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**KAY IVEY**  
GOVERNOR

**JAN 07 2026**

Awlahjaday Agee  
Board Chairman  
The Water Works & Sewer Board of the City of Clanton  
Post Office Box 580  
Clanton, AL 35046

RE: Draft Permit  
NPDES Permit No. AL0054631  
Walnut Creek WWTP  
Chilton County, Alabama

Dear Mr. Agee:

Transmitted herein is a draft of the referenced permit.

We would appreciate your comments on the permit within **30 days** of the date of this letter. Please direct any comments of a technical or administrative nature to the undersigned.

By copy of this letter and the draft permit, we are also requesting comments within the same time frame from EPA.

Please be aware that Parts I.C.1.c and I.C.2.e of your permit require participation in the Department's Alabama Environmental Permitting and Compliance System (AEPACS) for submittal of DMRs and SSOs upon issuance of this permit unless valid justification as to why you cannot participate is submitted in writing. SSO hotline notifications and hard copy Form 415 SSO reports may be used only with the written approval from the Department. AEPACS allows ADEM to electronically validate and acknowledge receipt of the data. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. Please note that all AEPACS users can create the electronic DMRs and SSOs; however, only AEPACS users with certifier permissions will be able to submit the electronic DMRs and SSOs to ADEM.

Please also be aware that Part IV. of your permit requires that you develop, implement, and maintain a Sanitary Sewer Overflow Response Plan.

The Alabama Department of Environmental Management encourages you to voluntarily consider pollution prevention practices and alternatives at your facility. Pollution Prevention may assist you in complying with effluent limitations, and possibly reduce or eliminate monitoring requirements.



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110 Vulcan Road  
Birmingham, AL 35209-4702  
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(205) 941-1603 (FAX)

**Decatur Office**  
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**Coastal Office**  
1615 South Broad Street  
Mobile, AL 36605  
(251) 450-3400  
(251) 479-2593 (FAX)

If you have questions regarding this permit or monitoring requirements, please contact Sandra Lee at [slee@adem.alabama.gov](mailto:slee@adem.alabama.gov) or (334) 274-4223.

Sincerely,

A handwritten signature in cursive script that reads "Sandra Lee". The signature is written in black ink and is positioned above the typed name.

Sandra Lee  
Municipal Section  
Water Division

Enclosure

cc: Environmental Protection Agency Email  
Ms. Elaine Snyder/U.S. Fish and Wildlife Service  
Ms. Elizabeth Brown/Alabama Historical Commission  
Advisory Council on Historic Preservation  
Department of Conservation and Natural Resources



# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

**PERMITTEE:** THE WATER WORKS & SEWER BOARD OF THE CITY OF CLANTON  
POST OFFICE BOX 580  
CLANTON, AL 35046

**FACILITY LOCATION:** WALNUT CREEK WWTP (2.25 MGD)  
1574 CHILTON COUNTY ROAD 51  
CLANTON, ALABAMA  
CHILTON COUNTY

**PERMIT NUMBER:** AL0054631

**RECEIVING WATERS:** WALNUT CREEK

*In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.*

**ISSUANCE DATE:**

**EFFECTIVE DATE:**

**EXPIRATION DATE:**

## Draft

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Alabama Department of Environmental Management  
Water Division Chief

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**PART I: DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS****A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS****1. DSN 0011: Treated Domestic and Industrial Wastewater**

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 001, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
Oxygen, Dissolved (DO) (00300) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	*****	mg/l	3X Weekly test	Grab	Not Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	3X Weekly test	Grab	Not Seasonal
Solids, Total Suspended (00530) Effluent Gross Value	562 Monthly Average	844 Weekly Average	lbs/day	*****	30.0 Monthly Average	45.0 Weekly Average	mg/l	3X Weekly test	24-Hr Composite	Not Seasonal
Solids, Total Suspended (00530) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	3X Weekly test	24-Hr Composite	Not Seasonal
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	37.5 Monthly Average	56.2 Weekly Average	lbs/day	*****	2.0 Monthly Average	3.0 Weekly Average	mg/l	3X Weekly test	24-Hr Composite	Not Seasonal
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Phosphorus, Total (As P) (00665) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Zinc Total Recoverable (01094) Effluent Gross Value	*****	*****	*****	*****	0.291 Monthly Average	0.291 Maximum Daily	mg/l	Monthly	Grab	Not Seasonal

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

(1) Sample Frequency – See also Part I.B.2

See Permit Requirements for Effluent Toxicity Testing in Part IV.B.

See Permit Requirements for Stormwater in Part IV.G

(2) S = Summer (April – October)

W = Winter (November - March)

ECS = E. coli Summer (May - October)

ECW = E. coli Winter (November - April)

(3) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter “\*9” on the monthly DMR.

(4) A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as “\*B” on the monthly DMR.

**DSN 0011 (Continued): Treated Domestic and Industrial Wastewater**

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 001, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
Copper Total Recoverable (01119) Effluent Gross Value	*****	*****	*****	*****	0.020 Monthly Average	0.026 Maximum Daily	mg/l	Monthly	Grab	Not Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Continuous	Not Seasonal
Chlorine, Total Residual (50060) See notes (3, 4) Effluent Gross Value	*****	*****	*****	*****	0.018 Monthly Average	0.031 Maximum Daily	mg/l	3X Weekly test	Grab	Not Seasonal
E. Coli (51040) Effluent Gross Value	*****	*****	*****	*****	548 Monthly Average	2507 Maximum Daily	col/100mL	3X Weekly test	Grab	ECW
E. Coli (51040) Effluent Gross Value	*****	*****	*****	*****	126 Monthly Average	298 Maximum Daily	col/100mL	3X Weekly test	Grab	ECS
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	187 Monthly Average	281 Weekly Average	lbs/day	*****	10.0 Monthly Average	15.0 Weekly Average	mg/l	3X Weekly test	24-Hr Composite	Not Seasonal
BOD, Carbonaceous 05 Day, 20C (80082) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	3X Weekly test	24-Hr Composite	Not Seasonal
BOD, Carb-5 Day, 20 Deg C, Percent Remvl (80091) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal
Solids, Suspended Percent Removal (81011) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

(1) Sample Frequency – See also Part I.B.2

See Permit Requirements for Effluent Toxicity Testing in Part IV.B.

See Permit Requirements for Stormwater in Part IV.G

(2) S = Summer (April – October)

W = Winter (November - March)

ECS = E. coli Summer (May - October)

ECW = E. coli Winter (November - April)

(3) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter “\*9” on the monthly DMR.

(4) A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as “\*B” on the monthly DMR.

**2. DSN 001T: Toxicity testing**

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 001, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
	*****	0 Single Sample		pass=0;fail=1	*****	*****				
Toxicity, Ceriodaphnia Chronic (61426) Effluent Gross Value	*****	0 Single Sample	pass=0;fail=1	*****	*****	*****	*****	See Permit Requirements	24-Hr Composite	Nov
Toxicity, Pimephales Chronic (61428) Effluent Gross Value	*****	0 Single Sample	pass=0;fail=1	*****	*****	*****	*****	See Permit Requirements	24-Hr Composite	Nov

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

- (1) Sample Frequency – See also Part I.B.2  
See Permit Requirements for Effluent Toxicity Testing in Part IV.B.  
See Permit Requirements for Stormwater in Part IV.G
- (2) S = Summer (April – October)  
W = Winter (November - March)  
ECS = E. coli Summer (May - October)  
ECW = E. coli Winter (November - April)
- (3) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter “\*9” on the monthly DMR.
- (4) A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as “\*B” on the monthly DMR.

**3. DSN 002S: Stormwater Runoff**

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee shall monitor from Outfall 002S, which is described more fully in the Permittee's application as a storm water outfall located at the wastewater treatment plant. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
	*****	*****		(Report) Minimum Daily	*****	(Report) Maximum Daily				
pH (00400) Storm Water	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Annually	Grab	Not Seasonal
Solids, Total Suspended (00530) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Oil & Grease (00556) Storm Water	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Nitrogen, Ammonia Total (As N) (00610) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Nitrogen, Kjeldahl Total (As N) (00625) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Phosphorus, Total (As P) (00665) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Storm Water	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Annually	Calculated	Not Seasonal
E. Coli (51040) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	col/100mL	Annually	Grab	Not Seasonal
BOD, Carbonaceous 05 Day, 20C (80082) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

(1) Sample Frequency – See also Part I.B.2

See Permit Requirements for Effluent Toxicity Testing in Part IV.B.

See Permit Requirements for Stormwater in Part IV.G

(2) S = Summer (April – October)

W = Winter (November - March)

ECS = E. coli Summer (May - October)

ECW = E. coli Winter (November - April)

(3) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter “\*9” on the monthly DMR.

(4) A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as “\*B” on the monthly DMR.

**4. DSN 003S: Stormwater Runoff**

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee shall monitor from Outfall 003S, which is described more fully in the Permittee’s application as a storm water outfall located at the wastewater treatment plant. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
	*****	*****		(Report) Minimum Daily	*****	(Report) Maximum Daily				
pH (00400) Storm Water	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Annually	Grab	Not Seasonal
Solids, Total Suspended (00530) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Oil & Grease (00556) Storm Water	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Nitrogen, Ammonia Total (As N) (00610) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Nitrogen, Kjeldahl Total (As N) (00625) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Phosphorus, Total (As P) (00665) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Storm Water	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Annually	Calculated	Not Seasonal
E. Coli (51040) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	col/100mL	Annually	Grab	Not Seasonal
BOD, Carbonaceous 05 Day, 20C (80082) Storm Water	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Annually	Grab	Not Seasonal

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

(1) Sample Frequency – See also Part I.B.2

See Permit Requirements for Effluent Toxicity Testing in Part IV.B.

See Permit Requirements for Stormwater in Part IV.G

(2) S = Summer (April – October)

W = Winter (November - March)

ECS = E. coli Summer (May - October)

ECW = E. coli Winter (November - April)

(3) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter “\*9” on the monthly DMR.

(4) A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as “\*B” on the monthly DMR.

## **B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS**

### **1. Representative Sampling**

Sample collection and measurement actions shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit. The effluent sampling point shall be at the nearest accessible location just prior to discharge and after final treatment, unless otherwise specified in the permit.

### **2. Measurement Frequency**

Measurement frequency requirements found in Provision I.A. shall mean:

- a. Seven days per week shall mean daily.
- b. Five days per week shall mean any five days of discharge during a calendar weekly period of Sunday through Saturday.
- c. Three days per week shall mean any three days of discharge during a calendar week.
- d. Two days per week shall mean any two days of discharge during a calendar week
- e. One day per week shall mean any day of discharge during a calendar week.
- f. Two days per month shall mean any two days of discharge during the month that are no less than seven days apart. However, if discharges occur only during one seven-day period in a month, then two days per month shall mean any two days of discharge during that seven day period.
- g. One day per month shall mean any day of discharge during the calendar month.
- h. Quarterly shall mean any day of discharge during each calendar quarter.
- i. The Permittee may increase the frequency of sampling, listed in Provisions I.B.2.a through I.B.2.h; however, all sampling results are to be reported to the Department.

### **3. Test Procedures**

For the purpose of reporting and compliance, permittees shall use one of the following procedures:

- a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" or "\*B" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.
- b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" or "\*B" reported for values below the ML.

- c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures a and b above shall be reported on the permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

#### 4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The facility name and location, point source number, date, time and exact place of sampling;
- b. The name(s) of person(s) who obtained the samples or measurements;
- c. The dates and times the analyses were performed;
- d. The name(s) of the person(s) who performed the analyses;
- e. The analytical techniques or methods used, including source of method and method number; and
- f. The results of all required analyses.

#### 5. Records Retention and Production

- a. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.
- b. All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

#### 6. Reduction, Suspension or Termination of Monitoring and/or Reporting

- a. The Director may, with respect to any point source identified in Provision I.A. of this permit, authorize the permittee to reduce, suspend or terminate the monitoring and/or reporting required by this permit upon the submission of a written request for such reduction, suspension or termination by the permittee, supported by sufficient data which demonstrates to the satisfaction of the Director that the discharge from such point source will continuously meet the discharge limitations specified in Provision I.A. of this permit.
- b. It remains the responsibility of the permittee to comply with the monitoring and reporting requirements of this permit until written authorization to reduce, suspend or terminate such monitoring and/or reporting is received by the permittee from the Director.

#### 7. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. At a minimum, flow measurement devices shall be calibrated at least once every 12 months.

### C. DISCHARGE REPORTING REQUIREMENTS

#### 1. Reporting of Monitoring Requirements

- a. The permittee shall conduct the required monitoring in accordance with the following schedule:
  - (1) **MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY** shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.
  - (2) **QUARTERLY MONITORING** shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring should be reported on the last DMR due for the quarter (i.e., March, June, September and December DMRs).

- (3) **SEMIANNUAL MONITORING** shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be reported on the last DMR due for the month of the semiannual period (i.e., June and December DMRs).
  - (4) **ANNUAL MONITORING** shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be reported on the December DMR.
- b. The permittee shall submit discharge monitoring reports (DMRs) in accordance with the following schedule:
- (1) **REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING** shall be submitted on a monthly basis. The first report is due on the 28th day of the month following the month the permit becomes effective. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.
  - (2) **REPORTS OF QUARTERLY TESTING** shall be submitted on a quarterly basis. The first report is due on the 28th day of the month following the first complete calendar quarter the permit becomes effective. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.
  - (3) **REPORTS OF SEMIANNUAL TESTING** shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.
  - (4) **REPORTS OF ANNUAL TESTING** shall be submitted on an annual basis. Unless specified elsewhere in the permit, the first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.
- c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b. electronically.
- (1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's electronic system (this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the date specified in Provision I.C.1.b., unless otherwise directed by the Department.  

If the Department's electronic system is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the Department's electronic system resuming operation, the permittee shall enter the data into the Department's electronic system, unless an alternate timeframe is approved by the Department. A comment should be included on the electronic DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date), if applicable.
  - (2) The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable.
  - (3) A permittee with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The permittee shall submit the Department-approved DMR forms to the address listed in Provision I.C.1.e.

- (4) If a permittee is allowed to submit a hard copy DMR, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit.
- (5) If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A. of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR and the increased frequency shall be indicated on the DMR.
- (6) In the event no discharge from a point source identified in Provision I.A. of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR.
- d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules and Regulations, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:
- "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 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."
- e. Discharge Monitoring Reports required by this permit, the AWPCA, and the Department's Rules that are being submitted in hard copy shall be addressed to:

**Alabama Department of Environmental Management  
Office of Water Services, Water Division  
Post Office Box 301463  
Montgomery, Alabama 36130-1463**

Certified and Registered Mail containing Discharge Monitoring Reports shall be addressed to:

**Alabama Department of Environmental Management  
Office of Water Services, Water Division  
1400 Coliseum Boulevard  
Montgomery, Alabama 36110-2400**

- f. All other correspondence and reports required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

**Alabama Department of Environmental Management  
Municipal Section, Water Division  
Post Office Box 301463  
Montgomery, Alabama 36130-1463**

Certified and Registered Mail shall be addressed to:

**Alabama Department of Environmental Management  
Municipal Section, Water Division  
1400 Coliseum Boulevard  
Montgomery, Alabama 36110-2400**

- g. If this permit is a reissuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b. above.

## 2. Noncompliance Notifications and Reports

- a. The Permittee shall notify the Department if, for any reason, the Permittee's discharge:
- (1) Does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I.A. of this permit which is denoted by an "(X)";
  - (2) Potentially threatens human health or welfare;

- (3) Threatens fish or aquatic life;
- (4) Causes an in-stream water quality criterion to be exceeded;
- (5) Does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);
- (6) Contains a quantity of a hazardous substance that may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);
- (7) Exceeds any discharge limitation for an effluent parameter listed in Part I.A. as a result of an unanticipated bypass or upset; or
- (8) Is an unpermitted direct or indirect discharge of a pollutant to a water of the state. (Note that unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision.)

The Permittee shall orally or electronically provide notification of any of the above occurrences, describing the circumstances and potential effects, to the Director or Designee within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic notification, the Permittee shall submit a report to the Director or Designee, as provided in Provision I.C.2.c. or I.C.2.e., no later than five days after becoming aware of the occurrence of such discharge or occurrence.

- b. If, for any reason, the Permittee's discharge does not comply with any limitation of this permit, then the Permittee shall submit a written report to the Director or Designee, as provided in Provision I.C.2.c below. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Provision I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.
- c. Except for notifications and reports of notifiable SSOs which shall be submitted in accordance with the applicable Provisions of this permit, the Permittee shall submit the reports required under Provisions I.C.2.a. and b. to the Director or Designee on ADEM Form 421, available on the Department's website (<http://www.adem.state.al.us/DeptForms/Form421.pdf>). The completed Form must document the following information:
  - (1) A description of the discharge and cause of noncompliance;
  - (2) The period of noncompliance, including exact dates, times, and duration of the noncompliance. If the noncompliance is not corrected by the due date of the written report, then the Permittee shall provide an estimated date by which the noncompliance will be corrected; and
  - (3) A description of the steps taken by the Permittee and the steps planned to be taken by the Permittee to reduce or eliminate the noncompliant discharge and to prevent its recurrence.
- d. Immediate notification

The Permittee shall provide notification to the Director, the public, the county health department, and any other affected entity such as public water systems, as soon as possible upon becoming aware of any notifiable sanitary sewer overflow. Notification to the Director shall be completed utilizing the Department's web-based electronic environmental SSO reporting system in accordance with Provision I.C.2.e.

- e. The Department is utilizing an electronic system for notification and submittal of SSO reports. Except as noted below, the Permittee must submit all SSO reports electronically in the Department's electronic system. If requested, waivers from utilization of the electronic system shall be submitted in accordance with ADEM Admin. Code 335-6-1-.04(6). The Department's electronic reporting system shall be utilized unless a written waiver has been granted. A waiver is not effective until receipt of written approval from the Department. Utilization of verbal notifications and hard copy SSO report submittals is allowed only if approved in writing by the Department. The Permittee shall include in the SSO reports the information requested by ADEM Form 415. In addition, the Permittee shall include the latitude and longitude of the SSO in the report except when the SSO is a result of an extreme weather event (e.g., hurricane). To participate in the electronic system for SSO reports, an account may be created at <https://aepacs.adem.alabama.gov/nviro/ncore/external/home>. If the electronic system is down (i.e., electronic submittal of SSO data cannot be completed due to technical problems originating with the Department's system), the Permittee is not relieved of its obligation to notify the Department or submit SSO reports to the Department by the required submittal date, and the Permittee shall submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include verbal reports, reports submitted via the SSO hotline, or reports submitted via fax, e-mail, mail, or hand-delivery such that they are

received by the required reporting date. Within five calendar days of the electronic system resuming operation, the Permittee shall enter the data into the electronic system, unless an alternate timeframe is approved by the Department. For any alternate notification, records of the date, time, notification method, and person submitting the notification should be maintained by the Permittee. If a Permittee is allowed to submit SSO reports via an alternate method, the SSO report must be in a format approved by the Department and must be legible.

- f. The Permittee shall maintain a record of all known wastewater discharge points that are not authorized as permitted outfalls, including but not limited to SSOs. The Permittee shall include this record in its **Municipal Water Pollution Prevention (MWPP) Annual Reports**, which shall be submitted to the Department each year by May 31st for the prior calendar year period beginning January 1st and ending December 31st. The MWPP Annual Reports shall contain a list of all known wastewater discharge points that are not authorized as permitted outfalls and any discharges that occur prior to the headworks of the wastewater treatment plant covered by this permit. The Permittee shall also provide in the MWPP Annual Reports a list of any discharges reported during the applicable time period in accordance with Provision I.C.2.a. The Permittee shall include in its MWPP Annual Reports the following information for each known unpermitted discharge that occurred:
- (1) The cause of the discharge;
  - (2) Date, duration and volume of discharge (estimate if unknown);
  - (3) Description of the source (e.g., manhole, lift station);
  - (4) Location of the discharge, by latitude and longitude (or other appropriate method as approved by the Department);
  - (5) The ultimate destination of the flow (e.g., surface waterbody, municipal separate storm sewer to surface waterbody); and
  - (6) Corrective actions taken and/or planned to eliminate future discharges.

#### **D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS**

##### **1. Anticipated Noncompliance**

The permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

##### **2. Termination of Discharge**

The permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

##### **3. Updating Information**

- a. The permittee shall inform the Director of any change in the permittee's mailing address or telephone number or in the permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the permittee shall furnish the Director with an update of any information provided in the permit application.
- b. If the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

##### **4. Duty to Provide Information**

The permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

**E. SCHEDULE OF COMPLIANCE**

**1. Compliance with discharge limits**

The permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

**COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT**

**2. Schedule**

No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

## **PART II: OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES**

### **A. OPERATIONAL AND MANAGEMENT REQUIREMENTS**

#### **1. Facilities Operation and Maintenance**

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

#### **2. Best Management Practices**

- a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.
- b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.
- c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

#### **3. Certified Operator**

The permittee shall not operate any wastewater treatment plant unless the competency of the operator to operate such plant has been duly certified by the Director pursuant to AWPCA, and meets the requirements specified in ADEM Administrative Code, Rule 335-10-1.

### **B. OTHER RESPONSIBILITIES**

#### **1. Duty to Mitigate Adverse Impacts**

The permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

#### **2. Right of Entry and Inspection**

- a. The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:
  - (1) Enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permits;
  - (3) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
  - (4) Sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

### **C. BYPASS AND UPSET**

#### **1. Bypass**

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:
  - (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;

- (2) It enters the same receiving stream as the permitted outfall; and
  - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
  - (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
  - (3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The permittee has the burden of establishing that each of the conditions of Provision II. C. 1. b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

## 2. Upset

- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
  - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that:
    - (i) An upset occurred;
    - (ii) The Permittee can identify the specific cause(s) of the upset;
    - (iii) The Permittee's facility was being properly operated at the time of the upset; and
    - (iv) The Permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
- b. The permittee has the burden of establishing that each of the conditions of Provision II. C. 2. a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I. A. of this permit.

## D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

### 1. Duty to Comply

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.
- b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.
- c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.
- d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.

- e. Nothing in this permit shall be construed to preclude or negate the Permittee's responsibility to apply for, obtain, or comply with other Federal, State, or Local Government permits, certifications, or licenses or to preclude from obtaining other federal, state, or local approvals, including those applicable to other ADEM programs and regulations.

**2. Removed Substances**

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.

**3. Loss or Failure of Treatment Facilities**

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

**4. Compliance with Statutes and Rules**

- a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Boulevard Montgomery, Alabama 36110-2059.
- b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

**E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE**

**1. Duty to Reapply or Notify of Intent to Cease Discharge**

- a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.
- b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

**2. Change in Discharge**

Prior to any facility expansion, process modification or any significant change in the method of operation of the permittee's treatment works, the permittee shall provide the Director with information concerning the planned expansion, modification or change. The permittee shall apply for a permit modification at least 180 days prior to any facility expansion, process modification, significant change in the method of operation of the permittee's treatment works, or other actions that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant or could result in an additional discharge point. This condition applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

**3. Transfer of Permit**

This permit may not be transferred or the name of the permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership, or control of the permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to

be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership, or control, he may decide not to modify the existing permit and require the submission of a new permit application.

**4. Permit Modification and Revocation**

- a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:
- (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;
  - (2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or
  - (3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.
- b. This permit may be modified during its term for cause, including but not limited to, the following:
- (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;
  - (2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
  - (3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;
  - (4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;
  - (5) Errors in calculation of discharge limitations or typographical or clerical errors were made;
  - (6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
  - (7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;
  - (8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;
  - (9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;
  - (10) When required by the reopener conditions in this permit;
  - (11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);
  - (12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;
  - (13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or
  - (14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules; or

**5. Termination**

This permit may be terminated during its term for cause, including but not limited to, the following:

- a. Violation of any term or condition of this permit;
- b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;
- c. Materially false or inaccurate statements or information in the permit application or the permit;

- d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;
- f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;
- g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee.
- h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

**6. Suspension**

This permit may be suspended during its term for noncompliance until the permittee has taken action(s) necessary to achieve compliance.

**7. Stay**

The filing of a request by the permittee for modification, suspension, or revocation of this permit, in whole or in part, does not stay any permit term or condition.

**F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION**

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the permittee and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit, or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition and the permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

**G. NOTICE TO DIRECTOR OF INDUSTRIAL USERS**

1. The permittee shall not allow the introduction of wastewater, other than domestic wastewater, from a new indirect discharger prior to approval and permitting, if applicable, of the discharge by the Department.
2. The permittee shall not allow an existing indirect discharger to increase the quantity or change the character of its wastewater, other than domestic wastewater, prior to approval and permitting, if applicable, of the increased discharge by the Department.
3. The permittee shall report to the Department any adverse impact caused or believed to be caused by an indirect discharger on the treatment process, quality of discharged water or quality of sludge. Such report shall be submitted within seven days of the permittee becoming aware of the adverse impacts.

**H. PROHIBITIONS**

The permittee shall not allow, and shall take effective enforcement action to prevent and terminate, the introduction of any of the following into its treatment works by industrial users:

1. Pollutants which may create a fire or explosive hazard, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
2. Pollutants which may cause corrosive structural damage to the treatment works, but in no case discharges with a pH lower than 5.0;
3. Solid or viscous pollutants in amounts which may cause obstruction to the flow in sewers, or other interference in the treatment works;
4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) of such volume or strength as to cause interference in the treatment works;

5. Heat in amounts which may inhibit biological activity in the treatment plant resulting in interference but in no case in such quantities that the temperature of the influent, at the treatment plant, exceeds 40 degrees centigrade or 104 degrees Fahrenheit;
6. Pollutants which may result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems;
7. Unless specifically authorized by this permit, any pollutants not generated at the facility for which this permit was issued; or
8. Petroleum oil, biodegradable cutting oil, or products of mineral oil origin in amounts that will cause pass through or interference.

## **PART III: ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS**

### **A. CIVIL AND CRIMINAL LIABILITY**

#### **1. Tampering**

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

#### **2. False Statements**

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

#### **3. Permit Enforcement**

- a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.
- b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes:
  - (1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;
  - (2) An action for damages;
  - (3) An action for injunctive relief; or
  - (4) An action for penalties.
- c. If the permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the permittee has made a timely and complete application for reissuance of the permit:
  - (1) Initiate enforcement action based upon the permit which has been continued;
  - (2) Issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
  - (3) Reissue the new permit with appropriate conditions; or
  - (4) Take other actions authorized by these rules and AWPCA.

#### **4. Relief from Liability**

Except as provided in Provision II. C. 1. (Bypass) and Provision II. C. 2. (Upset), nothing in this permit shall be construed to relieve the permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

### **B. OIL AND HAZARDOUS SUBSTANCE LIABILITY**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

### **C. PROPERTY AND OTHER RIGHTS**

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

#### **D. AVAILABILITY OF REPORTS**

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

#### **E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES**

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.
2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility, and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.
3. Construction has begun when the owner or operator has:
  - a. Begun, or caused to begin as part of a continuous on-site construction program:
    - (1) Any placement, assembly, or installation of facilities or equipment; or
    - (2) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which are necessary for the placement, assembly, or installation of new source facilities or equipment; or
  - b. Entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.
4. Final plans and specifications for a waste treatment facility at a new source or new discharger, or a modification to an existing waste treatment facility must be submitted to and examined by the Department prior to initiating construction of such treatment facility by the permittee.
5. Upon completion of construction of waste treatment facilities and prior to operation of such facilities, the permittee shall submit to the Department a certification from a registered professional engineer, licensed to practice in the State of Alabama, that the treatment facilities have been built according to plans and specifications submitted to and examined by the Department.

#### **F. COMPLIANCE WITH WATER QUALITY STANDARDS**

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.
2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.
3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

#### **G. GROUNDWATER**

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem, and the Director may require that the permittee undertake measures to abate any such discharge and/or contamination.

## H. DEFINITIONS

1. **Average monthly discharge limitation** - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
2. **Average weekly discharge limitation** - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
3. **Arithmetic Mean** – means the summation of the individual values of any set of values divided by the number of individual values.
4. **AWPCA** - means the Alabama Water Pollution Control Act.
5. **BOD** – means the five-day measure of the pollutant parameter biochemical oxygen demand.
6. **Bypass** - means the intentional diversion of waste streams from any portion of a treatment facility.
7. **CBOD** – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
8. **Daily discharge** - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
9. **Daily maximum** - means the highest value of any individual sample result obtained during a day.
10. **Daily minimum** - means the lowest value of any individual sample result obtained during a day.
11. **Day** - means any consecutive 24-hour period.
12. **Department** - means the Alabama Department of Environmental Management.
13. **Director** - means the Director of the Department.
14. **Discharge** - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(9).
15. **Discharge Monitoring Report (DMR)** - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.
16. **DO** – means dissolved oxygen.
17. **8HC** – means 8-hour composite sample, including any of the following:
  - a. The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 1 hour over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
  - b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
18. **EPA** - means the United States Environmental Protection Agency.
19. **FC** – means the pollutant parameter fecal coliform.
20. **Flow** – means the total volume of discharge in a 24-hour period.
21. **FWPCA** - means the Federal Water Pollution Control Act.
22. **Geometric Mean** – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

23. **Grab Sample** – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.
24. **Indirect Discharger** – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.
25. **Industrial User** – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category “Division D – Manufacturing” and such other classes of significant waste producers as, by regulation, the Director deems appropriate.
26. **MGD** – means million gallons per day.
27. **Monthly Average** – means the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.
28. **New Discharger** – means a person, owning or operating any building, structure, facility, or installation:
  - a) From which there is or may be a discharge of pollutants;
  - b) That did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and
  - c) Which has never received a final effective NPDES permit for dischargers at that site.
29. **NH3-N** – means the pollutant parameter ammonia, measured as nitrogen.
30. **Notifiable sanitary sewer overflow** - means an overflow, spill, release or diversion of wastewater from a sanitary sewer system that:
  - a) Reaches a surface water of the State; or
  - b) May imminently and substantially endanger human health based on potential for public exposure including but not limited to close proximity to public or private water supply wells or in areas where human contact would be likely to occur.
31. **Permit application** - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
32. **Point source** - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
33. **Pollutant** - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
34. **Privately Owned Treatment Works** – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a “POTW”.
35. **Publicly Owned Treatment Works (POTW)** – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
36. **Receiving Stream** – means the “waters” receiving a “discharge” from a “point source”.
37. **Severe property damage** - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
38. **Significant Source** – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work’s capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
39. **TKN** – means the pollutant parameter Total Kjeldahl Nitrogen.
40. **TON** – means the pollutant parameter Total Organic Nitrogen.
41. **TRC** – means Total Residual Chlorine.

42. **TSS** – means the pollutant parameter Total Suspended Solids.
43. **24HC** – means 24-hour composite sample, including any of the following:
  - a) The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
  - b) A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected;
  - c) A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
44. **Upset** - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
45. **Waters** - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.
46. **Week** - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
47. **Weekly (7-day and calendar week) Average** – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

#### **I. SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

## **PART IV: SPECIFIC REQUIREMENTS, CONDITIONS, AND LIMITATIONS**

### **A. SLUDGE MANAGEMENT PRACTICES**

#### **1. Applicability**

- a. Provisions of Provision IV.A. apply to a sewage sludge generated or treated in treatment works that is applied to agricultural and non-agricultural land, or that is otherwise distributed, marketed, incinerated, or disposed in landfills or surface disposal sites.
- b. Provisions of Provision IV.A. do not apply to:
  - (1) Sewage sludge generated or treated in a privately owned treatment works operated in conjunction with industrial manufacturing and processing facilities and which receive no domestic wastewater.
  - (2) Sewage sludge that is stored in surface impoundments located at the treatment works prior to ultimate disposal.

#### **2. Submitting Information**

- a. If applicable, the Permittee must submit annually with its Municipal Water Pollution Prevention (MWPP) report the following:
  - (1) Type of sludge stabilization/digestion method;
  - (2) Daily or annual sludge production (dry weight basis);
  - (3) Ultimate sludge disposal practice(s).
- b. The Permittee shall provide sludge inventory data to the Director as requested. These data may include, but are not limited to, sludge quantity and quality reported in Provision IV.A.2.a as well as other specific analyses required to comply with State and Federal laws regarding solid and hazardous waste disposal.
- c. The Permittee shall give prior notice to the Director of at least 30 days of any change planned in the Permittee's sludge disposal practices.

#### **3. Reopener or Modification**

- a. Upon review of information provided by the Permittee as required by Provision IV.A.2. or, based on the results of an on-site inspection, the permit shall be subject to modification to incorporate appropriate requirements.
- b. If an applicable "acceptable management practice" or if a numerical limitation for a pollutant in sewage sludge promulgated under Section 405 of FWPCA is more stringent than the sludge pollutant limit or acceptable management practice in this permit. This permit shall be modified or revoked or reissued to conform to requirements promulgated under Section 405. The Permittee shall comply with the limitations no later than the compliance deadline specified in applicable regulations as required by Section 405 of FWPCA.

### **B. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR CHRONIC TOXICITY**

#### **1. Chronic Toxicity Test**

- a. The permittee shall perform short-term chronic toxicity tests on the wastewater at Outfall 001T.
- b. The samples shall be diluted using appropriate control water to the Instream Waste Concentration (IWC) which is **62 percent** effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 7-day, 10-year low flow period.
- c. Any test result that shows a statistically significant reduction in survival, growth, or reproduction between the control and test samples at the 95% confidence level indicates chronic toxicity and shall constitute noncompliance with this permit.

#### **2. General Test Requirements**

- a. A minimum of three (3) 24-hour composite samples shall be obtained for use in the above biomonitoring tests. Samples shall be collected every other day so that the laboratory receives water samples on the first, third, and fifth day of the seven-day test period. The holding time for each composite sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA

821-R-02-013 (most current edition) or another control water selected by the Permittee and approved by the Department.

- b. Test results shall be deemed unacceptable and the Permittee shall rerun the tests as soon as practical within the monitoring period for the following:
  - (1) For testing with *P. promelas*: effluent toxicity tests with control survival of less than 80% or if dry weight per surviving control organism is less than 0.25 mg;
  - (2) For testing with *C. dubia*: if the number of young per surviving control organism is less than 15 or if less than 60% of surviving control females produce three broods; or
  - (3) If the other requirements of the EPA Test Procedure are not met.
- c. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are to be reported to the Department along with an explanation of the tests performed and the test results.
- d. Toxicity tests shall be conducted for the duration of this permit in the month of **NOVEMBER**. Should results from the Annual Toxicity test indicate that Outfall 001T exhibits chronic toxicity, then the Permittee must conduct the follow-up testing described in Part IV.B.4.a. In addition, the Permittee may then also be required to conduct toxicity testing in the months of FEBRUARY, MAY, AUGUST, and NOVEMBER.

### 3. Reporting Requirements

- a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
- b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2 of this part, an effluent toxicity report containing the information in Sections 2 and 6 shall be included with the DMR. The test results must be submitted to the Department no later than 28 days after the month that tests were performed.

### 4. Additional Testing Requirements

- a. If chronic toxicity is indicated (i.e., noncompliance with permit limit), then the Permittee must perform two additional valid chronic toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall run consecutively beginning on the first calendar week following the date that the Permittee became aware of the permit noncompliance. The results of these follow-up tests shall be submitted to the Department no later than 28 days following the month the tests were performed.
- b. After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols and guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-91-003, EPA/600/R-92/081, EPA/833/B-99/022, and/or EPA/600/6-91/005F)

### 5. Test Methods

The tests shall be performed in accordance with the latest edition of the "EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The Larval Survival and Growth Test, Method 1000.0, shall be used for the fathead minnow (*Pimephales promelas*) test and the Survival and Reproduction Test, Method 1002.0, shall be used for the cladoceran (*Ceriodaphnia dubia*) test.

### 6. Effluent Toxicity Testing Reports

The following information shall be submitted with each DMR unless otherwise directed by the Department. The Department may at any times suspend or reinstate this requirement or may decrease or increase the frequency of submittals.

- a. Introduction
  - (1) Facility name, location and county
  - (2) Permit number
  - (3) Toxicity testing requirements of permit

- (4) Name of receiving water body
  - (5) Contract laboratory information (if tests are performed under contract)
    - (i) Name of firm
    - (ii) Telephone number
    - (iii) Address
  - (6) Objective of test
- b. Plant Operations
- (1) Discharge Operating schedule (if other than continuous)
  - (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)
  - (3) Design flow of treatment facility at time of sampling
- c. Source of Effluent and Dilution Water
- (1) Effluent samples
  - (2) Sampling point
  - (3) Sample collection dates and times (to include composite sample start and finish times)
  - (4) Sample collection method
  - (5) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
  - (6) Lapsed time from sample collection to delivery
  - (7) Lapsed time from sample collection to test initiation
  - (8) Sample temperature when received at the laboratory
  - (9) Dilution Water
  - (10) Source
  - (11) Collection/preparation date(s) and time(s)
  - (12) Pretreatment (if applicable)
  - (13) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)
- d. Test Conditions
- (1) Toxicity test method utilized
  - (2) End point(s) of test
  - (3) Deviations from referenced method, if any, and reason(s)
  - (4) Date and time test started
  - (5) Date and time test terminated
  - (6) Type and volume of test chambers
  - (7) Volume of solution per chamber
  - (8) Number of organisms per test chamber
  - (9) Number of replicate test chambers per treatment
  - (10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)
  - (11) Specify if aeration was needed
  - (12) Feeding frequency, amount, and type of food

(13) Specify if (and how) pH control measures were implemented

(14) Light intensity (mean)

e. Test Organisms

- (1) Scientific name
- (2) Life stage and age
- (3) Source
- (4) Disease(s) treatment (if applicable)

f. Quality Assurance

- (1) Reference toxicant utilized and source
- (2) Date and time of most recent chronic reference toxicant test(s), raw data, and current control chart(s). (The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.)
- (3) Dilution water utilized in reference toxicant test
- (4) Results of reference toxicant test(s) (NOEC, IC25, etc.); report concentration-response relationship and evaluate test sensitivity
- (5) Physical and chemical methods utilized

g. Results

- (1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate
- (2) Provide table of endpoints: NOECs, IC25s, PASS/FAIL, etc. (as required in the applicable NPDES permit)
- (3) Indicate statistical methods used to calculate endpoints
- (4) Provide all physical and chemical data required by method
- (5) Results of test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD) calculated for sublethal endpoints determined by hypothesis testing.

h. Conclusions and Recommendations

- (1) Relationship between test endpoints and permit limits
- (2) Actions to be taken

Adapted from "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", Fourth Edition, October 2002 (EPA 821-R-02-013), Section 10, Report Preparation.

**C. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS**

1. If chlorine is not utilized for disinfection purposes, TRC monitoring under Part I of this Permit is not required. If TRC monitoring is not required (conditional monitoring), "\*9" should be reported on the DMR forms.
2. Testing for TRC shall be conducted according to either the amperometric titration method or the DPD colorimetric method as specified in Section 408(C) or (E), Standards Methods for the Examination of Water and Wastewater, 18th edition. If the analytical result is less than the detection level or a value otherwise indicated in this permit, the Permittee shall report on the DMR form "\*B" or "0". The Permittee shall then be considered to be in compliance with the daily maximum concentration limit for TRC.
3. This permit contains a maximum allowable TRC level in the effluent. The Permittee is responsible for determining the minimum TRC level needed in the chlorine contact chamber to comply with E.coli limits. The effluent shall be dechlorinated if necessary to meet the maximum allowable effluent TRC level.
4. The sample collection point for effluent TRC shall be at a point downstream of the chlorine contact chamber (downstream of dechlorination, if applicable). The exact location is to be approved by the Director.

**D. PLANT CLASSIFICATION**

The Permittee shall report to the Director within 30 days of the effective date of this permit the name, address and operator number of the certified wastewater operator in responsible charge of the facility. Unless specified elsewhere in this permit, this facility shall be classified in accordance with ADEM Admin. Code R. 335-10-1-.03.

**E. SANITARY SEWER OVERFLOW RESPONSE PLAN****1. SSO Response Plan**

Within 120 days of the effective date of this Permit, the Permittee shall develop a Sanitary Sewer Overflow (SSO) Response Plan to establish timely and effective methods for responding to notifiable sanitary sewer overflows. The SSO Response Plan shall address each of the following:

**a. General Information**

- (1) Approximate population of City/Town, if applicable
- (2) Approximate number of customers served by the Permittee
- (3) Identification of any subbasins designated by the Permittee, if applicable
- (4) Identification of estimated linear feet of sanitary sewers
- (5) Number of Pump/Lift Stations in the collection system

**b. Responsibility Information**

- (1) The title(s) and contact information of key position(s) who will coordinate the SSO response, including information for a backup coordinator in the event that the primary SSO coordinator is unavailable. The SSO coordinator is the person responsible for assessing the SSO and initiating a series of response actions based on the type, severity, and destination of the SSO, except for routine SSOs for which the coordinator may pre-approve written procedures. Routine SSOs are those for which the corrective action procedures are generally consistent.
- (2) The title(s), and contact information of key position(s) who will respond to SSOs, including information for backup responder(s) in the event the primary responder(s) are unavailable (i.e., position(s) who provide notification to the Department, the public, the county health department, and other affected entities such as public water systems; position(s) responsible for organizing crews for response; position(s) responsible for addressing public inquiries)

**c. SSO and Surface Water Assessment**

- (1) Identification of locations within the collection system at which an SSO is likely to occur (e.g., based upon historical SSOs, lift stations where electricity may be lost, etc.)
- (2) A map of the general collection system area, including identification of surface waterbodies and the location(s) of public drinking water source(s). Mapping of all collection system piping, pump stations, etc. is not required; however, if this information is already available, it should be included.
- (3) Identification of surface waterbodies within the collection system area which are classified as Swimming according to ADEM Admin. Code chap. 335-6-11. References available to assist in this requirement include the following: <http://adem.alabama.gov/alEnviroRegLaws/files/Division6Vol1.pdf> and <http://adem.alabama.gov/wqmap>.
- (4) Identification of surface waterbodies within the collection system area which are not classified as Swimming as indicated in paragraph c above, but are known locally as areas where swimming occurs or as areas that are heavily recreated

**d. Public Reporting of SSOs**

- (1) Contact information for the public to report an SSO to the Permittee, during both normal and outside of normal business hours (e.g., telephone number, website, email address, etc.)
- (2) Information requested from the person reporting an SSO to assist the Permittee in identifying the SSO (e.g., date, time, location, contact information)

- (3) Procedures for communication of the SSO report to the appropriate positions for follow-up investigation and response, if necessary
- e. Procedures to immediately notify the Department, the county health department, and other affected entities (such as public water systems) upon becoming aware of notifiable SSOs
- f. Public Notification Methods for SSOs
  - (1) A listing of methods that are feasible, as determined by the Permittee, for public notifications (e.g., flyers distributed to nearby residents; signs posted at the location of the SSO, where the SSO enters a water of the state, and/or at a central public location; signs posted at fishing piers, boat launches, parks, swimming waterbodies, etc.; website and/or social media notifications; local print or radio and broadcast media notifications; "opt in" email, text message, or automated phone message notifications)
    - (i) If signage is a feasible method for public notification, procedures for use and removal of signage (e.g., availability and maintenance of signs, appropriate duration of postings)
  - (2) Minimum information to be included in public notifications (e.g., identification that an SSO has occurred, date, duration if known, estimated volume if known, location of the SSO by street address or other appropriate method, initial destination of the SSO)
  - (3) Procedures developed by the Permittee for determining the appropriate public notification method(s) based upon the potential for public exposure to health risks associated with the SSO
- g. Standard Procedures shall be developed by the Permittee and shall include, at a minimum
  - (1) General SSO Response Procedures (e.g., procedures for dispatching staff to assess/correct an SSO; procedures for routine SSO corrective actions such as those for sewer blockages, overflowing manholes, line breakages, pump station power failure, etc.; procedures for disinfection of affected area, if applicable);
  - (2) Procedures for collection and proper disposal of the SSO, if feasible.
  - (3) General procedures for coordinating instream water quality monitoring, including, but not limited to, procedures for mobilizing staff, collecting samples, and typical test methods should the Department or the Permittee determine monitoring is appropriate following an SSO. Identification of a contractor who will collect and analyze the sample(s) may be listed in lieu of the procedures.
  - (4) References to other documents (such as Standard Operating Procedures for SSO Responses) may be acceptable for this section; however, the referenced document shall be identified and shall be reviewed at a frequency of at least that required by the Administrative Procedures Section.
- h. Date of the SSO Response Plan, dates of all modifications and/or reviews, the title and signature of the reviewer(s) for each date and the signature of the responsible official or the appropriate designee.

## **2. SSO Response Plan Implementation**

Except as otherwise required by this Permit, the Permittee shall fully implement the SSO Response Plan as soon as practicable, but no later than 180 days after the effective date of this Permit.

## **3. Department Review of the SSO Response Plan**

- a. When requested by the Director or his designee, the Permittee shall make the SSO Response Plan available for review by the Department.
- b. Upon review, the Director or his designee may notify the Permittee that the SSO Response Plan is deficient and require modification of the Plan.
- c. Within thirty days of receipt of notification, or an alternate timeframe as approved by the Department, the Permittee shall modify any SSO Response Plan deficiency identified by the Director or his designee and shall certify to the Department that the modification has been made.

## **4. SSO Response Plan Administrative Procedures**

- a. The Permittee shall maintain a copy of the SSO Response Plan at the permitted facility or an alternate location approved by the Department in writing and shall make it available for inspection by the Department.

- b. The Permittee shall make a copy of the SSO Response Plan available to the public upon written request within 30 days of such request. The Permittee may redact information which may present security issues, such as location of public water supplies, identification of specific details of vulnerabilities, employee information, etc.
- c. The Permittee shall provide training for any personnel required to implement the SSO Response Plan and shall retain at the facility documentation of such training. This documentation shall be available for inspection by the Department. Training shall be provided for existing personnel prior to the date by which implementation of the SSO Response Plan is required and for new personnel as soon as possible. Should significant revisions be made to the SSO Response Plan, training regarding the revisions shall be conducted as soon as possible.
- d. The Permittee shall complete a review and evaluation of the SSO Response Plan at least once every three years. Documentation of the SSO Response Plan review and evaluation shall be signed and dated by the responsible official or the appropriate designee as part of the SSO Response Plan.

## **F. POLLUTANT SCANS**

The Permittee shall sample and analyze for the pollutants listed in 40 CFR 122 Appendix J Table 2. The Permittee shall provide data from a minimum of three samples collected within the four and one-half years prior to submitting a permit application. Samples must be representative of the seasonal variation in the discharge from each outfall.

## **G. MAJOR SOURCE STORMWATER REQUIREMENTS**

### **1. Prohibitions**

- a. The Permittee shall not allow the discharge of non-storm water into permitted storm water outfall(s) unless said discharge is already subject to an NPDES permit.
- b. Pollutants removed in the course of treatment or control shall be disposed in a manner that complies with all applicable Department rules and regulations.

### **2. Operational and Management Practices**

The permittee shall prepare and implement a Storm Water Pollution Prevention (SWPP) Plan within one year of the effective date of this permit.

- a. In the SWPP Plan, the Permittee shall:
  - (1) Assess the treatment plant site by developing and presenting site drainage maps, materials inventory, and best management operational practices. The plan shall also include a description of all spill or leak sources;
  - (2) Describe mechanisms and procedures to prevent the contact of sewage sludge, screenings, raw or partially treated wastewater, or any other waste product or pollutant with storm water discharged from the facility;
  - (3) Provide for daily inspection on workdays of any structures that function to prevent storm water pollution or that remove pollutants from storm water;
  - (4) Provide for daily inspection of the facility in general to ensure that the SWPP Plan is continually implemented and effective;
  - (5) Include a Best Management Practices (BMP) Plan that, as a minimum, addresses housekeeping, preventative maintenance, spill prevention and response, and non-storm water discharges;
  - (6) Describe mechanisms and procedures to provide sediment control sufficient to prevent or control storm water pollution storm water by particles resulting from soil or sediment migration from the site due to significant clearing, grading, or excavation activities;
  - (7) Designate by position or name the person or persons responsible for the day to day implementation of the SWPP Plan; and
  - (8) Bear the signature of an individual meeting signatory requirements as defined in ADEM Administrative Code, Rule 335-6-6-.09.
- b. The Director or his designee may notify the permittee at any time that the SWPP Plan is deficient and will require correction of the deficiency. The permittee shall correct any SWPP Plan deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

c. Administrative Procedures

- (1) A copy of the SWPP Plan shall be maintained at the facility and shall be available for inspection by the Department.
- (2) A log of daily inspections required by Provision IV.G.2.a.(3.) of the permit shall be maintained at the facility and shall be made available for inspection by the Department upon request. The log shall contain records of all inspections performed and each daily entry shall be signed by the person performing the inspection.
- (3) The Permittee shall provide training for any personnel required to implement the SWPP Plan and shall retain documentation of such training at the facility. Training records for all personnel shall be available for inspection by the Department. Training shall be performed prior to the date implementation is required.

**3. Monitoring Requirements**

- a. Storm water discharged through each storm water outfall shall be sampled once per calendar year, using first flush grab samples (FFGS) collected during the first 30 minutes of discharge.
- b. The total volume of storm water discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for the storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained in accordance with Provision I.B.5. of this permit. The volume may be measured using flow measurement devices or may be estimated using any method approved in writing by the Department.

