



## CITY OF ADAMSVILLE

Post Office Box 301 • Adamsville, TN 38310 • (731) 632-1401

**DAVID LECKNER**

**Mayor**

JACKIE HAMM  
EMILY HOPPER  
BRIAN BURKS  
JENNIFER FRAZIER

**Commissioners**

**KARA HILL**  
City Administrator

February 6<sup>th</sup>, 2023

Ms. Maybelle Sparks  
Tennessee Department of Environment and Conservation  
Division of Water Resources  
Water-Based Systems  
William R. Snodgrass – Tennessee Tower  
312 Rosa Parks Avenue, 11<sup>th</sup> Floor  
Nashville, Tennessee 37243-1102

Re: NPDES Permit No. TN0064785  
Adamsville, Tennessee

Dear Ms. Sparks:

Enclosed please find two copies of the application for the permit renewal of NPDES Np. TN0064785 for the City of Adamsville, Tennessee.

If you have any questions, please call either Jim Cooper or Garrett Pettigrew at 731-414-1167 or 731-439-5863.

Sincerely,

THE CITY OF ADAMSVILLE, TENNESSEE

Scott Klinck  
Public Works Director

Enclosures

cc: Mr. Garrett Pettigrew, Wastewater Director  
Mr. Jim Cooper, (Consultant)



Form 2A NPDES		<b>U.S. Environmental Protection Agency</b> <b>Application for NPDES Permit to Discharge Wastewater</b> <b>NEW AND EXISTING PUBLICLY OWNED TREATMENT WORKS</b>
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**SECTION 1. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS (40 CFR 122.21(j)(1) and (9))**

<b>Facility Information</b>	1.1	Facility name Adamsville STP			
		Mailing address (street or P.O. box) P.O. Box 301			
		City or town Adamsville	State TN	ZIP code 8310	
		Contact name (first and last) Scott Klinck	Title Public Works Director	Phone number (731) 610-8983	Email address sklinck@cityofadamsville.com
		Location address (street, route number, or other specific identifier) <input type="checkbox"/> Same as mailing address Lagoon Street			
		City or town Adamsville	State TN	ZIP code 38310	
		1.2	Is this application for a facility that has yet to commence discharge? <input type="checkbox"/> Yes → See instructions on data submission requirements for new dischargers. <input checked="" type="checkbox"/> No		
<b>Applicant Information</b>	1.3	Is applicant different from entity listed under Item 1.1 above? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.4.			
		Applicant name			
		Applicant address (street or P.O. box)			
		City or town	State	ZIP code	
		Contact name (first and last)	Title	Phone number	Email address
	1.4	Is the applicant the facility's owner, operator, or both? (Check only one response.) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Both			
	1.5	To which entity should the NPDES permitting authority send correspondence? (Check only one response.) <input type="checkbox"/> Facility <input type="checkbox"/> Applicant <input checked="" type="checkbox"/> Facility and applicant (they are one and the same)			
<b>Existing Environmental Permits</b>	1.6	Indicate below any existing environmental permits. (Check all that apply and print or type the corresponding permit number for each.)			
		<b>Existing Environmental Permits</b>			
		<input checked="" type="checkbox"/> NPDES (discharges to surface water)	<input type="checkbox"/> RCRA (hazardous waste)	<input type="checkbox"/> UIC (underground injection control)	
		<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)	
	<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify)		





EPA Identification Number

NPDES Permit Number

Facility Name

Form Approved 03/05/19

TN0064785

Adamsille STP

OMB No. 2040-0004

Collection System and Population Served	1.7	Provide the collection system information requested below for the treatment works.				
		<b>Municipality Served</b>	<b>Population Served</b>	<b>Collection System Type (indicate percentage)</b>		<b>Ownership Status</b>
		2,204	2,204	<u>100</u> % separate sanitary sewer	<input checked="" type="checkbox"/> Own	<input checked="" type="checkbox"/> Maintain
				____ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				____ % separate sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				____ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				____ % separate sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
			____ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			____ % separate sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			____ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
		<b>Total Population Served</b>	2,204			
				<b>Separate Sanitary Sewer System</b>	<b>Combined Storm and Sanitary Sewer</b>	
		Total percentage of each type of sewer line (in miles)		100 %	0 %	
Indian Country	1.8	Is the treatment works located in Indian Country?				
		<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No		
Indian Country	1.9	Does the facility discharge to a receiving water that flows through Indian Country?				
		<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No		
Design and Actual Flow Rates	1.10	Provide design and actual flow rates in the designated spaces.			<b>Design Flow Rate</b>	
					0.299 mgd	
		<b>Annual Average Flow Rates (Actual)</b>				
		<b>Two Years Ago</b>		<b>Last Year</b>		<b>This Year</b>
		1.084 mgd		1.186 mgd		1.397 mgd
		<b>Maximum Daily Flow Rates (Actual)</b>				
<b>Two Years Ago</b>		<b>Last Year</b>		<b>This Year</b>		
1.34 mgd		1.07 mgd		1.261 mgd		
Discharge Points by Type	1.11	Provide the total number of effluent discharge points to waters of the United States by type.				
		<b>Total Number of Effluent Discharge Points by Type</b>				
		<b>Treated Effluent</b>	<b>Untreated Effluent</b>	<b>Combined Sewer Overflows</b>	<b>Bypasses</b>	<b>Constructed Emergency Overflows</b>
		1				

**Outfalls Other Than to Waters of the United States**

1.12 Does the POTW discharge wastewater to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the United States?  
 Yes  No → SKIP to Item 1.14.

1.13 Provide the location of each surface impoundment and associated discharge information in the table below.

**Surface Impoundment Location and Discharge Data**

Location	Average Daily Volume Discharged to Surface Impoundment	Continuous or Intermittent (check one)
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

1.14 Is wastewater applied to land?  
 Yes  No → SKIP to Item 1.16.

1.15 Provide the land application site and discharge data requested below.

**Land Application Site and Discharge Data**

Location	Size	Average Daily Volume Applied	Continuous or Intermittent (check one)
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

1.16 Is effluent transported to another facility for treatment prior to discharge?  
 Yes  No → SKIP to Item 1.21.

1.17 Describe the means by which the effluent is transported (e.g., tank truck, pipe).

1.18 Is the effluent transported by a party other than the applicant?  
 Yes  No → SKIP to Item 1.20.

1.19 Provide information on the transporter below.

**Transporter Data**

Entity name	Mailing address (street or P.O. box)	
City or town	State	ZIP code
Contact name (first and last)	Title	
Phone number	Email address	

**Outfalls and Other Discharge or Disposal Methods**



Outfalls and Other Discharge or Disposal Methods Continued

1.20 In the table below, indicate the name, address, contact information, NPDES number, and average daily flow rate of the receiving facility.

Receiving Facility Data				
Facility name			Mailing address (street or P.O. box)	
City or town		State	ZIP code	
Contact name (first and last)			Title	
Phone number			Email address	
NPDES number of receiving facility (if any) <input type="checkbox"/> None			Average daily flow rate <span style="float: right;">mgd</span>	

1.21 Is the wastewater disposed of in a manner other than those already mentioned in Items 1.14 through 1.21 that do not have outlets to waters of the United States (e.g., underground percolation, underground injection)?  
 Yes  No → SKIP to Item 1.23.

1.22 Provide information in the table below on these other disposal methods.

Information on Other Disposal Methods				
Disposal Method Description	Location of Disposal Site	Size of Disposal Site	Annual Average Daily Discharge Volume	Continuous or Intermittent (check one)
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

Variance Requests

1.23 Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(n)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)

Discharges into marine waters (CWA Section 301(h))  Water quality related effluent limitation (CWA Section 302(b)(2))

Not applicable

Contractor Information

1.24 Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?  
 Yes  No → SKIP to Section 2.

1.25 Provide location and contact information for each contractor in addition to a description of the contractor's operational and maintenance responsibilities.

Contractor Information			
	Contractor 1	Contractor 2	Contractor 3
Contractor name (company name)			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Contact name (first and last)			
Phone number			
Email address			
Operational and maintenance responsibilities of contractor			

**SECTION 2. ADDITIONAL INFORMATION (40 CFR 122.21(j)(1) and (2))**

Design Flow	<b>Outfalls to Waters of the United States</b>						
	2.1	Does the treatment works have a design flow greater than or equal to 0.1 mgd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 3.					
Inflow and Infiltration	2.2	Provide the treatment works' current average daily volume of inflow and infiltration.	Average Daily Volume of Inflow and Infiltration gpd				
	Indicate the steps the facility is taking to minimize inflow and infiltration.						
Topographic Map	2.3	Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Flow Diagram	2.4	Have you attached a process flow diagram or schematic to this application that contains all the required information? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Scheduled Improvements and Schedules of Implementation	2.5	Are improvements to the facility scheduled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 3.					
	Briefly list and describe the scheduled improvements.						
	1.						
	2.						
	3.						
	4.						
Scheduled Improvements and Schedules of Implementation	2.6	Provide scheduled or actual dates of completion for improvements.					
	<b>Scheduled or Actual Dates of Completion for Improvements</b>						
		Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
		1.					
		2.					
		3.					
	4.						
Scheduled Improvements and Schedules of Implementation	2.7	Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None required or applicable					
	Explanation:						



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**SECTION 3. INFORMATION ON EFFLUENT DISCHARGES (40 CFR 122.21(j)(3) to (5))**

Description of Outfalls	3.1	Provide the following information for each outfall. (Attach additional sheets if you have more than three outfalls.)		
		Outfall Number _____	Outfall Number _____	Outfall Number _____
	State	001		
	County	McNairy		
	City or town	Adamsville		
	Distance from shore	1 ft.	ft.	ft.
	Depth below surface	0 ft.	ft.	ft.
	Average daily flow rate	0.221 mgd	mgd	mgd
	Latitude	35° 12' 47"	° ' "	° ' "
	Longitude	88° 23' 52"	° ' "	° ' "
Seasonal or Periodic Discharge Data	3.2	Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.4.		
	3.3	If so, provide the following information for each applicable outfall.		
		Outfall Number _____	Outfall Number _____	Outfall Number _____
	Number of times per year discharge occurs	Depends on stream flow rate		
	Average duration of each discharge (specify units)	Discharge is proportional to stream flow rate.		
Average flow of each discharge	mgd	mgd	mgd	
Months in which discharge occurs	Depends on stream flow			
Diffuser Type	3.4	Are any of the outfalls listed under Item 3.1 equipped with a diffuser? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 3.6.		
	3.5	Briefly describe the diffuser type at each applicable outfall.		
		Outfall Number _____	Outfall Number _____	Outfall Number _____
Waters of the U.S.	3.6	Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 6.		

<b>Receiving Water Description</b>	3.7	Provide the receiving water and related information (if known) for each outfall.			
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	
	Receiving water name	Snake Creek mile 8.0			
	Name of watershed, river, or stream system	Tennessee Western valley	Beech		
	U.S. Soil Conservation Service 14-digit watershed code				
	Name of state management/river basin				
	U.S. Geological Survey 8-digit hydrologic cataloging unit code				
	Critical low flow (acute)		cfs	cfs	cfs
	Critical low flow (chronic)		cfs	cfs	cfs
	Total hardness at critical low flow		mg/L of CaCO <sub>3</sub>	mg/L of CaCO <sub>3</sub>	mg/L of CaCO <sub>3</sub>
<b>Treatment Description</b>	3.8	Provide the following information describing the treatment provided for discharges from each outfall.			
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	
	Highest Level of Treatment (check all that apply per outfall)	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify)	
	Design Removal Rates by Outfall				
	BOD <sub>5</sub> or CBOD <sub>5</sub>	65 %	%	%	%
	TSS	N/A %	%	%	%
	Phosphorus	<input checked="" type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %
	Nitrogen	<input checked="" type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %
Other (specify)	<input checked="" type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	



Treatment Description Continued

3.9 Describe the type of disinfection used for the effluent from each outfall in the table below. If disinfection varies by season, describe below.  
NONE

	Outfall Number _____	Outfall Number _____	Outfall Number _____
Disinfection type	NONE		
Seasons used	N/A		
Dechlorination used?	<input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No

Effluent Testing Data

3.10 Have you completed monitoring for all Table A parameters and attached the results to the application package?  
 Yes  No

3.11 Have you conducted any WET tests during the 4.5 years prior to the date of the application on any of the facility's discharges or on any receiving water near the discharge points?  
 Yes  No → SKIP to Item 3.13.

3.12 Indicate the number of acute and chronic WET tests conducted since the last permit reissuance of the facility's discharges by outfall number or of the receiving water near the discharge points.

	Outfall Number <u>001</u>		Outfall Number _____		Outfall Number _____	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Number of tests of discharge water	5					
Number of tests of receiving water						

3.13 Does the treatment works have a design flow greater than or equal to 0.1 mgd?  
 Yes  No → SKIP to Item 3.16.

3.14 Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent?  
 Yes → Complete Table B, including chlorine.  No → Complete Table B, omitting chlorine.

3.15 Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package?  
 Yes  No

3.16 Does one or more of the following conditions apply?

- The facility has a design flow greater than or equal to 1 mgd.
- The POTW has an approved pretreatment program or is required to develop such a program.
- The NPDES permitting authority has informed the POTW that it must sample for the parameters in Table C, must sample other additional parameters (Table D), or submit the results of WET tests for acute or chronic toxicity for each of its discharge outfalls (Table E).

Yes → Complete Tables C, D, and E as applicable.  No → SKIP to Section 4.

3.17 Have you completed monitoring for all applicable Table C pollutants and attached the results to this application package?  
 Yes  No

3.18 Have you completed monitoring for all applicable Table D pollutants required by your NPDES permitting authority and attached the results to this application package?  
 Yes  No additional sampling required by NPDES permitting authority.

<b>Effluent Testing Data Continued</b>	3.19	Has the POTW conducted either (1) minimum of four quarterly WET tests for one year preceding this permit application or (2) at least four annual WET tests in the past 4.5 years?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Complete tests and Table E and SKIP to Item 3.26.	
	3.20	Have you previously submitted the results of the above tests to your NPDES permitting authority?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Provide results in Table E and SKIP to Item 3.26.	
	3.21	Indicate the dates the data were submitted to your NPDES permitting authority and provide a summary of the results.				
		Date(s) Submitted (MM/DD/YYYY)	Summary of Results			
			4/10/2018 passed 5/8/2019 passed 4/22/2020 passed 4/5/2021 passed 4/8/2022 passed			
	3.22	Regardless of how you provided your WET testing data to the NPDES permitting authority, did any of the tests result in toxicity?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	SKIP to Item 3.26.	
	3.23	Describe the cause(s) of the toxicity:				
	3.24	Has the treatment works conducted a toxicity reduction evaluation?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	SKIP to Item 3.26.	
3.25	Provide details of any toxicity reduction evaluations conducted.					
3.26	Have you completed Table E for all applicable outfalls and attached the results to the application package?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> Not applicable	because previously submitted information to the NPDES permitting authority.		

**SECTION 4. INDUSTRIAL DISCHARGES AND HAZARDOUS WASTES (40 CFR 122.21(j)(6) and (7))**

<b>Industrial Discharges and Hazardous Wastes</b>	4.1	Does the POTW receive discharges from SIUs or NSCIUs?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	SKIP to Item 4.7.	
	4.2	Indicate the number of SIUs and NSCIUs that discharge to the POTW.				
		Number of SIUs	Number of NSCIUs			
		2				
	4.3	Does the POTW have an approved pretreatment program?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
	4.4	Have you submitted either of the following to the NPDES permitting authority that contains information substantially identical to that required in Table F: (1) a pretreatment program annual report submitted within one year of the application or (2) a pretreatment program?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	SKIP to Item 4.6.	
4.5	Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7. Semi-Annual report dated 10/28/22					
4.6	Have you completed and attached Table F to this application package?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			



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Industrial Discharges and Hazardous Wastes Continued

4.7	Does the POTW receive, or has it been notified that it will receive, by truck, rail, or dedicated pipe, any wastes that are regulated as RCRA hazardous wastes pursuant to 40 CFR 261?			
	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No → SKIP to Item 4.9.	
4.8	If yes, provide the following information:			
	<b>Hazardous Waste Number</b>	<b>Waste Transport Method (check all that apply)</b>		<b>Annual Amount of Waste Received</b>
		<input type="checkbox"/> Truck	<input type="checkbox"/> Rail	
		<input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Other (specify) _____	
		<input type="checkbox"/> Truck	<input type="checkbox"/> Rail	
		<input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Other (specify) _____	
		<input type="checkbox"/> Truck	<input type="checkbox"/> Rail	
		<input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Other (specify) _____	
4.9	Does the POTW receive, or has it been notified that it will receive, wastewaters that originate from remedial activities, including those undertaken pursuant to CERCLA and Sections 3004(7) or 3008(h) of RCRA?			
	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No → SKIP to Section 5.	
4.10	Does the POTW receive (or expect to receive) less than 15 kilograms per month of non-acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e)?			
	<input type="checkbox"/> Yes → SKIP to Section 5.		<input type="checkbox"/> No	
4.11	Have you reported the following information in an attachment to this application: identification and description of the site(s) or facility(ies) at which the wastewater originates; the identities of the wastewater's hazardous constituents; and the extent of treatment, if any, the wastewater receives or will receive before entering the POTW?			
	<input type="checkbox"/> Yes		<input type="checkbox"/> No	

**SECTION 5. COMBINED SEWER OVERFLOWS (40 CFR 122.21(j)(8))**

CSO Map and Diagram

5.1	Does the treatment works have a combined sewer system?	
	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No → SKIP to Section 6.
5.2	Have you attached a CSO system map to this application? (See instructions for map requirements.)	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.3	Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.)	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No

<b>CSO Outfall Description</b>	5.4	For each CSO outfall, provide the following information. (Attach additional sheets as necessary.)		
		<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____
	City or town			
	State and ZIP code			
	County			
	Latitude	° ' "	° ' "	° ' "
	Longitude	° ' "	° ' "	° ' "
	Distance from shore	ft.	ft.	ft.
Depth below surface	ft.	ft.	ft.	
<b>CSO Monitoring</b>	5.5	Did the POTW monitor any of the following items in the past year for its CSO outfalls?		
		<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____
	Rainfall	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO flow volume	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO pollutant concentrations	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Receiving water quality	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO frequency	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Number of storm events	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>CSO Events in Past Year</b>	5.6	Provide the following information for each of your CSO outfalls.		
		<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____
	Number of CSO events in the past year	events	events	events
	Average duration per event	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated
	Average volume per event	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated
Minimum rainfall causing a CSO event in last year	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	

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5.7

Provide the information in the table below for each of your CSO outfalls.

CSO Receiving Waters

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
Receiving water name			
Name of watershed/ stream system			
U.S. Soil Conservation Service 14-digit watershed code (if known)	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown
Name of state management/river basin			
U.S. Geological Survey 8-Digit Hydrologic Unit Code (if known)	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown
Description of known water quality impacts on receiving stream by CSO (see instructions for examples)			

**SECTION 6. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))**

6.1

In Column 1 below, mark the sections of Form 2A that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.

Column 1	Column 2	
<input checked="" type="checkbox"/> Section 1: Basic Application Information for All Applicants	<input type="checkbox"/> w/ variance request(s)	<input type="checkbox"/> w/ additional attachments
<input checked="" type="checkbox"/> Section 2: Additional Information	<input checked="" type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ additional attachments	<input checked="" type="checkbox"/> w/ process flow diagram
<input checked="" type="checkbox"/> Section 3: Information on Effluent Discharges	<input checked="" type="checkbox"/> w/ Table A <input checked="" type="checkbox"/> w/ Table B <input checked="" type="checkbox"/> w/ Table C	<input type="checkbox"/> w/ Table D <input type="checkbox"/> w/ Table E <input type="checkbox"/> w/ additional attachments
<input checked="" type="checkbox"/> Section 4: Industrial Discharges and Hazardous Wastes	<input checked="" type="checkbox"/> w/ SIU and NSCIU attachments <input type="checkbox"/> w/ additional attachments	<input checked="" type="checkbox"/> w/ Table F
<input type="checkbox"/> Section 5: Combined Sewer Overflows	<input type="checkbox"/> w/ CSO map <input type="checkbox"/> w/ CSO system diagram	<input type="checkbox"/> w/ additional attachments
<input checked="" type="checkbox"/> Section 6: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments	

6.2

**Certification Statement**

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Name (print or type first and last name)

David Leckner

Official title

Mayor

Signature



Date signed

2-7-23

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TABLE A. EFFLUENT PARAMETERS FOR ALL POTWS							
Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Biochemical oxygen demand <input checked="" type="checkbox"/> BOD <sub>5</sub> or <input type="checkbox"/> CBOD <sub>5</sub> (report one)	20	mg/l	7.7	mg/l	49	5210B-2016	4 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Fecal coliform	>2420	MPN/100ml	19.5	NPN/100ml	49	9223B-2016	1 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Design flow rate	1.22	MGD	1.22	MGD			
pH (minimum)	6.99	s.u.					
pH (maximum)	7.51	s.u.					
Temperature (winter)	N/A	N/A	N/A	N/A	N/A		
Temperature (summer)	N/A	N/A	N/A	N/A	N/A		
Total suspended solids (TSS)	<sup>37</sup>	mg/l	12	mg/l	49		

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).



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**TABLE B. EFFLUENT PARAMETERS FOR ALL POTWS WITH A FLOW EQUAL TO OR GREATER THAN 0.1 MGD**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Ammonia (as N)	2.57	mg/l	1.86	mg/l	3	4500nH3D-2011	0.200 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chlorine (total residual, TRC) <sup>2</sup>	.....	mg/l	.....	mg/l	.....	.....	..... <input type="checkbox"/> ML <input type="checkbox"/> MDL
Dissolved oxygen	7.98	mg/l	7.13	mg/l	3years	4500-0-H	0.1 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nitrate/nitrite	0.809	mg/l	0.464	mg/l	3	353.2	0.200 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Kjeldahl nitrogen	3.92	mg/l	3.21	mg/l	3	EPA-351.2	0.500 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Oil and grease	1.2	mg/l	<1.16	mg/l	3	EPA-1664B	1.1 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Phosphorus	1.56	mg/l	1.49	mg/l	3	EPA-365.1	0.041 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Total dissolved solids	248	mg/l	232	mg/l	3	2540C-2011	20 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

<sup>2</sup> Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent are not required to report data for chlorine.

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**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
<b>Metals, Cyanide, and Total Phenols</b>							
Hardness (as CaCO <sub>3</sub> )	125	mg/l	118	mg/l	3	EPA-200.7	0.0151 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Antimony, total recoverable	<0.0003	mg/l	<0.003	mg/l	3	EPA-200.8	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Arsenic, total recoverable	0.0017	mg/l	0.0012	mg/l	3	EPA-200.8	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Beryllium, total recoverable	<0.0001	mg/l	<0.0001	mg/l	3	EPA-200.8	0.0001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Cadmium, total recoverable	<0.0001	mg/l	<0.0001	mg/l	3	EPA-200.8	0.0001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chromium, total recoverable	<0.001	mg/l	<0.001	mg/l	3	calculation	0.001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Copper, total recoverable	0.0027	mg/l	0.002	mg/l	3	EPA-200.8	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Lead, total recoverable	<0.0005	mg/l	<0.0005	mg/l	3	EPA-200.8	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Mercury, total recoverable	<0.00013	mg/l	<0.00013	mg/l	3	EPA-245.1	0.00013 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nickel, total recoverable	0.0290	mg/l	0.0231	mg/l	3	EPA-200.8	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Selenium, total recoverable	<0.0005	mg/l	<0.0005	mg/l	3	EPA-200.8	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Silver, total recoverable	<0.0001	mg/l	<0.0001	mg/l	3	EPA-200.8	0.0001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Thallium, total recoverable	<0.00010	mg/l	<0.00010	mg/l	3	EPA-200.8	0.00010 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Zinc, total recoverable	0.020	mg/l	<0.020	mg/l	3	EPA-200.8	0.020 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Cyanide	0.008	mg/l	0.006	mg/l	3	EPA-335.4	0.005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Total phenolic compounds	0.020	mg/l	0.009	mg/l	3	EPA-420.4	0.002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
<b>Volatile Organic Compounds</b>							
Acrolein	<0.0054	mg/l	<0.0054	mg/l	3	624.1	0.0054 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Acrylonitrile	<0.0034	mg/l	<0.0034	mg/l	3	624.1	0.0034 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzene	<0.0004	mg/l	<0.0004	mg/l	3	624.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bromoform	<0.0009	mg/l	<0.0009	mg/l	3	624.1	0.0009 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride	<0.0005	mg/l	<0.0005	mg/l	3	624.1	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chlorobenzene	<0.0005	mg/l	<0.0005	mg/l	3	624.1	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chlorodibromomethane	<0.0008	mg/l	<0.0008	mg/l	3	624.1	0.0008 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chloroethane	<0.0006	mg/l	<0.0006	mg/l	3	624.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-chloroethylvinyl ether	<0.0026	mg/l	<0.0026	mg/l	3	624.1	0.0026 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chloroform	<0.0008	mg/l	<0.0008	mg/l	3	624.1	0.0008 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Dichlorobromomethane	<0.0006	mg/l	<0.0006	mg/l	3	624.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1-dichloroethane	<0.0004	mg/l	<0.0004	mg/l	3	624.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2-dichloroethane	<0.0008	mg/l	<0.0008	mg/l	3	624.1	0.0008 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
trans-1,2-dichloroethylene	<0.0005	mg/l	<0.0005	mg/l	3	624.1	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1-dichloroethylene	<0.0005	mg/l	<0.0005	mg/l	3	624.1	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2-dichloropropane	<0.0005	mg/l	<0.0005	mg/l	3	624.1	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,3-dichloropropylene	<0.0007	mg/l	<0.0007	mg/l	3	624.1	0.0007 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Ethylbenzene	<0.0005	mg/l	<0.0005	mg/l	3	624.1	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Methyl bromide	<0.0009	mg/l	<0.0009	mg/l	3	624.1	0.0009 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Methyl chloride	<0.0009	mg/l	<0.0009	mg/l	3	624.1	0.0009 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Methylene chloride	<0.0019	mg/l	<0.0019	mg/l	3	624.1	0.0019 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1,2,2-tetrachloroethane	<0.0009	mg/l	<0.0009	mg/l	3	624.1	0.0009 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Tetrachloroethylene	<0.0004	mg/l	<0.0004	mg/l	3	624.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Toluene	<0.0004	mg/l	<0.0004	mg/l	3	624.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1,1-trichloroethane	<0.0004	mg/l	<0.0004	mg/l	3	624.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1,2-trichloroethane	<0.0006	mg/l	<0.0006	mg/l	3	624.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL



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**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene	<0.0006	mg/l	<0.0006	mg/l	3	624.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Vinyl chloride	<0.0004	mg/l	<0.0004	mg/l	3	624.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
<b>Acid-Extractable Compounds</b>							
p-chloro-m-cresol	<0.0003	mg/l	<0.0003	mg/l	3	624.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-chlorophenol	<0.0002	mg/l	<0.0002	mg/l	3	624.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dichlorophenol	<0.001	mg/l	<0.001	mg/l	3	624.1	0.001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dimethylphenol	<0.007	mg/l	<0.007	mg/l	3	624.1	0.007 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4,6-dinitro-o-cresol	<0.019	mg/l	<0.019	mg/l	3	624.1	0.019 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dinitrophenol	<0.019	mg/l	<0.019	mg/l	3	624.1	0.019 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-nitrophenol	<0.0003	mg/l	<0.0003	mg/l	3	624.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4-nitrophenol	<0.003	mg/l	<0.003	mg/l	3	624.1	0.003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Pentachlorophenol	<0.001	mg/l	<0.001	mg/l	3	624.1	0.001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Phenol	<0.0003	mg/l	<0.0003	mg/l	3	624.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4,6-trichlorophenol	<0.0007	mg/l	<0.0007	mg/l	3	624.1	0.0007 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
<b>Base-Neutral Compounds</b>							
Acenaphthene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Acenaphthylene	<0.0002	mg/l	<0.0002	mg/l	3	625.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Anthracene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzidine	<0.011	mg/l	<0.011	mg/l	3	625.1	0.011 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzo(a)anthracene	<0.0002	mg/l	<0.0002	mg/l	3	625.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzo(a)pyrene	<0.0008	mg/l	<0.0008	mg/l	3	625.1	0.0008 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
3,4-benzofluoranthene	<0.0007	mg/l	<0.0007	mg/l	3	625.1	0.0007 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL



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**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzo(k)fluoranthene	<0.0010	mg/l	<0.0010	mg/l	3	625.1	0.0010 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-chloroethoxy) methane	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-chloroethyl) ether	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-chloroisopropyl) ether	<0.0004	mg/l	<0.0004	mg/l	3	625.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-ethylhexyl) phthalate	<0.0006	mg/l	<0.0006	mg/l	3	625.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4-bromophenyl phenyl ether	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Butyl benzyl phthalate	<0.0006	mg/l	<0.0006	mg/l	3	625.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-chloronaphthalene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4-chlorophenyl phenyl ether	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chrysene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
di-n-butyl phthalate	<0.0004	mg/l	<0.0004	mg/l	3	625.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
di-n-octyl phthalate	<0.0006	mg/l	<0.0006	mg/l	3	625.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Dibenzo(a,h)anthracene	<0.001	mg/l	<0.001	mg/l	3	625.1	0.001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2-dichlorobenzene	<0.0004	mg/l	<0.0004	mg/l	3	625.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,3-dichlorobenzene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,4-dichlorobenzene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
3,3-dichlorobenzidine	<0.008	mg/l	<0.008	mg/l	3	625.1	0.008 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Diethyl phthalate	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Dimethyl phthalate	<0.0002	mg/l	<0.0002	mg/l	3	625.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dinitrotoluene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,6-dinitrotoluene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine	<0.0002	mg/l	<0.0002	mg/l	3	625.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Fluoranthene	<0.0005	mg/l	<0.0005	mg/l	3	625.1	0.0005 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Fluorene	<0.0002	mg/l	<0.0002	mg/l	3	625.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Hexachlorobenzene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Hexachlorobutadiene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorocyclo-pentadiene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Hexachloroethane	<0.0004	mg/l	<0.0004	mg/l	3	625.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Indeno(1,2,3-cd)pyrene	<0.001	mg/l	<0.001	mg/l	3	625.1	0.001 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Isophorone	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Naphthalene	<0.0007	mg/l	<0.0007	mg/l	3	625.1	0.0007 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nitrobenzene	<0.0006	mg/l	<0.0006	mg/l	3	625.1	0.0006 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
N-nitrosodi-n-propylamine	<0.0004	mg/l	<0.0004	mg/l	3	625.1	0.0004 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
N-nitrosodimethylamine	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
N-nitrosodiphenylamine	<0.0002	mg/l	<0.0002	mg/l	3	625.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Phenanthrene	<0.0002	mg/l	<0.0002	mg/l	3	625.1	0.0002 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Pyrene	<0.0007	mg/l	<0.0007	mg/l	3	625.1	0.0007 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2,4-trichlorobenzene	<0.0003	mg/l	<0.0003	mg/l	3	625.1	0.0003 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number TN0064785	Facility Name Adamsville STP	Outfall Number 001
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**TABLE D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY**

Pollutant (list)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
<input checked="" type="checkbox"/> No additional sampling is required by NPDES permitting authority.							
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
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							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number TN0064785	Facility Name Adamsville STP	Outfall Number 001
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Form Approved 03/05/19  
OMB No. 2040-0004

<b>TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY</b>			
The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.			
<b>Test Information</b>			
	Test Number _____	Test Number _____	Test Number _____
Test species			
Age at initiation of test			
Outfall number			
Date sample collected			
Date test started			
Duration			
<b>Toxicity Test Methods</b>			
Test method number			
Manual title			
Edition number and year of publication			
Page number(s)			
<b>Sample Type</b>			
Check one:	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite
<b>Sample Location</b>			
Check one:	<input type="checkbox"/> Before Disinfection <input type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before Disinfection <input type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before disinfection <input type="checkbox"/> After disinfection <input type="checkbox"/> After dechlorination
<b>Point in Treatment Process</b>			
Describe the point in the treatment process at which the sample was collected for each test.			
<b>Toxicity Type</b>			
Indicate for each test whether the test was performed to assess acute or chronic toxicity, or both. (Check one response.)	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both

EPA Identification Number	NPDES Permit Number TN0064785	Facility Name Adamsville STP	Outfall Number 001
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**TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY**

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number _____	Test Number _____	Test Number _____
<b>Test Type</b>			
Indicate the type of test performed. (Check one response.)	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through
<b>Source of Dilution Water</b>			
Indicate the source of dilution water. (Check one response.)	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water
If laboratory water, specify type.			
If receiving water, specify source.			
<b>Type of Dilution Water</b>			
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)
<b>Percentage Effluent Used</b>			
Specify the percentage effluent used for all concentrations in the test series.			
<b>Parameters Tested</b>			
Check the parameters tested.	<input type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature	<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen	<input type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature
		<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen	<input type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature
			<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen
<b>Acute Test Results</b>			
Percent survival in 100% effluent		%	%
LC <sub>50</sub>			
95% confidence interval		%	%
Control percent survival		%	%



EPA Identification Number	NPDES Permit Number TN0064785	Facility Name Adamsville STP	Outfall Number 001
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**TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY**

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number _____	Test Number _____	Test Number _____
<b>Acute Test Results Continued</b>			
Other (describe)			
<b>Chronic Test Results</b>			
NOEC		%	%
IC <sub>25</sub>		%	%
Control percent survival		%	%
Other (describe)			
<b>Quality Control/Quality Assurance</b>			
Is reference toxicant data available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Was reference toxicant test within acceptable bounds?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

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EPA Identification Number

NPDES Permit Number  
TN0064785Facility Name  
Adamsville STPForm Approved 03/05/19  
OMB No. 2040-0004**TABLE F. INDUSTRIAL DISCHARGE INFORMATION**

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU <u>004</u>	SIU <u>005</u>	SIU <u>    </u>
Name of SIU	Masco Bath	Dan's Polishing Shop	
Mailing address (street or P.O. box)	320 Industrial Park Road	145 Duren Industril Drive	
City, state, and ZIP code	Adamsville, TN 38310	Adamsille, TN 38310	
Description of all industrial processes that affect or contribute to the discharge.	Landfill Leachate	Electroplating of copper, nickel, tin and Chromium over steel, aluminum, brass and stainless metals	
List the principal products and raw materials that affect or contribute to the SIU's discharge.	Landfill Leachate	copper, nickel, tin and/ or chrome metal coatings copper, and nickel metals, lead and tin anodes, chromium, sulfuric acid, nitric acid, potassium cyanide, nickelchloride, nickel sulfate, boric acid, alkaline cleaners	
Indicate the average daily volume of wastewater discharged by the SIU.	11,940 gpd	490 gpd	- gpd
How much of the average daily volume is attributable to process flow?	11,940 gpd	108 gpd	gpd
How much of the average daily volume is attributable to non-process flow?	0 gpd	382 gpd	gpd
Is the SIU subject to local limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the SIU subject to categorical standards?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

EPA Identification Number

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Adamsville STP

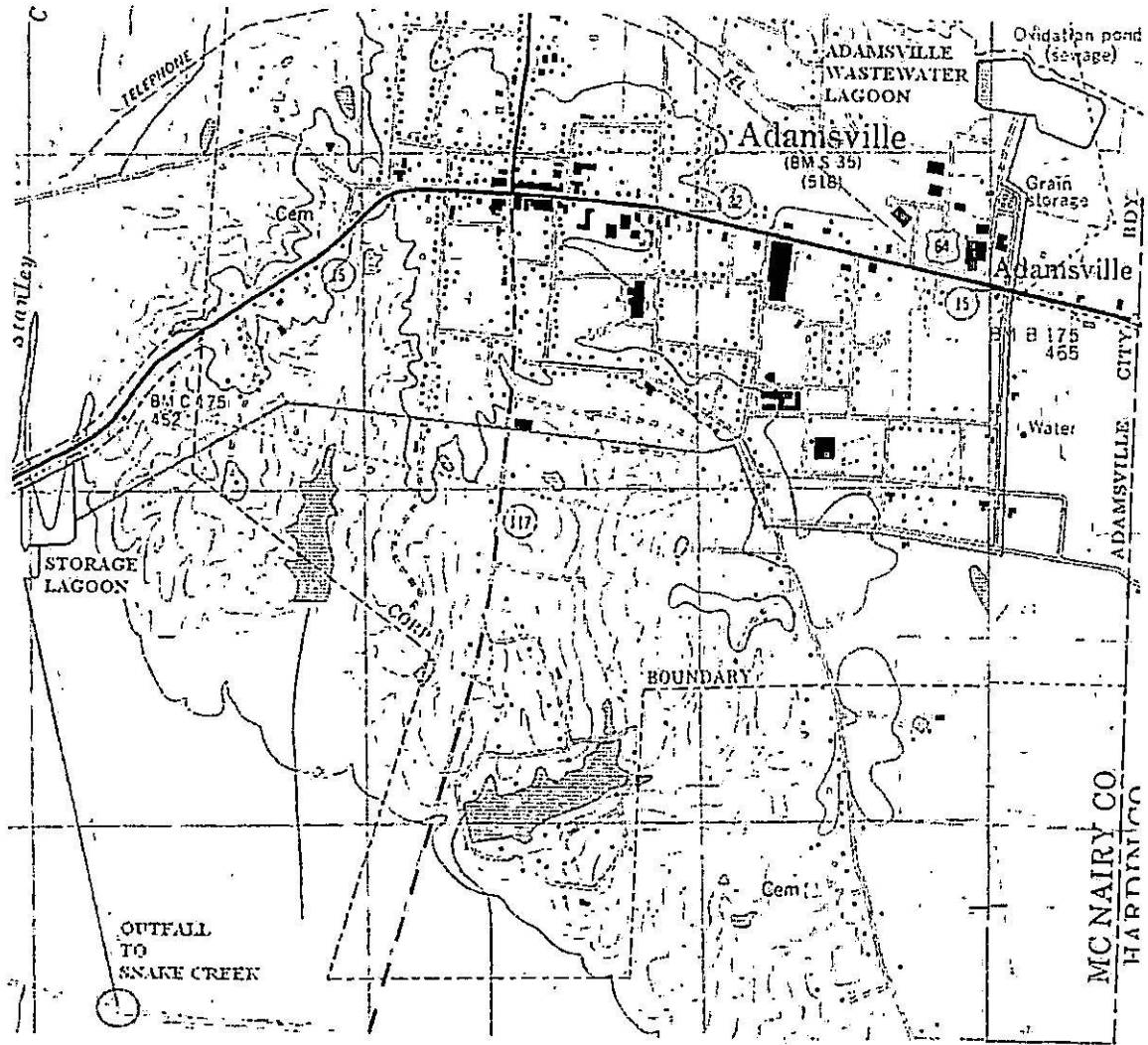
OMB No. 2040-0004

**TABLE F. INDUSTRIAL DISCHARGE INFORMATION**

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

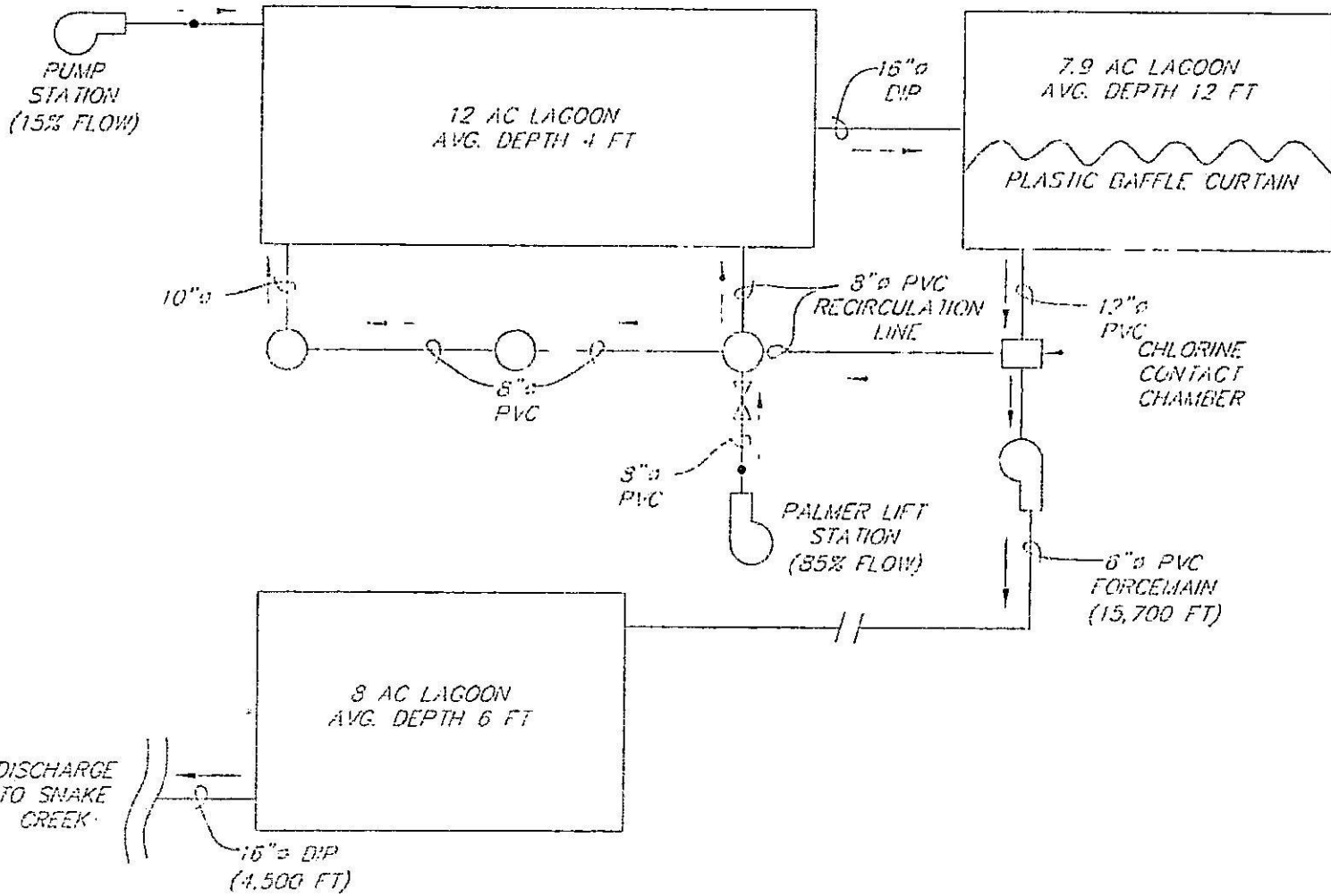
	SIU ____	SIU <sup>05</sup> ____	SIU ____
Under what categories and subcategories is the SIU subject?	SIC 3088	SIC 3471 / NAICS 332813	
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, describe.			





