41%	0.00%
19		5	0.4228	0.3238	0.5218	0.325	0.512	0.03567	0.07976	18.86%	12.79%
25		5	0.4666	0.395	0.5382	0.403	0.558	0.02579	0.05766	12.36%	3.75%
33		5	0.4394	0.3431	0.5357	0.372	0.564	0.0347	0.07759	17.66%	9.36%
44		5	0.4848	0.4302	0.5394	0.432	0.542	0.01967	0.04399	9.07%	0.00%
59		5	0.4166	0.3551	0.4781	0.343	0.471	0.02216	0.04955	11.89%	14.07%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.9000	1.0000	0.9000	1.0000	0.9000
19		1.0000	0.8000	0.9000	1.0000	1.0000
25		0.9000	0.9000	0.9000	1.0000	1.0000
33		0.9000	0.8000	1.0000	1.0000	0.9000
44		1.0000	0.9000	1.0000	1.0000	1.0000
59		0.9000	1.0000	0.8000	1.0000	0.9000

Mean Dry Weight-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.534	0.451	0.469	0.49	0.48
19		0.325	0.367	0.418	0.512	0.492
25		0.403	0.478	0.446	0.448	0.558
33		0.456	0.38	0.564	0.425	0.372
44		0.432	0.452	0.542	0.489	0.509
59		0.394	0.471	0.343	0.443	0.432

CETIS Summary Report

Report Date: 01 Aug-23 13:58 (p 2 of 2)

Test Code/ID: K2307003FH / 00-6626-9215

Fathead Minnow 7-d Larval Survival and Growth Test

Arkansas Analytical

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	9/10	10/10	9/10	10/10	9/10
19		10/10	8/10	9/10	10/10	10/10
25		9/10	9/10	9/10	10/10	10/10
33		9/10	8/10	10/10	10/10	9/10
44		10/10	9/10	10/10	10/10	10/10
59		9/10	10/10	8/10	10/10	9/10

CETIS Summary Report

Report Date: 01 Aug-23 13:50 (p 1 of 2)
 Test Code/ID: K2307003CD / 06-1592-7893

Ceriodaphnia 7-d Survival and Reproduction Test

Arkansas Analytical

Batch ID: 02-8056-1386	Test Type: Reproduction-Survival (7d)	Analyst: Melissa Bird
Start Date: 14 Jul-23 12:00	Protocol: EPA/821/R-02-013 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 21 Jul-23 12:00	Species: Ceriodaphnia dubia	Brine: Not Applicable
Test Length: 7d 0h	Taxon: Branchiopoda	Source: In-House Culture Age: <24
Sample ID: 18-8108-1003	Code: K2307003CD	Project: WET Quarterly Compliance Test (3Q)
Sample Date: 13 Jul-23 09:00	Material: Industrial Effluent	Source: Monticello East (AR0021831)
Receipt Date: 13 Jul-23 15:20	CAS (PC):	Station:
Sample Age: 27h (1 °C)	Client: Monticello East	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	TU	PMSD	S
03-1654-0615	7d Survival Rate	Fisher Exact/Bonferroni-Holm Test	59	>59	n/a	1.695	n/a	1
15-6494-2104	Reproduction	Steel Many-One Rank Sum Test	59	>59	n/a	1.695	43.2%	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
03-1654-0615	7d Survival Rate	Control Resp	1	0.8	>>	Yes	Passes Criteria
15-6494-2104	Reproduction	Control Resp	16.7	15	>>	Yes	Passes Criteria
15-6494-2104	Reproduction	PMSD	0.4317	0.13	0.47	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	L	10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
25		10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
33		10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
44		10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
59		10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	L	10	16.7	13.82	19.58	10	22	1.274	4.029	24.13%	0.00%
19		10	20.8	14.26	27.34	11	42	2.89	9.138	43.93%	-24.55%
25		10	22	16.92	27.08	13	39	2.246	7.102	32.28%	-31.74%
33		10	21.8	14.66	28.94	12	45	3.155	9.976	45.76%	-30.54%
44		10	19.4	15.13	23.67	10	29	1.887	5.967	30.76%	-16.17%
59		10	19.6	17.09	22.11	15	25	1.108	3.502	17.87%	-17.37%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	L	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
33		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
44		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
59		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Reproduction Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	L	14	22	13	19	16	20	22	17	14	10
19		20	11	16	42	21	30	19	13	15	21
25		18	24	18	23	39	25	13	19	24	17
33		12	19	21	45	32	20	16	24	14	15
44		19	16	15	20	15	29	26	26	10	18
59		22	23	23	15	18	19	15	25	17	19