**EDWARD F. POOLOS**  
DIRECTOR

**JEFFERY W. KITCHENS**  
DEPUTY DIRECTOR



Alabama Department of Environmental Management  
adem.alabama.gov

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Montgomery, Alabama 36130-1463  
(334) 271-7700 ■ FAX (334) 271-7950

**KAY IVEY**  
GOVERNOR

## FACT SHEET

### APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE POLLUTANTS TO WATERS OF THE STATE OF ALABAMA

**Date Prepared:** October 3, 2025

**By:** Sandra Lee

**NPDES Permit No.** AL0054631

**1. Name and Address of Applicant:**

The Water Works & Sewer Board of the City of Clanton  
Post Office Box 580  
Clanton, AL 35046

**2. Name and Address of Facility:**

Walnut Creek WWTP  
1574 Chilton County Road 51  
Clanton, AL 35046

**3. Description of Applicant's Type of Facility and/or Activity Generating the Discharge:**

Discharge Type(s): Surface Water  
Treatment Method(s): Mechanical (WWTP)

**4. Applicant's Receiving Waters**

Feature ID	Receiving Water	Classification
001	Walnut Creek	Fish and Wildlife (F&W)
002	Walnut Creek	Fish and Wildlife (F&W)
003	Walnut Creek	Fish and Wildlife (F&W)

For the Outfall latitude and longitude see the permit application.

**5. Permit Conditions:**

See attached Rationale and Draft Permit.

**6. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS**

**a. Comment Period**

The Alabama Department of Environmental Management proposes to issue this NPDES permit subject to the limitations and special conditions outlined above. This determination is tentative.

Interested persons are invited to submit written comments on the draft permit to the following address:

**Daphne Y. Lutz, Chief**  
**ADEM-Water Division**  
**1400 Coliseum Blvd**  
**[Mailing Address: Post Office Box 301463; Zip 36130-1463]**  
**Montgomery, Alabama 36110-2400**  
**(334) 271-7823**  
**[water-permits@adem.alabama.gov](mailto:water-permits@adem.alabama.gov)**

All comments received prior to the closure of the public notice period (see public notice for date) will be considered in the formulation of the final determination with regard to this permit.

**b. Public Hearing**

A written request for a public hearing may be filed within the public notice period and must state the nature of the issues proposed to be raised in the hearing. A request for a hearing should be filed with the Department at the following address:

**Daphne Y. Lutz, Chief**  
**ADEM-Water Division**  
**1400 Coliseum Blvd**  
**[Mailing Address: Post Office Box 301463; Zip 36130-1463]**  
**Montgomery, Alabama 36110-2400**  
**(334) 271-7823**  
**[water-permits@adem.alabama.gov](mailto:water-permits@adem.alabama.gov)**

The Director shall hold a public hearing whenever it is found, on the basis of hearing requests, that there exists a significant degree of public interest in a permit application or draft permit. The Director may hold a public hearing whenever such a hearing might clarify one or more issues involved in the permit decision. Public notice of such a hearing will be made in accordance with ADEM Admin. Code r. 335-6-6-.21.

**c. Issuance of the Permit**

All comments received during the public comment period shall be considered in making the final permit decision. At the time that any final permit decision is issued, the Department shall prepare a response to comments in accordance with ADEM Admin. Code r. 335-6-6-.21. **The permit record, including the response to comments, will be available to the public via the eFile System <http://app.adem.alabama.gov/eFile/> or an appointment to review the record may be made by writing the Permits and Services Division at the above address.**

Unless a request for a stay of a permit or permit provision is granted by the Environmental Management Commission, the proposed permit contained in the Director's determination shall be issued and effective, and such issuance will be the final administrative action of the Alabama Department of Environmental Management.

**d. Appeal Procedures**

As allowed under ADEM Admin. Code chap. 335-2-1, any person aggrieved by the Department's final administrative action may file a request for hearing to contest such action. Such requests should be received by the Environmental Management Commission within thirty days of issuance of the permit. Requests should be filed with the Commission at the following address:

**Alabama Environmental Management Commission  
1400 Coliseum Blvd  
[Mailing Address: Post Office Box 301463; Zip 36130-1463]  
Montgomery, Alabama 36110-2400**

All requests must be in writing and shall contain the information provided in ADEM Admin. Code r. 335-2-1-.04.

**NPDES PERMIT RATIONALE**

NPDES Permit No: **AL0054631** Date: October 3, 2025

Permit Applicant: The Water Works & Sewer Board of the City of Clanton  
Post Office Box 580  
Clanton, AL 35046

Location: **Walnut Creek WWTP**  
1574 Chilton County Road 51  
Clanton, AL 35046

Draft Permit is: Initial Issuance:  
Reissuance due to expiration: X  
Modification of existing permit:  
Revocation and Reissuance:

Basis for Limitations: Water Quality Model: DO, CBOD<sub>5</sub>, NH<sub>3</sub>N  
Reissuance with no modification: pH, DO, CBOD<sub>5</sub>, NH<sub>3</sub>N, TSS, E. Coli, TSS Percent Removal, CBOD<sub>5</sub> Percent Removal  
Instream calculation at 7Q10: ~62%  
Toxicity based: TRC  
Secondary Treatment Levels: TSS, TSS Percent Removal, CBOD<sub>5</sub> Percent Removal  
Other (described below): pH, E. Coli, Zinc, Copper

Design Flow (MGD): 2.25 MGD

Major: Yes

Description of Discharge:

Feature ID	Description	Receiving Water	Waterbody Use Classification	303(d)	TMDL
001	Treated Domestic and Industrial Wastewater	Walnut Creek	Fish and Wildlife (F&W)	Yes	No
002	Stormwater Runoff	Walnut Creek	Fish and Wildlife (F&W)	Yes	No
003	Stormwater Runoff	Walnut Creek	Fish and Wildlife (F&W)	Yes	No

Discussion: This permit is a reissuance due to expiration.

The pH limits for Outfall 0011 were developed consistent with the Water-Use designation of the receiving stream and the Municipal Section's Permit Development Rationale. The daily maximum pH limit is 8.5 s.u. and the daily minimum is 6.0 s.u. The monitoring frequency is three times per week. Flow will be monitored continuously, seven days per week.

The discharge limits for 5 Day Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>), Dissolved Oxygen (DO), and Total Ammonia as Nitrogen (NH<sub>3</sub>N) for Outfall 0011 were developed by the Municipal Permitting Section based on a Waste Load Allocation (WLA) model performed by the Department's Water Quality Branch on April 16, 2025. The monthly average limits for CBOD<sub>5</sub> and NH<sub>3</sub>N, are 10.0 mg/l and 2.0 mg/l, respectively. The daily minimum for DO is 6.0 mg/l. The monitoring frequency will be three times per week. A minimum percent removal of 85 percent is imposed for CBOD<sub>5</sub> based on 40 CFR 133.102. The percent removal will be calculated once per month.

The monthly average TSS limit is established at 30.0 mg/l in accordance with 40 CFR 133.102. The monitoring frequency will be three times per week. A minimum percent removal 85 percent is imposed for TSS based on 40 CFR 133.102. The percent removal will be calculated once per month.

The imposed E. coli limits were determined based on the water-use classification of the receiving stream. Since the segment of Walnut Creek containing the discharge is classified as Fish & Wildlife, the limits for May – October are 126 col/100ml (monthly average) and 298 col/100ml (daily maximum), while the limits for November – April are 548 col/100ml (monthly average) and 2507 col/100ml (daily maximum). The monitoring frequency will be three times per week.

The Municipal Section, in consultation with the Department's Water Quality Branch, has conducted a narrative nutrient reasonable potential analysis. Based on a review of the facility's current levels of nutrients in the discharge and current assessments of the available information, the Permittee is required to monitor monthly and report effluent test results for Total Kjeldahl Nitrogen (TKN), Nitrite plus Nitrate (NO<sub>2</sub>+NO<sub>3</sub>), and Total Phosphorus (TP). Monitoring for these nutrient-related parameters is imposed so that sufficient information will be available regarding the nutrient contribution from this point source, should it be necessary at some later time to impose additional nutrient limits on this discharge.

The Total Residual Chlorine (TRC) limits are based on calculations to ensure that acute and chronic toxic concentrations of TRC in the receiving stream are not exceeded. Daily maximum and monthly average TRC limitations of 0.031 mg/L and 0.018 mg/L, respectively, are being imposed at Outfall 0011. The monitoring frequency will be three times per week. The less stringent TRC limits are not considered backsliding because it is consistent with the Department's Antidegradation policy and water quality standards are being attained. Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter "\*9" or "NODI=9"(if hard copy) on the monthly DMR. A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as NODI=B or \*B on the monthly DMRs.

Because this facility is a major municipal discharger treating municipal and industrial wastewater, chronic toxicity testing with two species (Ceriodaphnia and Pimephales) is being imposed on this permit. Toxicity testing is imposed for both survival and life-cycle impairment (i.e., growth and reproduction). Chronic toxicity at the IWC of 62 percent is required once per year during the month of November. The lower IWC is not considered backsliding because it is consistent with the Department's Antidegradation policy and water quality standards are being attained. Should the results show chronic toxicity, the permittee would have to conduct follow-up testing as described in Part IV.B of the permit.

ADEM completed a numeric Reasonable Potential Analysis (RPA) of the data submitted in Table C of the Permittee's application (Per 40 CFR Part 122 Appendix J – Table 2) and the facility's DMR data. The Department also considers background data upstream of the point of discharge; however, there is no applicable background data for this discharge. The RPA indicates that the discharge may have a reasonable potential to contribute to copper and zinc excursions of Alabama's in-stream water quality standards. Total Recoverable Copper monitoring will be included in the permit with a daily maximum limitation of 0.026 mg/l and a monthly average limitation of 0.020 mg/l. Total Recoverable Zinc will be in the permit with a monthly average and daily maximum limitation of 0.291 mg/l. The monitoring frequency will be monthly. The monitoring frequency will be once per month. Based on DMR submitted by the Permittee for the previous five years, it appears no reasonable potential exists for nickel, which was included in the previous permit. Therefore, the limits for Total Recoverable Nickel were removed. The less stringent limits for Copper and Zinc and the removal of limits for Total Recoverable Nickel is not considered backsliding because it is consistent with the Department's Antidegradation policy and water quality standards are being attained. There was no stream background data that would be used the RPA.

The receiving stream is Walnut Creek, a Tier I waterbody. Walnut Creek is on the current 303(d) list for impaired waterbodies for pathogens. The E. coli limitations imposed for this permit are consistent with water quality criteria and are considered protective of the receiving stream. There are no approved TMDLs for this waterbody.

ADEM Administrative Rule 335-6-10-.12 requires applicants to new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in

Tier II waterbody, so the applicant is not required to demonstrate that the discharge is necessary for economic and social development.

Annual stormwater monitoring for outfalls 002S and 003S will be required for Flow, pH, TSS, NH<sub>3</sub>-N, CBOD<sub>5</sub>, TKN, NO<sub>3</sub>-NO<sub>2</sub>-N, TP, Oil and Grease, and E. Coli.

Prepared by: Sandra Lee

## TOXICITY AND DISINFECTION RATIONALE

Facility Name:	Clanton Walnut Creek WWTP	
NPDES Permit Number:	AL0054631	
Receiving Stream:	Walnut Creek	
Facility Design Flow (Q <sub>w</sub> ):	2.250 MGD	
Receiving Stream 7Q <sub>10</sub> :	2.204 cfs	
Receiving Stream 1Q <sub>10</sub> :	1.655 cfs	
Winter Headwater Flow (WHF):	4.062 cfs	
Summer Temperature for CCC:	30 deg. Celsius	
Winter Temperature for CCC:	30 deg. Celsius	
Headwater Background NH <sub>3</sub> -N Level:	0.11 mg/l	
Receiving Stream pH:	7.0 s.u.	
Headwater Background FC Level (summer):	N/A.	(Only applicable for facilities with diffusers.)
(winter):	N/A.	

The Stream Dilution Ratio (SDR) is calculated using the 7Q<sub>10</sub> for all stream classifications.

$$\text{Stream Dilution Ratio (SDR)} = \frac{Q_w}{7Q_{10} + Q_w} = 61.23\%$$

### AMMONIA TOXICITY LIMITATIONS

Toxicity-based ammonia limits are calculated in accordance with the *Ammonia Toxicity Protocol* and the *General Guidance for Writing Water Quality Based Toxicity Permits*.

If the Limiting Dilution is less than 1%, the waterbody is considered stream-dominated and the CMC applies.

If the Limiting Dilution is greater than 1%, the waterbody is considered effluent-dominated and the CCC applies.

$$\text{Limiting Dilution} = \frac{Q_w}{7Q_{10} + Q_w} = 61.23\% \quad \text{Effluent-Dominated, CCC Applies}$$

Criterion Maximum Concentration (CMC):  $CMC = 0.411 / (1 + 10^{(7.204 - pH)}) + 58.4 / (1 + 10^{(pH - 7.204)})$   
 Criterion Continuous Concentration (CCC):  $CCC = [0.0577 / (1 + 10^{(7.688 - pH)}) + 2.487 / (1 + 10^{(pH - 7.688)})] * \text{Min}[2.85, 1.45 * 10^{(0.028 * (25 - T))}]$

	<u>CMC</u>	<u>CCC</u>
Allowable Summer Instream NH <sub>3</sub> -N:	36.09 mg/l	2.18 mg/l
Allowable Winter Instream NH <sub>3</sub> -N:	36.09 mg/l	2.18 mg/l

$$\text{Summer NH}_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (7Q_{10} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (7Q_{10})]}{Q_w} = 3.5 \text{ mg/l NH}_3\text{-N at } 7Q_{10}$$

$$\text{Winter NH}_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (\text{WHF} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (\text{WHF})]}{Q_w} = \text{N/A.}$$

The ammonia limits established in the permit will be the lesser of the DO-based ammonia limit (from the wasteload allocation model) or the toxicity limits calculated above.

	<u>DO-based NH<sub>3</sub>-N limit</u>	<u>Toxicity-based NH<sub>3</sub>-N limit</u>
Summer	2.00 mg/l NH <sub>3</sub> -N	3.50 mg/l NH <sub>3</sub> -N
Winter	N/A.	N/A.

**Summer: The DO based limit of 2.00 mg/l NH<sub>3</sub>-N applies.**

**Winter limits are not applicable.**

**TOXICITY TESTING REQUIREMENTS (REFERENCE: MUNICIPAL BRANCH TOXICITY PERMITTING STRATEGY)**

The following factors trigger toxicity testing requirements:

1. Facility design flow is equal to or greater than 1.0 MGD (major facility).
2. There are significant industrial contributors (SID permits).

Acute toxicity testing is specified for A&I receiving streams, or for stream dilution ratios of 1% or less.  
 Chronic toxicity testing is specified for all other situations requiring toxicity testing.

**Chronic toxicity testing is required**

Instream Waste Concentration (IWC) =  $\frac{Q_w}{7Q_{10} + Q_w}$  = **61.23%** Note: This number will be rounded up for toxicity testing purposes.

**DISINFECTION REQUIREMENTS**

Bacteria limits are required, and will be the water quality limit for the receiving stream, except where diffusers are used the limit may be adjusted for the dilution provided by the diffuser.

See the attached Disinfection Guidance for applicable stream standards.

**(Non-coastal limits apply)**

Applicable Stream Classification: **Fish & Wildlife**

Disinfection Type: **Chlorination**

Limit calculation method: **Limits based on meeting stream standards at the point of discharge.**

	Stream Standard (colonies/100ml)	Effluent Limit (colonies/100ml)
<b><u>E. Coli (applies to Non-coastal and Shellfish Harvesting Coastal)</u></b>		
Monthly limit as monthly average (November through April):	548	<b>548</b>
Monthly limit as monthly average (May through October):	126	<b>126</b>
Daily Max (November through April):	2507	<b>2507</b>
Daily Max (May through October):	298	<b>298</b>
<b><u>Enterococci (applies to Coastal)</u></b>		
Monthly limit as geometric mean (October through May):	Not applicable	<b>Not applicable</b>
Monthly limit as geometric mean (June through September):	Not applicable	<b>Not applicable</b>
Daily Max (October through May):	Not applicable	<b>Not applicable</b>
Daily Max (June through September):	Not applicable	<b>Not applicable</b>

**MAXIMUM ALLOWABLE CHLORINATION LIMITS**

Toxicity-based chlorine limits are calculated in accordance with the General Guidance for Writing Water Quality Based Toxicity Permits.

Chlorine has been shown to be acutely toxic at 0.019 mg/l and chronically toxic at 0.011 mg/l.

Maximum allowable TRC in effluent:	0.018 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	0.031 mg/l (acute)	(0.019)/(SDR)

NOTE: A maximum chlorine limit will be imposed such that the instream concentration will not exceed acutely toxic concentrations in A & I streams and chronically toxic concentrations in all other streams, but may not exceed 1.0 mg/l.

Prepared By: Sandra Lee Date: 10/3/2025

# Waste Load Allocation Summary

Page 1

## REQUEST INFORMATION

Request Number: 4055

From: Sandy Lee In Branch/Section: Municipal  
Date Submitted: 3/19/2025 Date Required: 4/18/2025 FUND Code: 605  
Date Permit application received by NPDES program: 3/4/2025

Receiving Waterbody: Walnut Creek

Previous Stream Name:

Facility Name: Clanton Walnut Creek WWTP (Name of Discharger-WQ will use to file)

Previous Discharger Name:

River Basin: Coosa Outfall Latitude: 32.868330 (decimal degrees)

\*County: Chilton Outfall Longitude: -86.597370 (decimal degrees)

Permit Number: AL0054631 Permit Type: Permit Reissuance

Permit Status: Active

Type of Discharger: MUNICIPAL

Do other discharges exist that may impact the model?  Yes  No

If yes, impacting dischargers names.

Empty text box for impacting dischargers names.

Impacting dischargers permit numbers.

Empty text box for impacting dischargers permit numbers.

Existing Discharge Design Flow: 2.25 MGD

Proposed Discharge Design Flow: MGD

Note: The flow rates given should be those requested for modeling.

Comments included

Yes  No

Information Verified By: SH

Year File Was Created: 2001

Response ID Number: 2036

Lat/Long Method: GPS

12 Digit HUC Code: 031501070802

Use Classification: F&W

Site Visit Completed?  Yes  No

Date of Site Visit: 4/3/2025

Waterbody Impaired?  Yes  No

Date of WLA Response: 4/16/2025

Antidegradation  Yes  No

Approved TMDL?

Yes  No

Waterbody Tier Level: Tier I

Use Support Category: 5

Approval Date of TMDL:

## Waste Load Allocation Information

Modeled Reach Length: 13.29 Miles

Date of Allocation: 4/14/2025

Name of Model Used: SWQM

Allocation Type: Annual

Model Completed by: Shae Holley

Type of Model Used: Desk-top

Allocation Developed by: Water Quality Branch

# Waste Load Allocation Summary

Annual Effluent Limits	Conventional Parameters				Other Parameters			
	Qw	MGD	Qw	MGD	Qw	MGD	Qw	MGD
<b>Season</b>			<b>Season</b>		<b>Season</b>		<b>Season</b>	
Qw 2.25 MGD			<b>From</b>		<b>From</b>		<b>From</b>	
CBOD5 10			<b>Through</b>		<b>Through</b>		<b>Through</b>	
NH3-N 2			CBOD5			TP		
TKN			NH3-N			TN		
D.O. 6			TKN			TSS		
			D.O.					

"Monitor Only" Parameters for Effluent:	Parameter	Frequency	Parameter	Frequency
	TP	Monthly		
	NO2+NO3-N	Monthly		
	TKN	Monthly		

Water Quality Characteristics Immediately Upstream of Discharge				
Parameter	Summer		Winter	
CBODu	2	mg/l		mg/l
NH3-N	0.11	mg/l		mg/l
Temperature	30	°C		°C
pH	7	su		su

Hydrology at Discharge Location			
<b>Drainage Area Qualifier</b>	Drainage Area	30.4	sq mi
Exact	Stream 7Q10	2.204	cfs
	Stream 1Q10	1.655	cfs
	Stream 7Q2	4.062	cfs
	Annual Average	48.22	cfs

Method Used to Calculate
ADEM Estimate w/USGS Gage Data

Comments and/or Notations

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$							Enter Max Daily Discharge as reported by Applicant (C <sub>d</sub> ) Max µg/L	Enter Avg Daily Discharge as reported by Applicant (C <sub>d</sub> ) Ave µg/L	Partition Coefficient (Stream / Lake)
ID	Pollutant	Carcinogen Yes*	Type	Background from upstream source (C <sub>d</sub> ) Daily Max	Background from upstream source (C <sub>d2</sub> ) Monthly Ave	Background Instrument (C <sub>s</sub> ) Daily Max			
1	Antimony		Metals	0	0	0	0	0	-
2	Arsenic**	YES	Metals	0	0	0	0	0	0.574
3	Beryllium		Metals	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	-
7	Copper**		Metals	0	0	0	0	6.2	0.388
8	Lead**		Metals	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0.0007	0.0005
10	Nickel**		Metals	0	0	0	0	51	7.283
11	Selenium		Metals	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	64	26.7
15	Cyanide		Metals	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	83000	79900
18	Arcrolein		VOC	0	0	0	0	0	-
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	-
20	Aldrin	YES	VOC	0	0	0	0	0	-
21	Benzene*	YES	VOC	0	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	-
24	Chloroform	YES	VOC	0	0	0	0	0	-
25	Chlorobenzene	YES	VOC	0	0	0	0	0	-
26	Chlorobromo-Methane*	YES	VOC	0	0	0	0	0	-
27	Chloroethane	YES	VOC	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether	YES	VOC	0	0	0	0	0	-
29	Chloroform*	YES	VOC	0	0	0	0	9.8	3.287
30	4,4'-DDD	YES	VOC	0	0	0	0	0	-
31	4,4'-DDE	YES	VOC	0	0	0	0	0	-
32	4,4'-DDT	YES	VOC	0	0	0	0	0	-
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	-
34	1,1-Dichloroethane	YES	VOC	0	0	0	0	0	-
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	0	-
36	Trans-1,2-Dichloro-Ethylene	YES	VOC	0	0	0	0	0	-
37	1,1-Dichloroethylene*	YES	VOC	0	0	0	0	0	-
38	1,2-Dichloropropane	YES	VOC	0	0	0	0	0	-
39	1,2-Dichloro-Propylene	YES	VOC	0	0	0	0	0	-
40	Dieldrin	YES	VOC	0	0	0	0	0	-
41	Ethylbenzene	YES	VOC	0	0	0	0	0	-
42	Methyl Bromide	YES	VOC	0	0	0	0	0	-
43	Methyl Chloride	YES	VOC	0	0	0	0	0	-
44	Methylene Chloride*	YES	VOC	0	0	0	0	0	-
45	1,1,2,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	-
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	-
47	Toluene	YES	VOC	0	0	0	0	0	-
48	Texaphene	YES	VOC	0	0	0	0	0	-
49	Tributyltin (TBT)	YES	VOC	0	0	0	0	0	-
50	1,1,1-Trichloroethane	YES	VOC	0	0	0	0	0	-
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	-
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	-
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	-
54	P-Chloro-M-Cresol	YES	Acids	0	0	0	0	0	-
55	2-Chlorophenol	YES	Acids	0	0	0	0	0	-
56	2,4-Dichlorophenol	YES	Acids	0	0	0	0	0	-
57	2,6-Dimethylphenol	YES	Acids	0	0	0	0	0	-
58	4,6-Dinitro-O-Cresol	YES	Acids	0	0	0	0	0	-
59	2,4-Dinitrophenol	YES	Acids	0	0	0	0	0	-
60	4,6-Dinitro-2-methylphenol	YES	Acids	0	0	0	0	0	-
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	-
62	2-Nitrophenol	YES	Acids	0	0	0	0	0	-
63	4-Nitrophenol	YES	Acids	0	0	0	0	0	-
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	-
65	Phenol	YES	Acids	0	0	0	0	0	-
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	0	-
67	Acephenanthrene	YES	Bases	0	0	0	0	0	-
68	Acenaphthylene	YES	Bases	0	0	0	0	0	-
69	Anthracene	YES	Bases	0	0	0	0	0	-
70	Benzidine	YES	Bases	0	0	0	0	0	-
71	Benzo(A)Anthracene*	YES	Bases	0	0	0	0	0	-
72	Benzo(A)Pyrene*	YES	Bases	0	0	0	0	0	-
73	3,4-Benzo-Fluoranthene	YES	Bases	0	0	0	0	0	-
74	Benzo(GH)Perylene	YES	Bases	0	0	0	0	0	-
75	Benzo(K)Fluoranthene	YES	Bases	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane	YES	Bases	0	0	0	0	0	-
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	-
78	Bis (2-Chloroisopropyl) Ether	YES	Bases	0	0	0	0	0	-
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether	YES	Bases	0	0	0	0	0	-
81	Butyl Benzyl Phthalate	YES	Bases	0	0	0	0	0	-
82	2-Chloronaphthalene	YES	Bases	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether	YES	Bases	0	0	0	0	0	-
84	Chrysene*	YES	Bases	0	0	0	0	0	-
85	Di-N-Butyl Phthalate	YES	Bases	0	0	0	0	0	-
86	Di-N-Octyl Phthalate	YES	Bases	0	0	0	0	0	-
87	Dibenz(A,H)Anthracene*	YES	Bases	0	0	0	0	0	-
88	1,2-Dichlorobenzene	YES	Bases	0	0	0	0	0	-
89	1,3-Dichlorobenzene	YES	Bases	0	0	0	0	0	-
90	1,4-Dichlorobenzene	YES	Bases	0	0	0	0	0	-
91	3,3-Dichlorobenzidine*	YES	Bases	0	0	0	0	0	-
92	Dieldrin Phthalate	YES	Bases	0	0	0	0	0	-
93	Dimethyl Phthalate	YES	Bases	0	0	0	0	0	-
94	2,4-Dinitrotoluene*	YES	Bases	0	0	0	0	0	-
95	2,6-Dinitrotoluene	YES	Bases	0	0	0	0	0	-
96	1,2-Diphenylhydrazine	YES	Bases	0	0	0	0	0	-
97	Endosulfan (alpha)	YES	Bases	0	0	0	0	0	-
98	Endosulfan (beta)	YES	Bases	0	0	0	0	0	-
99	Endosulfan sulfate	YES	Bases	0	0	0	0	0	-
100	Erdrin	YES	Bases	0	0	0	0	0	-
101	Erdrin Aldehyde	YES	Bases	0	0	0	0	0	-
102	Fluoranthene	YES	Bases	0	0	0	0	0	-
103	Fluorene	YES	Bases	0	0	0	0	0	-
104	Heptachlor	YES	Bases	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	-
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	-
107	Hexachlorocyclopentadiene*	YES	Bases	0	0	0	0	0	-
108	Hexachlorocyclohexan (alpha)	YES	Bases	0	0	0	0	0	-
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	0	-
110	Hexachlorocyclohexan (gamma)	YES	Bases	0	0	0	0	0	-
111	Hexachlorocyclopentadiene	YES	Bases	0	0	0	0	0	-
112	Hexachloroethane	YES	Bases	0	0	0	0	0	-
113	Indeno(1,2,3-CD)Pyrene*	YES	Bases	0	0	0	0	0	-
114	Isophorone	YES	Bases	0	0	0	0	0	-
115	Naphthalene	YES	Bases	0	0	0	0	0	-
116	Nitrobenzene	YES	Bases	0	0	0	0	0	-
117	N-Nitrosodi-N-Propylamine*	YES	Bases	0	0	0	0	0	-
118	N-Nitrosodi-N-Methylamine*	YES	Bases	0	0	0	0	0	-
119	N-Nitrosodi-N-Phenylamine*	YES	Bases	0	0	0	0	0	-
120	PCB-1016	YES	Bases	0	0	0	0	0	-
121	PCB-1211	YES	Bases	0	0	0	0	0	-
122	PCB-1232	YES	Bases	0	0	0	0	0	-
123	PCB-1242	YES	Bases	0	0	0	0	0	-
124	PCB-1248	YES	Bases	0	0	0	0	0	-
125	PCB-1254	YES	Bases	0	0	0	0	0	-
126	PCB-1260	YES	Bases	0	0	0	0	0	-
127	Phenanthrene	YES	Bases	0	0	0	0	0	-
128	Pyrene	YES	Bases	0	0	0	0	0	-
129	1,2,4-Trichlorobenzene	YES	Bases	0	0	0	0	0	-

2.25	Enter Q <sub>d</sub> = wastewater discharge flow from facility (MGD)
3.48126525	Q <sub>d</sub> = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter flow from upstream discharge Q <sub>d2</sub> = background stream flow in MGD above point of discharge
0	Q <sub>d2</sub> = background stream flow from upstream source (cfs)
2.204	Enter 7Q10, Q <sub>s</sub> = background stream flow in cfs above point of discharge
1.655	Enter or estimated, 1Q10, Q <sub>s</sub> = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
48.22	Enter Mean Annual Flow, Q <sub>s</sub> = background stream flow in cfs above point of discharge
4.062	Enter 7Q2, Q <sub>s</sub> = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Laka	Enter C <sub>s</sub> = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q <sub>d</sub> + Q <sub>d2</sub> + Q <sub>s</sub>	Q <sub>r</sub> = resultant in-stream flow, after discharge
Calculated on her	C <sub>r</sub> = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
50	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 n.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? **YES* Other option would be to a Lake. (This changes the partition coefficients for the metals)

\*\* Using Partition Coefficients

December 3, 2025

Freshwater F&W classification														Freshwater Acute (µg/l) Q <sub>a</sub> = 1Q10				Freshwater Chronic (µg/l) Q <sub>a</sub> = 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q <sub>a</sub> = Annual Average Non-Carcinogen Q <sub>a</sub> = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (C <sub>25%</sub> ) Daily Max	Max Daily Discharge as reported by Applicant (C <sub>max</sub> )	Water Quality Criteria (C <sub>1</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit	RP?	Background from upstream source (C <sub>25%</sub> ) Monthly Ave	Avg Daily Discharge as reported by Applicant (C <sub>avg</sub> )	Water Quality Criteria (C <sub>1</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit	RP?	Water Quality Criteria (C <sub>1</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit	RP?						
1	Antimony			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
2	Arsenic		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
3	Beryllium			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
4	Cadmium			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
5	Chromium/ Chromium III			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
6	Chromium/ Chromium VI			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
7	Copper		YES	0	6.2	1.0E+01	26.598	5.319	Yes	0	0.53088	1.0E+01	20.847	4.189	No	0.10E+02	6.10E+02	1.22E+02	No						
8	Lead			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
9	Mercury			0	0.0007	0.0007	3.541	0.708	No	0	0.0005	0.0007	0.020	0.004	No	4.24E-02	8.93E-02	1.39E-02	No						
10	Nickel			0	31	0.10E+02	781.048	152.210	No	0	7.283	0.10E+02	83.584	18.713	No	9.93E+02	1.62E+03	3.24E+02	No						
11	Selenium			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
12	Silver			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
13	Thallium			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
14	Zinc		YES	0	64	1.0E+01	291.198	58.240	Yes	0	28.7	1.0E+01	324.980	84.992	No	1.49E+04	2.43E+04	4.85E+03	No						
15	Cyanide			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
16	Total Phenolic Compounds			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
17	Hardness (As CaCO <sub>3</sub> )			0	83400	-	-	-	-	78800	-	-	-	-	-	-	-	-	-						
18	Acrolein			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
19	Acrylonitrile			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
20	Aldrin		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
21	Benzene		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
22	Bromoform		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
23	Carbon Tetrachloride		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
24	Chlordane		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
25	Chlorobenzene			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
26	Chlorodibromo-Methane		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
27	Chloroethane			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
28	2-Chloro-Ethylvinyl Ether			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
29	Chloroform		YES	0	9.8	0.05	873.931	174.786	No	0	3.267	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
30	4,4' - DDD		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
31	4,4' - DDE		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
32	4,4' - DDT		YES	0	0	1.100	1.823	0.325	No	0	0	0.001	0.002	0.000	No	1.98E+02	2.98E+02	5.96E+01	No						
33	Dichlorobromo-Methane		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
34	1,1-Dichloroethane			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
35	1,2-Dichloroethane		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
36	Trans-1,2-Dichloro-Ethylene			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
37	1,1-Dichloroethylene		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
38	1,2-Dichloropropane			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
39	1,3-Dichloro-Propylene			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
40	Dieldrin		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
41	Ethylbenzene			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
42	Methyl Bromide			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
43	Methyl Chloride			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
44	Methylene Chloride		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
45	1,1,2,2-Tetrachloro-Ethane		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
46	Tetrachloro-Ethylene		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
47	Toluene			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
48	Toxaphene		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
49	Tributyltin (TBT)		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
50	1,1,1-Trichloroethane			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
51	1,1,2-Trichloroethane		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
52	Trichloroethylene		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
53	Vinyl Chloride		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
54	p-Chloro-m-Cresol			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
55	2-Chlorophenol			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
56	2,4-Dichlorophenol			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
57	2,4-Dimethylphenol			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
58	4,6-Dinitro-O-Cresol			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
59	2,4-Dinitrophenol			0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
60	4,6-Dinitro-2-methylphenol		YES	0	0	0.05	873.931	174.786	No	0	0	0.05	426.789	85.354	No	0.10E+02	6.10E+02	1.22E+02	No						
61	Dioxin (2,3,7,																								

# Clanton Walnut Creek WWTP (AL0054631) – Outfall 0011

## Total Recoverable Copper DMR Data

Monitor Pd End Date	Monthly Average (mg/L)	Daily Maximum (mg/L)
4/30/20	0	0
5/31/20	0	0
6/30/20	0	0
7/31/20	0	0
8/31/20	0	0
9/30/20	0	0
10/31/20	0.0031	0.0031
11/30/20	0	0
12/31/20	0.0062	0.0062
1/31/21	0	0
2/28/21	0	0
3/31/21	0	0
4/30/21	0	0
5/31/21	0	0
6/30/21	0	0
7/31/21	0	0
8/31/21	0	0
9/30/21	0	0
10/31/21	0	0
11/30/21	0	0
12/31/21	0	0
1/31/22	0	0
2/28/22	0	0
3/31/22	0	0
4/30/22	0	0
5/31/22	0	0
6/30/22	0	0
7/31/22	0	0
8/31/22	0	0
9/30/22	0	0
10/31/22	0	0
11/30/22	0	0
12/31/22	0	0
1/31/23	0	0
2/28/23	0	0
3/31/23	0	0
4/30/23	0	0
5/31/23	0	0

6/30/23	0	0	
7/31/23	0	0	
8/31/23	0	0	
9/30/23	0	0	
10/31/23	0	0	
11/30/23	0	0	
12/31/23	0	0	
1/31/24	0.0035	0.0035	
2/29/24	0.0017	0.0017	
3/31/24	0	0	
4/30/24	0	0	
5/31/24	0.001	0.001	
6/30/24	0.001	0.001	
7/31/24	0	0	
8/31/24	0	0	
9/30/24	0.0033	0.0033	
10/31/24	0.002	0.002	
11/30/24	0.002	0.002	
12/31/24	0.0015	0.0015	
1/31/25	0	0	
2/28/25	0	0	
3/31/25	0.0019	0.0019	
4/30/25	0.001	0.001	
5/31/25	0.0025	0.0025	
6/30/25	0.002	0.002	
7/31/25	0.0015	0.0015	
8/31/25	0.0019	0.0019	
1/20/2025 Application	0	0	
1/31/2025 Application	0	0	
2/5/2025 Application	0	0	
<b>Monthly Average</b>	<b>0.00053088</b>	<b>Maximum</b>	<b>0.0062</b>

# Clanton Walnut Creek WWTP (AL0054631) – Outfall 0011

## Total Recoverable Nickel DMR Data

Monitor Pd End Date	Monthly Average (mg/L)	Daily Maximum (mg/L)
4/30/20	0.0045	0.0045
5/31/20	0.0036	0.0036
6/30/20	0.0053	0.0053
7/31/20	0.0052	0.0052
8/31/20	0.0061	0.0061
9/30/20	0.0054	0.0054
10/31/20	0.0088	0.0088
11/30/20	0.0073	0.0073
12/31/20	0.0079	0.0079
1/31/21	0.0048	0.0048
2/28/21	0.0043	0.0043
3/31/21	0.0058	0.0058
4/30/21	0.0038	0.0038
5/31/21	0.0085	0.0085
6/30/21	0.0084	0.0084
7/31/21	0.009	0.009
8/31/21	0.0084	0.0084
9/30/21	0.00686	0.00686
10/31/21	0.007	0.007
11/30/21	0.0087	0.0087
12/31/21	0.013	0.013
1/31/22	0.016	0.016
2/28/22	0.017	0.017
3/31/22	0.013	0.013
4/30/22	0.0071	0.0071
5/31/22	0.0061	0.0061
6/30/22	0.0041	0.0041
7/31/22	0.0055	0.0055
8/31/22	0.017	0.017
9/30/22	0.0086	0.0086
10/31/22	0.0065	0.0065
11/30/22	0.005	0.005
12/31/22	0.015	0.015
1/31/23	0.0055	0.0055
2/28/23	0.0073	0.0073
3/31/23	0.0074	0.0074
4/30/23	0.011	0.011
5/31/23	0.0067	0.0067

6/30/23	0.018	0.018		
7/31/23	0.031	0.031		
8/31/23	0.016	0.016		
9/30/23	0.013	0.013		
10/31/23	0.011	0.011		
11/30/23	0.0069	0.0069		
12/31/23	0.0058	0.0058		
1/31/24	0.0087	0.0087		
2/29/24	0.005	0.005		
3/31/24	0.0038	0.0038		
4/30/24	0.0026	0.0026		
5/31/24	0.0033	0.0033		
6/30/24	0.0029	0.0029		
7/31/24	0.0033	0.0033		
8/31/24	0.003	0.003		
9/30/24	0.0041	0.0041		
10/31/24	0.0029	0.0029		
11/30/24	0.0028	0.0028		
12/31/24	0.0017	0.0017		
1/31/25	0.0034	0.0034		
2/28/25	0.0051	0.0051		
3/31/25	0.0042	0.0042		
4/30/25	0.0037	0.0037		
5/31/25	0.0047	0.0047		
6/30/25	0.0037	0.0037		
7/31/25	0.0034	0.0034		
8/31/25	0.0051	0.0051		
1/20/2025 Application	0.0042	0.0061		
1/31/2025 Application	0.0044			
2/5/2025 Application	0.0061			
	<b>Monthly Average</b>	<b>0.007283235</b>	<b>Maximum</b>	<b>0.031</b>

# Clanton Walnut Creek WWTP (AL0054631) – Outfall 0011

## Total Recoverable Zinc DMR Data

Monitor Pd End Date	Monthly Average (mg/L)	Daily Maximum (mg/L)
4/30/20	0.026	0.026
5/31/20	0.017	0.017
6/30/20	0.043	0.043
7/31/20	0.033	0.033
8/31/20	0.029	0.029
9/30/20	0.033	0.033
10/31/20	0.02	0.02
11/30/20	0.023	0.023
12/31/20	0.044	0.044
1/31/21	0.029	0.029
2/28/21	0.043	0.043
3/31/21	0.027	0.027
4/30/21	0.023	0.023
5/31/21	0.042	0.042
6/30/21	0.037	0.037
7/31/21	0.024	0.024
8/31/21	0.04	0.04
9/30/21	0.0278	0.0278
10/31/21	0.019	0.019
11/30/21	0.014	0.014
12/31/21	0.017	0.017
1/31/22	0.021	0.021
2/28/22	0.015	0.015
3/31/22	0.012	0.012
4/30/22	0.019	0.019
5/31/22	0.016	0.016
6/30/22	0.012	0.012
7/31/22	0.03	0.03
8/31/22	0.022	0.022
9/30/22	0.017	0.017
10/31/22	0.019	0.019
11/30/22	0.016	0.016
12/31/22	0.02	0.02
1/31/23	0.062	0.062
2/28/23	0.016	0.016
3/31/23	0.025	0.025
4/30/23	0.026	0.026
5/31/23	0.018	0.018

6/30/23		0.026		0.026
7/31/23		0.058		0.058
8/31/23		0.032		0.032
9/30/23		0.021		0.021
10/31/23		0.055		0.055
11/30/23		0.044		0.044
12/31/23		0.043		0.043
1/31/24		0.027		0.027
2/29/24		0.022		0.022
3/31/24		0.018		0.018
4/30/24		0.021		0.021
5/31/24		0.024		0.024
6/30/24		0.018		0.018
7/31/24		0.039		0.039
8/31/24		0.025		0.025
9/30/24		0.02		0.02
10/31/24		0.013		0.013
11/30/24		0.019		0.019
12/31/24		0.014		0.014
1/31/25		0.064		0.064
2/28/25		0.023		0.023
3/31/25		0.02		0.02
4/30/25		0.028		0.028
5/31/25		0.019		0.019
6/30/25		0.014		0.014
7/31/25		0.015		0.015
8/31/25		0.019		0.019
1/20/2025 Application		0.019		0.059
1/31/2025 Application		0.02		
2/5/2025 Application		0.059		
	<b>Monthly Average</b>	<b>0.026703088</b>	<b>Maximum</b>	<b>0.064</b>

**Lee, Sandra**

---

**From:** Stanley Higgins <shiggins@clantonal.gov>  
**Sent:** Tuesday, January 6, 2026 12:48 PM  
**To:** Lee, Sandra  
**Cc:** Anthony Robinson  
**Subject:** Responsible Official

Sandra the responsible official is:

Awlahjaday Agee  
Chairman  
The Water Works & Sewer Board of the City of Clanton  
[AAgee@clantonal.gov](mailto:AAgee@clantonal.gov)

Best,

**Stanley Higgins, PE**  
**City Engineer – City of Clanton**  
**Director of Utilities – Clanton Water & Sewer Board**

505 2<sup>nd</sup> Avenue North • Clanton, AL 35045

 205-299-0775  
 205-755-1105 Ext 213  
 [shiggins@clantonal.gov](mailto:shiggins@clantonal.gov)  
 [www.clantonal.gov](http://www.clantonal.gov)



# NPDES Individual Permit - Modification/Reissuance - Municipal (Form 188)

version 1.16

(Submission #: HQ9-EJFR-YYAGD, version 4)

Digitally signed by:  
AEPACS  
Date: 2025.12.04 16:13:20 -06:00  
Reason: Submission Data  
Location: State of Alabama

## Details

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Submission ID HQ9-EJFR-YYAGD

## Form Input

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### General Instructions

NPDES Individual Permit Modification and Reissuance Form – Publicly-Owned Treatment Works (POTW), Other Treatment Works Treating Domestic Sewage (TWTDS), and Public Water Supply Treatment Plants

IF YOU ARE APPLYING FOR A PERMIT MODIFICATION, PLEASE CONTACT YOUR ASSIGNED PERMIT CONTACT TO DISCUSS THE TYPE OF MODIFICATION YOU SHOULD APPLY FOR BEFORE COMPLETING THIS FORM.

This form should be used to submit the following permit requests for permitted Publicly-Owned Treatment Works (POTW), Other Treatment Works Treating Domestic Sewage (TWTDS), and Public Water Supply Treatment Plants:

- (1) Permit Transfers
- (2) Permittee/Facility Name Changes
- (3) Minor Modifications  
This modification may not be used for changes that would result in changes to permit conditions
- (4) Major Modifications (No Effluent Limit Change)
- (5) Major Modifications (Effluent Limit Change)
- (6) Reissuances  
Reissuance of a permit due to approaching expiration  
Revocation and Reissuance of permit prior to its scheduled expiration

Please complete all questions and attach all necessary documentation as prompted throughout the application process. Incomplete or incorrect information will delay processing.

Applicable Fees:

Permit Transfers and/or Permittee/Facility Name Changes  
\$800  
Minor Modifications  
\$800  
Major Modifications (No Effluent Limit Change)  
\$3,140 (Major Sources)  
\$2,250 (Minor Sources or Public Water Supply Treatment Plants)  
Major Modifications (Effluent Limit Change)  
\$7,060 (Major Sources)  
\$4,290 (Minor Sources or Public Water Supply Treatment Plants)  
Reissuances  
\$7,060 (Major Sources)  
\$4,290 (Minor Sources or Public Water Supply Treatment Plants)  
For assistance, please click here to determine the permit engineer responsible for the site or call (334) 271-7810.

### Processing Information

**Purpose of Application**

Reissuance of Permit Due to Approaching Expiration

**Please indicate if the Permittee is applying for a permit transfer and/or name change in addition to permit modification or reissuance:**

Only Permittee or Facility Name Change

**Action Type**

Reissuance with NOC

**Briefly describe any planned changes at the facility that are included in this reissuance application:**

None

**Do you have additional contacts associated with this site?**

No

**Permit Information**

**Permit Number**

AL0054631

**Current Permittee Name**

City of Clanton

**Permittee**

**Permittee Name**

The Water Works & Sewer Board of the City of Clanton

**Mailing Address**

Post Office Box 580

Clanton, AL 35046

**Is the Operator the same as the Permittee?**

Yes

**Has the Operator's scope of responsibility changed?**

No

**Responsible Official**

**Prefix**

Hon.

**First Name      Last Name**

Jeff                  Mims

**Title**

Superintendent/Mayor

**Organization Name**

City of Clanton

**Phone Type    Number      Extension**

Business        2057556840

**Email**

mayorjmims@clantonal.gov

**Mailing Address**

P O Box 580

Clanton, AL 35046

**Existing Permit Contacts**

Affiliation Type	Contact Information	Remove?
Emergency Contact,DMR Contact,Environmental Contact	Anthony Robinson, City of Clanton	Remove

Affiliation Type	Contact Information	Remove?
Permittee,Notification Recipient	City of Clanton	Remove
Notification Recipient,Responsible Official	Jeff Mims, City of Clanton	Remove

## Facility/Site Information

### Facility/Site Name

Walnut Creek WWTP

### Organization/Ownership Type

Water/Sewer/Utility District or Board

The Facility/Site Address is the physical location of the treatment plant. Do not enter a PO Box. Do not enter the address of the office of the Permittee if different from the treatment plant.

### Facility/Site Physical Location Address

1574 Chilton County Road 51  
Clanton, AL 35046

### Facility/Site County

Chilton

### Facility/Site Contact

#### Prefix

Mr.

#### First Name

Anthony

#### Last Name

Robinson

#### Title

Supervisor/Operator

#### Organization Name

The Water Works & Sewer Board of the City of Clanton

#### Phone Type

Business

#### Number

205-755-2380

#### Extension

#### Email

arobinson@clantonal.gov

## Note

Detailed directions should be included if a street address is not available.

### Detailed Directions to the Facility/Site

NONE PROVIDED

Please refer to the link below for Lat/Long map instruction help.

[Map Instruction Help](#)

### Facility/Site Front Gate Latitude and Longitude

32.86861100000000,-86.60027800000000

1574 Chilton County Road 51, Clanton, AL

### Primary SIC Code

4952-Sewerage Systems

### Primary NAICS Code

221320-Sewage Treatment Facilities

**Emergency Contact**

**Prefix**

Mr.

**First Name      Last Name**

Anthony          Robinson

**Title**

Supervisor/Operator

**Phone Type      Number          Extension**

Business          205-755-2380

**Email**

arobinson@clantonal.gov

**Does the facility have a designated Environmental Contact who is different than the Facility Contact or Emergency Contact listed above?**

No

**Enforcement History**

**Has the applicant been issued any Notices of Violation, Orders (Consent or Administrative/Unilateral), or Judicial Actions (Complaint, Settlement Agreement, Consent Decree, or Court Order) concerning water pollution or other permit violations within the State of Alabama in the past five years?**

Yes

**Identify all Notices of Violation, Orders (Consent or Administrative/Unilateral), or Judicial Actions (Complaint, Settlement Agreement, Consent Decree, or Court Order) concerning water pollution or other permit violations, if any, against the Applicant within the State of Alabama in the past five years.**

Facility/Site Name	Permit Number	Type of Action	Date of Action
Walnut Creek WWTP	AL0054631	Consent Order	04/14/2020

**Wastewater Treatment & Discharge Information**

**Please indicate which type of operations occur at this facility:**

Treatment Works Treating Domestic Sewage

**What treatment type is used at this facility:**

Mechanical (WWTP)

**What discharge options are used at this facility:**

Surface Water

**What is the Total Design Flow (in millions of gallons per day, MGD) for this facility?**

2.25

**What is the facility's total 2-Year Actual Average Flow (in millions of gallons per day, MGD)?**

1.566

**Does this facility have any current or proposed stormwater outfalls from the treatment facility?**

Yes

**Process Flow Schematic**

[NPDES Permit Flow Diagram R1.pdf - 10/24/2025 02:13 PM](#)

**Comment**

NONE PROVIDED

**Do you share an outfall with another facility?**

No

**Indicate if automatic sampling equipment or continuous wastewater flow metering equipment is being operated at this facility:**

Current	Yes/No
Continuous Wastewater Flow Metering Equipment	Yes
Automatic Sampling Equipment	Yes

Indicate if installation of automatic sampling equipment or continuous wastewater flow metering equipment is planned at this facility:

Planned	Yes/No
Continuous Wastewater Flow Metering Equipment	No
Automatic Sampling Equipment	No

**Schematic Diagram**

[NPDES Permit Flow Diagram R1.pdf - 10/24/2025 02:14 PM](#)

**Comment**

NONE PROVIDED

Are any wastewater collection or treatment modifications or expansions planned during the next three years that could alter wastewater volumes or characteristics (Note: Permit Modification may be required)?

Yes

Please briefly describe these changes and any potential or anticipated effects on the wastewater quality and quantity:

Addition of 125 foot diameter clarifier which will allow plant to better handle I&I from rain events.

**Treatment Methods (TWTDS)**

**Treatment Level**

Preliminary Treatment (e.g., grit removal, flow equalization, screening)

Secondary Treatment [e.g., suspended growth biological treatment; attached growth and combined biological treatment].