U.S.G.S  
 7.5 Minute Series (Topographic)  
 Stantonville/Pittsburg Landing Quadrangles  
 1949, Photo-revised 1992/1972  
 Scale: 1:2000

**Exhibit A**  
**Outfall Location Map**  
 For The  
 Town of Adamsville  
 2018 NPDES Permit Renewal  
 WAUFORD Project No. 3500  
**WAUFORD**  
 J. R. Wauford & Company Consulting Engineers, Inc

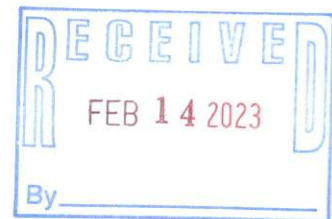


**LEGEND**

	DIRECTION OF FLOW
	PUMP STATION
	MANHOLE
	FLOW METER
	VALVE

EXHIBIT B  
 TOWN OF ADAMSVILLE  
 LAGOON SYSTEM SCHEMATIC  
 JR/WCO 3500

**2022  
ADAMSVILLE STP  
ANNUAL  
BIOMONITORING  
TN0064785  
OUTFALL 001**



Waypoint Analytical  
2269 DR. F. E. WRIGHT DRIVE  
JACKSON, TN 38305

April 08, 2022

Mr. Scott Klinck  
231 East Main Street  
Adamsville, TN 38310

RE: Annual Biomonitoring 2022 Adamsville STP – TN0064785

Dear Mr. Scott Klinck,


Please find enclosed the above referenced report for samples submitted the week of March 28, 2022.

Results of the test indicate that the samples **passed** permit requirements for the Pimephales promelas and **passed** permit requirements for the Ceriodaphnia dubia.

EPA Methods: 2002.0 Ceriodaphnia dubia Survival  
2000.0 Pimephales promelas Larval Survival

If you have any questions, please call. We appreciate you as a client and are always glad to be of service to you.

Sincerely,



Billie Haynes  
Laboratory Manager

Enclosure



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## TEST SUMMARY

Listed below is a summary of results for the four "48-Hour Static Acute Toxicity Tests" performed on wastewater effluent samples from the Adamsville STP – Adamsville, Tennessee - Outfall 001.

1. The test type was "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Ceriodaphnia and an "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Pimephales. Four separate grab samples collected at 6-hour intervals over a 24-hour period were used in four separate tests.
2. Tests were conducted on 03/30/22-04/01/22 for the Ceriodaphnia and 03/30/22-04/01/22 for the Pimephales.
3. The test method used was EPA-821-R-02-012.
4. The 4 samples were collected on 03/29/22 and 03/30/22.

### TABLED SUMMARY OF TEST RESULTS

Species	Results	Permit	Survival	Growth	Reproduction
		Limit	LC50	LC50	LC50
*Ceriodaphnia dubia - Pull #1	Pass	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #2	Pass	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #3	Pass	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #4	Pass	17%	>68%	----	----
*Pimephales promelas- Pull #1	Pass	17%	>68%	----	----
*Pimephales promelas- Pull #2	Pass	17%	>68%	----	----
*Pimephales promelas- Pull #3	Pass	17%	>68%	----	----
*Pimephales promelas- Pull #4	Pass	17%	>68%	----	----

\*Result table is applicable for all four separate tests.

**All QC criteria required by the above referenced method were met during this analysis.**

# **Waypoint Analytical Inc.**

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **TABLE OF CONTENTS**

**Introduction**

**Plant Operations**

**Source of Effluent, Receiving Water and Dilution Water**

**Test Conditions**

**Test Organisms**

**Quality Assurance**

**Results**

**Conclusions and Recommendations**

**Tables**

**Attachments**

### **INTRODUCTION:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Permit Number:**

TN0064785

**Toxicity Testing Requirements of Permit:**

4 separate 48-Hour, Static, Non-renewal, Ceriodaphnia dubia Survival and a 48-Hour, Static, Non-renewal, Pimephales promelas Survival Tests. The permit limit is 17 % with an LC<sub>50</sub> endpoint. Five serial dilutions and a control are required. The dilutions are as follows:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	2 X PL	Permit Limit	0.5 X PL	0.25 X PL	Control
%effluent					
68	34	17	8.5	4.25	0

**Plant Location:**

Adamsville, McNairy County, Tennessee

**Name of receiving water body:**

Snake Creek at mile 8.0

**Contract Laboratory:**

Waypoint Analytical Inc.  
2269 Dr. F. E. Wright Drive  
Jackson, Tennessee 38305  
731.423.5330

**PLANT OPERATIONS:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Product(s):**

Treated municipal wastewater

**Raw Materials:**

**Operating Schedule:**

**Description of Waste Treatment:**

**Schematic of Waste Treatment:**

**Retention Time (If Applicable):**

**Volume of Waste Flow:**

**Design Flow of Treatment Facility  
at time of Sampling:**



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **SOURCE OF EFFLUENT, RECEIVING WATER AND DILUTION WATER:**

### **EFFLUENT:**

#### **Sampling Point:**

Effluent at Outfall 001

#### **Sample Collection Method:**

Grab Sample

#### **Collection Dates and Times:**

Sample 1 – 03/29/22, 1315

Sample 2 – 03/29/22, 1915

Sample 3 – 03/30/22, 0115

Sample 4 – 03/30/22, 1030

#### **Physical and Chemical Data:**

None Requested

#### **Mean Daily Discharge on Sample Collection Dates:**

None Given

#### **Lapsed Time from Sample Collection to Delivery:**

Sample 1 – 22.58 hrs

Sample 2 – 16.58 hrs

Sample 3 – 07.58 hrs

Sample 4 – 01.33 hrs

#### **Sample Temperature when received at the Laboratory:**

2.0°C

### **RECEIVING WATER:**

Not Applicable

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **DILUTION WATER:**

### **Source:**

20% Diluted Mineral Water (Perrier) Prepared by Waypoint

### **Collection Date(s) and Time(s):**

Not Applicable

### **Pretreatment:**

Temperature Equilibration and Aeration

### **Physical and Chemical Characteristics:**

<b>Batch ID</b>	<b>Date Tested</b>	<b>pH</b>	<b>Dissolved Oxygen</b>	<b>Specific Conductance</b>	<b>Alkalinity</b>	<b>Hardness</b>
032522S1	03/26/22	8.15	8.13	190.4	78.0	100.0

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **TEST METHODS:**

### **Toxicity Test Method Used:**

“Method for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms”, Fifth Edition, EPA-821-R-02-012

### **Endpoint of Test:**

Survival LC<sub>50</sub> – Ceriodaphnia dubia  
Survival LC<sub>50</sub> – Pimephales Promelas

### **Deviation(s) from Reference Method:**

None

### **Date and Time Tests Started:**

Ceriodaphnia – 03/30/22, 1356-1457  
Pimephales – 03/30/22, 1340-1513

### **Date and Time Tests Terminated:**

Ceriodaphnia – 04/01/22, 1357-1502  
Pimephales – 04/01/22, 1433-1525

### **Type and Volume of Test Chambers:**

Ceriodaphnia – 30ml Plastic Cups  
Pimephales – 500ml Plastic Beakers

### **Volume of Solution per Chamber:**

Ceriodaphnia – 15ml  
Pimephales – 250ml

### **Number of Organisms per Chamber:**

Ceriodaphnia – 5 Neonate  
Pimephales – 10 Larvae

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Number of Replicated Test Chambers per Treatment:**

Ceriodaphnia – 4  
Pimephales - 2

**Acclimation of Test Organisms:**

Ceriodaphnia – N/A Waypoint Culture  
Pimephales – 5 hrs @ 25°C +/- 1°C

**Test Temperature (Mean and Range):**

See Attachment 1

**Specify if Aeration was needed:**

None Needed

**Feeding Frequency, Amount and Type of Food:**

Ceriodaphnia – 0.1ml of YCT (1.8g solids/L) and 0.1ml of Selenastrum (3.0 X 10<sup>7</sup> cell/ml) 2 hours prior to introduction to test solutions.  
Pimephales – 0.15g Brine Shrimp, 2 hours prior to introduction to test solutions.

**pH Control Measures (if necessary):**

None Needed



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **TEST ORGANISMS:**

### **Scientific Name:**

Ceriodaphnia dubia and Pimephales promelas

### **Age:**

Ceriodaphnia dubia - < 24 hrs old  
Pimephales Promelas – 3 days old

### **Life Stage:**

Ceriodaphnia – Neonate  
Pimephales - Larvae

### **Mean Length and Weight:**

Ceriodaphnia – Not Applicable  
Pimephales – Not Applicable

### **Source:**

Ceriodaphnia – Waypoint Culture  
Pimephales – Aquatic Biosystems, Fort Collins, Colorado

### **Diseases and Treatment:**

Not Applicable

### **Taxonomic Key used for Species Identification:**

Ceriodaphnia – Microscopic Examination as compared to reference material.  
Pimephales – Aquatic Biosystems

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **QUALITY ASSURANCE:**

### **Reference Toxicant used Routinely; Source:**

Potassium Chloride, KCL – Fisher Scientific – Waypoint ID #: CS-316

### **Date and Time of Most Recent Reference Toxicant Test, Test Results, and Current Control Chart:**

See Attachment 2

### **Dilution Water used in Reference Toxicant Test:**

20% DMW – See “Dilution Water” Section

### **Results PMSD for Sub-lethal Endpoints Determined by Hypothesis Testing in Reference Toxicant Test:**

See “Attachment 2”.

### **Physical and Chemical Methods used:**

NPDES Approved Methods from “Standard Methods for the Examination of Water and Wastewater” Eighteenth Edition

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**RESULTS:**

**Tabulated Toxicity Data:**

Table 1 – Data for Pimephales promelas Larval Survival Test

Table 2 – Data for Ceriodaphnia Survival Test

Table 3 – Physical and Chemical Data, Acute Toxicity

**Test Endpoint Table: (Tabled results are applicable for all 4 separate tests.)**

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
*Ceriodaphnia dubia - Pull #1	<b>Pass</b>	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #2	<b>Pass</b>	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #3	<b>Pass</b>	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #4	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #1	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #2	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #3	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #4	<b>Pass</b>	17%	>68%	----	----

**Statistical Method used to Calculate Endpoints:**

Ceriodaphnia Survival – N/A\*

Pimephales Survival – N/A\*

\*Endpoints could not be calculated as no test solution produced significant mortality.

**Tabulated QA Data:**

See Attachment 2

**PMSDs for Sub-lethal Endpoints:**

Species	Endpoint	Lower PMSD Bound	Upper PMSD Bound	Result
Ceriodaphnia	Reprod.	13	47	*
Pimephales	Growth	12	30	*

\*Not required for “Point Estimation Testing”.

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **CONCLUSION AND RECOMMENDATIONS:**

### **Conclusion:**

Endpoints meet the permit requirements.

### **Recommendation:**

Report results to appropriate regulatory agency.



# Waypoint Analytical Inc.

## Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #1  
**Dil. H2O:** DMW  
**Lab ID #:** 22-089-0025  
**Chamber #:** 2  
**Template #:** A  
**Test Dates:** 03/30/22-04/01/22  
**Analyst:** LC  
**Food ID #:** 2244 BIO  
**Org. ID #:** 2291 BIO

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	10	10		
	2	10	10		
4.25	1	10	9		
	2	10	10		
8.5	1	10	10		
	2	10	10		
17	1	10	10		
	2	10	10		
34	1	10	9		
	2	10	10		
68	1	10	10		
	2	10	10		

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/30 - LC	1346		Setup 1340
1	03/31 - LC			Count 0906
2	04/01 - LC			End 1433
3				
4				

# Waypoint Analytical Inc.

## Table 2

### Survival Data for *Ceriodaphnia dubia* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #1  
 Dil. H2O: DMW  
 Lab ID #: 22-089-0025  
 Chamber #: 2  
 Template #: A  
 Test Dates: 03/30/22-04/01/22  
 Analyst: LC

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
4.25	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
8.5	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
17	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
34	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
68	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #1  
**Test Dates:** 03/30/22-04/01/22

**Lab ID #:** 22-089-0025  
**NPDES #:** TN0064785  
**Analyst:** LC

<b>Species:</b> Pimephales promelas									<b>Remarks</b>
<b>Conc:</b> Control		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C°)</b>	<b>Initial</b>	23.3							
	<b>Final</b>		22.6						
<b>DO (mg/L)</b>	<b>Initial</b>	7.99							
	<b>Final</b>		6.75						
<b>pH (su)</b>	<b>Initial</b>	8.02							
	<b>Final</b>		7.84						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		78.0							
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		100.0							
<b>Conductivity (umhos/cm)</b>		190.4							
<b>Chlorine (mg/L)</b>		<0.05							
<b>Light Intensity (ft/c)</b>		50-100							

<b>Species:</b> Ceriodaphnia dubia									<b>Remarks</b>
<b>Conc:</b> Control		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C°)</b>	<b>Initial</b>	23.3							
	<b>Final</b>		22.7						
<b>DO (mg/L)</b>	<b>Initial</b>	7.99							
	<b>Final</b>		7.67						
<b>pH (su)</b>	<b>Initial</b>	8.02							
	<b>Final</b>		7.91						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		78.0							
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		100.0							
<b>Conductivity (umhos/cm)</b>		190.4							
<b>Chlorine (mg/L)</b>		<0.05							
<b>Light Intensity (ft/c)</b>		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #1                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.1							
	Final		22.8						
DO (mg/L)	Initial	8.18							
	Final		7.21						
pH (su)	Initial	8.07							
	Final		7.93						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.1							
	Final		22.7						
DO (mg/L)	Initial	8.18							
	Final		7.80						
pH (su)	Initial	8.07							
	Final		7.97						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #1  
**Test Dates:** 03/30/22-04/01/22

**Lab ID #:** 22-089-0025  
**NPDES #:** TN0064785  
**Analyst:** LC

<b>Species:</b> Pimephales promelas									<b>Remarks</b>
<b>Conc:</b> 8.50%		<b>Day</b>							
		1	2	3	4	5	6	7	
<b>Temp (C<sup>o</sup>)</b>	<b>Initial</b>	23.2							
	<b>Final</b>		22.4						
<b>DO (mg/L)</b>	<b>Initial</b>	8.36							
	<b>Final</b>		6.62						
<b>pH (su)</b>	<b>Initial</b>	8.16							
	<b>Final</b>		7.76						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									

<b>Species:</b> Ceriodaphnia dubia									<b>Remarks</b>
<b>Conc:</b> 8.50%		<b>Day</b>							
		1	2	3	4	5	6	7	
<b>Temp (C<sup>o</sup>)</b>	<b>Initial</b>	23.2							
	<b>Final</b>		22.6						
<b>DO (mg/L)</b>	<b>Initial</b>	8.36							
	<b>Final</b>		7.42						
<b>pH (su)</b>	<b>Initial</b>	8.16							
	<b>Final</b>		8.01						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #1                  NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		22.5						
DO (mg/L)	Initial	8.47							
	Final		8.23						
pH (su)	Initial	8.28							
	Final		8.24						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		22.2						
DO (mg/L)	Initial	8.47							
	Final		7.82						
pH (su)	Initial	8.28							
	Final		8.00						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
NPDES #: TN0064785  
Analyst: LC

Species:		Pimephales promelas							Remarks
Conc:		34.00%							
		Day							
		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		22.4						
DO (mg/L)	Initial	9.13							
	Final		7.00						
pH (su)	Initial	8.46							
	Final		8						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species:		Ceriodaphnia dubia							Remarks
Conc:		34.00%							
		Day							
		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		22.3						
DO (mg/L)	Initial	9.13							
	Final		7.47						
pH (su)	Initial	8.46							
	Final		7.99						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #1                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.5							
	Final		22.3						
DO (mg/L)	Initial	10.45							
	Final		6.96						
pH (su)	Initial	8.72							
	Final		7.87						
Alkalinity (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		99.2							100% Effluent
Conductivity (umhos/cm)		286.6							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.5							
	Final		22.1						
DO (mg/L)	Initial	10.45							
	Final		8.11						
pH (su)	Initial	8.72							
	Final		8.05						
Alkalinity (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		99.2							100% Effluent
Conductivity (umhos/cm)		286.6							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

### **Survival Data for *Pimephales promelas* Acute Survival Test**

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #2  
**Dil. H2O:** DMW  
**Lab ID #:** 22-089-0025  
**Chamber #:** 2  
**Template #:** B  
**Test Dates:** 03/30/22-04/01/22  
**Analyst:** LC  
**Food ID #:** 2244 BIO  
**Org. ID #:** 2291 BIO

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	10	10		
	2	10	10		
4.25	1	10	10		
	2	10	10		
8.5	1	10	10		
	2	10	10		
17	1	10	9		
	2	10	9		
34	1	10	9		
	2	10	9		
68	1	10	10		
	2	10	10		

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/30 -LC	1346		Setup 1342
1	03/31 - LC			Count 0908
2	04/01 - LC			End 1440
3				
4				



# Waypoint Analytical Inc.

## Table 2

**Survival Data for Ceriodaphnia dubia  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #2  
 Dil. H2O: DMW  
 Lab ID #: 22-089-0025  
 Chamber #: 2  
 Template #: B  
 Test Dates: 03/30/22-04/01/22  
 Analyst: LC

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
4.25	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
8.5	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
17	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
34	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
68	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		



**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #2  
**Test Dates:** 03/30/22-04/01/22

**Lab ID #:** 22-089-0025  
**NPDES #:** TN0064785  
**Analyst:** LC

<b>Species:</b> Pimephales promelas									<b>Remarks</b>
<b>Conc:</b> Control		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C<sup>o</sup>)</b>	<b>Initial</b>	23.3							
	<b>Final</b>		23.1						
<b>DO (mg/L)</b>	<b>Initial</b>	7.99							
	<b>Final</b>		7.14						
<b>pH (su)</b>	<b>Initial</b>	8.02							
	<b>Final</b>		7.76						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		78.0							
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		100.0							
<b>Conductivity (umhos/cm)</b>		190.4							
<b>Chlorine (mg/L)</b>		<0.05							
<b>Light Intensity (ft/c)</b>		50-100							

<b>Species:</b> Ceriodaphnia dubia									<b>Remarks</b>
<b>Conc:</b> Control		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C<sup>o</sup>)</b>	<b>Initial</b>	23.3							
	<b>Final</b>		22.2						
<b>DO (mg/L)</b>	<b>Initial</b>	7.99							
	<b>Final</b>		7.74						
<b>pH (su)</b>	<b>Initial</b>	8.02							
	<b>Final</b>		7.97						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		78.0							
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		100.0							
<b>Conductivity (umhos/cm)</b>		190.4							
<b>Chlorine (mg/L)</b>		<0.05							
<b>Light Intensity (ft/c)</b>		50-100							

Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.2							
	Final		22.9						
DO (mg/L)	Initial	8.07							
	Final		7.51						
pH (su)	Initial	8.24							
	Final		7.78						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.2							
	Final		22.1						
DO (mg/L)	Initial	8.07							
	Final		7.96						
pH (su)	Initial	8.24							
	Final		7.96						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #2  
 Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	22.6							
	Final		22.7						
DO (mg/L)	Initial	8.70							
	Final		7.60						
pH (su)	Initial	8.22							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	22.6							
	Final		22.1						
DO (mg/L)	Initial	8.70							
	Final		7.69						
pH (su)	Initial	8.22							
	Final		7.96						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.7							
	Final		22.2						
DO (mg/L)	Initial	8.85							
	Final		7.23						
pH (su)	Initial	8.25							
	Final		7.75						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.7							
	Final		21.9						
DO (mg/L)	Initial	8.85							
	Final		7.71						
pH (su)	Initial	8.25							
	Final		7.95						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.6							
	Final		22.4						
DO (mg/L)	Initial	9.30							
	Final		6.73						
pH (su)	Initial	8.37							
	Final		7.73						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.6							
	Final		21.7						
DO (mg/L)	Initial	9.30							
	Final		8.03						
pH (su)	Initial	8.37							
	Final		7.91						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.3							
	Final		22.5						
DO (mg/L)	Initial	9.58							
	Final		7.19						
pH (su)	Initial	8.59							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		97.2							100% Effluent
Conductivity (umhos/cm)		289.3							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.3							
	Final		21.5						
DO (mg/L)	Initial	9.58							
	Final		8.25						
pH (su)	Initial	8.59							
	Final		7.96						
Alkalinity (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		97.2							100% Effluent
Conductivity (umhos/cm)		289.3							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

### *Survival Data for Pimephales promelas Acute Survival Test*

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 Dil. H2O: DMW  
 Lab ID #: 22-089-0025  
 Chamber #: 2  
 Template #: C  
 Test Dates: 03/30/22-04/01/22  
 Analyst: LC  
 Food ID #: 2244 BIO  
 Org. ID #: 2291 BIO

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	10	10		
	2	10	10		
4.25	1	10	10		
	2	10	10		
8.5	1	10	10		
	2	10	10		
17	1	10	10		
	2	10	10		
34	1	10	10		
	2	10	10		
68	1	10	9		
	2	10	10		

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/30 - LC	1530		Setup 1503
1	03/31 - LC			Count 0912
2	04/01 - LC			End 1517
3				
4				

# Waypoint Analytical Inc.

## Table 2

### Survival Data for *Ceriodaphnia dubia* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 Dil. H2O: DMW  
 Lab ID #: 22-089-0025  
 Chamber #: 2  
 Template #: C  
 Test Dates: 03/30/22-04/01/22  
 Analyst: LC

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
4.25	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
8.5	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
17	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
34	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
68	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		22.4						
DO (mg/L)	Initial	7.78							
	Final		7.22						
pH (su)	Initial	8.14							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )		78.0							
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							
Conductivity (umhos/cm)		190.4							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		22.4						
DO (mg/L)	Initial	7.78							
	Final		7.73						
pH (su)	Initial	8.14							
	Final		8.00						
Alkalinity (mg/L as CaCO <sub>3</sub> )		78.0							
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							
Conductivity (umhos/cm)		190.4							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							



Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #3                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.1							
	Final		22.7						
DO (mg/L)	Initial	8.12							
	Final		7.03						
pH (su)	Initial	8.16							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.1							
	Final		22.1						
DO (mg/L)	Initial	8.12							
	Final		7.74						
pH (su)	Initial	8.16							
	Final		7.97						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #3                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.9							
	Final		22.6						
DO (mg/L)	Initial	8.51							
	Final		7.29						
pH (su)	Initial	8.19							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.9							
	Final		22.2						
DO (mg/L)	Initial	8.51							
	Final		7.50						
pH (su)	Initial	8.19							
	Final		7.97						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #3  
**Test Dates:** 03/30/22-04/01/22

**Lab ID #:** 22-089-0025  
**NPDES #:** TN0064785  
**Analyst:** LC

<b>Species:</b> Pimephales promelas									<b>Remarks</b>
<b>Conc:</b> 17.00%		<b>Day</b>							
		1	2	3	4	5	6	7	
<b>Temp (C°)</b>	<b>Initial</b>	24.2							
	<b>Final</b>		23.4						
<b>DO (mg/L)</b>	<b>Initial</b>	8.83							
	<b>Final</b>		7.28						
<b>pH (su)</b>	<b>Initial</b>	8.25							
	<b>Final</b>		7.84						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									

<b>Species:</b> Ceriodaphnia dubia									<b>Remarks</b>
<b>Conc:</b> 17.00%		<b>Day</b>							
		1	2	3	4	5	6	7	
<b>Temp (C°)</b>	<b>Initial</b>	24.2							
	<b>Final</b>		22.1						
<b>DO (mg/L)</b>	<b>Initial</b>	8.83							
	<b>Final</b>		7.35						
<b>pH (su)</b>	<b>Initial</b>	8.25							
	<b>Final</b>		7.97						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
NPDES #: TN0064785  
Analyst: LC

Species:		Pimephales promelas							Remarks
Conc:		34.00%							
		Day							Remarks
		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.9							
	Final		22.8						
DO (mg/L)	Initial	9.38							
	Final		7.67						
pH (su)	Initial	8.34							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species:		Ceriodaphnia dubia							Remarks
Conc:		34.00%							
		Day							Remarks
		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.9							
	Final		22.0						
DO (mg/L)	Initial	9.38							
	Final		7.67						
pH (su)	Initial	8.34							
	Final		7.94						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #3  
**Test Dates:** 03/30/22-04/01/22

**Lab ID #:** 22-089-0025  
**NPDES #:** TN0064785  
**Analyst:** LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.0							
	Final		23.0						
DO (mg/L)	Initial	9.37							
	Final		6.84						
pH (su)	Initial	8.55							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )		96.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		97.0							100% Effluent
Conductivity (umhos/cm)		291.6							100% Effluent
Chlorine (mg/L)		0.06							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.0							
	Final		21.3						
DO (mg/L)	Initial	9.37							
	Final		8.20						
pH (su)	Initial	8.55							
	Final		7.96						
Alkalinity (mg/L as CaCO <sub>3</sub> )		96.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		97.0							100% Effluent
Conductivity (umhos/cm)		291.6							100% Effluent
Chlorine (mg/L)		0.06							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

### *Survival Data for Pimephales promelas Acute Survival Test*

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 22-089-0025  
 Chamber #: 2  
 Template #: D  
 Test Dates: 03/30/22-04/01/22  
 Analyst: LC  
 Food ID #: 2244 BIO  
 Org. ID #: 2291 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	9			
	2	10	10			
8.5	1	10	10			
	2	10	10			
17	1	9	9			
	2	10	8			
34	1	10	10			
	2	10	10			
68	1	10	10			
	2	10	9			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/30 - LC	1530		Setup 1513
1	03/31 - LC			Count 0913
2	04/01 - LC			End 1525
3				
4				



# Waypoint Analytical Inc.

## Table 2

### Survival Data for *Ceriodaphnia dubia* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 22-089-0025  
 Chamber #: 3  
 Template #: D  
 Test Dates: 03/30/22-04/01/22  
 Analyst: LC

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
4.25	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
8.5	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
17	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
34	1	5	5		
	2	5	5		
	3	5	4		
	4	5	5		
68	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		22.4						
DO (mg/L)	Initial	7.78							
	Final		7.22						
pH (su)	Initial	8.14							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )		78.0							
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							
Conductivity (umhos/cm)		190.4							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		21.7						
DO (mg/L)	Initial	7.78							
	Final		7.44						
pH (su)	Initial	8.14							
	Final		7.91						
Alkalinity (mg/L as CaCO <sub>3</sub> )		78.0							
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							
Conductivity (umhos/cm)		190.4							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #4  
**Test Dates:** 03/30/22-04/01/22

**Lab ID #:** 22-089-0025  
**NPDES #:** TN0064785  
**Analyst:** LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.1							
	Final		22.7						
DO (mg/L)	Initial	8.00							
	Final		6.90						
pH (su)	Initial	8.26							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.1							
	Final		21.6						
DO (mg/L)	Initial	8.00							
	Final		7.22						
pH (su)	Initial	8.26							
	Final		7.89						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
NPDES #: TN0064785  
Analyst: LC

Species:		Pimephales promelas							Remarks
Conc:		8.50%							
		Day							
		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		22.8						
DO (mg/L)	Initial	8.53							
	Final		7.29						
pH (su)	Initial	8.23							
	Final		7.87						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species:		Ceriodaphnia dubia							Remarks
Conc:		8.50%							
		Day							
		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		21.7						
DO (mg/L)	Initial	8.53							
	Final		7.08						
pH (su)	Initial	8.23							
	Final		7.89						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #4                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.5							
	Final		22.5						
DO (mg/L)	Initial	8.54							
	Final		6.91						
pH (su)	Initial	8.26							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.5							
	Final		21.7						
DO (mg/L)	Initial	8.54							
	Final		7.98						
pH (su)	Initial	8.26							
	Final		7.94						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/30/22-04/01/22

Lab ID #: 22-089-0025  
NPDES #: TN0064785  
Analyst: LC

Species:		Pimephales promelas							Remarks
Conc:		34.00%							
		Day							
		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		21.9						
DO (mg/L)	Initial	8.27							
	Final		7.32						
pH (su)	Initial	8.36							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species:		Ceriodaphnia dubia							Remarks
Conc:		34.00%							
		Day							
		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		21.2						
DO (mg/L)	Initial	8.27							
	Final		6.91						
pH (su)	Initial	8.36							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data  
Acute Toxicity*

Discharger: Adamsville STP                      Lab ID #: 22-089-0025  
 Location: Outfall 001, Pull #4                NPDES #: TN0064785  
 Test Dates: 03/30/22-04/01/22              Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.7							
	Final		21.9						
DO (mg/L)	Initial	9.30							
	Final		6.77						
pH (su)	Initial	8.57							
	Final		7.75						
Alkalinity (mg/L as CaCO <sub>3</sub> )		94.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		96.7							100% Effluent
Conductivity (umhos/cm)		291.1							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.7							
	Final		20.9						
DO (mg/L)	Initial	9.30							
	Final		7.31						
pH (su)	Initial	8.57							
	Final		7.88						
Alkalinity (mg/L as CaCO <sub>3</sub> )		94.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		96.7							100% Effluent
Conductivity (umhos/cm)		291.1							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

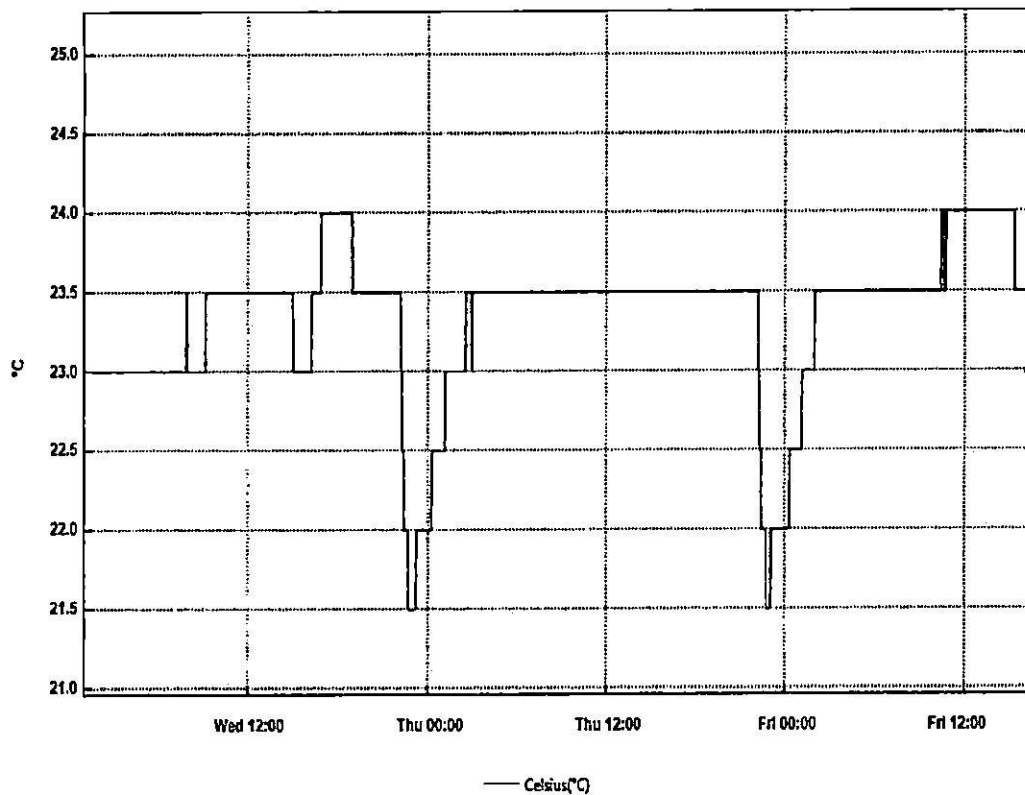
# Waypoint Analytical

## Attachment 1

### Temperature Log for Biototoxicity Testing.

Discharger: Adamsville STP    Lab ID #: 22-089-0025    Test dates: 03/30/22-04/01/22  
Location: Outfall 001    NPDES #: TN0064785    Analyst: LC

Number 2



From: Wednesday, March 30, 2022 12:53:37 AM - To: Friday, April 01, 2022 4:51:53 PM

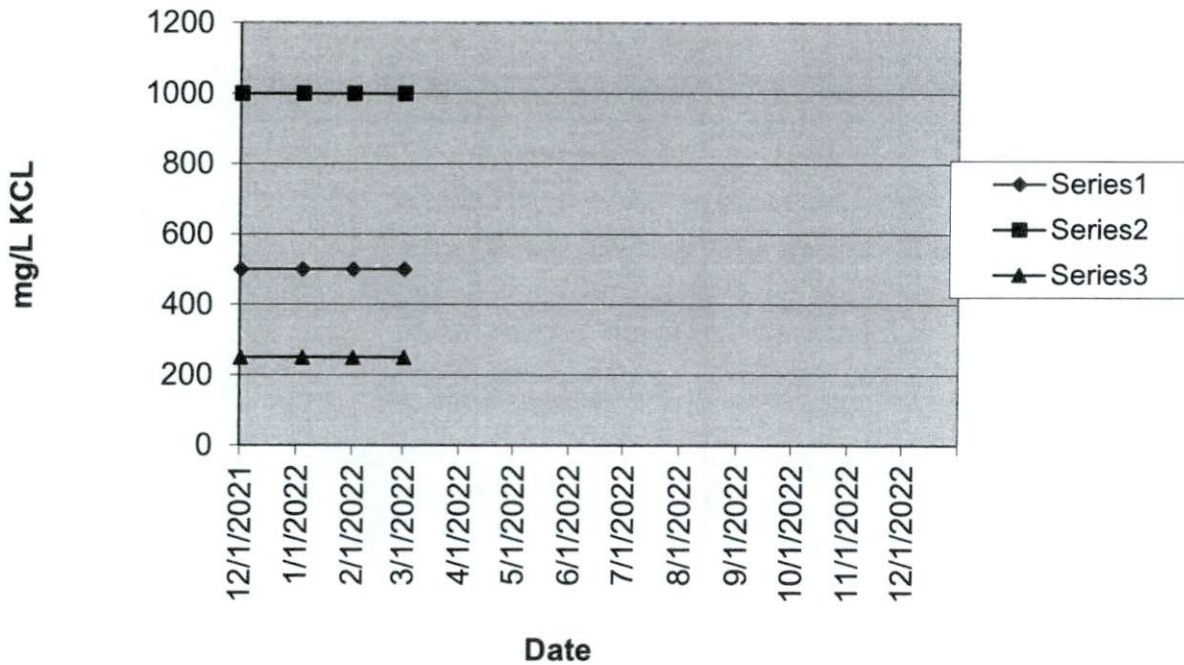
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
Survival NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/21	500	1000	250			500.00
01/04/22	500	1000	250	0.00	0.00	500.00
02/01/22	500	1000	250	0.00	0.00	500.00
03/01/22	500	1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00

**PIMEPHALES REFERENCE TOXICANT SURVIVAL NOEC**

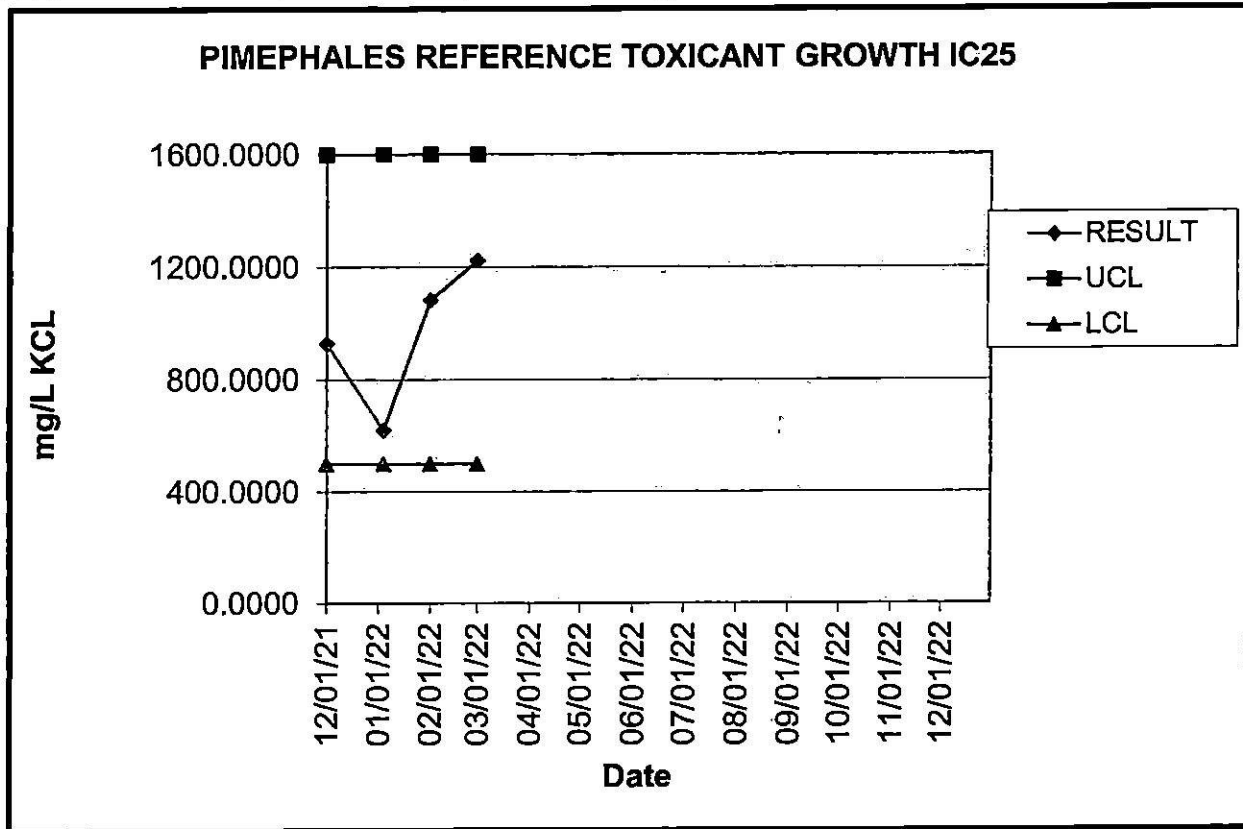


Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
Growth IC25**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/21	927.9980	1600.0000	500.0000		0.00	928.00
01/04/22	621.4200	1600.0000	500.0000	216.78	27.98	774.71
02/01/22	1082.8200	1600.0000	500.0000	234.82	26.76	877.41
03/01/22	1222.5700	1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70
		1600.0000	500.0000	257.96	26.77	963.70



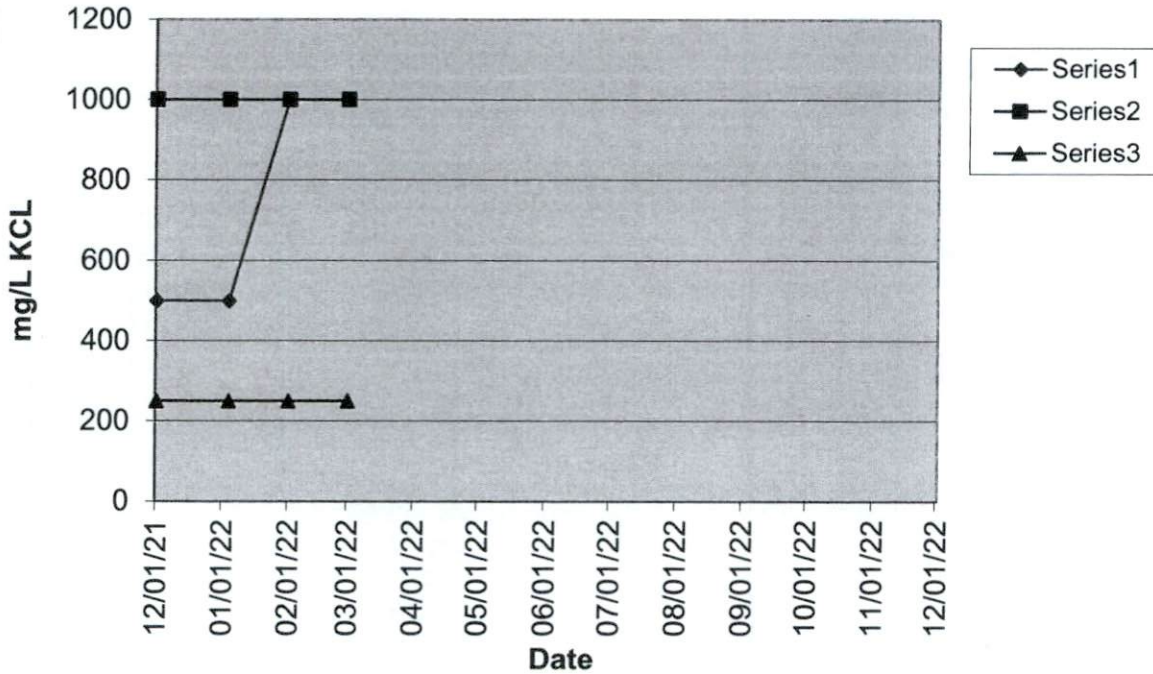


**Waypoint Analytical Inc.  
Attachment 2**

**Pimephales Chronic Reference Toxicant Data  
Growth NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	PMSD	MEAN
12/01/21	500	1000	250		0.00	15.06	500.00
01/04/22	500	1000	250	0.00	0.00	25.60	500.00
02/01/22	1000	1000	250	288.68	43.30	22.31	666.67
03/01/22	1000	1000	250	288.68	38.49	26.26	750.00
		1000	250	288.68	38.49	15.48	750.00
		1000	250	288.68	38.49	24.44	750.00
		1000	250	288.68	38.49	25.89	750.00
		1000	250	288.68	38.49	16.16	750.00
		1000	250	288.68	38.49	19.30	750.00
		1000	250	288.68	38.49	22.55	750.00
		1000	250	288.68	38.49	18.90	750.00
		1000	250	288.68	38.49	24.64	750.00
		1000	250	288.68	38.49	23.31	750.00

**PIMEPHALES REFERENCE TOXICANT GROWTH NOEC**



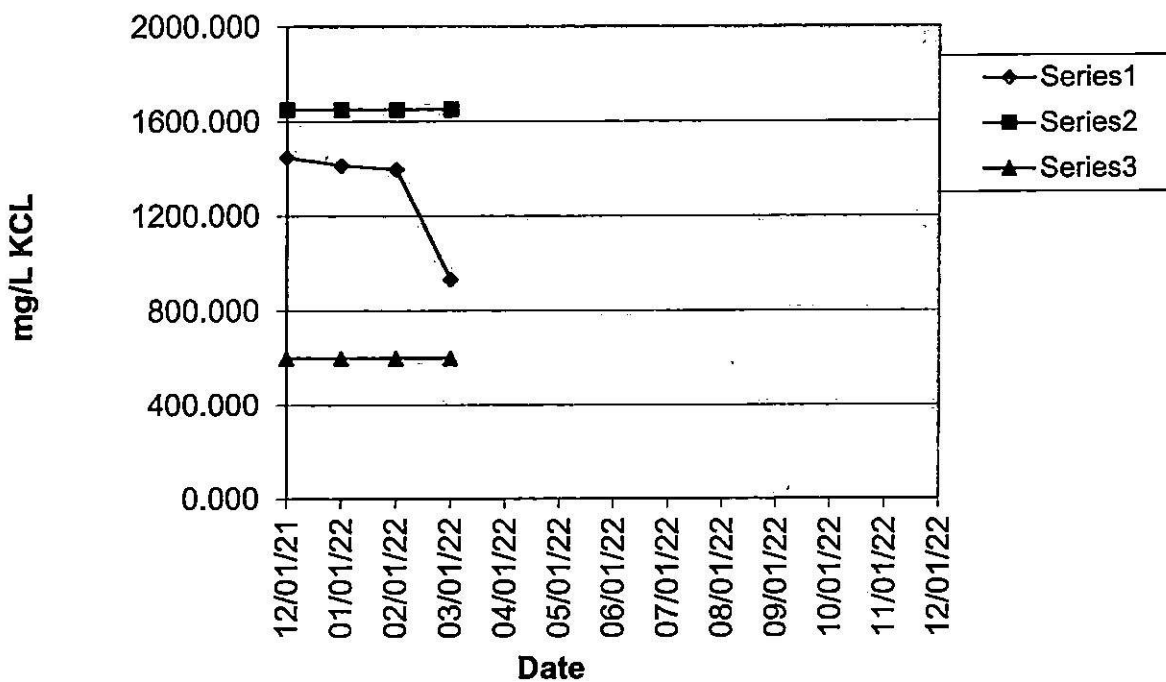
# Waypoint Analytical Inc.