CETIS Summary Report

Report Date: 01 Aug-23 13:50 (p 2 of 2)
Test Code/ID: K2307003CD / 06-1592-7893

Ceriodaphnia 7-d Survival and Reproduction Test

Arkansas Analytical

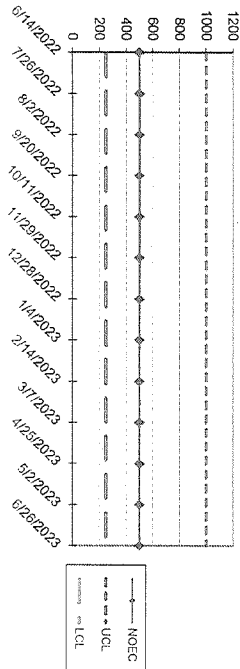
7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	L	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
19		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
33		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
44		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
59		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

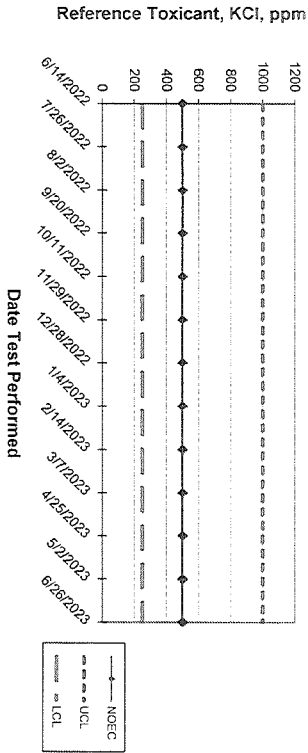
CHEMICAL DATA SHEET FOR CHRONIC TOXICITY TESTING									
Lab # / Sample ID <i>62307003</i>					Fathead Minnow				
Client: <i>Case Monticello</i>					Test Start (Date/Time) <i>7-14-23 1420</i>				
					Test End (Date/Time) <i>7-21-23 1430</i>				
Day of Test									
		1	2	3	4	5	6	7	notes/remarks
Control	<i>MHS 091</i>	<i>7-14</i>	<i>7-15</i>	<i>7-16</i>	<i>7-17</i>	<i>7-18</i>	<i>7-19</i>	<i>7-20</i>	
D.O. (mg/L)	INITIAL	8.9	8.8	8.9	8.9	8.8	8.8	8.8	
	FINAL	7.0	7.2	7.1	7.1	6.5	6.6	7.7	
pH (s.u.)	INITIAL	8.2	8.0	8.1	8.1	8.1	8.2	8.0	
	FINAL	7.6	7.9	7.9	7.7	7.3	7.6	7.7	
temp (C)	INITIAL	23	21	21	21	22	23	22	
	FINAL	25	25	22	22	24	22	23	
ALKALINITY (mg/L)		64							>
HARDNESS (mg/L)		73							>
CONDUCTIVITY (umhos/cm)		300							>
CHLORINE (mg/L)		0.05							>
CONC: <i>19%</i>									