**Wastewater Disinfection Technology Information**

Chlorination

Dechlorination

**Please select all POTW Treatment Categories that apply.**

Activated Sludge Process & Modifications

Disinfection

Nitrogen Removal (Biological)

Phosphorus Removal (Biological)

Aeration

Clarification

Dechlorination

Nitrogen Control (Biological)

Sedimentation

**Please select all unit operations that apply for Activated Sludge Process & Modifications:**

Activated Sludge, Anaerobic/Anoxic/Oxic

Activated Sludge, Extended Aeration

Reactor (Oxidation Ditch)

Activated Sludge, Complete Mix

Activated Sludge, Conventional

Activated Sludge, With Biological Denitrification

**Please select all unit operations that apply for Aeration:**

Aeration (general)

Aeration (pre-treatment)

Aeration (post-treatment)

**Please select all unit operations that apply for Clarification:**

Clarification, Secondary

**Please select all unit operations that apply for Disinfection:**

Disinfection, Gaseous Chlorine

Disinfection, Chlorination

**Please select all unit operations that apply for Nitrogen Control (Biological):**

Nitrification, Biological (Combined and BOD Reduction)

**Please select all unit operations that apply for Phosphorus Removal (Biological):**

Phosphorus Removal, Biological

**Please select all unit operations that apply for Preliminary Treatment:**

Aerated Grit Chambers  
Screen, Mechanical Bar  
Grit Removal  
Scum Removal

**Please select all unit operations that apply for Sedimentation:**

Sediment Basins

**Waste Storage & Disposal Information**

**Any storage of solids or liquids at the facility that have any potential for accidental discharge to a water of the state?**

No

**Collection System Information**

**Collection Systems**

Collection System ID	Collection System Name	Owner Type of Collection System	Population of Collection System
AL0054631	The Water Works & Sewer Board of the City of Clanton	Publicly owned (Owned by State, municipality, or Tribal government. This includes a district association or other public body created by or pursuant to State law and having jurisdiction over the disposal of sewage).	7,200

**Industrial Indirect Discharge Contributors**

**Does this wastewater treatment system receive or plan to receive industrial source wastewater contributions?**

Yes

**How will you be submitting the list of existing and proposed industrial source wastewater contributions to the municipal wastewater treatment system?**

I have a list to attach.

**Please attach the list of existing and proposed industrial source wastewater contributions to the municipal wastewater treatment system:**

[Table F - SIUs.pdf - 10/14/2025 03:35 PM](#)

**Comment**

NONE PROVIDED

**Are industrial wastewater contributions regulated via a locally approved sewer use ordinance?**

Yes

**Please attach a copy of the ordinance.**

[Sewer Use Ordinance.pdf - 03/04/2025 12:43 PM](#)

**Comment**

NONE PROVIDED

**Coastal Zone Information**

**Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County?**

No

## Anti-Degradation Evaluation

Does this modification/reissuance include a new or increased discharge that began after April 3, 1991?

No

Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced above?

No

## EPA Application Forms

All Applicants must submit certain EPA permit application forms. More than one application form may be required from a POTW or other TWTDS depending on the number and types of discharges or outfalls.

The EPA application forms must be submitted as follows:

1. Applicants for new or existing discharges of sanitary wastewater from Publicly-Owned Treatment Works (POTW) and Other Treatment Works Treating Domestic Sewage (TWTDS) must submit Form 2A. If the facility design capacity is equal to or greater than 1 MGD, Form 2F is also required.
2. Applicants for new or existing land application of sanitary wastewater must submit Form 2A and Form 2F.
3. Applicants for new and existing discharges of process wastewater from water treatment facilities (i.e. public water supply treatment plants) must submit Form 1 and Form 2C.
4. Applicants that generate sewage sludge, derive a material from sewage sludge, or dispose of sewage sludge must submit Part 2 of Form 2S.

The EPA application forms are found on the Department's website [here](#).

### **EPA Form 2A**

[20343797\\_frc.pdf - 05/05/2025 10:11 AM](#)

[20344625\\_frc.pdf - 05/05/2025 10:11 AM](#)

[20345056\\_frc.pdf - 05/05/2025 10:11 AM](#)

[Topographic Map.pdf - 05/05/2025 10:17 AM](#)

[2022-Toxicity Report.pdf - 05/05/2025 10:25 AM](#)

[2023-Toxicity Report.pdf - 05/05/2025 10:25 AM](#)

[2024 Toxicity Report.pdf - 05/05/2025 10:25 AM](#)

[20354038\\_frc.pdf - 06/05/2025 01:59 PM](#)

[3510-2A V3 -Signed.pdf - 12/04/2025 04:03 PM](#)

[NPDES Permit Flow Diagram R2.pdf - 12/04/2025 04:05 PM](#)

#### **Comment**

NONE PROVIDED

### **EPA Form 2F**

[Impervious Area Map.pdf - 05/05/2025 11:12 AM](#)

[3510-2F V3 Signed.pdf - 12/04/2025 04:02 PM](#)

#### **Comment**

NONE PROVIDED

### **EPA form 2S**

[Sludge Field 4 V2.pdf - 05/05/2025 10:12 AM](#)

[Sludge - Land Application Treatment Processes.pdf - 05/05/2025 10:13 AM](#)

[Sludge Line Diagram V2.pdf - 05/05/2025 10:13 AM](#)

[3510-2S R1 signed.pdf - 10/24/2025 02:10 PM](#)

#### **Comment**

NONE PROVIDED

### **Other attachments (as needed)**

NONE PROVIDED

#### **Comment**

NONE PROVIDED

## Topographic Map

Attach topographic map here.

[Topo Map.pdf - 05/05/2025 11:13 AM](#)

#### **Comment**

NONE PROVIDED

## Engineering Report/BMP Plan Requirements

### Engineering Report/BMP Plan Requirements

NONE PROVIDED

#### Comment

NONE PROVIDED

## Outfalls (1 of 1)

### Outfall: 001

#### Do you want to remove this outfall from the modified/reissued permit?

No

#### Outfall Identifier

001

#### Is this Outfall equipped with a diffuser?

No

#### What is this Outfall's 2-Year Average Flow (in millions of gallons per day, MGD)?

1.566

#### Receiving Water

Walnut Creek

#### Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

#### Please refer to the link below for Lat/Long map instruction help.

[Map Instruction Help](#)

#### Location of Outfall or Discharge Point/Receiving Water

32.86748900000000, -86.59764600000000

#### Are the location coordinates above still correct for this outfall?

Yes

[A list of the 303\(d\) impaired waters can be found here.](#)

#### 303(d) Segment?

No

[A list of waters subject to a TMDL can be found here.](#)

#### TMDL Segment?

No

### **NOTE**

---

If a TMDL Compliance Schedule is requested, the following should be attached as supporting documentation: (1) Justification for the requested Compliance Schedule (e.g., time for design and installation of control equipment, etc.); (2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, and MDL/ML, etc. should be submitted as available); (3) Requested interim limitations, if applicable; (4) Date of final compliance with the TMDL limitations; and (5) Any other additional information available to support the requested compliance schedule.

### **TMDL Attachments**

NONE PROVIDED

#### Comment

NONE PROVIDED

**Stormwater Outfall(s) (1 of 2)**

**Stormwater Outfall: 002**

**Do you want to remove this outfall from the modified/reissued permit?**

No

**Stormwater Outfall Identifier**

002

**Receiving Water**

Walnut Creek

**Does the discharge enter the named receiving water via an unnamed tributary?**

NONE PROVIDED

**Please refer to the link below for Lat/Long map instruction help.**

[Map Instruction Help](#)

**Location of Outfall or Discharge Point/Receiving Water**

32.86863900000000, -86.59999999999999

**Are the location coordinates above still correct for this stormwater outfall?**

Yes

**303(d) Segment?**

No

**TMDL Segment?**

No

**Stormwater Outfall(s) (2 of 2)**

**Stormwater Outfall: 003**

**Do you want to remove this outfall from the modified/reissued permit?**

No

**Stormwater Outfall Identifier**

003

**Receiving Water**

Walnut Creek

**Does the discharge enter the named receiving water via an unnamed tributary?**

NONE PROVIDED

**Please refer to the link below for Lat/Long map instruction help.**

[Map Instruction Help](#)

**Location of Outfall or Discharge Point/Receiving Water**

32.86688900000000, -86.59811100000000

**Are the location coordinates above still correct for this stormwater outfall?**

Yes

**303(d) Segment?**

No

**TMDL Segment?**

No

**Fee**

**Fee**

7060

**Note: Additional Fees may be assessed after the review of the application is complete. These fees may include any of the following:**

Modeling with Data Collection (10 Stations) - \$60,390

Modeling with Data Collection (5 Stations) - \$49,315

Modeling - desktop - \$4,855

Review of Model Performed by Others - \$2,705

Seasonal Limits - \$4,855/additional season

Biomonitoring & Toxicity Limits - \$1,015

Please contact your area engineer if you have any questions about which additional fees may be assessed for this application.

**Application Preparer**

**Application Preparer**

**Prefix**

NONE PROVIDED

**First Name**

Stanley

**Last Name**

Higgins

**Title**

Director of Utilities

**Organization Name**

The Water Works & Sewer Board of the City of Clanton

**Phone Type**

Mobile

**Number**

205-299-0775

**Extension**

**Email**

shiggins@clantonal.gov

**Address**

PO BOX 580

CLANTON, AL 35046-0580

**Revisions**

Revision	Revision Date	Revision By
Revision 1	1/6/2025 2:51 PM	Stanley Higgins
Revision 2	4/23/2025 4:16 PM	Stanley Higgins
Revision 3	10/14/2025 3:27 PM	Stanley Higgins
Revision 4	12/4/2025 3:42 PM	Stanley Higgins

# Agreements and Signature(s)

## SUBMISSION AGREEMENTS

- I am the owner of the account used to perform the electronic submission and signature.
- I have the authority to submit the data on behalf of the facility I am representing.
- I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

*The information contained in this form must be certified by a responsible official as defined in ADEM Administrative Code r. 335-6-6-.09 "signatories to permit applications and reports" (see below).*

*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.*

### **335-6-6-.09 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.**

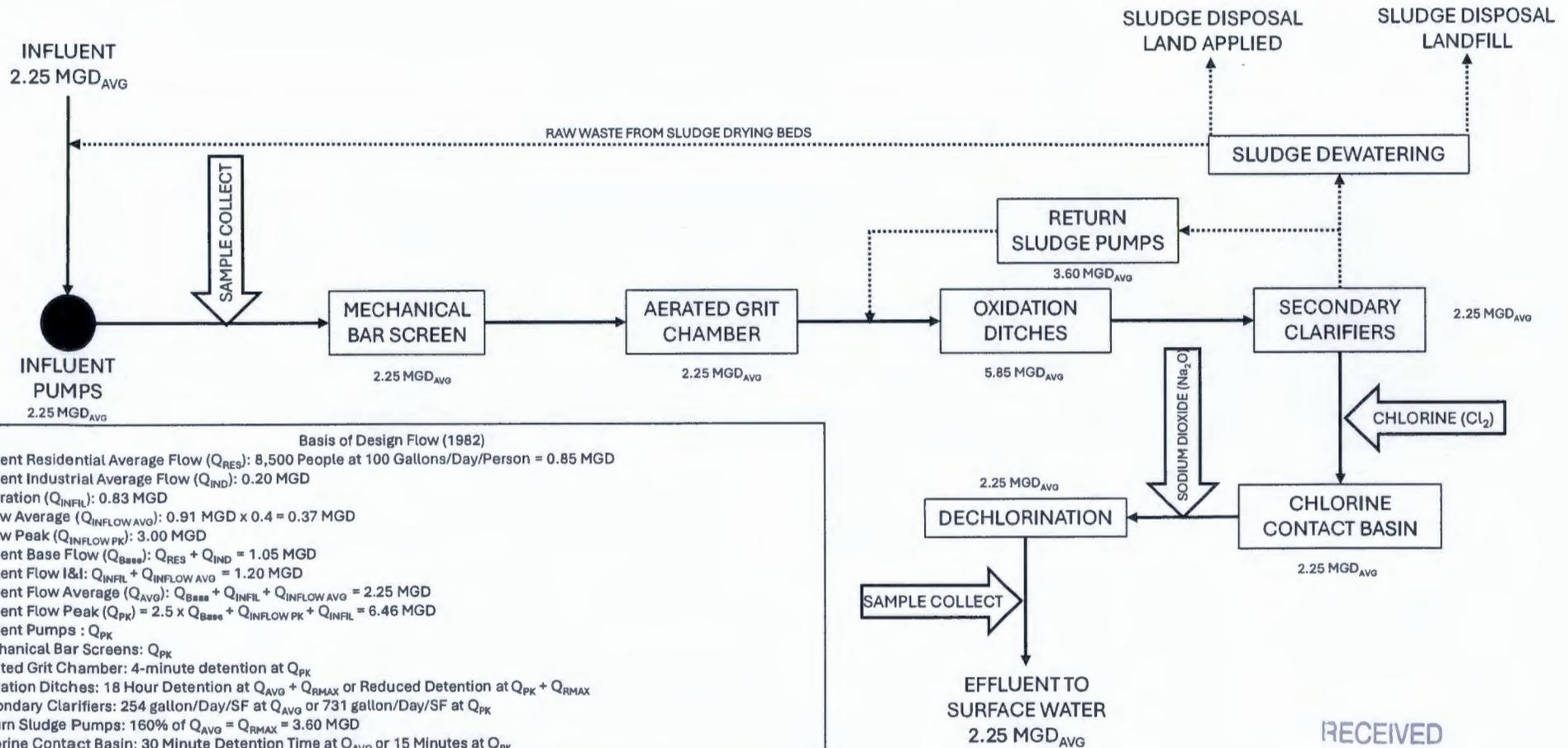
*(1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:*

- (a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;*
- (b) In the case of a partnership, by a general partner;*
- (c) In the case of a sole proprietorship, by the proprietor; or*
- (d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.*

**Signed**  
**By** Stanley Higgins on 12/04/2025 at 4:07 PM



# The Water Works & Sewer Board of the City of Clanton Walnut Creek WWTP – Process Flow Diagram



**Basis of Design Flow (1982)**

Influent Residential Average Flow ( $Q_{\text{RES}}$ ): 8,500 People at 100 Gallons/Day/Person = 0.85 MGD  
 Influent Industrial Average Flow ( $Q_{\text{IND}}$ ): 0.20 MGD  
 Infiltration ( $Q_{\text{INFIL}}$ ): 0.83 MGD  
 Inflow Average ( $Q_{\text{INFLOW AVG}}$ ):  $0.91 \text{ MGD} \times 0.4 = 0.37 \text{ MGD}$   
 Inflow Peak ( $Q_{\text{INFLOW PK}}$ ): 3.00 MGD  
 Influent Base Flow ( $Q_{\text{BASE}}$ ):  $Q_{\text{RES}} + Q_{\text{IND}} = 1.05 \text{ MGD}$   
 Influent Flow I&I:  $Q_{\text{INFIL}} + Q_{\text{INFLOW AVG}} = 1.20 \text{ MGD}$   
 Influent Flow Average ( $Q_{\text{AVG}}$ ):  $Q_{\text{BASE}} + Q_{\text{INFIL}} + Q_{\text{INFLOW AVG}} = 2.25 \text{ MGD}$   
 Influent Flow Peak ( $Q_{\text{PK}}$ ):  $2.5 \times Q_{\text{BASE}} + Q_{\text{INFLOW PK}} + Q_{\text{INFIL}} = 6.46 \text{ MGD}$   
 Influent Pumps :  $Q_{\text{PK}}$   
 Mechanical Bar Screens:  $Q_{\text{PK}}$   
 Aerated Grit Chamber: 4-minute detention at  $Q_{\text{PK}}$   
 Oxidation Ditches: 18 Hour Detention at  $Q_{\text{AVG}} + Q_{\text{RMAX}}$  or Reduced Detention at  $Q_{\text{PK}} + Q_{\text{RMAX}}$   
 Secondary Clarifiers: 254 gallon/Day/SF at  $Q_{\text{AVG}}$  or 731 gallon/Day/SF at  $Q_{\text{PK}}$   
 Return Sludge Pumps: 160% of  $Q_{\text{AVG}} = Q_{\text{RMAX}} = 3.60 \text{ MGD}$   
 Chlorine Contact Basin: 30 Minute Detention Time at  $Q_{\text{AVG}}$  or 15 Minutes at  $Q_{\text{PK}}$   
 Dechlorination:  $Q_{\text{PK}}$

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BASIS OF DESIGN

A. GIVEN OR ASSUMED

1. Design Year-----	2000	
Design Flow (Avg. 24 Hr.)-----	2.25	M.G.D.
	1563	G.P.M.
Maximum Rainwater Flow-----	4.5	M.G.D.
	3126	G.P.M.
Maximum Hourly Rainwater Flow-----	5000	G.P.M.
2. Design Loadings		
B.O.D. <sub>5</sub> -----	102	mg/L
1b. B.O.D. <sub>5</sub> /day = M.G.D. x mg/L x 8.34 lb/gal. =	1909	lb/day
Suspended Solids (S.S.) -----	120	mg/L
1b. S.S./day = M.G.D. x mg/L x 8.34 lb/gal. =	2246	lb/day
NH <sub>3</sub> -N -----	12	mg/L
1b. NH <sub>3</sub> -N/day = M.G.D. x mg/L x 8.34 lb/gal. =	225	lb/day

B. EFFLUENT CRITERIA

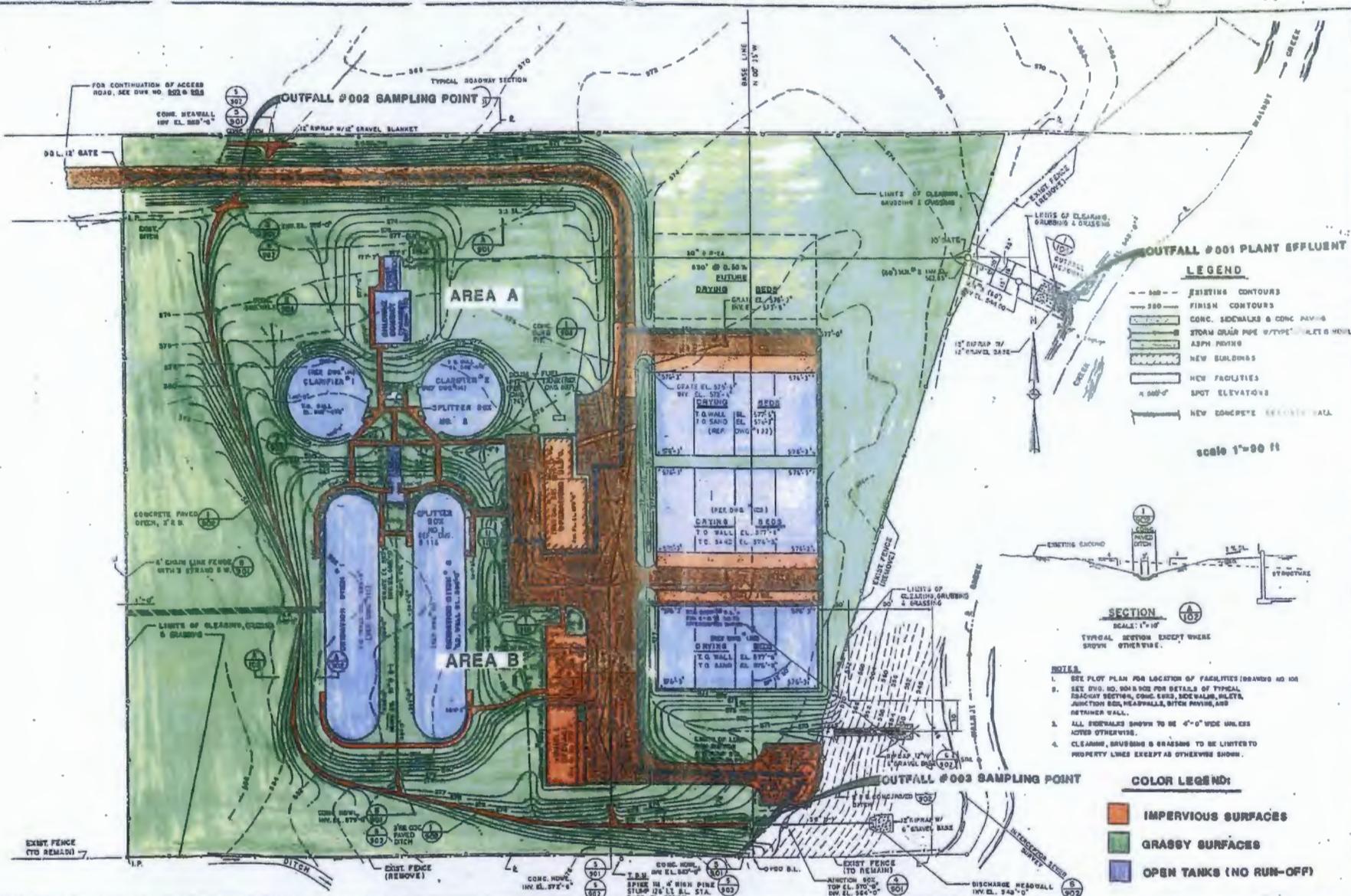
	SUMMER		WINTER
1. B.O.D. <sub>5</sub> -----	10	mg/L	30
2. S.S. -----		mg/L	
3. NH <sub>3</sub> -N -----	1	mg/L	20

C. ANTICIPATED PERFORMANCE (Effluent Criteria as Monthly Average)

1. B.O.D. <sub>5</sub> -----	< 10	mg/L	< 15
2. S.S. -----	< 15	mg/L	< 15
3. NH <sub>3</sub> -N -----	< 1	mg/L	< 10

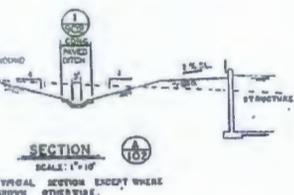
D. PRE-TREATMENT EQUIPMENT (SCREEN, GRIT, GREASE REMOVAL)

Sized for maximum rainwater flow. Equalization basin should be considered for treatment plant if maximum flows exceed 3.5 times average.



- LEGEND**
- 500 --- EXISTING CONTOURS
  - 500 --- FINISH CONTOURS
  - CONC. SIDEWALKS & CONC. PAVING
  - STORM DRAIN PIPE W/TYPE "A" LETS & HOUL
  - ASPH. PAVING
  - NEW BUILDINGS
  - NEW FACILITIES
  - SPOT ELEVATIONS
  - NEW CONCRETE REINFORCED WALL

scale 1"=50 ft



- NOTES**
1. SEE PLOT PLAN FOR LOCATION OF FACILITIES (BRANDED NO. 10)
  2. SEE DWG. NO. 004 & 005 FOR DETAILS OF TYPICAL REACTORY SECTION, CONC. LEGS, SIDE WALKS, RILEYS, JOINT BOX HEADWALLS, DITCH PAVING, AND DISTANCE WALL.
  3. ALL SIDEWALKS SHOWN TO BE 4'-0" WIDE UNLESS NOTED OTHERWISE.
  4. CLEARWAY, BRUSHING & GRASSING TO BE LIMITED TO PROPERTY LINES EXCEPT AS OTHERWISE SHOWN.

- COLOR LEGEND:**
- IMPERVIOUS SURFACES
  - GRASSY SURFACES
  - OPEN TANKS (NO RUN-OFF)

NO.	DESCRIPTION	DATE	BY	CHKD.	DATE	BY	CHKD.	DATE	BY

Betz-Converse-Murdoch Inc.  
 J.B. Converse & Co., Inc.  
 Mobile, Ala.

Montgomery, Ala.  
 Panama City, Fla.  
 Biloxi, Miss.  
 Albany, Ga.

BCM  
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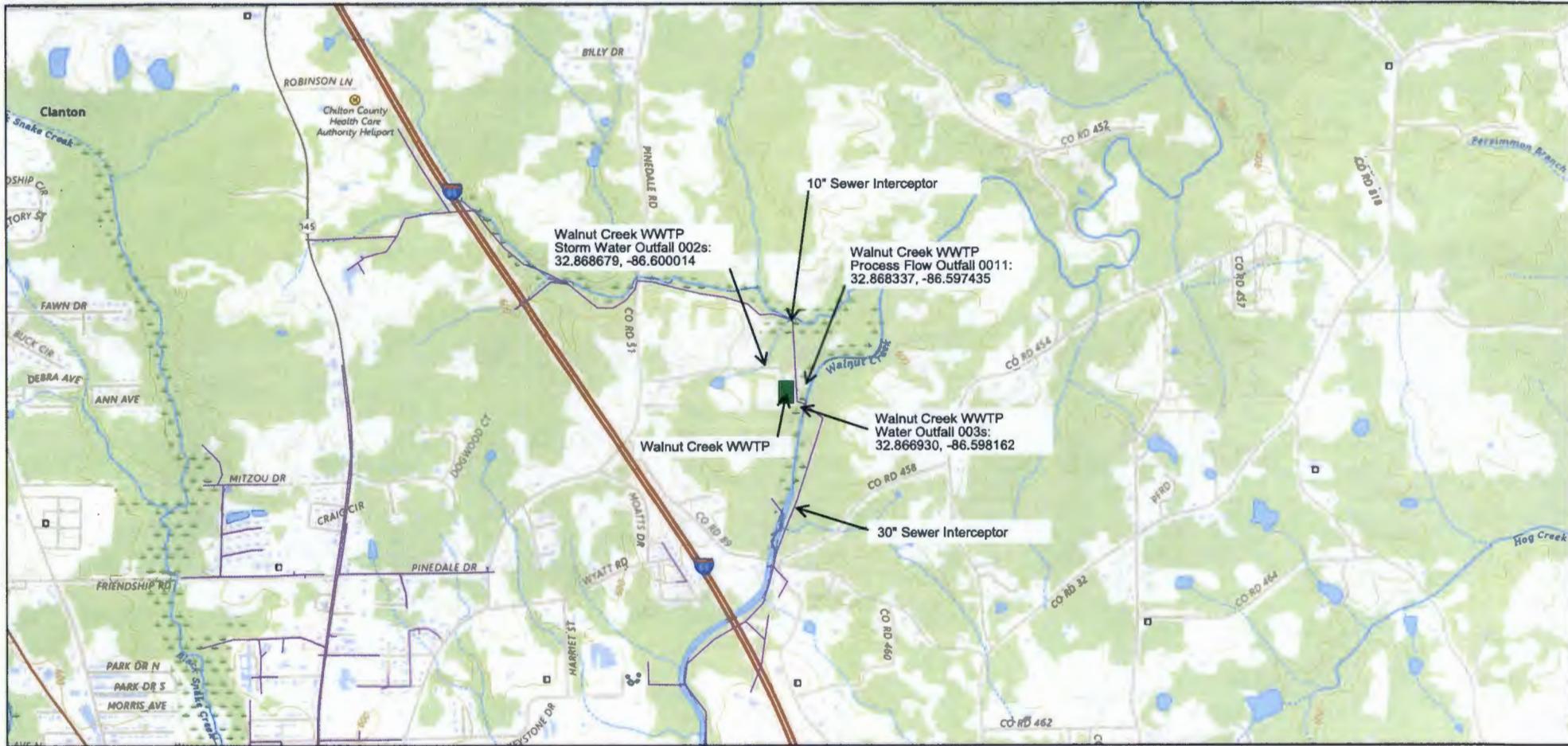
CLIENT: THE WATER, GAS AND SEWER BOARD  
 OF THE CITY OF  
 OLANTON, ALABAMA

TITLE: GRADING, PAVING, AND DRAINAGE PLAN

PROJECT NO. 05-1107-05  
 DRAWING NO. 102  
 SHEET 3 OF 80

JUN 05 2025  
 MUNICIPAL SECTION

# Walnut Creek WWTP



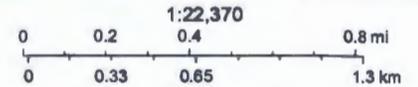
2/28/2025, 12:23:30 PM

— Sanitary Sewer

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USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data;

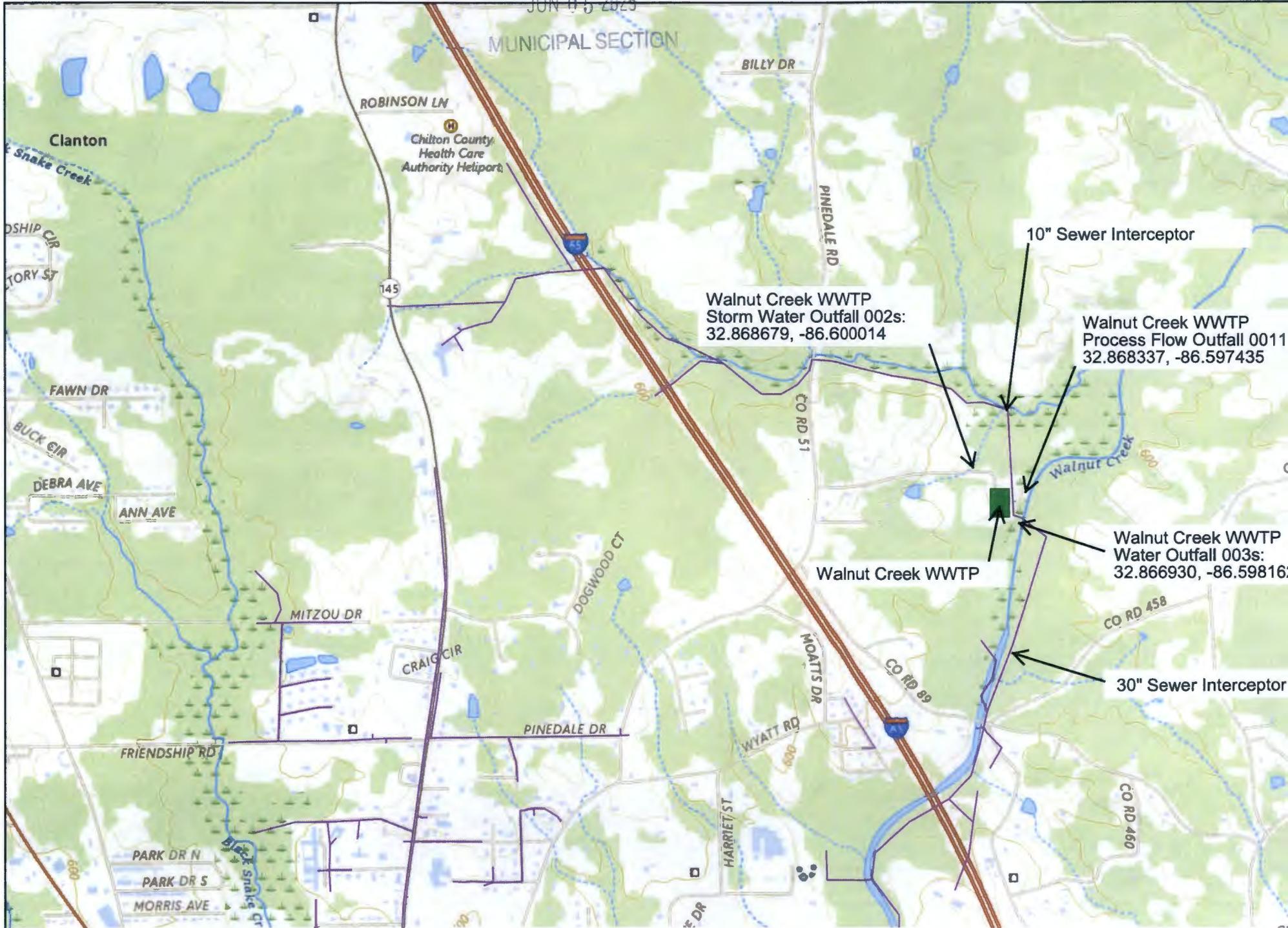
USGS  
2021 USGS

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# Walnut Creek WWTP

JUN 05 2025

MUNICIPAL SECTION



RESOLUTION

TO PROVIDE RULES AND REGULATIONS FOR THE  
USE OF THE SANITARY SEWER SYSTEM CLANTON, ALABAMA

BE IT RESOLVED by the Water, Gas and Sewer Board of the City of Clanton, Alabama, as follows:

ARTICLE I - Definitions

Unless the context specifically indicates otherwise, the meaning of terms used in these Rules and Regulations shall be as follows:

SECTION 1. "BOD" (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20°C. expressed in milligrams per liter.

SECTION 2. "Building Drain" shall mean that part of the lowest horizontal piping of drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five (5) feet (1.5 meters) outside the inner face of the building wall.

SECTION 3. "Building Sewer" shall mean a sewer receiving both surface runoff and sewage.

SECTION 4. "Combined Sewer" shall mean a sewer receiving both surface runoff and sewage.

SECTION 5. "Garbage" shall mean solid wastes from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling, storage, and sale of produce.

SECTION 6. "Industrial Wastes" shall mean the liquid wastes from industrial manufacturing processes, trade, or business as distinct from sanitary sewage.

SECTION 7. "Natural Outlet" shall mean any outlet into a watercourse, pond, ditch, lake, or other body of surface or groundwater.

SECTION 8. "Person" shall mean any individual, firm, company, association, society, corporation, or group.

SECTION 9. "pH" shall mean the logarithm of the reciprocal of the weight of hydrogen ions and grams per liter of solution.

SECTION 10. "Properly Shredded Garbage" shall mean the wastes from the preparation, cooking, and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one half (1/2) inch (1.27 centimeters) in any dimension.

SECTION 11. "Public Sewer" shall mean a sewer in which all owners of abutting properties have equal rights, and is controlled by public authority.

SECTION 12. "Sanitary Sewer" shall mean a sewer which carries sewage and to which storm, surface, and groundwaters are not intentionally admitted.

SECTION 13. "Sewage" shall mean a combination of the water-carried wastes from residences, business buildings, institutions, and industrial establishments, together with such ground, surface, and stormwaters as may be present.

SECTION 14. "Sewage Treatment Plant" shall mean any arrangement of devices and structures used for treating sewage.

SECTION 15. "Sewage Works" shall mean all facilities for collecting, pumping, treating, and disposing of sewage.

SECTION 16. "Sewer" shall mean a pipe or conduit for carrying sewage.

SECTION 17. "Shall" is mandatory; "May" is permissive.

SECTION 18. "Slug" shall mean any discharge of water, sewage, or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration or flows during normal operation.

SECTION 19. "Storm Drain" (sometimes termed "storm sewer") shall mean a sewer which carries storm and surface waters and drainage, but excludes sewage and industrial wastes, other than unpolluted cooling water.

SECTION 20. "Superintendent" shall mean the Superintendent of Sewage Works of the Water, Gas and Sewer Board of the City of Clanton, or his authorized deputy, agent, or representative.

SECTION 21. "Suspended Solids" shall mean solids that are in suspension in water, sewage, or other liquids, and which are removable by laboratory filtering.

SECTION 22. "Watercourse" shall mean a channel in which a flow of water occurs, either continuously or intermittently.

## ARTICLE II - Building Sewers and Connections

SECTION 1. No unauthorized person shall uncover, make any connection with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the Superintendent.

SECTION 2. All costs and expense incident to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the Water Gas and Sewer Board of the City of Clanton and the City of Clanton from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.

SECTION 3. A separate and independent building sewer shall be provided for every building, except where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard, or driveway, the building sewer from the front building may be extended to the rear building and the whole considered as one building sewer.

SECTION 4. Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the Superintendent, to meet all requirements of this regulation.

SECTION 5. The size, slope, alignment, materials of construction of a building sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the Building and Plumbing Code or other applicable rules and regulations of the City of Clanton. In the absence of code provisions or in amplification thereof, the materials and procedures set forth in appropriate specifications of the A.S.T.M. and W.P.C.F Manual of Practice No. 9 shall apply.

SECTION 6. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building drain shall be lifted by an approved means and discharged to the building sewer.

SECTION 7. No person shall make connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to a public sanitary sewer.

SECTION 8. The connection of the building sewer into the public sewer shall conform to the requirements of the Building and Plumbing Code or other applicable rules and regulations of the City of Clanton, or the procedures set forth in appropriate specifications of the A.S.T.M. and W.P.C.F. Manual of Practice No. 9. All such connections shall be made gastight and watertight. Any deviation from the prescribed procedures and materials must be approved by the Superintendent before installation.

SECTION 9. The applicant for the building sewer permit shall notify the Superintendent when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the Superintendent or his representative.

SECTION 10. All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the City of Clanton.

### ARTICLE III - Use of the Public Sewers

SECTION 1. No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process waters to any sanitary sewer.

SECTION 2. Stormwater and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as storm sewers, or to a natural outlet approved by the Alabama Department of Environmental Management. Industrial cooling water or unpolluted process waters may be discharged, on approval of the Alabama Department of Environmental Management, to a storm sewer, or natural outlet.

SECTION 3. No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers:

- (a) Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas.
- (b) Any waters or wastes containing toxic or poisonous solids, liquids, or gasses in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans, or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant.
- (c) Any waters or wastes having the pH lower than 5.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
- (d) Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

**SECTION 4.** No person shall discharge or cause to be discharged the following described substances, materials, water, or wastes if it appears likely in the opinion of the Superintendent that such wastes can harm either the sewers, sewage treatment process, or equipment; have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming an opinion as to the acceptability of these wastes, the Superintendent will give consideration of such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plant, and other pertinent factors. The substances prohibited are:

- (a) Any liquid or vapor having a temperature higher than one hundred fifty (150)°F (65°C).
- (b) Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150)°F (0 and 65°C).
- (c) Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of three-fourths (3/4) horsepower (0.76 hp metric) or greater shall be subject to the review and approval of the Superintendent.
- (d) Any waters or wastes containing strong acid iron pickling wastes, or concentrated plating solutions whether neutralized or not.
- (e) Any waters or wastes containing iron, chromium, copper, zinc, cyanide, and similar objectionable or toxic substances; or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the sewage treatment works exceeds the limits established by the Superintendent and/or the Alabama Department of Environmental Management for such materials.
- (f) Any waters or wastes containing phenols or other taste or odor producing substances, in such concentrations exceeding limits which may be established by the Superintendent as necessary, after treatment of the composite sewage, to meet the requirements of the State, Federal, or other public agencies of jurisdiction for such discharge to the receiving water.
- (g) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Superintendent in compliance with applicable State or Federal regulations.
- (h) Any waters or wastes having a pH in excess of 9.5.
- (i) Materials which exert or cause:

- (1) Unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime slurries, and lime residues) or of dissolved solids (such as but not limited to sodium chloride and sodium sulfate).
  - (2) Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).
  - (3) Unusual BOD (above 200 mg/l), chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.
- (j) Waters or wastes containing substances which are not amenable to treatment or reduction by the sewage treatment processes employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.
- (k) Waters or wastes containing suspended solids in excess of 300 mg/l.

SECTION 5. If any waters or wastes are discharged, or are proposed to be discharged to the sewers, which waters contain the substances or possess the characteristics enumerated in Section 4 of this Article, and which in the judgment of the Superintendent and/or the Alabama Department of Environmental Management, may have a deleterious effect upon the sewage works, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Superintendent may:

- (a) Reject the wastes.
- (b) Require pretreatment to an acceptable condition for discharge to the public sewers.
- (c) Require control over the quantities and rates of discharge, and/or,
- (d) Require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under the provisions of Section 10 of this Article.

If the Superintendent permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Superintendent, and the Alabama Department of Environmental Management and subject to the requirements of all applicable codes, ordinances, and laws.

SECTION 6. Grease, oil, and sand interceptors shall be provided when in the opinion of the Superintendent, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Superintendent and shall be located as to be readily and easily accessible for cleaning and inspection.

SECTION 7. Where preliminary treatment for flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

SECTION 8. When required by the Superintendent, the owner of any property serviced by a building sewer carrying industrial waste shall install a suitable control manhole together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes. Such manhole, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the Superintendent. The manhole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.

SECTION 9. All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this regulation shall be determined in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater," published by the American Public Health Association, and shall be determined at the control manhole provided, or upon suitable samples taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the public sewer to the point at which the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the sewage works and to determine the existence of hazards of life, limb, and property. (The particular analyses involved will determine whether a twenty-four (24) hour composite of all outfalls of a premise is appropriate or whether a grab sample or samples should be taken. Normally, but not always, BOD and suspended solids analyses are obtained from 24 hour composites of all outfalls whereas pH's are determined from periodic grab samples.)

SECTION 10. No statement contained in this Article shall be construed as preventing any special agreement or arrangement between the Water, Gas and Sewer Board of the City of Clanton and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the Water, Gas and Sewer Board of the City of Clanton for treatment, subject to payment therefor, by the industrial concern.

#### ARTICLE IV - Protection from Damage

SECTION 1. No unauthorized person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance, or equipment which is a part of the sewage works. Any person violating this provision shall be subject to immediate arrest under charge of disorderly conduct.

## ARTICLE V - Powers and Authority of Inspectors

SECTION 1. The Superintendent and other duly authorized employees of the Water, Gas and Sewer Board of the City of Clanton bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement sampling, and testing in accordance with the provisions of this regulation. The Superintendent or his representatives shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic, paper, or other industries beyond that point having a direct bearing on the kind and source of discharge to the sewers or waterways or facilities for waste treatment.

SECTION 2. While performing the necessary work on private properties referred to in Article V, Section 1 above, the Superintendent or duly authorized employees of the Water, Gas and Sewer Board of the City of Clanton shall observe all safety rules applicable to the premises established by the company and the company shall be held harmless for injury or death to the Water, Gas and Sewer Board of the City of Clanton's employees and the Water, Gas and Sewer Board of the City of Clanton shall indemnify the company against loss or damage to its property by the Water, Gas and Sewer Board of the City of Clanton employees and against liability claims and demands for personal injury or property damage asserted against the company and growing out of the gauging and sampling operation, except as such may be caused by negligence or failure of the company to maintain safe conditions as required in Article V, Section 8.

SECTION 3. The Superintendent and other duly authorized employees of the Water, Gas and Sewer Board of the City of Clanton, bearing proper credentials and identification shall be permitted to enter all private properties through which the Water, Gas and Sewer Board of the City of Clanton holds a duly negotiated easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair, and maintenance of any portion of the sewage works lying within said easement. All entry and subsequent work if any, on said easement, shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property involved.

## ARTICLE VI - Penalties

SECTION 1. Any person found to be violating any provision of this resolution except Article IV shall be served by the Water, Gas and Sewer Board of the City of Clanton with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations.

SECTION 2. Any person who shall continue any violation beyond the time limit provided for in Article VI, Section 1, his connection to the sanitary sewer system may be severed and will not be reconnected until full compliance with this resolution is made.

SECTION 3. Any person violating any of the provisions of this resolution shall become liable to the Water, Gas and Sewer Board of the City of Clanton for any expense, loss, or damage occasioned the Water, Gas and Sewer Board of the City of Clanton by reason of such violation.

SECTION VII - Validity

SECTION 1. The invalidity of any section, clause, sentence, or provision of this regulation shall not affect the validity of any other part of this regulation which can be given effect without such invalid part or parts.

SECTION 2. This resolution shall become effective immediately following publication as required by law.

Done this the 23 day of August, 1983.

Olin B. Fields  
Olin Fields  
Chairman, The Water, Gas and Sewer  
Board of the City of Clanton

ATTEST

Douglas L. Barton  
Secretary

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026
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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>	<u>1.1</u>	Facility name Walnut Creek WWTP
		Mailing address (street or P.O. box) PO Box 580
		City or town Clanton
		State AL
		ZIP code 35046
		Contact name (first and last) Anthony Robinson
		Title Plant Supervisor
	Phone number (205) 755-2380	
	Email address arobinson@clantonal.gov	
	Location address (street, route number, or other specific identifier) <input type="checkbox"/> Same as mailing address 1574 County Road 51	
	City or town Clanton	
	State AL	
	ZIP code 35046	
	<u>1.2</u>	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>	<u>1.3</u>	Is applicant different from entity listed under Item 1.1 above? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 1.4.
		Applicant name The Water Works & Sewer Board of the City of Clanton
		Applicant address (street or P.O. box) PO Box 580
		City or town Clanton
		State AL
		ZIP code 35046
		Contact name (first and last) Stanley Higgins
	Title Director of Utilities	
	Phone number (205) 755-6840	
	Email address shiggins@clantonal.gov	
	<u>1.4</u>	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
	<u>1.5</u>	To which entity should the NPDES permitting authority send correspondence? (Check only one response.) <input type="checkbox"/> Facility <input checked="" type="checkbox"/> Applicant <input type="checkbox"/> Facility and applicant (they are one and the same)
<b>Existing Environmental Permits</b>	<u>1.6</u>	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) AL0054631
		<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)	



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**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

<b>Outfalls and Other Discharge or Disposal Methods Continued</b>	<u>1.20</u>	In the table below, indicate the name, address, contact information, NPDES number, and average daily flow rate of the receiving facility.			
	<b>Receiving Facility Data</b>				
	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>		
	<u>1.21</u>	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)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.23.			
	<u>1.22</u>	Provide information in the table below on these other disposal methods.			
		<b>Information on Other Disposal Methods</b>			
		<b>Disposal Method Description</b>	<b>Location of Disposal Site</b>	<b>Size of Disposal Site</b>	<b>Annual Average Daily Discharge Volume</b>
				acres	gpd
				acres	gpd
				acres	gpd
				acres	gpd
				acres	gpd
<b>Variance Requests</b>	<u>1.23</u>	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.) <input type="checkbox"/> Discharges into marine waters (CWA Section 301(h)) <input type="checkbox"/> Water quality related effluent limitation (CWA Section 302(b)(2)) <input checked="" type="checkbox"/> Not applicable			
<b>Contractor Information</b>	<u>1.24</u>	Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 2.			
	<u>1.25</u>	Provide location and contact information for each contractor in addition to a description of the contractor's operational and maintenance responsibilities.			
		<b>Contractor Information</b>			
			<b>Contractor 1</b>	<b>Contractor 2</b>	<b>Contractor 3</b>
		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				

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**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.			<b>Average Daily Volume of Inflow and Infiltration</b>	
					580,000 gpd	
		Indicate the steps the facility is taking to minimize inflow and infiltration. Sewer collections crew performs maintenance. Seeking appropriations and grants to repair/replace/line approximately 50,000 LF of clay pipe.				
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				
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				
Scheduled Improvements and Schedules of Implementation	2.5	Are improvements to the facility scheduled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 3.				
	Briefly list and describe the scheduled improvements.					
	1. Addition of a 125 foot diameter clarifier.					
	2.					
	3.					
	4.					
	2.6					
		Provide scheduled or actual dates of completion for improvements.				
<b>Scheduled or Actual Dates of Completion for Improvements</b>						
	<b>Scheduled Improvement (from above)</b>	<b>Affected Outfalls (list outfall number)</b>	<b>Begin Construction (MM/DD/YYYY)</b>	<b>End Construction (MM/DD/YYYY)</b>	<b>Begin Discharge (MM/DD/YYYY)</b>	<b>Attainment of Operational Level (MM/DD/YYYY)</b>
	1.	0011	06/01/2025	12/31/2026	12/31/2026	12/31/2026
	2.					
	3.					
	4.					
	2.7	Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None required or applicable				
		Explanation: All permits are in place.				

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**SECTION 3. INFORMATION ON EFFLUENT DISCHARGES (40 CFR 122.21(J)(3) TO (5))**

<b>Description of Outfalls</b>	<b>3.1</b>	Provide the following information for each outfall. (Attach additional sheets if you have more than three outfalls.)		
		<b>Outfall Number</b> 0011	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	State	Alabama		
	County	Chilton		
	City or town	Clanton		
	Distance from shore	0 ft.	ft.	ft.
	Depth below surface	0 ft.	ft.	ft.
	Average daily flow rate	1.58 mgd	mgd	mgd
	Latitude	32.868337		
	Longitude	-86.597435		
<b>Seasonal or Periodic Discharge Data</b>	<b>3.2</b>	Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 3.4.		
	<b>3.3</b>	If so, provide the following information for each applicable outfall.		
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	Number of times per year discharge occurs			
	Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd	
Months in which discharge occurs				
<b>Diffuser Type</b>	<b>3.4</b>	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.		
	<b>3.5</b>	Briefly describe the diffuser type at each applicable outfall.		
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
<b>Waters of the U.S.</b>	<b>3.6</b>	Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 6.		

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<b>Receiving Water Description</b>	<b>3.7</b>	Provide the receiving water and related information (if known) for each outfall.		
		<b>Outfall Number</b> <u>0011</u>	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	Receiving water name	Walnut Creek		
	Name of watershed, river, or stream system	Walnut Creek		
	Natural Resources Conservation Service 14-digit watershed code			
	Name of state management/river basin	Lower Coosa		
	U.S. Geological Survey 8-digit hydrologic cataloging unit code	03150107		
	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>	<b>3.8</b>	Provide the following information describing the treatment provided for discharges from each outfall.		
		<b>Outfall Number</b> <u>0011</u>	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	<b>Highest Level of Treatment</b> (check all that apply per outfall)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input checked="" 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) _____
	<b>Design Removal Rates by Outfall</b>			
	BOD <sub>5</sub> or CBOD <sub>5</sub>	85 %	%	%
	TSS	855 %	%	%
	Phosphorus	<input checked="" 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 %
Other (specify) _____	<input checked="" type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	

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<b>Treatment Description Continued</b>	<b>3.9</b>	Describe the type of disinfection used for the effluent from each outfall in the table below. If disinfection varies by season, describe in the table below.					
			<b>Outfall Number 0011</b>	<b>Outfall Number _____</b>	<b>Outfall Number _____</b>		
	Disinfection type	Chlorine					
	Seasons used	All					
	Dechlorination used?	<input type="checkbox"/> Not applicable <input checked="" 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	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>Effluent Testing Data</b>	<b>3.10</b>	Have you completed monitoring for all Table A parameters and attached the results to the application package? <input checked="" type="checkbox"/> Yes					
	<b>3.11</b>	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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.13.					
	<b>3.12</b>	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.					
			<b>Outfall Number 0011</b>	<b>Outfall Number _____</b>	<b>Outfall Number _____</b>		
			<b>Acute</b>	<b>Chronic</b>	<b>Acute</b>	<b>Chronic</b>	<b>Acute</b> <b>Chronic</b>
	Number of tests of discharge water		5				
	Number of tests of receiving water						
	<b>3.13</b>	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 Item 3.16.					
	<b>3.14</b>	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? <input checked="" type="checkbox"/> Yes → Complete Table B, including chlorine. <input type="checkbox"/> No → Complete Table B, omitting chlorine.					
	<b>3.15</b>	Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package? <input checked="" type="checkbox"/> Yes					
<b>3.16</b>	Does one or more of the following conditions apply? <ul style="list-style-type: none"> <li>The facility has a design flow greater than or equal to 1 mgd.</li> <li>The POTW has an approved pretreatment program or is required to develop such a program.</li> <li>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).</li> </ul> <input checked="" type="checkbox"/> Yes → Complete Tables C, D, and E as applicable. <input type="checkbox"/> No → SKIP to Section 4.						
<b>3.17</b>	Have you completed monitoring for all Table C pollutants and attached the results to this application package? <input checked="" type="checkbox"/> Yes						
<b>3.18</b>	Have you completed monitoring for all Table D pollutants required by your NPDES permitting authority and attached the results to this application package? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No additional sampling required by NPDES permitting authority.						