## Attachment 2

### Pimephales Chronic Reference Toxicant Data 48Hour Survival

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/02/21	1447.270	1650.00	600.00		0.00	1447.27
01/05/22	1414.210	1650.00	600.00	23.38	1.63	1430.74
02/02/22	1397.700	1650.00	600.00	25.24	1.78	1419.73
03/02/22	933.033	1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05
		1650.00	600.00	244.22	18.81	1298.05

### PIMEPHALES REFERENCE TOXICANT 48HOUR SURVIVAL



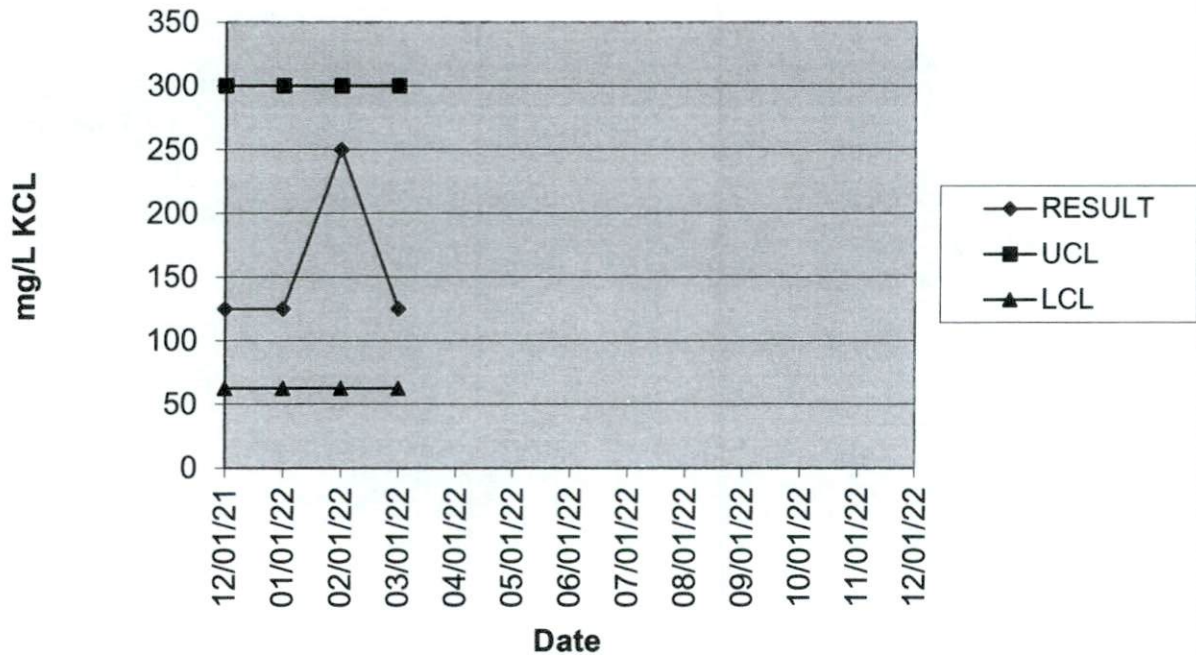
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Survival NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/21	125	300	62.5			125.00
01/04/22	125	300	62.5	0.00	0.00	125.00
02/01/22	250	300	62.5	72.17	43.30	166.67
03/01/22	125	300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25

**CERIODAPHNIA REFERENCE TOXICANT SURVIVAL NOEC**



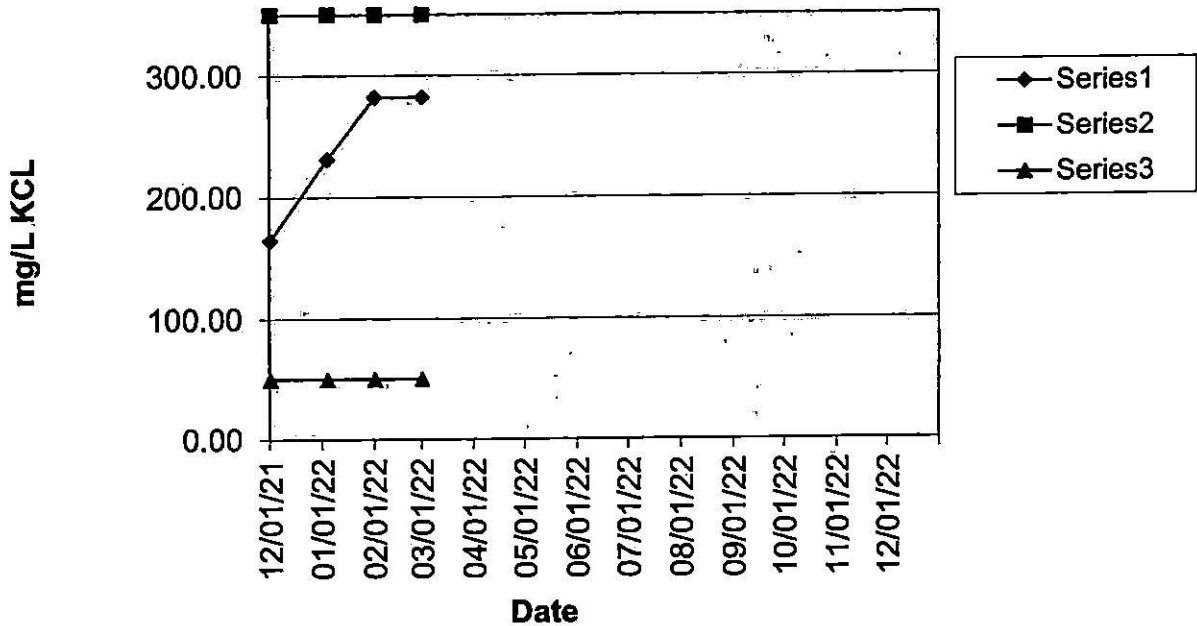
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Reproduction IC25**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/21	164.60	350.00	50.00	55.76	23.23	240.04
01/04/22	231.13	350.00	50.00	55.76	23.23	240.04
02/01/22	282.21	350.00	50.00	55.76	23.23	240.04
03/01/22	282.21	350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04
		350.00	50.00	55.76	23.23	240.04

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTION IC25**





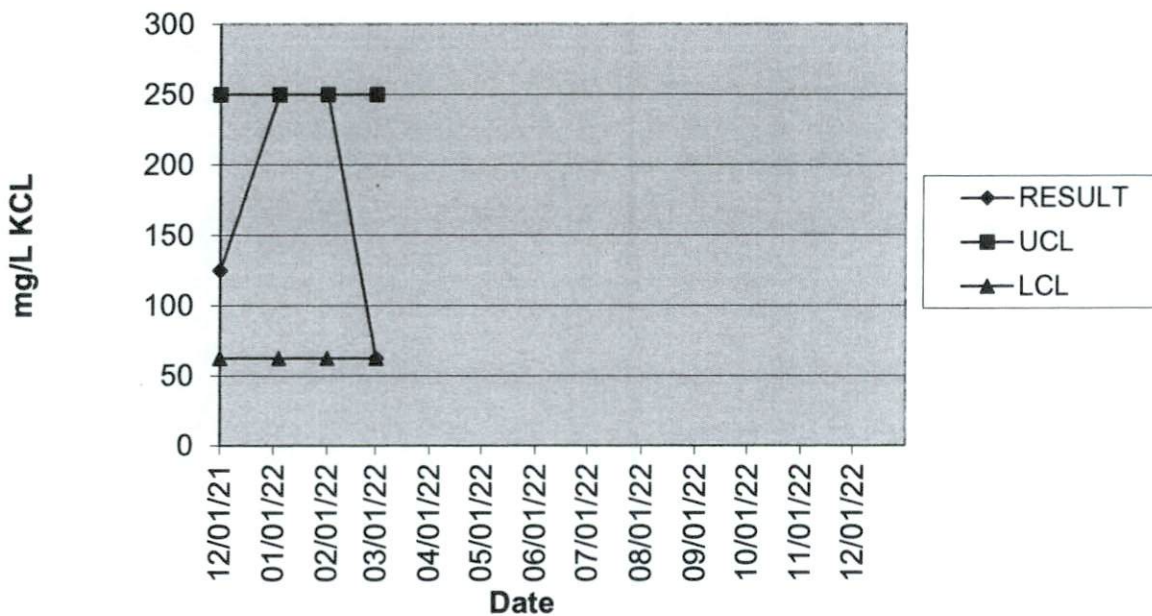
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Reproduction NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN	PMSD
12/01/21	125	250	62.5			125.00	14.94
01/04/22	250	250	62.5	88.39	47.14	187.50	28.31
02/01/22	250	250	62.5	72.17	34.64	208.33	23.51
03/01/22	62.5	250	62.5	93.75	54.55	171.88	37.50
		250	62.5	93.75	54.55	171.88	31.89
		250	62.5	93.75	54.55	171.88	41.54
		250	62.5	93.75	54.55	171.88	23.83
		250	62.5	93.75	54.55	171.88	23.26
		250	62.5	93.75	54.55	171.88	30.41
		250	62.5	93.75	54.55	171.88	39.35
		250	62.5	93.75	54.55	171.88	32.19
		250	62.5	93.75	54.55	171.88	38.64
		250	62.5	93.75	54.55	171.88	38.93

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTON  
NOEC**





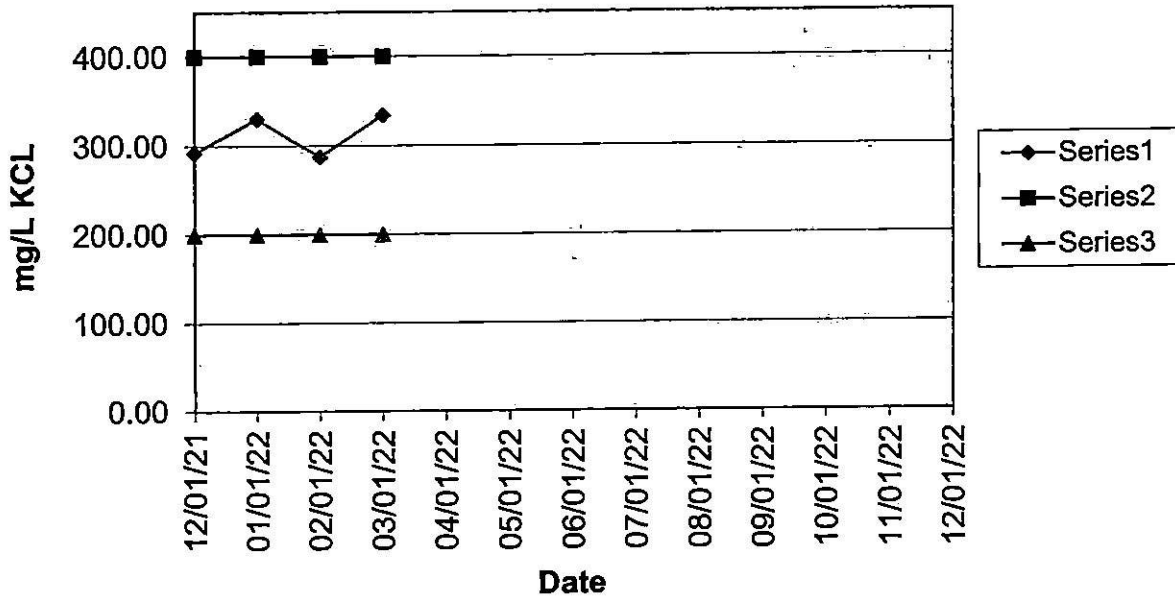
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicity Data**  
**48Hour Survival**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/02/21	292.02	400.00	200.00			292.02
01/05/22	329.88	400.00	200.00	26.77	8.61	310.95
02/02/22	287.17	400.00	200.00	23.38	7.72	303.02
03/02/22	334.07	400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79
		400.00	200.00	24.61	7.92	310.79

**CERIODAPHNIA REFERENCE TOXICANT 48HOUR SURVIVAL**



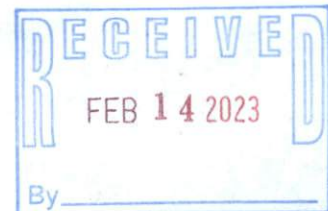


2269 Dr. F. E. Wright Drive  
Jackson, TN 38305

(800) 832-1808  
(731) 423-5330  
FAX (731) 423-5326

CLIENT NAME: City of Adamsville		Project Name: Bioassay-Acute			ANALYSES REQUESTED								
ADDRESS: 203 Sunrise Drive.		P.O. # <i>Waste Water</i>		QID # 766									
Adamsville TN 38310		RUSH?	Notify Lab in Advance		CLIENT # C0109WW								
Phone:		<24hr	Notify Lab in Advance		DATE NEEDED:								
Fax:		24-48	Notify Lab in Advance										
COLLECTED BY: <i>Garrett Pettigrew</i>		48-78	Notify Lab in Advance		FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes								
# OF CONT.	SAMPLE DESCRIPTION/LOCATION	DATE	TIME	TYPE		MATRIX*	PRESERVATIVE						
				COMP.	GRAB								
1	First Pull	3-29-22	1:15 pm		X	WW	-----	Bioassay					
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)					
1	Second Pull	3-29-22	7:15 pm		X	WW	-----	Bioassay					
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)					
1	Third Pull	3-30-22	1:15 AM		X	WW	-----	Bioassay					
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)					
1	Fourth Pull	3-30-22	10:30 AM		X	WW	-----	Bioassay					
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)					
		FLOW (GPD):											
Remarks:		1st pull	2nd pull	3rd pull	4th pull	SHIPPED VIA:							
Cl_res:						UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>				
Conductivity:						FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>				
DO:						OTHER	<input type="checkbox"/>	COOLER #:	<input type="checkbox"/>				
pH:						SAMPLES RETURNED VIA:							
RELINQUISHED BY: <i>Scott Kelly</i>		DATE: 3-30-22	TIME: 11:50	RECEIVED BY:		UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>	Condition: (lab use only)			
RELINQUISHED BY:		DATE:	TIME:	RECEIVED BY:		FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>				
RELINQUISHED BY:		DATE:	TIME:	RECEIVED FOR LAB BY: <i>Spratt</i>		TEMP: 2°C	Bottles Received: 4						
		DATE: 11:50	TIME: 11:50			pH:							

**2021  
ADAMSVILLE STP  
ANNUAL  
BIOMONITORING  
TN0064785  
OUTFALL 001**



Waypoint Analytical  
2269 DR. F. E. WRIGHT DRIVE  
JACKSON, TN 38305

April 05, 2021

Mr. Scott Klinck  
231 East Main Street  
Adamsville, TN 38310

RE: Annual Biomonitoring 2021 Adamsville STP – TN0064785

Dear Mr. Scott Klinck,

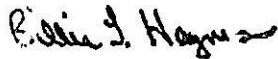
Please find enclosed the above referenced report for samples submitted the week of March 29, 2021.

Results of the test indicate that the samples **passed** permit requirements for the Pimephales promelas and **passed** permit requirements for the Ceriodaphnia dubia.

EPA Methods: 2002.0 Ceriodaphnia dubia Survival  
2000.0 Pimephales promelas Larval Survival

If you have any questions, please call. We appreciate you as a client and are always glad to be of service to you.

Sincerely,



Billie Haynes  
Laboratory Manager

Enclosure

# Waypoint Analytical Inc.

Discharger Name: Adamsville STP  
NPDES Number: TN0064785

## TEST SUMMARY

Listed below is a summary of results for the four "48-Hour Static Acute Toxicity Tests" performed on wastewater effluent samples from the Adamsville STP – Adamsville, Tennessee - Outfall 001.

1. The test type was "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Ceriodaphnia and an "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Pimephales. Four separate grab samples collected at 6-hour intervals over a 24-hour period were used in four separate tests.
2. Tests were conducted on 03/31/21-04/02/21 for the Ceriodaphnia and 03/31/21-04/02/21 for the Pimephales.
3. The test method used was EPA-821-R-02-012.
4. The 4 samples were collected on 03/30/21 and 03/31/21.

## TABLED SUMMARY OF TEST RESULTS

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
*Ceriodaphnia dubia - Pull #1	Pass	17%	>68%	-----	-----
*Ceriodaphnia dubia - Pull #2	Pass	17%	>68%	-----	-----
*Ceriodaphnia dubia - Pull #3	Pass	17%	>68%	-----	-----
*Ceriodaphnia dubia - Pull #4	Pass	17%	>68%	-----	-----
*Pimephales promelas- Pull #1	Pass	17%	>68%	-----	-----
*Pimephales promelas- Pull #2	Pass	17%	>68%	-----	-----
*Pimephales promelas- Pull #3	Pass	17%	>68%	-----	-----
*Pimephales promelas- Pull #4	Pass	17%	>68%	-----	-----

\*Result table is applicable for all four separate tests.

All QC criteria required by the above referenced method were met during this analysis.



# **Waypoint Analytical Inc.**

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **TABLE OF CONTENTS**

**Introduction**

**Plant Operations**

**Source of Effluent, Receiving Water and Dilution Water**

**Test Conditions**

**Test Organisms**

**Quality Assurance**

**Results**

**Conclusions and Recommendations**

**Tables**

**Attachments**

### **INTRODUCTION:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Permit Number:**

TN0064785

**Toxicity Testing Requirements of Permit:**

4 separate 48-Hour, Static, Non-renewal, Ceriodaphnia dubia Survival and a 48-Hour, Static, Non-renewal, Pimephales promelas Survival Tests. The permit limit is 17 % with an LC<sub>50</sub> endpoint. Five serial dilutions and a control are required. The dilutions are as follows:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	2 X PL	Permit Limit	0.5 X PL	0.25 X PL	Control
%effluent					
68	34	17	8.5	4.25	0

**Plant Location:**

Adamsville, McNairy County, Tennessee

**Name of receiving water body:**

Snake Creek at mile 8.0

**Contract Laboratory:**

Waypoint Analytical Inc.  
2269 Dr. F. E. Wright Drive  
Jackson, Tennessee 38305  
731.423.5330

**PLANT OPERATIONS:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Product(s):**

Treated municipal wastewater

**Raw Materials:**

**Operating Schedule:**

**Description of Waste Treatment:**

**Schematic of Waste Treatment:**

**Retention Time (If Applicable):**

**Volume of Waste Flow:**

**Design Flow of Treatment Facility  
at time of Sampling:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **SOURCE OF EFFLUENT, RECEIVING WATER AND DILUTION WATER:**

### **EFFLUENT:**

#### **Sampling Point:**

Effluent at Outfall 001

#### **Sample Collection Method:**

Grab Sample

#### **Collection Dates and Times:**

Sample 1 – 03/30/21, 2203

Sample 2 – 03/31/21, 0200

Sample 3 – 03/31/21, 0605

Sample 4 – 03/31/21, 1009

#### **Physical and Chemical Data:**

None Requested

#### **Mean Daily Discharge on Sample Collection Dates:**

None Given

#### **Lapsed Time from Sample Collection to Delivery:**

Sample 1 – 24.75 hrs

Sample 2 – 09.80 hrs

Sample 3 – 05.72 hrs

Sample 4 – 01.65 hrs

#### **Sample Temperature when received at the Laboratory:**

-3.0°C

### **RECEIVING WATER:**

Not Applicable

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**DILUTION WATER:**

**Source:**

20% Diluted Mineral Water (Perrier) Prepared by Waypoint

**Collection Date(s) and Time(s):**

Not Applicable

**Pretreatment:**

Temperature Equilibration and Aeration

**Physical and Chemical Characteristics:**

<b>Batch ID</b>	<b>Date Tested</b>	<b>pH</b>	<b>Hardness</b>	<b>Alkalinity</b>	<b>Specific Conductance</b>	<b>Dissolved Oxygen</b>
032521S2	03/26/21	8.22	98.3	58.0	195.0	8.71



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **TEST METHODS:**

### **Toxicity Test Method Used:**

“Method for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms”, Fifth Edition, EPA-821-R-02-012

### **Endpoint of Test:**

Survival LC<sub>50</sub> – Ceriodaphnia dubia  
Survival LC<sub>50</sub> – Pimephales Promelas

### **Deviation(s) from Reference Method:**

None

### **Date and Time Tests Started:**

Ceriodaphnia – 03/31/21, 1246-1513  
Pimephales – 03/31/21, 1258-1536

### **Date and Time Tests Terminated:**

Ceriodaphnia – 04/02/21, 1236-1512  
Pimephales – 04/02/21, 1250-1534

### **Type and Volume of Test Chambers:**

Ceriodaphnia – 30ml Plastic Cups  
Pimephales – 500ml Plastic Beakers

### **Volume of Solution per Chamber:**

Ceriodaphnia – 15ml  
Pimephales – 250ml

### **Number of Organisms per Chamber:**

Ceriodaphnia – 5 Neonate  
Pimephales – 10 Larvae

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

**Number of Replicated Test Chambers per Treatment:**

Ceriodaphnia – 4

Pimephales - 2

**Acclimation of Test Organisms:**

Ceriodaphnia – N/A Waypoint Culture

Pimephales – 5 hrs @ 25°C +/- 1°C

**Test Temperature (Mean and Range):**

See Attachment 1

**Specify if Aeration was needed:**

None Needed

**Feeding Frequency, Amount and Type of Food:**

Ceriodaphnia – 0.1ml of YCT (1.8g solids/L) and 0.1ml of Selenastrum (3.0 X 10<sup>7</sup> cell/ml) 2 hours prior to introduction to test solutions.

Pimephales – 0.15g Brine Shrimp, 2 hours prior to introduction to test solutions.

**pH Control Measures (if necessary):**

None Needed

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **TEST ORGANISMS:**

### **Scientific Name:**

Ceriodaphnia dubia and Pimephales promelas

### **Age:**

Ceriodaphnia dubia - < 24 hrs old

Pimephales Promelas – 3 days old

### **Life Stage:**

Ceriodaphnia – Neonate

Pimephales - Larvae

### **Mean Length and Weight:**

Ceriodaphnia – Not Applicable

Pimephales – Not Applicable

### **Source:**

Ceriodaphnia – Waypoint Culture

Pimephales – Aquatic Biosystems, Fort Collins, Colorado

### **Diseases and Treatment:**

Not Applicable

### **Taxonomic Key used for Species Identification:**

Ceriodaphnia – Microscopic Examination as compared to reference material.

Pimephales – Aquatic Biosystems

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **QUALITY ASSURANCE:**

### **Reference Toxicant used Routinely; Source:**

Potassium Chloride, KCL – Fisher Scientific – Waypoint ID #: CS-316

### **Date and Time of Most Recent Reference Toxicant Test, Test Results, and Current Control Chart:**

See Attachment 2

### **Dilution Water used in Reference Toxicant Test:**

20% DMW – See “Dilution Water” Section

### **Results PMSD for Sub-lethal Endpoints Determined by Hypothesis Testing in Reference Toxicant Test:**

See “Attachment 2”.

### **Physical and Chemical Methods used:**

NPDES Approved Methods from “Standard Methods for the Examination of Water and Wastewater” Eighteenth Edition

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

**RESULTS:**

**Tabulated Toxicity Data:**

Table 1 – Data for Pimephales promelas Larval Survival Test

Table 2 – Data for Ceriodaphnia Survival Test

Table 3 – Physical and Chemical Data, Acute Toxicity

**Test Endpoint Table: (Tabled results are applicable for all 4 separate tests.)**

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
*Ceriodaphnia dubia - Pull #1	<b>Pass</b>	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #2	<b>Pass</b>	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #3	<b>Pass</b>	17%	>68%	----	----
*Ceriodaphnia dubia - Pull #4	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #1	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #2	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #3	<b>Pass</b>	17%	>68%	----	----
*Pimephales promelas- Pull #4	<b>Pass</b>	17%	>68%	----	----

**Statistical Method used to Calculate Endpoints:**

Ceriodaphnia Survival – N/A\*

Pimephales Survival – N/A\*

\*Endpoints could not be calculated as no test solution produced significant mortality.

**Tabulated QA Data:**

See Attachment 2

**PMSDs for Sub-lethal Endpoints:**

Species	Endpoint	Lower PMSD Bound	Upper PMSD Bound	Result
Ceriodaphnia	Reprod.	13	47	*
Pimephales	Growth	12	30	*

\*Not required for "Point Estimation Testing".



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **CONCLUSION AND RECOMMENDATIONS:**

### **Conclusion:**

Endpoints meet the permit requirements.

### **Recommendation:**

Report results to appropriate regulatory agency.

# Waypoint Analytical Inc.

## Table 1

### *Survival Data for Pimephales promelas Acute Survival Test*

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #1  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 2  
 Template #: A  
 Test Dates: 03/31/21-04/02/21  
 Analyst: LC  
 Food ID #: 2077 BIO  
 Org. ID #: 2153 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	10			
	2	10	10			
8.5	1	9	9			
	2	10	9			
17	1	10	9			
	2	10	8			
34	1	10	10			
	2	10	9			
68	1	10	9			
	2	10	8			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/31 - LC	1306		Setup 1258
1	04/01 - LC			Count 1126
2	04/02 - LC			End 1250
3				
4				

# Waypoint Analytical Inc.

## Table 2

### *Survival Data for Ceriodaphnia dubia Acute Survival Test*

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #1  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 2  
 Template #: A  
 Test Dates: 03/31/21-04/02/21  
 Analyst: LC

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
4.25	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
8.5	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
17	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
34	1	5	5		
	2	5	5		
	3	5	4		
	4	5	4		
68	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		22.7						
DO (mg/L)	Initial	8.27							
	Final		7.38						
pH (su)	Initial	8.24							
	Final		7.93						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		22.3						
DO (mg/L)	Initial	8.27							
	Final		7.68						
pH (su)	Initial	8.24							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		23.1						
DO (mg/L)	Initial	8.61							
	Final		8.25						
pH (su)	Initial	8.09							
	Final		7.93						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		22.4						
DO (mg/L)	Initial	8.61							
	Final		7.98						
pH (su)	Initial	8.09							
	Final		7.87						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data  
Acute Toxicity*

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #1  
 Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		22.9						
DO (mg/L)	Initial	8.62							
	Final		7.98						
pH (su)	Initial	8.03							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		22.4						
DO (mg/L)	Initial	8.62							
	Final		8.06						
pH (su)	Initial	8.03							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		22.6						
DO (mg/L)	Initial	8.29							
	Final		8.18						
pH (su)	Initial	7.97							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		21.7						
DO (mg/L)	Initial	8.29							
	Final		8.06						
pH (su)	Initial	7.97							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		22.4						
DO (mg/L)	Initial	8.31							
	Final		7.71						
pH (su)	Initial	7.91							
	Final		7.68						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		21.6						
DO (mg/L)	Initial	8.31							
	Final		7.91						
pH (su)	Initial	7.91							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		21.7						
DO (mg/L)	Initial	8.56							
	Final		8.01						
pH (su)	Initial	7.74							
	Final		7.86						
Alkalinity (mg/L as CaCO <sub>3</sub> )		102.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		99.7							100% Effluent
Conductivity (umhos/cm)		267.7							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		21.3						
DO (mg/L)	Initial	8.56							
	Final		7.95						
pH (su)	Initial	7.74							
	Final		7.86						
Alkalinity (mg/L as CaCO <sub>3</sub> )		102.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		99.7							100% Effluent
Conductivity (umhos/cm)		267.7							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

### ***Survival Data for Pimephales promelas Acute Survival Test***

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #2  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 2  
 Template #: B  
 Test Dates: 03/31/21-04/02/21  
 Analyst: LC  
 Food ID #: 2077 BIO  
 Org. ID #: 2153 BIO

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	10	10		
	2	10	10		
4.25	1	10	10		
	2	10	10		
8.5	1	10	10		
	2	10	10		
17	1	10	10		
	2	10	10		
34	1	10	10		
	2	10	10		
68	1	10	10		
	2	10	10		

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/31 - LC	1307		Setup 1302
1	04/01 - LC			Count 1126
2	04/02 - LC			End 1252
3				
4				



# Waypoint Analytical Inc.

## Table 2

### Survival Data for *Ceriodaphnia dubia* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #2  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 2  
 Template #: B  
 Test Dates: 03/31/21-04/02/21  
 Analyst: LC

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	

# Waypoint Analytical Inc.

## Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #2  
 Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.8							
	Final		22.6						
DO (mg/L)	Initial	8.27							
	Final		8.26						
pH (su)	Initial	8.24							
	Final		7.77						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.8							
	Final		21.5						
DO (mg/L)	Initial	8.27							
	Final		7.82						
pH (su)	Initial	8.24							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.9							
	Final		22.5						
DO (mg/L)	Initial	7.80							
	Final		8.31						
pH (su)	Initial	8.02							
	Final		7.78						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.9							
	Final		20.9						
DO (mg/L)	Initial	7.80							
	Final		8.09						
pH (su)	Initial	8.02							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #2  
 Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.9							
	Final		22.4						
DO (mg/L)	Initial	8.08							
	Final		8.36						
pH (su)	Initial	8.00							
	Final		7.78						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.9							
	Final		21.2						
DO (mg/L)	Initial	8.08							
	Final		7.99						
pH (su)	Initial	8.00							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.3							
	Final		22.2						
DO (mg/L)	Initial	8.49							
	Final		8.14						
pH (su)	Initial	7.96							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.3							
	Final		20.6						
DO (mg/L)	Initial	8.49							
	Final		8.12						
pH (su)	Initial	7.96							
	Final		7.85						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #2  
 Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.7							
	Final		22.2						
DO (mg/L)	Initial	8.64							
	Final		7.98						
pH (su)	Initial	7.88							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.7							
	Final		20.2						
DO (mg/L)	Initial	8.64							
	Final		7.99						
pH (su)	Initial	7.88							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.6							
	Final		22.2						
DO (mg/L)	Initial	8.53							
	Final		7.89						
pH (su)	Initial	7.74							
	Final		7.8						
Alkalinity (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Conductivity (umhos/cm)		279.1							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.6							
	Final		20.2						
DO (mg/L)	Initial	8.53							
	Final		8.03						
pH (su)	Initial	7.74							
	Final		7.87						
Alkalinity (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Conductivity (umhos/cm)		279.1							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

### *Survival Data for Pimephales promelas Acute Survival Test*

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 2  
 Template #: C  
 Test Dates: 03/31/21-04/02/21  
 Analyst: LC  
 Food ID #: 2077 BIO  
 Org. ID #: 2151 BIO

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	10	10		
	2	10	10		
4.25	1	10	10		
	2	10	10		
8.5	1	10	10		
	2	10	10		
17	1	10	10		
	2	10	9		
34	1	10	10		
	2	10	10		
68	1	10	9		
	2	10	9		

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/31 - LC	1539		Setup 1522
1	04/01 - LC			Count 1130
2	04/02 - LC			End 1532
3				
4				

# Waypoint Analytical Inc.

## Table 2

### Survival Data for Ceriodaphnia dubia Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 2  
 Template #: C  
 Test Dates: 03/31/21-04/02/21  
 Analyst: LC

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
4.25	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
8.5	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
17	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
34	1	5	5			
	2	5	5			
	3	5	5			
	4	5	4			
68	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		23.2						
DO (mg/L)	Initial	7.83							
	Final		7.71						
pH (su)	Initial	7.91							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		23.2						
DO (mg/L)	Initial	7.83							
	Final		7.90						
pH (su)	Initial	7.91							
	Final		8.09						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #3  
 Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.7							
	Final		22.7						
DO (mg/L)	Initial	8.60							
	Final		8.41						
pH (su)	Initial	7.89							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.7							
	Final		22.4						
DO (mg/L)	Initial	8.60							
	Final		8.07						
pH (su)	Initial	7.89							
	Final		8.02						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #3  
 Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		22.3						
DO (mg/L)	Initial	8.62							
	Final		8.50						
pH (su)	Initial	7.89							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		22.5						
DO (mg/L)	Initial	8.62							
	Final		8.04						
pH (su)	Initial	7.89							
	Final		8.03						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data:**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #3  
 Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
 NPDES #: TN0064785  
 Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.2							
	Final		21.9						
DO (mg/L)	Initial	8.59							
	Final		8.22						
pH (su)	Initial	7.83							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.2							
	Final		22.4						
DO (mg/L)	Initial	8.59							
	Final		7.87						
pH (su)	Initial	7.83							
	Final		7.99						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.1							
	Final		21.8						
DO (mg/L)	Initial	7.89							
	Final		8.20						
pH (su)	Initial	7.77							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.1							
	Final		22.0						
DO (mg/L)	Initial	7.89							
	Final		8.15						
pH (su)	Initial	7.77							
	Final		7.93						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

# Waypoint Analytical Inc.

## Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.0							
	Final		21.9						
DO (mg/L)	Initial	8.26							
	Final		8.21						
pH (su)	Initial	7.66							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )		106.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		105.0							100% Effluent
Conductivity (umhos/cm)		266.8							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.0							
	Final		21.7						
DO (mg/L)	Initial	8.26							
	Final		7.79						
pH (su)	Initial	7.66							
	Final		7.92						
Alkalinity (mg/L as CaCO <sub>3</sub> )		106.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		105.0							100% Effluent
Conductivity (umhos/cm)		266.8							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 2  
 Template #: D  
 Test Dates: 03/31/21-04/02/31  
 Analyst: LC  
 Food ID #: 2077 BIO  
 Org. ID #: 2153 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	10			
	2	10	10			
8.5	1	9	9			
	2	10	10			
17	1	10	10			
	2	10	10			
34	1	10	10			
	2	10	9			
68	1	10	9			
	2	10	8			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/31 - LC	1540		Setup 1536
1	04/01 - LC			Count 1132
2	04/02 - LC			End 1534
3				
4				

# Waypoint Analytical Inc.

## Table 2

### *Survival Data for Ceriodaphnia dubia* *Acute Survival Test*

Discharger: Adamsville STP.  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 21-090-0024  
 Chamber #: 3  
 Template #: D  
 Test Dates: 03/31/21-04/02/21  
 Analyst: LC

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
4.25	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
8.5	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
17	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
34	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
68	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			

Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.8							
	Final		23.4						
DO (mg/L)	Initial	7.83							
	Final		8.17						
pH (su)	Initial	7.91							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.8							
	Final		21.7						
DO (mg/L)	Initial	7.83							
	Final		7.55						
pH (su)	Initial	7.91							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )		58.0							
Hardness (mg/L as CaCO <sub>3</sub> )		98.3							
Conductivity (umhos/cm)		195.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		23.1						
DO (mg/L)	Initial	8.41							
	Final		8.04						
pH (su)	Initial	7.89							
	Final		7.73						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		21.9						
DO (mg/L)	Initial	8.41							
	Final		7.39						
pH (su)	Initial	7.89							
	Final		7.77						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.9							
	Final		23.2						
DO (mg/L)	Initial	8.02							
	Final		7.99						
pH (su)	Initial	7.88							
	Final		7.73						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.9							
	Final		21.9						
DO (mg/L)	Initial	8.02							
	Final		7.91						
pH (su)	Initial	7.88							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		23.2						
DO (mg/L)	Initial	7.71							
	Final		8.03						
pH (su)	Initial	7.86							
	Final		7.71						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		21.9						
DO (mg/L)	Initial	7.71							
	Final		7.83						
pH (su)	Initial	7.86							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		23.3						
DO (mg/L)	Initial	8.07							
	Final		7.85						
pH (su)	Initial	7.80							
	Final		7.72						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		21.8						
DO (mg/L)	Initial	8.07							
	Final		7.83						
pH (su)	Initial	7.80							
	Final		7.90						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/31/21-04/02/21

Lab ID #: 21-090-0024  
NPDES #: TN0064785  
Analyst: LC

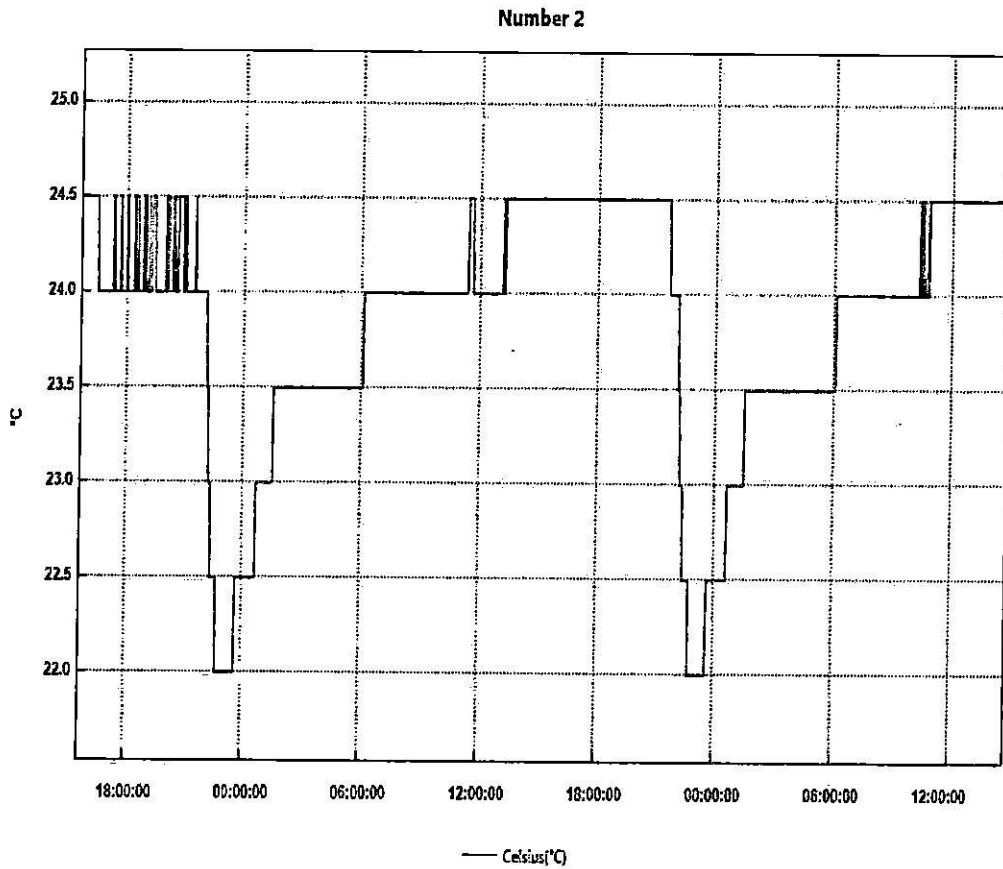
Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.5							
	Final		23.2						
DO (mg/L)	Initial	7.83							
	Final		7.71						
pH (su)	Initial	7.67							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )		108.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Conductivity (umhos/cm)		269.9							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.5							
	Final		21.5						
DO (mg/L)	Initial	7.83							
	Final		7.61						
pH (su)	Initial	7.67							
	Final		7.86						
Alkalinity (mg/L as CaCO <sub>3</sub> )		108.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Conductivity (umhos/cm)		269.9							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

## Attachment 1

### Temperature Log for Biotoxicity Testing.

**Discharger:** Adamsville STP    **Lab ID #:** 21-090-0024    **Test dates:** 03/31/21-04/02/21  
**Location:** Outfall 001    **NPDES #:** TN0064785    **Analyst:** LC



From: Wednesday, March 31, 2021 3:36:37 PM - To: Friday, April 02, 2021 2:53:43 PM