D.O. (mg/L)	INITIAL	8.9	8.8	8.9	9.1	8.7	9.6	8.8	
	FINAL	7.2	7.2	7.2	6.7	5.6	7.7	7.5	
pH (s.u.)	INITIAL	8.4	8.1	8.2	8.4	8.4	8.5	8.4	
	FINAL	7.7	7.9	7.8	7.7	7.5	7.7	7.8	
temp (C)	INITIAL	22	21	21	21	22	23	23	
	FINAL	25	25	22	22	24	22	23	
CONC: <i>25%</i>									
D.O. (mg/L)	INITIAL	8.8	8.8	8.8	9.1	8.7	9.1	8.8	
	FINAL	7.4	7.3	7.5	6.4	6.5	6.6	7.4	
pH (mg/L)	INITIAL	8.6	8.3	8.4	8.6	8.5	8.6	8.5	
	FINAL	7.8	7.8	7.8	7.6	7.7	7.7	7.7	
temp (C)	INITIAL	22	21	21	21	22	23	24	
	FINAL	25	25	22	22	24	22	23	
CONC: <i>33%</i>									
D.O. (mg/L)	INITIAL	8.8	8.8	8.7	9.4	8.7	9.1	8.7	
	FINAL	7.0	7.3	7.3	6.7	6.6	6.7	7.4	
pH (s.u.)	INITIAL	8.7	8.4	8.5	8.9	8.6	8.7	8.6	
	FINAL	7.7	7.8	7.8	7.7	7.7	7.7	7.7	
temp (C)	INITIAL	22	22	21	21	22	24	24	
	FINAL	25	25	22	22	24	22	23	
CONC: <i>44%</i>									
D.O. (mg/L)	INITIAL	8.7	8.8	8.7	9.4	8.7	9.2	8.7	
	FINAL	6.9	7.2	7.4	6.2	6.5	6.9	7.0	
pH (s.u.)	INITIAL	8.8	8.4	8.6	8.8	8.7	8.7	8.7	
	FINAL	7.7	7.6	7.8	7.6	7.7	7.7	7.6	
temp (C)	INITIAL	22	22	22	21	23	24	24	
	FINAL	25	25	22	22	24	22	23	
CONC: <i>59%</i>									
D.O. (mg/L)	INITIAL	8.6	8.8	8.6	9.4	8.6	9.4	8.6	
	FINAL	7.1	7.1	7.5	6.7	6.6	6.6	7.5	
pH (s.u.)	INITIAL	9.0	8.45	8.8	8.9	8.8	8.9	8.8	
	FINAL	7.7	7.6	7.9	7.7	7.7	7.7	7.8	
temp (C)	INITIAL	22	22	22	22	23	25	25	
	FINAL	25	25	22	23	24	23	23	
CONC: <i>A</i>									
ALKALINITY (mg/L)		46							>
HARDNESS (mg/L)		34							>
CONDUCTIVITY (umhos/cm)		228							>
CHLORINE (mg/L)		0.05							>