**Effluent Testing Data Continued**

<u>3.19</u>	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 <span style="margin-left: 200px;"><input type="checkbox"/> No → Complete tests and Table E and SKIP to Item 3.26.</span>				
<u>3.20</u>	Have you previously submitted the results of the above tests to your NPDES permitting authority? <input checked="" type="checkbox"/> Yes <span style="margin-left: 200px;"><input type="checkbox"/> No → Provide results in Table E and SKIP to Item 3.26.</span>				
<u>3.21</u>	Indicate the dates the data were submitted to your NPDES permitting authority and provide a summary of the results.				
	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Date(s) Submitted (MM/DD/YYYY)</th> <th style="width:50%;">Summary of Results</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">09/13/2024</td> <td>CD: 2024 Pass, 2023 Pass, 2022 Pass, 2021 Pass, 2020 Pass PP: 2024 Pass, 2023 Pass, 2022 Pass, 2021 Pass, 2020 Pass</td> </tr> </tbody> </table>	Date(s) Submitted (MM/DD/YYYY)	Summary of Results	09/13/2024	CD: 2024 Pass, 2023 Pass, 2022 Pass, 2021 Pass, 2020 Pass PP: 2024 Pass, 2023 Pass, 2022 Pass, 2021 Pass, 2020 Pass
Date(s) Submitted (MM/DD/YYYY)	Summary of Results				
09/13/2024	CD: 2024 Pass, 2023 Pass, 2022 Pass, 2021 Pass, 2020 Pass PP: 2024 Pass, 2023 Pass, 2022 Pass, 2021 Pass, 2020 Pass				
<u>3.22</u>	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 <span style="margin-left: 200px;"><input checked="" type="checkbox"/> No → SKIP to Item 3.26.</span>				
<u>3.23</u>	Describe the cause(s) of the toxicity:				
<u>3.24</u>	Has the treatment works conducted a toxicity reduction evaluation? <input type="checkbox"/> Yes <span style="margin-left: 200px;"><input checked="" type="checkbox"/> No → SKIP to Item 3.26.</span>				
<u>3.25</u>	Provide details of any toxicity reduction evaluations conducted.				
<u>3.26</u>	Have you completed Table E for all applicable outfalls and attached the results to the application package? <input checked="" type="checkbox"/> Yes <span style="margin-left: 200px;"><input type="checkbox"/> Not applicable because previously submitted information to the NPDES permitting authority.</span>				

**SECTION 4. INDUSTRIAL DISCHARGES AND HAZARDOUS WASTES (40 CFR 122.21(J)(6) AND (7))**
**Industrial Discharges and Hazardous Wastes**

<u>4.1</u>	Does the POTW receive discharges from SIUs or NSCIUs? (See instructions for definitions of SIUs and NSCIUs.) <input checked="" type="checkbox"/> Yes <span style="margin-left: 200px;"><input type="checkbox"/> No → SKIP to Item 4.7.</span>				
<u>4.2</u>	Indicate the number of SIUs and NSCIUs that discharge to the POTW.				
	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Number of SIUs</th> <th style="width:50%;">Number of NSCIUs</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>	Number of SIUs	Number of NSCIUs	2	0
Number of SIUs	Number of NSCIUs				
2	0				
<u>4.3</u>	Does the POTW have an approved pretreatment program? <input checked="" type="checkbox"/> Yes <span style="margin-left: 200px;"><input type="checkbox"/> No</span>				
<u>4.4</u>	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 type="checkbox"/> Yes <span style="margin-left: 200px;"><input checked="" type="checkbox"/> No → SKIP to Item 4.6.</span>				
<u>4.5</u>	Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7.				
<u>4.6</u>	Have you completed and attached Table F to this application package? <input checked="" type="checkbox"/> Yes				

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<b>Industrial Discharges and Hazardous Wastes Continued</b>	<b>4.7</b>	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.			
	<b>4.8</b>	If yes, provide the following information:			
		<b>Hazardous Waste Number</b>	<b>Waste Transport Method</b> (check all that apply)		<b>Annual Amount of Waste Received</b>
			<input type="checkbox"/> Truck <input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Rail <input type="checkbox"/> Other (specify) _____	
			<input type="checkbox"/> Truck <input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Rail <input type="checkbox"/> Other (specify) _____	
			<input type="checkbox"/> Truck <input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Rail <input type="checkbox"/> Other (specify) _____	
	<b>4.9</b>	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.			
	<b>4.10</b>	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			
	<b>4.11</b>	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			
<b>SECTION 5. COMBINED SEWER OVERFLOWS (40 CFR 122.21(J)(8))</b>					
<b>CSO Map and Diagram</b>	<b>5.1</b>	Does the treatment works have a combined sewer system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 6.			
	<b>5.2</b>	Have you attached a CSO system map to this application? (See instructions for map requirements.) <input type="checkbox"/> Yes			
	<b>5.3</b>	Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.) <input type="checkbox"/> Yes			

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<b>CSO Outfall Description</b>	<b>5.4</b>	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>	<b>5.5</b>	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>	<b>5.6</b>	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	hours	hours
		<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated
Average volume per event		million gallons	million gallons	million gallons	
	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	
Minimum rainfall causing a CSO event in last year		inches of rainfall	inches of rainfall	inches of rainfall	
	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	<input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	

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CSO Receiving Waters

5.7	Provide the information in the table below for each of your CSO outfalls.			
		CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
	Receiving water name			
	Name of watershed/ stream system			
	Natural Resources 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))**

Checklist and Certification Statement

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.		
	<b>Column 1</b>	<b>Column 2</b>	
	<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 checked="" 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 checked="" 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	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)	
	<b>Certification Statement</b>	
	<i>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.</i>	
	Name (print or type first and last name) Jeff Mims	Official title Superintendent
Signature 	Date signed 03/04/2025	

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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 type="checkbox"/> BOD <sub>5</sub> or <input type="checkbox"/> CBOD <sub>5</sub> (report one)	3	mg/l	2	mg/l	13		<input type="checkbox"/> ML <input type="checkbox"/> MDL
Fecal coliform	100	mg/l	48	mg/l	12		<input type="checkbox"/> ML <input type="checkbox"/> MDL
Design flow rate	3.566	MGD	1.55	MGD	12		
pH (minimum)	6.73	su					
pH (maximum)	7.32	su					
Temperature (winter)	17.0	C°	15.2	C°	3		
Temperature (summer)	24.9	C°	24.3	C°	3		
Total suspended solids (TSS)	8	mg/l	5	mg/l	13		<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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**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)	0.042	mg/L	0.012	mg/L	13	sm4500c	0 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chlorine (total residual, TRC) <sup>2</sup>	0	mg/L	0	mg/L	13	sm4500d	0 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Dissolved oxygen	9.08	mg/L	8.55	mg/L	13		0 <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nitrate/nitrite	12.0	mg/L	2.45	mg/L	12	353.2	0.04 mg/l <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Kjeldahl nitrogen	1.9	mg/L	0.69	mg/L	12	351.2	0.15 mg/l <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Oil and grease	ND	mg/L	ND	mg/L	3	1664B	5.2 mg/L <input type="checkbox"/> ML <input type="checkbox"/> MDL
Phosphorus	2.5	mg/L	1.02	mg/L	12	365.4	0.10 mg/l <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Total dissolved solids	250	mg/L	250	mg/L	1	SM2540C	25mg/L <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> )	83.4	mg/L	79.9	mg/L	3	200.8	.005 mg/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Antimony, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.00010 rr <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Arsenic, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.0010 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Beryllium, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.00050 rr <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Cadmium, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.0010 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Chromium, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.0010 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Copper, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.0010 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Lead, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.0010 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Mercury, total recoverable	0.7	ng/L	0.5	ng/L	3	1631E 2002	0.3 ng/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nickel, total recoverable	0.0061	mg/L	0.0049	mg/L	3	200.8	0.0010 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Selenium, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.0010 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Silver, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.00050 rr <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Thallium, total recoverable	ND	mg/L	ND	mg/L	3	200.8	0.00050 rr <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Zinc, total recoverable	0.059	mg/L	0.03267	mg/L	3	200.8	0.0050 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Cyanide	ND	mg/L	ND	mg/L	3	4500-CN E-11	0.0100 mg <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Total phenolic compounds	ND	mg/L	ND	mg/L	3	420.1	0.020 mg/ <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
<b>Volatile Organic Compounds</b>							
Acrolein	ND	ug/L	ND	ug/L	3	624.1	20.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Acrylonitrile	ND	ug/L	ND	ug/L	3	624.1	20.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Benzene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Bromoform	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input 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	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorobenzene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorodibromomethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Chloroethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2-chloroethylvinyl ether	ND	ug/L	ND	ug/L	3	624.1	20.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Chloroform	9.8	ug/L	3.267	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Dichlorobromomethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,1-dichloroethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichloroethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
trans-1,2-dichloroethylene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,1-dichloroethylene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichloropropane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,3-dichloropropylene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Ethylbenzene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Methyl bromide	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Methyl chloride	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Methylene chloride	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,2,2-tetrachloroethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Tetrachloroethylene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Toluene	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,1-trichloroethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,2-trichloroethane	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input 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	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Vinyl chloride	ND	ug/L	ND	ug/L	3	624.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
<b>Acid-Extractable Compounds</b>							
p-chloro-m-cresol	ND	ug/L	ND	ug/L	3	625.1	20.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2-chlorophenol	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dichlorophenol	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dimethylphenol	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
4,6-dinitro-o-cresol	ND	ug/L	ND	ug/L	3	625.1	50.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dinitrophenol	ND	ug/L	ND	ug/L	3	625.1	50.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2-nitrophenol	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
4-nitrophenol	ND	ug/L	ND	ug/L	3	625.1	50.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Pentachlorophenol	ND	ug/L	ND	ug/L	3	625.1	50.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Phenol	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2,4,6-trichlorophenol	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
<b>Base-Neutral Compounds</b>							
Acenaphthene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Acenaphthylene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Anthracene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Benzidine	ND	ug/L	ND	ug/L	3	625.1	50.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(a)anthracene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(a)pyrene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
3,4-benzofluoranthene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input 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	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(k)fluoranthene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroethoxy) methane	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroethyl) ether	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroisopropyl) ether	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-ethylhexyl) phthalate	ND	ug/L	ND	ug/L	3	625.1	5.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
4-bromophenyl phenyl ether	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Butyl benzyl phthalate	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2-chloronaphthalene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
4-chlorophenyl phenyl ether	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Chrysene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
di-n-butyl phthalate	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
di-n-octyl phthalate	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Dibenzo(a,h)anthracene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichlorobenzene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,3-dichlorobenzene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,4-dichlorobenzene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
3,3-dichlorobenzidine	ND	ug/L	ND	ug/L	3	625.1	20.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Diethyl phthalate	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Dimethyl phthalate	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dinitrotoluene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
2,6-dinitrotoluene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL

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EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	Outfall Number 0011
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OMB No. 2040-0004  
Expires 07/31/2026

**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	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Fluoranthene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Fluorene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorobenzene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorobutadiene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorocyclo-pentadiene	ND	ug/L	ND	ug/L	3	625.1	20.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachloroethane	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Indeno(1,2,3-cd)pyrene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Isophorone	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Naphthalene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Nitrobenzene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodi-n-propylamine	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodimethylamine	ND	ug/L	ND	ug/L	3	625.1	20.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodiphenylamine	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Phenanthrene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Pyrene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
1,2,4-trichlorobenzene	ND	ug/L	ND	ug/L	3	625.1	10.0 ug/L <input checked="" 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 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	Outfall Number 0011
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OMB No. 2040-0004  
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<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 <u>01</u>	Test Number <u>02</u>	Test Number _____
Test species	Pimephales promelas	Ceriodaphnia dubia	
Age at initiation of test	Less Than 24 HRS		
Outfall number	0011	0011	
Date sample collected	11/04/2024	11/04/2024	
Date test started	11/05/2024	11/05/2024	
Duration	7 Days	6 Days	
<b>Toxicity Test Methods</b>			
Test method number	EPA-821-R-02-013, Test Method 1000.0	EPA-821-R-02-013, Test Method 1002.0	
Manual title	Short-term Methods for Estimating the Chron	Short-term Methods for Estimating the Chron	
Edition number and year of publication	4th 2002	4th 2002	
Page number(s)			
<b>Sample Type</b>			
Check one:	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input checked="" 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 checked="" type="checkbox"/> After dechlorination	<input type="checkbox"/> Before disinfection <input type="checkbox"/> After disinfection <input checked="" 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.	The Effluent Outfall	The Effluent Outfall	
<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 checked="" type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input checked="" type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	Outfall Number 0011
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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 <u>01</u>	Test Number <u>02</u>	Test Number _____
<b>Test Type</b>			
Indicate the type of test performed. (Check one response.)	<input type="checkbox"/> Static <input checked="" type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input type="checkbox"/> Static <input checked="" 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 checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water
If laboratory water, specify type.	Moderately Hard Synthetic Water	Moderately Hard Synthetic Water	Moderately Hard Synthetic Water
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 checked="" type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input checked="" 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 checked="" type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature	<input type="checkbox"/> Ammonia <input checked="" type="checkbox"/> Dissolved oxygen	<input checked="" type="checkbox"/> pH <input type="checkbox"/> Salinity <input checked="" type="checkbox"/> Temperature
		<input type="checkbox"/> Ammonia <input checked="" 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 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	Outfall Number 0011
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Expires 07/31/2026

**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 <u>01</u>	Test Number <u>02</u>	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 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP
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OMB No. 2040-0004  
Expires 07/31/2026

**TABLE F. INDUSTRIAL DISCHARGE INFORMATION**

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

	SIU 1	SIU 2	SIU ____
Name of SIU	Adient	Oflex	
Mailing address (street or P.O. box)	2541 7th Street South	725 Keystone Drive	
City, state, and ZIP code	Clanton, AL 35046	Clanton, AL 35045	
Describe all industrial processes that affect or contribute to the discharge.	Metal finishing operations	Metal finishing operations	
List the principal products and raw materials that affect or contribute to the SIU's discharge.	Electric seat metal frames for auto industry. Metals, acids for parts cleaning.	Anodizing metal parts. Metals, acids for parts cleaning.	
Indicate the average daily volume of wastewater discharged by the SIU.	18,500 gpd	95000 gpd	gpd
How much of the average daily volume is attributable to process flow?	13500 gpd	90000 gpd	gpd
How much of the average daily volume is attributable to non-process flow?	5000 gpd	5000 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 type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP
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OMB No. 2040-0004  
Expires 07/31/2026

**TABLE F. INDUSTRIAL DISCHARGE INFORMATION**

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

	SIU <u>1</u>	SIU <u>2</u>	SIU _____
Under what categories and subcategories is the SIU subject?			
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.			

[Click to go back to the beginning of Form](#)



Pace Analytical Services, LLC

1168 Whigham Place

Tuscaloosa, AL 35405

(205) 614-6630

February 03, 2025

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: Permit renewal Form 2A  
Pace Project No.: 20343797

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory on January 20, 2025. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - New Orleans
- Pace Analytical Services - Allen

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Cindy Simpson*

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Permit renewal Form 2A

Pace Project No.: 20343797

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### Pace Analytical Services New Orleans

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 2000662023-7

Kansas Department of Health and Environment (NELAC):  
E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):  
02006

Texas Commission on Env. Quality (NELAC):  
T104704405-23-18

U.S. Dept. of Agriculture Foreign Soil Import: 525-23-117-  
89728

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### Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Louisiana Certification #: 04076

Michigan Drinking Water Laboratory #9050

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Washington Dept of Ecology #: C1081

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

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### Pace Analytical Services Dallas

400 West Bethany Dr Suite 190, Allen, TX 75013

Texas Certification T104704232-20-32

Florida Certification #: E871118

EPA# TX00074

Kansas Certification #: E-10388

Arkansas Certification #: 88-0647

Oklahoma Certification #: 8727

Louisiana Certification #: 30686

Iowa Certification #: 408

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**SAMPLE ANALYTE COUNT**

Project: Permit renewal Form 2A  
Pace Project No.: 20343797

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
20343797001	Effluent Composite	EPA 200.8	FC1	13	PASI-N
		EPA 625.1	FIP	63	PASI-I
20343797002	Effluent Grab	EPA 624.1	SLK	34	PASI-N
		EPA 1664B, 2010	TMO	1	PASI-N
		SM 4500-CN E-11	SMC	1	PASL-AT
		EPA 420.1	MHM	1	PASI-N
20343797005	Trip Blank	EPA 624.1	SLK	36	PASI-N

PASI-I = Pace Analytical Services - Indianapolis  
PASI-N = Pace Analytical Services - New Orleans  
PASL-AT = Pace Analytical Services - Allen

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**ANALYTICAL RESULTS**

Project: Permit renewal Form 2A  
 Pace Project No.: 20343797

Sample: Effluent Composite Lab ID: 20343797001 Collected: 01/20/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Antimony	ND	mg/L	0.0010	1	
Arsenic	ND	mg/L	0.0010	1	
Beryllium	ND	mg/L	0.00050	1	
Cadmium	ND	mg/L	0.0010	1	
Chromium	ND	mg/L	0.0010	1	
Copper	ND	mg/L	0.0010	1	
Lead	ND	mg/L	0.0010	1	
Nickel	0.0042	mg/L	0.0010	1	
Selenium	ND	mg/L	0.0010	1	
Silver	ND	mg/L	0.00050	1	
Thallium	ND	mg/L	0.00050	1	
Total Hardness	75.3	mg/L	0.0050	1	
Zinc	0.019	mg/L	0.0050	1	
Acenaphthene	ND	ug/L	10.0	1	
Acenaphthylene	ND	ug/L	10.0	1	
Anthracene	ND	ug/L	10.0	1	
Benzdine	ND	ug/L	50.0	1	
Benzo(a)anthracene	ND	ug/L	10.0	1	
Benzo(a)pyrene	ND	ug/L	10.0	1	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	
Butylbenzylphthalate	ND	ug/L	10.0	1	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	
2-Chloronaphthalene	ND	ug/L	10.0	1	
2-Chlorophenol	ND	ug/L	10.0	1	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	
Chrysene	ND	ug/L	10.0	1	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	
1,2-Dichlorobenzene	ND	ug/L	10.0	1	
1,3-Dichlorobenzene	ND	ug/L	10.0	1	
1,4-Dichlorobenzene	ND	ug/L	10.0	1	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	
Diethylphthalate	ND	ug/L	10.0	1	
2,4-Dimethylphenol	ND	ug/L	10.0	1	
Dimethylphthalate	ND	ug/L	10.0	1	
Di-n-butylphthalate	ND	ug/L	10.0	1	
4,6-Dinitro-2-methylphenol	ND	ug/L	50.0	1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	
Di-n-octylphthalate	ND	ug/L	10.0	1	L1
1,2-Diphenylhydrazine	ND	ug/L	10.0	1	
bis(2-Ethylhexyl)phthalate	ND	ug/L	5.0	1	

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**ANALYTICAL RESULTS**

Project: Permit renewal Form 2A  
 Pace Project No.: 20343797

**Sample: Effluent Composite**      **Lab ID: 20343797001**      Collected: 01/20/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Fluoranthene	ND	ug/L	10.0	1	
Fluorene	ND	ug/L	10.0	1	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	
Hexachlorobenzene	ND	ug/L	10.0	1	
Hexachlorocyclopentadiene	ND	ug/L	20.0	1	
Hexachloroethane	ND	ug/L	10.0	1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	
Isophorone	ND	ug/L	10.0	1	
Naphthalene	ND	ug/L	10.0	1	
Nitrobenzene	ND	ug/L	10.0	1	
2-Nitrophenol	ND	ug/L	10.0	1	
4-Nitrophenol	ND	ug/L	50.0	1	
N-Nitrosodimethylamine	ND	ug/L	20.0	1	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	
Pentachlorophenol	ND	ug/L	50.0	1	
Phenanthrene	ND	ug/L	10.0	1	
Phenol	ND	ug/L	10.0	1	
Pyrene	ND	ug/L	10.0	1	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	1	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	
2-Fluorophenol (S)	57	%.	1-102	1	
Phenol-d5 (S)	41	%.	8-424	1	
Nitrobenzene-d5 (S)	95	%.	15-314	1	
2-Fluorobiphenyl (S)	76	%.	2-103	1	
2,4,6-Tribromophenol (S)	85	%.	20-155	1	
p-Terphenyl-d14 (S)	84	%.	1-168	1	

**Sample: Effluent Grab**      **Lab ID: 20343797002**      Collected: 01/20/25 08:10

Parameters	Results	Units	Report Limit	DF	Qualifiers
Acrolein	ND	ug/L	20.0	1	AC
Acrylonitrile	ND	ug/L	20.0	1	
Benzene	ND	ug/L	5.0	1	
Bromoform	ND	ug/L	5.0	1	
Bromomethane	ND	ug/L	5.0	1	
Carbon tetrachloride	ND	ug/L	5.0	1	
Chlorobenzene	ND	ug/L	5.0	1	
Chloroethane	ND	ug/L	5.0	1	
2-Chloroethylvinyl ether	ND	ug/L	20.0	1	M1
Chloroform	ND	ug/L	5.0	1	
Chloromethane	ND	ug/L	5.0	1	
Dibromochloromethane	ND	ug/L	5.0	1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1	
1,1-Dichloroethane	ND	ug/L	5.0	1	
1,2-Dichloroethane	ND	ug/L	5.0	1	
1,1-Dichloroethene	ND	ug/L	5.0	1	

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### ANALYTICAL RESULTS

Project: Permit renewal Form 2A

Pace Project No.: 20343797

Sample: Effluent Grab		Lab ID: 20343797002	Collected: 01/20/25 08:10			
Parameters	Results	Units	Report Limit	DF	Qualifiers	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		
1,2-Dichloropropane	ND	ug/L	5.0	1		
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		
Ethylbenzene	ND	ug/L	5.0	1		
Methylene Chloride	ND	ug/L	5.0	1		
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		
Tetrachloroethene	ND	ug/L	5.0	1		
Toluene	ND	ug/L	5.0	1		
1,1,1-Trichloroethane	ND	ug/L	5.0	1		
1,1,2-Trichloroethane	ND	ug/L	5.0	1		
Trichloroethene	ND	ug/L	5.0	1		
Trichlorofluoromethane	ND	ug/L	5.0	1		
Vinyl chloride	ND	ug/L	5.0	1	M1	
4-Bromofluorobenzene (S)	101	%	82-118	1		
Toluene-d8 (S)	100	%	81-120	1		
Dibromofluoromethane (S)	102	%	77-123	1		
Oil and Grease	ND	mg/L	5.2	1	P1	
Cyanide	ND	mg/L	0.0100	1		
Phenolics, Total Recoverable	ND	mg/L	0.020	1		

Sample: Trip Blank		Lab ID: 20343797005	Collected: 01/20/25 08:10			
Parameters	Results	Units	Report Limit	DF	Qualifiers	
Acrolein	ND	ug/L	20.0	1	AC	
Acrylonitrile	ND	ug/L	20.0	1		
Benzene	ND	ug/L	5.0	1		
Bromodichloromethane	ND	ug/L	5.0	1		
Bromoform	ND	ug/L	5.0	1		
Bromomethane	ND	ug/L	5.0	1		
Carbon tetrachloride	ND	ug/L	5.0	1		
Chlorobenzene	ND	ug/L	5.0	1		
Chloroethane	ND	ug/L	5.0	1		
2-Chloroethylvinyl ether	ND	ug/L	20.0	1		
Chloroform	ND	ug/L	5.0	1		
Chloromethane	ND	ug/L	5.0	1		
Dibromochloromethane	ND	ug/L	5.0	1		
1,2-Dichlorobenzene	ND	ug/L	5.0	1		
1,3-Dichlorobenzene	ND	ug/L	5.0	1		
1,4-Dichlorobenzene	ND	ug/L	5.0	1		
1,1-Dichloroethane	ND	ug/L	5.0	1		
1,2-Dichloroethane	ND	ug/L	5.0	1		
1,1-Dichloroethene	ND	ug/L	5.0	1		
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		
1,2-Dichloropropane	ND	ug/L	5.0	1		
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		
Ethylbenzene	ND	ug/L	5.0	1		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Permit renewal Form 2A  
Pace Project No.: 20343797

Sample: Trip Blank      Lab ID: 20343797005      Collected: 01/20/25 08:10

Parameters	Results	Units	Report Limit	DF	Qualifiers
Methylene Chloride	ND	ug/L	5.0	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1	
Tetrachloroethene	ND	ug/L	5.0	1	
Toluene	ND	ug/L	5.0	1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1	
1,1,2-Trichloroethane	ND	ug/L	5.0	1	
Trichloroethene	ND	ug/L	5.0	1	
Trichlorofluoromethane	ND	ug/L	5.0	1	
Vinyl chloride	ND	ug/L	5.0	1	
4-Bromofluorobenzene (S)	97	%.	82-118	1	
Toluene-d8 (S)	100	%.	81-120	1	
Dibromofluoromethane (S)	100	%.	77-123	1	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Permit renewal Form 2A

Pace Project No.: 20343797

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

### ANALYTE QUALIFIERS

- |    |   |
|----|---|
| AC | Analysis of acrolein and/or acrylonitrile was performed from a sample that was field preserved to pH < 2, which is less than the pH range of 4-5 specified in the test method and required for NPDES compliance per 40CFR Part 136. |
| L1 | Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.   |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.   |
| P1 | Routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.  |

## REPORT OF LABORATORY ANALYSIS

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**Pace**  
 Pace® Location Requested (City/State):  
 Pace Analytical Tuscaloosa  
 1168 Whigham Place, Tuscaloosa, AL 35401

**CHAIN-OF-CUSTODY Analytical Request Document**  
 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAP  
**WO# : 20343797**  
  
 20343797  


Company Name: Clanton - WWTP -WW  
 Street Address: 1574 County Road 51  
 P. O. Box 580  
 Clanton, AL 35046

Contact/Report To: Anthony Robinson  
 Phone #: (205)755-2380  
 E-Mail: arobinson@clantonal.gov  
 Cc E-Mail:

Customer Project #: Permit renewal Form 2A

Project Name: Permit renewal Form 2A

Site Collection Info/Facility ID (as applicable):

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET  
 County / State origin of sample(s): Alabama

Specify Container Size \*\*  
 \*\*Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

Identify Container Preservative Type\*\*\*  
 \*\*\* Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Analysis Requested

Data Deliverables:  
 [ ] Level II [ ] Level III [ ] Level IV  
 [ ] EQUIS  
 [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):  
 [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other \_\_\_\_\_

Date Results Requested: \_\_\_\_\_  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis: \_\_\_\_\_

\* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

200.8 Metals, Total	420.1 Phenolics, Total	4500CNE Cyanide, Total	624 Volatile Organics	625 Form 2a list	HEM, Oil and Grease	Low Level Mercury 1631	Low Level Mercury Field Blank
X				X			
	X	X	X		X		
						X	
			X				X

Proj. Mgr:  
**Cindy Simpson**

AcctNum / Client ID:  
 \_\_\_\_\_

Table #:  
 \_\_\_\_\_

Profile / Template:  
**20028**

Prelog / Bottle Ord. ID:  
**EZ 3210975**

Sample Comment

Preservation non-conformance identified for: sample

Customer Sample ID	Matrix *	Comp / Grab	Composite Start		Collected or Composite End		# Cont.	Res. Chlorine		200.8 Metals, Total	420.1 Phenolics, Total	4500CNE Cyanide, Total	624 Volatile Organics	625 Form 2a list	HEM, Oil and Grease	Low Level Mercury 1631	Low Level Mercury Field Blank
			Date	Time	Date	Time		Results	Units								
Effluent Composite	WT	C	1-19-25	8:00	1-20-25	8:00				X							
Effluent Grab	WT	G			1-20-25	8:00					X	X	X		X		
LLHg Effluent Grab	WT	G			1-20-25	8:00										X	
LLHg Field Blank	WT	G			1-20-25	8:00											X
Trip Blank	WT	G			1-20-25	8:00							X				

Additional Instructions from Pace®:

Collected By: **Tim Robinson**  
 (Printed Name)  
 Signature: *Tim Robinson*

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers: 1 Thermometer ID: TUTM13 Correction Factor (°C): 0 Obs. Temp. (°C): 4.1 Corrected Temp. (°C): 4.1 On Ice: Y

Relinquished by/Company: (Signature) <i>Tim Robinson</i>	Date/Time: 1/20/25 11:15	Received by/Company: (Signature) <i>Stacy King</i>	Date/Time: 1/20/25 11:15	Tracking Number:  Delivered by: [ ] In-Person [X] Courier  [ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature) <i>Stacy King</i>	Date/Time: 1/20/25 13:00	Received by/Company: (Signature) <i>Stacy King</i>	Date/Time: 1/20/25 13:00	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Page 1 of 17



Sample Condition Upon Receipt Form (SCUR)

WO#: 20343797

Project #  
 Project Manager:  
 Client:

PM: CRS Due Date: 02/03/25  
 CLIENT: TU-ClantonWW

Date and Initials of person:

Examining contents: STR

Verifying pH: STR

Thermometer Used: TUTM13

Date: 1/20/25

Time: 1300

Initials: STR

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp. °C 4.1 (Visual) 0 (Correction Factor) 4.1 (Actual)  
 Cooler #2 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #3 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #4 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Samples on ice, cooling process has begun.  
 Samples on ice, cooling process has begun.

Recheck for OOT °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Time: \_\_\_\_\_ Initials: \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_

Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other: \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # \_\_\_\_\_

Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No

Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

Samples shorted to lab:  Yes  No (If yes, complete the following)

Shorted Date: \_\_\_\_\_

Shorted Time: \_\_\_\_\_

Bottle Quantity / Type: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Comments:
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Comments: 1664 AGIH 2/2 - used AGIU
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:
All containers needing acid / base preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Preservation Information Preservative: _____ Date: _____ Lot / Trace: _____ Time: _____ Amount added (mL): _____ Initials: _____
All containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: Vials, Microbiology, O&G, PFAS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in Volatile Vials? (>8mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3/13 625s, 1/3 Trip Blanks 624 STR
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

Comments / Resolutions (use back for additional comments):

Labeled by: STR

Reviewed by: DPH

Delivered by: STR



Pace Analytical Services, LLC  
P.O. Box 907  
Madisonville, KY 42431  
270.821.7375  
www.pacelabs.com

### Certificate of Analysis 5015179

Cindy Simpson  
Pace Analytical Services LLC Tuscaloosa  
3516 Greensboro Ave  
Tuscaloosa, AL 35401

Customer ID: 44-102111  
Report Printed: 01/30/2025 14:07

Project Name: Cindy Simpson PM	Workorder: 5015179
--------------------------------	--------------------

Dear Cindy Simpson

Enclosed are the analytical results for samples received by the laboratory 01/25/2025 11:08.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Madisonville - 825 Industrial Road, Madisonville, KY 42431

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY  
#460291 Pikeville, KY  
#E871136 Englewood, OH

Melissia Brown, Project Coordinator

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Pace Analytical Services, LLC  
 P.O. Box 907  
 Madisonville, KY 42431  
 270.821.7375  
 www.pacelabs.com

**SAMPLE SUMMARY**

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
5015179-01	Low Level Mercury/20343797003 LLHg Effluent Grab	Wastewater	01/20/2025 08:10	01/25/2025 11:08	Client
5015179-02	Low Level Mercury Field Blank/20343797004 LLHg Field Blank	Wastewater	01/20/2025 08:10	01/25/2025 11:08	Client

**ANALYTICAL RESULTS**

Lab Sample ID: **5015179-01**  
 Description: **Low Level Mercury 20343797003 LLHg Effluent Grab**

Sample Collection Date Time: 01/20/2025 08:10  
 Sample Received Date Time: 01/25/2025 11:08

Metals Analysis Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	0.3	J	ng/L	0.5	0.3	EPA 1631E 2002	01/29/2025 14:10	01/30/2025 12:01	DER

**ANALYTICAL RESULTS**

Lab Sample ID: **5015179-02**  
 Description: **Low Level Mercury Field Blank 20343797004 LLHg Field Blank**

Sample Collection Date Time: 01/20/2025 08:10  
 Sample Received Date Time: 01/25/2025 11:08

Metals Analysis Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	0.3	J	ng/L	0.5	0.3	EPA 1631E 2002	01/29/2025 14:10	01/30/2025 11:31	DER



**Notes for work order 5015179**

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
- Results contained in this report are only representative of the samples received.
- PACE does not provide interpretation of these results unless otherwise stated .
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.  
Concentrations reported are estimated values.

**Qualifiers**

- J Estimated value.
- M1 Matrix spike recovery was high; the method control sample recovery was acceptable.
- U Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).

**Standard Qualifiers/Acronyms**

- MDL Method Detection Limit
- MRL Minimum Reporting Limit
- ND Not Detected
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- % Rec Percent Recovery
- RPD Relative Percent Difference
- > Greater than
- < Less than



**Metals Analysis Madisonville - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch BEA2613 - Default Prep Metals**

**Blank (BEA2613-BLK1)**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 9:59

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**Blank (BEA2613-BLK2)**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 10:07

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**Blank (BEA2613-BLK3)**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 10:14

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**LCS (BEA2613-BS1)**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 10:22

Mercury	5.4	0.5	ng/L	5.00		108	77-123			
Mercury	5.4	0.5	ng/L	5.00		108	77-123			

**Matrix Spike (BEA2613-MS1) Source: 5015232-04**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 12:32

Mercury	5.6	0.5	ng/L	5.00	2.7	57.8	71-125			M1
Mercury	5.6	0.5	ng/L	5.00	2.7	57.8	71-125			M1

**Matrix Spike (BEA2613-MS2) Source: 5012814-01**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 12:47

Mercury	5.6	0.5	ng/L	5.00	0.8	96.2	71-125			
Mercury	5.6	0.5	ng/L	5.00	0.8	96.2	71-125			

**Matrix Spike Dup (BEA2613-MSD1) Source: 5015232-04**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 12:40

Mercury	6.0	0.5	ng/L	5.00	2.7	66.5	71-125	7.47	24	M1
Mercury	6.0	0.5	ng/L	5.00	2.7	66.5	71-125	7.47	24	M1

**Matrix Spike Dup (BEA2613-MSD2) Source: 5012814-01**

Prepared: 1/29/2025 14:10, Analyzed: 1/30/2025 12:55

Mercury	5.5	0.5	ng/L	5.00	0.8	93.6	71-125	2.34	24	
Mercury	5.5	0.5	ng/L	5.00	0.8	93.6	71-125	2.34	24	

**Certified Analyses included in this Report**

Analyte	Certifications
---------	----------------

**EPA 1631E 2002 in Water**

Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030)
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431



**Pace Analytical Services, LLC**  
P.O. Box 907  
Madisonville, KY 42431  
270.821.7375  
www.pacelabs.com

<b>Sample Acceptance Checklist for Work Order 5015179</b>	
Shipped By: Fed Ex	Temperature: 8.00° Celcius
<b>Condition</b>	
Check if Custody Seals are Present/Intact	<input type="checkbox"/>
Check if Custody Signatures are Present	<input checked="" type="checkbox"/>
Check if Collector Signature Present	<input checked="" type="checkbox"/>
Check if bottles are intact	<input checked="" type="checkbox"/>
Check if bottles are correct	<input checked="" type="checkbox"/>
Check if bottles have sufficient volume	<input checked="" type="checkbox"/>
Check if samples received on ice	<input type="checkbox"/>
Check if VOA headspace is acceptable	<input type="checkbox"/>
Check if samples received in holding time.	<input checked="" type="checkbox"/>
Check if samples are preserved properly	<input checked="" type="checkbox"/>





Ship To:  
Pace Analytical Madisonville  
825 Industrial Rd  
Madisonville, KY 42431  
Phone 270-824-2211

INTER\_LABORATORY WORK ORDER # 20343797  
(To be completed by sending lab)

Sending Project No:	20343797
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	01/22/25
<b>REQUESTED COMPLETION DATE:</b>	<b>2/3/2025</b>

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR44-Madisonville	External Client	Clanton - WWTP -WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Low Level Mercury 1631	AG3N		HNO3	1	SI-20MET	SUB PASI MET
Low Level Mercury 1631 Field Blank	AG3N		HNO3	1	SI-20MET	SUB PASI MET

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

**FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO**

Return Samples to Sending Region:  Yes  No

**DISPOSITION of FORM**

Original sent to the receiving lab - Copy kept at the sending lab.  
When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.



February 17, 2025

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: Permit renewal Form 2A  
Pace Project No.: 20344625

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory on January 31, 2025. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Cindy Simpson*

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC

1168 Whigham Place

Tuscaloosa, AL 35405

(205) 614-6630

## CERTIFICATIONS

Project: Permit renewal Form 2A

Pace Project No.: 20344625

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### Pace Analytical Services New Orleans

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 2000662023-7

Kansas Department of Health and Environment (NELAC):  
E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):  
02006

Texas Commission on Env. Quality (NELAC):

T104704405-23-18

U.S. Dept. of Agriculture Foreign Soil Import: 525-23-117-  
89728

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### Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Louisiana Certification #: 04076

Michigan Drinking Water Laboratory #9050

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Washington Dept of Ecology #: C1081

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Permit renewal Form 2A  
Pace Project No.: 20344625

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
20344625001	Effluent Composite	EPA 200.8	FC1	13	PASI-N
		EPA 625.1	FIP	63	PASI-I
20344625002	Effluent Grab	EPA 624.1	SLK	34	PASI-N
		EPA 1664B, 2010	DS	1	PASI-N
		EPA 420.1	MHM	1	PASI-N
		SM 4500-CN-E	JTB	1	PASI-N
20344625005	Trip Blank	EPA 624.1	SLK	36	PASI-N

PASI-I = Pace Analytical Services - Indianapolis  
PASI-N = Pace Analytical Services - New Orleans

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS**

Project: Permit renewal Form 2A

Pace Project No.: 20344625

Sample: Effluent Composite Lab ID: 20344625001 Collected: 01/31/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Antimony	ND	mg/L	0.0010	1	
Arsenic	ND	mg/L	0.0010	1	
Beryllium	ND	mg/L	0.00050	1	
Cadmium	ND	mg/L	0.0010	1	
Chromium	ND	mg/L	0.0010	1	
Copper	ND	mg/L	0.0010	1	
Lead	ND	mg/L	0.0010	1	
Nickel	0.0044	mg/L	0.0010	1	
Selenium	ND	mg/L	0.0010	1	
Silver	ND	mg/L	0.00050	1	
Thallium	ND	mg/L	0.00050	1	
Total Hardness	81.0	mg/L	0.0050	1	
Zinc	0.020	mg/L	0.0050	1	
1,2,4-Trichlorobenzene	ND	ug/L	10.2	1	
1,2-Dichlorobenzene	ND	ug/L	10.2	1	
1,2-Diphenylhydrazine	ND	ug/L	10.2	1	
1,3-Dichlorobenzene	ND	ug/L	10.2	1	
1,4-Dichlorobenzene	ND	ug/L	10.2	1	
2,4,6-Trichlorophenol	ND	ug/L	10.2	1	
2,4-Dichlorophenol	ND	ug/L	10.2	1	
2,4-Dimethylphenol	ND	ug/L	10.2	1	
2,4-Dinitrophenol	ND	ug/L	51.0	1	
2,4-Dinitrotoluene	ND	ug/L	10.2	1	
2,6-Dinitrotoluene	ND	ug/L	10.2	1	
2-Chloronaphthalene	ND	ug/L	10.2	1	
2-Chlorophenol	ND	ug/L	10.2	1	
2-Nitrophenol	ND	ug/L	10.2	1	
3,3'-Dichlorobenzidine	ND	ug/L	20.4	1	
4,6-Dinitro-2-methylphenol	ND	ug/L	51.0	1	
4-Bromophenylphenyl ether	ND	ug/L	10.2	1	
4-Chloro-3-methylphenol	ND	ug/L	20.4	1	
4-Chlorophenylphenyl ether	ND	ug/L	10.2	1	
4-Nitrophenol	ND	ug/L	51.0	1	
Acenaphthene	ND	ug/L	10.2	1	
Acenaphthylene	ND	ug/L	10.2	1	
Anthracene	ND	ug/L	10.2	1	
Benzidine	ND	ug/L	51.0	1	
Benzo(a)anthracene	ND	ug/L	10.2	1	
Benzo(a)pyrene	ND	ug/L	10.2	1	
Benzo(b)fluoranthene	ND	ug/L	10.2	1	
Benzo(g,h,i)perylene	ND	ug/L	10.2	1	
Benzo(k)fluoranthene	ND	ug/L	10.2	1	
Butylbenzylphthalate	ND	ug/L	10.2	1	
Chrysene	ND	ug/L	10.2	1	
Di-n-butylphthalate	ND	ug/L	10.2	1	
Di-n-octylphthalate	ND	ug/L	10.2	1	
Dibenz(a,h)anthracene	ND	ug/L	10.2	1	
Diethylphthalate	ND	ug/L	10.2	1	
Dimethylphthalate	ND	ug/L	10.2	1	

**REPORT OF LABORATORY ANALYSIS**

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ANALYTICAL RESULTS

Project: Permit renewal Form 2A

Pace Project No.: 20344625

Sample: Effluent Composite Lab ID: 20344625001 Collected: 01/31/25 08:00

Table with 6 columns: Parameters, Results, Units, Report Limit, DF, Qualifiers. Lists various chemical compounds and their detection results.

Sample: Effluent Grab Lab ID: 20344625002 Collected: 01/31/25 08:00

Table with 6 columns: Parameters, Results, Units, Report Limit, DF, Qualifiers. Lists various chemical compounds and their detection results.

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### ANALYTICAL RESULTS

Project: Permit renewal Form 2A  
 Pace Project No.: 20344625

Sample: Effluent Grab		Lab ID: 20344625002		Collected: 01/31/25 08:00	
Parameters	Results	Units	Report Limit	DF	Qualifiers
trans-1,2-Dichloroethene	ND	ug/L	5.0	1	
1,2-Dichloropropane	ND	ug/L	5.0	1	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1	
Ethylbenzene	ND	ug/L	5.0	1	
Methylene Chloride	ND	ug/L	5.0	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1	
Tetrachloroethene	ND	ug/L	5.0	1	
Toluene	ND	ug/L	5.0	1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1	
1,1,2-Trichloroethane	ND	ug/L	5.0	1	
Trichloroethene	ND	ug/L	5.0	1	
Trichlorofluoromethane	ND	ug/L	5.0	1	
Vinyl chloride	ND	ug/L	5.0	1	L1
4-Bromofluorobenzene (S)	103	%	82-118	1	
Toluene-d8 (S)	100	%	81-120	1	
Dibromofluoromethane (S)	101	%	77-123	1	
Oil and Grease	ND	mg/L	5.0	1	
Phenolics, Total Recoverable	ND	mg/L	0.020	1	
Cyanide	ND	mg/L	0.020	1	

Sample: Trip Blank		Lab ID: 20344625005		Collected: 01/31/25 08:00	
Parameters	Results	Units	Report Limit	DF	Qualifiers
Acrolein	ND	ug/L	20.0	1	Ac
Acrylonitrile	ND	ug/L	20.0	1	
Benzene	ND	ug/L	5.0	1	
Bromodichloromethane	ND	ug/L	5.0	1	
Bromoform	ND	ug/L	5.0	1	
Bromomethane	ND	ug/L	5.0	1	
Carbon tetrachloride	ND	ug/L	5.0	1	
Chlorobenzene	ND	ug/L	5.0	1	
Chloroethane	ND	ug/L	5.0	1	
2-Chloroethylvinyl ether	ND	ug/L	20.0	1	
Chloroform	ND	ug/L	5.0	1	
Chloromethane	ND	ug/L	5.0	1	
Dibromochloromethane	ND	ug/L	5.0	1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1	L1
1,3-Dichlorobenzene	ND	ug/L	5.0	1	L1
1,4-Dichlorobenzene	ND	ug/L	5.0	1	L1
1,1-Dichloroethane	ND	ug/L	5.0	1	
1,2-Dichloroethane	ND	ug/L	5.0	1	
1,1-Dichloroethene	ND	ug/L	5.0	1	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1	
1,2-Dichloropropane	ND	ug/L	5.0	1	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1	
Ethylbenzene	ND	ug/L	5.0	1	

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### ANALYTICAL RESULTS

Project: Permit renewal Form 2A  
Pace Project No.: 20344625

Sample: Trip Blank      Lab ID: 20344625005      Collected: 01/31/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Methylene Chloride	ND	ug/L	5.0	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1	
Tetrachloroethene	ND	ug/L	5.0	1	
Toluene	ND	ug/L	5.0	1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1	
1,1,2-Trichloroethane	ND	ug/L	5.0	1	
Trichloroethene	ND	ug/L	5.0	1	
Trichlorofluoromethane	ND	ug/L	5.0	1	
Vinyl chloride	ND	ug/L	5.0	1	L1
4-Bromofluorobenzene (S)	106	%.	82-118	1	
Toluene-d8 (S)	100	%.	81-120	1	
Dibromofluoromethane (S)	102	%.	77-123	1	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Permit renewal Form 2A

Pace Project No.: 20344625

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

### ANALYTE QUALIFIERS

Ac Analysis of acrolein was performed from an unpreserved sample outside of the 3 day holding time required by the test method and for NPDES compliance per 40CFR Part 136 for unpreserved samples.

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

## REPORT OF LABORATORY ANALYSIS

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**WO# : 20344625**

**Project #**  
**Project Manager:**  
**Client:**

**PM: CRS**      **Due Date: 02/14/25**  
**CLIENT: TU-ClantonWW**

**Date and Initials of person:**  
**Examining contents:** kw1  
**Verifying pH:** kw1  
**Initials:** CTR

Thermometer Used: TUTM13      Date: 1.31      Time: 1340

State of Origin: \_\_\_\_\_  For WW projects, all containers verified to ±6 °C

Cooler #1 Temp.°C 10.8 (Visual) 0 (Correction Factor) 10.8 (Actual)

Cooler #2 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #3 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #4 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #5 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #6 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Recheck for OOT °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Samples on ice, cooling process has begun.  
 Time: \_\_\_\_\_ Initials: \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_

Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other: \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # \_\_\_\_\_

Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No      Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

Samples shorted to lab:  Yes  No (if yes, complete the following)

Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_

Bottle Quantity / Type: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:						
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A							
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:						
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Comments:						
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:						
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:						
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:						
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:						
All containers needing acid / base preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<table border="1"> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </table>	Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
Preservative: _____	Date: _____							
Lot / Trace: _____	Time: _____							
Amount added (mL): _____	Initials: _____							
All containers needing preservation are found to be in compliance with EPA recommendation:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A							
Exceptions: Vials, Microbiology, O&G, PFAS								
Headspace in Volatile Vials? (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Effluent grab vials 1 and 3.						
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A							

Comments / Resolutions (use back for additional comments): \_\_\_\_\_

Labeled by: kw1      Reviewed by: Jo      Delivered by: Jo



Pace Analytical Services, LLC  
 P.O. Box 907  
 Madisonville, KY 42431  
 270.821.7375  
 www.pacelabs.com

**Certificate of Analysis**  
**5022888**

Cindy Simpson  
 Pace Analytical Services LLC Tuscaloosa  
 3516 Greensboro Ave  
 Tuscaloosa, AL 35401

Customer ID: 44-102111  
 Report Printed: 02/07/2025 14:32

Project Name: Cindy Simpson PM	Workorder: 5022888
--------------------------------	--------------------

Dear Cindy Simpson

Enclosed are the analytical results for samples received by the laboratory 02/04/ 2025 11:06.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Madisonville - 825 Industrial Road, Madisonville, KY 42431

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY  
 #460291 Pikeville, KY  
 #E871136 Englewood, OH

Melissia Brown, Project Coordinator

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Pace Analytical Services, LLC  
 P.O. Box 907  
 Madisonville, KY 42431  
 270.821.7375  
 www.pacelabs.com

**SAMPLE SUMMARY**

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
5022888-01	Low Level Mercury/20344625003 LLHg Effluent Grab	Wastewater	01/31/2025 08:00	02/04/2025 11:06	Client
5022888-02	Low Level Mercury Field Blank/20344625004 LLHg Field Blank	Wastewater	01/31/2025 08:00	02/04/2025 11:06	Client

**ANALYTICAL RESULTS**

Lab Sample ID: **5022888-01**  
 Description: **Low Level Mercury 20344625003 LLHg Effluent Grab**

Sample Collection Date Time: 01/31/2025 08:00  
 Sample Received Date Time: 02/04/2025 11:06

**Metals Analysis Madisonville**

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	0.7		ng/L	0.5	0.3	EPA 1631E 2002	02/06/2025 14:06	02/07/2025 12:10	DER

**ANALYTICAL RESULTS**

Lab Sample ID: **5022888-02**  
 Description: **Low Level Mercury Field Blank 20344625004 LLHg Field Blank**

Sample Collection Date Time: 01/31/2025 08:00  
 Sample Received Date Time: 02/04/2025 11:06

**Metals Analysis Madisonville**

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	0.5	0.3	EPA 1631E 2002	02/06/2025 14:06	02/07/2025 10:53	DER



**Notes for work order 5022888**

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
- Results contained in this report are only representative of the samples received.
- PACE does not provide interpretation of these results unless otherwise stated .
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.  
Concentrations reported are estimated values.

**Qualifiers**

U Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).