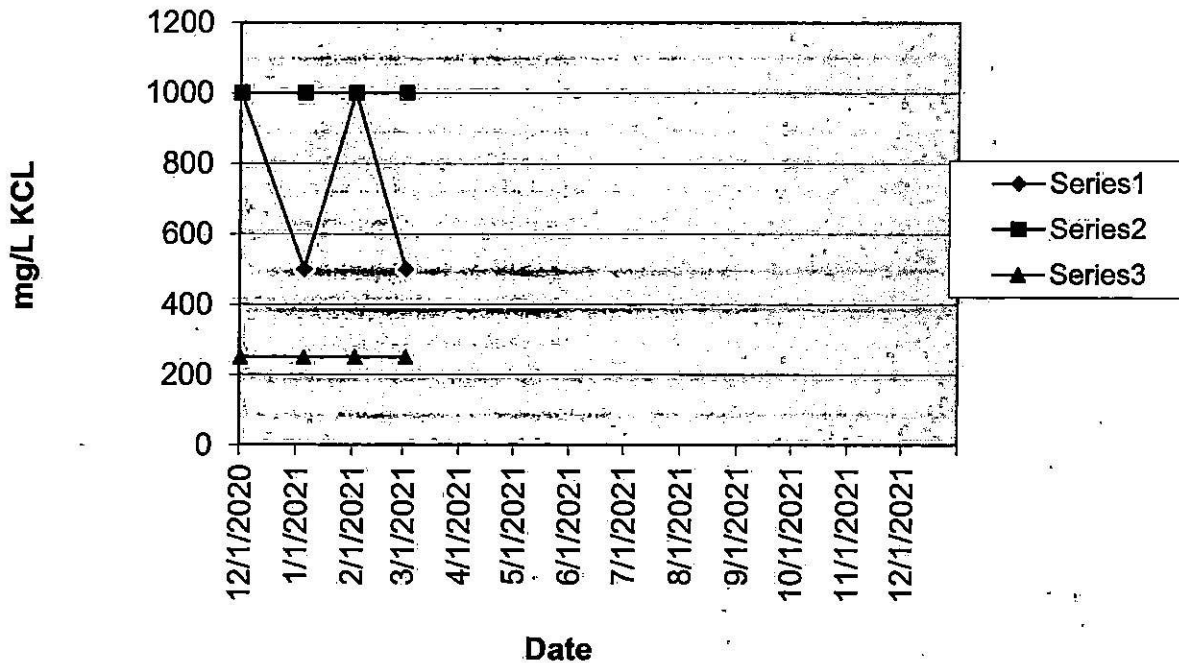
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
Survival NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/20	1000	1000	250			1000.00
01/05/21	500	1000	250	353.55	47.14	750.00
02/02/21	1000	1000	250	288.68	34.64	833.33
03/02/21	500	1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00
		1000	250	288.68	38.49	750.00

**PIMEPHALES REFERENCE TOXICANT SURVIVAL NOEC**

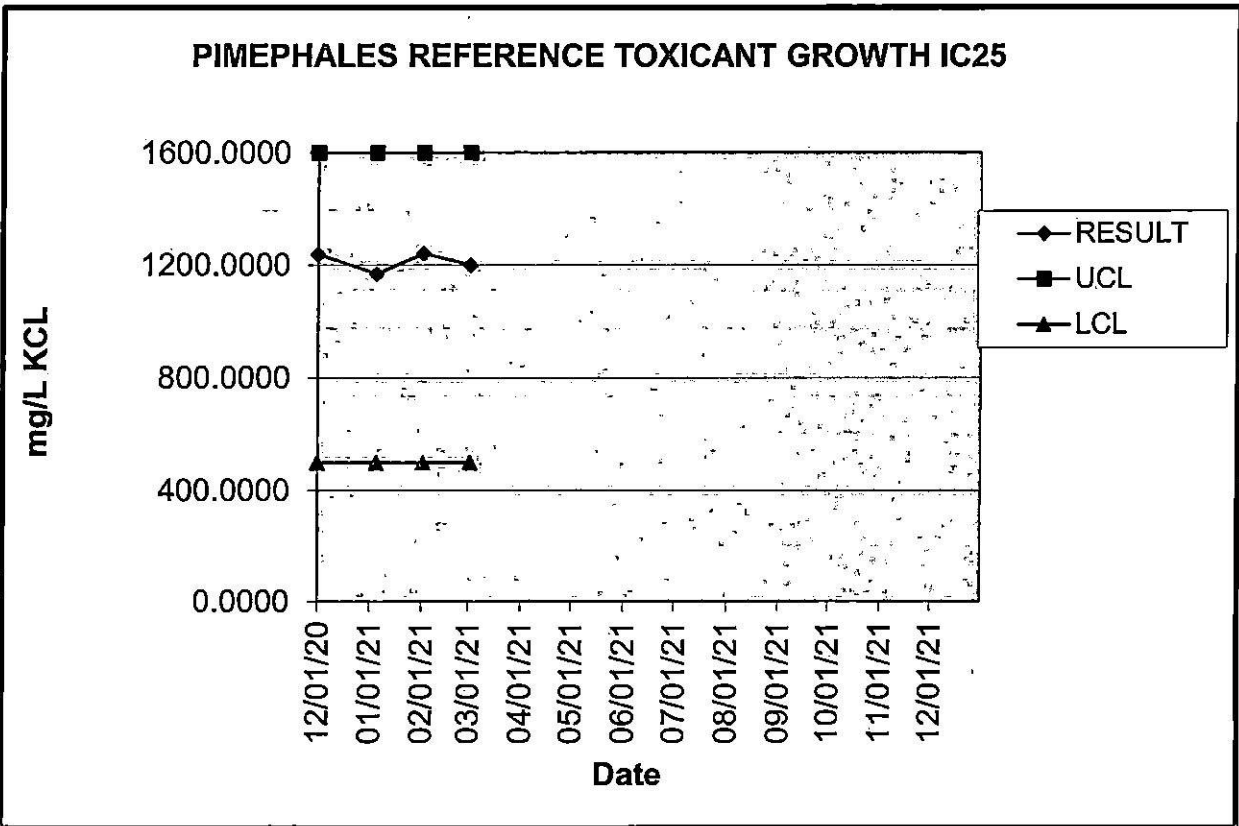


Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
Growth IC25**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/20	1238.0100	1600.0000	500.0000		0.00	1238.01
01/05/21	1167.4000	1600.0000	500.0000	49.93	4.15	1202.71
02/02/21	1241.6300	1600.0000	500.0000	41.85	3.44	1215.68
03/02/21	1199.3700	1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60
		1600.0000	500.0000	35.13	2.90	1211.60

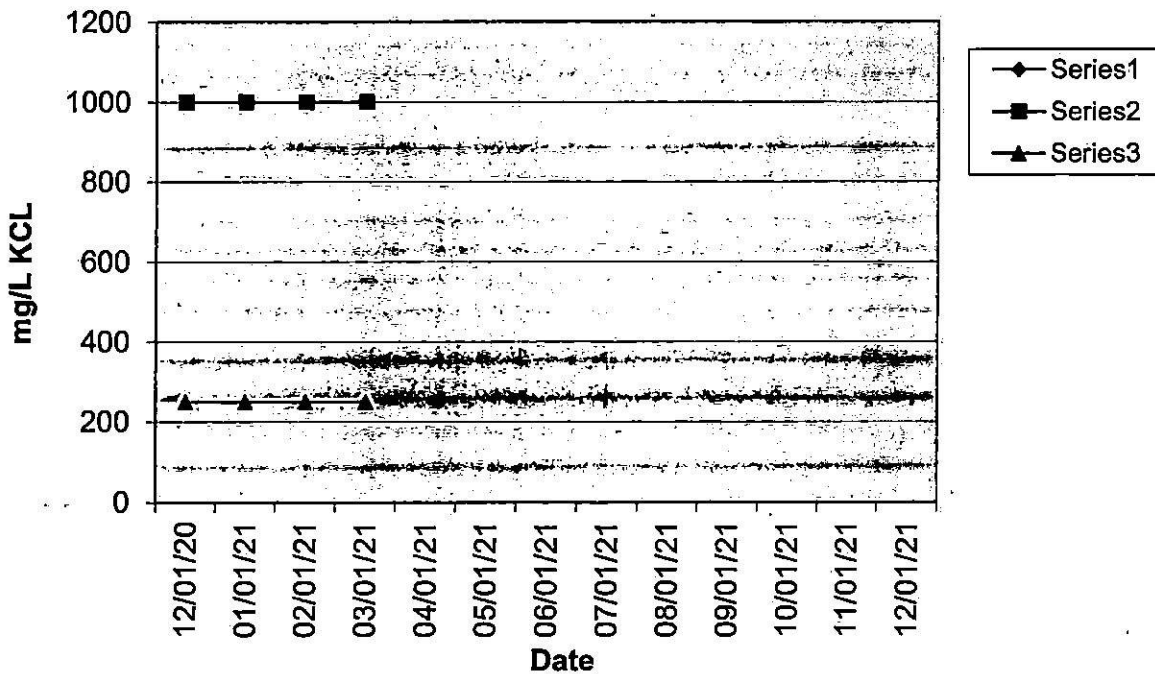


**Waypoint Analytical Inc.  
Attachment 2**

**Pimephales Chronic Reference Toxicant Data  
Growth NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	PMSD	MEAN
12/01/20	1000	1000	250		0.00	15.06	1000.00
01/05/21	1000	1000	250	0.00	0.00	25.60	1000.00
02/02/21	1000	1000	250	0.00	0.00	22.31	1000.00
03/02/21	1000	1000	250	0.00	0.00	26.26	1000.00
		1000	250	0.00	0.00	15.48	1000.00
		1000	250	0.00	0.00	24.44	1000.00
		1000	250	0.00	0.00	25.89	1000.00
		1000	250	0.00	0.00	16.16	1000.00
		1000	250	0.00	0.00	19.30	1000.00
		1000	250	0.00	0.00	22.55	1000.00
		1000	250	0.00	0.00	18.90	1000.00
		1000	250	0.00	0.00	24.64	1000.00
		1000	250	0.00	0.00	23.31	1000.00

**PIMEPHALES REFERENCE TOXICANT GROWTH NOEC**



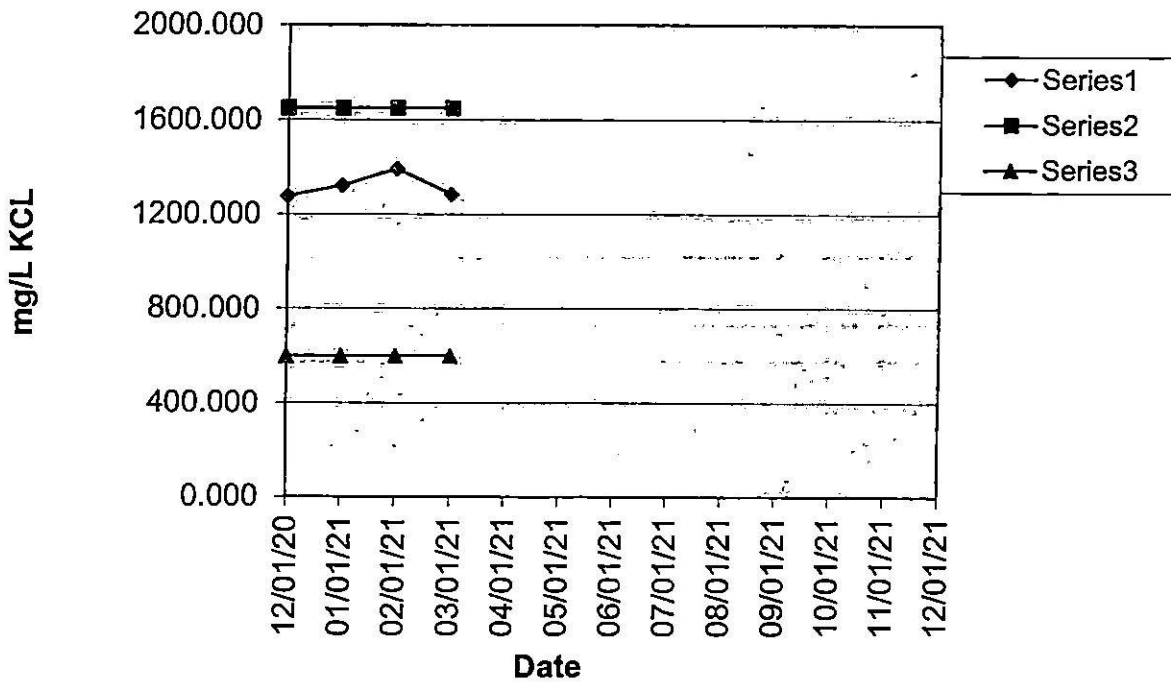
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
48Hour Survival**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/02/20	1274.560	1650.00	600.00		0.00	1274.56
01/06/21	1319.510	1650.00	600.00	31.78	2.45	1297.04
02/03/21	1389.920	1650.00	600.00	58.15	4.38	1328.00
03/03/21	1281.510	1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38
		1650.00	600.00	52.86	4.02	1316.38

**PIMEPHALES REFERENCE TOXICANT 48HOUR SURVIVAL**



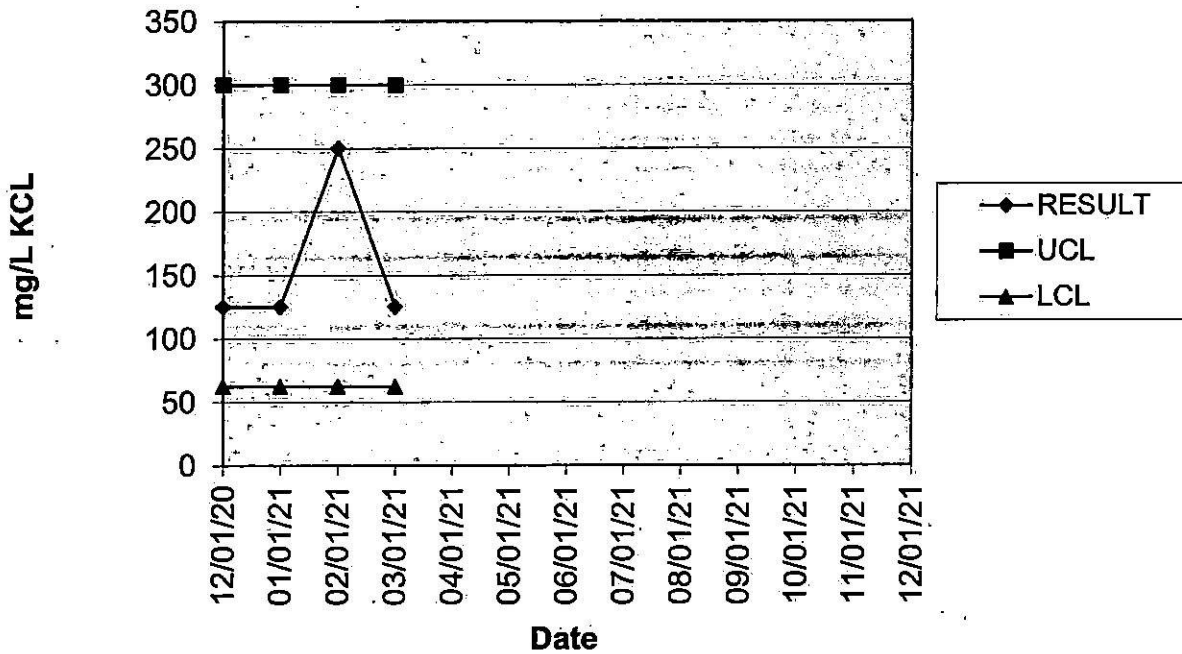
Waypoint Analytical Inc.

Attachment 2

Ceriodaphnia Chronic Reference Toxicant Data  
Survival NOEC

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/20	125	300	62.5			125.00
01/05/21	125	300	62.5	0.00	0.00	125.00
02/02/21	250	300	62.5	72.17	43.30	166.67
03/02/21	125	300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25
		300	62.5	62.50	40.00	156.25

CERIODAPHNIA REFERENCE TOXICANT SURVIVAL NOEC



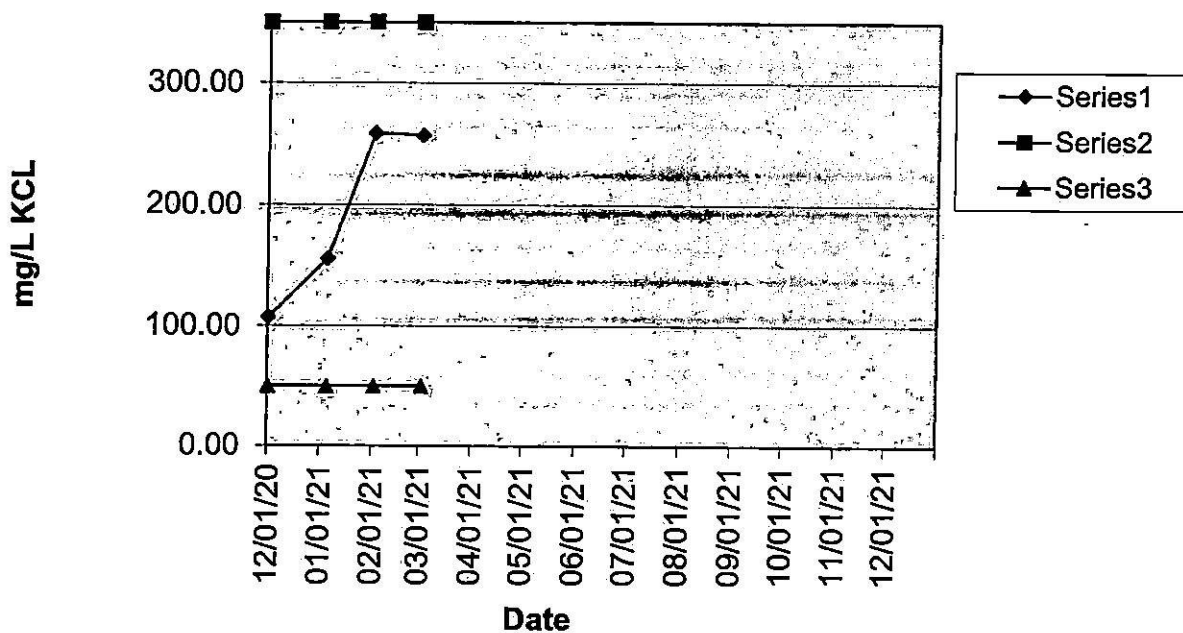
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Reproduction IC25**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/01/20	106.81	350.00	50.00	75.74	38.96	194.40
01/05/21	155.39	350.00	50.00	75.74	38.96	194.40
02/02/21	258.64	350.00	50.00	75.74	38.96	194.40
03/02/21	256.76	350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40
		350.00	50.00	75.74	38.96	194.40

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTION IC25**





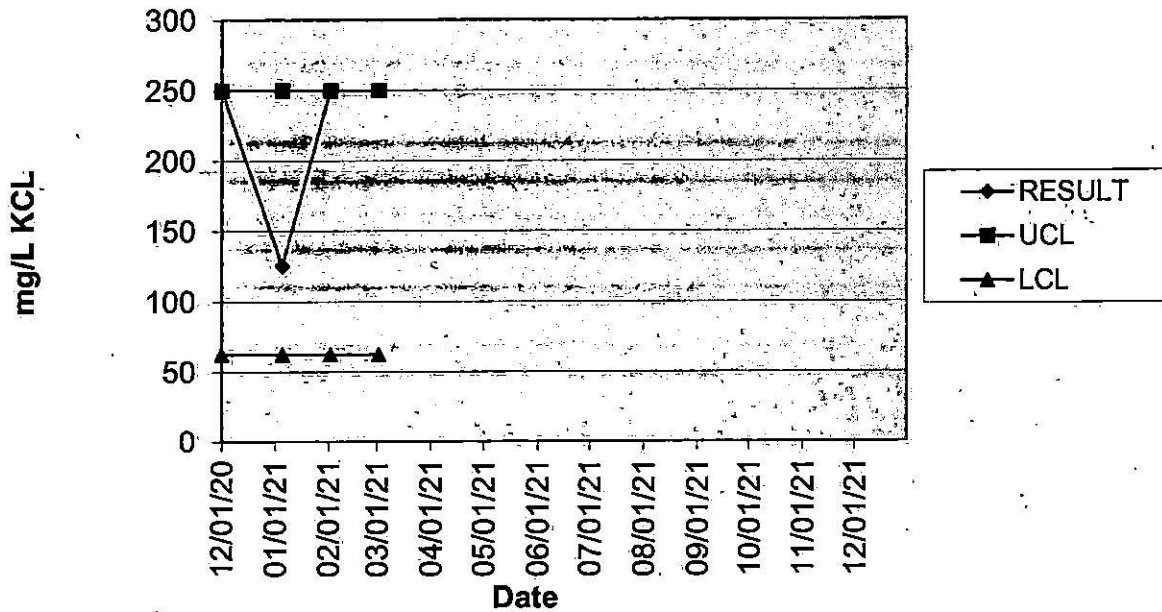
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Reproduction NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN	PMSD
12/01/20	250	250	62.5			250.00	14.94
01/05/21	125	250	62.5	88.39	47.14	187.50	28.31
02/02/21	250	250	62.5	72.17	34.64	208.33	23.51
03/02/21	250	250	62.5	62.50	28.57	218.75	37.50
		250	62.5	62.50	28.57	218.75	31.89
		250	62.5	62.50	28.57	218.75	41.54
		250	62.5	62.50	28.57	218.75	23.83
		250	62.5	62.50	28.57	218.75	23.26
		250	62.5	62.50	28.57	218.75	30.41
		250	62.5	62.50	28.57	218.75	39.35
		250	62.5	62.50	28.57	218.75	32.19
		250	62.5	62.50	28.57	218.75	38.64
		250	62.5	62.50	28.57	218.75	38.93

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTON  
NOEC**



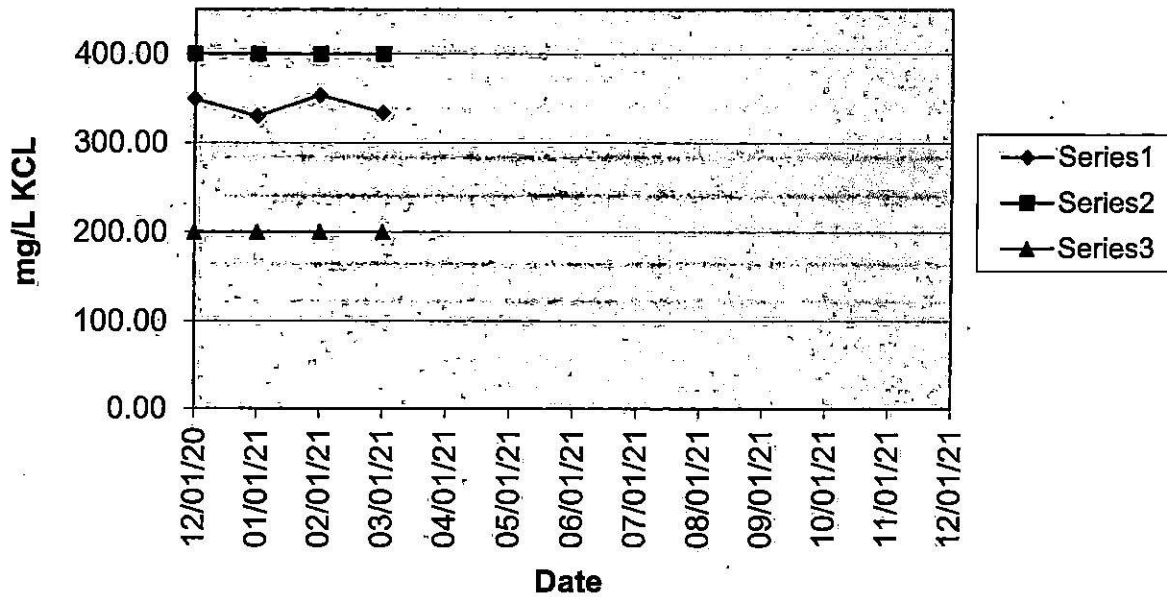
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicity Data**  
**48Hour Survival**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/02/20	349.35	400.00	200.00			349.35
01/06/21	329.88	400.00	200.00	13.77	4.05	339.62
02/03/21	353.55	400.00	200.00	12.63	3.67	344.26
03/03/21	334.06	400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71
		400.00	200.00	11.50	3.37	341.71


**CERIODAPHNIA REFERENCE TOXICANT 48HOUR SURVIVAL**





2269 Dr. F. E. Wright Drive  
Jackson, TN 38305

(800) 832-1808  
(731) 423-5330  
FAX (731) 423-5326

CLIENT NAME: City of Adamsville		Project Name: Bioassay-Acute			ANALYSES REQUESTED					
ADDRESS: 203 Sunrise Drive.		P.O. # <i>Waste water</i> QID # 766								
Adamsville TN 38310		RUSH?	Notify Lab in Advance	CLIENT # C0109WW						
Phone:		<24hr	Notify Lab in Advance	DATE NEEDED:						
Fax:		24-48	Notify Lab in Advance							
COLLECTED BY:		48-78	Notify Lab in Advance	FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes						
					 21-090-0024 00088 03-31-2021 11:41:49 City of Adamsville Adamsville - Bioassay					
# OF CONT.	SAMPLE DESCRIPTION/LOCATION	DATE	TIME	TYPE COMP GRAB	MATRIX*		PRESERVATIVE			
1	First Pull	3-30-21	10:03pm	X	WW	-----		Bioassay		
	"			X	WW	-----		Alk/Hardness/Cl res (lab analysis)		
1	Second Pull	3-31-21	2:00am	X	WW	-----		Bioassay		
	"			X	WW	-----		Alk/Hardness/Cl res (lab analysis)		
1	Third Pull	3-31-21	12:05 AM	X	WW	-----		Bioassay		
	"			X	WW	-----		Alk/Hardness/Cl res (lab analysis)		
1	Fourth Pull	3-31-21	10:09 AM	X	WW	-----		Bioassay		
	"			X	WW	-----		Alk/Hardness/Cl res (lab analysis)		
		FLOW (GPD):								
Remarks:		1st pull	2nd pull	3rd pull	4th pull	SHIPPED VIA:				
Cl_res:						UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>	
Conductivity:						FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>	
DO:						OTHER	<input type="checkbox"/>	COOLER #:	<input type="checkbox"/>	
pH:						SAMPLES RETURNED VIA:			Condition: (lab use only)	
RELINQUISHED BY: <i>[Signature]</i>		DATE: 3-31-21	TIME: 11:48	RECEIVED BY:		UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>	
RELINQUISHED BY:		DATE:	TIME:	RECEIVED BY:		FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>	
RELINQUISHED BY:		DATE:	TIME:	RECEIVED FOR LAB BY: <i>[Signature]</i>		TEMP: 20C	Bottles Received: 4			
						DATE: 3/31/21	TIME: 1148	pH:		

Waypoint Analytical Laboratory  
Method 1311 TCLP Prep Sheet

Inorganics: **As Ba Cd Cr Pb Hg Ag Se Zn Cu Ni** Reactivity Corrosivity

Organics: **VOC BNA PEST HERB TPH/Ext TPH/VOC Benzene**

Client Name: Dana Commercial Vehicle Products

Report #: 21-103-0017

Sample Date: 4/12/21 0:00

Date Arrived: 4/12/21 0:00

Date Extracted: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Combined \_\_\_\_\_

Leachates \_\_\_\_\_

Filtrates \_\_\_\_\_

Matrix: AQU/SOL/Liquid/Oil/Solid/Other

Extraction Techn.: \_\_\_\_\_

pH Calibration Reference: \_\_\_\_\_

<b>SVOC/Metals</b>	Characterization for Extract Fluid				Extraction		Final pH Fluid	Size Reduction Y/N	Bottle #
Lab ID #:	Sample Weight g	Initial pH	Second pH	Extract Fluid #	Weight grams	mls Fluid			
Q94067									
Q94068									
<b>VOC</b>	Characterization for Extract Fluid				Extraction		Final pH Fluid	ZHE Pressure Maintained	ZHE #
Lab ID #:	Sample Weight g	Initial pH	Second pH	Extract Fluid #	Weight grams	mls Fluid			
Q94067				F1				Y   N	
Q94068				F1				Y   N	
				F1				Y   N	
				F1				Y   N	
				F1				Y   N	

Lab ID #:	Sample + Beaker	Final Beaker	Actual Sample	Empty Flask	Final Flask	Initial Filter	Final Filter	Filtrate	Solid

**Standard/Reagent Traceability**

TCLP Filter Lot#: \_\_\_\_\_

Filter Acid Wash SRN: \_\_\_\_\_

IN HCl SRN: \_\_\_\_\_

Rotator ID: \_\_\_\_\_

Date/Time on Rotator: \_\_\_\_\_

Date/Time off Rotator: \_\_\_\_\_

Thermometer ID: \_\_\_\_\_

Initial Temp.: 23 +/- 2°C

Final Temp.: 23 +/- 2°C

Fluid Blank ID (F1): \_\_\_\_\_

Fluid Blank ID (F2): \_\_\_\_\_

Extraction Batch ID: \_\_\_\_\_

Temp. Min/Max Reading: \_\_\_\_\_



Waypoint Analytical Laboratory  
Method 1311 TCLP Prep Sheet

Inorganics: **As Ba Cd Cr Pb Hg Ag Se Zn Cu Ni** Reactivity Corrosivity

Organics: **VOC** BNA PEST HERB TPH/Ext TPH/VOC Benzene

Client Name: Dana Commercial Vehicle Products

Report #: 21-103-0017

Sample Date: 4/12/21 0:00

Date Arrived: 4/12/21 0:00

Date Extracted: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Combined \_\_\_\_\_

Leachates \_\_\_\_\_

Filtrates \_\_\_\_\_

Matrix: AQU/SOL/Liquid/Oil/Solid/Other

Extraction Techn.: \_\_\_\_\_

pH Calibration Reference: \_\_\_\_\_

SVOC/Metals Lab ID #:	Characterization for Extract Fluid				Extraction		Final pH Fluid	Size Reduction Y/N	Bottle #
	Sample Weight g	Initial pH	Second pH	Extract Fluid #	Weight grams	mls Fluid			
Q94067									
Q94068									
VOC Lab ID #:	Characterization for Extract Fluid				Extraction		Final pH Fluid	ZHE Pressure Maintained	ZHE #
	Sample Weight g	Initial pH	Second pH	Extract Fluid #	Weight grams	mls Fluid			
Q94067				F1				Y   N	
Q94068				F1				Y   N	
				F1				Y   N	
				F1				Y   N	
				F1				Y   N	

Lab ID #:	Sample + Beaker	Final Beaker	Actual Sample	Empty Flask	Final Flask	Initial Filter	Final Filter	Filtrate	Solid

**Standard/Reagent Traceability**

TCLP Filter Lot#: \_\_\_\_\_

Filter Acid Wash SRN: \_\_\_\_\_

1N HCl SRN: \_\_\_\_\_

Rotator ID: \_\_\_\_\_

Date/Time on Rotator: \_\_\_\_\_

Date/Time off Rotator: \_\_\_\_\_

Thermometer ID: \_\_\_\_\_

Initial Temp.: 23 +/- 2°C \_\_\_\_\_

Final Temp.: 23 +/- 2°C \_\_\_\_\_

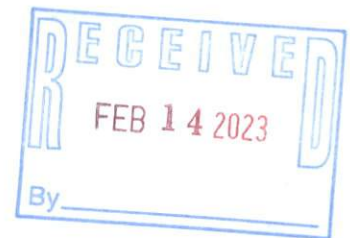
Fluid Blank ID (F1): \_\_\_\_\_

Fluid Blank ID (F2): \_\_\_\_\_

Extraction Batch ID: \_\_\_\_\_

Temp. Min/Max Reading: \_\_\_\_\_

**2020  
ADAMSVILLE STP  
ANNUAL  
BIOMONITORING  
TN0064785  
OUTFALL 001**





# Waypoint Analytical Inc.

April 22, 2020

Mr. Scott Klinck  
231 East Main Street  
Adamsville, TN 38310

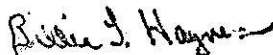
RE: Annual Biomonitoring 2020 Adamsville STP – TN0064785

Dear Mr. Klinck,

Please find enclosed the above referenced results for the samples April 15, 2020. The two species used in the test were Pimephales promelas and Ceriodaphnia dubia. The results of the tests indicate that the samples **passed** the permit criteria for both species.

If you have any questions, please call. We appreciate you as a client and are always glad to be of service to you.

Sincerely,



Billie Haynes  
Laboratory Manager

Enclosure

# Waypoint Analytical Inc.

Discharger Name: Adamsville STP  
NPDES Number: TN0064785

## TEST SUMMARY

Listed below is a summary of results for the four "48-Hour Static Acute Toxicity Tests" performed on wastewater effluent samples from the Adamsville STP – Adamsville, Tennessee - Outfall 001.

1. The test type was "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Ceriodaphnia and an "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Pimephales. Four separate grab samples collected at 6-hour intervals over a 24-hour period were used in four separate tests.
2. Tests were conducted on 04/15/20-04/17/20 for the Ceriodaphnia and 04/15/20-04/17/20 for the Pimephales.
3. The test method used was EPA-821-R-02-012.
4. The 4 samples were collected on 04/14/20 and 04/15/20.

### TABLED SUMMARY OF TEST RESULTS

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
*Ceriodaphnia Dubia	Pass	17%	>68%	-----	-----
*Pimephales Promelas	Pass	17%	>68%	-----	-----

\*Result table is applicable for all four separate tests.

All QC criteria required by the above referenced method were met during this analysis.

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## TABLE OF CONTENTS

**Introduction**

**Plant Operations.**

**Source of Effluent, Receiving Water and Dilution Water**

**Test Conditions**

**Test Organisms**

**Quality Assurance**

**Results**

**Conclusions and Recommendations**

**Tables**

**Attachments**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## INTRODUCTION:

### Permit Number:

TN0064785

### Toxicity Testing Requirements of Permit:

4 separate 48-Hour, Static, Non-renewal, Ceriodaphnia dubia Survival and a 48-Hour, Static, Non-renewal, Pimephales promelas Survival Tests. The permit limit is 17 % with an LC<sub>50</sub> endpoint. Five serial dilutions and a control are required. The dilutions are as follows:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	2 X PL	Permit Limit	0.5 X PL	0.25 X PL	Control
%effluent					
68	34	17	8.5	4.25	0

### Plant Location:

Adamsville, McNairy County, Tennessee

### Name of receiving water body:

Snake Creek at mile 8.0

### Contract Laboratory:

Waypoint Analytical Inc.  
2269 Dr. F. E. Wright Drive  
Jackson, Tennessee 38305  
731.423.5330

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **PLANT OPERATIONS:**

### **Product(s):**

Treated municipal wastewater

### **Raw Materials:**

### **Operating Schedule:**

### **Description of Waste Treatment:**

### **Schematic of Waste Treatment:**

### **Retention Time (If Applicable):**

### **Volume of Waste Flow:**

### **Design Flow of Treatment Facility at time of Sampling:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **SOURCE OF EFFLUENT, RECEIVING WATER AND DILUTION WATER:**

### **EFFLUENT:**

#### **Sampling Point:**

Effluent at Outfall 001

#### **Sample Collection Method:**

Grab Sample

#### **Collection Dates and Times:**

Sample 1 – 04/14/20, 1200  
Sample 2 – 04/14/20, 1800  
Sample 3 – 04/15/20, 0600  
Sample 4 – 04/15/20, 1200

#### **Physical and Chemical Data:**

None Requested

#### **Mean Daily Discharge on Sample Collection Dates:**

None Given

#### **Lapsed Time from Sample Collection to Delivery:**

Sample 1 – 25.25 hrs  
Sample 2 – 19.25 hrs  
Sample 3 – 7.25 hrs  
Sample 4 – 1.25 hrs

#### **Sample Temperature when received at the Laboratory:**

3.0°C

### **RECEIVING WATER:**

Not Applicable



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **DILUTION WATER:**

### **Source:**

20% Diluted Mineral Water (Perrier) Prepared by Waypoint

### **Collection Date(s) and Time(s):**

Not Applicable

### **Pretreatment:**

Temperature Equilibration and Aeration

### **Physical and Chemical Characteristics:**

<b>Batch ID</b>	<b>Date Tested</b>	<b>pH</b>	<b>Hardness</b>	<b>Alkalinity</b>	<b>Specific Conductance</b>	<b>Dissolved Oxygen</b>
041220S3	04/13/20	8.02	101.0	66.0	186.8	8.28
041320S1	04/14/20	7.84	84.9	62.0	162.5	8.44

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **TEST METHODS:**

### **Toxicity Test Method Used:**

“Method for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms”, Fifth Edition, EPA-821-R-02-012

### **Endpoint of Test:**

Survival LC<sub>50</sub> – Ceriodaphnia dubia  
Survival LC<sub>50</sub> – Pimephales Promelas

### **Deviation(s) from Reference Method:**

None

### **Date and Time Tests Started:**

Ceriodaphnia – 04/15/20, 1600-1718  
Pimephales – 04/15/20, 1520-1712

### **Date and Time Tests Terminated:**

Ceriodaphnia – 04/17/20, 1605-1711  
Pimephales – 04/17/20, 1520-1651

### **Type and Volume of Test Chambers:**

Ceriodaphnia – 30ml Plastic Cups  
Pimephales – 500ml Plastic Beakers

### **Volume of Solution per Chamber:**

Ceriodaphnia – 15ml  
Pimephales – 250ml

### **Number of Organisms per Chamber:**

Ceriodaphnia – 5 Neonate  
Pimephales – 10 Larvae

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Number of Replicated Test Chambers per Treatment:**

Ceriodaphnia – 4  
Pimephales - 2

**Acclimation of Test Organisms:**

Ceriodaphnia – N/A Waypoint Culture  
Pimephales – 5 hrs @ 25°C +/- 1°C

**Test Temperature (Mean and Range):**

See Attachment 1

**Specify if Aeration was needed:**

None Needed

**Feeding Frequency, Amount and Type of Food:**

Ceriodaphnia – 0.1ml of YCT (1.8g solids/L) and 0.1ml of Selenastrum ( $3.0 \times 10^7$  cell/ml) 2 hours prior to introduction to test solutions.  
Pimephales – 0.15g Brine Shrimp, 2 hours prior to introduction to test solutions.

**pH Control Measures (if necessary):**

None Needed

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **TEST ORGANISMS:**

### **Scientific Name:**

Ceriodaphnia dubia and Pimephales promelas

### **Age:**

Ceriodaphnia dubia - < 24 hrs old  
Pimephales Promelas – 3 days old

### **Life Stage:**

Ceriodaphnia – Neonate  
Pimephales - Larvae

### **Mean Length and Weight:**

Ceriodaphnia – Not Applicable  
Pimephales – Not Applicable

### **Source:**

Ceriodaphnia – Waypoint Culture  
Pimephales – Aquatic Biosystems, Fort Collins, Colorado

### **Diseases and Treatment:**

Not Applicable

### **Taxonomic Key used for Species Identification:**

Ceriodaphnia – Microscopic Examination as compared to reference material.  
Pimephales – Aquatic Biosystems

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **QUALITY ASSURANCE:**

### **Reference Toxicant used Routinely; Source:**

Potassium Chloride, KCL – Fisher Scientific – Waypoint ID #: CS-79

### **Date and Time of Most Recent Reference Toxicant Test, Test Results, and Current Control Chart:**

See Attachment 2

### **Dilution Water used in Reference Toxicant Test:**

20% DMW – See “Dilution Water” Section

### **Results PMSD for Sub-lethal Endpoints Determined by Hypothesis Testing in Reference Toxicant Test:**

See “Attachment 2”.

### **Physical and Chemical Methods used:**

NPDES Approved Methods from “Standard Methods for the Examination of Water and Wastewater” Eighteenth Edition

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## RESULTS:

### Tabulated Toxicity Data:

Table 1 – Data for Pimephales promelas Larval Survival Test

Table 2 – Data for Ceriodaphnia Survival Test

Table 3 – Physical and Chemical Data, Acute Toxicity

**Test Endpoint Table: (Tabled results are applicable for all 4 separate tests.)**

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
Ceriodaphnia Dubia	Pass	17%	>68%	----	----
Pimephales Promelas	Pass	17%	>68%	----	----

### Statistical Method used to Calculate Endpoints:

Ceriodaphnia Survival – N/A\*

Pimephales Survival – N/A\*

\*Endpoints could not be calculated as no test solution produced significant mortality.

### Tabulated QA Data:

See Attachment 2

### PMSDs for Sub-lethal Endpoints:

Species	Endpoint	Lower PMSD Bound	Upper PMSD Bound	Result
Ceriodaphnia	Reprod.	13	47	*
Pimephales	Growth	12	30	*

\*Not required for "Point Estimation Testing".



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **CONCLUSION AND RECOMMENDATIONS:**

### **Conclusion:**

Endpoints meet the permit requirements.

### **Recommendation:**

Report results to appropriate regulatory agency.