CHEMICAL DATA SHEET FOR CHRONIC TOXICITY TESTING							Ceriodaphnia Dubia			
Lab #/ Sample ID			K2307003			Test Start (Date/Time)			7-14-23, 1200	
Client:			East Monticello			Test End (Date/Time)			7-21-23, 1200	
			Day of Test							
			1	2	3	4	5	6	7	notes/remarks
Control	WHS091		7-14	7-15	7-16	7-17	7-18	7-19	7-20	
D.O. (mg/L)	INITIAL		8.9	8.8	8.9	8.9	8.6	8.8	8.8	
	FINAL		7.9	8.1	8.3	7.5	7.5	6.5	7.4	
pH (s.u.)	INITIAL		8.2	8.0	8.1	8.1	8.1	8.2	8.0	
	FINAL		7.8	7.9	8.0	8.0	7.9	7.6	7.9	
temp (C)	INITIAL		23	21	21	21	22	23	22	
	FINAL		25	25	24	25	21	24	23	
ALKALINITY (mg/L)			66							>
HARDNESS (mg/L)			73							>
CONDUCTIVITY (umhos/cm)			300							>
CHLORINE (mg/L)			60.05							>
CONC:			19%							
D.O. (mg/L)	INITIAL		8.79	8.8	8.7	9.1	8.7	9.0	8.8	
	FINAL		7.9	8.1	8.4	7.3	7.3	6.8	7.6	
pH (s.u.)	INITIAL		8.41	8.1	8.2	8.4	8.4	8.5	8.4	
	FINAL		7.8	8.0	8.1	8.0	8.0	7.7	7.9	
temp (C)	INITIAL		21.8	21	21	21	22	23	23	
	FINAL		25	25	24	25	21	23	23	
CONC:			25%							
D.O. (mg/L)	INITIAL		8.77	8.8	8.8	9.1	8.7	9.1	8.8	
	FINAL		8.0	8.1	8.5	7.6	8.1	6.7	7.6	
pH (mg/L)	INITIAL		8.56	8.3	8.4	8.5	8.5	8.6	8.5	
	FINAL		7.8	8.0	8.1	8.0	8.0	7.7	7.9	
temp (C)	INITIAL		21.7	21	21	21	22	23	24	
	FINAL		25	25	24	25	21	23	23	
CONC:			33%							
D.O. (mg/L)	INITIAL		8.76	8.8	8.7	9.4	8.7	9.1	8.7	
	FINAL		8.1	8.0	8.4	7.8	8.2	6.8	7.8	
pH (s.u.)	INITIAL		8.67	8.4	8.5	8.9	8.6	8.7	8.6	
	FINAL		7.9	8.1	8.1	8.0	8.0	7.7	7.9	
temp (C)	INITIAL		21.8	22	21	21	22	24	24	
	FINAL		25	25	24	25	21	24	23	
CONC:			44%							
D.O. (mg/L)	INITIAL		8.71	8.8	8.7	9.4	8.7	9.2	8.7	
	FINAL		8.0	7.9	8.4	7.7	8.1	6.6	7.7	
pH (s.u.)	INITIAL		8.81	8.4	8.6	8.8	8.7	8.8	8.7	
	FINAL		7.9	8.1	8.1	8.0	8.0	7.6	7.9	
temp (C)	INITIAL		22.0	22	22	21	23	24	24	
	FINAL		25	25	24	25	21	22	23	
CONC:			59%							
D.O. (mg/L)	INITIAL		8.65	8.7	8.6	9.4	8.6	9.4	8.6	
	FINAL		8.1	7.9	8.3	7.7	8.1	6.6	7.7	
pH (s.u.)	INITIAL		8.97	8.5	8.8	8.9	8.8	8.9	8.8	
	FINAL		7.9	8.1	8.1	8.0	8.0	7.0	7.9	
temp (C)	INITIAL		22.1	22	22	22	23	25	25	
	FINAL		25	25	25	25	21	23	23	
CONC:			A							
ALKALINITY (mg/L)			46							>
HARDNESS (mg/L)			34							>
CONDUCTIVITY (umhos/cm)			22.8							>
CHLORINE (mg/L)			60.05							>

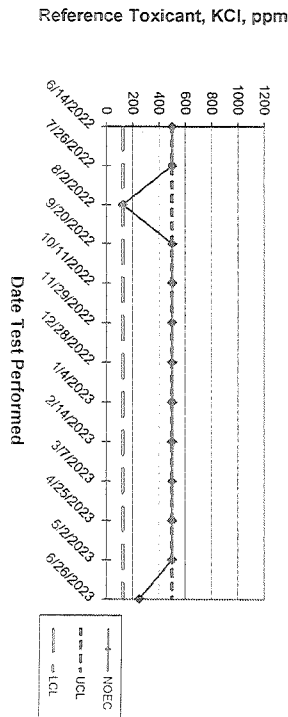
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