**Standard Qualifiers/Acronyms**

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than



**Metals Analysis Madisonville - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch BEB0555 - Default Prep Metals**

**Blank (BEB0555-BLK1)**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 9:44

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**Blank (BEB0555-BLK2)**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 9:52

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**Blank (BEB0555-BLK3)**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 9:59

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**LCS (BEB0555-BS1)**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 10:07

Mercury	4.8	0.5	ng/L	5.00		95.6	77-123			
Mercury	4.8	0.5	ng/L	5.00		95.6	77-123			

**Matrix Spike (BEB0555-MS1) Source: 5020631-05**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 13:03

Mercury	4.7	0.5	ng/L	5.00	0.3	87.5	71-125			
Mercury	4.7	0.5	ng/L	5.00	0.3	87.5	71-125			

**Matrix Spike (BEB0555-MS2) Source: 5023133-01**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 13:19

Mercury	8.9	0.5	ng/L	5.00	2.7	124	71-125			
Mercury	8.9	0.5	ng/L	5.00	2.7	124	71-125			

**Matrix Spike Dup (BEB0555-MSD1) Source: 5020631-05**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 13:11

Mercury	5.0	0.5	ng/L	5.00	0.3	93.6	71-125	6.24	24	
Mercury	5.0	0.5	ng/L	5.00	0.3	93.6	71-125	6.24	24	

**Matrix Spike Dup (BEB0555-MSD2) Source: 5023133-01**

Prepared: 2/6/2025 14:06, Analyzed: 2/7/2025 13:26

Mercury	7.6	0.5	ng/L	5.00	2.7	97.2	71-125	16.2	24	
Mercury	7.6	0.5	ng/L	5.00	2.7	97.2	71-125	16.2	24	

**Certified Analyses Included in this Report**

Analyte	Certifications
<b>EPA 1631E 2002 in Water</b>	
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030)
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431



Pace Analytical Services, LLC  
P.O. Box 907  
Madisonville, KY 42431  
270.821.7375  
www.pacelabs.com

<b>Sample Acceptance Checklist for Work Order 5022888</b>	
Shipped By: Fed Ex	Temperature: 4.20° Celcius
<b>Condition</b>	
Check if Custody Seals are Present/Intact	<input type="checkbox"/>
Check if Custody Signatures are Present	<input checked="" type="checkbox"/>
Check if Collector Signature Present	<input checked="" type="checkbox"/>
Check if bottles are intact	<input checked="" type="checkbox"/>
Check if bottles are correct	<input checked="" type="checkbox"/>
Check if bottles have sufficient volume	<input checked="" type="checkbox"/>
Check if samples received on ice	<input checked="" type="checkbox"/>
Check if VOA headspace is acceptable	<input type="checkbox"/>
Check if samples received in holding time.	<input checked="" type="checkbox"/>
Check if samples are preserved properly	<input checked="" type="checkbox"/>





Ship To:  
Pace Analytical Madisonville  
825 Industrial Rd  
Madisonville, KY 42431  
Phone 270-824-2211

INTER\_LABORATORY WORK ORDER # 20344625  
(To be completed by sending lab)

Sending Project No:	20344625
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	01/31/25
REQUESTED COMPLETION DATE:	2/14/2025

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR44-Madisonville	External Client	Clanton - WWTP -WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet \_\_\_\_\_ Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Low Level Mercury	AG3N		HNO3	2	SI-20MET	SUB PASI MET

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

**FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO**

Return Samples to Sending Region:  Yes  No

**DISPOSITION of FORM**

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.



Pace Analytical Services, LLC

1168 Whigham Place

Tuscaloosa, AL 35405

(205) 614-6630

February 24, 2025

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: Permit renewal Form 2A  
Pace Project No.: 20345056

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory on February 05, 2025. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Cindy Simpson*

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

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### CERTIFICATIONS

Project: Permit renewal Form 2A

Pace Project No.: 20345056

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#### Pace Analytical Services New Orleans

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 2000662023-7

Kansas Department of Health and Environment (NELAC):  
E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):  
02006

Texas Commission on Env. Quality (NELAC):

T104704405-23-18

U.S. Dept. of Agriculture Foreign Soil Import: 525-23-117-  
89728

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#### Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Louisiana Certification #: 04076

Michigan Drinking Water Laboratory #9050

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Washington Dept of Ecology #: C1081

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

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### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Permit renewal Form 2A  
Pace Project No.: 20345056

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
20345056001	Effluent Composite	EPA 200.8	FC1	13	PASI-N
		EPA 625.1	FIP	63	PASI-I
20345056002	Effluent Grab	EPA 624.1	JRP	34	PASI-N
		EPA 1664B, 2010	DS	1	PASI-N
		EPA 420.1	JTB	1	PASI-N
		SM 4500-CN-E	MHM	1	PASI-N
20345056005	Trip Blank	EPA 624.1	JRP	36	PASI-N

PASI-I = Pace Analytical Services - Indianapolis  
PASI-N = Pace Analytical Services - New Orleans

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS**

Project: Permit renewal Form 2A  
 Pace Project No.: 20345056

Sample: Effluent Composite Lab ID: 20345056001 Collected: 02/05/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Antimony	ND	mg/L	0.0010	1	
Arsenic	ND	mg/L	0.0010	1	
Beryllium	ND	mg/L	0.00050	1	
Cadmium	ND	mg/L	0.0010	1	
Chromium	ND	mg/L	0.0010	1	
Copper	ND	mg/L	0.0010	1	
Lead	ND	mg/L	0.0010	1	
Nickel	0.0061	mg/L	0.0010	1	
Selenium	ND	mg/L	0.0010	1	
Silver	ND	mg/L	0.00050	1	
Thallium	ND	mg/L	0.00050	1	
Total Hardness	83.4	mg/L	0.0050	1	
Zinc	0.059	mg/L	0.0050	1	
Acenaphthene	ND	ug/L	10.2	1	
Acenaphthylene	ND	ug/L	10.2	1	
Anthracene	ND	ug/L	10.2	1	
Benzidine	ND	ug/L	51.0	1	
Benzo(a)anthracene	ND	ug/L	10.2	1	
Benzo(a)pyrene	ND	ug/L	10.2	1	
Benzo(b)fluoranthene	ND	ug/L	10.2	1	
Benzo(g,h,i)perylene	ND	ug/L	10.2	1	
Benzo(k)fluoranthene	ND	ug/L	10.2	1	
4-Bromophenylphenyl ether	ND	ug/L	10.2	1	
Butylbenzylphthalate	ND	ug/L	10.2	1	
4-Chloro-3-methylphenol	ND	ug/L	20.4	1	
bis(2-Chloroethoxy)methane	ND	ug/L	10.2	1	
bis(2-Chloroethyl) ether	ND	ug/L	10.2	1	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.2	1	
2-Chloronaphthalene	ND	ug/L	10.2	1	
2-Chlorophenol	ND	ug/L	10.2	1	
4-Chlorophenylphenyl ether	ND	ug/L	10.2	1	
Chrysene	ND	ug/L	10.2	1	
Dibenz(a,h)anthracene	ND	ug/L	10.2	1	
1,2-Dichlorobenzene	ND	ug/L	10.2	1	
1,3-Dichlorobenzene	ND	ug/L	10.2	1	
1,4-Dichlorobenzene	ND	ug/L	10.2	1	
3,3'-Dichlorobenzidine	ND	ug/L	20.4	1	
2,4-Dichlorophenol	ND	ug/L	10.2	1	
Diethylphthalate	ND	ug/L	10.2	1	
2,4-Dimethylphenol	ND	ug/L	10.2	1	
Dimethylphthalate	ND	ug/L	10.2	1	
Di-n-butylphthalate	ND	ug/L	10.2	1	
4,6-Dinitro-2-methylphenol	ND	ug/L	51.0	1	
2,4-Dinitrophenol	ND	ug/L	51.0	1	
2,4-Dinitrotoluene	ND	ug/L	10.2	1	
2,6-Dinitrotoluene	ND	ug/L	10.2	1	
Di-n-octylphthalate	ND	ug/L	10.2	1	
1,2-Diphenylhydrazine	ND	ug/L	10.2	1	
bis(2-Ethylhexyl)phthalate	ND	ug/L	5.1	1	

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS

Project: Permit renewal Form 2A  
 Pace Project No.: 20345056

Sample: **Effluent Composite** Lab ID: **20345056001** Collected: 02/05/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Fluoranthene	ND	ug/L	10.2	1	
Fluorene	ND	ug/L	10.2	1	
Hexachloro-1,3-butadiene	ND	ug/L	10.2	1	
Hexachlorobenzene	ND	ug/L	10.2	1	
Hexachlorocyclopentadiene	ND	ug/L	20.4	1	
Hexachloroethane	ND	ug/L	10.2	1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.2	1	
Isophorone	ND	ug/L	10.2	1	
Naphthalene	ND	ug/L	10.2	1	
Nitrobenzene	ND	ug/L	10.2	1	
2-Nitrophenol	ND	ug/L	10.2	1	
4-Nitrophenol	ND	ug/L	51.0	1	
N-Nitrosodimethylamine	ND	ug/L	20.4	1	
N-Nitroso-di-n-propylamine	ND	ug/L	10.2	1	
N-Nitrosodiphenylamine	ND	ug/L	10.2	1	
Pentachlorophenol	ND	ug/L	51.0	1	
Phenanthrene	ND	ug/L	10.2	1	
Phenol	ND	ug/L	10.2	1	
Pyrene	ND	ug/L	10.2	1	
1,2,4-Trichlorobenzene	ND	ug/L	10.2	1	
2,4,6-Trichlorophenol	ND	ug/L	10.2	1	
2-Fluorophenol (S)	43	%.	1-102	1	
Phenol-d5 (S)	28	%.	8-424	1	
Nitrobenzene-d5 (S)	80	%.	15-314	1	
2-Fluorobiphenyl (S)	84	%.	2-103	1	
2,4,6-Tribromophenol (S)	98	%.	20-155	1	
p-Terphenyl-d14 (S)	98	%.	1-168	1	

Sample: **Effluent Grab** Lab ID: **20345056002** Collected: 02/05/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Acrolein	ND	ug/L	20.0	1	
Acrylonitrile	ND	ug/L	20.0	1	
Benzene	ND	ug/L	5.0	1	
Bromoform	ND	ug/L	5.0	1	
Bromomethane	ND	ug/L	5.0	1	
Carbon tetrachloride	ND	ug/L	5.0	1	
Chlorobenzene	ND	ug/L	5.0	1	
Chloroethane	ND	ug/L	5.0	1	
2-Chloroethylvinyl ether	ND	ug/L	20.0	1	
Chloroform	ND	ug/L	5.0	1	
Chloromethane	ND	ug/L	5.0	1	
Dibromochloromethane	ND	ug/L	5.0	1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1	
1,1-Dichloroethane	ND	ug/L	5.0	1	
1,2-Dichloroethane	ND	ug/L	5.0	1	
1,1-Dichloroethene	ND	ug/L	5.0	1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Permit renewal Form 2A

Pace Project No.: 20345056

Sample: Effluent Grab Lab ID: 20345056002 Collected: 02/05/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
trans-1,2-Dichloroethene	ND	ug/L	5.0	1	
1,2-Dichloropropane	ND	ug/L	5.0	1	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1	
Ethylbenzene	ND	ug/L	5.0	1	
Methylene Chloride	ND	ug/L	5.0	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1	
Tetrachloroethene	ND	ug/L	5.0	1	
Toluene	ND	ug/L	5.0	1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1	
1,1,2-Trichloroethane	ND	ug/L	5.0	1	
Trichloroethene	ND	ug/L	5.0	1	
Trichlorofluoromethane	ND	ug/L	5.0	1	
Vinyl chloride	ND	ug/L	5.0	1	
4-Bromofluorobenzene (S)	105	%.	82-118	1	
Toluene-d8 (S)	106	%.	81-120	1	
Dibromofluoromethane (S)	103	%.	77-123	1	
Oil and Grease	ND	mg/L	5.0	1	
Phenolics, Total Recoverable	ND	mg/L	0.020	1	
Cyanide	ND	mg/L	0.020	1	

Sample: Trip Blank Lab ID: 20345056005 Collected: 02/05/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Acrolein	ND	ug/L	20.0	1	
Acrylonitrile	ND	ug/L	20.0	1	
Benzene	ND	ug/L	5.0	1	
Bromodichloromethane	ND	ug/L	5.0	1	
Bromoform	ND	ug/L	5.0	1	
Bromomethane	ND	ug/L	5.0	1	
Carbon tetrachloride	ND	ug/L	5.0	1	
Chlorobenzene	ND	ug/L	5.0	1	
Chloroethane	ND	ug/L	5.0	1	
2-Chloroethylvinyl ether	ND	ug/L	20.0	1	
Chloroform	ND	ug/L	5.0	1	
Chloromethane	ND	ug/L	5.0	1	
Dibromochloromethane	ND	ug/L	5.0	1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1	
1,1-Dichloroethane	ND	ug/L	5.0	1	
1,2-Dichloroethane	ND	ug/L	5.0	1	
1,1-Dichloroethene	ND	ug/L	5.0	1	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1	
1,2-Dichloropropane	ND	ug/L	5.0	1	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1	
Ethylbenzene	ND	ug/L	5.0	1	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Permit renewal Form 2A

Pace Project No.: 20345056

Sample: Trip Blank Lab ID: 20345056005 Collected: 02/05/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Methylene Chloride	ND	ug/L	5.0	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1	
Tetrachloroethene	ND	ug/L	5.0	1	
Toluene	ND	ug/L	5.0	1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1	
1,1,2-Trichloroethane	ND	ug/L	5.0	1	
Trichloroethene	ND	ug/L	5.0	1	
Trichlorofluoromethane	ND	ug/L	5.0	1	
Vinyl chloride	ND	ug/L	5.0	1	
4-Bromofluorobenzene (S)	103	%.	82-118	1	
Toluene-d8 (S)	104	%.	81-120	1	
Dibromofluoromethane (S)	104	%.	77-123	1	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Permit renewal Form 2A

Pace Project No.: 20345056

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

## REPORT OF LABORATORY ANALYSIS

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**Pace** Pace® Location Requested (City/State):  
Pace Analytical Tuscaloosa  
1168 Whigham Place, Tuscaloosa, AL 35401

**CHAIN-OF-CUSTODY Analytical Request Document**

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields



LAB USE ONLY  
**WO# : 20345056**  
20345056

Company Name: Clanton - WWTP-WW  
Street Address: 1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046  
Customer Project #:   
Project Name: Permit renewal Form 2A  
Site Collection Info/Facility ID (as applicable):

Contact/Report To: Anthony Robinson  
Phone #: (205)755-2380  
E-Mail: arobinson@clantonal.gov  
Cc E-Mail:  
Invoice To: Accounts Payable  
Invoice E-Mail: kwoodham@cityofclanton.com  
Purchase Order # (if applicable):  
Quote #:

Specify Container Size \*\*  
Identify Container Preservative Type\*\*\*  
Analysis Requested

\*\*Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other  
\*\*\* Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCL, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET  
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

County / State origin of sample(s): Alabama  
Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No  
Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other \_\_\_\_\_  
DW PWSID # or WW Permit # as applicable:  
Date Results Requested: Field Filtered (if applicable): [ ] Yes [ ] No  
Analysis:

200.8 Metals, Total	420.1 Phenolics, Total	4500CNE Cyanide, Total	624 Volatile Organics	625 Form 2a list	HEM, Oil and Grease	Low Level Mercury 1631	Low Level Mercury Field Blank
---------------------	------------------------	------------------------	-----------------------	------------------	---------------------	------------------------	-------------------------------

Proj. Mgr: **Cindy Simpson**  
AcctNum / Client ID:  
Table #:  
Profile / Template: **20028**  
Prelog / Bottle Ord. ID: **EZ 3211055**  
Sample Comment

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start		Collected or Composite End		# Cont.	Res. Chlorine	
			Date	Time	Date	Time		Results	Units
Effluent Composite	WT	C	2-04-25	8:00	2-05-25	8:00			
Effluent Grab	WT	G			2-05-25	8:00			
LLHg Effluent Grab	WT	G			2-05-25	8:00			
LLHg Field Blank	WT				2-05-25	8:00			
Trip Blank	WT				2-05-25	8:00			

X				X					
	X	X	X		X				
						X			
							X		
				X					

Additional Instructions from Pace®:

Collected By: **Tina Robinson**  
(Printed Name)  
Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards:

Relinquished by/Company: (Signature) *[Signature]*  
Date/Time: 2/5/25 10:43  
Relinquished by/Company: (Signature) *[Signature]*  
Date/Time: 2/5/25 10:43  
Relinquished by/Company: (Signature) *[Signature]*  
Date/Time:  
Relinquished by/Company: (Signature) *[Signature]*  
Date/Time:

Date/Time: 2/5/25 10:43  
Date/Time: 2/5/25 10:43  
Date/Time:  
Date/Time:

Received by/Company: (Signature) *[Signature]*  
Received by/Company: (Signature) *[Signature]*  
Received by/Company: (Signature)  
Received by/Company: (Signature)

# Coolers: 1 Thermometer ID: TUTM13 Correction Factor (°C): 0 Obs. Temp. (°C): 0.8 Corrected Temp. (°C): 0.8 On Ice: Y  
Tracking Number:

Date/Time: 2/5/25 10:43  
Date/Time: 2/5/25 14:22  
Date/Time:

Delivered by: [ ] In-Person [X] Courier  
[ ] FedEx [ ] UPS [ ] Other  
Page: 1 of 1



**WO#: 20345056**

**Project #** PM: CRS **Due Date:** 02/19/25  
**Project Manager:** CLIENT: TU-ClantonHW  
**Client:**

**Date and Initials of person:**      
**Examining contents:**      
**Verifying pH:**    

**Thermometer Used:** TUTM13 **Date:** 2/5/25 **Time:** 1449 **Initials:** DPH

State of Origin: AL  For WV projects, all containers verified to  $\leq 8$  °C  
 Cooler #1 Temp. °C 0.8 (Visual) 0 (Correction Factor) 0.8 (Actual)  
 Cooler #2 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #3 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #4 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Recheck for OOT °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Samples on ice, cooling process has begun.  
 Samples on ice, cooling process has begun.  
**Time:** \_\_\_\_\_ **Initials:** \_\_\_\_\_

**Courier:**  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_

**Shipping Method:**  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other: \_\_\_\_\_

**Billing:**  Recipient  Sender  Third Party  Credit Card  Unknown

**Tracking #** \_\_\_\_\_

**Custody Seal Present:**  Yes  No **Seal properly placed and intact:**  Yes  No **Ice:**  Wet  Blue  Dry  None  Melted

**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

**Samples shorted to lab:**  Yes  No (if yes, complete the following)

**Shorted Date:** \_\_\_\_\_

**Shorted Time:** \_\_\_\_\_

**Bottle Quantity / Type:** \_\_\_\_\_

<b>Chain of Custody:</b>	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A										
	Relinquished To Pace: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A										
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:									
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Comments:									
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:									
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:									
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:									
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:									
All containers needing acid / base preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<table border="1"> <tr> <th colspan="2">Preservation Information</th> </tr> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </table>		Preservation Information		Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
Preservation Information											
Preservative: _____	Date: _____										
Lot / Trace: _____	Time: _____										
Amount added (mL): _____	Initials: _____										
All containers needing preservation are found to be in compliance with EPA recommendation:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A										
Exceptions: Vials, Microbiology, O&G, PFAS											
Headspace in Volatile Vials? (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	↓									
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A										

**Comments / Resolutions (use back for additional comments):** 2476972, 2476973 headspace

**Labeled by:**    

**Reviewed by:** STR

**Delivered by:**



Pace Analytical Services, LLC  
P.O. Box 907  
Madisonville, KY 42431  
270.821.7375  
www.pacelabs.com

**Certificate of Analysis**  
**5023540**

Cindy Simpson  
Pace Analytical Services LLC Tuscaloosa  
3516 Greensboro Ave  
Tuscaloosa, AL 35401

Customer ID: 44-102111  
Report Printed: 02/20/2025 14:30

Project Name: Cindy Simpson PM	Workorder: 5023540
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Dear Cindy Simpson

Enclosed are the analytical results for samples received by the laboratory 02/08/2025 12:04.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Madisonville - 825 Industrial Road, Madisonville, KY 42431

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY  
#460291 Pikeville, KY  
#E871136 Englewood, OH

Melissia Brown, Project Coordinator

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Pace Analytical Services, LLC  
 P.O. Box 907  
 Madisonville, KY 42431  
 270.821.7375  
 www.pacelabs.com

**SAMPLE SUMMARY**

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
5023540-01	Low Level Mercury/20345056003 LLHg Effluent Grab	Wastewater	02/05/2025 08:00	02/08/2025 12:04	Client
5023540-02	Low Level Mercury Field Blank/20345056004 LLHg Field Blank	Wastewater	02/05/2025 08:00	02/08/2025 12:04	Client

**ANALYTICAL RESULTS**

Lab Sample ID: **5023540-01**  
 Description: **Low Level Mercury 20345056003 LLHg Effluent Grab**

Sample Collection Date Time: 02/05/2025 08:00  
 Sample Received Date Time: 02/08/2025 12:04

**Metals Analysis Madisonville**

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	0.5		ng/L	0.5	0.3	EPA 1631E 2002	02/19/2025 10:17	02/20/2025 12:27	DER

**ANALYTICAL RESULTS**

Lab Sample ID: **5023540-02**  
 Description: **Low Level Mercury Field Blank 20345056004 LLHg Field Blank**

Sample Collection Date Time: 02/05/2025 08:00  
 Sample Received Date Time: 02/08/2025 12:04

**Metals Analysis Madisonville**

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	0.5	0.3	EPA 1631E 2002	02/19/2025 10:17	02/20/2025 10:55	DER



**Notes for work order 5023540**

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
- Results contained in this report are only representative of the samples received.
- PACE does not provide interpretation of these results unless otherwise stated .
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.  
Concentrations reported are estimated values.

**Qualifiers**

U Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).

**Standard Qualifiers/Acronyms**

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than



**Metals Analysis Madisonville - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch BEB1832 - Default Prep Metals**

**Blank (BEB1832-BLK1)**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 9:46

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**Blank (BEB1832-BLK2)**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 9:54

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**Blank (BEB1832-BLK3)**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 10:01

Mercury	ND	0.5	ng/L							U
Mercury	ND	0.5	ng/L							U

**LCS (BEB1832-BS1)**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 10:09

Mercury	4.6	0.5	ng/L	5.00		93.0	77-123			
Mercury	4.6	0.5	ng/L	5.00		93.0	77-123			

**Matrix Spike (BEB1832-MS1) Source: 5010548-10**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 13:28

Mercury	5.4	0.5	ng/L	5.00	1.0	87.3	71-125			
Mercury	5.4	0.5	ng/L	5.00	1.0	87.3	71-125			

**Matrix Spike (BEB1832-MS2) Source: 5023586-01**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 13:43

Mercury	4.7	0.5	ng/L	5.00	0.5	84.5	71-125			
Mercury	4.7	0.5	ng/L	5.00	0.5	84.5	71-125			

**Matrix Spike Dup (BEB1832-MSD1) Source: 5010548-10**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 13:36

Mercury	5.5	0.5	ng/L	5.00	1.0	90.1	71-125	2.58	24	
Mercury	5.5	0.5	ng/L	5.00	1.0	90.1	71-125	2.58	24	

**Matrix Spike Dup (BEB1832-MSD2) Source: 5023586-01**

Prepared: 2/19/2025 10:17, Analyzed: 2/20/2025 13:51

Mercury	4.9	0.5	ng/L	5.00	0.5	88.2	71-125	3.96	24	
Mercury	4.9	0.5	ng/L	5.00	0.5	88.2	71-125	3.96	24	

**Certified Analyses included in this Report**

Analyte	Certifications
<b>EPA 1631E 2002 in Water</b>	
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030)
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026
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Form 2F NPDES		<b>U.S Environmental Protection Agency</b> <b>Application for NPDES Permit to Discharge Wastewater</b> <b>STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY</b>
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**SECTION 1. OUTFALL LOCATION (40 CFR 122.21(G)(1))**

<b>Outfall Location</b>	<b>1.1</b>	Provide information on each of the facility's outfalls in the table below			
		<b>Outfall Number</b>	<b>Receiving Water Name</b>	<b>Latitude</b>	<b>Longitude</b>
		002S	Walnut Creek	32.86863900000000	-86.59999999999999
		003S	Walnut Creek	32.86688900000000	-86.59811100000000

**SECTION 2. IMPROVEMENTS (40 CFR 122.21(G)(6))**

<b>Improvements</b>	<b>2.1</b>	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 3.				
	<b>2.2</b>	Briefly identify each applicable project in the table below.				
		<b>Brief Identification and Description of Project</b>	<b>Affected Outfalls (list outfall numbers)</b>	<b>Source(s) of Discharge</b>	<b>Final Compliance Dates</b>	
					<b>Required</b>	<b>Projected</b>
	<b>2.3</b>	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? <i>(optional item)</i> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>RECEIVED</b>				

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**SECTION 3. SITE DRAINAGE MAP (40 CFR 122.26(C)(1)(I)(A))**

<b>Site Drainage Map</b>	<b>3.1</b>	Have you attached a site drainage map containing all required information to this application? (See instructions for specific guidance.)
		<input checked="" type="checkbox"/> Yes

**SECTION 4. POLLUTANT SOURCES (40 CFR 122.26(C)(1)(I)(B))**

<b>Pollutant Sources</b>	<b>4.1</b>	Provide information on the facility's pollutant sources in the table below.			
		<b>Outfall Number</b>	<b>Impervious Surface Area</b> (within a mile radius of the facility)	<b>Total Surface Area Drained</b> (within a mile radius of the facility)	
		002S	0.45	<i>specify units</i> Acres	2.93 <i>specify units</i> Acres
		003S	0.93	<i>specify units</i> Acres	2.83 <i>specify units</i> Acres
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
	<b>4.2</b>	Provide a narrative description of the facility's significant material in the space below. (See instructions for content requirements.)			
		All chemicals for wastewater treatment are stored indoors preventing any exposure to storm water. There have been no leaks or spills of chemicals or other pollutants which could contribute to storm water contamination. There are no pesticides, herbicides, soil conditioners, or fertilizers applied to the grounds other than a small amount of fire ant pesticide. Sludge is removed from drying beds and disposed of at appropriately licensed/permitted facilities.			
	<b>4.3</b>	Provide the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff. (See instructions for specific guidance.)			
		<b>Stormwater Treatment</b>			
		<b>Outfall Number</b>	<b>Control Measures and Treatment</b>	<b>Codes from Exhibit 2F-1 (list)</b>	
			N/A		

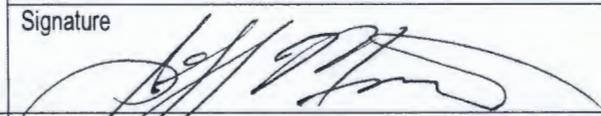
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**SECTION 5. NON STORMWATER DISCHARGES (40 CFR 122.26(C)(1)(I)(C))**

Non-Stormwater Discharges	<b>5.1</b> Provide the following certification. (See instructions to determine the appropriate person to sign the application.) <i>I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges. Moreover, I certify that the outfalls identified as having non-stormwater discharges are described in either an accompanying NPDES Form 2C, 2D, or 2E application.</i>			
	Name (print or type first and last name)		Official title	
	Jeff Mims		Superintendent	
	Signature		Date signed	
			05/05/2025	
	<b>5.2</b> Provide the testing information requested in the table below.			
		<b>Outfall Number</b>	<b>Description of Testing Method Used</b>	<b>Date(s) of Testing</b>
	002S	Annual Storm Water	04/11/2024	002S
	003S	Annual Storm Water	04/11/2024	003S

**SECTION 6. SIGNIFICANT LEAKS OR SPILLS (40 CFR 122.26(C)(1)(I)(D))**

Significant Leaks or Spills	<b>6.1</b>	Describe any significant leaks or spills of toxic or hazardous pollutants in the last three years. N/A
-----------------------------	------------	---

**SECTION 7. DISCHARGE INFORMATION (40 CFR 122.26(C)(1)(I)(E))**

Discharge Information	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.	
	<b>7.1</b>	Is this a new source or new discharge? <input type="checkbox"/> Yes → See instructions regarding submission of <i>estimated</i> data. <input checked="" type="checkbox"/> No → See instructions regarding submission of <i>actual</i> data.
	<b>Tables A, B, C, and D</b>	
<b>7.2</b>	Have you completed Table A for each outfall? <input checked="" type="checkbox"/> Yes	

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Discharge Information Continued	<u>7.3</u>	Is the facility subject to an effluent limitation guideline (ELG) or effluent limitations in an NPDES permit for its process wastewater?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.5.
	<u>7.4</u>	Have you completed Table B by providing quantitative data for those pollutants that are (1) limited either directly or indirectly in an ELG and/or (2) subject to effluent limitations in an NPDES permit for the facility's process wastewater?  <input type="checkbox"/> Yes
	<u>7.5</u>	Do you know or have reason to believe any pollutants in Exhibit 2F-2 are present in the discharge?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.7.
	<u>7.6</u>	Have you listed all pollutants in Exhibit 2F-2 that you know or have reason to believe are present in the discharge and provided quantitative data or an explanation for those pollutants in Table C?  <input type="checkbox"/> Yes
	<u>7.7</u>	Do you qualify for a small business exemption under the criteria specified in the Instructions?  <input type="checkbox"/> Yes → SKIP to Item 7.18. <input checked="" type="checkbox"/> No
	<u>7.8</u>	Do you know or have reason to believe any pollutants in Exhibit 2F-3 are present in the discharge?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.10.
	<u>7.9</u>	Have you listed all pollutants in Exhibit 2F-3 that you know or have reason to believe are present in the discharge in Table C?  <input type="checkbox"/> Yes
	<u>7.10</u>	Do you expect any of the pollutants in Exhibit 2F-3 to be discharged in concentrations of 10 ppb or greater?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.12.
	<u>7.11</u>	Have you provided quantitative data in Table C for those pollutants in Exhibit 2F-3 that you expect to be discharged in concentrations of 10 ppb or greater?  <input type="checkbox"/> Yes
	<u>7.12</u>	Do you expect acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol to be discharged in concentrations of 100 ppb or greater?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.14.
	<u>7.13</u>	Have you provided quantitative data in Table C for the pollutants identified in Item 7.12 that you expect to be discharged in concentrations of 100 ppb or greater?  <input type="checkbox"/> Yes
	<u>7.14</u>	Have you provided quantitative data or an explanation in Table C for pollutants you expect to be present in the discharge at concentrations less than 10 ppb (or less than 100 ppb for the pollutants identified in Item 7.12)?  <input type="checkbox"/> Yes
	<u>7.15</u>	Do you know or have reason to believe any pollutants in Exhibit 2F-4 are present in the discharge?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.17.

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP
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Discharge Information Continued	7.16	Have you listed pollutants in Exhibit 2F-4 that you know or believe to be present in the discharge and provided an explanation in Table C? <input type="checkbox"/> Yes		
	7.17	Have you provided information for the storm event(s) sampled in Table D? <input checked="" type="checkbox"/> Yes		
	<b>Used or Manufactured Toxics</b>			
	7.18	Is any pollutant listed on Exhibits 2F-2 through 2F-4 a substance or a component of a substance used or manufactured as an intermediate or final product or byproduct? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 8.		
	7.19	List the pollutants below, including TCDD if applicable. Attach additional sheets, if necessary.		
	1.	4.	7.	
	2.	5.	8.	
	3.	6.	9.	

**SECTION 8. BIOLOGICAL TOXICITY TESTING DATA (40 CFR 122.21(G)(11))**

Biological Toxicity Testing Data	8.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last three years? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 9.		
	8.2	Identify the tests and their purposes below.		
		<b>Test(s)</b>	<b>Purpose of Test(s)</b>	<b>Submitted to NPDES Permitting Authority?</b>
				<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	

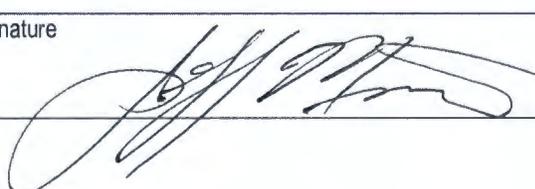
**SECTION 9. CONTRACT ANALYSIS INFORMATION (40 CFR 122.21(G)(12))**

Contract Analysis Information	9.1	Were any of the analyses reported in Section 7 (in Tables A through C) performed by a contract laboratory or consulting firm? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 10.			
	9.2	Provide information for each contract laboratory or consulting firm below.			
			<b>Laboratory Number 1</b>	<b>Laboratory Number 2</b>	<b>Laboratory Number 3</b>
		Name of laboratory/firm	Pace		
		Laboratory address	1168 Whigham Place Tuscaloosa, AL 35405		
		Phone number	(205) 614-6630		
	Pollutant(s) analyzed	All Required			

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**SECTION 10. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(A) AND (D))**

<b>Checklist and Certification Statement</b>	<u>10.1</u>	In Column 1 below, mark the sections of Form 2F 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 complete all sections or provide attachments.	
		<b>Column 1</b>	<b>Column 2</b>
		<input checked="" type="checkbox"/> Section 1	<input type="checkbox"/> w/ attachments (e.g., responses for additional outfalls)
		<input checked="" type="checkbox"/> Section 2	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 3	<input checked="" type="checkbox"/> w/ site drainage map
		<input checked="" type="checkbox"/> Section 4	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 5	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 6	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 7	<input type="checkbox"/> Table A <input type="checkbox"/> w/ small business exemption request <input type="checkbox"/> Table B <input checked="" type="checkbox"/> w/ analytical results as an attachment <input type="checkbox"/> Table C <input type="checkbox"/> Table D
		<input checked="" type="checkbox"/> Section 8	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 9	<input type="checkbox"/> w/ attachments (e.g., responses for additional contact laboratories or firms)
	<input checked="" type="checkbox"/> Section 10		
	<u>10.2</u>	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)	
		<b>Certification Statement</b>	
		<i>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.</i>	
		Name (print or type first and last name)	Official title
		Jeff Mims	Superintendent
		Signature	Date signed
			03/04/2025

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	Outfall Number 002S
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**TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(C)(1)(I)(E)(3))<sup>1</sup>**

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1. Oil and grease			ND		3	
2. Biochemical oxygen demand (BOD <sub>5</sub> )			3 mg/L		3	
3. Chemical oxygen demand (COD)						
4. Total suspended solids (TSS)			7 mg/L		3	
5. Total phosphorus			ND		3	
6. Total Kjeldahl nitrogen (TKN)			0.70 mg/L		3	
7. Total nitrogen (as N)			0.70 mg/L		3	
8. pH (minimum)			7.12 S.U.		3	
			7.12 S.U.		3	

<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 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	Outfall Number 003S
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Expires 07/31/2026

**TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(C)(1)(I)(E)(3))<sup>1</sup>**

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1. Oil and grease			ND			
2. Biochemical oxygen demand (BOD <sub>5</sub> )			1 mg/L			
3. Chemical oxygen demand (COD)						
4. Total suspended solids (TSS)			5 mg/L			
5. Total phosphorus			ND			
6. Total Kjeldahl nitrogen (TKN)			1.2 mg/L			
7. Total nitrogen (as N)			0.017mg/L			
8. pH (minimum)			7.24 SU			
pH (maximum)			7.24 SU			

<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 110006644480	NPDES Permit Number AL0054631	Facility name Walnut Creek WWTP	Outfall Number 003S
---	----------------------------------	------------------------------------	------------------------

OMB No. 2040-0004  
Expires 07/31/2026

**TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(C)(1)(I)(E)(6))**

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)

Provide a description of the method of flow measurement or estimate.

Empty space for providing a description of the method of flow measurement or estimate.

[Click to go back to the beginning of Form](#)



April 24, 2024

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: NPDES AL0054631Walnut Creek WW  
Pace Project No.: 20313691

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory on April 11, 2024. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:  
• Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Cindy Simpson".

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NPDES AL0054631Walnut Creek WW  
Pace Project No.: 20313691

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### Pace Analytical Services New Orleans

Florida Department of Health (NELAC): E87595  
Illinois Environmental Protection Agency: 2000662023-7  
Kansas Department of Health and Environment (NELAC):  
E-10266  
Louisiana Dept. of Environmental Quality (NELAC/LELAP):  
02006

Texas Commission on Env. Quality (NELAC):  
T104704405-23-18  
U.S. Dept. of Agriculture Foreign Soil Import: 525-23-117-  
89728

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: NPDES AL0054631Walnut Creek WW  
Pace Project No.: 20313691

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
20313691001	DSN002 Annual Storm Water	EPA 1664B, 2010	TMO	1	PASI-N
		EPA 351.2	DS	1	PASI-N
		EPA 365.4	DS	1	PASI-N
		SM 4500-NO3 F	MHM	1	PASI-N
20313691002	DSN003 Annual Storm Water	EPA 1664B, 2010	TMO	1	PASI-N
		EPA 351.2	DS	1	PASI-N
		EPA 365.4	DS	1	PASI-N
		SM 4500-NO3 F	MHM	1	PASI-N

PASI-N = Pace Analytical Services - New Orleans

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: NPDES AL0054631Walnut Creek WW  
Pace Project No.: 20313691

Sample: **DSN002 Annual Storm Water** Lab ID: **20313691001** Collected: 04/10/24 02:45

Parameters	Results	Units	Report Limit	DF	Qualifiers
Oil and Grease	ND	mg/L	5.1	1	P1
Nitrogen, Kjeldahl, Total	<b>0.70</b>	mg/L	0.10	1	
Phosphorus	ND	mg/L	0.10	1	
Nitrite as N	ND	mg/L	0.050	1	H1, H3

Sample: **DSN003 Annual Storm Water** Lab ID: **20313691002** Collected: 04/10/24 02:45

Parameters	Results	Units	Report Limit	DF	Qualifiers
Oil and Grease	ND	mg/L	5.1	1	
Nitrogen, Kjeldahl, Total	<b>1.2</b>	mg/L	0.10	1	
Phosphorus	ND	mg/L	0.10	1	
Nitrite as N	ND	mg/L	0.050	1	H1, H3

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: NPDES AL0054631Walnut Creek WW  
Pace Project No.: 20313691

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

### ANALYTE QUALIFIERS

H1 Analysis conducted outside the EPA method holding time.  
H3 Sample was received or analysis requested beyond the recognized method holding time.  
P1 Routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.

## REPORT OF LABORATORY ANALYSIS

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**WO#: 20313691**

PM: CRS Due Date: 04/25/24  
 CLIENT: TU-ClantonHW



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70087

Project:

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals intact:  YES  NO

Samples on ice:  YES  NO

Type of Ice:  White  Blue  None

Date and Initials of person examining contents: AS 4.11

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: TUTM79 Cooler Temp °C: (Observed) 0.1 (CF) Ø (Actual) 0.1  
 Cooler #2 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #3 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #4 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_

Tracking #: \_\_\_\_\_

Temperature Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If added record lot #.: HNO3 _____ H2SO4 _____ Date: _____ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Pace Analytical Services, LLC  
 P.O. Box 907  
 Madisonville, KY 42431  
 270.821.7375  
 www.pacelabs.com

## Certificate of Analysis 4044412

Cindy Simpson  
 Pace Analytical Services LLC Tuscaloosa  
 3516 Greensboro Ave  
 Tuscaloosa, AL 35401

Customer ID: 44-102111  
 Report Printed: 04/22/2024 14:54

Project Name: Cindy Simpson PM	Workorder: 4044412
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Dear Cindy Simpson

Enclosed are the analytical results for samples received by the laboratory 04/12/2024 14:50.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Madisonville

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY  
 #460291 Pikeville, KY  
 #E871136 Englewood, OH

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Melissia Brown, Project Coordinator



Pace Analytical Services, LLC  
 P.O. Box 907  
 Madisonville, KY 42431  
 270.821.7375  
 www.pacelabs.com

**SAMPLE SUMMARY**

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4044412-01	Environmental (Water / Wastewater)/20313691001 DSN002 Annual Storm Water	Water	04/10/2024 02:45	04/12/2024 14:50	Client
4044412-02	Environmental (Water / Wastewater)/20313691002 DSN003 Annual Storm Water	Water	04/10/2024 02:45	04/12/2024 14:50	Client

**ANALYTICAL RESULTS**

Lab Sample ID: **4044412-01**  
 Description: **Environmental (Water / Wastewater) 20313691001 DSN002 Annual Storm Water**

Sample Collection Date Time: 04/10/2024 02:45  
 Sample Received Date Time: 04/12/2024 14:50

Matrix: Water Discharge/Site No: Regulatory ID: AL0054631

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Nitrate/Nitrite as N	ND	u	mg/L	0.20	0.04	EPA 353.2	04/19/2024 12:23	04/19/2024 12:23	SLM

**ANALYTICAL RESULTS**

Lab Sample ID: **4044412-02**  
 Description: **Environmental (Water / Wastewater) 20313691002 DSN003 Annual Storm Water**

Sample Collection Date Time: 04/10/2024 02:45  
 Sample Received Date Time: 04/12/2024 14:50

Matrix: Water Discharge/Site No: Regulatory ID: AL0054631

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Nitrate/Nitrite as N	ND	u	mg/L	0.20	0.04	EPA 353.2	04/19/2024 12:24	04/19/2024 12:24	SLM



**Notes for work order 4044412**

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
- Results contained in this report are only representative of the samples received.
- PACE does not provide interpretation of these results unless otherwise stated .
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.  
Concentrations reported are estimated values.

**Qualifiers**

- J Estimated value.
- U Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).

**Standard Qualifiers/Acronyms**

- MDL Method Detection Limit
- MRL Minimum Reporting Limit
- ND Not Detected
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- % Rec Percent Recovery
- RPD Relative Percent Difference
- > Greater than
- < Less than



Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------	-----	-----------	-------

Batch BDD2202 - Default Prep Wet Chem

Blank (BDD2202-BLK1)

Prepared: 4/19/2024 12:16, Analyzed: 4/19/2024 12:16

Nitrate/Nitrite as N	ND	0.20	mg/L							U
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LCS (BDD2202-BS1)

Prepared: 4/19/2024 12:17, Analyzed: 4/19/2024 12:17

Nitrate/Nitrite as N	10.4	0.20	mg/L	10.0		104	90-110			
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Matrix Spike (BDD2202-MS1) Source: 4042378-01

Prepared: 4/19/2024 12:32, Analyzed: 4/19/2024 12:32

Nitrate/Nitrite as N	5.57	0.20	mg/L	5.00	ND	111	80-120			
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Matrix Spike (BDD2202-MS2) Source: 4044465-01

Prepared: 4/19/2024 12:47, Analyzed: 4/19/2024 12:47

Nitrate/Nitrite as N	5.72	0.20	mg/L	5.00	ND	114	80-120			
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Matrix Spike Dup (BDD2202-MSD1) Source: 4042378-01

Prepared: 4/19/2024 12:33, Analyzed: 4/19/2024 12:33

Nitrate/Nitrite as N	5.56	0.20	mg/L	5.00	ND	111	80-120	0.180	30	
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Matrix Spike Dup (BDD2202-MSD2) Source: 4044465-01

Prepared: 4/19/2024 12:48, Analyzed: 4/19/2024 12:48

Nitrate/Nitrite as N	5.76	0.20	mg/L	5.00	ND	115	80-120	0.697	30	
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Certified Analyses included in this Report

Analyte	Certifications
---------	----------------

EPA 353.2 In Water

Nitrate/Nitrite as N KY Wastewater Mdv (00030)

Sample Acceptance Checklist for Work Order 4044412

Shipped By: Fed Ex

Temperature: 5.20° Celcius

Condition

Check if Custody Seals are Present/Intact	<input type="checkbox"/>
Check if Custody Signatures are Present	<input checked="" type="checkbox"/>
Check if Collector Signature Present	<input checked="" type="checkbox"/>
Check if bottles are intact	<input checked="" type="checkbox"/>
Check if bottles are correct	<input checked="" type="checkbox"/>
Check if bottles have sufficient volume	<input checked="" type="checkbox"/>
Check if samples received on ice	<input checked="" type="checkbox"/>
Check if VOA headspace is acceptable	<input type="checkbox"/>
Check if samples received in holding time.	<input checked="" type="checkbox"/>
Check if samples are preserved properly	<input checked="" type="checkbox"/>

# Internal Transfer Chain of Custody

4044412



Page 12 of 13  
Page 5 of 6



Rush Multiplier  X

State Of Origin: AL

Samples Pre-Logged into eCOC

Cert. Needed:  Yes  No

Workorder: 20313691

Workorder Name: NPDES AL0054631Walnut Creek WW

Owner Received Date: 4/11/2024

Results Requested By: 4/25/2024

Report To		Subcontract To					Requested Analysis															
Cindy Simpson Pace Analytical Tuscaloosa 1168 Whigham Place Tuscaloosa, AL 35405 Phone (205)614-6630		Pace Analytical Madisonville 825 Industrial Rd Madisonville, KY 42431 Phone 270-824-2211																				
							Total Nitrate-Nitrite by EPA 353.2															
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers				LAB USE ONLY												
1	DSN002 Annual Storm Water	PS	4/10/2024 02:45	20313691001	Water	1																
2	DSN003 Annual Storm Water	PS	4/10/2024 02:45	20313691002	Water	1																
3																						
4																						
5																						
Transfers		Released By	Date/Time	Received By	Date/Time	Comments																
1		<i>[Signature]</i>	4/11/24 18:30	<i>[Signature]</i>	4/12/24 14:50																	
2																						
3																						
Cooler Temperature on Receipt			°C	Custody Seal Y or N			Received on Ice Y or N			Samples Intact Y or N												

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Thermometer Serial Number  
 - 181390287  
 - 181460057  
 Temp. 2°C  
*[Signature]*



INTER\_LABORATORY WORK ORDER # 20313691

(To be completed by sending lab)

Ship To:  
Pace Analytical Madisonville  
825 Industrial Rd  
Madisonville, KY 42431  
Phone 270-824-2211

• Sending Project No	20313691
Receiving Project No	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	04/11/24
REQUESTED COMPLETION DATE:	4/25/2024

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR44-Madisonville	External Client	Clanton - WWTP -WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Total Nitrate-Nitrite by EPA 353.2	BP3S		H2SO4	1	SI-21WET	SUB PASI WET
Total Nitrate-Nitrite by EPA 353.2	BP3S		H2SO4	1	SI-21WET0	SUB PASI WTA

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region:  Yes  No

DISPOSITION of FORM

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026
---	----------------------------------	------------------------------------	---

**PART 2 PERMIT APPLICATION INFORMATION (40 CFR 122.21(q))**

Complete this part if you have an effective NPDES permit or have been directed by the NPDES permitting authority to submit a full permit application. In other words, complete this part if your facility has, or is applying for, an NPDES permit. Part 2 is divided into five sections. Section 1 pertains to all applicants. The applicability of Sections 2 to 5 depends on your facility's sewage sludge use or disposal practices. See the instructions to determine which sections you are required to complete.

**PART 2, SECTION 1. GENERAL INFORMATION (40 CFR 122.21(Q)(1-7) AND (Q)(13))**

General Information	All Part 2 applicants must complete this section.			
	<b>Facility Information</b>			
	<b>1.1</b>	Facility name Walnut Creek WWTP		
		Mailing address (street or P.O. box) PO Box 580		
		City or town Clanton	State AL	ZIP code 35046
		Phone number (205) 755-2380		
		Contact name (first and last) Anthony Robinson	Title Supervisor	Email address arobinson@clantonal.gov
		Location address (street, route number, or other specific identifier) 1574 County Road 51		<input type="checkbox"/> Same as mailing address
		City or town Clanton	State AL	ZIP code 35046
	<b>1.2</b>	Is this facility a Class I sludge management facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
	<b>1.3</b>	Facility Design Flow Rate	2.25 million gallons per day (mgd)	
	<b>1.4</b>	Total Population Served	7,200	
	<b>1.5</b>	<b>Ownership Status</b>		
		<input type="checkbox"/> Public—federal	<input type="checkbox"/> Public—state	<input checked="" type="checkbox"/> Other public (specify) Board
		<input type="checkbox"/> Private	<input type="checkbox"/> Other (specify) _____	
	<b>Applicant Information</b>			
	<b>1.6</b>	Is applicant different from entity listed under Item 1.1 above? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 1.8 (Part 2, Section 1).		
	<b>1.7</b>	Applicant name The Water Works & Sewer Board of the City of Clanton		
		Applicant mailing address (street or P.O. box) PO Box 580		
	City or town Clanton	State AL	ZIP code 35046	
	Contact name (first and last) Stanley Higgins	Title Director of Utilities	Phone number (205) 755-6840	
	Email address shiggins@clantonal.gov			
<b>1.8</b>	Is the applicant the facility's owner, operator, or both? (Check only one response.) <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Both			
<b>1.9</b>	To which entity should the NPDES permitting authority send correspondence? (Check only one response.) <input type="checkbox"/> Facility <input checked="" type="checkbox"/> Applicant <input type="checkbox"/> Facility and applicant (they are one and the same)			

General Information Continued	<b>Permit Information</b>						
	<u>1.10</u>	Facility's NPDES permit number <input type="checkbox"/> Check here if you do not have an NPDES permit but are otherwise required to submit Part 2 of Form 2S.	<b>NPDES Permit Number</b>  AL0054631				
	<u>1.11</u>	Indicate all other federal, state, and local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices below. <input type="checkbox"/> Check here if you have provided a separate attachment with this information.					
	<b>Existing Environment Permits (check all that apply and print or type the corresponding permit number for each)</b>						
	<input type="checkbox"/>	RCRA (hazardous wastes)	<input type="checkbox"/>	Nonattainment program (CAA)	<input type="checkbox"/>	NESHAPs (CAA)	
	<input type="checkbox"/>	PSD (air emissions)	<input type="checkbox"/>	Dredge or fill (CWA Section 404)	<input type="checkbox"/>		Other (specify)
	<input type="checkbox"/>	Ocean dumping (MPRSA)	<input type="checkbox"/>	UIC (underground injection of fluids)			
	<b>Indian Country</b>						
	<u>1.12</u>	Does any generation, treatment, storage, application to land, or disposal of sewage sludge from this facility occur in Indian Country? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.14 (Part 2, Section 1) below.					
	<u>1.13</u>	Provide a description of the generation, treatment, storage, land application, or disposal of sewage sludge that occurs.					
	<b>Topographic Map</b>						
	<u>1.14</u>	Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes					
	<b>Line Drawing</b>						
	<u>1.15</u>	Have you attached a line drawing and/or a narrative description that identifies all sewage sludge practices that will be employed during the term of the permit containing all the required information to this application? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes					
	<b>Contractor Information</b>						
<u>1.16</u>	Do contractors have any operational or maintenance responsibilities related to sewage sludge generation, treatment, use, or disposal at the facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.18 (Part 2, Section 1) below.						
<u>1.17</u>	Provide the following information for each contractor. <input type="checkbox"/> Check here if you have attached additional sheets to the application package.						
		<b>Contractor 1</b>	<b>Contractor 2</b>	<b>Contractor 3</b>			
	Contractor company name						
	Mailing address (street or P.O. box)						
	City, state, and ZIP code						
	Contact name (first and last)						
	Telephone number						
	Email address						

<u>1.17</u> cont.	Responsibilities of contractor	<b>Contractor 1</b>	<b>Contractor 2</b>	<b>Contractor 3</b>

**Pollutant Concentrations**

Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants for which limits in sewage sludge have been established in 40 CFR 503 for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than 4.5 years old.