# Waypoint Analytical Inc.

## Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #1  
**Dil. H2O:** DMW  
**Lab ID #:** 20-106-0039  
**Chamber #:** 2  
**Template #:** A  
**Test Dates:** 04/15/20-04/17/20  
**Analyst:** LC, LK  
**Food ID #:** 1936 BIO  
**Org. ID #:** 2012 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	9			
	2	10	10			
8.5	1	9	9			
	2	10	10			
17	1	10	10			
	2	10	10			
34	1	10	10			
	2	10	10			
68	1	10	10			
	2	10	10			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/15 - LK	1514		Setup 1512
1	04/16 - LC			Count 1632
2	04/17 - LC			End 1520
3				
4				

# Waypoint Analytical Inc.

## Table 2

**Survival Data for Ceriodaphnia dubia  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #1  
 Dil. H2O: DMW  
 Lab ID #: 20-106-0039  
 Chamber #: 2  
 Template #: A  
 Test Dates: 04/15/20-04/17/20  
 Analyst: LC, LK

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
4.25	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
8.5	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
17	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		
34	1	5	5		
	2	5	5		
	3	5	5		
	4	4	4		
68	1	5	5		
	2	5	5		
	3	5	5		
	4	5	5		

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		22.1						
DO (mg/L)	Initial	8.03							
	Final		7.83						
pH (su)	Initial	7.85							
	Final		7.71						
Alkalinity (mg/L as CaCO <sub>3</sub> )		66.0							
Hardness (mg/L as CaCO <sub>3</sub> )		101.0							
Conductivity (umhos/cm)		186.8							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		23.0						
DO (mg/L)	Initial	8.03							
	Final		7.89						
pH (su)	Initial	7.85							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )		66.0							
Hardness (mg/L as CaCO <sub>3</sub> )		101.0							
Conductivity (umhos/cm)		186.8							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #1  
 Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
 NPDES #: TN0064785  
 Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.3							
	Final		22.7						
DO (mg/L)	Initial	7.68							
	Final		7.46						
pH (su)	Initial	7.88							
	Final		7.74						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.3							
	Final		23.3						
DO (mg/L)	Initial	7.68							
	Final		8.17						
pH (su)	Initial	7.88							
	Final		7.86						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #1  
 Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
 NPDES #: TN0064785  
 Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		22.7						
DO (mg/L)	Initial	8.04							
	Final		7.54						
pH (su)	Initial	7.88							
	Final		7.72						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.8							
	Final		23.4						
DO (mg/L)	Initial	8.04							
	Final		8.14						
pH (su)	Initial	7.88							
	Final		7.90						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		23.0						
DO (mg/L)	Initial	7.60							
	Final		7.05						
pH (su)	Initial	7.84							
	Final		7.73						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		23.0						
DO (mg/L)	Initial	7.60							
	Final		8.13						
pH (su)	Initial	7.84							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.9							
	Final		22.1						
DO (mg/L)	Initial	7.02							
	Final		7.35						
pH (su)	Initial	7.79							
	Final		7.75						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.9							
	Final		23.2						
DO (mg/L)	Initial	7.02							
	Final		7.90						
pH (su)	Initial	7.79							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	22.3							
	Final		21.6						
DO (mg/L)	Initial	6.90							
	Final		7.21						
pH (su)	Initial	7.62							
	Final		7.72						
Alkalinity (mg/L as CaCO <sub>3</sub> )		72.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		87.0							100% Effluent
Conductivity (umhos/cm)		247.4							100% Effluent
Chlorine (mg/L)		0.05							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	22.3							
	Final		23.1						
DO (mg/L)	Initial	6.90							
	Final		7.94						
pH (su)	Initial	7.62							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )		72.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		87.0							100% Effluent
Conductivity (umhos/cm)		247.4							100% Effluent
Chlorine (mg/L)		0.05							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

***Survival Data for Pimephales promelas  
Acute Survival Test***

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #2  
**Dil. H2O:** DMW  
**Lab ID #:** 20-106-0039  
**Chamber #:** 2  
**Template #:** B  
**Test Dates:** 04/15/20-04/17/20  
**Analyst:** LC, LK  
**Food ID #:** 1936 BIO  
**Org. ID #:** 2012 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	10			
	2	10	10			
8.5	1	10	10			
	2	10	10			
17	1	10	10			
	2	10	10			
34	1	10	10			
	2	10	10			
68	1	10	10			
	2	10	10			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/15 - LK	1600		Setup 1558
1	04/16 - LC			Count 1634
2	04/17 - LC			End 1553
3				
4				

# Waypoint Analytical Inc.

## Table 2

**Survival Data for Ceriodaphnia dubia  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #2  
 Dil. H2O: DMW  
 Lab ID #: 20-106-0039  
 Chamber #: 2  
 Template #: B  
 Test Dates: 04/15/20-04/17/20  
 Analyst: LC, LK

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
4.25	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
8.5	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
17	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
34	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
68	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		22.9						
DO (mg/L)	Initial	8.03							
	Final		7.44						
pH (su)	Initial	7.85							
	Final		7.72						
Alkalinity (mg/L as CaCO <sub>3</sub> )		66.0							
Hardness (mg/L as CaCO <sub>3</sub> )		101.0							
Conductivity (umhos/cm)		186.8							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		23.1						
DO (mg/L)	Initial	8.03							
	Final		7.86						
pH (su)	Initial	7.85							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )		66.0							
Hardness (mg/L as CaCO <sub>3</sub> )		101.0							
Conductivity (umhos/cm)		186.8							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #2  
**Test Dates:** 04/15/20-04/17/20

**Lab ID #:** 20-106-0039  
**NPDES #:** TN0064785  
**Analyst:** LC, LK

<b>Species:</b> Pimephales promelas									<b>Remarks</b>
<b>Conc:</b> 4.25%		<b>Day</b>							
		1	2	3	4	5	6	7	
<b>Temp (C°)</b>	<b>Initial</b>	21.4							
	<b>Final</b>		22.5						
<b>DO (mg/L)</b>	<b>Initial</b>	7.42							
	<b>Final</b>		7.27						
<b>pH (su)</b>	<b>Initial</b>	7.83							
	<b>Final</b>		7.70						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									

<b>Species:</b> Ceriodaphnia dubia									<b>Remarks</b>
<b>Conc:</b> 4.25%		<b>Day</b>							
		1	2	3	4	5	6	7	
<b>Temp (C°)</b>	<b>Initial</b>	21.4							
	<b>Final</b>		23.3						
<b>DO (mg/L)</b>	<b>Initial</b>	7.42							
	<b>Final</b>		8.28						
<b>pH (su)</b>	<b>Initial</b>	7.83							
	<b>Final</b>		7.75						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.6							
	Final		22.9						
DO (mg/L)	Initial	7.19							
	Final		7.47						
pH (su)	Initial	7.84							
	Final		7.68						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.6							
	Final		23.3						
DO (mg/L)	Initial	7.19							
	Final		8.51						
pH (su)	Initial	7.84							
	Final		7.74						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.8							
	Final		22.8						
DO (mg/L)	Initial	8.03							
	Final		7.01						
pH (su)	Initial	7.81							
	Final		7.65						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.8							
	Final		22.5						
DO (mg/L)	Initial	8.03							
	Final		7.97						
pH (su)	Initial	7.81							
	Final		7.77						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.1							
	Final		22.7						
DO (mg/L)	Initial	8.21							
	Final		7.50						
pH (su)	Initial	7.75							
	Final		7.66						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.1							
	Final		22.1						
DO (mg/L)	Initial	8.21							
	Final		8.22						
pH (su)	Initial	7.75							
	Final		7.76						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		22.2						
DO (mg/L)	Initial	8.83							
	Final		7.49						
pH (su)	Initial	7.64							
	Final		7.65						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		90.8							100% Effluent
Conductivity (umhos/cm)		237.0							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.6							
	Final		22.0						
DO (mg/L)	Initial	8.86							
	Final		8.21						
pH (su)	Initial	7.64							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		90.8							100% Effluent
Conductivity (umhos/cm)		237.0							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

### *Survival Data for Pimephales promelas Acute Survival Test*

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #3  
**Dil. H2O:** DMW  
**Lab ID #:** 20-106-0039  
**Chamber #:** 2  
**Template #:** C  
**Test Dates:** 04/15/20-04/17/20  
**Analyst:** LC. LK  
**Food ID #:** 1936 BIO  
**Org. ID #:** 2012 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	10			
	2	10	10			
8.5	1	10	10			
	2	10	10			
17	1	10	10			
	2	10	10			
34	1	10	10			
	2	10	10			
68	1	10	10			
	2	10	10			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/15 -LK	1646		Setup 1643
1	04/16 - LC			Count 1638
2	04/17 - LC			End 1631
3				
4				



# Waypoint Analytical Inc.

## Table 2

**Survival Data for Ceriodaphnia dubia  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 Dil. H2O: DMW  
 Lab ID #: 20-106-0039  
 Chamber #: 2  
 Template #: C  
 Test Dates: 04/15/20-04/17/20  
 Analyst: LC, LK

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	4	4	4	4	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	4	4	4	4	
	4	5	5	5	5	

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		22.8						
DO (mg/L)	Initial	7.40							
	Final		7.99						
pH (su)	Initial	7.85							
	Final		7.65						
Alkalinity (mg/L as CaCO <sub>3</sub> )		62.0							
Hardness (mg/L as CaCO <sub>3</sub> )		84.9							
Conductivity (umhos/cm)		162.5							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		24.5						
DO (mg/L)	Initial	7.90							
	Final		8.45						
pH (su)	Initial	7.85							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )		62.0							
Hardness (mg/L as CaCO <sub>3</sub> )		84.9							
Conductivity (umhos/cm)		162.5							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #3  
 Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
 NPDES #: TN0064785  
 Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.6							
	Final		21.9						
DO (mg/L)	Initial	7.98							
	Final		7.69						
pH (su)	Initial	7.85							
	Final		7.68						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.6							
	Final		24.5						
DO (mg/L)	Initial	7.98							
	Final		8.45						
pH (su)	Initial	7.85							
	Final		7.71						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #3  
 Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
 NPDES #: TN0064785  
 Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		23.2						
DO (mg/L)	Initial	8.35							
	Final		7.25						
pH (su)	Initial	7.81							
	Final		7.69						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		24.9						
DO (mg/L)	Initial	8.35							
	Final		9.06						
pH (su)	Initial	7.81							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #3  
 Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
 NPDES #: TN0064785  
 Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		23.6						
DO (mg/L)	Initial	8.35							
	Final		7.21						
pH (su)	Initial	7.81							
	Final		7.70						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		24.9						
DO (mg/L)	Initial	8.35							
	Final		8.59						
pH (su)	Initial	7.81							
	Final		7.74						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		22.8						
DO (mg/L)	Initial	8.22							
	Final		7.24						
pH (su)	Initial	7.69							
	Final		7.70						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.5							
	Final		24.7						
DO (mg/L)	Initial	8.22							
	Final		8.63						
pH (su)	Initial	7.69							
	Final		7.73						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
 Location: Outfall 001, Pull #3  
 Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
 NPDES #: TN0064785  
 Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		23.7						
DO (mg/L)	Initial	8.50							
	Final		7.17						
pH (su)	Initial	7.55							
	Final		7.74						
Alkalinity (mg/L as CaCO <sub>3</sub> )		60.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		82.1							100% Effluent
Conductivity (umhos/cm)		245.7							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.2							
	Final		24.6						
DO (mg/L)	Initial	8.50							
	Final		8.36						
pH (su)	Initial	7.55							
	Final		7.74						
Alkalinity (mg/L as CaCO <sub>3</sub> )		60.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		82.1							100% Effluent
Conductivity (umhos/cm)		245.7							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

### Survival Data for *Pimephales promelas* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 20-106-0039  
 Chamber #: 2  
 Template #: D  
 Test Dates: 04/15/20-04/17/20  
 Analyst: LC, LK  
 Food ID #: 1936 BIO  
 Org. ID #: 2012 BIO

Conc:	Rep. No.	No. Surviving Organisms by Day				Remarks
		1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	10			
	2	10	10			
8.5	1	10	10			
	2	10	10			
17	1	9	8			
	2	10	9			
34	1	8	8			
	2	10	9			
68	1	10	9			
	2	10	10			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/15 - LK	1714		Setup 1712
1	04/16 - LC			Count 1639
2	04/17 - LC			End 1651
3				
4				

# Waypoint Analytical Inc.

## Table 2

### Survival Data for Ceriodaphnia dubia Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 20-106-0039  
 Chamber #: 3  
 Template #: D  
 Test Dates: 04/15/20-04/17/20  
 Analyst: LC, LK

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	4	4	4	4	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		23.4						
DO (mg/L)	Initial	7.90							
	Final		7.30						
pH (su)	Initial	7.85							
	Final		7.66						
Alkalinity (mg/L as CaCO <sub>3</sub> )		62.0							
Hardness (mg/L as CaCO <sub>3</sub> )		84.9							
Conductivity (umhos/cm)		162.5							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		23.8						
DO (mg/L)	Initial	7.90							
	Final		8.08						
pH (su)	Initial	7.85							
	Final		7.76						
Alkalinity (mg/L as CaCO <sub>3</sub> )		62.0							
Hardness (mg/L as CaCO <sub>3</sub> )		84.9							
Conductivity (umhos/cm)		162.5							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.1							
	Final		23.5						
DO (mg/L)	Initial	7.86							
	Final		7.10						
pH (su)	Initial	7.79							
	Final		7.67						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.1							
	Final		23.3						
DO (mg/L)	Initial	7.86							
	Final		7.76						
pH (su)	Initial	7.79							
	Final		7.73						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #4  
**Test Dates:** 04/15/20-04/17/20

**Lab ID #:** 20-106-0039  
**NPDES #:** TN0064785  
**Analyst:** LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.7							
	Final		23.2						
DO (mg/L)	Initial	7.45							
	Final		7.30						
pH (su)	Initial	7.80							
	Final		7.72						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.7							
	Final		22.9						
DO (mg/L)	Initial	7.45							
	Final		7.99						
pH (su)	Initial	7.80							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		23.3						
DO (mg/L)	Initial	7.60							
	Final		7.40						
pH (su)	Initial	7.75							
	Final		7.72						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		24.0						
DO (mg/L)	Initial	7.60							
	Final		8.15						
pH (su)	Initial	7.75							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

*Physical and Chemical Data*  
*Acute Toxicity*

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.0							
	Final		23.5						
DO (mg/L)	Initial	7.45							
	Final		7.11						
pH (su)	Initial	7.73							
	Final		7.71						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.0							
	Final		23.7						
DO (mg/L)	Initial	7.45							
	Final		8.48						
pH (su)	Initial	7.73							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/15/20-04/17/20

Lab ID #: 20-106-0039  
NPDES #: TN0064785  
Analyst: LC, LK

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.5							
	Final		23.4						
DO (mg/L)	Initial	7.95							
	Final		7.39						
pH (su)	Initial	7.61							
	Final		7.72						
Alkalinity (mg/L as CaCO <sub>3</sub> )		86.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		83.7							100% Effluent
Conductivity (umhos/cm)		246.0							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

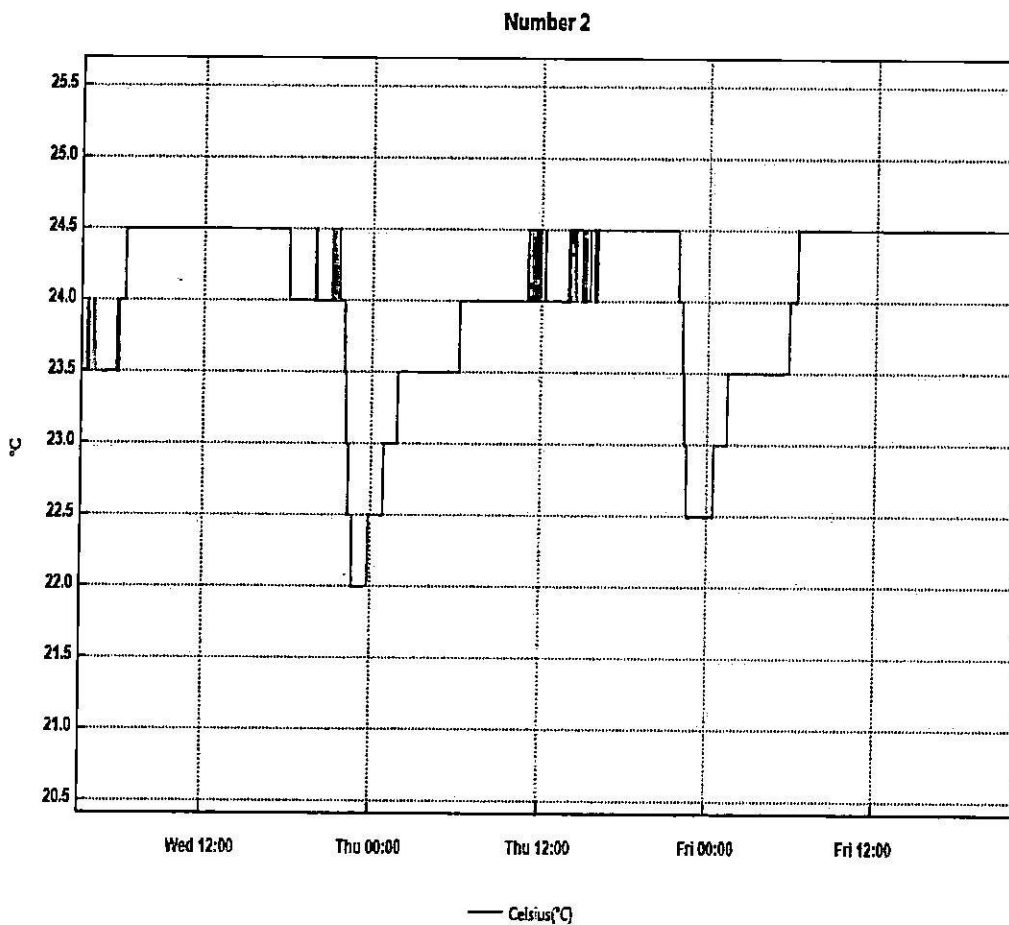
Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.5							
	Final		23.4						
DO (mg/L)	Initial	7.95							
	Final		8.42						
pH (su)	Initial	7.61							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )		86.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		83.7							100% Effluent
Conductivity (umhos/cm)		246.0							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Attachment 1

### Temperature Log for Biototoxicity Testing.

**Discharger:** Adamsville STP    **Lab ID #:** 20-106-0039    **Test dates:** 04/15/20-04/17/20  
**Location:** Outfall 001    **NPDES #:** TN0064785    **Analyst:** LC, LK



From: Wednesday, April 15, 2020 3:12:12 AM - To: Friday, April 17, 2020 10:06:39 PM

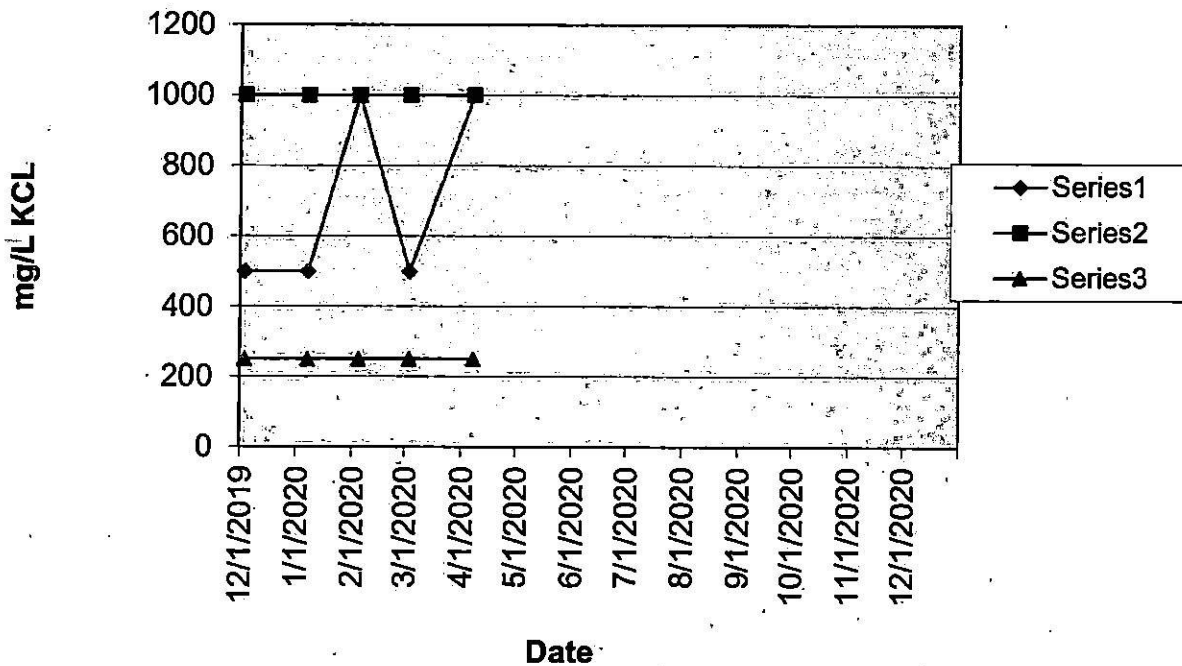
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
Survival NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/03/19	500	1000	250			500.00
01/07/20	500	1000	250	0.00	0.00	500.00
02/04/20	1000	1000	250	288.68	43.30	666.67
03/03/20	500	1000	250	250.00	40.00	625.00
04/07/20	1000	1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00
		1000	250	273.86	39.12	700.00

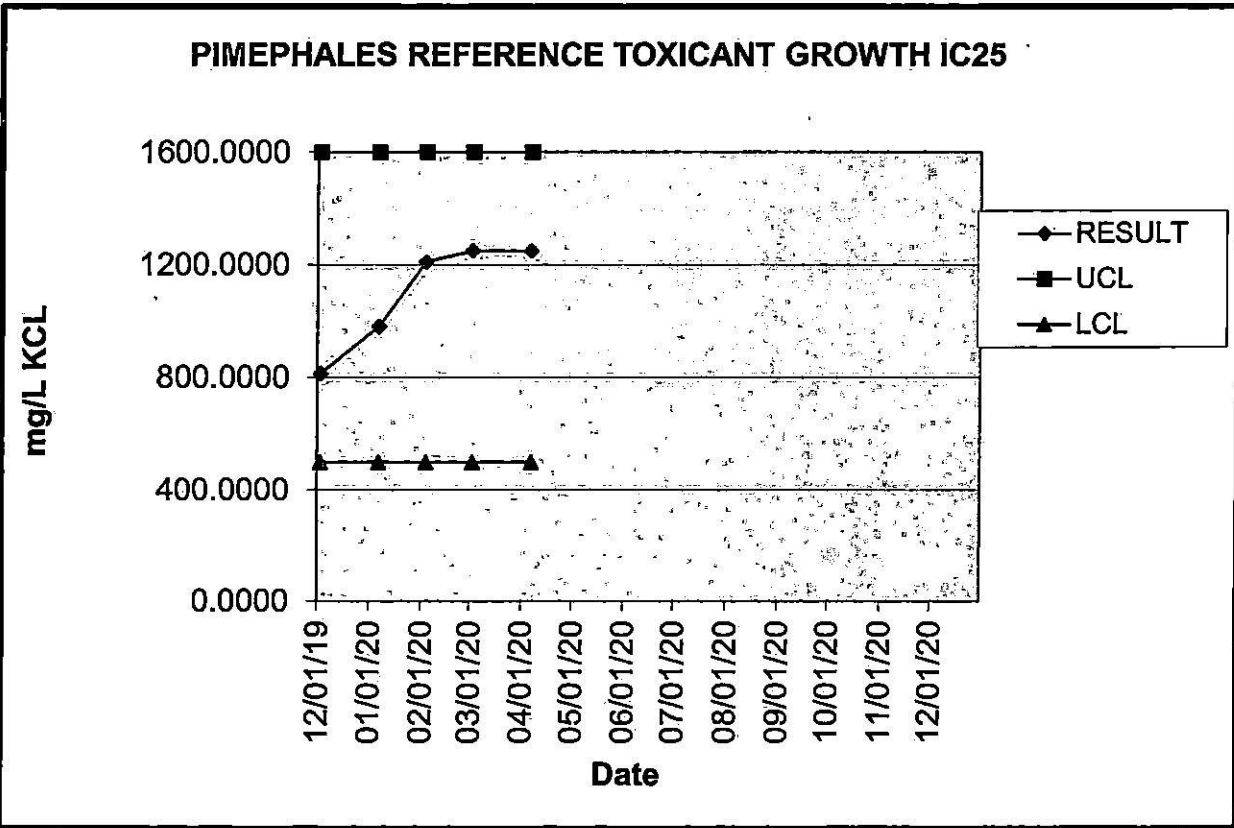
**PIMEPHALES REFERENCE TOXICANT SURVIVAL NOEC**



Waypoint Analytical Inc.

Attachment 2

<b>Pimephales Chronic Reference Toxicant Data</b>						
<b>Growth IC25</b>						
DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/03/19	814.3700	1600.0000	500.0000		0.00	814.37
01/07/20	982.3460	1600.0000	500.0000	118.78	13.22	898.36
02/04/20	1211.1000	1600.0000	500.0000	199.14	19.86	1002.61
03/03/20	1250.0000	1600.0000	500.0000	204.30	19.19	1064.45
04/07/20	1250.0000	1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56
		1600.0000	500.0000	195.42	17.74	1101.56

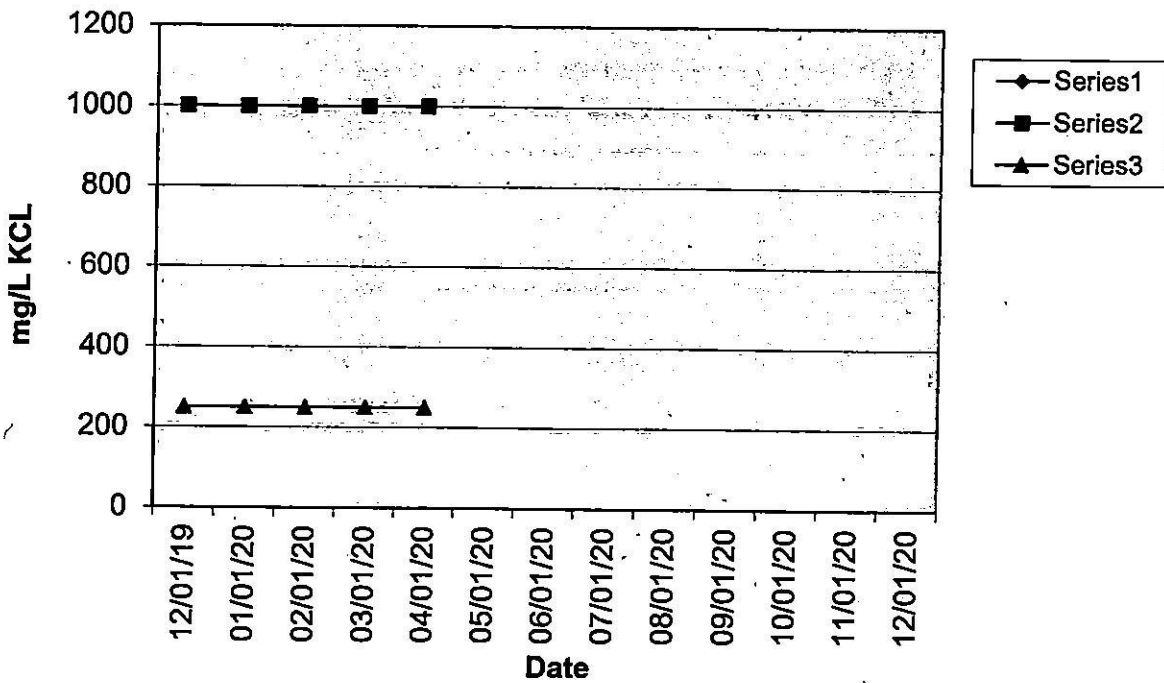


**Waypoint Analytical Inc.**  
**Attachment 2**

**Pimephales Chronic Reference Toxicant Data**  
**Growth NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	PMSD	MEAN
12/03/19	1000	1000	250		0.00	15.06	1000.00
01/07/20	1000	1000	250	0.00	0.00	25.60	1000.00
02/04/20	1000	1000	250	0.00	0.00	22.31	1000.00
03/03/20	1000	1000	250	0.00	0.00	26.26	1000.00
04/07/20	1000	1000	250	0.00	0.00	15.48	1000.00
		1000	250	0.00	0.00	24.44	1000.00
		1000	250	0.00	0.00	25.89	1000.00
		1000	250	0.00	0.00	16.16	1000.00
		1000	250	0.00	0.00	19.30	1000.00
		1000	250	0.00	0.00	22.55	1000.00
		1000	250	0.00	0.00	18.90	1000.00
		1000	250	0.00	0.00	24.64	1000.00
		1000	250	0.00	0.00	23.31	1000.00

**PIMEPHALES REFERENCE TOXICANT GROWTH NOEC**



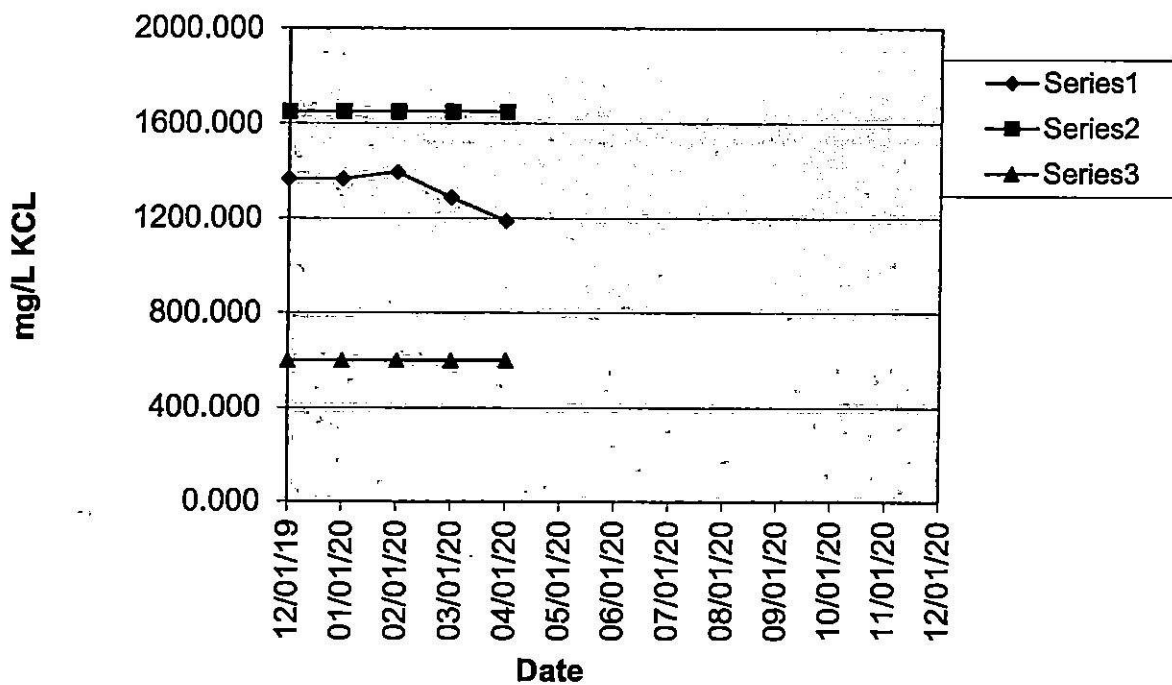
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
48Hour Survival**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/04/19	1366.040	1650.00	600.00		0.00	1366.04
01/08/20	1366.040	1650.00	600.00	0.00	0.00	1366.04
02/05/20	1395.250	1650.00	600.00	16.86	1.23	1375.78
03/04/20	1287.760	1650.00	600.00	46.11	3.41	1353.77
04/08/20	1189.000	1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82
		1650.00	600.00	83.81	6.35	1320.82

**PIMEPHALES REFERENCE TOXICANT 48HOUR SURVIVAL**





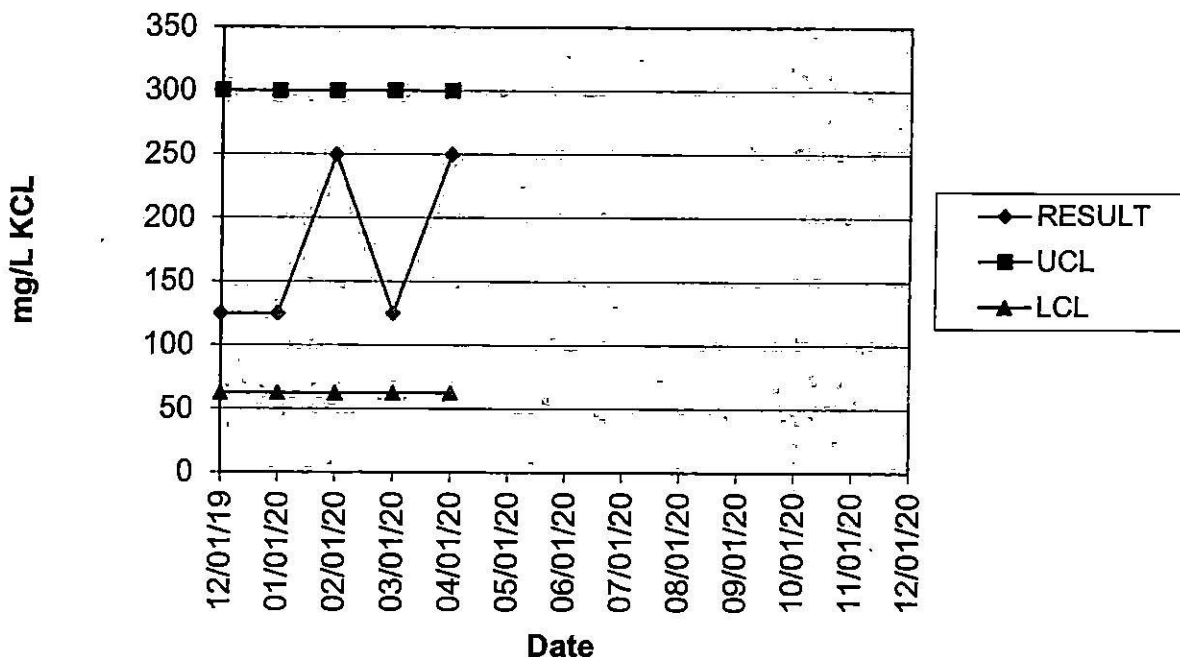
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Survival NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/03/19	125	300	62.5			125.00
01/07/20	125	300	62.5	0.00	0.00	125.00
02/04/20	250	300	62.5	72.17	43.30	166.67
03/03/20	125	300	62.5	62.50	40.00	156.25
04/07/20	250	300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00
		300	62.5	68.47	39.12	175.00

**CERIODAPHNIA REFERENCE TOXICANT SURVIVAL NOEC**



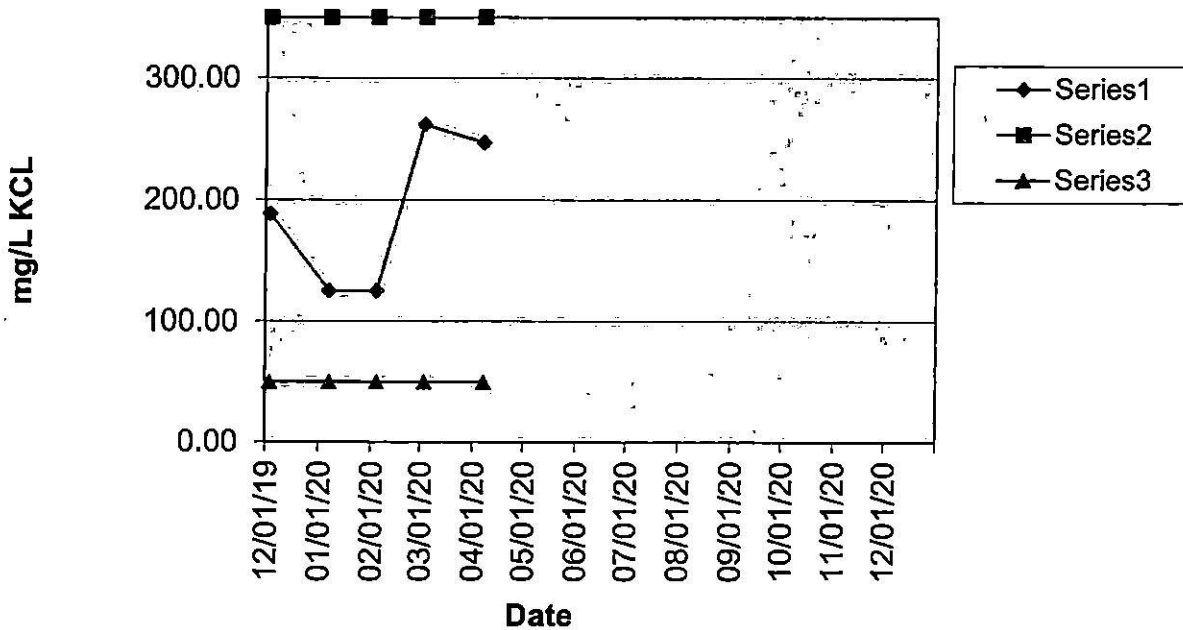
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Reproduction IC25**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/03/19	188.90	350.00	50.00	64.87	34.16	189.87
01/07/20	125.47	350.00	50.00	64.87	34.16	189.87
02/04/20	125.47	350.00	50.00	64.87	34.16	189.87
03/03/20	262.28	350.00	50.00	64.87	34.16	189.87
04/07/20	247.24	350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87
		350.00	50.00	64.87	34.16	189.87

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTION IC25**



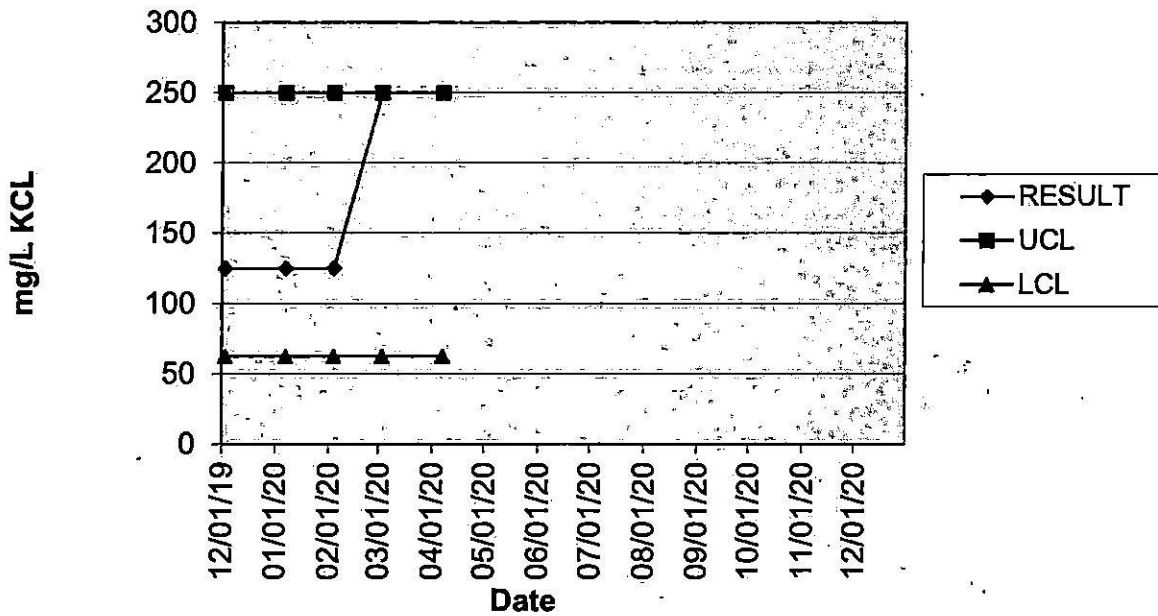
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Reproduction NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN	PMSD
12/03/19	125	250	62.5			125.00	14.94
01/07/20	125	250	62.5	0.00	0.00	125.00	28.31
02/04/20	125	250	62.5	0.00	0.00	125.00	23.51
03/03/20	250	250	62.5	62.50	40.00	156.25	37.50
04/07/20	250	250	62.5	68.47	39.12	175.00	31.89
		250	62.5	68.47	39.12	175.00	41.54
		250	62.5	68.47	39.12	175.00	23.83
		250	62.5	68.47	39.12	175.00	23.26
		250	62.5	68.47	39.12	175.00	30.41
		250	62.5	68.47	39.12	175.00	39.35
		250	62.5	68.47	39.12	175.00	32.19
		250	62.5	68.47	39.12	175.00	38.64
		250	62.5	68.47	39.12	175.00	38.93

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTON  
NOEC**



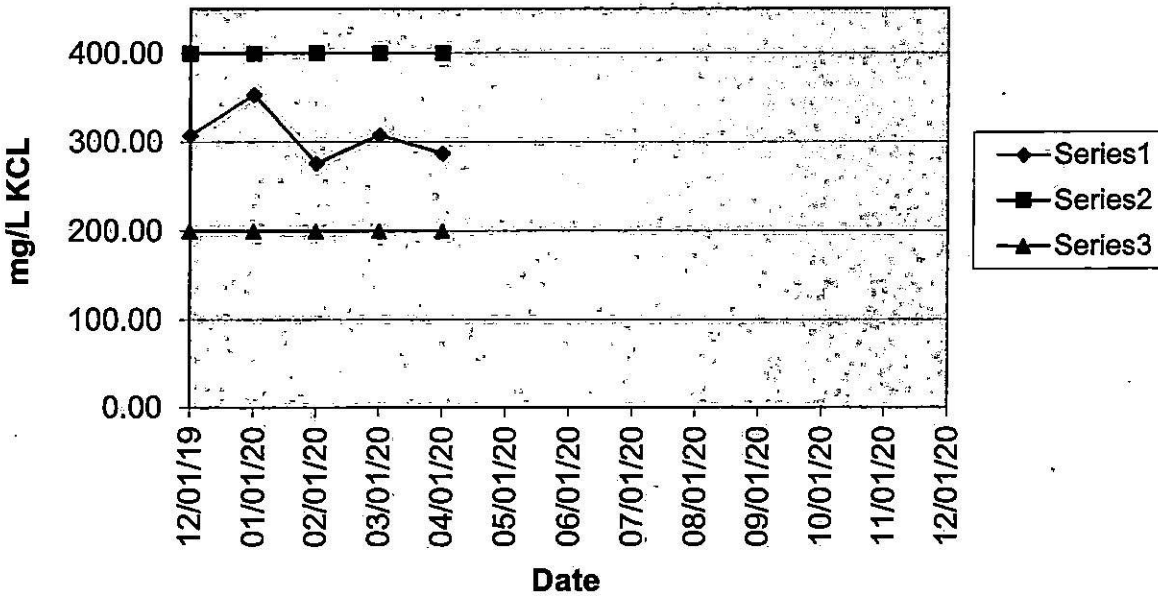
Waypoint Analytical Inc.