Check here if you have attached additional sheets to the application package.

<u>1.18</u>	<b>Pollutant</b>	<b>Average Monthly Concentration (mg/kg dry weight)</b>	<b>Analytical Method</b>	<b>Detection Level</b>
	Arsenic	5.73	EPA 6010	1.2
	Cadmium	0.73	EPA 6010	0.58
	Chromium	27.27	EPA 6010	1.2
	Copper	303.0	EPA 6010	1.2
	Lead	18.37	EPA 6010	0.58
	Mercury	1.18	EPA 7471	0.026
	Molybdenum	14.3	EPA 6010	1.2
	Nickel	280.67	EPA 6010	4.6
	Selenium	7.47	EPA 6010	2.3
	Zinc	828	EPA 6010	5.8

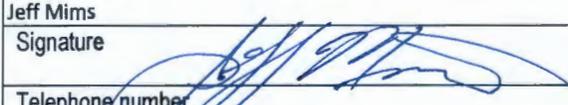
**Checklist and Certification Statement**

<u>1.19</u>	In Column 1 below, mark the sections of Form 2S, Part 2, that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing. Note that not all applicants are required to complete all sections or provide attachments. See Exhibit 2S-2 in the Instructions.	
	<b>Column 1</b>	<b>Column 2</b>
	<input checked="" type="checkbox"/> Section 1 (General Information)	<input checked="" type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 2 (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)	<input checked="" type="checkbox"/> w/ attachments
	<input type="checkbox"/> Section 3 (Land Application of Bulk Sewage Sludge)	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/> Section 4 (Surface Disposal)	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/> Section 5 (Incineration)	<input type="checkbox"/> w/ attachments

1.20 Provide the following certification. (See instructions to determine the appropriate person to sign the application.)

**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) Jeff Mims	Official title Superintendent
Signature 	Date signed 03/04/2025
Telephone number (205) 755-6840	

Upon the request of the NPDES permitting authority, you must submit any other information the authority deems necessary to assess sewage sludge use or disposal practices at your facility and identify appropriate permitting requirements.

General Information Continued

**PART 2, SECTION 2. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE (40 CFR 122.21(Q)(8) THROUGH (12))**

<b>Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge</b>	<u>2.1</u>	Does your facility generate sewage sludge or derive a material from sewage sludge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Part 2, Section 3.		
	<b>Amount Generated Onsite</b>			
	<u>2.2</u>	Total dry metric tons per 365-day period generated at your facility:	80	
	<b>Amount Received from Offsite Facility</b>			
	<u>2.3</u>	Does your facility receive sewage sludge from another facility for treatment use or disposal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.8 (Part 2, Section 2) below.		
	<u>2.4</u>	Indicate the total number of facilities from which you receive sewage sludge for treatment, use, or disposal:		
	Provide the following information for each of the facilities from which you receive sewage sludge. <input type="checkbox"/> Check here if you have attached additional sheets to the application package.			
	<u>2.5</u>	Name of facility		
		Mailing address (street or P.O. box)		
		City or town	State	ZIP code
	Contact name (first and last)	Title	Phone number	
	Location address (street, route number, or other specific identifier)		<input type="checkbox"/> Same as mailing address	
	City or town	State	ZIP code	
	County	County code	<input type="checkbox"/> Not available	
<u>2.6</u>	Indicate the amount of sewage sludge received, the applicable pathogen class and reduction alternative, and the applicable vector reduction option provided at the offsite facility.			
	<b>Amount</b> (dry metric tons)		<b>Vector Attraction Reduction Option</b>	
		<input type="checkbox"/> Not applicable <input type="checkbox"/> Class A, Alternative 1 <input type="checkbox"/> Class A, Alternative 2 <input type="checkbox"/> Class A, Alternative 3 <input type="checkbox"/> Class A, Alternative 4 <input type="checkbox"/> Class A, Alternative 5 <input type="checkbox"/> Class A, Alternative 6 <input type="checkbox"/> Class B, Alternative 1 <input type="checkbox"/> Class B, Alternative 2 <input type="checkbox"/> Class B, Alternative 3 <input type="checkbox"/> Class B, Alternative 4 <input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Not applicable <input type="checkbox"/> Option 1 <input type="checkbox"/> Option 2 <input type="checkbox"/> Option 3 <input type="checkbox"/> Option 4 <input type="checkbox"/> Option 5 <input type="checkbox"/> Option 6 <input type="checkbox"/> Option 7 <input type="checkbox"/> Option 8 <input type="checkbox"/> Option 9 <input type="checkbox"/> Option 10 <input type="checkbox"/> Option 11	
<u>2.7</u>	Identify the treatment process(es) that are known to occur at the offsite facility, including blending activities and treatment to reduce pathogens or vector attraction properties. (Check all that apply.)			
	<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and dewatering) <input type="checkbox"/> Stabilization <input type="checkbox"/> Composting <input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization) <input type="checkbox"/> Heat drying <input type="checkbox"/> Methane or biogas capture and recovery			
	<input type="checkbox"/> Thickening (concentration) <input type="checkbox"/> Anaerobic digestion <input type="checkbox"/> Conditioning <input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons) <input type="checkbox"/> Thermal reduction <input type="checkbox"/> Other (specify) _____			

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

<u>2.8</u>	For each sewage sludge use or disposal practice, indicate the applicable pathogen class and reduction alternative and the applicable vector attraction reduction option provided at your facility. Attach additional pages, as necessary.		
	<b>Use or Disposal Practice</b> <small>(check one)</small>	<b>Pathogen Class and Reduction Alternative</b>	<b>Vector Attraction Reduction Option</b>
	<input type="checkbox"/> Land application of bulk sewage <input checked="" type="checkbox"/> Land application of biosolids (bulk) <input type="checkbox"/> Land application of biosolids (bags) <input type="checkbox"/> Disposal in a landfill <input type="checkbox"/> Surface disposal <input type="checkbox"/> Incineration	<input type="checkbox"/> Not applicable <input type="checkbox"/> Class A, Alternative 1 <input type="checkbox"/> Class A, Alternative 2 <input type="checkbox"/> Class A, Alternative 3 <input type="checkbox"/> Class A, Alternative 4 <input type="checkbox"/> Class A, Alternative 5 <input type="checkbox"/> Class A, Alternative 6 <input type="checkbox"/> Class B, Alternative 1 <input checked="" type="checkbox"/> Class B, Alternative 2 <input type="checkbox"/> Class B, Alternative 3 <input type="checkbox"/> Class B, Alternative 4 <input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Not applicable <input type="checkbox"/> Option 1 <input type="checkbox"/> Option 2 <input type="checkbox"/> Option 3 <input checked="" type="checkbox"/> Option 4 <input type="checkbox"/> Option 5 <input type="checkbox"/> Option 6 <input type="checkbox"/> Option 7 <input type="checkbox"/> Option 8 <input type="checkbox"/> Option 9 <input type="checkbox"/> Option 10 <input type="checkbox"/> Option 11
<u>2.9</u>	Identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge? (Check all that apply.)		
	<input checked="" type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting) <input type="checkbox"/> Thickening (concentration) <input type="checkbox"/> Stabilization <input type="checkbox"/> Anaerobic digestion <input type="checkbox"/> Composting <input type="checkbox"/> Conditioning <input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization) <input checked="" type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons) <input type="checkbox"/> Heat drying <input type="checkbox"/> Thermal reduction <input type="checkbox"/> Methane or biogas capture and recovery		
<u>2.10</u>	Describe any other sewage sludge treatment or blending activities not identified in Items 2.8 and 2.9 (Part 2, Section 2) above. <input type="checkbox"/> Check here if you have attached the description to the application package.		
<b>Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements, and One of Vector Attraction Reduction Options 1 to 8</b>			
<u>2.11</u>	Does the sewage sludge from your facility meet the ceiling concentrations in Table 1 of 40 CFR 503.13, the pollutant concentrations in Table 3 of 40 CFR 503.13, Class A pathogen reduction requirements at 40 CFR 503.32(a), and one of the vector attraction reduction requirements at 40 CFR 503.33(b)(1)–(8) and is it land applied? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.14 (Part 2, Section 2) below.		
<u>2.12</u>	Total dry metric tons per 365-day period of sewage sludge subject to this subsection that is applied to the land:		
<u>2.13</u>	Is sewage sludge subject to this subsection placed in bags or other containers for sale or give-away for application to the land? <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input checked="" type="checkbox"/> Check here once you have completed Items 2.11 to 2.13, then → SKIP to Item 2.32 (Part 2, Section 2) below.			

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Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued	<b>Sale or Give-Away in a Bag or Other Container for Application to the Land</b>				
	<b>2.14</b>	Do you place sewage sludge in a bag or other container for sale or give-away for land application? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.17 (Part 2, Section 2) below.			
	<b>2.15</b>	Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land:			
	<b>2.16</b>	Attach a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land. <input type="checkbox"/> Check here to indicate that you have attached all labels or notices to this application package.			
	<input type="checkbox"/> Check here once you have completed Items 2.14 to 2.16, then → SKIP to Part 2, Section 2, Item 2.32.				
	<b>Shipment Offsite for Treatment or Blending</b>				
	<b>2.17</b>	Does another facility provide treatment or blending of your facility's sewage sludge? (This question does not pertain to dewatered sludge sent directly to a land application or surface disposal site.) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.27 (Part 2, Section 2) below.			
	<b>2.18</b>	Indicate the total number of facilities that provide treatment or blending of your facility's sewage sludge. Provide the information in Items 2.19 to 2.26 (Part 2, Section 2) below for each facility. <input type="checkbox"/> Check here if you have attached additional sheets to the application package.			
	<b>2.19</b>	Name of receiving facility			
		Mailing address (street or P.O. box)			
		City or town	State	ZIP code	
		Contact name (first and last)	Title	Phone number	Email address
		Location address (street, route number, or other specific identifier)		<input type="checkbox"/> Same as mailing address	
		City or town	State	ZIP code	
	<b>2.20</b>	Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:			
<b>2.21</b>	Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility or reduce the vector attraction properties of sewage sludge from your facility? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.24 (Part 2, Section 2) below.				
<b>2.22</b>	Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge at the receiving facility.				
	<b>Pathogen Class and Reduction Alternative</b>	<b>Vector Attraction Reduction Option</b>			
	<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable			
	<input type="checkbox"/> Class A, Alternative 1	<input type="checkbox"/> Option 1			
	<input type="checkbox"/> Class A, Alternative 2	<input type="checkbox"/> Option 2			
	<input type="checkbox"/> Class A, Alternative 3	<input type="checkbox"/> Option 3			
	<input type="checkbox"/> Class A, Alternative 4	<input type="checkbox"/> Option 4			
	<input type="checkbox"/> Class A, Alternative 5	<input type="checkbox"/> Option 5			
	<input type="checkbox"/> Class A, Alternative 6	<input type="checkbox"/> Option 6			
	<input type="checkbox"/> Class B, Alternative 1	<input type="checkbox"/> Option 7			
	<input type="checkbox"/> Class B, Alternative 2	<input type="checkbox"/> Option 8			
	<input type="checkbox"/> Class B, Alternative 3	<input type="checkbox"/> Option 9			
	<input type="checkbox"/> Class B, Alternative 4	<input type="checkbox"/> Option 10			
	<input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Option 11			

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EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026												
Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued	<p><b>2.23</b> Which treatment process(es) are used at the receiving facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge from your facility? (Check all that apply.)</p> <table border="0"> <tr> <td><input type="checkbox"/> Preliminary operations (e.g., sludge grinding and dewatering)</td> <td><input type="checkbox"/> Thickening (concentration)</td> </tr> <tr> <td><input type="checkbox"/> Stabilization</td> <td><input type="checkbox"/> Anaerobic digestion</td> </tr> <tr> <td><input type="checkbox"/> Composting</td> <td><input type="checkbox"/> Conditioning</td> </tr> <tr> <td><input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)</td> <td><input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)</td> </tr> <tr> <td><input type="checkbox"/> Heat drying</td> <td><input type="checkbox"/> Thermal reduction</td> </tr> <tr> <td><input type="checkbox"/> Methane or biogas capture and recovery</td> <td><input type="checkbox"/> Other (specify) _____</td> </tr> </table>			<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and dewatering)	<input type="checkbox"/> Thickening (concentration)	<input type="checkbox"/> Stabilization	<input type="checkbox"/> Anaerobic digestion	<input type="checkbox"/> Composting	<input type="checkbox"/> Conditioning	<input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	<input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)	<input type="checkbox"/> Heat drying	<input type="checkbox"/> Thermal reduction	<input type="checkbox"/> Methane or biogas capture and recovery	<input type="checkbox"/> Other (specify) _____
	<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and dewatering)	<input type="checkbox"/> Thickening (concentration)													
	<input type="checkbox"/> Stabilization	<input type="checkbox"/> Anaerobic digestion													
	<input type="checkbox"/> Composting	<input type="checkbox"/> Conditioning													
	<input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	<input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)													
	<input type="checkbox"/> Heat drying	<input type="checkbox"/> Thermal reduction													
	<input type="checkbox"/> Methane or biogas capture and recovery	<input type="checkbox"/> Other (specify) _____													
	<p><b>2.24</b> Attach a copy of any information you provide the receiving facility to comply with the "notice and necessary information" requirement of 40 CFR 503.12(g).</p> <input type="checkbox"/> Check here to indicate that you have attached material.														
	<p><b>2.25</b> Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.32 (Part 2, Section 2) below.														
	<p><b>2.26</b> Attach a copy of all labels or notices that accompany the product being sold or given away.</p> <input type="checkbox"/> Check here to indicate that you have attached material.														
	<input type="checkbox"/> Check here once you have completed Items 2.17 to 2.26 (Part 2, Section 2), then → SKIP to Item 2.32 (Part 2, Section 2) below.														
	<b>Land Application of Bulk Sewage Sludge</b>														
	<p><b>2.27</b> Is sewage sludge from your facility applied to the land?</p> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.32 (Part 2, Section 2) below.														
	<p><b>2.28</b> Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:</p>		70												
	<p><b>2.29</b> Did you identify all land application sites in Part 2, Section 3 of this application?</p> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → Submit a copy of the land application plan with your application.														
<p><b>2.30</b> Are any land application sites located in states other than the state where you generate sewage sludge or derive a material from sewage sludge?</p> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.32 (Part 2, Section 2) below.															
<p><b>2.31</b> Describe how you notify the NPDES permitting authority for the states where the land application sites are located. Attach a copy of the notification.</p> <input type="checkbox"/> Check here if you have attached the explanation to the application package. <input type="checkbox"/> Check here if you have attached the notification to the application package.															
<b>Surface Disposal</b>															
<p><b>2.32</b> Is sewage sludge from your facility placed on a surface disposal site?</p> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.39 (Part 2, Section 2) below.															
<p><b>2.33</b> Total dry metric tons of sewage sludge from your facility placed on all surface disposal sites per 365-day period:</p>															
<p><b>2.34</b> Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?</p> <input type="checkbox"/> Yes → SKIP to Item 2.39 (Part 2, Section 2) below. <input type="checkbox"/> No															
<p><b>2.35</b> Indicate the total number of surface disposal sites to which you send your sewage sludge. (Provide the information in Items 2.36 to 2.38 of Part 2, Section 2, for each facility.)</p> <input type="checkbox"/> Check here if you have attached additional sheets to the application package.															

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EPA Identification Number 110006644480		NPDES Permit Number AL0054631		Facility Name Walnut Creek WWTP		OMB No. 2040-0004 Expires 07/31/2026	
Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued	2.36 Site name or number of surface disposal site you do not own or operate						
	Mailing address (street or P.O. box)						
	City or town				State		ZIP code
	Contact name (first and last)		Title		Phone number		Email address
	2.37 Site contact (check all that apply) <input type="checkbox"/> Owner <input type="checkbox"/> Operator						
	2.38 Total dry metric tons of sewage sludge from your facility placed on this surface disposal site per 365-day period:						80
	<b>Incineration</b>						
	2.39 Is sewage sludge from your facility fired in a sewage sludge incinerator? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.46 (Part 2, Section 2) below.						
	2.40 Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period:						
	2.41 Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired? <input type="checkbox"/> Yes → SKIP to Item 2.46 (Part 2, Section 2) below. <input type="checkbox"/> No						
	2.42 Indicate the total number of sewage sludge incinerators that you use but do not own or operate. (Provide the information in Items 2.43 to 2.45 directly below for each facility.) <input type="checkbox"/> Check here if you have attached additional sheets to the application package.						
	2.43 Incinerator name or number						
	Mailing address (street or P.O. box)						
	City or town				State		ZIP code
Contact name (first and last)		Title		Phone number		Email address	
Location address (street, route number, or other specific identifier)						<input type="checkbox"/> Same as mailing address	
City or town				State		ZIP code	
2.44 Contact (check all that apply) <input type="checkbox"/> Incinerator owner <input type="checkbox"/> Incinerator operator							
2.45 Total dry metric tons of sewage sludge from your facility fired in this sewage sludge incinerator per 365-day period:							
<b>Disposal in a Municipal Solid Waste Landfill</b>							
2.46 Is sewage sludge from your facility placed on a municipal solid waste landfill? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Part 2, Section 3.							
2.47 Indicate the total number of municipal solid waste landfills used. (Provide the information in Items 2.48 to 2.52 directly below for each facility.) <input type="checkbox"/> Check here if you have attached additional sheets to the application package.						1	
Generation of Sewage Sludge or Preparation of a Material Derived	2.48 Name of landfill Shelby County Landfill						
	Mailing address (street or P.O. box) 1281 HWY 70						
	City or town Columbiana				State AL		ZIP code 35051
	Contact name (first and last) James Frost		Title Environmental Services M		Phone number (205) 669-3737		Email address TELLISON@shelbyal.com

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026
Location address (street, route number, or other specific identifier) 401 Landfill Road		<input type="checkbox"/> Same as mailing address	
County Shelby	County code		<input checked="" type="checkbox"/> Not available
City or town Columbiana	State AL	ZIP code 35051	
<u>2.49</u>	Total dry metric tons of sewage sludge from your facility placed in this municipal solid waste landfill per 365-day period:	20	
<u>2.50</u>	List the numbers of all other federal, state, and local permits that regulate the operation of this municipal solid waste landfill.		
	<b>Permit Number</b>	<b>Type of Permit</b>	
	59-15	Municipal Solid Waste Disposal	
<u>2.51</u>	Attach information to determine whether the sewage sludge meets applicable requirements for disposal of sewage sludge in a municipal solid waste landfill (e.g., results of paint filter liquids test and TCLP test). <input checked="" type="checkbox"/> Check here to indicate you have attached the requested information.		
<u>2.52</u>	Does the municipal solid waste landfill comply with applicable criteria set forth in 40 CFR 258? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

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**PART 2, SECTION 3 LAND APPLICATION OF BULK SEWAGE SLUDGE (40 CFR 122.21(Q)(9))**

Land Application of Bulk Sewage Sludge	<u>3.1</u>	Does your facility apply sewage sludge to land? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Part 2, Section 4.		
	<u>3.2</u>	Do any of the following conditions apply? <ul style="list-style-type: none"> <li>• The sewage sludge meets the ceiling concentrations in Table 1 of 40 CFR 503.12, the pollutant concentrations in Table 3 of 40 CFR 503.13, Class A pathogen reduction requirements at 40 CFR 503.32(a), and one of the vector attraction reduction requirements at 40 CFR 503.33(b)(1)–(8);</li> <li>• The sewage sludge is sold or given away in a bag or other container for application to the land; or</li> <li>• You provide the sewage sludge to another facility for treatment or blending.</li> </ul> <input type="checkbox"/> Yes → SKIP to Part 2, Section 4. <input checked="" type="checkbox"/> No		
	<u>3.3</u>	Complete Section 3 for every site on which the sewage sludge is applied. <input type="checkbox"/> Check here if you have attached sheets to the application package for one or more land application sites.		
	<b>Identification of Land Application Site</b>			
	<u>3.4</u>	Site name or number Field 4		
		Location address (street, route number, or other specific identifier) 1574 County Road 51		<input type="checkbox"/> Same as mailing address
		County Chilton	County code	<input type="checkbox"/> Not available
		City or town Clanton	State AL	ZIP code 35046
		<b>Latitude/Longitude of Land Application Site (see instructions)</b>		
		<b>Latitude</b>	<b>Longitude</b>	
		32.869356	-86.598546	
		<b>Method of Determination</b>		
		<input type="checkbox"/> USGS map <input checked="" type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____		
	<u>3.5</u>	Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location. <input checked="" type="checkbox"/> Check here to indicate you have attached a topographic map for this site.		
	<b>Owner Information</b>			
<u>3.6</u>	Are you the owner of this land application site? <input checked="" type="checkbox"/> Yes → SKIP to Item 3.8 (Part 2, Section 3) below. <input type="checkbox"/> No			
<u>3.7</u>	Owner name			
	Mailing address (street or P.O. box)			
	City or town	State	ZIP code	
	Contact name (first and last)	Title	Phone number Email address	
<b>Applier Information</b>				
<u>3.8</u>	Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site? <input checked="" type="checkbox"/> Yes → SKIP to Item 3.10 (Part 2, Section 3) below. <input type="checkbox"/> No			
<u>3.9</u>	Applier's name			
	Mailing address (street or P.O. box)			
	City or town	State	ZIP code	
	Contact name (first and last)	Title	Phone number Email address	

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EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026
Land Application of Bulk Sewage Sludge Continued	<b>Site Type</b>		
	<b>3.10</b>	Type of land application:	
		<input checked="" type="checkbox"/> Agricultural land	<input type="checkbox"/> Forest
		<input type="checkbox"/> Reclamation site	<input type="checkbox"/> Public contact site
		<input type="checkbox"/> Other (describe)	
	<b>Crop or Other Vegetation Grown Onsite</b>		
	<b>3.11</b>	What type of crop or other vegetation is grown on this site?	Grass/Hay
	<b>3.12</b>	What is the nitrogen requirement for this crop or vegetation?	100
	<b>Vector Attraction Reduction</b>		
	<b>3.13</b>	Are the vector attraction reduction requirements at 40 CFR 503.33(b)(9) and (b)(10) met when sewage sludge is applied to the land application site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.16 (Part 2, Section 3) below.
	<b>3.14</b>	Indicate which vector attraction reduction option is met. (Check only one response.)	<input type="checkbox"/> Option 9 (injection below land surface) <input checked="" type="checkbox"/> Option 10 (incorporation into soil within 6 hours)
	<b>3.15</b>	Describe any treatment processes used at the land application site to reduce vector attraction properties of sewage sludge.	<input checked="" type="checkbox"/> Check here if you have attached your description to the application package.
	<b>Cumulative Loadings and Remaining Allotments</b>		
	<b>3.16</b>	Is the sewage sludge applied to this site since July 20, 1993, subject to the cumulative pollutant loading rates (CPLRs) in 40 CFR 503.13(b)(2)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Part 2, Section 4.
	<b>3.17</b>	Have you contacted the NPDES permitting authority in the state where the bulk sewage sludge subject to CPLRs will be applied to ascertain whether bulk sewage sludge subject to CPLRs has been applied to this site on or since July 20, 1993?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → Sewage sludge subject to CPLRs may not be applied to this site. SKIP to Part 2, Section 4.
	<b>3.18</b>	Provide the following information about your NPDES permitting authority:	
		NPDES permitting authority name	U.S. Environmental Protection Agency, Region 4
		Contact person	Michael Hom
	Telephone number	(404) 562-9748	
	Email address	hom.michael@epa.gov	
<b>3.19</b>	Based on your inquiry, has bulk sewage sludge subject to CPLRs been applied to this site since July 20, 1993?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Part 2, Section 4.	
<b>3.20</b>	Provide the following information for every facility other than yours that is sending, or has sent, bulk sewage sludge subject to CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.	<input type="checkbox"/> Check here to indicate that additional pages are attached.	
	Facility name	N/A	
	Mailing address (street or P.O. box)		
	City or town	State ZIP code	
	Contact name (first and last)	Title Phone number Email address	

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**PART 2, SECTION 4 SURFACE DISPOSAL (40 CFR 122.21(Q)(10))**

Surface Disposal	<u>4.1</u>	Do you own or operate a surface disposal site? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Part 2, Section 5.		
	<u>4.2</u>	Complete all items in Section 4 for each active sewage sludge unit that you own or operate. <input type="checkbox"/> Check here to indicate that you have attached material to the application package for one or more active sewage sludge units.		
	<b>Information on Active Sewage Sludge Units</b>			
	<u>4.3</u>	Unit name or number		
		Mailing address (street or P.O. box)		
		City or town	State	ZIP code
		Contact name (first and last)	Title	Phone number      Email address
		Location address (street, route number, or other specific identifier)		<input type="checkbox"/> Same as mailing address
		County	County code	<input type="checkbox"/> Not available
		City or town	State	ZIP code
		<b>Latitude/Longitude of Active Sewage Sludge Unit (see instructions)</b>		
		Latitude	Longitude	
		<b>Method of Determination</b>		
	<input type="checkbox"/> USGS map <input type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____			
<u>4.4</u>	Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location. <input type="checkbox"/> Check here to indicate that you have completed and attached a topographic map.			
<u>4.5</u>	Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:			
<u>4.6</u>	Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:			
<u>4.7</u>	Does the active sewage sludge unit have a liner with a maximum permeability of $1 \times 10^{-7}$ centimeters per second (cm/sec)? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.9 (Part 2, Section 4) below.			
<u>4.8</u>	Describe the liner. <input type="checkbox"/> Check here to indicate that you have attached a description to the application package.			
<u>4.9</u>	Does the active sewage sludge unit have a leachate collection system? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.11 (Part 2, Section 4) below.			
<u>4.10</u>	Describe the leachate collection system and the method used for leachate disposal and provide the numbers of any federal, state, or local permit(s) for leachate disposal. <input type="checkbox"/> Check here to indicate that you have attached the description to the application package.			

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Surface Disposal Continued	<a href="#">4.11</a>	Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site?  <input type="checkbox"/> Yes <span style="margin-left: 200px;"><input type="checkbox"/> No → SKIP to Item 4.13 (Part 2, Section 4) below.</span>																
	<a href="#">4.12</a>	Provide the actual distance in meters: _____ meters																
	<a href="#">4.13</a>	Remaining capacity of active sewage sludge unit in dry metric tons: _____ dry metric tons																
	<a href="#">4.14</a>	Anticipated closure date for active sewage sludge unit, if known (MM/DD/YYYY): _____																
	<a href="#">4.15</a>	Attach a copy of any closure plan that has been developed for this active sewage sludge unit. <input type="checkbox"/> Check here to indicate that you have attached a copy of the closure plan to the application package.																
	<b>Sewage Sludge from Other Facilities</b>																	
	<a href="#">4.16</a>	Is sewage sludge sent to this active sewage sludge unit from any facilities other than your facility?  <input type="checkbox"/> Yes <span style="margin-left: 200px;"><input type="checkbox"/> No → SKIP to Item 4.21 (Part 2, Section 4) below.</span>																
	<a href="#">4.17</a>	Indicate the total number of facilities (other than your facility) that send sewage sludge to this active sewage sludge unit. (Complete Items 4.18 to 4.20 directly below for each such facility.)  <input type="checkbox"/> Check here to indicate that you have attached responses for each facility to the application package.																
	<a href="#">4.18</a>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="4">Facility name</td> </tr> <tr> <td colspan="4">Mailing address (street or P.O. box)</td> </tr> <tr> <td>City or town</td> <td>State</td> <td colspan="2">ZIP code</td> </tr> <tr> <td>Contact name (first and last)</td> <td>Title</td> <td>Phone number</td> <td>Email address</td> </tr> </table>	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
	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															
<a href="#">4.19</a>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge before it leaves the other facility.</td> </tr> <tr> <td style="width:50%; text-align: center;"><b>Pathogen Class and Reduction Alternative</b></td> <td style="width:50%; text-align: center;"><b>Vector Attraction Reduction Option</b></td> </tr> <tr> <td> <input type="checkbox"/> Not applicable  <input type="checkbox"/> Class A, Alternative 1  <input type="checkbox"/> Class A, Alternative 2  <input type="checkbox"/> Class A, Alternative 3  <input type="checkbox"/> Class A, Alternative 4  <input type="checkbox"/> Class A, Alternative 5  <input type="checkbox"/> Class A, Alternative 6  <input type="checkbox"/> Class B, Alternative 1  <input type="checkbox"/> Class B, Alternative 2  <input type="checkbox"/> Class B, Alternative 3  <input type="checkbox"/> Class B, Alternative 4  <input type="checkbox"/> Domestic septage, pH adjustment         </td> <td> <input type="checkbox"/> Not applicable  <input type="checkbox"/> Option 1  <input type="checkbox"/> Option 2  <input type="checkbox"/> Option 3  <input type="checkbox"/> Option 4  <input type="checkbox"/> Option 5  <input type="checkbox"/> Option 6  <input type="checkbox"/> Option 7  <input type="checkbox"/> Option 8  <input type="checkbox"/> Option 9  <input type="checkbox"/> Option 10  <input type="checkbox"/> Option 11         </td> </tr> </table>	Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge before it leaves the other facility.		<b>Pathogen Class and Reduction Alternative</b>	<b>Vector Attraction Reduction Option</b>	<input type="checkbox"/> Not applicable <input type="checkbox"/> Class A, Alternative 1 <input type="checkbox"/> Class A, Alternative 2 <input type="checkbox"/> Class A, Alternative 3 <input type="checkbox"/> Class A, Alternative 4 <input type="checkbox"/> Class A, Alternative 5 <input type="checkbox"/> Class A, Alternative 6 <input type="checkbox"/> Class B, Alternative 1 <input type="checkbox"/> Class B, Alternative 2 <input type="checkbox"/> Class B, Alternative 3 <input type="checkbox"/> Class B, Alternative 4 <input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Not applicable <input type="checkbox"/> Option 1 <input type="checkbox"/> Option 2 <input type="checkbox"/> Option 3 <input type="checkbox"/> Option 4 <input type="checkbox"/> Option 5 <input type="checkbox"/> Option 6 <input type="checkbox"/> Option 7 <input type="checkbox"/> Option 8 <input type="checkbox"/> Option 9 <input type="checkbox"/> Option 10 <input type="checkbox"/> Option 11											
Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge before it leaves the other facility.																		
<b>Pathogen Class and Reduction Alternative</b>	<b>Vector Attraction Reduction Option</b>																	
<input type="checkbox"/> Not applicable <input type="checkbox"/> Class A, Alternative 1 <input type="checkbox"/> Class A, Alternative 2 <input type="checkbox"/> Class A, Alternative 3 <input type="checkbox"/> Class A, Alternative 4 <input type="checkbox"/> Class A, Alternative 5 <input type="checkbox"/> Class A, Alternative 6 <input type="checkbox"/> Class B, Alternative 1 <input type="checkbox"/> Class B, Alternative 2 <input type="checkbox"/> Class B, Alternative 3 <input type="checkbox"/> Class B, Alternative 4 <input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Not applicable <input type="checkbox"/> Option 1 <input type="checkbox"/> Option 2 <input type="checkbox"/> Option 3 <input type="checkbox"/> Option 4 <input type="checkbox"/> Option 5 <input type="checkbox"/> Option 6 <input type="checkbox"/> Option 7 <input type="checkbox"/> Option 8 <input type="checkbox"/> Option 9 <input type="checkbox"/> Option 10 <input type="checkbox"/> Option 11																	
<a href="#">4.20</a>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">Which treatment process(es) are used at the other facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge before it leaves that facility? (Check all that apply.)</td> </tr> <tr> <td> <input type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting)  <input type="checkbox"/> Stabilization  <input type="checkbox"/> Composting  <input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)  <input type="checkbox"/> Heat drying  <input type="checkbox"/> Methane or biogas capture and recovery         </td> <td> <input type="checkbox"/> Thickening (concentration)  <input type="checkbox"/> Anaerobic digestion  <input type="checkbox"/> Conditioning  <input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)  <input type="checkbox"/> Thermal reduction  <input type="checkbox"/> Other (specify) _____         </td> </tr> </table>	Which treatment process(es) are used at the other facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge before it leaves that facility? (Check all that apply.)		<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting) <input type="checkbox"/> Stabilization <input type="checkbox"/> Composting <input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization) <input type="checkbox"/> Heat drying <input type="checkbox"/> Methane or biogas capture and recovery	<input type="checkbox"/> Thickening (concentration) <input type="checkbox"/> Anaerobic digestion <input type="checkbox"/> Conditioning <input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons) <input type="checkbox"/> Thermal reduction <input type="checkbox"/> Other (specify) _____													
Which treatment process(es) are used at the other facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge before it leaves that facility? (Check all that apply.)																		
<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting) <input type="checkbox"/> Stabilization <input type="checkbox"/> Composting <input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization) <input type="checkbox"/> Heat drying <input type="checkbox"/> Methane or biogas capture and recovery	<input type="checkbox"/> Thickening (concentration) <input type="checkbox"/> Anaerobic digestion <input type="checkbox"/> Conditioning <input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons) <input type="checkbox"/> Thermal reduction <input type="checkbox"/> Other (specify) _____																	

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026
<b>Surface Disposal Continued</b>	<b>Vector Attraction Reduction</b>		
	<u>4.21</u>	Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?	
		<input type="checkbox"/> Option 9 (injection below and surface)	<input type="checkbox"/> Option 11 (covering active sewage sludge unit daily)
		<input type="checkbox"/> Option 10 (incorporation into soil within 6 hours)	<input type="checkbox"/> None
	<u>4.22</u>	Describe any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge.	
		<input type="checkbox"/> Check here if you have attached your description to the application package.	
	<b>Groundwater Monitoring</b>		
	<u>4.23</u>	Is groundwater monitoring currently conducted at this active sewage sludge unit, or are groundwater monitoring data otherwise available for this active sewage sludge unit?	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.26 (Part 2, Section 4) below.
	<u>4.24</u>	Provide a copy of available groundwater monitoring data.	
		<input type="checkbox"/> Check here to indicate you have attached the monitoring data.	
	<u>4.25</u>	Describe the well locations, the approximate depth to groundwater, and the groundwater monitoring procedures used to obtain these data.	
		<input type="checkbox"/> Check here if you have attached your description to the application package.	
	<u>4.26</u>	Has a groundwater monitoring program been prepared for this active sewage sludge unit?	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.28 (Part 2, Section 4) below.	
<u>4.27</u>	Submit a copy of the groundwater monitoring program with this permit application.		
	<input type="checkbox"/> Check here to indicate you have attached the monitoring program.		
<u>4.28</u>	Have you obtained a certification from a qualified groundwater scientist that the aquifer below the active sewage sludge unit has not been contaminated?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.30 (Part 2, Section 4) below.	
<u>4.29</u>	Submit a copy of the certification with this permit application.		
	<input type="checkbox"/> Check here to indicate you have attached the certification to the application package.		
<b>Site-Specific Limits</b>			
<u>4.30</u>	Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Part 2, Section 5.	
<u>4.31</u>	Submit information to support the request for site-specific pollutant limits with this application.		
	<input type="checkbox"/> Check here to indicate you have attached the requested information.		

**PART 2, SECTION 5 INCINERATION (40 CFR 122.21(Q)(11))**

Incineration	<b>Incinerator Information</b>		
	<u>5.1</u>	Do you fire sewage sludge in a sewage sludge incinerator?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to END.
	<u>5.2</u>	Indicate the total number of incinerators used at your facility. (Complete the remainder of Section 5 for each such incinerator.)	
		<input type="checkbox"/> Check here to indicate that you have attached information for one or more incinerators.	
	<u>5.3</u>	Incinerator name or number	
		Location address (street, route number, or other specific identifier)	
		County	County code <input type="checkbox"/> Not available
		City or town	State ZIP code
		<b>Latitude/Longitude of Incinerator (see instructions)</b>	
		Latitude	Longitude
		<b>Method of Determination</b>	
		<input type="checkbox"/> USGS map <input type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____	
	<b>Amount Fired</b>		
	<u>5.4</u>	Dry metric tons per 365-day period of sewage sludge fired in the sewage sludge incinerator:	
<b>Beryllium NESHAP</b>			
<u>5.5</u>	Submit information, test data, and a description of measures taken that demonstrate whether the sewage sludge incinerated is beryllium-containing waste and will continue to remain as such.		
	<input type="checkbox"/> Check here to indicate that you have attached this material to the application package.		
<u>5.6</u>	Is the sewage sludge fired in this incinerator "beryllium-containing waste" as defined at 40 CFR 61.31?		
	<input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.8 (Part 2, Section 5) below.		
<u>5.7</u>	Submit with this application a complete report of the latest beryllium emission rate testing and documentation of ongoing incinerator operating parameters indicating that the NESHAP emission rate limit for beryllium has been and will continue to be met.		
	<input type="checkbox"/> Check here to indicate that you have attached this information.		
<b>Mercury NESHAP</b>			
<u>5.8</u>	Is compliance with the mercury NESHAP being demonstrated via stack testing?		
	<input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.11 (Part 2, Section 5) below.		
<u>5.9</u>	Submit a complete report of stack testing and documentation of ongoing incinerator operating parameters indicating that the incinerator has met and will continue to meet the mercury NESHAP emission rate limit.		
	<input type="checkbox"/> Check here to indicate that you have attached this information.		
<u>5.10</u>	Provide copies of mercury emission rate tests for the two most recent years in which testing was conducted.		
	<input type="checkbox"/> Check here to indicate that you have attached this information.		
<u>5.11</u>	Do you demonstrate compliance with the mercury NESHAP by sewage sludge sampling?		
	<input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.13 (Part 2, Section 5) below.		
<u>5.12</u>	Submit a complete report of sewage sludge sampling and documentation of ongoing incinerator operating parameters indicating that the incinerator has met and will continue to meet the mercury NESHAP emission rate limit.		
	<input type="checkbox"/> Check here to indicate that you have attached this information.		

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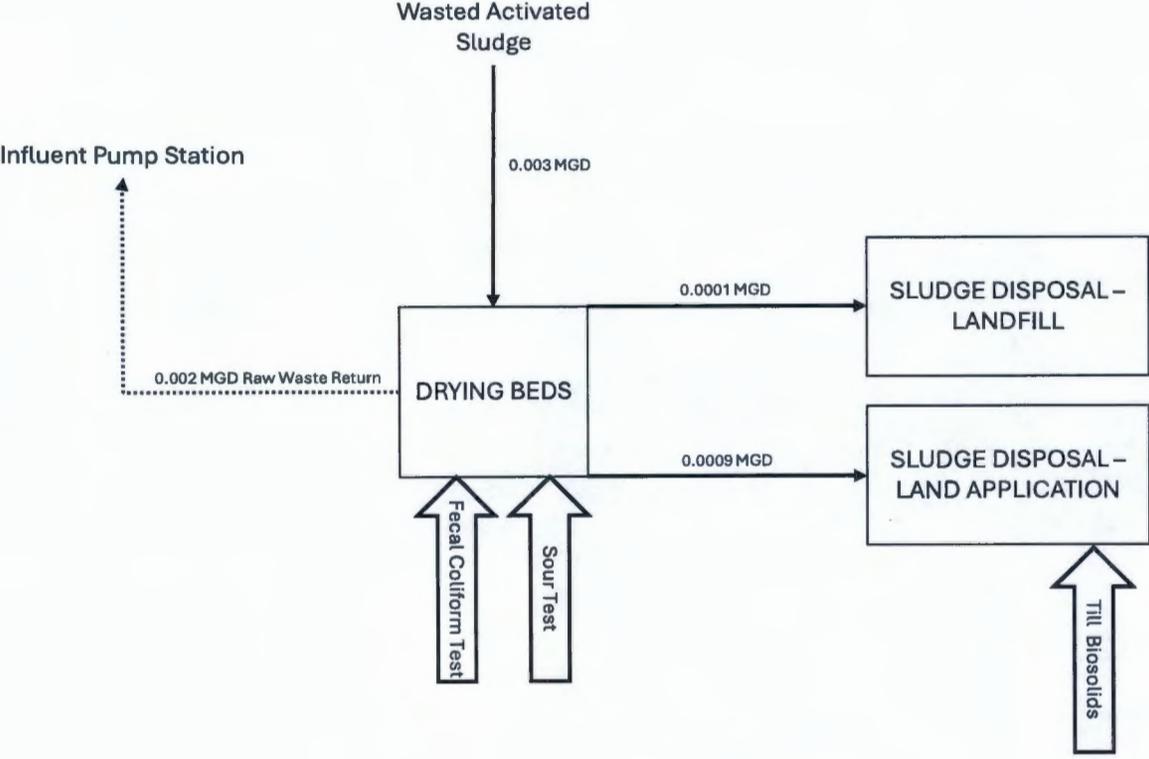
JUN 05 2025

EPA Identification Number 110006644480	NPDES Permit Number AL0054631	Facility Name Walnut Creek WWTP	OMB No. 2040-0004 Expires 07/31/2026.
Incineration Continued	<b>Dispersion Factor</b>		
	5.13	Dispersion factor in micrograms/cubic meter per gram/second:	
	5.14	Name and type of dispersion model:	
	5.15	Submit a copy of the modeling results and supporting documentation. <input type="checkbox"/> Check here to indicate that you have attached this information.	
	<b>Control Efficiency</b>		
	5.16	Provide the control efficiency, in hundredths, for each of the pollutants listed below.	
		<b>Pollutant</b>	<b>Control Efficiency, in Hundredths</b>
		Arsenic	
		Cadmium	
		Chromium	
		Lead	
		Nickel	
	5.17	Attach a copy of the results or performance testing and supporting documentation (including testing dates). <input type="checkbox"/> Check here to indicate that you have attached this information.	
	<b>Risk-Specific Concentration for Chromium</b>		
	5.18	Provide the risk-specific concentration (RSC) used for chromium in micrograms per cubic meter:	
	5.19	Was the RSC determined via Table 2 in 40 CFR 503.43? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.21 (Part 2, Section 5) below.	
	5.20	Identify the type of incinerator used as the basis. <input type="checkbox"/> Fluidized bed with wet scrubber <input type="checkbox"/> Other types with wet scrubber <input type="checkbox"/> Fluidized bed with wet scrubber and wet electrostatic precipitator <input type="checkbox"/> Other types with wet scrubber and wet electrostatic precipitator	
	5.21	Was the RSC determined via Table 6 in 40 CFR 503.43 (site-specific determination)? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.23 (Part 2, Section 5) below.	
5.22	Provide the decimal fraction of hexavalent chromium concentration to total chromium concentration in stack exit gas:		
5.23	Attach the results of incinerator stack tests for hexavalent and total chromium concentrations, including the date(s) of any test(s), with this application. <input type="checkbox"/> Check here to indicate that you have attached this information. <input type="checkbox"/> Not applicable		
<b>Incinerator Parameters</b>			
5.24	Do you monitor total hydrocarbons (THC) in the exit gas of the sewage sludge incinerator? <input type="checkbox"/> Yes <input type="checkbox"/> No		
5.25	Do you monitor carbon monoxide (CO) in the exit gas of the sewage sludge incinerator? <input type="checkbox"/> Yes <input type="checkbox"/> No		
5.26	Indicate the type of sewage sludge incinerator.		
5.27	Incinerator stack height in meters:		
5.28	Indicate whether the value submitted in Item 5.27 is (check only one response): <input type="checkbox"/> Actual stack height <input type="checkbox"/> Creditable stack height		





# The Water Works & Sewer Board of the City of Clanton Walnut Creek WWTP – Sludge Line Diagram



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## Land Application of Sewage Sludge

### Walnut Creek WWTP

#### **Class B Pathogen Requirements – Alternate 1 or Alternate 2:**

- 1) Alternative 1 of Table 5-5: Monitoring of Indicator Organisms of Table 5-5
  - a) Test for fecal coliform density
    - i) Take geometric mean of seven samples over a two week period.
      - (1) Results must be less than 2 million CFUs/Gram of total solids at time of disposal.
      - (2) Test frequency - once/year (Table 6-2)
  
- 2) Alternative 2 of Table 5-5: Biosolids Treated in a PSRP.
  - a) Biosolids must be treated in one of the Processes to Significantly Reduce Pathogens(PSRP).
    - i) Air Drying
      - (1) Biosolids are dried on sand beds for a minimum of 3 months.

#### **Reducing Vector Attraction Requirements 1 & 2:**

- 1) Option 4 of Table 5-8
  - a) Reducing the attractiveness of biosolids to vectors.
    - i) Meet a specific oxygen uptake rate for aerobically digested biosolids – S.O.U.R. test.
      - (1) S.O.U.R. test  $\leq 1.5$  mg of Oxygen/hour/gram.
      - (2) Test Frequency – once/each drying bed (Table 6-3)
  
- 2) Option 10 of Table 5-8
  - a) Preventing vectors from coming in contact with biosolids
    - i) Till biosolids into the soil within 6 hours of land application.

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# Sludge Field 4

JUN 15 2025

MUNICIPAL SECTION



Sludge Field 4  
32.869356, -86.598546

## SEWAGE SLUDGE LAND APPLICATION SITE TREATMENT PROCESSES

Treatment processes at the land application site to reduce vector attraction properties of sewage sludge used by **The Water Works & Sewer Board of the City of Clanton**. The processes have been prepared in accordance with the guidelines and regulatory requirements established by the U.S. Environmental Protection Agency codified in 40 CFR Part 503:

1. Weather related conditions
2. Time restrictions

Any person responsible for land application for this system must read the plan and be thoroughly familiar with it prior to land applying any sewage sludge.

### METHODOLOGY FOR TREATMENT PROCESSES AT THE LAND APPLICATION SITE

Management personnel with valid operator certificates will be responsible for routinely overseeing the land application site treatment processes.

#### Evaluation Of Weather Related Conditions

1. The land application site is to be evaluated to verify that any areas to receive sewage sludge are not flooded, prior to application.
2. The land application site is to be evaluated to verify that any areas to receive sewage sludge are not frozen, prior to application.
3. The land application site is to be evaluated to verify that any areas to receive sewage sludge are not snow covered, prior to application.

#### Time Restrictions

1. Sewage sludge must be tilled into the soil within six (6) hours of being placed at the land application.

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Pace Analytical Services, LLC  
P.O. Box 907  
Madisonville, KY 42431  
270.821.7375  
www.pacelabs.com

**Sample Acceptance Checklist for Work Order 5023540**

Shipped By: Fed Ex

Temperature: 2.00° Celcius

**Condition**

Check if Custody Seals are Present/Intact	<input type="checkbox"/>
Check if Custody Signatures are Present	<input checked="" type="checkbox"/>
Check if Collector Signature Present	<input checked="" type="checkbox"/>
Check if bottles are intact	<input checked="" type="checkbox"/>
Check if bottles are correct	<input checked="" type="checkbox"/>
Check if bottles have sufficient volume	<input checked="" type="checkbox"/>
Check if samples received on ice	<input checked="" type="checkbox"/>
Check if VOA headspace is acceptable	<input type="checkbox"/>
Check if samples received in holding time.	<input checked="" type="checkbox"/>
Check if samples are preserved properly	<input checked="" type="checkbox"/>





Ship To:  
Pace Analytical Madisonville  
825 Industrial Rd  
Madisonville, KY 42431  
Phone 270-824-2211

INTER\_LABORATORY WORK ORDER # 20345056  
(To be completed by sending lab)

Sending Project No:	20345056
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	02/07/25
<b>REQUESTED COMPLETION DATE:</b>	<b>2/19/2025</b>

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR44-Madisonville	External Client	Clanton - WWTP -VWV
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Low Level Mercury	BP3N		HNO3	2	SI-20MET	SUB PASI MET

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

**FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO**

Return Samples to Sending Region:  Yes  No

**DISPOSITION of FORM**

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.



Pace Analytical Services, LLC  
1168 Whigham Place  
Tuscaloosa, AL 35405  
(205) 614-6630

May 21, 2025

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: AL0054631 Walnut Creek WWTP 00  
Pace Project No.: 20354038

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2025. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - New Orleans
- Pace Analytical Services - Allen

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Cindy Simpson*

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



**Pace Analytical Services, LLC**

1168 Whigham Place

Tuscaloosa, AL 35405

(205) 614-6630

## CERTIFICATIONS

Project: AL0054631 Walnut Creek WWTP 00

Pace Project No.: 20354038

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### **Pace Analytical Services New Orleans**

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 2000662023-7

Kansas Department of Health and Environment (NELAC):

E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):

02006

Texas Commission on Env. Quality (NELAC):

T104704405-23-18

U.S. Dept. of Agriculture Foreign Soil Import: 525-23-117-  
89728

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### **Pace Analytical Services Dallas**

400 West Bethany Dr Suite 190, Allen, TX 75013

Texas Certification T104704232-20-32

Florida Certification #: E871118

EPA# TX00074

Kansas Certification #: E-10388

Arkansas Certification #: 88-0647

Oklahoma Certification #: 8727

Louisiana Certification #: 30686

Iowa Certification #: 408

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### SAMPLE ANALYTE COUNT

Project: AL0054631 Walnut Creek WWTP 00  
Pace Project No.: 20354038

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
20354038001	Outfall 0011 Composite	SM 4500-P E	SMC	1	PASL-AT
		EPA 351.2	JLH	1	PASI-N
		SM 4500-NO3 F	MHM	1	PASI-N
		SM 4500-NO3 F	JLH	2	PASI-N
20354038002	Outfall 0011 Grab	EPA 200.8	FC1	3	PASI-N
20354038003	Outfall 0011	SM 2540C	QQT	1	PASL-AT

PASI-N = Pace Analytical Services - New Orleans  
PASL-AT = Pace Analytical Services - Allen

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### ANALYTICAL RESULTS

Project: AL0054631 Walnut Creek WWTP 00

Pace Project No.: 20354038

**Sample: Outfall 0011 Composite**      **Lab ID: 20354038001**      Collected: 05/07/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Phosphorus	1.30	mg/L	0.100	2	
Nitrogen, Kjeldahl, Total	ND	mg/L	0.15	1	
Nitrite as N	ND	mg/L	0.050	1	
Nitrate as N	9.4	mg/L	0.50	10	
Nitrogen, NO2 plus NO3	9.4	mg/L	0.50	10	D4

**Sample: Outfall 0011 Grab**      **Lab ID: 20354038002**      Collected: 05/07/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Copper	0.0025	mg/L	0.0010	1	
Nickel	0.0047	mg/L	0.0010	1	
Zinc	0.019	mg/L	0.0050	1	

**Sample: Outfall 0011**      **Lab ID: 20354038003**      Collected: 05/07/25 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Total Dissolved Solids	250	mg/L	25.0	1	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: AL0054631 Walnut Creek WWTP 00

Pace Project No.: 20354038

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

### ANALYTE QUALIFIERS

D4 Sample was diluted due to the presence of high levels of target analytes.

## REPORT OF LABORATORY ANALYSIS

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DC#\_Title: ENV-FRM-ORB1-0093 Sample Condition Upon Receipt Form  
Version: 7 | Effective Date: | Issued by: Ormond Beach



WO#: 20354038

PM: CRS Due Date: 05/21/25

CLIENT: TU-ClantonWW

Project #  
Project Manager:  
Client:

Date and Initials of person:  
Examining contents: \_\_\_\_\_  
Verifying pH: \_\_\_\_\_

Thermometer Used: John 13

Date: 5-7-25

Time: 1359

Initials: JD

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to ±8 °C

Cooler #1 Temp.°C 1.3 (Visual) 0.0 (Correction Factor) 1.3 (Actual)

Cooler #2 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #3 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #4 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #5 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #6 Temp.°C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Recheck for OOT °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

- Samples on ice, cooling process has begun.

Time: \_\_\_\_\_ Initials: \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_

Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other: \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # \_\_\_\_\_

Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No

Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

Samples shorted to lab:  Yes  No (if yes, complete the following)

Shorted Date: \_\_\_\_\_

Shorted Time: \_\_\_\_\_

Bottle Quantity / Type: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Samples Arrived within Hold Time.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:								
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:								
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:								
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:								
Containers intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:								
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Comments:								
All containers needing acid / base preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<table border="1"> <tr> <th colspan="2">Preservation Information</th> </tr> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </table>	Preservation Information		Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
Preservation Information										
Preservative: _____	Date: _____									
Lot / Trace: _____	Time: _____									
Amount added (mL): _____	Initials: _____									
All containers needing preservation are found to be in compliance with EPA recommendation: <small>Exceptions: Vials, Microbiology, O&amp;G, PFAS</small>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Headspace in Volatile Vials? (>8mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A									
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A									

Comments / Resolutions (use back for additional comments):

Labeled by: \_\_\_\_\_

Reviewed by: \_\_\_\_\_

Delivered by: \_\_\_\_\_



Pace Analytical Services, LLC

1168 Whigham Place

Tuscaloosa, AL 35405

(205) 614-6630

December 18, 2024

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: Clanton Chronic Toxicity AL005  
Pace Project No.: 20335672

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory between November 04, 2024 and November 08, 2024. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Cindy Simpson*

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

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DC#\_Title: ENV-FRM-ORB1-0093 Sample Condition Upon Receipt Form  
Version: 7 | Effective Date: | Issued by: Ormond Beach



**WO# : 20335672**

**Project #**  
**Project Manager:**  
**Client:**

**PM: CRS**      **Due Date: 11/18/24**  
**CLIENT: TU-ClantonWW**

Date and initials of person:

Examining contents: JO

Verifying pH: \_\_\_\_\_

Thermometer Used: TUTM79

Date: STR 11/14/24

Time: 1422

Initials: STR

State of Origin: \_\_\_\_\_  For WW projects, all containers verified to ±6 °C

Cooler #1 Temp. °C 0.9 (Visual) 0 (Correction Factor) 0.9 (Actual)

Cooler #2 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #3 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #4 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Recheck for OOT °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Samples on ice, cooling process has begun.

Time: \_\_\_\_\_ Initials: \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_

Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other: \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # \_\_\_\_\_

Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No

Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

Samples shorted to lab:  Yes  No (if yes, complete the following)

Shorted Date: \_\_\_\_\_

Shorted Time: \_\_\_\_\_

Bottle Quantity / Type: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
All containers needing acid / base preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
All containers needing preservation are found to be in compliance with EPA recommendation:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Exceptions: Vials, Microbiology, O&G, PFAS									
Headspace in Volatile Vials? (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
<table border="1"> <thead> <tr> <th colspan="2">Preservation Information</th> </tr> </thead> <tbody> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </tbody> </table>		Preservation Information		Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
Preservation Information									
Preservative: _____	Date: _____								
Lot / Trace: _____	Time: _____								
Amount added (mL): _____	Initials: _____								

Comments / Resolutions (use back for additional comments):

Labeled by: JO

Reviewed by: STR

Delivered by: JO



DC#\_Title: ENV-FRM-ORB1-0093 Sample Condition Upon Receipt Form  
Version: 7 | Effective Date: | Issued by: Ormond Beach



WO#: 20335672

Project #  
Project Manager:  
Client:

PM: CRS Due Date: 11/19/24  
CLIENT: TU-ClantonWW

Date and Initials of person:  
Examining contents: dr  
Verifying pH: \_\_\_\_\_

Thermometer Used: tuttm79 Date: 11.06.24 Time: 1410 Initials: br

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to ±0.5 °C

Cooler #1 Temp. °C <u>4.1</u> (Visual) <u>0.0</u> (Correction Factor) <u>4.1</u> (Actual)	<input checked="" type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #2 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #3 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #4 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #5 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #6 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Recheck for OOT °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	Time: _____ Initials: _____

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_

Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other: \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # \_\_\_\_\_

Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

Samples shorted to lab:  Yes  No (If yes, complete the following)

Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_

Bottle Quantity / Type: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments: _____								
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Comments: _____								
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments: _____								
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments: _____								
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments: _____								
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments: _____								
All containers needing acid / base preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
All containers needing preservation are found to be in compliance with EPA recommendation:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Exceptions: Vials, Microbiology, O&G, PFAS									
Headspace in Volatile Vials? (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
<table border="1"> <tr> <td colspan="2">Preservation Information</td> </tr> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </table>		Preservation Information		Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
Preservation Information									
Preservative: _____	Date: _____								
Lot / Trace: _____	Time: _____								
Amount added (mL): _____	Initials: _____								

Comments / Resolutions (use back for additional comments): \_\_\_\_\_

Labeled by: dr

Reviewed by: ST

Delivered by: dr



DC#\_Title: ENV-FRM-ORB1-0093 Sample Condition Upon Receipt Form  
Version: 7 | Effective Date: | Issued by: Ormond Beach



**WO#: 20335672**

**Project #**  
**Project Manager:**  
**Client:**

**PM: CRS**      **Due Date: 11/19/24**  
**CLIENT: TU-ClantonWW**

**Date and Initials of person:**  
**Examining contents:**     
**Verifying pH:**           

Thermometer Used: tubm 79      Date: 11.08.24      Time: 1554      Initials:   

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to 56 °C

Cooler #1 Temp.*C <u>3.2</u> (Visual) <u>0.0</u> (Correction Factor) <u>3.2</u> (Actual)	<input checked="" type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #2 Temp.*C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #3 Temp.*C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #4 Temp.*C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #5 Temp.*C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Cooler #6 Temp.*C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun.
Recheck for OOT °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	Time: _____ Initials: _____

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_

Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other: \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # \_\_\_\_\_

Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

Samples shorted to lab:  Yes  No (If yes, complete the following)  
Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_  
Bottle Quantity / Type: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
All containers needing acid / base preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
All containers needing preservation are found to be in compliance with EPA recommendation:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Exceptions: Vials, Microbiology, O&G, PFAS	
Headspace in Volatile Vials? (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

**Preservation Information**

Preservative: \_\_\_\_\_ Date: \_\_\_\_\_  
Lot / Trace: \_\_\_\_\_ Time: \_\_\_\_\_  
Amount added (mL): \_\_\_\_\_ Initials: \_\_\_\_\_

Comments / Resolutions (use back for additional comments):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Labeled by:         Reviewed by: DRH      Delivered by:



Pace Analytical Services, LLC  
P.O. Box 907  
Madisonville, KY 42431  
270.821.7375  
www.pacelabs.com

### Certificate of Analysis 4112586

Cindy Simpson  
Pace Analytical Services LLC Tuscaloosa  
3516 Greensboro Ave  
Tuscaloosa, AL 35401

Customer ID: 44-102111  
Report Printed: 11/21/2024 16:18

Project Name: Cindy Simpson PM	Workorder: 4112586
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Dear Cindy Simpson

Enclosed are the analytical results for samples received by the laboratory 11/05/2024 09:20.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Pikeville

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY  
#460291 Pikeville, KY  
#E871136 Englewood, OH

Melissia Brown, Project Coordinator

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Pace Analytical Services, LLC  
 P.O. Box 907  
 Madisonville, KY 42431  
 270.821.7375  
 www.pacelabs.com

**SAMPLE SUMMARY**

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4112586-01	Chronic Toxicity Day 1/20335672001 Day 1 Monday WWTP Effluent Clanton AL005	Water	11/04/2024 08:00	11/05/2024 9:20	Client
4112586-02	Chronic Toxicity Day 2/20335672002 Day 2 Wednesday WWTP Effluent	Water	11/06/2024 08:00	11/08/2024 10:15	Client
4112586-03	Chronic Toxicity Day 3/20335672003 Day 3 Friday WWTP Effluent	Water	11/08/2024 08:00	11/09/2024 10:16	Client

**ANALYTICAL RESULTS**

Lab Sample ID: **4112586-01**  
 Description: **Chronic Toxicity Day 1 20335672001 Day 1 Monday WWTP Effluent Clanton AL005**

Sample Collection Date Time: 11/04/2024 08:00  
 Sample Received Date Time: 11/05/2024 09:20

Whole Effluent Toxicity Pikeville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Ceriodaphnia dubia Toxicity	Pass		Pass/Fail	1.00		EPA 1002.0	11/05/2024 13:36	11/05/2024 13:36	JGC
Pimephales promelas Toxicity	Pass		Pass/Fail	1.00		EPA 1000.0	11/05/2024 13:46	11/05/2024 13:46	JGC

**ANALYTICAL RESULTS**

Lab Sample ID: **4112586-02**  
 Description: **Chronic Toxicity Day 2 20335672002 Day 2 Wednesday WWTP Effluent**

Sample Collection Date Time: 11/06/2024 08:00  
 Sample Received Date Time: 11/08/2024 10:15

Whole Effluent Toxicity Pikeville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Ceriodaphnia dubia Toxicity	Pass		Pass/Fail	1.00		EPA 1002.0	11/07/2024 14:03	11/07/2024 14:03	JGC
Pimephales promelas Toxicity	Pass		Pass/Fail	1.00		EPA 1000.0	11/07/2024 14:10	11/07/2024 14:10	JGC

**ANALYTICAL RESULTS**

Lab Sample ID: **4112586-03**  
 Description: **Chronic Toxicity Day 3 20335672003 Day 3 Friday WWTP Effluent**

Sample Collection Date Time: 11/08/2024 08:00  
 Sample Received Date Time: 11/09/2024 10:16

Matrix: Water

Discharge/Site No:

Regulatory ID: AL0067067

Whole Effluent Toxicity Pikeville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Ceriodaphnia dubia Toxicity	Pass		Pass/Fail	1.00		EPA 1002.0	11/09/2024 14:10	11/09/2024 14:10	JGC
Pimephales promelas Toxicity	Pass		Pass/Fail	1.00		EPA 1000.0	11/09/2024 14:11	11/09/2024 14:11	JGC



**Notes for work order 4112586**

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
  - Results contained in this report are only representative of the samples received.
  - PACE does not provide interpretation of these results unless otherwise stated .
  - All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
  - All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
  - Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
  - The Chain of Custody document is included as part of this report.
  - All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.
- Concentrations reported are estimated values.

**Standard Qualifiers/Acronyms**

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD	RPD Limit	Notes
		Limit	Units			%REC	Limits			

Prepared: , Analyzed:

**Certified Analyses included in this Report**

Analyte	Certifications
<b>EPA 1000.0 in Water</b>	
Pimephales promelas Toxicity	WV Wastewater Pikeville (102), 173 Island Creek Rd Pikeville, KY 41501 KY Wastewater Pkv (00050) VA NELAC PKV (460291)
<b>EPA 1002.0 in Water</b>	
Ceriodaphnia dubia Toxicity	KY Wastewater Pkv (00050) WV Wastewater Pikeville (102), 173 Island Creek Rd Pikeville, KY 41501 VA NELAC PKV (460291)



Pace Analytical Services, LLC  
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Madisonville, KY 42431  
270.821.7375  
www.pacelabs.com

<b>Sample Acceptance Checklist for Work Order 4112586</b>	
Shipped By: UPS	Temperature: 1.00° Celcius
<b>Condition</b>	
Check if Custody Seals are Present/Intact	<input type="checkbox"/>
Check if Custody Signatures are Present	<input checked="" type="checkbox"/>
Check if Collector Signature Present	<input checked="" type="checkbox"/>
Check if bottles are intact	<input checked="" type="checkbox"/>
Check if bottles are correct	<input checked="" type="checkbox"/>
Check if bottles have sufficient volume	<input checked="" type="checkbox"/>
Check if samples received on ice	<input checked="" type="checkbox"/>
Check if VOA headspace is acceptable	<input type="checkbox"/>
Check if samples received in holding time.	<input checked="" type="checkbox"/>
Check if samples are preserved properly	<input checked="" type="checkbox"/>





INTER\_LABORATORY WORK ORDER # 20335672

(To be completed by sending lab)

Ship To:
Pace Analytical SE Kansas
808 West McKay
Frontenac, KS 66763
Phone (620)235-0003

Table with 2 columns: Field Name, Value. Fields include Sending Project No (20335672), Receiving Project No, Check Box for Consolidated Invoice, Date Prepared (11/04/24), and REQUESTED COMPLETION DATE (11/18/2024).

Table with 4 columns: Field Name, Value. Fields include Sending Region (IR20-New Orleans), Receiving Region (IR62-SE Kansas), State of Sample Origin (AL), and others.

All questions should be addressed to sending project manager.

Requested Reportable Units Report Wet or Dry Weight? Wet Cert. Needed

Table titled 'WORK REQUESTED' with columns: Method Description, Container Type, Quantity of containers, Preservative, Quantity of Samples, Acode, Acode Desc. Row: Chronic Toxicity Day One, BP1U, Unpreserved, 1, SI-21WET, SUB PASI WET.

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region: Yes No

DISPOSITION of FORM

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.





Ship To:  
 Pace Analytical SE Kansas  
 808 West McKay  
 Frontenac, KS 66763  
 Phone (620)235-0003

INTER\_LABORATORY WORK ORDER # 20335672

(To be completed by sending lab)

Sending Project No	20335672
Receiving Project No	
Check Box for Consolidated Invoice	<input type="checkbox"/>
Date Prepared	11/06/24
REQUESTED COMPLETION DATE	11/19/2024

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR62-SE Kansas	External Client	Clanton - WWTP - WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Chronic Toixcity Day Two	BP1U		Unpreserved	1	SI-21WET	SUB PASI WET
Chronic Toxicity Day One	BP1U		Unpreserved	1	SI-21WET	SUB PASI WET

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

**FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO**

Return Samples to Sending Region:  Yes  No

**DISPOSITION of FORM**

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.





Ship To:  
 Pace Analytical SE Kansas  
 808 West McKay  
 Frontenac, KS 66763  
 Phone (620)235-0003

INTER\_LABORATORY WORK ORDER # 20335672  
 (To be completed by sending lab)

Sending Project No	20335672
Receiving Project No	
Check Box for Consolidated Invoice	<input type="checkbox"/>
Date Prepared	11/08/24
REQUESTED COMPLETION DATE	11/19/2024

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR62-SE Kansas	External Client	Clanton - WWTP -WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Chronic Toxicity Day Two	BP1U		Unpreserved	1	SI-21WET	SUB PASI WET
Chronic Toxicity Day One	BP1U		Unpreserved	1	SI-21WET	SUB PASI WET
Chronic Toxicity Day Three	BP1U		Unpreserved	1	SI-21WET	SUB PASI WET

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region:  Yes  No

DISPOSITION of FORM

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
TOXICITY TEST REPORT SUMMARY

**1. GENERAL:**

NPDES PERMIT NO.: AL0054631 DSN: 0011 COUNTY: Chilton  
 Permittee: City of Clanton  
 Facility Name: Walnut Creek WWTP 1574 Chilton County Road 51 Clanton, Alabama  
 Agent submitting Report: City of Clanton Post Office Box 580 Clanton, Alabama 35046  
 Lab Conducting Toxicity Test(s): Pace Analytical Services LLC, Pikeville 173 Island Creek Rd. Pikeville KY 41501  
 Months To Test: \_\_\_\_\_  
 This Report for Toxicity Test(s) Required for the Month of: \_\_\_\_\_  
 Scheduled Test(s): Yes  No \_\_\_\_\_ Accelerated Test(s): Yes \_\_\_\_\_ No   
 Accelerated Test Number \_\_\_\_\_ of \_\_\_\_\_ For Failed Scheduled Test Date: \_\_\_\_\_  
 Test Type Required: 48-Hr Acute Screening: \_\_\_\_\_ -Hr Acute Definitive: \_\_\_\_\_  
 Short-term Chronic Screening:  Short-term Chronic Definitive: \_\_\_\_\_

Test Organism: *Pimephales promelas*

Test Organism: *Ceriodaphnia dubia*

Sam No.	Date/Time MM/DD/YY	Start HH:MM	Date/Time MM/DD/YY	Ended HH:MM	Control Valid	Date/Time MM/DD/YY	Start HH:MM	Date/Time MM/DD/YY	Ended HH:MM	Control Valid
1	11/05/24	13:46	11/12/24	14:01	Yes	11/05/24	13:36	11/11/24	13:58	Yes

**2A. SUMMARY OF RESULTS FOR SCREENING TEST:**

Test Org.	Eff. Conc.	Test Number											
		(1)			(2)			(3)			(4)		
		Sur	Rep	Gro	Sur	Rep	Gro	Sur	Rep	Gro	Sur	Rep	Gro
C.d.	75%	Pass	Pass										
P.p.	75%	Pass		Pass									

**2B. SUMMARY OF RESULTS FOR DEFINITIVE TEST:**

Test Organism	Test Solution Concentration (%)					LC50	NOEC	Not Determined

**3. LABORATORY ANALYSIS OF UNDILUTED SAMPLES:**

Sample ID	pH s.u.	Alk mg/L	Hard mg/L	Spec Cond umhos/cm				
1	7.83	73	422	631				
2	7.30	76	437	649				
3	7.43	77	437	684				

*Municipal Facilities Only*

Sample ID	Arsenic (g/L)	Cadium (g/L)	Chromium (g/L)	Copper (g/L)	Lead (g/L)	Hexavalent Chromium (g/L)
Sample ID	Mercury (g/L)	Nickel (g/L)	Silver (g/L)	Zinc (g/L)	Total Cyanide (g/L)	Other(s) (g/L)

Chemical Analysis Performed By (LAB): Pace Analytical.

Instantaneous Flow: (1) \_\_\_\_\_ GPM (2) \_\_\_\_\_ GPM (3) \_\_\_\_\_ GPM  
 Total 24-Hour Flow: (1) \_\_\_\_\_ MGD (2) \_\_\_\_\_ MGD (3) \_\_\_\_\_ MGD

Comments:

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.

SIGNATURE OF RESPONSIBLE OFFICIAL: \_\_\_\_\_ DATE: \_\_\_\_\_

Facility Name: Walnut Creek WWTP NPDES #: AL0054631 DSN: 0011 Date: 11/19/2024

4. SAMPLE COLLECTION:

Split Samples: N/A X Yes \_\_\_\_\_ (explain) \_\_\_\_\_

Samples Collected as Specified in the NPDES Permit: Yes X No (explain) \_\_\_\_\_

Receiving Water: Little Cahaba River Design Flow: Monitor (MGD)

Sample ID	Sample(s) Collected MM/DD/YY HHMM - MM/DD/YY HHMM	Arrival Temp (C)	Used in Test(s) MM/DD/YY - MM/DD/YY
1	11/04/24 08:00	1.0	11/05/24-1/07/24
2	11/06/24 08:00	2.1	11/08/24-11/09/24
3	11/08/24 08:00	1.1	11/10/24-11/12/24

5. CONTROL / DILUTION WATER:

Type	Prepared MM/DD/YY	Begin Use MM/DD/YY	Initial Water Chemistries				
			Hard.	Alk.	pH	Cond.	@ °C
MHSW	10/22/24	11/05/24	92	64	7.19	289	25.1
MHSW	10/22/24	11/05/24	90	61	7.11	293	25.1

6. TOXICITY TEST INFORMATION:

Test Species	Organism Age	Organism Source	Test Solution Concentrations (%)				
Pp	<24 hrs	AquaTox	00	75			
Cd	<24 hrs	In-house Culture	00	75			

Test Species	Test Vessel Type	Vessel Vol. (mL)	Solution Vol. (mL)	Org. / Test Vessel	Replicates per Conc.
Pp	Plastic cups	473	250	10	4
Cd	Plastic cups	30	30	1	10

Test Species	Temp. Range (C)	D.O. Range (mg/L)	pH Range (s.u.)	Light Intensity Avg. (ft-c)
Pp	24.8-25.5	6.06-7.63	7.05-7.86	50-100
Cd	24.8-25.5	6.06-7.63	7.05-7.86	50-100

7. FEEDING:

Not Fed: \_\_\_\_\_ Fed Daily: X Fed Irregular: \_\_\_\_\_ (Explain in comments below)

Brine Shrimp: Fed 0.15 mL Suspension of Newly Hatched Larvae 2 Times Daily.

YCT: Fed 0.2 mL Suspension Containing \_\_\_\_\_ mg/L TSS Daily.

Algae: Fed 0.2 mL Suspension Containing 3.0x10<sup>7</sup> Algal Cells/mL Daily.

COMMENTS: \_\_\_\_\_

Facility Name: Walnut Creek WWTP NPDES #: AL0054631 DSN: 0011 Date: 11/19/2024

8. REFERENCE TOXICANT TESTS:

Toxicant: Sodium Chloride, NaCl Source: Fisher Lot 4019532 CAS#: 7647-14-5

Solution concentration unit: mg/L      g/L X %      other (specify):     

Test Org.	Test Date MM/DD - MM/DD	Control Water	Reference Test Solution Concentrations (Cont. to Highest Conc.)					
			00	20	40	60	80	100
Pp	10/01/24-10/08/24	MHSW	00	20	40	60	80	100
Cd	10/01/24-10/07/24	MHSW	00	20	40	60	80	100

Test Org.	Results	95% Confidence Interval	Upper and Lower CUSUM Chart Control Limit (This Test)	Number (N)
Pp	24.6	15.5-27.98	9.56-84.7	18
Cd	10	6.901-17.98	12.5-96.4	19

9. TEST CONDITION VARIABILITY:

9.A. Deviations From Standard Test Conditions:

None.

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9.B. Test Solution Manipulations or Test Modifications:

None.

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10. REQUIRED REPORT ATTACHMENTS:

Attach copies of Chain-of-Custody Forms, Reference Toxicant Tests, and Raw Data (Bench Sheets) Pertaining to Physical, Chemical, and Biological Measurements for All Tests. Include Suspended, Interrupted, or Discontinued Toxicity Tests Data.

COMMENTS:

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11.C. CHRONIC SCREENING TOXICITY TESTS RESULTS (Freshwater):

TEST ORGANISM: *Ceriodaphnia dubia*

Were Neonates Used to Begin the Test Within 8 Hours of the Same Age?: Yes: X No: \_\_\_\_\_  
 Did 60% of the CONTROL Females Produce Their Third Brood?: Yes: X No: \_\_\_\_\_

**SURVIVAL**

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO SURVIVAL STATISTICAL ANALYSIS NECESSARY: X  
 CONTROL(%) 24h 100 48h 100 END 100 EFFLUENT(%) 24h 100 48h 100 END 100  
 Fishers Exact Test: A = \_\_\_\_\_ B = \_\_\_\_\_ a = \_\_\_\_\_ b = \_\_\_\_\_

**REPRODUCTION** (Average Neonates/Female)

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO REPRODUCTION STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_  
 CONTROL(%): 20.1 EFFLUENT(%): 18.6  
 Normally Distributed: YES \_\_\_\_\_ NO \_\_\_\_\_  
 Test Statistic: 0.9523 Critical Value: 1.734 (Parametric)  
 Equal variance: \_\_\_\_\_ Unequal variance: \_\_\_\_\_  
 F Statistic: \_\_\_\_\_ Critical F: \_\_\_\_\_  
 t - Test Statistic: \_\_\_\_\_ t - Test Critical Value: \_\_\_\_\_  
 Sample Rank Sum: \_\_\_\_\_ # Reprs.: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non - Parametric)  
 COMMENTS: \_\_\_\_\_

TEST ORGANISM: *Pimephale promelas*

**SURVIVAL**

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO SURVIVAL STATISTICAL ANALYSIS NECESSARY: X  
 CONTROL(%) 24h 100 48h 100 END 100 EFFLUENT(%) 24h 100 48h 100 END 100  
 Normally Distributed: YES \_\_\_\_\_ NO \_\_\_\_\_  
 Test Statistic: \_\_\_\_\_ Critical Value: \_\_\_\_\_ (Parametric)  
 Equal variance: \_\_\_\_\_ Unequal variance: \_\_\_\_\_  
 F Statistic: \_\_\_\_\_ Critical F: \_\_\_\_\_  
 t - Test Statistic: \_\_\_\_\_ t - Test Critical Value: \_\_\_\_\_  
 Sample Rank Sum: \_\_\_\_\_ # Reprs.: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non - Parametric)

**GROWTH** (Mean Dry Weight - mg)

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO GROWTH STATISTICAL ANALYSIS NECESSARY: X  
 CONTROL: 0.281 EFFLUENT: 0.3147  
 Normally Distributed: YES \_\_\_\_\_ NO \_\_\_\_\_  
 Test Statistic: \_\_\_\_\_ Critical Value: \_\_\_\_\_ (Parametric)  
 Equal variance: \_\_\_\_\_ Unequal variance: \_\_\_\_\_  
 F Statistic: \_\_\_\_\_ Critical F: \_\_\_\_\_  
 t - Test Statistic: \_\_\_\_\_ t - Test Critical Value: \_\_\_\_\_  
 Sample Rank Sum: \_\_\_\_\_ # Reprs.: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non - Parametric)  
 COMMENTS: No fathead minnow survival statistical analysis was necessary since effluent survival was the same as the control survival..

PACE ANALYTICAL SERVICES, LLC. KENTUCKY  
173 Island Creek Rd.  
Pikeville, KY 41501  
606-237-2726

# ***WHOLE EFFLUENT TOXICITY TEST***

City of Clanton  
AL0054631  
Outfall 0011  
November 2024

Attached are the results of the static renewal Whole Effluent Toxicity (WET) test conducted with samples of Outfall 0011 effluent. Testing was conducted per NPDES permit number AL0054631 and initial samples were received on November 05, 2024 at sample receipt temperatures below 6.0 °C. All samples were used within 36 hours of collection and were utilized for testing with *Pimephales promelas* and *Ceriodaphnia Dubia* at Pace Analytical Services, LLC Kentucky. The test was initiated on November 05, 2024. Organisms were exposed at 25.0 ± 1 °C to an effluent concentration of 75%, and a moderately hard synthetic water control.

Chronic toxicity test methods followed EPA-821-R-02-013, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (Fourth Edition). Test controls met USEPA criteria for test acceptability.

TOXICITY TEST RESULTS			
Test endpoints	Permit Limit	C. dubia	P. promelas
Pass/Fail	----	Pass	Pass
TUc	----	----	----
IC25	----	----	----
LC50 48-hr	----	----	----
NOEC Survival	----	----	----
NOEC reproduction	----	----	----
NOEC Growth	----	----	----
TUa – Acute toxicity unit			
TUc – Chronic toxicity unit			
IC25 – Inhibition concentration to 25 percent of exposed organism			
LC50 – Median lethal concentration, calculated from 48-hr exposure in chronic test			
NOEC – No Observed Effect Concentration			
LOEC – Lowest Observed Effect Concentration			

Test results for Outfall 0011 effluent displayed adequate survival and growth as compared to the control in the Fathead minnow growth and survival test. Test results for the *Ceriodaphnia dubia* displayed adequate survival and reproduction as compared to the control in the *Ceriodaphnia dubia* neonate survival and reproduction test. This report includes this summary, the statistics and raw test data, chain-of-custody documentation, and reference toxicant data.

If you have any questions or concerns regarding this report, please feel free to contact me at (606) 727-9023.

Sincerely,

Joshua Standifur  
 Supervisor  
 joshua.standifur@pacelabs.com

**INTRODUCTORY INFORMATION**

---

**Permit number:**

- AL0054631

**Toxicity testing permit requirements and Test Method:**

- Ceriodaphnia Dubia survival and reproduction test (Chronic)
- Fathead minnow survival and growth test (Chronic)

**Plant location:**

Walnut Creek WWTP  
1574 Chilton County Road 51  
Clanton, Alabama  
Chilton County

**Name of receiving water body:**

- Walnut Creek

**Laboratory conducting the test (s):**

- Pace Analytical Services, LLC Kentucky  
173 Island Creek Road  
Pikeville, Kentucky 41501

**SOURCE OF EFFLUENT AND DILUTION WATER**

**Effluent samples:**

Sample collection dates and times (Grab):

Sample Date/Time:

- November 04, 2024            08:00
- November 06, 2024            08:00
- November 08, 2024            08:00

Sample collection method:

- Grab

Were effluent samples modified prior to testing? (ex. Filtration, Aeration, Chem addition)

- No

**Dilution water samples:**

Source:

- Moderately hard synthetic water
  - Prepared in house

Date prepared:

- October 22, 2024            (LIMS: 4048640) (Fathead minnow)
- October 22, 2024            (LIMS: 4048644) (Ceriodaphnia dubia)

Pretreatment:

- None

## FATHEAD MINNOW LARVAL SURVIVAL AND GROWTH TEST

### Toxicity test method used:

- Static-Renewal Fathead Minnow Chronic toxicity

### Endpoints of Toxicity:

- 7 Day survival (Pass/Fail)
- Mean Dry Biomass (Pass/Fail)

### Test method and deviations, if any:

- EPA-821-R-02-013, October 2002
- Test Method 1000.0

### Date and time test started:

- November 05, 2024 13:46

### Date and time test terminated:

- November 12, 2024 14:01

### Type of test chambers:

- Plastic, 473ml

### Volume of solution used per chamber:

- 250ml

### Number of organisms per chamber:

- Ten

### Number of replicate chambers per treatment:

- Four

### Test Temperature:

- 25 ± 1 degree

### Specific name:

- Pimephales promelas

**Age:**

- Less than 24 hours
- Batch: 4049872

**Life stage:**

- Larvae

**Source:**

- Aquatox, AR

**Methods used to calculate endpoints:**

- Wilcoxon Rank Sum Two-Sample Test
- Equal Variance t Two-Sample Test

**Test Acceptability Criteria:**

- 80% or greater survival in the control group
- Average dry weight per surviving organisms in the control group

## CERIODAPHNIA DUBIA NEONATE SURVIVAL AND REPRODUCTION TEST

### Toxicity test method used:

- Static-Renewal Ceriodaphnia dubia Chronic toxicity

### Endpoints of Toxicity:

- Survival/Reproduction (Pass/Fail)

### Test method and deviations, if any:

- EPA-821-R-02-013, October 2002
- Test Method 1002.0

### Date and time test started:

- November 05, 2024 13:36

### Date and time test terminated:

- November 11, 2024 13:58

### Type of test chambers:

- Plastic, 1oz

### Volume of solution used per chamber:

- 30ml

### Number of organisms per chamber:

- One

### Number of replicate chambers per treatment:

- Ten

### Test Temperature:

- 25 ± 1 degree

**Specific name:**

- Ceriodaphnia dubia

**Age:**

- Less than 24 hours
- Brood: 10/23/2024

**Life stage:**

- Neonate

**Source:**

- In-House

**Methods used to calculate endpoints:**

- Equal Variance t Two-Sample Test
- Fisher Exact Test

**Test Acceptability Criteria:**

- 80% or greater survival in the control group, 60% of surviving females produce three broods.
- Average of fifteen or more young per surviving female in control dilutions

**CETIS Summary Report**

**Report Date:** 15 Oct-24 16:02 (p 1 of 2)  
**Test Code/ID:** 3366A1EF / 08-6236-4143

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

<b>Batch ID:</b> 12-9863-5819	<b>Test Type:</b> Growth-Survival (7d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 01 Oct-24 14:28	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 08 Oct-24 14:31	<b>Species:</b> Pimephales promelas	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 7d 0h	<b>Taxon:</b> Actinopterygii	<b>Source:</b> Aquatox, AR <b>Age:</b> <24
<b>Sample ID:</b> 04-7713-9809	<b>Code:</b> October Chronic	<b>Project:</b> Special Studies
<b>Sample Date:</b> 01 Oct-24 10:00	<b>Material:</b> Sodium chloride	<b>Source:</b> Reference Toxicant
<b>Receipt Date:</b> 01 Oct-24 10:30	<b>CAS (PC):</b>	<b>Station:</b> In House
<b>Sample Age:</b> 4h	<b>Client:</b> Internal Lab	

**Multiple Comparison Summary**

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	S
03-7781-7123	7d Survival Rate	Steel Many-One Rank Sum Test	✓ 20	40	28.28	7.49%	1
09-3018-9143	Mean Dry Biomass-mg	Dunnett Multiple Comparison Test	✓ 20	40	28.28	26.8%	1

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
00-0108-1269	7d Survival Rate	GLM: Log-Normal (Probit)	LC5	20.01	16.79	22.49	1
			LC10	21.6	18.52	24.05	
			LC15	22.74	19.77	25.2	
			LC20	23.69	20.8	26.18	
			✓ LC25	24.54	21.71	27.07	
			✓ LC40	26.81	24.08	29.57	
16-1528-8798	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)	✓ IC15	22.12	4.884	25.17	1
			✓ IC20	23.36	10.19	26.58	
			IC25	24.6	15.5	27.98	
			IC40	28.32	22.12	32.25	
			IC50	30.8	25.44	35.1	

**7d Survival Rate Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
20		4	0.9500	0.8581	1.0420	0.9000	1.0000	0.0289	0.0577	6.08%	5.00%
40		4	0.0500	-0.0419	0.1419	0.0000	0.1000	0.0289	0.0577	115.47%	95.00%
60		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	—	100.00%
80		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	—	100.00%
100		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	—	100.00%

**Mean Dry Biomass-mg Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.2905	0.2234	0.3576	0.232	0.326	0.02109	0.04218	14.52%	0.00%
20		4	0.2717	0.1773	0.3662	0.212	0.337	0.02969	0.05938	21.85%	6.46%
40		4	0.0375	-0.03924	0.1142	0	0.101	0.02411	0.04823	128.60%	87.09%
60		4	0	0	0	0	0	0	0	—	100.00%
80		4	0	0	0	0	0	0	0	—	100.00%
100		4	0	0	0	0	0	0	0	—	100.00%

**CETIS Summary Report**

**Report Date:** 15 Oct-24 16:02 (p 2 of 2)  
**Test Code/ID:** 3366A1EF / 08-6236-4143

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

**7d Survival Rate Detail**

MD5: F77B12904E1A4D37F59438FD3501B836

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
20		1.0000	1.0000	0.9000	0.9000
40		0.1000	0.0000	0.0000	0.1000
60		0.0000	0.0000	0.0000	0.0000
80		0.0000	0.0000	0.0000	0.0000
100		0.0000	0.0000	0.0000	0.0000

**Mean Dry Biomass-mg Detail**

MD5: 028B6F8A399BB8D9E4C51A5A7117F06E

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.288	0.326	0.232	0.316
20		0.306	0.232	0.212	0.337
40		0.101	0	0	0.049
60		0	0	0	0
80		0	0	0	0
100		0	0	0	0

**7d Survival Rate Binomials**

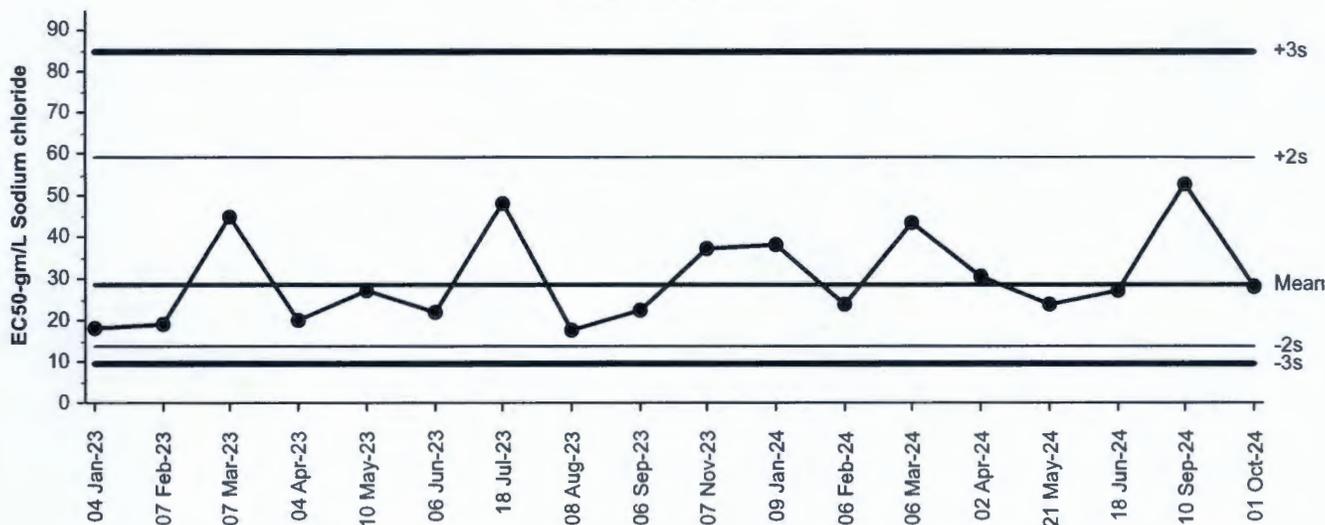
Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
20		10/10	10/10	9/10	9/10
40		1/10	0/10	0/10	1/10
60		0/10	0/10	0/10	0/10
80		0/10	0/10	0/10	0/10
100		0/10	0/10	0/10	0/10

Fathead Minnow 7-d Larval Survival and Growth Test

Pace Analytical

Test Type: Growth-Survival (7d)      Organism: Pimephales promelas      Material: Sodium chloride  
 Protocol: EPA/821/R-02-013 (2002)      Endpoint: 7d Survival Rate      Source: Reference Toxicant-REF

Fathead Minnow 7-d Larval Survival and Growth Test  
 7d Survival Rate Endpoint



Lognormal Levey-Jennings Plot

Mean: 28.45      Count: 17      -2s Warning Limit: 13.7      -3s Action Limit: 9.56  
 Sigma: NA      CV: 37.60%      +2s Warning Limit: 58.9      +3s Action Limit: 84.7

Quality Control Data

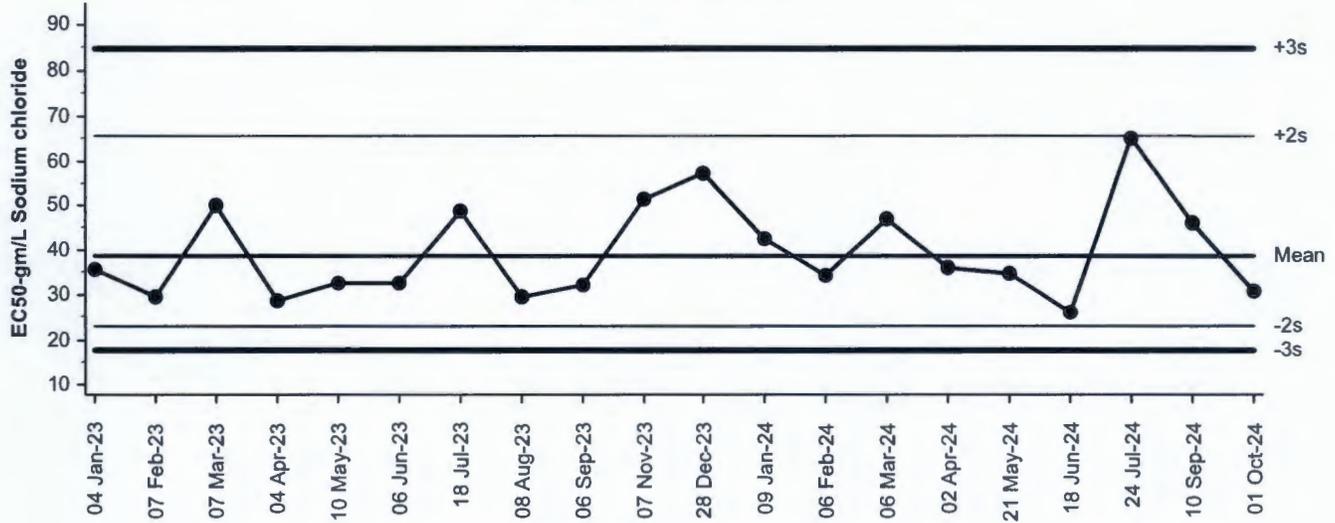
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Jan	4	12:43	17.91	-10.54	-1.273			08-6458-5262	07-0367-5271
2		Feb	7	11:16	19.12	-9.328	-1.093			07-8916-2678	04-0275-4662
3		Mar	7	11:03	44.62	16.17	1.238			09-0646-8027	18-0859-5764
4		Apr	4	11:30	20	-8.446	-0.9688			10-1484-9805	03-9823-4979
5		May	10	11:00	27.16	-1.289	-0.1275			17-5764-5018	12-8798-5059
6		Jun	6	11:45	21.93	-6.516	-0.7154			16-0536-5664	02-6498-4883
7		Jul	18	12:14	48.24	19.79	1.452			01-4932-3290	02-8701-4146
8		Aug	8	10:00	17.6	-10.84	-1.32			09-1285-1709	06-8329-6604
9		Sep	6	12:02	22.36	-6.084	-0.6618			08-9217-5113	11-3322-7462
10		Nov	7	12:04	36.91	8.468	0.7167			00-1237-8404	12-3813-6446
11	2024	Jan	9	12:42	38.1	9.649	0.8033			07-0327-2861	03-4872-0978
12		Feb	6	11:30	23.78	-4.671	-0.4933			08-4821-4547	14-0126-0641
13		Mar	6	11:00	43.33	14.89	1.158			00-7881-4369	01-2832-1810
14		Apr	2	11:03	30.48	2.03	0.1896			20-8385-7806	02-1948-0215
15		May	21	12:24	23.77	-4.676	-0.4939			01-1168-4778	18-2145-6455
16		Jun	18	12:50	27.17	-1.273	-0.1259			10-6737-8756	04-7469-4792
17		Sep	10	11:02	52.63	24.18	1.692			07-1706-9029	16-5255-8457
18		Oct	1	14:28	28.28	-0.1704	-0.01652			08-6236-4143	00-0108-1269

Fathead Minnow 7-d Larval Survival and Growth Test

Pace Analytical

Test Type: Growth-Survival (7d) Organism: Pimephales promelas Material: Sodium chloride  
 Protocol: EPA/821/R-02-013 (2002) Endpoint: Mean Dry Biomass-mg Source: Reference Toxicant-REF

Fathead Minnow 7-d Larval Survival and Growth Test  
 Mean Dry Biomass-mg Endpoint



Lognormal Levey-Jennings Plot

Mean: 38.82 Count: 19 -2s Warning Limit: 23.1 -3s Action Limit: 17.8  
 Sigma: NA CV: 26.50% +2s Warning Limit: 65.3 +3s Action Limit: 84.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Jan	4	12:43	35.77	-3.05	-0.3144			08-6458-5262	08-3269-5180
2		Feb	7	11:16	29.59	-9.232	-1.044			07-8916-2678	18-8201-1553
3		Mar	7	11:03	50	11.18	0.9724			09-0646-8027	21-4233-5867
4		Apr	4	11:30	28.73	-10.09	-1.157			10-1484-9805	19-9403-9288
5		May	10	11:00	32.86	-5.965	-0.6411			17-5764-5018	04-6146-9127
6		Jun	6	11:45	32.79	-6.034	-0.6492			16-0536-5664	06-0892-7232
7		Jul	18	12:14	48.74	9.918	0.8743			01-4932-3290	11-1497-4722
8		Aug	8	10:00	29.47	-9.35	-1.059			09-1285-1709	08-3725-9880
9		Sep	6	12:02	32.42	-6.399	-0.6923			08-9217-5113	17-7953-9325
10		Nov	7	12:04	51.61	12.78	1.094			00-1237-8404	06-9636-2066
11		Dec	28	12:22	57.33	18.51	1.498			00-1704-0036	15-4169-3228
12	2024	Jan	9	12:42	42.55	3.732	0.3528			07-0327-2861	21-0374-6732
13		Feb	6	11:30	34.43	-4.395	-0.4617			08-4821-4547	17-4659-3717
14		Mar	6	11:00	46.92	8.099	0.7282			00-7881-4369	01-2548-5425
15		Apr	2	11:03	36.34	-2.482	-0.2539			20-8385-7806	19-8132-0658
16		May	21	12:24	35.06	-3.766	-0.3922			01-1168-4778	06-9857-0372
17		Jun	18	12:50	25.94	-12.88	-1.549			10-6737-8756	20-0624-4073
18		Jul	24	11:32	65.1	26.28	1.987			08-3858-6621	16-8522-6591
19		Sep	10	11:02	46.29	7.471	0.6764			07-1706-9029	19-1621-0501
20		Oct	1	14:28	30.8	-8.022	-0.8896			08-6236-4143	16-1528-8798

# CETIS Summary Report

Report Date: 15 Oct-24 16:15 (p 1 of 2)  
 Test Code/ID: 2177C545 / 05-6149-7413

## EC Ceriodaphnia Reproduction and Survival Test

Pace Analytical

Batch ID: 13-9578-5640      Test Type: Reproduction-Survival (6-8d)      Analyst: Lab Tech  
 Start Date: 01 Oct-24 14:31      Protocol: EPA/821/R-02-013 (2002)      Diluent: Mod-Hard Synthetic Water  
 Ending Date: 07 Oct-24 14:42      Species: Ceriodaphnia dubia      Brine: Not Applicable  
 Test Length: 6d 0h      Taxon: Branchiopoda      Source: In-House Culture      Age: <24

Sample ID: 07-4116-6184      Code: October Chronic      Project: Special Studies  
 Sample Date: 01 Oct-24 10:00      Material: Sodium chloride      Source: Reference Toxicant  
 Receipt Date: 01 Oct-24 10:30      CAS (PC):      Station: In House  
 Sample Age: 5h      Client: Internal Lab

### Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	S
07-9793-1810	6d Reproduction	Steel Many-One Rank Sum Test	✓ <20	20	—	22.6%	1
20-0783-4572	6d Survival Rate	Fisher Exact/Bonferroni-Holm Test	20	40	28.28	—	1

### Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
05-5761-6518	6d Reproduction	Linear Interpolation (ICPIN)	✓ IC15	6	4.141	10.79	1
			✓ IC20	8	5.521	14.38	
			✓ IC25	10	6.901	17.98	
			✓ IC40	16	11.04	24.23	
			✓ IC50	20	13.8	27.77	
05-1740-0203	6d Survival Rate	GLM: Log-Normal (Probit)	LC5	16.16	7.086	22.55	1
			LC10	18.82	9.352	25.28	
			LC15	20.86	11.25	27.37	
			LC20	22.63	13	29.21	
			LC25	24.28	14.7	30.95	
			LC40	28.96	19.79	36.2	
			LC50	32.21	23.38	40.26	
11-6275-6417	6d Survival Rate	Linear Interpolation (ICPIN)	LC15	15	6	30	1
			LC20	20	8	40	
			LC25	23.33	10	41.25	
			LC40	33.33	16	45	
			LC50	40	26.67	47.5	

### 6d Reproduction Summary

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	10	19.8	17.67	21.93	16	25	0.9404	2.974	15.02%	0.00%
20		10	9.9	4.489	15.31	0	20	2.392	7.564	76.40%	50.00%
40		10	2.7	0.5132	4.887	0	8	0.9667	3.057	113.22%	86.36%
60		10	0	0	0	0	0	0	0	—	100.00%
80		10	0	0	0	0	0	0	0	—	100.00%
100		10	0	0	0	0	0	0	0	—	100.00%