Attachment 2

**Ceriodaphnia Chronic Reference Toxicity Data**  
**48Hour Survival**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/04/19	307.79	400.00	200.00			307.79
01/08/20	353.55	400.00	200.00	32.36	9.79	330.67
02/05/20	276.02	400.00	200.00	38.97	12.47	312.45
03/04/20	307.79	400.00	200.00	31.91	10.25	311.29
04/08/20	287.17	400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46
		400.00	200.00	29.66	9.68	306.46

**CERIODAPHNIA REFERENCE TOXICANT 48HOUR SURVIVAL**



CLIENT NAME: City of Adamsville	Project Name: Bioassay-Acute	ANALYSES REQUESTED
ADDRESS: 203 Sunrise Drive. Adamsville TN 38310	P.O. # 28847 QID # 766	
Phone: 731-315-0174	RUSH? <input type="checkbox"/> Notify Lab In Advance	 <p>20-106-0039 00088 04-15-2020 13:02:49</p>
Fax:	<24hr <input type="checkbox"/> Notify Lab In Advance	
COLLECTED BY: Phillip Parvott	24-48 <input type="checkbox"/> Notify Lab In Advance	
	48-78 <input type="checkbox"/> Notify Lab In Advance	
	CLIENT # C0109WW	
	DATE NEEDED:	
	FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes	

# OF CONT.	SAMPLE DESCRIPTION/LOCATION	DATE	TIME	TYPE		MATRIX*	PRESERVATIVE	ANALYSES REQUESTED											
				COMP	GRAB														
1	First Pull	4-14-20	12:00PM		X	WW	-----												
	"				X	WW	-----												
1	Second Pull	4-14-20	6:00PM		X	WW	-----												
	"				X	WW	-----												
1	Third Pull	4-15-20	6:00AM		X	WW	-----												
	"				X	WW	-----												
1	Fourth Pull	4-15-20	1:00PM		X	WW	-----												
	"				X	WW	-----												
					X	WW	-----												

Remarks: FLOW (GPD):

	1st pull	2nd pull	3rd pull	4th pull
Cl <sub>2</sub> res:				
Conductivity:				
DO:				
pH:				

SHIPPED VIA:		CLIENT VEHICLE	
UPS	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>
FEDX	<input type="checkbox"/>	COOLER #:	<input type="checkbox"/>
OTHER	<input type="checkbox"/>		
SAMPLES RETURNED VIA:		Condition: (lab use only)	
UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>
FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>
TEMP:		Bottles Received:	
DATE:		TIME:	
		pH:	

RELINQUISHED BY: <i>Phillip Parvott</i>	DATE: 4-15-20	TIME: 1:15	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED FOR LAB BY:

**2019  
ADAMSVILLE STP  
ANNUAL  
BIOMONITORING  
TN0064785  
OUTFALL 001**



# Waypoint Analytical Inc.

May 8, 2019

Mr. Lannie Hutton  
231 East Main Street  
Adamsville, TN 38310

RE: Annual Biomonitoring 2019 Adamsville STP – TN0064785

Dear Mr. Hutton,

Please find enclosed the above referenced results for the samples April 24, 2019. The two species used in the test were Pimephales promelas and Ceriodaphnia dubia. The results of the tests indicate that the samples **passed** the permit criteria for both species.

If you have any questions, please call. We appreciate you as a client and are always glad to be of service to you.

Sincerely,



Billie Haynes  
Laboratory Manager

Enclosure



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## TEST SUMMARY

Listed below is a summary of results for the four "48-Hour Static Acute Toxicity Tests" performed on wastewater effluent samples from the Adamsville STP – Adamsville, Tennessee - Outfall 001.

1. The test type was "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Ceriodaphnia and an "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Pimephales. Four separate grab samples collected at 6-hour intervals over a 24-hour period were used in four separate tests.
2. Tests were conducted on 04/24/04/26/19 for the Ceriodaphnia and 04/24/19-04/26/19 for the Pimephales.
3. The test method used was EPA-821-R-02-012.
4. The 4 samples were collected on 04/23/19 and 04/24/18.

### TABLED SUMMARY OF TEST RESULTS

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
*Ceriodaphnia Dubia	Pass	17%	>68%	----	----
*Pimephales Promelas	Pass	17%	>68%	----	----

\*Result table is applicable for all four separate tests.

**All QC criteria required by the above referenced method were met during this analysis.**

# **Waypoint Analytical Inc.**

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **TABLE OF CONTENTS**

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**Plant Operations**

**Source of Effluent, Receiving Water and Dilution Water**

**Test Conditions**

**Test Organisms**

**Quality Assurance**

**Results**

**Conclusions and Recommendations**

**Tables**

**Attachments**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## INTRODUCTION:

**Permit Number:**

TN0064785

**Toxicity Testing Requirements of Permit:**

4 separate 48-Hour, Static, Non-renewal, Ceriodaphnia dubia Survival and a 48-Hour, Static, Non-renewal, Pimephales promelas Survival Tests. The permit limit is 17 % with an LC<sub>50</sub> endpoint. Five serial dilutions and a control are required. The dilutions are as follows:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	2 X PL	Permit Limit	0.5 X PL	0.25 X PL	Control
%effluent					
68	34	17	8.5	4.25	0

**Plant Location:**

Adamsville, McNairy County, Tennessee

**Name of receiving water body:**

Snake Creek at mile 8.0

**Contract Laboratory:**

Waypoint Analytical Inc.  
2269 Dr. F. E. Wright Drive  
Jackson, Tennessee 38305  
731.423.5330

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **PLANT OPERATIONS:**

### **Product(s):**

Treated municipal wastewater

### **Raw Materials:**

### **Operating Schedule:**

### **Description of Waste Treatment:**

### **Schematic of Waste Treatment:**

### **Retention Time (If Applicable):**

### **Volume of Waste Flow:**

### **Design Flow of Treatment Facility at time of Sampling:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **SOURCE OF EFFLUENT, RECEIVING WATER AND DILUTION WATER:**

### **EFFLUENT:**

#### **Sampling Point:**

Effluent at Outfall 001

#### **Sample Collection Method:**

Grab Sample

#### **Collection Dates and Times:**

Sample 1 – 04/23/19, 1200

Sample 2 – 04/23/19, 1800

Sample 3 – 04/23/19, 2400

Sample 4 – 04/24/19, 0600

#### **Physical and Chemical Data:**

None Requested

#### **Mean Daily Discharge on Sample Collection Dates:**

None Given

#### **Lapsed Time from Sample Collection to Delivery:**

Sample 1 – 19.95 hrs

Sample 2 – 13.95 hrs

Sample 3 – 7.95 hrs

Sample 4 – 1.95 hrs

#### **Sample Temperature when received at the Laboratory:**

3.0°C

### **RECEIVING WATER:**

Not Applicable

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **DILUTION WATER:**

### **Source:**

20% Diluted Mineral Water (Perrier) Prepared by Waypoint

### **Collection Date(s) and Time(s):**

Not Applicable

### **Pretreatment:**

Temperature Equilibration and Aeration

### **Physical and Chemical Characteristics:**

<b>Batch ID</b>	<b>Date Tested</b>	<b>pH</b>	<b>Hardness</b>	<b>Alkalinity</b>	<b>Specific Conductance</b>	<b>Dissolved Oxygen</b>
042019S2	04/21/19	7.99	70.7	54.0	142.0	9.14

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **TEST METHODS:**

### **Toxicity Test Method Used:**

“Method for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms”, Fifth Edition, EPA-821-R-02-012

### **Endpoint of Test:**

Survival LC<sub>50</sub> – Ceriodaphnia dubia

Survival LC<sub>50</sub> – Pimephales Promelas

### **Deviation(s) from Reference Method:**

None

### **Date and Time Tests Started:**

Ceriodaphnia – 04/24/19, 0901-1034

Pimephales – 04/24/19, 1052-1142

### **Date and Time Tests Terminated:**

Ceriodaphnia – 04/26/19, 1102-1119

Pimephales – 04/26/19, 1126-1234

### **Type and Volume of Test Chambers:**

Ceriodaphnia – 30ml Plastic Cups

Pimephales – 500ml Plastic Beakers

### **Volume of Solution per Chamber:**

Ceriodaphnia – 15ml

Pimephales – 250ml

### **Number of Organisms per Chamber:**

Ceriodaphnia – 5 Neonate

Pimephales – 10 Larvae



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Number of Replicated Test Chambers per Treatment:**

Ceriodaphnia – 4  
Pimephales - 2

**Acclimation of Test Organisms:**

Ceriodaphnia – N/A Waypoint Culture  
Pimephales – 5 hrs @ 25°C +/- 1°C

**Test Temperature (Mean and Range):**

See Attachment 1

**Specify if Aeration was needed:**

None Needed

**Feeding Frequency, Amount and Type of Food:**

Ceriodaphnia – 0.1ml of YCT (1.8g solids/L) and 0.1ml of Selenastrum (3.0 X 10<sup>7</sup> cell/ml) 2 hours prior to introduction to test solutions.  
Pimephales – 0.15g Brine Shrimp, 2 hours prior to introduction to test solutions.

**pH Control Measures (if necessary):**

None Needed

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **TEST ORGANISMS:**

### **Scientific Name:**

Ceriodaphnia dubia and Pimephales promelas

### **Age:**

Ceriodaphnia dubia - < 24 hrs old

Pimephales Promelas – 3 days old

### **Life Stage:**

Ceriodaphnia – Neonate

Pimephales - Larvae

### **Mean Length and Weight:**

Ceriodaphnia – Not Applicable

Pimephales – Not Applicable

### **Source:**

Ceriodaphnia – Waypoint Culture

Pimephales – Aquatic Biosystems, Fort Collins, Colorado

### **Diseases and Treatment:**

Not Applicable

### **Taxonomic Key used for Species Identification:**

Ceriodaphnia – Microscopic Examination as compared to reference material.

Pimephales – Aquatic Biosystems

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **QUALITY ASSURANCE:**

### **Reference Toxicant used Routinely; Source:**

Potassium Chloride, KCL – Fisher Scientific – Waypoint ID #: CS-79

### **Date and Time of Most Recent Reference Toxicant Test, Test Results, and Current Control Chart:**

See Attachment 2

### **Dilution Water used in Reference Toxicant Test:**

20% DMW – See “Dilution Water” Section

### **Results PMSD for Sub-lethal Endpoints Determined by Hypothesis Testing in Reference Toxicant Test:**

See “Attachment 2”.

### **Physical and Chemical Methods used:**

NPDES Approved Methods from “Standard Methods for the Examination of Water and Wastewater” Eighteenth Edition

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## RESULTS:

### Tabulated Toxicity Data:

Table 1 – Data for Pimephales promelas Larval Survival Test

Table 2 – Data for Ceriodaphnia Survival Test

Table 3 – Physical and Chemical Data, Acute Toxicity

**Test Endpoint Table: (Tabled results are applicable for all 4 separate tests.)**

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
Ceriodaphnia Dubia	Pass	17%	>68%	-----	-----
Pimephales Promelas	Pass	17%	>68%	-----	-----

### Statistical Method used to Calculate Endpoints:

Ceriodaphnia Survival – N/A\*

Pimephales Survival – N/A\*

\*Endpoints could not be calculated as no test solution produced significant mortality.

### Tabulated QA Data:

See Attachment 2

### PMSDs for Sub-lethal Endpoints:

Species	Endpoint	Lower PMSD Bound	Upper PMSD Bound	Result
Ceriodaphnia	Reprod.	13	47	*
Pimephales	Growth	12	30	*

\*Not required for "Point Estimation Testing".

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **CONCLUSION AND RECOMMENDATIONS:**

### **Conclusion:**

Endpoints meet the permit requirements.

### **Recommendation:**

Report results to appropriate regulatory agency.

# Waypoint Analytical Inc.

## Table 1

### Survival Data for *Pimephales promelas* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #1  
 Dil. H2O: DMW  
 Lab ID #: 19-114-0200  
 Chamber #: 2  
 Template #: A  
 Test Dates: 04/24/19-04/26/19  
 Analyst: LC  
 Food ID #: 1866 BIO  
 Org. ID #: 1879 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	10			
	2	10	10			
8.5	1	10	10			
	2	10	9			
17	1	10	10			
	2	10	10			
34	1	10	10			
	2	10	10			
68	1	10	10			
	2	10	10			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/24 - LC	1056		Setup 1052
1	04/25 - LC			Count 0920
2	04/26 - LC			End 1126
3				
4				

# Waypoint Analytical Inc.

## Table 2

### *Survival Data for Ceriodaphnia dubia* *Acute Survival Test*

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #1  
 Dil. H2O: DMW  
 Lab ID #: 19-114-0200  
 Chamber #: 2  
 Template #: A  
 Test Dates: 04/24/19-04/26/19  
 Analyst: LC

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
4.25	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
8.5	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
17	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
34	1	5	5			
	2	5	5			
	3	5	5			
	4	5	4			
68	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			



**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #1  
**Test Dates:** 04/24/19-04/26/19

**Lab ID #:** 19-114-0200  
**NPDES #:** TN0064785  
**Analyst:** LC

<b>Species:</b> Pimephales promelas									<b>Remarks</b>
<b>Conc:</b> Control		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C°)</b>	<b>Initial</b>	20.8							
	<b>Final</b>		22.5						
<b>DO (mg/L)</b>	<b>Initial</b>	10.15							
	<b>Final</b>		9.67						
<b>pH (su)</b>	<b>Initial</b>	7.98							
	<b>Final</b>		7.97						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		54.0							
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		70.7							
<b>Conductivity (umhos/cm)</b>		142.0							
<b>Chlorine (mg/L)</b>		<0.05							
<b>Light Intensity (ft/c)</b>		50-100							

<b>Species:</b> Ceriodaphnia dubia									<b>Remarks</b>
<b>Conc:</b> Control		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C°)</b>	<b>Initial</b>	20.8							
	<b>Final</b>		23.7						
<b>DO (mg/L)</b>	<b>Initial</b>	10.15							
	<b>Final</b>		9.84						
<b>pH (su)</b>	<b>Initial</b>	7.98							
	<b>Final</b>		7.72						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		54.0							
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		70.7							
<b>Conductivity (umhos/cm)</b>		142.0							
<b>Chlorine (mg/L)</b>		<0.05							
<b>Light Intensity (ft/c)</b>		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	20.8							
	Final		22.8						
DO (mg/L)	Initial	9.95							
	Final		9.91						
pH (su)	Initial	7.98							
	Final		7.90						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	20.8							
	Final		21.9						
DO (mg/L)	Initial	9.95							
	Final		9.93						
pH (su)	Initial	7.98							
	Final		8.16						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.3							
	Final		22.6						
DO (mg/L)	Initial	13.73							
	Final		10.05						
pH (su)	Initial	7.98							
	Final		7.97						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.3							
	Final		21.6						
DO (mg/L)	Initial	13.73							
	Final		10.21						
pH (su)	Initial	7.98							
	Final		8.17						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.7							
	Final		22.7						
DO (mg/L)	Initial	12.45							
	Final		10.11						
pH (su)	Initial	7.92							
	Final		8.00						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.7							
	Final		21.5						
DO (mg/L)	Initial	12.45							
	Final		9.35						
pH (su)	Initial	7.92							
	Final		8.10						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #1  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.7							
	Final		22.2						
DO (mg/L)	Initial	10.37							
	Final		10.51						
pH (su)	Initial	7.81							
	Final		7.8						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.7							
	Final		21.5						
DO (mg/L)	Initial	10.37							
	Final		8.82						
pH (su)	Initial	7.81							
	Final		8.15						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #1  
**Test Dates:** 04/24/19-04/26/19

**Lab ID #:** 19-114-0200  
**NPDES #:** TN0064785  
**Analyst:** LC

<b>Species:</b> Pimephales promelas		<b>Day</b>							<b>Remarks</b>
<b>Conc:</b> 68.00%		1	2	3	4	5	6	7	
<b>Temp (C°)</b>	<b>Initial</b>	22.4							
	<b>Final</b>		22.0						
<b>DO (mg/L)</b>	<b>Initial</b>	9.81							
	<b>Final</b>		10.43						
<b>pH (su)</b>	<b>Initial</b>	7.41							
	<b>Final</b>		8.02						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		120.0							100% Effluent
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		106.0							100% Effluent
<b>Conductivity (umhos/cm)</b>		275.3							100% Effluent
<b>Chlorine (mg/L)</b>		ND							100% Effluent
<b>Light Intensity (ft/c)</b>		50-100							

<b>Species:</b> Ceriodaphnia dubia		<b>Day</b>							<b>Remarks</b>
<b>Conc:</b> 68.00%		1	2	3	4	5	6	7	
<b>Temp (C°)</b>	<b>Initial</b>	22.4							
	<b>Final</b>		20.9						
<b>DO (mg/L)</b>	<b>Initial</b>	9.81							
	<b>Final</b>		9.27						
<b>pH (su)</b>	<b>Initial</b>	7.41							
	<b>Final</b>		8.00						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>		120.0							100% Effluent
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>		106.0							100% Effluent
<b>Conductivity (umhos/cm)</b>		275.3							100% Effluent
<b>Chlorine (mg/L)</b>		ND							100% Effluent
<b>Light Intensity (ft/c)</b>		50-100							

# Waypoint Analytical Inc.

## Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #2  
 Dil. H2O: DMW  
 Lab ID #: 19-114-0200  
 Chamber #: 2  
 Template #: B  
 Test Dates: 04/24/19-04/26/19  
 Analyst: LC  
 Food ID #: 1866 BIO  
 Org. ID #: 1879 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	10	10			
	2	10	10			
8.5	1	10	10			
	2	10	10			
17	1	10	10			
	2	10	10			
34	1	10	10			
	2	10	10			
68	1	10	9			
	2	10	8			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/24 - LC	1107		Setup 1103
1	04/25 - LC			Count 0927
2	04/26 - LC			End 1145
3				
4				



# Waypoint Analytical Inc.

## Table 2

**Survival Data for Ceriodaphnia dubia  
Acute Survival Test**

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #2  
**Dil. H2O** DMW  
**Lab ID #:** 19-114-0200  
**Chamber #:** 2  
**Template #:** B  
**Test Dates:** 04/24/19-04/26/19  
**Analyst:** LC

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	4	5	5	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.2							
	Final		22.6						
DO (mg/L)	Initial	10.54							
	Final		10.24						
pH (su)	Initial	7.78							
	Final		7.99						
Alkalinity (mg/L as CaCO <sub>3</sub> )		54.0							
Hardness (mg/L as CaCO <sub>3</sub> )		70.7							
Conductivity (umhos/cm)		142.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.2							
	Final		20.9						
DO (mg/L)	Initial	10.54							
	Final		9.52						
pH (su)	Initial	7.78							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )		54.0							
Hardness (mg/L as CaCO <sub>3</sub> )		70.7							
Conductivity (umhos/cm)		142.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		22.7						
DO (mg/L)	Initial	10.81							
	Final		9.81						
pH (su)	Initial	7.79							
	Final		8.08						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		20.7						
DO (mg/L)	Initial	10.81							
	Final		9.47						
pH (su)	Initial	7.79							
	Final		7.78						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.5							
	Final		22.5						
DO (mg/L)	Initial	11.34							
	Final		9.59						
pH (su)	Initial	7.78							
	Final		8.08						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.5							
	Final		20.8						
DO (mg/L)	Initial	11.34							
	Final		9.13						
pH (su)	Initial	7.78							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.4							
	Final		22.5						
DO (mg/L)	Initial	11.22							
	Final		10.05						
pH (su)	Initial	8.16							
	Final		8.09						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.4							
	Final		21.0						
DO (mg/L)	Initial	11.22							
	Final		8.87						
pH (su)	Initial	8.16							
	Final		7.87						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #2  
**Test Dates:** 04/24/19-04/26/19

**Lab ID #:** 19-114-0200  
**NPDES #:** TN0064785  
**Analyst:** LC

<b>Species:</b> Pimephales promelas									<b>Remarks</b>
<b>Conc:</b> 34.00%		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C°)</b>	<b>Initial</b>	24.4							
	<b>Final</b>		22.2						
<b>DO (mg/L)</b>	<b>Initial</b>	10.90							
	<b>Final</b>		10.10						
<b>pH (su)</b>	<b>Initial</b>	7.94							
	<b>Final</b>		7.87						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									

<b>Species:</b> Ceriodaphnia dubia									<b>Remarks</b>
<b>Conc:</b> 34.00%		<b>Day</b>							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>Temp (C°)</b>	<b>Initial</b>	24.4							
	<b>Final</b>		21.0						
<b>DO (mg/L)</b>	<b>Initial</b>	10.90							
	<b>Final</b>		9.27						
<b>pH (su)</b>	<b>Initial</b>	7.94							
	<b>Final</b>		8.21						
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>									
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>									
<b>Conductivity (umhos/cm)</b>									
<b>Chlorine (mg/L)</b>									
<b>Light Intensity (ft/c)</b>									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #2  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.8							
	Final		22.2						
DO (mg/L)	Initial	11.08							
	Final		10.70						
pH (su)	Initial	7.79							
	Final		8.06						
Alkalinity (mg/L as CaCO <sub>3</sub> )		116.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		105.0							100% Effluent
Conductivity (umhos/cm)		268.5							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.8							
	Final		21.2						
DO (mg/L)	Initial	11.08							
	Final		5.71						
pH (su)	Initial	7.79							
	Final		8.13						
Alkalinity (mg/L as CaCO <sub>3</sub> )		116.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		105.0							100% Effluent
Conductivity (umhos/cm)		268.5							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							



# Waypoint Analytical Inc.

## Table 1

### *Survival Data for Pimephales promelas Acute Survival Test*

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 Dil. H2O: DMW  
 Lab ID #: 19-114-0200  
 Chamber #: 2  
 Template #: C  
 Test Dates: 04/24/19-04/26/19  
 Analyst: LC  
 Food ID #: 1866 BIO  
 Org. ID #: 1879 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10			
	2	10	10			
4.25	1	9	9			
	2	10	10			
8.5	1	10	10			
	2	10	9			
17	1	10	10			
	2	10	10			
34	1	10	10			
	2	10	10			
68	1	10	10			
	2	10	9			

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/24 - LC	1132		Setup 1128
1	04/25 - LC			Count 0949
2	04/26 - LC			End 1201
3				
4				

# Waypoint Analytical Inc.

## Table 2

### Survival Data for *Ceriodaphnia dubia* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 DII, H2O: DMW  
 Lab ID #: 19-114-0200  
 Chamber #: 2  
 Template #: C  
 Test Dates: 04/24/19-04/26/19  
 Analyst: LC

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
4.25	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
8.5	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
17	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
34	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			
68	1	5	5			
	2	5	5			
	3	5	5			
	4	5	5			

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.4							
	Final		22.5						
DO (mg/L)	Initial	0.82							
	Final		10.58						
pH (su)	Initial	7.91							
	Final		7.68						
Alkalinity (mg/L as CaCO <sub>3</sub> )		54.0							
Hardness (mg/L as CaCO <sub>3</sub> )		70.7							
Conductivity (umhos/cm)		142.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.4							
	Final		22.4						
DO (mg/L)	Initial	10.82							
	Final		9.90						
pH (su)	Initial	7.91							
	Final		7.75						
Alkalinity (mg/L as CaCO <sub>3</sub> )		54.0							
Hardness (mg/L as CaCO <sub>3</sub> )		70.7							
Conductivity (umhos/cm)		142.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	22.0							
	Final		22.4						
DO (mg/L)	Initial	10.56							
	Final		9.95						
pH (su)	Initial	7.70							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	22.0							
	Final		22.5						
DO (mg/L)	Initial	10.56							
	Final		10.10						
pH (su)	Initial	7.70							
	Final		7.90						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.2							
	Final		22.3						
DO (mg/L)	Initial	11.06							
	Final		9.88/						
pH (su)	Initial	7.69							
	Final		8.06						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.2							
	Final		22.2						
DO (mg/L)	Initial	11.06							
	Final		10.64						
pH (su)	Initial	7.69							
	Final		7.78						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.3							
	Final		22.5						
DO (mg/L)	Initial	10.95							
	Final		9.61						
pH (su)	Initial	7.98							
	Final		7.99						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.3							
	Final		22.3						
DO (mg/L)	Initial	10.95							
	Final		10.30						
pH (su)	Initial	7.98							
	Final		7.75						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		22.6						
DO (mg/L)	Initial	10.03							
	Final		9.69						
pH (su)	Initial	7.78							
	Final		8.12						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.4							
	Final		21.9						
DO (mg/L)	Initial	10.03							
	Final		9.82						
pH (su)	Initial	7.78							
	Final		8.13						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.7							
	Final		22.4						
DO (mg/L)	Initial	9.32							
	Final		9.75						
pH (su)	Initial	7.78							
	Final		8.15						
Alkalinity (mg/L as CaCO <sub>3</sub> )		122.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		106.0							100% Effluent
Conductivity (umhos/cm)		281.4							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.7							
	Final		22.0						
DO (mg/L)	Initial	9.32							
	Final		9.87						
pH (su)	Initial	7.78							
	Final		8.08						
Alkalinity (mg/L as CaCO <sub>3</sub> )		122.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		106.0							100% Effluent
Conductivity (umhos/cm)		281.4							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

# Waypoint Analytical Inc.

## Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 19-114-0200  
 Chamber #: 2  
 Template #: D  
 Test Dates: 04/24/19-04/26/19  
 Analyst: LC  
 Food ID #: 1866 BIO  
 Org. ID #: 1879 BIO

Conc:	Rep. No.	No. Surviving Organisms by Day				Remarks
		1	2	3	4	
Control:	1	10	10	10	10	
	2	10	10	10	10	
4.25	1	10	10	10	10	
	2	10	10	10	10	
8.5	1	10	10	10	10	
	2	10	10	10	10	
17	1	10	10	10	10	
	2	10	10	10	10	
34	1	10	10	10	10	
	2	10	10	10	10	
68	1	10	8	10	10	
	2	10	10	10	10	

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	04/24 - LC	1146		Setup 1142
1	04/25 - LC			Count 0953
2	04/26 - LC			End 1234
3				
4				

# Waypoint Analytical Inc.

## Table 2

### Survival Data for *Ceriodaphnia dubia* Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 19-114-0200  
 Chamber #: 2  
 Template #: D  
 Test Dates: 04/24/19-04/26/19  
 Analyst: LC

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	4	5	5	
	4	5	5	5	5	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.9							
	Final		21.9						
DO (mg/L)	Initial	10.23							
	Final		10.39						
pH (su)	Initial	8.06							
	Final		7.89						
Alkalinity (mg/L as CaCO <sub>3</sub> )		54.0							
Hardness (mg/L as CaCO <sub>3</sub> )		70.7							
Conductivity (umhos/cm)		142.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.9							
	Final		21.9						
DO (mg/L)	Initial	10.23							
	Final		10.01						
pH (su)	Initial	8.06							
	Final		8.04						
Alkalinity (mg/L as CaCO <sub>3</sub> )		54.0							
Hardness (mg/L as CaCO <sub>3</sub> )		70.7							
Conductivity (umhos/cm)		142.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.6							
	Final		22.4						
DO (mg/L)	Initial	10.80							
	Final		10.40						
pH (su)	Initial	7.66							
	Final		7.68						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.6							
	Final		21.9						
DO (mg/L)	Initial	10.80							
	Final		10.80						
pH (su)	Initial	7.66							
	Final		8.07						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.7							
	Final		22.0						
DO (mg/L)	Initial	10.72							
	Final		10.11						
pH (su)	Initial	7.63							
	Final		8.08						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.7							
	Final		21.5						
DO (mg/L)	Initial	10.72							
	Final		10.58						
pH (su)	Initial	7.63							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.9							
	Final		22.5						
DO (mg/L)	Initial	10.61							
	Final		9.84						
pH (su)	Initial	7.61							
	Final		8.11						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	21.9							
	Final		21.4						
DO (mg/L)	Initial	10.61							
	Final		10.52						
pH (su)	Initial	7.61							
	Final		7.94						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.4							
	Final		22.8						
DO (mg/L)	Initial	9.96							
	Final		9.39						
pH (su)	Initial	7.55							
	Final		8.14						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	22.4							
	Final		21.3						
DO (mg/L)	Initial	9.96							
	Final		10.04						
pH (su)	Initial	7.55							
	Final		7.99						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 04/24/19-04/26/19

Lab ID #: 19-114-0200  
NPDES #: TN0064785  
Analyst: LC

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.1							
	Final		23.0						
DO (mg/L)	Initial	9.32							
	Final		10.23						
pH (su)	Initial	7.57							
	Final		8.20						
Alkalinity (mg/L as CaCO <sub>3</sub> )		122.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		103.0							100% Effluent
Conductivity (umhos/cm)		263.4							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

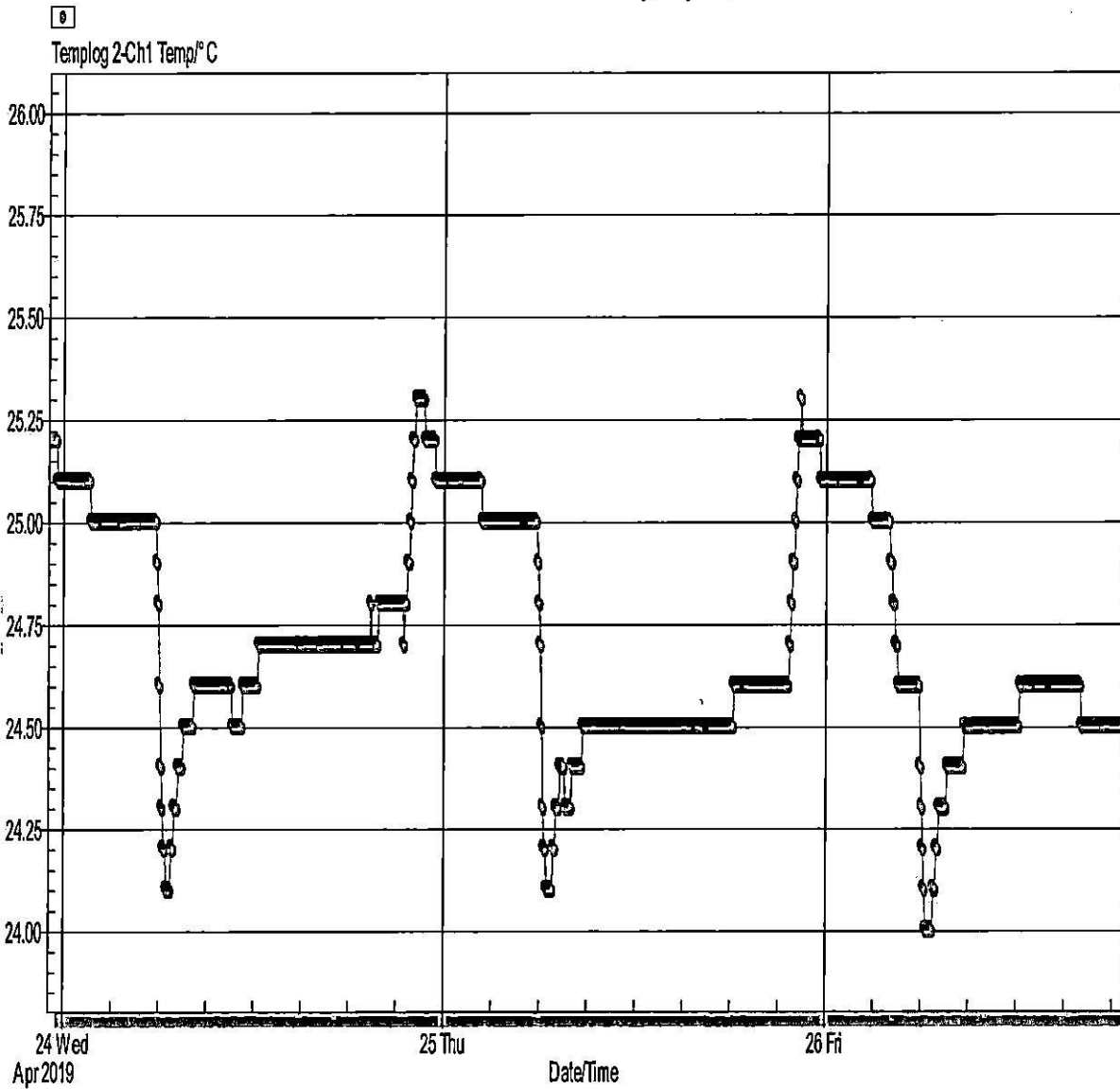
Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.1							
	Final		21.1						
DO (mg/L)	Initial	9.32							
	Final		9.93						
pH (su)	Initial	7.57							
	Final		7.93						
Alkalinity (mg/L as CaCO <sub>3</sub> )		122.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		103.0							100% Effluent
Conductivity (umhos/cm)		263.4							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Attachment 1

Temperature Log for Biotoxicity Testing.

Discharger: Adamsville STP    Lab ID #: 19-114-0200    Test dates: 04/24/19-04/26/19  
Location: Outfall 001    NPDES #: TN0064785    Analyst: LC

Downloaded Data- Wednesday, May 01, 2019



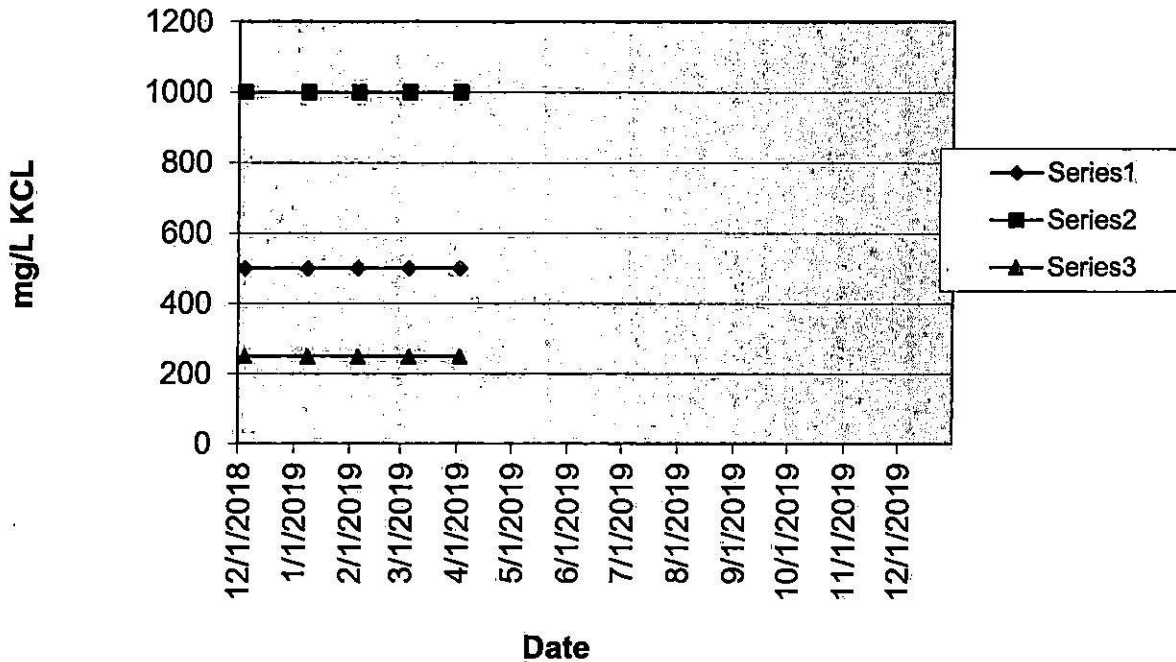
# Waypoint Analytical

## Attachment 2

### *Pimephales Chronic Reference Toxicant Data* Survival NOEC

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/04/18	500	1000	250			500.00
01/08/19	500	1000	250	0.00	0.00	500.00
02/05/19	500	1000	250	0.00	0.00	500.00
03/05/19	500	1000	250	0.00	0.00	500.00
04/02/19	500	1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00
		1000	250	0.00	0.00	500.00

### PIMEPHALES REFERENCE TOXICANT SURVIVAL NOEC



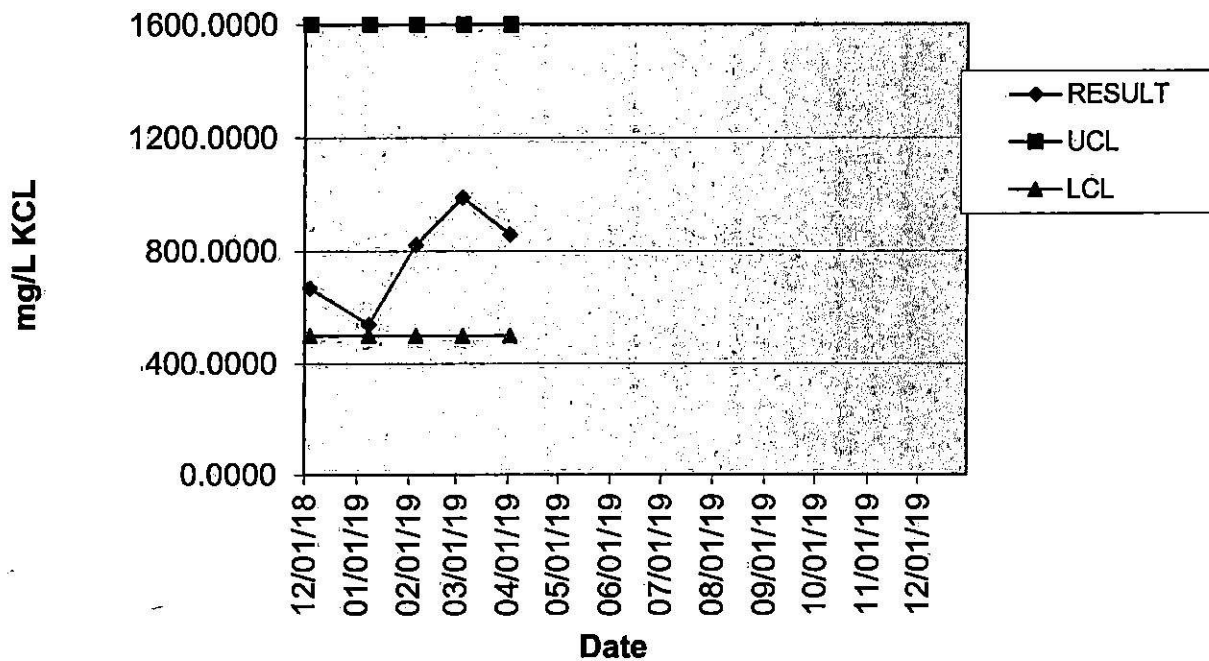
# Waypoint Analytical

## Attachment 2

### Pimephales Chronic Reference Toxicant Data Growth IC25

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/04/18	668.0000	1600.0000	500.0000		0.00	668.00
01/08/19	538.0000	1600.0000	500.0000	91.92	15.24	603.00
02/05/19	821.4210	1600.0000	500.0000	141.87	20.99	675.81
03/05/19	987.7010	1600.0000	500.0000	194.26	25.77	753.78
04/02/19	858.0140	1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63
		1600.0000	500.0000	174.57	22.54	774.63

### PIMEPHALES REFERENCE TOXICANT GROWTH IC25

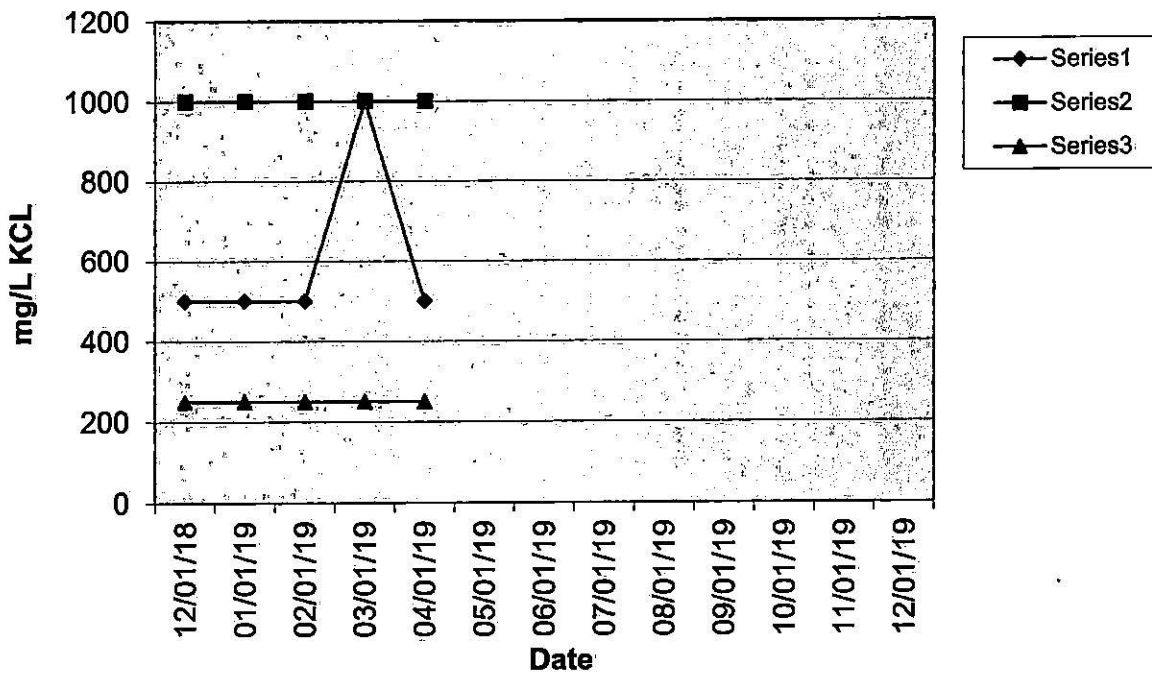


## Waypoint Analytical Attachment 2

### Pimephales Chronic Reference Toxicant Data Growth NOEC

DATE	RESULT	UCL	LCL	STDEV	CV%	PMSD	MEAN
12/04/18	500	1000	250		0.00	19.43	500.00
01/08/19	500	1000	250	0.00	0.00	34.98	500.00
02/05/19	500	1000	250	0.00	0.00		500.00
03/05/19	1000	1000	250	250.00	40.00		625.00
04/02/19	500	1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00
		1000	250	223.61	37.27		600.00

### PIMEPHALES REFERENCE TOXICANT GROWTH NOEC



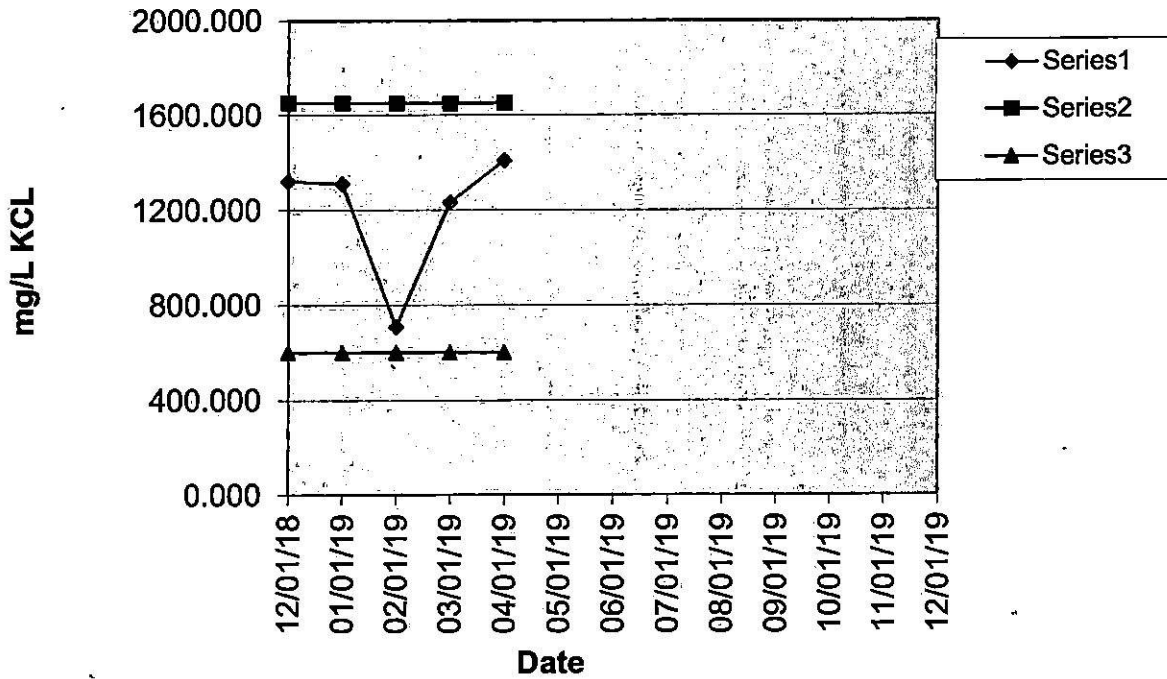
# Waypoint Analytical

## Attachment 2

### Pimephales Chronic Reference Toxicant Data 48Hour Survival

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/05/18	1320.000	1650.00	600.00		0.00	1320.00
01/09/19	1309.000	1650.00	600.00	7.78	0.59	1314.50
02/06/19	707.110	1650.00	600.00	350.72	31.54	1112.04
03/06/19	1231.140	1650.00	600.00	292.49	25.62	1141.81
04/03/19	1408.020	1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05
		1650.00	600.00	279.88	23.42	1195.05

### PIMEPHALES REFERENCE TOXICANT 48HOUR SURVIVAL





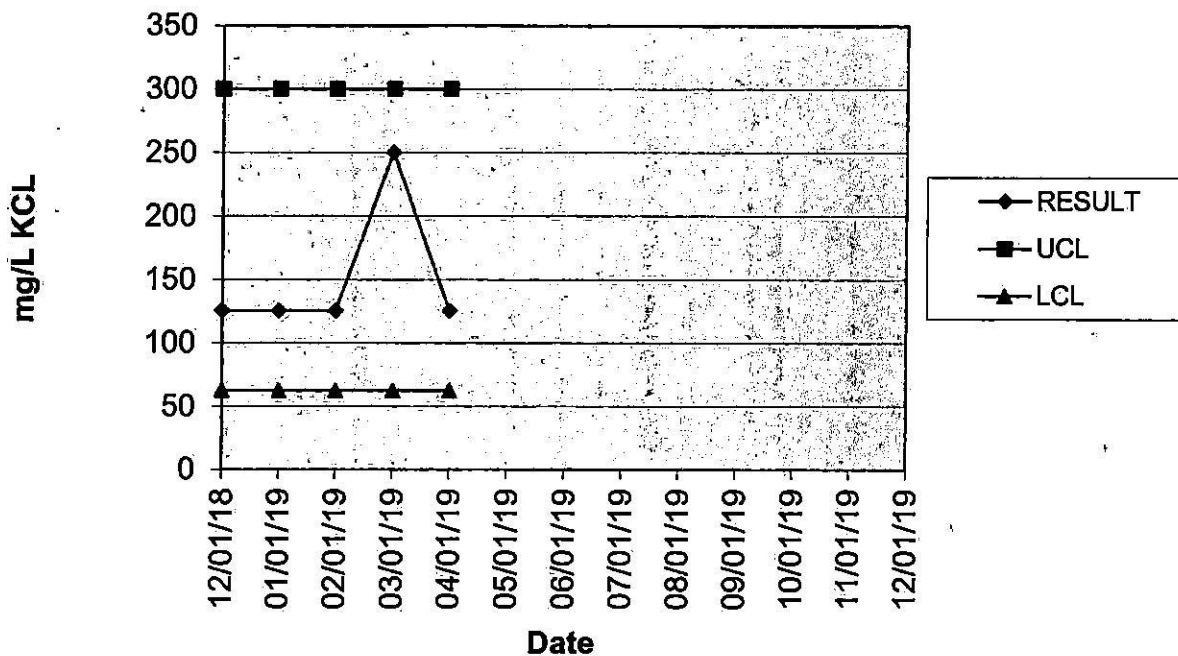
# Waypoint Analytical

## Attachment 2

### Ceriodaphnia Chronic Reference Toxicant Data Survival NOEC

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/04/18	125	300	62.5			125.00
01/08/19	125	300	62.5	0.00	0.00	125.00
02/05/19	125	300	62.5	0.00	0.00	125.00
03/05/19	250	300	62.5	62.50	40.00	156.25
04/02/19	125	300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00
		300	62.5	55.90	37.27	150.00

### CERIODAPHNIA REFERENCE TOXICANT SURVIVAL NOEC



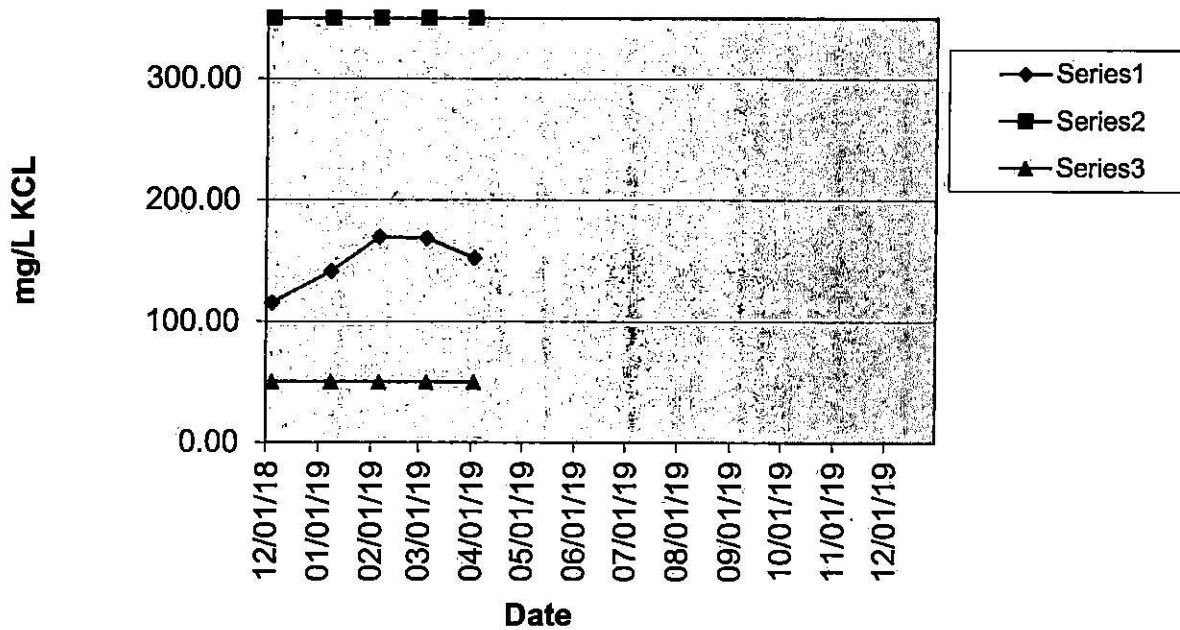
# Waypoint Analytical

## Attachment 2

### Ceriodaphnia Chronic Reference Toxicant Data Reproduction IC25

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/04/18	115.00	350.00	50.00	22.41	19.49	115.00
01/08/19	141.00	350.00	50.00	22.41	15.03	149.10
02/05/19	169.17	350.00	50.00	22.41	15.03	149.10
03/05/19	168.32	350.00	50.00	22.41	15.03	149.10
04/02/19	152.01	350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10
		350.00	50.00	22.41	15.03	149.10

### CERIODAPHNIA REFERENCE TOXICANT REPRODUCTION IC25



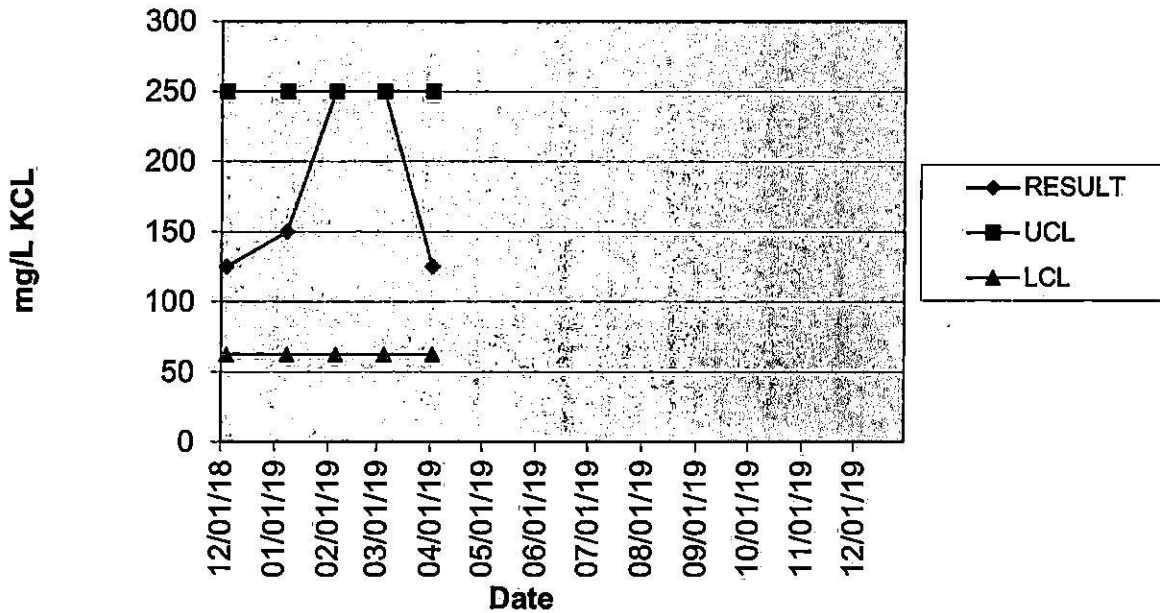
# Waypoint Analytical

## Attachment 2

### Ceriodaphnia Chronic Reference Toxicant Data Reproduction NOEC

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN	PMSD
12/04/18	125	250	62.5			125.00	37.87
01/08/19	150	250	62.5	17.68	12.86	137.50	53.14
02/05/19	250	250	62.5	66.14	37.80	175.00	
03/05/19	250	250	62.5	65.75	33.93	193.75	
04/02/19	125	250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	
		250	62.5	64.71	35.95	180.00	

### CERIODAPHNIA REFERENCE TOXICANT REPRODUCTON NOEC



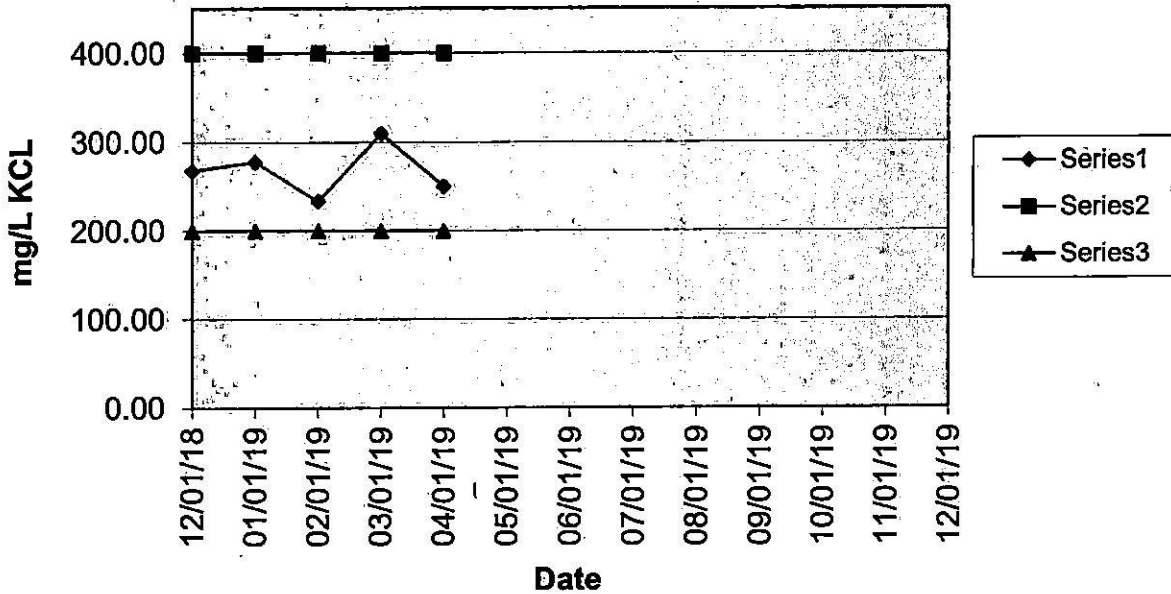
# Waypoint Analytical

## Attachment 2

### Ceriodaphnia Chronic Reference Toxicity Data 48Hour Survival

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/05/18	268.00	400.00	200.00			268.00
01/09/19	277.89	400.00	200.00	6.99	2.56	272.95
02/06/19	233.26	400.00	200.00	23.44	9.03	259.72
03/06/19	309.35	400.00	200.00	31.34	11.52	272.13
04/03/19	250.00	400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70
		400.00	200.00	28.89	10.79	267.70

### CERIODAPHNIA REFERENCE TOXICANT 48HOUR SURVIVAL




**Waypoint Analytical**  
 2269 Dr. F. E. Wright Drive  
 Jackson, TN 38305

(800) 832-1808  
 (731) 423-5330  
 FAX (731) 423-5326

CLIENT NAME: City of Adamsville		Project Name: Bioassay-Acute		ANALYSES REQUESTED			
ADDRESS: 203 Sunrise Drive.		P.O. #					
Adamsville TN 38310		RUSH?	Notify Lab in Advance	CLIENT # C0109WW			
Phone: 731-632-4214 Lannie Hutton		<24hr	Notify Lab in Advance	DATE NEEDED:			
Fax: 731-632-1980		24-48	Notify Lab in Advance	FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes			
COLLECTED BY:		48-78	Notify Lab in Advance	FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes			

								 19-114-0200 00088 04-24-2019 08:38:27	

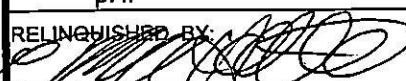
  

# OF CONT.	SAMPLE DESCRIPTION/LOCATION	DATE	TIME	TYPE		MATRIX*	PRESERVATIVE											
				COMP	GRAB													
1	First Pull	4-23-19	12:00pm		X	WW	-----	Bioassay										
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)										
1	Second Pull	4-23-19	6:00pm		X	WW	-----	Bioassay										
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)										
1	Third Pull	4-24-19	12:00am		X	WW	-----	Bioassay										
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)										
1	Fourth Pull	4-24-19	6:00am		X	WW	-----	Bioassay										
	"				X	WW	-----	Alk/Hardness/Cl res (lab analysis)										

FLOW (GPD):																			
-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Remarks:		1st pull	2nd pull	3rd pull	4th pull	SHIPPED VIA:												
Cl_res:						UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>									
Conductivity:						FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>									
DO:						OTHER	<input type="checkbox"/>	COOLER #:	<input type="checkbox"/>									
pH:						SAMPLES RETURNED VIA:		Condition: (lab use only)										
RELINQUISHED BY:		DATE:	4-24	TIME:	1:57	UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>									
RELINQUISHED BY:		DATE:		TIME:		FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>									
RELINQUISHED BY:		DATE:		TIME:		TEMP:		Bottles Received:										
						DATE:	4-24-19	TIME:	4:57	pH								

**2018  
ADAMSVILLE STP  
ANNUAL  
BIOMONITORING  
TN0064785**



4/10/2018

City of Adamsville  
Mr. Lannie Hutton  
231 East Main Street  
Adamsville, TN, 38310

Ref: Analytical Testing  
Lab Report Number: 18-087-0212  
Client Project Description: Bioassay - Acute

Dear Mr. Lannie Hutton:

Waypoint Analytical Tennessee, Inc. (J) received sample(s) on 3/28/2018 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,



Billie Haynes  
Lab Manager



**Sample Summary Table**

**Report Number:** 18-087-0212  
**Client Project Description:** Bioassay - Acute

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
94773	First Pull	Aqueous	03/27/2018 12:00	03/28/2018	EPA-200.7	
94773	First Pull	Aqueous	03/27/2018 12:00	03/28/2018		
94774	Second Pull	Aqueous	03/27/2018 18:00	03/28/2018	EPA-200.7	
94774	Second Pull	Aqueous	03/27/2018 18:00	03/28/2018		
94775	Third Pull	Aqueous	03/28/2018	03/28/2018	EPA-200.7	
94775	Third Pull	Aqueous	03/28/2018	03/28/2018		
94776	Fourth Pull	Aqueous	03/28/2018 06:00	03/28/2018	EPA-200.7	
94776	Fourth Pull	Aqueous	03/28/2018 06:00	03/28/2018		



00088  
 City of Adamsville  
 Mr. Lannie Hutton  
 231 East Main Street  
 Adamsville, TN 38310

Project Bioassay - Acute  
 Information :

Report Date : 04/10/2018  
 Received : 3/28/2018

*Billie Haynes*

Report Number : **18-087-0212**

**REPORT OF ANALYSIS**

Billie L. Haynes  
 Lab Manager

Lab No : **94773**  
 Sample ID : **First Pull**

Matrix: **Aqueous**  
 Sampled: **3/27/2018 12:00**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	<b>120</b>	mg/L	4	4	1	04/02/18 12:30	KMH	2320B-2011
Chlorine, Total Residual	<b>0.080</b>	mg/L	0.050	0.050	1	03/28/18 16:47	KMH	4500CIG-2011
Total Calcium	<b>28.4</b>	mg/L	0.043	0.100	1	04/06/18 00:11	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	<b>102</b>	mg/L	0.028	0.100	1	04/06/18 00:11		EPA-200.7
Total Magnesium	<b>7.43</b>	mg/L	0.028	0.100	1	04/06/18 00:11	BKN	EPA-200.7

**Qualifiers/ Definitions**      DF      Dilution Factor      MQL      Method Quantitation Limit

00088  
 City of Adamsville  
 Mr. Lannie Hutton  
 231 East Main Street  
 Adamsville, TN 38310

Project Bioassay - Acute  
 Information :

Report Date : 04/10/2018  
 Received : 3/28/2018

*Billie Haynes*

Report Number : **18-087-0212**

**REPORT OF ANALYSIS**

Billie L. Haynes  
 Lab Manager

Lab No : **94774**  
 Sample ID : **Second Pull**

Matrix: **Aqueous**  
 Sampled: **3/27/2018 18:00**

Test	Results	Units	MDL	MLL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	<b>132</b>	mg/L	4	4	1	04/02/18 12:30	KMH	2320B-2011
Chlorine, Total Residual	<b>0.060</b>	mg/L	0.050	0.050	1	03/28/18 16:47	KMH	4500CIG-2011
Total Calcium	<b>28.1</b>	mg/L	0.043	0.100	1	04/06/18 00:16	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	<b>102</b>	mg/L	0.028	0.100	1	04/06/18 00:16		EPA-200.7
Total Magnesium	<b>7.78</b>	mg/L	0.028	0.100	1	04/06/18 00:16	BKN	EPA-200.7

**Qualifiers/ Definitions**      DF      Dilution Factor      MQL      Method Quantitation Limit

00088

City of Adamsville  
 Mr. Lannie Hutton  
 231 East Main Street  
 Adamsville, TN 38310

Project Bioassay - Acute  
 Information :

Report Date : 04/10/2018

Received : 3/28/2018

*Billie Haynes*

Billie L. Haynes  
 Lab Manager

Report Number : **18-087-0212**

**REPORT OF ANALYSIS**

Lab No : **94775**  
 Sample ID : **Third Pull**

Matrix: **Aqueous**  
 Sampled: **3/28/2018 0:00**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO <sub>3</sub> )	<b>124</b>	mg/L	4	4	1	04/02/18 12:30	KMH	2320B-2011
Chlorine, Total Residual	<b>0.090</b>	mg/L	0.050	0.050	1	03/28/18 16:47	KMH	4500CIG-2011
Total Calcium	<b>28.3</b>	mg/L	0.043	0.100	1	04/06/18 00:29	BKN	EPA-200.7
Hardness as CaCO <sub>3</sub> (SM-2340B)	<b>102</b>	mg/L	0.028	0.100	1	04/06/18 00:29		EPA-200.7
Total Magnesium	<b>7.52</b>	mg/L	0.028	0.100	1	04/06/18 00:29	BKN	EPA-200.7

**Qualifiers/  
 Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit

00088  
 City of Adamsville  
 Mr. Lannie Hutton  
 231 East Main Street  
 Adamsville, TN 38310

Project Bioassay - Acute  
 Information :

Report Date : 04/10/2018  
 Received : 3/28/2018

*Billie Haynes*

Billie L. Haynes  
 Lab Manager

Report Number : **18-087-0212**

**REPORT OF ANALYSIS**

Lab No : **94776**  
 Sample ID : **Fourth Pull**

Matrix: **Aqueous**  
 Sampled: **3/28/2018 6:00**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	<b>128</b>	mg/L	4	4	1	04/02/18 12:30	KMH	2320B-2011
Chlorine, Total Residual	<0.050	mg/L	0.050	0.050	1	03/28/18 16:47	KMH	4500CIG-2011
Total Calcium	<b>27.7</b>	mg/L	0.043	0.100	1	04/06/18 00:34	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	<b>100</b>	mg/L	0.028	0.100	1	04/06/18 00:34		EPA-200.7
Total Magnesium	<b>7.52</b>	mg/L	0.028	0.100	1	04/06/18 00:34	BKN	EPA-200.7

**Qualifiers/  
 Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit

# Waypoint Analytical Inc.

April 9, 2018

Mr. Lannie Hutton  
231 East Main Street  
Adamsville, TN 38310

RE: Annual Biomonitoring 2018 Adamsville STP – TN0064785

Dear Mr. Hutton,

Please find enclosed the above referenced results for the samples March 28, 2018. The two species used in the test were Pimephales promelas and Ceriodaphnia dubia. The results of the tests indicate that the samples **passed** the permit criteria for both species.

If you have any questions, please call. We appreciate you as a client and are always glad to be of service to you.

Sincerely,



Billie Haynes  
Laboratory Manager

Enclosure

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## TEST SUMMARY

Listed below is a summary of results for the four "48-Hour Static Acute Toxicity Tests" performed on wastewater effluent samples from the Adamsville STP – Adamsville, Tennessee - Outfall 001.

1. The test type was "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Ceriodaphnia and an "Acute, Static, Non-renewal, with a 48-Hour Endpoint" for the Pimephales. Four separate grab samples collected at 6-hour intervals over a 24-hour period were used in four separate tests.
2. Tests were conducted on 03/28/18-03/30/18 for the Ceriodaphnia and 03/28/18-03/30/18 for the Pimephales.
3. The test method used was EPA-821-R-02-012.
4. The 4 samples were collected on 03/27/18 and 03/28/18.

### TABLED SUMMARY OF TEST RESULTS

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
*Ceriodaphnia Dubia	Pass	17%	>68%	-----	-----
*Pimephales Promelas	Pass	17%	>68%	-----	-----

\*Result table is applicable for all four separate tests.

**All QC criteria required by the above referenced method were met during this analysis.**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## TABLE OF CONTENTS

**Introduction**

**Plant Operations**

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**Test Conditions**

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**Conclusions and Recommendations**

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**Attachments**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## INTRODUCTION:

**Permit Number:**

TN0064785

**Toxicity Testing Requirements of Permit:**

4 separate 48-Hour, Static, Non-renewal, Ceriodaphnia dubia Survival and a 48-Hour, Static, Non-renewal, Pimephales promelas Survival Tests. The permit limit is 17 % with an LC<sub>50</sub> endpoint. Five serial dilutions and a control are required. The dilutions are as follows:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	2 X PL	Permit Limit	0.5 X PL	0.25 X PL	Control
%effluent					
68	34	17	8.5	4.25	0

**Plant Location:**

Adamsville, McNairy County, Tennessee

**Name of receiving water body:**

Snake Creek at mile 8.0

**Contract Laboratory:**

Waypoint Analytical Inc.  
2269 Dr. F. E. Wright Drive  
Jackson, Tennessee 38305  
731.423.5330



# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **PLANT OPERATIONS:**

### **Product(s):**

Treated municipal wastewater

### **Raw Materials:**

### **Operating Schedule:**

### **Description of Waste Treatment:**

### **Schematic of Waste Treatment:**

### **Retention Time (If Applicable):**

### **Volume of Waste Flow:**

### **Design Flow of Treatment Facility at time of Sampling:**

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **SOURCE OF EFFLUENT, RECEIVING WATER AND DILUTION WATER:**

### **EFFLUENT:**

#### **Sampling Point:**

Effluent at Outfall 001

#### **Sample Collection Method:**

Grab Sample

#### **Collection Dates and Times:**

Sample 1 – 03/27/18, 1200  
Sample 2 – 03/27/18, 1800  
Sample 3 – 03/28/18, 2400  
Sample 4 – 03/28/18, 0600

#### **Physical and Chemical Data:**

None Requested

#### **Mean Daily Discharge on Sample Collection Dates:**

None Given

#### **Lapsed Time from Sample Collection to Delivery:**

Sample 1 – 21.24 hrs  
Sample 2 – 15.24 hrs  
Sample 3 – 9.24 hrs  
Sample 4 – 3.24 hrs

#### **Sample Temperature when received at the Laboratory:**

3.0°C

### **RECEIVING WATER:**

Not Applicable

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**DILUTION WATER:**

**Source:**

20% Diluted Mineral Water (Perrier) Prepared by Waypoint

**Collection Date(s) and Time(s):**

Not Applicable

**Pretreatment:**

Temperature Equilibration and Aeration

**Physical and Chemical Characteristics:**

<b>Batch ID</b>	<b>Date Tested</b>	<b>pH</b>	<b>Hardness</b>	<b>Alkalinity</b>	<b>Specific Conductance</b>	<b>Dissolved Oxygen</b>
032418S2	03/25/18	8.03	65.3	64.0	144.0	7.99
032518S3	03/26/18	8.03	68.1	68.0	149.8	7.96

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**

**NPDES Number: TN0064785**

## **TEST METHODS:**

### **Toxicity Test Method Used:**

“Method for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms”, Fifth Edition, EPA-821-R-02-012

### **Endpoint of Test:**

Survival LC<sub>50</sub> – Ceriodaphnia dubia  
Survival LC<sub>50</sub> – Pimephales Promelas

### **Deviation(s) from Reference Method:**

None

### **Date and Time Tests Started:**

Ceriodaphnia – 03/28/18, 1115-1142  
Pimephales – 03/28/18, 1149-1205

### **Date and Time Tests Terminated:**

Ceriodaphnia – 03/30/18, 0952-1005  
Pimephales – 03/30/18, 1029-1047

### **Type and Volume of Test Chambers:**

Ceriodaphnia – 30ml Plastic Cups  
Pimephales – 500ml Plastic Beakers

### **Volume of Solution per Chamber:**

Ceriodaphnia – 15ml  
Pimephales – 250ml

### **Number of Organisms per Chamber:**

Ceriodaphnia – 5 Neonate  
Pimephales – 10 Larvae

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

**Number of Replicated Test Chambers per Treatment:**

Ceriodaphnia – 4  
Pimephales - 2

**Acclimation of Test Organisms:**

Ceriodaphnia – N/A Waypoint Culture  
Pimephales – 5 hrs @ 25°C +/- 1°C

**Test Temperature (Mean and Range):**

See Attachment 1

**Specify if Aeration was needed:**

None Needed

**Feeding Frequency, Amount and Type of Food:**

Ceriodaphnia – 0.1ml of YCT (1.8g solids/L) and 0.1ml of Selenastrum (3.0 X 10<sup>7</sup> cell/ml) 2 hours prior to introduction to test solutions.  
Pimephales – 0.15g Brine Shrimp, 2 hours prior to introduction to test solutions.

**pH Control Measures (if necessary):**

None Needed

# Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

## **TEST ORGANISMS:**

### **Scientific Name:**

Ceriodaphnia dubia and Pimephales promelas

### **Age:**

Ceriodaphnia dubia - < 24 hrs old  
Pimephales Promelas – 3 days old

### **Life Stage:**

Ceriodaphnia – Neonate  
Pimephales - Larvae

### **Mean Length and Weight:**

Ceriodaphnia – Not Applicable  
Pimephales – Not Applicable

### **Source:**

Ceriodaphnia – Waypoint Culture  
Pimephales – Aquatic Biosystems, Fort Collins, Colorado

### **Diseases and Treatment:**

Not Applicable

### **Taxonomic Key used for Species Identification:**

Ceriodaphnia – Microscopic Examination as compared to reference material.  
Pimephales – Aquatic Biosystems

## Waypoint Analytical Inc.

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

### **QUALITY ASSURANCE:**

#### **Reference Toxicant used Routinely; Source:**

Potassium Chloride, KCL – Fisher Scientific – Waypoint ID #: CS-79

#### **Date and Time of Most Recent Reference Toxicant Test, Test Results, and Current Control Chart:**

See Attachment 2

#### **Dilution Water used in Reference Toxicant Test:**

20% DMW – See “Dilution Water” Section

#### **Results PMSD for Sub-lethal Endpoints Determined by Hypothesis Testing in Reference Toxicant Test:**

See “Attachment 2”.

#### **Physical and Chemical Methods used:**

NPDES Approved Methods from “Standard Methods for the Examination of  
Water and Wastewater” Eighteenth Edition



# Waypoint Analytical Inc.

Discharger Name: Adamsville STP  
NPDES Number: TN0064785

## RESULTS:

### Tabulated Toxicity Data:

Table 1 – Data for Pimephales promelas Larval Survival Test

Table 2 – Data for Ceriodaphnia Survival Test

Table 3 – Physical and Chemical Data, Acute Toxicity

**Test Endpoint Table: (Tabled results are applicable for all 4 separate tests.)**

Species	Results	Permit Limit	Survival LC50	Growth LC50	Reproduction LC50
Ceriodaphnia Dubia	Pass	17%	>68%	----	----
Pimephales Promelas	Pass	17%	>68%	----	----

### Statistical Method used to Calculate Endpoints:

Ceriodaphnia Survival – N/A\*

Pimephales Survival – N/A\*

\*Endpoints could not be calculated as no test solution produced significant mortality.

### Tabulated QA Data:

See Attachment 2

### PMSDs for Sub-lethal Endpoints:

Species	Endpoint	Lower PMSD Bound	Upper PMSD Bound	Result
Ceriodaphnia	Reprod.	13	47	*
Pimephales	Growth	12	30	*

\*Not required for "Point Estimation Testing".

## **Waypoint Analytical Inc.**

**Discharger Name: Adamsville STP**  
**NPDES Number: TN0064785**

### **CONCLUSION AND RECOMMENDATIONS:**

**Conclusion:**

Endpoints meet the permit requirements.

**Recommendation:**

Report results to appropriate regulatory agency.

# Waypoint Analytical Inc.

## Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #1  
**Dil. H2O:** DMW  
**Lab ID #:** 18-087-0212  
**Chamber #:** 2  
**Template #:** A  
**Test Dates:** 03/28/18-03/30/18  
**Analyst:** KH, AF  
**Food ID #:** 1576 BIO  
**Org. ID #:** 1742 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10	10	10	
	2	10	10	10	10	
4.25	1	10	10	10	10	
	2	10	10	10	10	
8.5	1	10	10	10	10	
	2	10	10	10	10	
17	1	10	10	10	10	
	2	10	10	10	10	
34	1	10	10	10	10	
	2	10	10	10	10	
68	1	10	10	10	10	
	2	10	10	10	10	

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/28 - KH	0825		Setup 1149
1	03/29 - AF			Count 0928
2	03/30 - AF			End 1043
3				
4				

# Waypoint Analytical Inc.

## Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #2  
 Dil. H2O: DMW  
 Lab ID #: 18-087-0212  
 Chamber #: 2  
 Template #: B  
 Test Dates: 03/28/18-03/30/18  
 Analyst: KH, AF  
 Food ID #: 1576 BIO  
 Org. ID #: 1747 BIO

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	10	10		
	2	9	9		
4.25	1	10	10		
	2	10	10		
8.5	1	10	10		
	2	10	10		
17	1	10	10		
	2	10	10		
34	1	10	10		
	2	10	10		
68	1	10	10		
	2	10	10		

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/28 - KH	0825		Setup 1153
1	03/29 - AF			Count 0930
2	03/30 - AF			End 1047
3				
4				

# Waypoint Analytical Inc.

## Table 1

### **Survival Data for *Pimephales promelas* Acute Survival Test**

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #3  
**Dil. H2O:** DMW  
**Lab ID #:** 18-087-0212  
**Chamber #:** 2  
**Template #:** C  
**Test Dates:** 03/28/18-03/30/18  
**Analyst:** KH, AF  
**Food ID #:** 1576 BIO  
**Org. ID #:** 1747 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10	10	10	
	2	10	10	10	10	
4.25	1	10	10	10	10	
	2	10	10	10	10	
8.5	1	10	10	10	10	
	2	10	10	10	10	
17	1	10	10	10	10	
	2	10	10	10	10	
34	1	10	10	10	10	
	2	10	10	10	10	
68	1	10	10	10	10	
	2	10	9	10	10	

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/28 - KH	0825		Setup 1159
1	03/29 - AF			Count 0933
2	03/30 - AF			End 1029
3				
4				

Waypoint Analytical Inc.

Table 1

**Survival Data for *Pimephales promelas*  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 18-087-0212  
 Chamber #: 2  
 Template #: D  
 Test Dates: 03/28/18-03/30/18  
 Analyst: KH, AF  
 Food ID #: 1576 BIO  
 Org. ID #: 1747 BIO

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	10	10	10	10	
	2	10	10	10	10	
4.25	1	10	9	10	10	
	2	10	10	10	10	
8.5	1	10	10	10	10	
	2	10	10	10	10	
17	1	10	10	10	10	
	2	10	10	10	10	
34	1	10	10	10	10	
	2	10	10	10	10	
68	1	10	9	10	10	
	2	10	10	10	10	

Day	Date/Ints.	Feeding Time	Renewal Time	Remarks
Setup	03/28 - KH	0825		Setup 1205
1	03/29 - AF			Count 0935
2	03/30 - AF			End 1037
3				
4				

# Waypoint Analytical Inc.

## Table 2

### Survival Data for Ceriodaphnia dubia Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #1  
 DII. H2O: DMW  
 Lab ID #: 18-087-0212  
 Chamber #: 2  
 Template #: A  
 Test Dates: 03/28/18-03/30/18  
 Analyst: KH, AF

Conc:	Rep. No.	No. Surviving Organisms by Day				Remarks
		1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	

# Waypoint Analytical Inc.

## Table 2

**Survival Data for Ceriodaphnia dubia  
Acute Survival Test**

**Discharger:** Adamsville STP  
**NPDES #:** TN0064785  
**Location:** Outfall 001, Pull #2  
**Dil. H2O:** DMW  
**Lab ID #:** 18-087-0212  
**Chamber #:** 2  
**Template #:** B  
**Test Dates:** 03/28/18-03/30/18  
**Analyst:** KH, AF

Conc:	No. Surviving Organisms by Day				Remarks
	Rep. No.	1	2	3	
Control:	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
4.25	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
8.5	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
17	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
34	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5
68	1	5	5	5	5
	2	5	5	5	5
	3	5	5	5	5
	4	5	5	5	5



# Waypoint Analytical Inc.

## Table 2

### Survival Data for Ceriodaphnia dubia Acute Survival Test

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #3  
 Dil. H2O: DMW  
 Lab ID #: 18-087-0212  
 Chamber #: 2  
 Template #: C  
 Test Dates: 03/28/18-03/30/18  
 Analyst: KH, AF

Conc:	Rep. No.	No. Surviving Organisms by Day				Remarks
		1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	

# Waypoint Analytical Inc.

## Table 2

**Survival Data for Ceriodaphnia dubia  
Acute Survival Test**

Discharger: Adamsville STP  
 NPDES #: TN0064785  
 Location: Outfall 001, Pull #4  
 Dil. H2O: DMW  
 Lab ID #: 18-087-0212  
 Chamber #: 3  
 Template #: D  
 Test Dates: 03/28/18-03/30/18  
 Analyst: KH, AF

Conc:	No. Surviving Organisms by Day					Remarks
	Rep. No.	1	2	3	4	
Control:	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
4.25	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
8.5	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
17	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
34	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	
68	1	5	5	5	5	
	2	5	5	5	5	
	3	5	5	5	5	
	4	5	5	5	5	

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #1                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	25.0							
	Final		23.2						
DO (mg/L)	Initial	9.16							
	Final		7.71						
pH (su)	Initial	7.93							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							
Hardness (mg/L as CaCO <sub>3</sub> )		65.3							
Conductivity (umhos/cm)		144.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.6							
	Final		23.0						
DO (mg/L)	Initial	9.16							
	Final		8.50						
pH (su)	Initial	7.93							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							
Hardness (mg/L as CaCO <sub>3</sub> )		65.3							
Conductivity (umhos/cm)		144.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #1                  NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18                Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	25.0							
	Final		23.0						
DO (mg/L)	Initial	10.16							
	Final		7.79						
pH (su)	Initial	7.89							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.5							
	Final		23.2						
DO (mg/L)	Initial	10.16							
	Final		8.35						
pH (su)	Initial	7.89							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #1                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.9							
	Final		23.0						
DO (mg/L)	Initial	9.23							
	Final		7.71						
pH (su)	Initial	7.90							
	Final		7.76						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.4							
	Final		23.1						
DO (mg/L)	Initial	9.23							
	Final		8.51						
pH (su)	Initial	7.90							
	Final		7.83						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #1  
**Test Dates:** 03/28/18-03/30/18

**Lab ID #:** 18-087-0212  
**NPDES #:** TN0064785  
**Analyst:** KH, AF

Species: Pimephales promelas		Day								Remarks
Conc: 17.00%		1	2	3	4	5	6	7		
Temp (C <sup>o</sup> )	Initial	24.8								
	Final		23.0							
DO (mg/L)	Initial	9.12								
	Final		7.56							
pH (su)	Initial	7.87								
	Final		7.80							
Alkalinity (mg/L as CaCO <sub>3</sub> )										
Hardness (mg/L as CaCO <sub>3</sub> )										
Conductivity (umhos/cm)										
Chlorine (mg/L)										
Light Intensity (ft/c)										

Species: Ceriodaphnia dubia		Day								Remarks
Conc: 17.00%		1	2	3	4	5	6	7		
Temp (C <sup>o</sup> )	Initial	24.3								
	Final		23.1							
DO (mg/L)	Initial	9.12								
	Final		8.41							
pH (su)	Initial	7.87								
	Final		7.89							
Alkalinity (mg/L as CaCO <sub>3</sub> )										
Hardness (mg/L as CaCO <sub>3</sub> )										
Conductivity (umhos/cm)										
Chlorine (mg/L)										
Light Intensity (ft/c)										

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #1                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		23.2						
DO (mg/L)	Initial	8.72							
	Final		7.57						
pH (su)	Initial	7.89							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.3							
	Final		23.3						
DO (mg/L)	Initial	8.72							
	Final		8.59						
pH (su)	Initial	7.89							
	Final		7.89						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

<b>Discharger:</b> Adamsville STP	<b>Lab ID #:</b> 18-087-0212
<b>Location:</b> Outfall 001, Pull #1	<b>NPDES #:</b> TN0064785
<b>Test Dates:</b> 03/28/18-03/30/18	<b>Analyst:</b> KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		23.0						
DO (mg/L)	Initial	8.94							
	Final		7.34						
pH (su)	Initial	7.79							
	Final		7.89						
Alkalinity (mg/L as CaCO <sub>3</sub> )		120.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		102.0							100% Effluent
Conductivity (umhos/cm)		361.0							100% Effluent
Chlorine (mg/L)		0.08							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.4							
	Final		23.1						
DO (mg/L)	Initial	8.94							
	Final		8.55						
pH (su)	Initial	7.79							
	Final		8.04						
Alkalinity (mg/L as CaCO <sub>3</sub> )		120.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		102.0							100% Effluent
Conductivity (umhos/cm)		361.0							100% Effluent
Chlorine (mg/L)		0.08							100% Effluent
Light Intensity (ft/c)		50-100							



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #1                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	25.0							
	Final		23.2						
DO (mg/L)	Initial	9.16							
	Final		7.71						
pH (su)	Initial	7.93							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							
Hardness (mg/L as CaCO <sub>3</sub> )		65.3							
Conductivity (umhos/cm)		144.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.6							
	Final		23.0						
DO (mg/L)	Initial	9.16							
	Final		8.50						
pH (su)	Initial	7.93							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							
Hardness (mg/L as CaCO <sub>3</sub> )		65.3							
Conductivity (umhos/cm)		144.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

**Discharger:** Adamsville STP  
**Location:** Outfall 001, Pull #2  
**Test Dates:** 03/28/18-03/30/18

**Lab ID #:** 18-087-0212  
**NPDES #:** TN0064785  
**Analyst:** KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	25.0							
	Final		23.6						
DO (mg/L)	Initial	9.06							
	Final		7.51						
pH (su)	Initial	7.95							
	Final		7.69						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							
Hardness (mg/L as CaCO <sub>3</sub> )		65.3							
Conductivity (umhos/cm)		144.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.5							
	Final		22.7						
DO (mg/L)	Initial	9.06							
	Final		8.26						
pH (su)	Initial	7.95							
	Final		7.82						
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0							
Hardness (mg/L as CaCO <sub>3</sub> )		65.3							
Conductivity (umhos/cm)		144.0							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day								Remarks
Conc: 4.25%		1	2	3	4	5	6	7		
Temp (C°)	Initial	25.0								
	Final		23.0							
DO (mg/L)	Initial	8.90								
	Final		7.71							
pH (su)	Initial	7.94								
	Final		7.74							
Alkalinity (mg/L as CaCO <sub>3</sub> )										
Hardness (mg/L as CaCO <sub>3</sub> )										
Conductivity (umhos/cm)										
Chlorine (mg/L)										
Light Intensity (ft/c)										

Species: Ceriodaphnia dubia		Day								Remarks
Conc: 4.25%		1	2	3	4	5	6	7		
Temp (C°)	Initial	24.4								
	Final		23.9							
DO (mg/L)	Initial	8.90								
	Final		8.13							
pH (su)	Initial	7.94								
	Final		7.82							
Alkalinity (mg/L as CaCO <sub>3</sub> )										
Hardness (mg/L as CaCO <sub>3</sub> )										
Conductivity (umhos/cm)										
Chlorine (mg/L)										
Light Intensity (ft/c)										

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.9							
	Final		23.4						
DO (mg/L)	Initial	8.23							
	Final		7.60						
pH (su)	Initial	7.96							
	Final		7.75						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.3							
	Final		22.9						
DO (mg/L)	Initial	8.73							
	Final		8.12						
pH (su)	Initial	7.96							
	Final		7.86						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.7							
	Final		23.0						
DO (mg/L)	Initial	8.49							
	Final		7.46						
pH (su)	Initial	7.96							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.1							
	Final		23.0						
DO (mg/L)	Initial	8.49							
	Final		8.08						
pH (su)	Initial	7.96							
	Final		7.86						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		23.3						
DO (mg/L)	Initial	8.36							
	Final		7.49						
pH (su)	Initial	7.92							
	Final		7.84						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		23.1						
DO (mg/L)	Initial	8.36							
	Final		7.93						
pH (su)	Initial	7.92							
	Final		7.97						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #2                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day								Remarks
Conc: 68.00%		1	2	3	4	5	6	7		
Temp (C°)	Initial	24.3								
	Final		23.0							
DO (mg/L)	Initial	8.81								
	Final		7.11							
pH (su)	Initial	7.89								
	Final		7.89							
Alkalinity (mg/L as CaCO <sub>3</sub> )		132.0								100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		102.0								100% Effluent
Conductivity (umhos/cm)		360.0								100% Effluent
Chlorine (mg/L)		0.06								100% Effluent
Light Intensity (ft/c)		50-100								

Species: Ceriodaphnia dubia		Day								Remarks
Conc: 68.00%		1	2	3	4	5	6	7		
Temp (C°)	Initial	24.0								
	Final		23.3							
DO (mg/L)	Initial	8.81								
	Final		7.80							
pH (su)	Initial	7.89								
	Final		8.10							
Alkalinity (mg/L as CaCO <sub>3</sub> )		132.0								100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		102.0								100% Effluent
Conductivity (umhos/cm)		360.0								100% Effluent
Chlorine (mg/L)		0.06								100% Effluent
Light Intensity (ft/c)		50-100								

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #3                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: <b>Pimephales promelas</b>										Remarks
Conc: <b>Control</b>		Day								
		1	2	3	4	5	6	7		
Temp (C°)	Initial	24.8								
	Final		24.0							
DO (mg/L)	Initial	10.41								
	Final		7.60							
pH (su)	Initial	7.92								
	Final		7.69							
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0								
Hardness (mg/L as CaCO <sub>3</sub> )		65.3								
Conductivity (umhos/cm)		144.0								
Chlorine (mg/L)		<0.05								
Light Intensity (ft/c)		50-100								

Species: <b>Ceriodaphnia dubia</b>										Remarks
Conc: <b>Control</b>		Day								
		1	2	3	4	5	6	7		
Temp (C°)	Initial	24.0								
	Final		22.5							
DO (mg/L)	Initial	10.41								
	Final		7.14							
pH (su)	Initial	7.92								
	Final		7.83							
Alkalinity (mg/L as CaCO <sub>3</sub> )		64.0								
Hardness (mg/L as CaCO <sub>3</sub> )		65.3								
Conductivity (umhos/cm)		144.0								
Chlorine (mg/L)		<0.05								
Light Intensity (ft/c)		50-100								



**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #3                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		23.8						
DO (mg/L)	Initial	9.34							
	Final		8.33						
pH (su)	Initial	7.92							
	Final		7.68						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.1							
	Final		22.5						
DO (mg/L)	Initial	9.34							
	Final		8.36						
pH (su)	Initial	7.92							
	Final		7.81						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #3                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		23.6						
DO (mg/L)	Initial	8.11							
	Final		7.68						
pH (su)	Initial	7.92							
	Final		7.73						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.1							
	Final		23.1						
DO (mg/L)	Initial	8.11							
	Final		7.89						
pH (su)	Initial	7.92							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #3                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		23.5						
DO (mg/L)	Initial	7.98							
	Final		7.68						
pH (su)	Initial	7.83							
	Final		7.80						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.0							
	Final		22.6						
DO (mg/L)	Initial	7.98							
	Final		8.13						
pH (su)	Initial	7.83							
	Final		7.98						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #3  
Test Dates: 03/28/18-03/30/18

Lab ID #: 18-087-0212  
NPDES #: TN0064785  
Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.9							
	Final		23.5						
DO (mg/L)	Initial	7.69							
	Final		7.37						
pH (su)	Initial	7.92							
	Final		7.88						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 34.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.0							
	Final		22.7						
DO (mg/L)	Initial	7.69							
	Final		8.00						
pH (su)	Initial	7.92							
	Final		8.00						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #3                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		23.3						
DO (mg/L)	Initial	8.44							
	Final		7.09						
pH (su)	Initial	7.81							
	Final		7.96						
Alkalinity (mg/L as CaCO <sub>3</sub> )		124.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		102.0							100% Effluent
Conductivity (umhos/cm)		362.0							100% Effluent
Chlorine (mg/L)		0.09							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.1							
	Final		22.1						
DO (mg/L)	Initial	8.44							
	Final		7.94						
pH (su)	Initial	7.81							
	Final		8.12						
Alkalinity (mg/L as CaCO <sub>3</sub> )		124.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		102.0							100% Effluent
Conductivity (umhos/cm)		362.0							100% Effluent
Chlorine (mg/L)		0.09							100% Effluent
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #4                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		23.5						
DO (mg/L)	Initial	8.47							
	Final		7.76						
pH (su)	Initial	7.98							
	Final		7.74						
Alkalinity (mg/L as CaCO <sub>3</sub> )		68.0							
Hardness (mg/L as CaCO <sub>3</sub> )		68.1							
Conductivity (umhos/cm)		149.8							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: Control		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.9							
	Final		22.5						
DO (mg/L)	Initial	8.47							
	Final		8.06						
pH (su)	Initial	7.98							
	Final		7.93						
Alkalinity (mg/L as CaCO <sub>3</sub> )		68.0							
Hardness (mg/L as CaCO <sub>3</sub> )		68.1							
Conductivity (umhos/cm)		149.8							
Chlorine (mg/L)		<0.05							
Light Intensity (ft/c)		50-100							

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

**Discharger:** Adamsville STP                      **Lab ID #:** 18-087-0212  
**Location:** Outfall 001, Pull #4                      **NPDES #:** TN0064785  
**Test Dates:** 03/28/18-03/30/18                      **Analyst:** KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		23.4						
DO (mg/L)	Initial	9.67							
	Final		7.33						
pH (su)	Initial	7.97							
	Final		7.79						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 4.25%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.0							
	Final		22.5						
DO (mg/L)	Initial	9.62							
	Final		8.08						
pH (su)	Initial	7.97							
	Final		7.90						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

**Waypoint Analytical Inc.**

**Table 3**

**Physical and Chemical Data  
Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #4                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.8							
	Final		23.6						
DO (mg/L)	Initial	8.91							
	Final		7.59						
pH (su)	Initial	7.95							
	Final		7.89						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 8.50%		1	2	3	4	5	6	7	
Temp (C°)	Initial	23.9							
	Final		22.3						
DO (mg/L)	Initial	8.91							
	Final		8.19						
pH (su)	Initial	7.95							
	Final		7.85						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									



Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP                      Lab ID #: 18-087-0212  
 Location: Outfall 001, Pull #4                NPDES #: TN0064785  
 Test Dates: 03/28/18-03/30/18              Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	24.8							
	Final		23.4						
DO (mg/L)	Initial	8.99							
	Final		7.16						
pH (su)	Initial	7.90							
	Final		7.88						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 17.00%		1	2	3	4	5	6	7	
Temp (C <sup>o</sup> )	Initial	23.8							
	Final		22.3						
DO (mg/L)	Initial	8.99							
	Final		8.44						
pH (su)	Initial	7.90							
	Final		7.85						
Alkalinity (mg/L as CaCO <sub>3</sub> )									
Hardness (mg/L as CaCO <sub>3</sub> )									
Conductivity (umhos/cm)									
Chlorine (mg/L)									
Light Intensity (ft/c)									

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: Outfall 001, Pull #4  
Test Dates: 03/28/18-03/30/18

Lab ID #: 18-087-0212  
NPDES #: TN0064785  
Analyst: KH, AF

Species: Pimephales promelas		Day								Remarks
Conc: 34.00%		1	2	3	4	5	6	7		
Temp (C°)	Initial	24.7								
	Final		24.3							
DO (mg/L)	Initial	7.89								
	Final		7.28							
pH (su)	Initial	7.88								
	Final		7.92							
Alkalinity (mg/L as CaCO <sub>3</sub> )										
Hardness (mg/L as CaCO <sub>3</sub> )										
Conductivity (umhos/cm)										
Chlorine (mg/L)										
Light Intensity (ft/c)										

Species: Ceriodaphnia dubia		Day								Remarks
Conc: 34.00%		1	2	3	4	5	6	7		
Temp (C°)	Initial	23.8								
	Final		22.9							
DO (mg/L)	Initial	7.89								
	Final		8.32							
pH (su)	Initial	7.85								
	Final		7.87							
Alkalinity (mg/L as CaCO <sub>3</sub> )										
Hardness (mg/L as CaCO <sub>3</sub> )										
Conductivity (umhos/cm)										
Chlorine (mg/L)										
Light Intensity (ft/c)										

Waypoint Analytical Inc.

Table 3

**Physical and Chemical Data**  
**Acute Toxicity**

Discharger: Adamsville STP  
Location: - Outfall 001, Pull #4  
Test Dates: 03/28/18-03/30/18

Lab ID #: 18-087-0212  
NPDES #: TN0064785  
Analyst: KH, AF

Species: Pimephales promelas		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.6							
	Final		23.6						
DO (mg/L)	Initial	8.20							
	Final		7.22						
pH (su)	Initial	7.79							
	Final		7.97						
Alkalinity (mg/L as CaCO <sub>3</sub> )		128.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Conductivity (umhos/cm)		361.0							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

Species: Ceriodaphnia dubia		Day							Remarks
Conc: 68.00%		1	2	3	4	5	6	7	
Temp (C°)	Initial	24.6							
	Final		22.5						
DO (mg/L)	Initial	8.20							
	Final		8.03						
pH (su)	Initial	7.79							
	Final		8.09						
Alkalinity (mg/L as CaCO <sub>3</sub> )		128.0							100% Effluent
Hardness (mg/L as CaCO <sub>3</sub> )		100.0							100% Effluent
Conductivity (umhos/cm)		361.0							100% Effluent
Chlorine (mg/L)		ND							100% Effluent
Light Intensity (ft/c)		50-100							

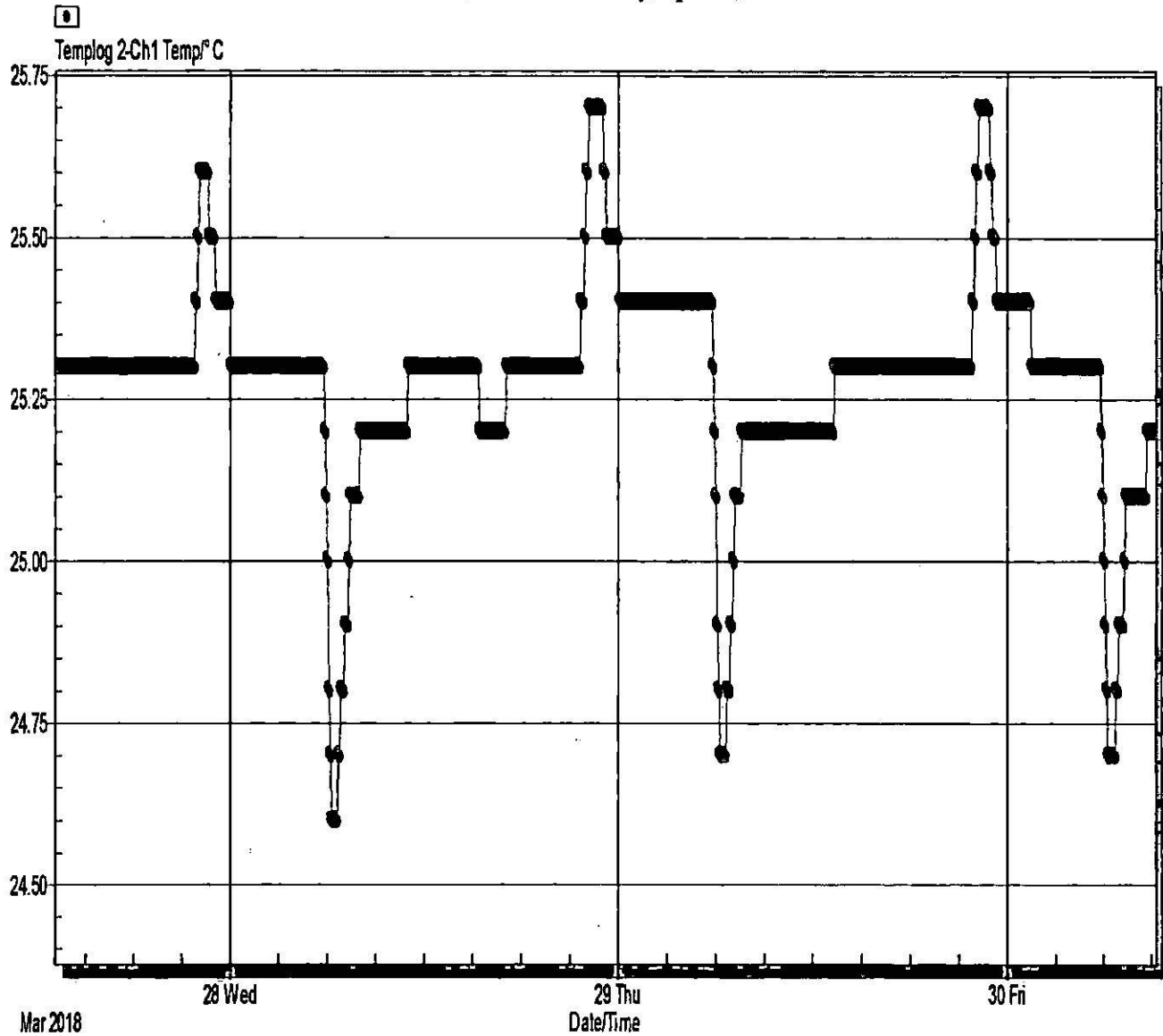
# Waypoint Analytical Inc.

## Attachment 1

### Temperature Log for Biototoxicity Testing.

Discharger: Adamsville STP    Lab ID #: 18-087-0212    Test dates: 03/28/18-03/30/18  
Location: Outfall 001    NPDES #: TN0064785    Analyst: KH, AF

Downloaded Data- Monday, April 02, 2018



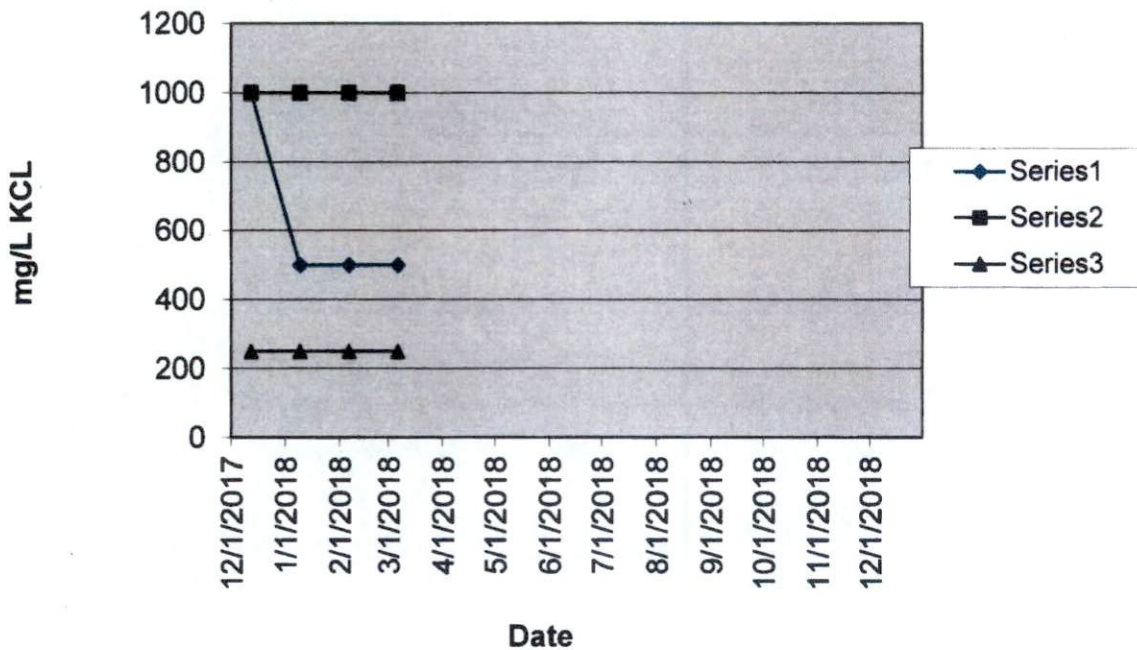
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
Survival NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/12/17	1000	1000	250			1000.00
01/09/18	500	1000	250	353.55	47.14	750.00
02/06/18	500	1000	250	288.68	43.30	666.67
03/06/18	500	1000	250	250.00	40.00	625.00

**PIMEPHALES REFERENCE TOXICANT SURVIVAL NOEC**





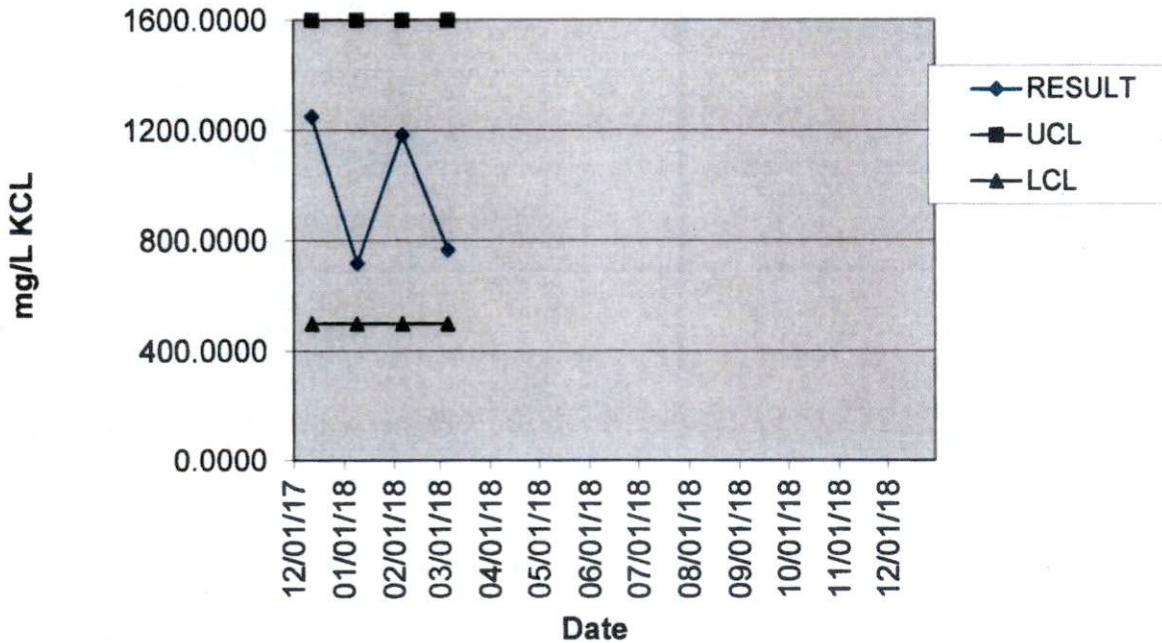
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
Growth IC25**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/12/17	1250.0000	1600.0000	500.0000		0.00	1250.00
01/09/18	717.3500	1600.0000	500.0000	376.64	38.29	983.68
02/06/18	1183.3800	1600.0000	500.0000	290.21	27.63	1050.24
03/06/18	766.7590	1600.0000	500.0000	276.12	28.19	979.37

**PIMEPHALES REFERENCE TOXICANT GROWTH IC25**

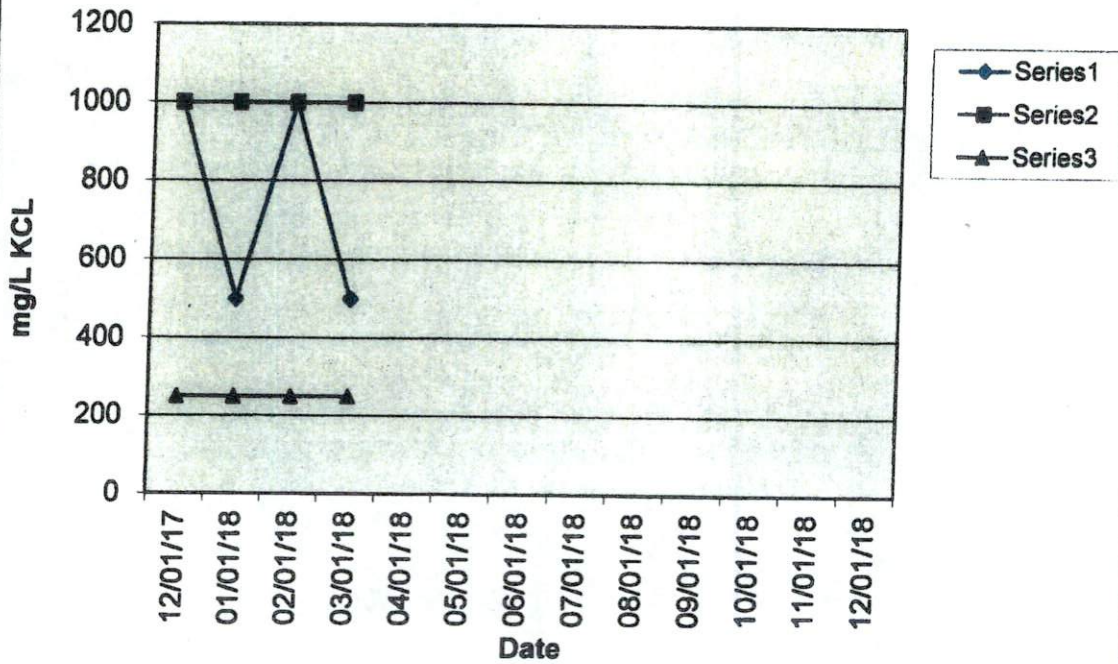


**Waypoint Analytical Inc.**  
**Attachment 2**

***Pimephales Chronic Reference Toxicant Data***  
***Growth NOEC***

DATE	RESULT	UCL	LCL	STDEV	CV%	PMSD	MEAN
12/12/17	1000	1000	250		0.00	23.31	1000.00
01/09/18	500	1000	250	353.55	47.14	21.64	750.00
02/06/18	1000	1000	250	288.68	34.64	29.49	833.33
03/06/18	500	1000	250	288.68	38.49	23.90	750.00

**PIMEPHALES REFERENCE TOXICANT GROWTH NOEC**



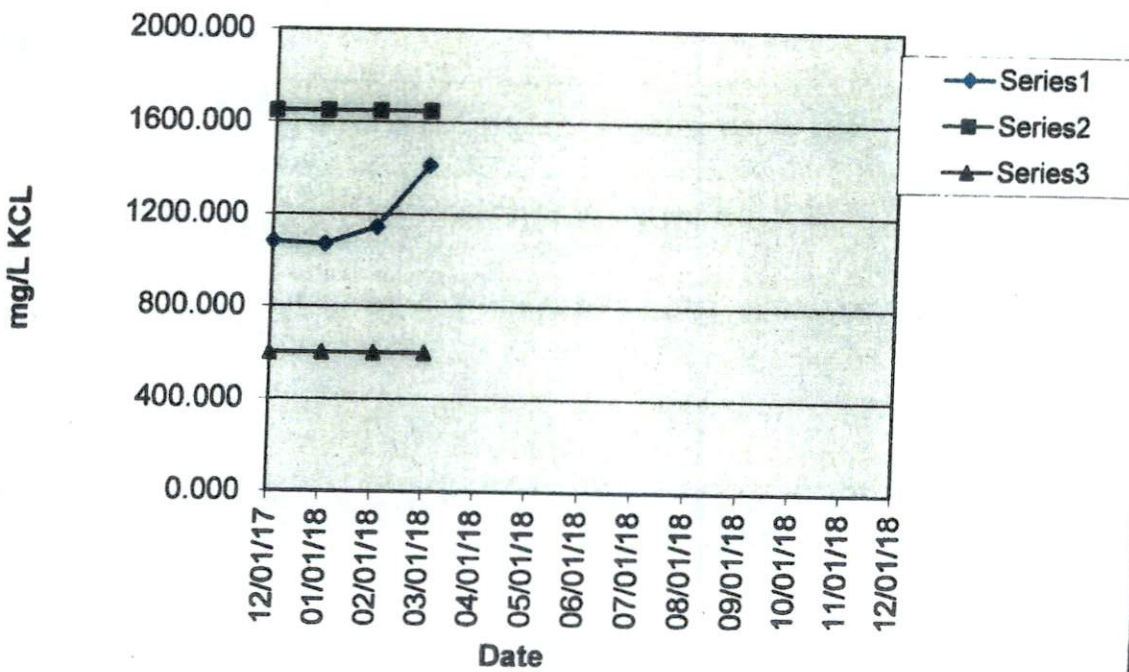
Waypoint Analytical Inc.

Attachment 2

**Pimephales Chronic Reference Toxicant Data  
48Hour Survival**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/12/17	1083.260	1650.00	600.00		0.00	1083.26
01/09/18	1071.770	1650.00	600.00	8.12	0.75	1077.52
02/06/18	1148.700	1650.00	600.00	41.50	3.77	1101.24
03/06/18	1414.210	1650.00	600.00	160.11	13.57	1179.49

**PIMEPHALES REFERENCE TOXICANT 48HOUR SURVIVAL**





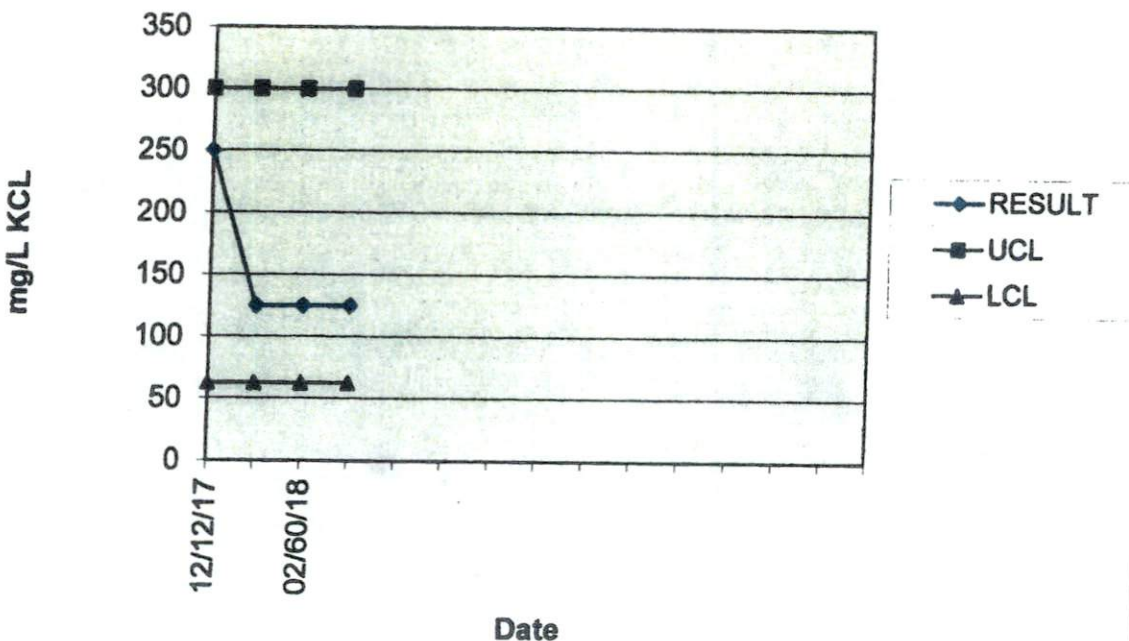
Waypoint Analytical Inc.

Attachment 2

*Ceriodaphnia* Chronic Reference Toxicant Data  
Survival NOEC

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/12/17	250	300	62.5			250.00
01/09/18	125	300	62.5	88.39	47.14	187.50
02/60/18	125	300	62.5	72.17	43.30	166.67
03/06/18	125	300	62.5	62.50	40.00	156.25

CERIODAPHNIA REFERENCE TOXICANT SURVIVAL NOEC



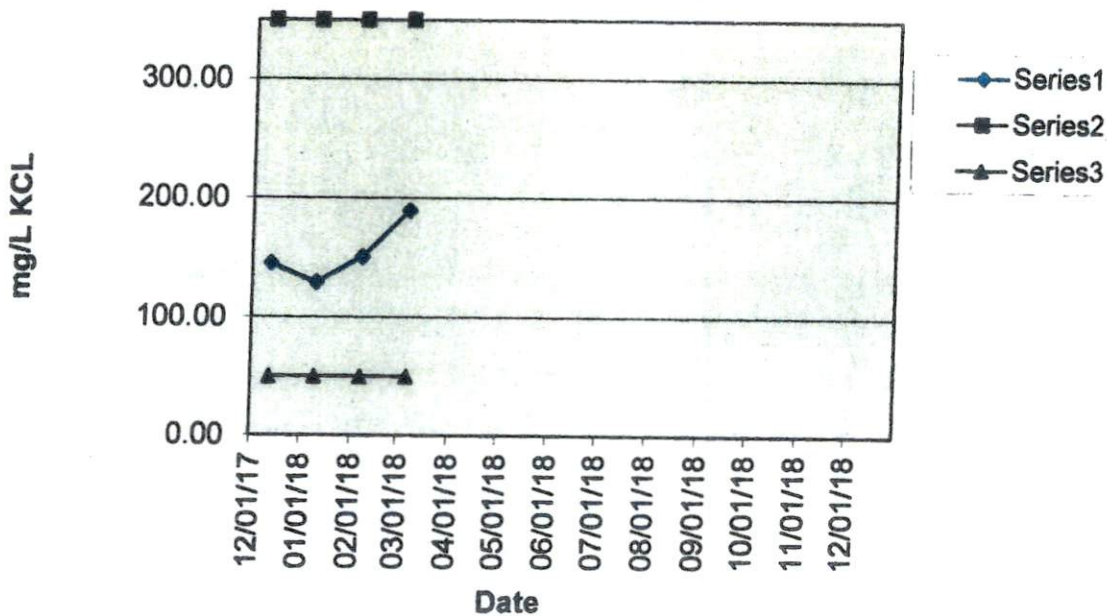
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicant Data  
Reproduction IC25**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/12/17	145.31	350.00	50.00	25.46	16.55	153.88
01/09/18	129.60	350.00	50.00	25.46	16.55	153.88
02/06/18	151.04	350.00	50.00	25.46	16.55	153.88
03/06/18	189.57	350.00	50.00	25.46	16.55	153.88

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTION IC25**



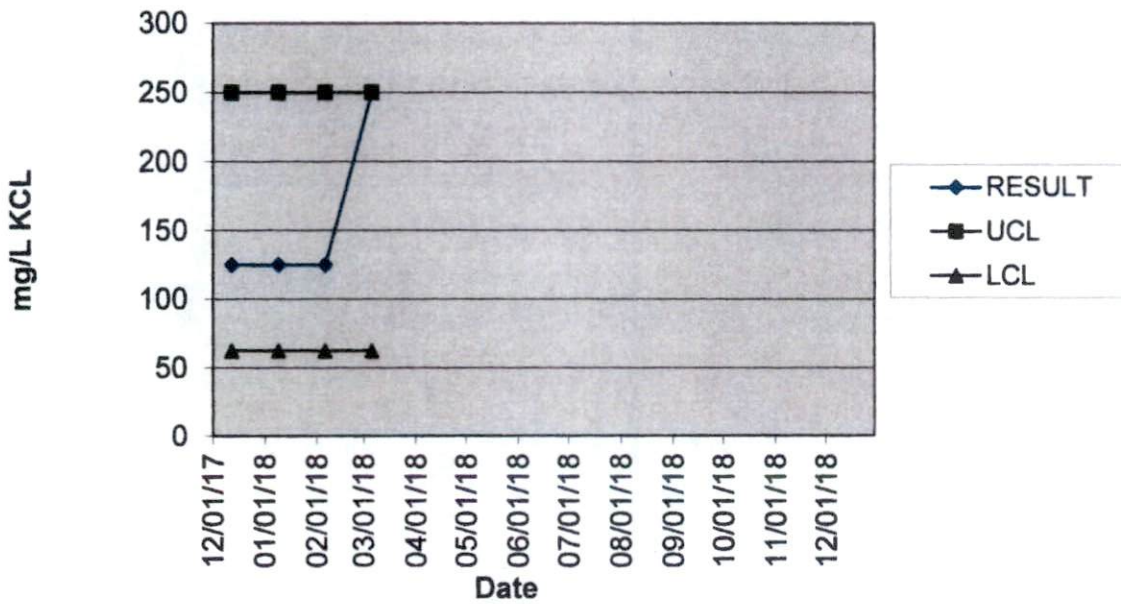
Waypoint Analytical Inc.

Attachment 2

*Ceriodaphnia Chronic Reference Toxicant Data*  
**Reproduction NOEC**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN	PMSD
12/12/17	125	250	62.5			125.00	38.93
01/09/18	125	250	62.5	0.00	0.00	125.00	23.34
02/06/18	125	250	62.5	0.00	0.00	125.00	29.64
03/06/18	250	250	62.5	62.50	40.00	156.25	42.40

**CERIODAPHNIA REFERENCE TOXICANT REPRODUCTON NOEC**



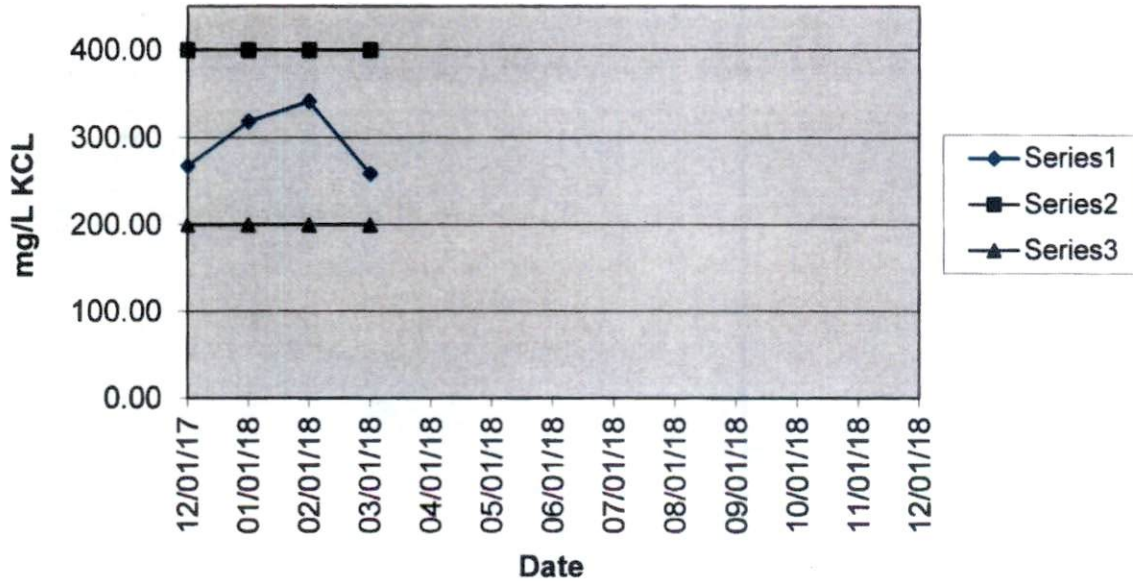
Waypoint Analytical Inc.

Attachment 2

**Ceriodaphnia Chronic Reference Toxicity Data**  
**48Hour Survival**

DATE	RESULT	UCL	LCL	STDEV	CV%	MEAN
12/12/17	267.94	400.00	200.00			267.94
01/09/18	318.64	400.00	200.00	35.85	12.22	293.29
02/06/18	341.51	400.00	200.00	37.65	12.17	309.36
03/06/18	258.82	400.00	200.00	39.80	13.41	296.73

**CERIODAPHNIA REFERENCE TOXICANT 48HOUR SURVIVAL**





**Waypoint Analytical**  
**2269 Dr. F. E. Wright Drive**  
**Jackson, TN 38305**

**(800) 832-1808**  
**(731) 423-5330**  
**FAX (731) 423-5326**

CLIENT NAME: City of Adamsville		Project Name: Bioassay-Acute		ANALYSES REQUEST	
ADDRESS: 203 Sunrise Drive.		P.O. # <u>23601</u>		QID # 766	
Adamsville TN 38310		RUSH?	Notify Lab in Advance	CLIENT # C0109WW	
Phone: 731-632-4214 Lannie Hutton		<24hr	Notify Lab in Advance	DATE NEEDED:	
Fax: 731-632-1980		24-48	Notify Lab in Advance		
COLLECTED BY: <i>[Signature]</i>		48-78	Notify Lab in Advance	FAX? <u>  </u> No <u>  </u> Yes	

# OF CONT.	SAMPLE DESCRIPTION/LOCATION	DATE	TIME	TYPE		MATRIX*	PRESERVATIVE		
				COMP	GRAB				
↑	First Pull	3-27-18	12:00		X	WW	-----	Bioassay	
	"				X	WW	-----	Alk/Hardness/Cl res ( ) analysis)	
1	Second Pull	3-27-18	6:00pm		X	WW	-----	Bioassay	
	"				X	WW	-----	Alk/Hardness/Cl res ( ) analysis)	
1	Third Pull	3-28-18	12:00		X	WW	-----	Bioassay	
	"				X	WW	-----	Alk/Hardness/Cl res ( ) analysis)	
1	Fourth Pull	3-28-18	6:00AM		X	WW	-----	Bioassay	
	"				X	WW	-----	Alk/Hardness/Cl res ( ) analysis)	

FLOW (GPD):					
Remarks:	1st pull	2nd pull	3rd pull	4th pull	<i>016:47 by KMH</i>
Cl_res:	0.08ms/L	0.06ms/L	0.09ms/L	0.04ms/L	
Conductivity:					
DO:					
pH:					

RELINQUISHED BY: <i>[Signature]</i>		DATE: 3/28/18	TIME: 7:30	RECEIVED BY: <i>[Signature]</i>	SHIPPED VIA:	CLIENT VEHICLE
RELINQUISHED BY:		DATE:	TIME:	RECEIVED BY:	UPS <input type="checkbox"/>	LAB VEHICLE
RELINQUISHED BY: <i>[Signature]</i>		DATE:	TIME:	RECEIVED FOR LAB BY: <i>[Signature]</i>	FEDX <input type="checkbox"/>	OTHER #:
		DATE:	TIME:		OTHER <input type="checkbox"/>	SAMPLES RETURNED
		DATE:	TIME:		TEMP: 3°C	Condition: (lab use only)
		DATE:	TIME:		Bottles Received: 4	
		DATE:	TIME:			pH

### Cooler Receipt Form

Customer Number: **00088**  
 Customer Name: **City of Adamsville**  
 Report Number: **18-087-0212**

#### Shipping Method

Fed Ex       US Postal       Lab       Other :   
 UPS       Client       Courier      Thermometer ID: IR1

Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Number of coolers received	<input type="text" value="1"/>		
Custody seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Water - Sample containers properly preserved	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 – compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
<input type="checkbox"/> High concentration container (48 hr)		<input type="checkbox"/> Low concentration EnCore samplers (48 hr)	
<input type="checkbox"/> High concentration pre-weighed (methanol -14 d)		<input type="checkbox"/> Low conc pre-weighed vials (Sod Bis -14 d)	
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:


Signature:

Date & Time:



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COLLECTED BY: <i>[Signature]</i>		48-78	Notify Lab in Advance	FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes														
				 18-087-0212 00088 City of Adamsville Bioassay - Acute 03-28-2018 09.44.06														
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Cl_res:						UPS	<input type="checkbox"/>	CLIENT VEHICLE	<input type="checkbox"/>									
Conductivity:						FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>									
DO:						OTHER	<input type="checkbox"/>	COOLER #:	<input type="checkbox"/>									
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RELINQUISHED BY:		DATE:	TIME:	RECEIVED BY:		FEDX	<input type="checkbox"/>	LAB VEHICLE	<input type="checkbox"/>									
RELINQUISHED BY: <i>[Signature]</i>		DATE:	TIME:	RECEIVED FOR LAB BY: <i>[Signature]</i>		TEMP: 3°C	Bottles Received: 4											
		DATE: 3/28/18	TIME: 9:24			pH												