### 6d Survival Rate Summary

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
20		10	0.8000	0.4984	1.1020	0.0000	1.0000	0.1333	0.4216	52.70%	20.00%
40		10	0.5000	0.1230	0.8770	0.0000	1.0000	0.1667	0.5270	105.41%	50.00%
60		10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	—	100.00%
80		10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	—	100.00%
100		10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	—	100.00%

**CETIS Summary Report**

Report Date: 15 Oct-24 16:15 (p 2 of 2)  
 Test Code/ID: 2177C545 / 05-6149-7413

**EC Ceriodaphnia Reproduction and Survival Test**

Pace Analytical

**6d Reproduction Detail**

MD5: FBF801BE31CF5D8CEA8E59656B916AF8

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	22	18	21	18	16	17	25	22	22	17
20		20	17	16	0	15	10	14	0	2	5
40		5	6	0	0	4	8	0	4	0	0
60		0	0	0	0	0	0	0	0	0	0
80		0	0	0	0	0	0	0	0	0	0
100		0	0	0	0	0	0	0	0	0	0

**6d Survival Rate Detail**

MD5: F7761361ACD7A9BED7D15F2477FECF33

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
20		1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000
40		1.0000	1.0000	0.0000	0.0000	1.0000	1.0000	0.0000	1.0000	0.0000	0.0000
60		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
80		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
100		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**6d Survival Rate Binomials**

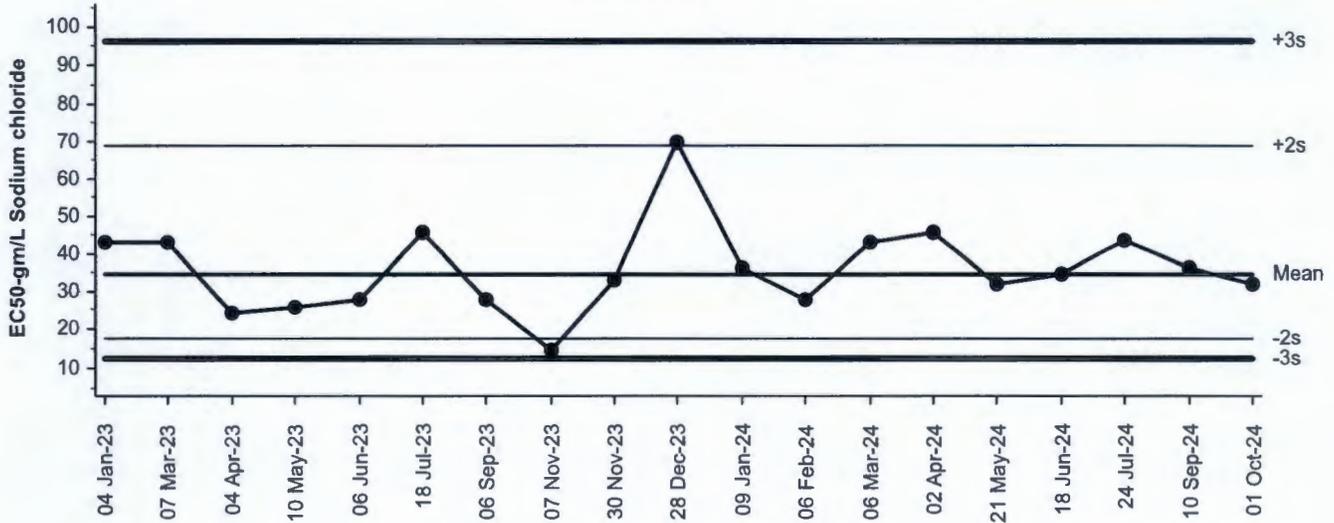
Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
20		1/1	1/1	1/1	0/1	1/1	1/1	1/1	0/1	1/1	1/1
40		1/1	1/1	0/1	0/1	1/1	1/1	0/1	1/1	0/1	0/1
60		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
80		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
100		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

EC Ceriodaphnia Reproduction and Survival Test

Pace Analytical

Test Type: Reproduction-Survival (6-8d) Organism: Ceriodaphnia dubia Material: Sodium chloride  
 Protocol: EPA/821/R-02-013 (2002) Endpoint: 6d Survival Rate Source: Reference Toxicant-REF

EC Ceriodaphnia Reproduction and Survival Test  
 6d Survival Rate Endpoint



Lognormal Levey-Jennings Plot

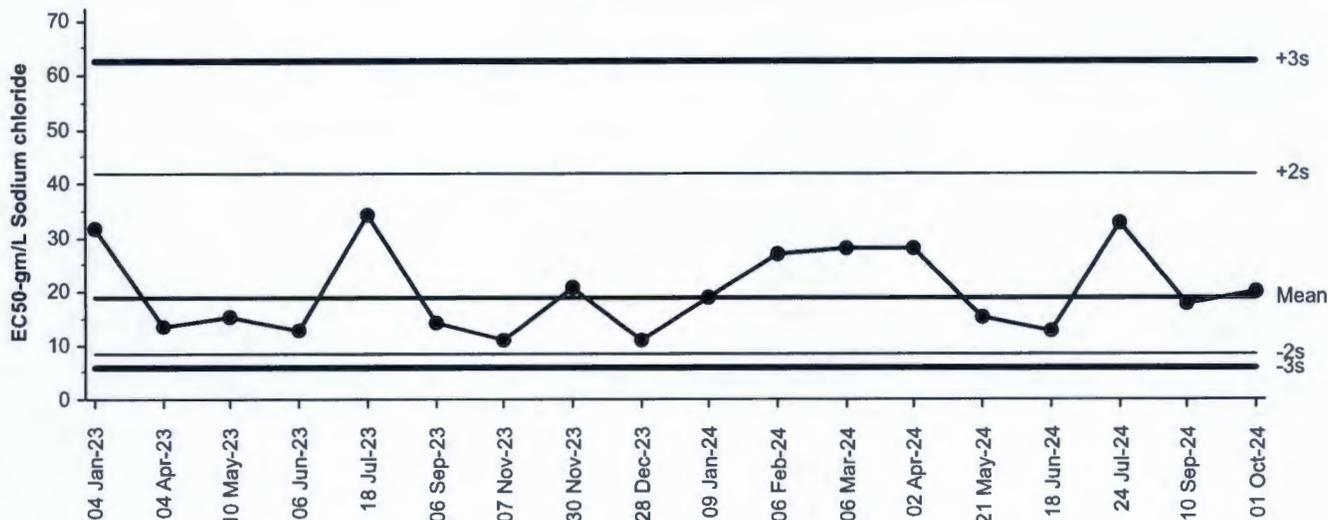
Mean: 34.71 Count: 18 -2s Warning Limit: 17.6 -3s Action Limit: 12.5  
 Sigma: NA CV: 35.10% +2s Warning Limit: 68.6 +3s Action Limit: 96.4

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Jan	4	12:52	43.33	8.624	0.6516			14-3976-1405	10-3389-5934
2		Mar	7	11:09	43.33	8.624	0.6516			09-6387-6789	14-9469-0878
3		Apr	4	11:00	24.35	-10.36	-1.041			03-9957-8886	17-0964-2970
4		May	10	11:03	26.2	-8.511	-0.8259			16-3147-1799	03-5732-8159
5		Jun	6	11:10	28.34	-6.365	-0.5948			20-6903-7120	06-6824-9434
6		Jul	18	10:00	45.71	11.01	0.8086			02-3012-1974	19-1049-2441
7		Sep	6	12:14	28.2	-6.505	-0.6094			02-3623-1604	10-2352-7333
8		Nov	7	12:11	14.29	-20.42	-2.606	(-)		13-0744-2735	17-6469-6079
9			30	11:35	33.55	-1.159	-0.09973			04-4320-0139	14-4558-4430
10		Dec	28	12:28	70	35.29	2.06	(+)		09-0665-9260	12-8988-0299
11	2024	Jan	9	12:46	36.67	1.958	0.1611			09-9575-7512	12-1803-8717
12		Feb	6	11:30	28.34	-6.365	-0.5948			16-5655-7891	09-2191-6980
13		Mar	6	11:30	43.33	8.624	0.6516			02-6338-4354	05-4174-8265
14		Apr	2	11:14	45.71	10.99	0.8078			11-6832-4248	13-4629-7129
15		May	21	12:36	32.21	-2.502	-0.2196			20-8272-1007	13-3098-2189
16		Jun	18	12:56	34.9	0.1926	0.01625			20-9388-7900	16-6161-0205
17		Jul	24	11:46	43.53	8.818	0.6647			15-0375-9487	01-6195-5877
18		Sep	10	11:09	36.21	1.498	0.124			10-0785-6728	15-4177-8752
19		Oct	1	14:31	32.21	-2.502	-0.2196			05-6149-7413	05-1740-0203

EC Ceriodaphnia Reproduction and Survival Test			Pace Analytical
Test Type: Reproduction-Survival (6-8d)	Organism: Ceriodaphnia dubia	Material: Sodium chloride	
Protocol: EPA/821/R-02-013 (2002)	Endpoint: 6d Reproduction	Source: Reference Toxicant-REF	

EC Ceriodaphnia Reproduction and Survival Test  
6d Reproduction Endpoint



Lognormal Levey-Jennings Plot

Mean: 18.82      Count: 17      -2s Warning Limit: 8.46      -3s Action Limit: 5.67  
 Sigma: NA      CV: 41.60%      +2s Warning Limit: 41.9      +3s Action Limit: 62.5

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Jan	4	12:52	31.64	12.82	1.299			14-3976-1405	06-2470-0901
2		Apr	4	11:00	13.55	-5.268	-0.8213			03-9957-8886	18-6510-0323
3		May	10	11:03	15.19	-3.636	-0.537			16-3147-1799	09-9132-0677
4		Jun	6	11:10	12.82	-6.001	-0.9604			20-6903-7120	16-9689-8289
5		Jul	18	10:00	34.23	15.41	1.496			02-3012-1974	10-1820-3732
6		Sep	6	12:14	14.27	-4.547	-0.6916			02-3623-1604	07-4672-0573
7		Nov	7	12:11	10.84	-7.984	-1.381			13-0744-2735	02-0652-7628
8			30	11:35	20.93	2.109	0.2656			04-4320-0139	00-8546-7945
9		Dec	28	12:28	11.04	-7.783	-1.335			09-0665-9260	14-8146-4781
10	2024	Jan	9	12:46	18.78	-0.04101	-0.00546			09-9575-7512	12-1051-0770
11		Feb	6	11:30	27.04	8.216	0.906			16-5655-7891	20-6328-5902
12		Mar	6	11:30	27.86	9.036	0.9807			02-6338-4354	09-2195-9134
13		Apr	2	11:14	28.2	9.378	1.011			11-6832-4248	10-8230-3737
14		May	21	12:36	15.41	-3.416	-0.501			20-8272-1007	14-9761-6414
15		Jun	18	12:56	12.82	-6.003	-0.9607			20-9388-7900	08-5814-2891
16		Jul	24	11:46	32.9	14.08	1.397			15-0375-9487	12-2945-8229
17		Sep	10	11:09	17.72	-1.099	-0.1504			10-0785-6728	04-0583-9792
18		Oct	1	14:31	20	1.178	0.1519			05-6149-7413	05-5761-6518

ANALYST (s) Joc, ZTB, JWS, GAE  
 MHSF LIMS ID # 4046327 4046366  
 LIMS SAMPLE ID # 4046222  
 FATHEAD ID # 4046327  
 RANDOMIZATION Temp. 2  
 DATA REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_



CLIENT Ref Tox - October

Biomonitoring performed at (Choose one): Madisonville

Pikeville

CONTROL							% <u>20</u>			% <u>40</u>			% <u>60</u>			% <u>80</u>			% <u>100</u>					SAMPLE ID		
	pH	DO	%C	ALK	HARD	COND	pH	DO	%c	pH	DO	%c	ALK/TRC	HARD		COND										
Day 1	I	7.64	7.21	24.9	65	84	285	7.72	7.37	24.9	7.84	7.44	24.9	7.95	7.61	24.9	8.03	7.69	24.9	8.15	7.75	25.0	63	44	2,917	ANALYST: ZTB
	F	7.06	6.73	24.9				6.74	6.85	24.8	6.77	6.97	24.7	6.68	6.88	24.8	6.52	6.18	24.9	5.78	6.82	24.9	0			
Day 2	I	7.30	7.49	25.2	63	80	287	7.04	7.55	25.3	6.83	7.31	25.2	6.69	7.49	25.3	6.55	7.45	24.8	5.55	7.48	24.8	65	47	2,921	ANALYST: GAE
	F	6.94	6.40	25.1				6.95	6.79	25.5	7.16	7.36	25.0													
Day 3	I	7.18	6.85	25.2	60	81	293	6.98	7.32	25.0	7.00	7.15	24.9	7.16	7.36	25.0							62	40	2,915	ANALYST: JOC
	F	7.35	6.99	25.1				7.46	7.07	25.1	7.73	7.21	25.1										0			
Day 4	I	7.28	6.78	24.9	64	80	280	7.69	6.84	24.9	7.68	7.09	25.1										66	49	2,918	ANALYST: JOC
	F	7.39	7.15	25.0				7.49	7.28	25.0	7.62	7.67	25.0													
Day 5	I	7.49	6.48	25.1	67	82	277	7.63	7.10	25.1	7.75	7.21	25.1										67	52	2,749	ANALYST: ZTB
	F	7.36	7.13	25.2				7.43	7.22	25.1	7.63	7.36	25.1										0.00			
Day 6	I	7.43	7.92	25.2	63	84	276	7.62	7.24	25.1	7.71	7.22	25.1										61	50	2,916	ANALYST: JWS
	F	7.16	8.36	24.6				7.07	6.75	24.7	7.11	6.89	24.7													
Day 7	I	7.16	8.71	24.9	62	83	276	7.01	8.82	24.9	6.89	8.81	24.9										68	53	2,926	ANALYST: GAE
	F	7.19	6.45	25.0				7.34	6.39	25.0	7.30	6.62	25.1													

UNITS: pH - STD, DISSOLVE OXYGEN (DO) - MG/L, HARDNESS - MG/L, ALKALINITY - MG/L, CONDUCTIVITY - UMHOS/CM, TOTAL RESIDUAL CHLORINE (TRC) - MG/L, BRINE SHRIMP (BS) - µ

EPA 821 - R - 02 - 013 METHOD 1000.0 STATIC RENEWAL

CLIENT Ref Tex. October

ANALYST Jac, ZTB, JMS, GAE

SETUP DATE & TIME 10-01-24 16:28

FATHEAD BATCH # 4046327 AGE 24 hrs

DATA REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_

# ORG/CONC. -FATHEAD 40

INITIAL FEEDING ID: \_\_\_\_\_

INCUBATOR ID: \_\_\_\_\_

DRYING OVEN ID: 2032031

WEIGHTS ID: 1016126

CONTROL	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
ANALYST	GAE	Jac	Jac	ZTB	JMS	JMS	Jac
DATE	10-2-24	10-3-24	10-4-24	10-5-24	10-6-24	10-7-24	10-8-24
TIME	14:36	14:47	14:34	14:52	14:38	14:46	14:31
1	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10
=	40	40	40	40	40	40	40
20 %	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
1	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10
3	10	10	10	10	10	9	9
4	10	10	10	10	10	9	9
=	40	40	40	40	40	38	38
40 %	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
1	103	3	3	2	2	2	1
2	32	2	2	1	0	0	0
3	81	1	1	1	1	0	0
4	81	1	1	1	1	1	1
=	297	7	7	5	4	3	2
60 %	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
=	0	0	0	0	0	0	0
80 %	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
=	0	0	0	0	0	0	0
100 %	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
=	0	0	0	0	0	0	0
SAMPLE ID	4046222-01	4046222-02	4046222-02	4046222-03	4046222-03	4046222-03	4046222-03
BRINE SHRIMP ID	13171 4154852	13171 4154862	13171 4154872	13171 4154882	13171 4154892	13171 4154902	13171 4154912

WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1312.24	1315.12
1309.32	1312.58
1308.94	1311.26
1312.01	1315.17
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1311.92	1314.99
1311.90	1314.22
1314.44	1321.56
1314.04	1317.41
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1309.76	1310.77
1310.72	1310.72
1314.31	1314.31
1306.91	1307.40 1307.12
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1289.18	1289.18
1295.13	1295.13
1310.15	1310.15
1313.38	1313.38 1313.5
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1308.59	1308.59
1312.48	1312.48
1305.20	1305.20
1308.28	1308.28
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1309.87	1309.87
1312.89	1312.89
1310.29	1310.29
1289.13	1289.13

COMMENTS:

At GAE 10/2

DATE DRIED 10-9-24  
 ANALYST Jac  
 TEMP (°C) IN 102.2 TIME DRIED 14:42  
 0.001 g 0.001  
 0.100 g 0.1

DATE WEIGHED 10-9-24  
 ANALYST Jac  
 TEMP (°C) OUT 109.0 TIME OUT 14:56  
 0.001 g 0.001  
 0.100 g 0.1

CLIENT Ref Tox - October



Biomonitoring performed at (Choose one): Madisonville

Pikeville

CONTROL							% <u>20</u>			% <u>40</u>			% <u>60</u>			% <u>80</u>			% <u>100</u>							
	pH	DO	%c	ALK	HARD	COND	pH	DO	%c	pH	DO	%c	ALK/TRC	HARD	COND	SAMPLE ID										
Day 1	I	7.89	7.21	24.9	67	86	291	7.78	7.37	24.9	7.84	7.49	24.9	7.95	7.61	24.9	8.03	7.69	24.9	8.15	7.75	25.0	63	44	2,917	ANALYST: ZTB
	F	7.06	6.73	24.9				6.74	6.85	24.8	6.77	6.97	24.7	6.68	6.88	24.8	6.52	6.18	24.9	5.73	6.82	24.9	0			ANALYST: GAE
Day 2	I	7.30	7.49	25.2	69	85	290	7.04	7.55	25.3	6.83	7.31	25.2	6.69	7.49	25.3	6.55	7.45	24.8	5.55	7.48	24.8	65	47	2,921	ANALYST: GAE
	F	6.94	6.40	25.1				6.95	6.79	25.5	7.16	7.36	25.0													ANALYST: JGC
Day 3	I	7.18	6.85	25.2	68	83	295	6.98	7.32	25.0	7.00	7.15	24.9										62	40	2,915	ANALYST: JGC
	F	7.35	6.99	25.1				7.46	7.09	25.1	7.73	7.21	25.1										0			ANALYST: JGC
Day 4	I	7.28	6.78	24.9	66	84	286	7.69	6.84	24.9	7.68	7.08	25.1										66	49	2,918	ANALYST: JGC
	F	7.39	7.15	25.0				7.49	7.28	25.0	7.62	7.37	25.0													ANALYST: ZTB
Day 5	I	7.49	6.98	25.1	69	86	281	7.63	7.10	25.1	7.75	7.21	25.1										67	52	2,949	ANALYST: ZTB
	F	7.25	7.13	25.2				7.48	7.22	25.1	7.63	7.34	25.1										0			ANALYST: JGC
Day 6	I	7.43	7.92	25.2	63	84	296	7.62	7.29	25.1	7.71	7.25	25.1										61	50	2,986	ANALYST: JGC
	F	7.16	8.36	24.6				7.07	6.75	24.7	7.11	6.89	24.7													ANALYST: GAE
Day 7	I	7.16	8.71	24.9	65	89	278	7.01	8.82	24.9	6.89	8.81	24.9										68	53	2,926	ANALYST: GAE
	F	7.19	6.45	25.0				7.34	6.39	25.0	7.30	6.62	25.1													ANALYST: JGC

UNITS: pH - STD, DISSOLVE OXYGEN (DO) - MG/L, HARDNESS - MG/L, ALKALINITY - MG/L, CONDUCTIVITY - UMHOS/CM, TOTAL RESIDUAL CHLORINE (TRC) - MG/L  
 EPA 821 - R - 02 - 013 METHOD 1002.0 STATIC RENEWAL

C# Title: ENV-FRM-MADV-0135 v00\_Cerio Chronic  
 Effective Date: 02/01/2023

SET UP DATE & TIME 10-01-24 14:31  
 DATE REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_

CLIENT Ref Tex - October  
 CERIO TRAY # 9118A  
 # ORG/CONC. - CERIO \_\_\_\_\_/\_\_\_\_

	LIMS ID #	AMOUNT FEED DAILY IN µl
ALGAE	4046363	200
YCT	4043153	200

CERIODAPHRNIA/CONTROL/EFFLUENT # YNG = NUMBER OF BABIES, # ADT = NUMBER OF ADULTS, X = DEAD, 0 = NO BABIES AND NO MORTALITY

DAY	1	2	3	4	5	6	7	8
ANALYST	GAE	JGC	JGC	ZTB	JMS	JMS		
DATE	10-2-24	10-3-24	10-4-24	10-5-24	10-6-24	10-7-24		
TIME	14:40	14:52	14:46	14:52	14:53	14:42		
SAMPLE ID	4046223	4046223-02	4046223-02	4046223-02	4046223-03	4046223-03		

Comments:

Control	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	0	0	0	0	0	0	0	0	0	0	0	10
DAY 2	0	0	0	0	0	0	0	0	0	0	0	10
DAY 3	2	0	1	1	0	0	3	0	2	0	9	10
DAY 4	4	3	4	3	2	2	6	4	4	3	36	16
DAY 5	7	6	6	5	6	5	7	8	7	6	61	10
DAY 6	9	9	10	9	8	9	9	10	9	8	90	10
DAY 7												
TOTAL	22	18	21	18	16	17	25	22	22	17	196	10

60%	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	X	X	0	X	X	X	0	0	0	0	0	5
DAY 2	X	X	X	X	X	X	X	X	X	X	0	0
DAY 3	X	X	X	X	X	X	X	X	X	X	0	0
DAY 4	X	X	X	X	X	X	X	X	X	X	0	0
DAY 5	X	X	X	X	X	X	X	X	X	X	0	0
DAY 6	X	X	X	X	X	X	X	X	X	X	0	0
DAY 7												
TOTAL	X	X	X	X	X	X	X	X	X	X	0	0

20%	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	0	0	0	0	0	0	0	0	0	0	0	10
DAY 2	0	0	0	0	0	0	0	0	0	0	0	10
DAY 3	1	1	0	0	1	2	0	0	0	1	6	10
DAY 4	4	3	4	X	2	1	3	X	0	0	17	8
DAY 5	7	6	5	X	4	3	4	X	0	1	30	8
DAY 6	8	7	7	X	8	6	7	X	2	3	48	8
DAY 7												
TOTAL	20	17	16	X	15	10	14	X	2	5	101	8

80%	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	X	X	X	X	X	X	X	X	X	X	0	0
DAY 2	X	X	X	X	X	X	X	X	X	X	0	0
DAY 3	X	X	X	X	X	X	X	X	X	X	0	0
DAY 4	X	X	X	X	X	X	X	X	X	X	0	0
DAY 5	X	X	X	X	X	X	X	X	X	X	0	0
DAY 6	X	X	X	X	X	X	X	X	X	X	0	0
DAY 7												
TOTAL	X	X	X	X	X	X	X	X	X	X	0	0

40%	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	0	0	0	0	0	0	0	0	0	0	0	10
DAY 2	0	0	0	0	0	0	0	0	0	0	0	10
DAY 3	0	2	0	0	1	2	0	2	0	0	7	10
DAY 4	1	1	X	X	0	1	X	1	X	X	4	5
DAY 5	1	1	X	X	1	2	X	1	X	X	5	5
DAY 6	2	2	X	X	2	3	X	0	X	X	4	6
DAY 7												
TOTAL	5	6	X	X	4	8	X	4	X	X	25	5

100%	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	X	X	X	X	X	X	X	X	X	X	0	0
DAY 2	X	X	X	X	X	X	X	X	X	X	0	0
DAY 3	X	X	X	X	X	X	X	X	X	X	0	0
DAY 4	X	X	X	X	X	X	X	X	X	X	0	0
DAY 5	X	X	X	X	X	X	X	X	X	X	0	0
DAY 6	X	X	X	X	X	X	X	X	X	X	0	0
DAY 7												
TOTAL	X	X	X	X	X	X	X	X	X	X	0	0

# CETIS Summary Report

Report Date: 19 Nov-24 09:37 (p 1 of 1)  
 Test Code/ID: 6B25F075 / 17-9764-8501

## Fathead Minnow 7-d Larval Survival and Growth Test

Pace Analytical

<b>Batch ID:</b> 10-8714-6903	<b>Test Type:</b> Growth-Survival (7d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 05 Nov-24 13:46	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 12 Nov-24 14:01	<b>Species:</b> Pimephales promelas	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 7d 0h	<b>Taxon:</b> Actinopterygii	<b>Source:</b> Aquatox, AR <b>Age:</b> <24
<b>Sample ID:</b> 17-8364-9649	<b>Code:</b> 4112586	<b>Project:</b> Effluent Characterization (Quarterly)
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Source:</b> NPDES Permit # (AL0054631) (AL005)
<b>Receipt Date:</b> 05 Nov-24 09:20	<b>CAS (PC):</b>	<b>Station:</b> 0011
<b>Sample Age:</b> 30h (1 °C)	<b>Client:</b> Clanton	

### Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
12-7557-8516	7d Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	75% passed 7d survival rate	1
18-0113-7956	Mean Dry Biomass-mg	Equal Variance t Two-Sample Test	0.8260	75% passed mean dry biomass-mg	1

### 7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
75		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

### Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.281	0.2241	0.3379	0.237	0.317	0.01789	0.03579	12.74%	0.00%
75		4	0.3147	0.2259	0.4036	0.241	0.365	0.02791	0.05581	17.73%	-12.01%

### 7d Survival Rate Detail

MD5: FB907C229DE461E929DEBA4E30E4BFED

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
75		1.0000	1.0000	1.0000	1.0000

### Mean Dry Biomass-mg Detail

MD5: D98372DDE72930181464D5AA196D2F57

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.302	0.268	0.237	0.317
75		0.35	0.365	0.303	0.241

### 7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
75		10/10	10/10	10/10	10/10

**CETIS Analytical Report**

**Report Date:** 19 Nov-24 09:38 (p 1 of 4)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

<b>Analysis ID:</b> 12-7557-8516	<b>Endpoint:</b> 7d Survival Rate	<b>CETIS Version:</b> CETIS v2.1.5
<b>Analyzed:</b> 19 Nov-24 9:36	<b>Analysis:</b> Nonparametric-Two Sample	<b>Status Level:</b> 1
<b>Edit Date:</b> 19 Nov-24 0:00	<b>MD5 Hash:</b> FB907C229DE461E929DEBA4E30E4BFE	<b>Editor ID:</b> 005-502-078-6
<b>Batch ID:</b> 10-8714-6903	<b>Test Type:</b> Growth-Survival (7d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 05 Nov-24 13:46	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 12 Nov-24 14:01	<b>Species:</b> Pimephales promelas	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 7d 0h	<b>Taxon:</b> Actinopterygii	<b>Source:</b> Aquatox, AR <b>Age:</b> <24
<b>Sample ID:</b> 17-8364-9649	<b>Code:</b> 4112586	<b>Project:</b> Effluent Characterization (Quarterly)
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Source:</b> NPDES Permit # (AL0054631) (AL005
<b>Receipt Date:</b> 05 Nov-24 09:20	<b>CAS (PC):</b>	<b>Station:</b> 0011
<b>Sample Age:</b> 30h (1 °C)	<b>Client:</b> Clanton	

<b>Data Transform</b>	<b>Alt Hyp</b>	<b>Comparison Result</b>
Angular (Corrected)	C > T	75% passed 7d survival rate endpoint

**Wilcoxon Rank Sum Two-Sample Test**

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	6	18	—	1	Exact	1.0000	Non-Significant Effect

**Test Acceptability Criteria**

**TAC Limits**

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.8	>>	Yes	Passes Criteria

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	6			
Total	0		7			

**ANOVA Assumptions Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

**7d Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
75		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

**Angular (Corrected) Transformed Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
75		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%

**7d Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
75		1.0000	1.0000	1.0000	1.0000

**Angular (Corrected) Transformed Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.4120	1.4120	1.4120	1.4120
75		1.4120	1.4120	1.4120	1.4120

**CETIS Analytical Report**

Report Date: 19 Nov-24 09:38 (p 2 of 4)  
 Test Code/ID: 6B25F075 / 17-9764-8501

**Fathead Minnow 7-d Larval Survival and Growth Test**

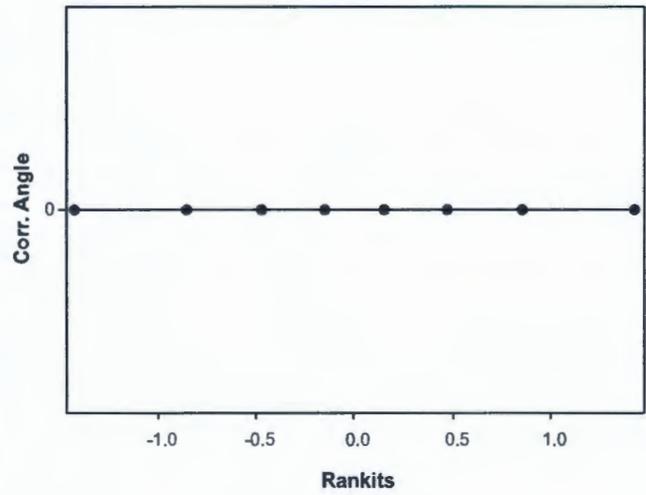
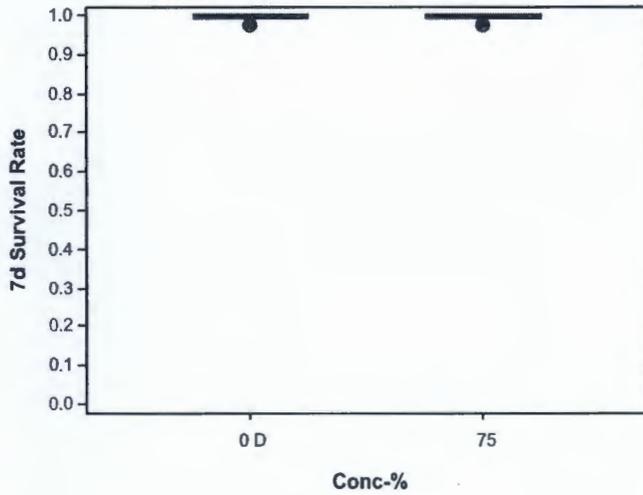
**Pace Analytical**

Analysis ID: 12-7557-8516      Endpoint: 7d Survival Rate      CETIS Version: CETIS v2.1.5  
 Analyzed: 19 Nov-24 9:36      Analysis: Nonparametric-Two Sample      Status Level: 1  
 Edit Date: 19 Nov-24 0:00      MD5 Hash: FB907C229DE461E929DEBA4E30E4BFE      Editor ID: 005-502-078-6

**7d Survival Rate Binomials**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
75		10/10	10/10	10/10	10/10

**Graphics**



**CETIS Analytical Report**

**Report Date:** 19 Nov-24 09:38 (p 3 of 4)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

**Analysis ID:** 18-0113-7956      **Endpoint:** Mean Dry Biomass-mg      **CETIS Version:** CETIS v2.1.5  
**Analyzed:** 19 Nov-24 9:36      **Analysis:** Parametric-Two Sample      **Status Level:** 1  
**Edit Date:** 19 Nov-24 0:00      **MD5 Hash:** D98372DDE72930181464D5AA196D2F57      **Editor ID:** 005-502-078-6

**Batch ID:** 10-8714-6903      **Test Type:** Growth-Survival (7d)      **Analyst:** Lab Tech  
**Start Date:** 05 Nov-24 13:46      **Protocol:** EPA/821/R-02-013 (2002)      **Diluent:** Mod-Hard Synthetic Water  
**Ending Date:** 12 Nov-24 14:01      **Species:** Pimephales promelas      **Brine:** Not Applicable  
**Test Length:** 7d 0h      **Taxon:** Actinopterygii      **Source:** Aquatox, AR      **Age:** <24

**Sample ID:** 17-8364-9649      **Code:** 4112586      **Project:** Effluent Characterization (Quarterly)  
**Sample Date:** 04 Nov-24 08:00      **Material:** POTW Effluent      **Source:** NPDES Permit # (AL0054631) (AL005  
**Receipt Date:** 05 Nov-24 09:20      **CAS (PC):**      **Station:** 0011  
**Sample Age:** 30h (1 °C)      **Client:** Clanton

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	75% passed mean dry biomass-mg endpoint	22.92%

**Equal Variance t Two-Sample Test**

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	6	-1.018	1.943	0.06442	CDF	0.8260	Non-Significant Effect

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.281	0.25	>>	Yes	Passes Criteria
PMSD	0.2292	0.12	0.3	Yes	Passes Criteria

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0022780	0.0022780	1	1.037	0.3479	Non-Significant Effect
Error	0.0131865	0.0021978	6			
Total	0.0154645		7			

**ANOVA Assumptions Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	2.432	47.47	0.4845	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9282	0.6451	0.4995	Normal Distribution

**Mean Dry Biomass-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.281	0.2241	0.3379	0.285	0.237	0.317	0.01789	12.74%	0.00%
75		4	0.3147	0.2259	0.4036	0.3265	0.241	0.365	0.02791	17.73%	-12.01%

**Mean Dry Biomass-mg Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.302	0.268	0.237	0.317
75		0.35	0.365	0.303	0.241

# CETIS Analytical Report

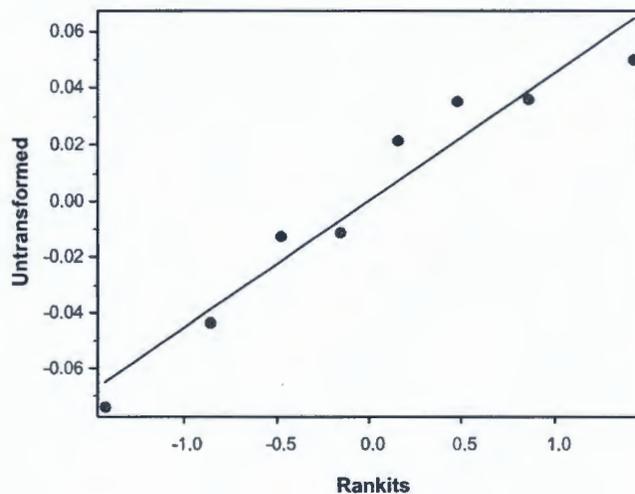
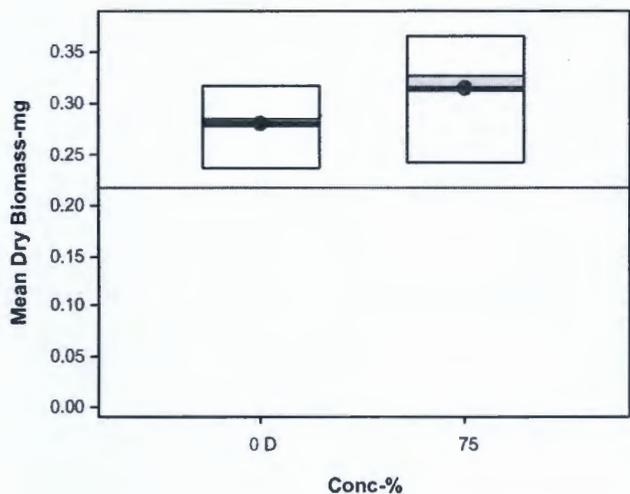
Report Date: 19 Nov-24 09:38 (p 4 of 4)  
Test Code/ID: 6B25F075 / 17-9764-8501

## Fathead Minnow 7-d Larval Survival and Growth Test

Pace Analytical

<b>Analysis ID:</b> 18-0113-7956	<b>Endpoint:</b> Mean Dry Biomass-mg	<b>CETIS Version:</b> CETIS v2.1.5
<b>Analyzed:</b> 19 Nov-24 9:36	<b>Analysis:</b> Parametric-Two Sample	<b>Status Level:</b> 1
<b>Edit Date:</b> 19 Nov-24 0:00	<b>MD5 Hash:</b> D98372DDE72930181464D5AA196D2F57	<b>Editor ID:</b> 005-502-078-6

### Graphics



**CETIS Measurement Report**

**Report Date:** 19 Nov-24 09:38 (p 1 of 3)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

<b>Batch ID:</b> 10-8714-6903	<b>Test Type:</b> Growth-Survival (7d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 05 Nov-24 13:46	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 12 Nov-24 14:01	<b>Species:</b> Pimephales promelas	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 7d 0h	<b>Taxon:</b> Actinopterygii	<b>Source:</b> Aquatox, AR <b>Age:</b> <24
<b>Sample ID:</b> 17-8364-9649	<b>Code:</b> 4112586	<b>Project:</b> Effluent Characterization (Quarterly)
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Source:</b> NPDES Permit # (AL0054631) (AL005)
<b>Receipt Date:</b> 05 Nov-24 09:20	<b>CAS (PC):</b>	<b>Station:</b> 0011
<b>Sample Age:</b> 30h (1 °C)	<b>Client:</b> Clanton	

**Test Measurements 1**

Light Level-Lux

**Sample Measurements**

pH-Units  
Salinity-ppt

**Final Dissolved Oxygen-mg/L**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	6.756	6.261	7.251	6.06	7.39	0.07648	0.5353	7.92%	0
75		7	7.12	6.755	7.485	6.51	7.46	0.05636	0.3945	5.54%	0
Overall		14	6.938	6.655	7.221	6.06	7.46	0.1309	0.4897	7.06%	0 (0%)

**Initial Dissolved Oxygen-mg/L**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	7.107	6.759	7.455	6.46	7.45	0.05379	0.3766	5.30%	0
75		7	7.441	7.326	7.557	7.25	7.62	0.01783	0.1248	1.68%	0
Overall		14	7.274	7.089	7.459	6.46	7.62	0.08566	0.3205	4.41%	0 (0%)

**Final pH-Units**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	7.376	7.204	7.548	7.21	7.73	0.02657	0.186	2.52%	0
75		7	7.577	7.391	7.763	7.31	7.82	0.02871	0.201	2.65%	0
Overall		14	7.476	7.353	7.6	7.21	7.82	0.05703	0.2134	2.85%	0 (0%)

**Initial pH-Units**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	7.47	7.237	7.703	7.05	7.75	0.03599	0.2519	3.37%	0
75		7	7.571	7.394	7.749	7.33	7.86	0.0274	0.1918	2.53%	0
Overall		14	7.521	7.393	7.649	7.05	7.86	0.05918	0.2214	2.94%	0 (0%)

**Final Temperature-°C**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	25.09	24.86	25.31	24.8	25.5	0.03443	0.241	0.96%	0
75		7	25.07	24.92	25.22	24.9	25.4	0.02291	0.1604	0.64%	0
Overall		14	25.08	24.96	25.19	24.8	25.5	0.0526	0.1968	0.78%	0 (0%)

**Initial Temperature-°C**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	25.03	24.94	25.12	24.9	25.1	0.01359	0.09514	0.38%	0
75		7	25.07	24.98	25.16	25	25.2	0.01359	0.09511	0.38%	0
Overall		14	25.05	25	25.1	24.9	25.2	0.02514	0.09405	0.38%	0 (0%)

**CETIS Measurement Report**

**Report Date:** 19 Nov-24 09:38 (p 2 of 3)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

**Final Dissolved Oxygen-mg/L**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		6.06					
75				6.51					
0	D	2		7.39					
75				7.46					
0	D	3		6.89					
75				7.39					
0	D	4		7.18					
75				7.41					
0	D	5		7.19					
75				7.28					
0	D	6		6.21					
75				6.61					
0	D	7		6.37					
75				7.18					

**Initial Dissolved Oxygen-mg/L**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		7.39					
75				7.54					
0	D	2		7.45					
75				7.62					
0	D	3		6.46					
75				7.25					
0	D	4		6.7					
75				7.43					
0	D	5		7.21					
75				7.38					
0	D	6		7.22					
75				7.36					
0	D	7		7.32					
75				7.51					

**Final pH-Units**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		7.34					
75				7.46					
0	D	2		7.73					
75				7.82					
0	D	3		7.49					
75				7.71					
0	D	4		7.25					
75				7.39					
0	D	5		7.22					
75				7.31					
0	D	6		7.39					
75				7.56					
0	D	7		7.21					
75				7.79					

**CETIS Measurement Report**

**Report Date:** 19 Nov-24 09:38 (p 3 of 3)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

**Initial pH-Units**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		7.75					
75				7.86					
0	D	2		7.69					
75				7.75					
0	D	3		7.23					
75				7.37					
0	D	4		7.05					
75				7.33					
0	D	5		7.49					
75				7.61					
0	D	6		7.47					
75				7.5					
0	D	7		7.61					
75				7.58					

**Final Temperature-°C**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		25.5					
75				25.4					
0	D	2		24.8					
75				25.1					
0	D	3		25.1					
75				25					
0	D	4		25.1					
75				25					
0	D	5		25.1					
75				25					
0	D	6		25.2					
75				25.1					
0	D	7		24.8					
75				24.9					

**Initial Temperature-°C**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		25.1					
75				25					
0	D	2		24.9					
75				25.2					
0	D	3		24.9					
75				25					
0	D	4		25.1					
75				25.1					
0	D	5		25					
75				25					
0	D	6		25.1					
75				25.2					
0	D	7		25.1					
75				25					

**CETIS Test Data Worksheet**

**Report Date:** 19 Nov-24 09:38 (p 1 of 1)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

<b>Fathead Minnow 7-d Larval Survival and Growth Test</b>										<b>Pace Analytical</b>	
<b>Start Date:</b>	05 Nov-24 13:46	<b>Species:</b>	Pimephales promelas	<b>Sample Code:</b>	4112586						
<b>End Date:</b>	12 Nov-24 14:01	<b>Protocol:</b>	EPA/821/R-02-013 (2002)	<b>Sample Source:</b>	NPDES Permit # (AL0054631)						
<b>Sample Date:</b>	04 Nov-24 08:00	<b>Material:</b>	POTW Effluent	<b>Sample Station:</b>	0011						

Conc-%	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	Weight-mg Total	Weight-mg Tare	Pan Count	Notes
0	D	1	8	10	10	10	10	10	10	10	10	1286	1283	10	
0	D	2	5	10	10	10	10	10	10	10	10	1282	1280	10	
0	D	3	1	10	10	10	10	10	10	10	10	1282	1280	10	
0	D	4	6	10	10	10	10	10	10	10	10	1287	1284	10	
75		1	3	10	10	10	10	10	10	10	10	1307	1303	10	
75		2	7	10	10	10	10	10	10	10	10	1300	1296	10	
75		3	2	10	10	10	10	10	10	10	10	1287	1284	10	
75		4	4	10	10	10	10	10	10	10	10	1300	1298	10	

**CETIS Measurement Worksheet**

**Report Date:** 19 Nov-24 09:38 (p 1 of 2)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace Analytical**

**Start Date:** 05 Nov-24 13:46    **Species:** Pimephales promelas    **Sample Code:** 4112586  
**End Date:** 12 Nov-24 14:01    **Protocol:** EPA/821/R-02-013 (2002)    **Sample Source:** NPDES Permit # (AL0054631)  
**Sample Date:** 04 Nov-24 08:00    **Material:** POTW Effluent    **Sample Station:** 0011

Conc-%	Code	Parameter	Read	Measure	Qual	QA Measure	Qual	Date/Time	Instrument ID	Analyst
0	D	Final Dissolved Oxygen-mg/L	1	6.06						
0	D	Final Dissolved Oxygen-mg/L	2	7.39						
0	D	Final Dissolved Oxygen-mg/L	3	6.89						
0	D	Final Dissolved Oxygen-mg/L	4	7.18						
0	D	Final Dissolved Oxygen-mg/L	5	7.19						
0	D	Final Dissolved Oxygen-mg/L	6	6.21						
0	D	Final Dissolved Oxygen-mg/L	7	6.37						
0	D	Initial Dissolved Oxygen-mg/L	1	7.39						
0	D	Initial Dissolved Oxygen-mg/L	2	7.45						
0	D	Initial Dissolved Oxygen-mg/L	3	6.46						
0	D	Initial Dissolved Oxygen-mg/L	4	6.7						
0	D	Initial Dissolved Oxygen-mg/L	5	7.21						
0	D	Initial Dissolved Oxygen-mg/L	6	7.22						
0	D	Initial Dissolved Oxygen-mg/L	7	7.32						
0	D	Final pH-Units	1	7.34						
0	D	Final pH-Units	2	7.73						
0	D	Final pH-Units	3	7.49						
0	D	Final pH-Units	4	7.25						
0	D	Final pH-Units	5	7.22						
0	D	Final pH-Units	6	7.39						
0	D	Final pH-Units	7	7.21						
0	D	Initial pH-Units	1	7.75						
0	D	Initial pH-Units	2	7.69						
0	D	Initial pH-Units	3	7.23						
0	D	Initial pH-Units	4	7.05						
0	D	Initial pH-Units	5	7.49						
0	D	Initial pH-Units	6	7.47						
0	D	Initial pH-Units	7	7.61						
0	D	Final Temperature-°C	1	25.5						
0	D	Final Temperature-°C	2	24.8						
0	D	Final Temperature-°C	3	25.1						
0	D	Final Temperature-°C	4	25.1						
0	D	Final Temperature-°C	5	25.1						
0	D	Final Temperature-°C	6	25.2						
0	D	Final Temperature-°C	7	24.8						
0	D	Initial Temperature-°C	1	25.1						
0	D	Initial Temperature-°C	2	24.9						
0	D	Initial Temperature-°C	3	24.9						
0	D	Initial Temperature-°C	4	25.1						
0	D	Initial Temperature-°C	5	25						
0	D	Initial Temperature-°C	6	25.1						
0	D	Initial Temperature-°C	7	25.1						

**CETIS Measurement Worksheet**

Report Date:

19 Nov-24 09:38 (p 2 of 2)

Test Code/ID:

6B25F075 / 17-9764-8501

Conc-%	Code	Parameter	Read	Measure	Qual	QA Measure	Qual	Date/Time	Instrument ID	Analyst
75		Final Dissolved Oxygen-mg/L	1	6.51						
75		Final Dissolved Oxygen-mg/L	2	7.46						
75		Final Dissolved Oxygen-mg/L	3	7.39						
75		Final Dissolved Oxygen-mg/L	4	7.41						
75		Final Dissolved Oxygen-mg/L	5	7.28						
75		Final Dissolved Oxygen-mg/L	6	6.61						
75		Final Dissolved Oxygen-mg/L	7	7.18						
75		Initial Dissolved Oxygen-mg/L	1	7.54						
75		Initial Dissolved Oxygen-mg/L	2	7.62						
75		Initial Dissolved Oxygen-mg/L	3	7.25						
75		Initial Dissolved Oxygen-mg/L	4	7.43						
75		Initial Dissolved Oxygen-mg/L	5	7.38						
75		Initial Dissolved Oxygen-mg/L	6	7.36						
75		Initial Dissolved Oxygen-mg/L	7	7.51						
75		Final pH-Units	1	7.46						
75		Final pH-Units	2	7.82						
75		Final pH-Units	3	7.71						
75		Final pH-Units	4	7.39						
75		Final pH-Units	5	7.31						
75		Final pH-Units	6	7.56						
75		Final pH-Units	7	7.79						
75		Initial pH-Units	1	7.86						
75		Initial pH-Units	2	7.75						
75		Initial pH-Units	3	7.37						
75		Initial pH-Units	4	7.33						
75		Initial pH-Units	5	7.61						
75		Initial pH-Units	6	7.5						
75		Initial pH-Units	7	7.58						
75		Final Temperature-°C	1	25.4						
75		Final Temperature-°C	2	25.1						
75		Final Temperature-°C	3	25						
75		Final Temperature-°C	4	25						
75		Final Temperature-°C	5	25						
75		Final Temperature-°C	6	25.1						
75		Final Temperature-°C	7	24.9						
75		Initial Temperature-°C	1	25						
75		Initial Temperature-°C	2	25.2						
75		Initial Temperature-°C	3	25						
75		Initial Temperature-°C	4	25.1						
75		Initial Temperature-°C	5	25						
75		Initial Temperature-°C	6	25.2						
75		Initial Temperature-°C	7	25						

**CETIS Measurement Worksheet**

**Report Date:** 19 Nov-24 09:39 (p 1 of 1)  
**Test Code/ID:** 6B25F075 / 17-9764-8501

<b>Fathead Minnow 7-d Larval Survival and Growth Test</b>					<b>Pace Analytical</b>	
<b>Start Date:</b> 05 Nov-24 13:46	<b>Species:</b> Pimephales promelas				<b>Sample Code:</b> 4112586	
<b>End Date:</b> 12 Nov-24 14:01	<b>Protocol:</b> EPA/821/R-02-013 (2002)				<b>Sample Source:</b> NPDES Permit # (AL0054631)	
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent				<b>Sample Station:</b> 0011	

<b>Final Dissolved Oxygen-mg/L</b>								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	6.06	7.39	6.89	7.18	7.19	6.21	6.37
75		6.51	7.46	7.39	7.41	7.28	6.61	7.18
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

<b>Initial Dissolved Oxygen-mg/L</b>								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	7.39	7.45	6.46	6.7	7.21	7.22	7.32
75		7.54	7.62	7.25	7.43	7.38	7.36	7.51
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

<b>Final pH-Units</b>								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	7.34	7.73	7.49	7.25	7.22	7.39	7.21
75		7.46	7.82	7.71	7.39	7.31	7.56	7.79
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

<b>Initial pH-Units</b>								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	7.75	7.69	7.23	7.05	7.49	7.47	7.61
75		7.86	7.75	7.37	7.33	7.61	7.5	7.58
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

<b>Final Temperature-°C</b>								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	25.5	24.8	25.1	25.1	25.1	25.2	24.8
75		25.4	25.1	25	25	25	25.1	24.9
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

<b>Initial Temperature-°C</b>								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	25.1	24.9	24.9	25.1	25	25.1	25.1
75		25	25.2	25	25.1	25	25.2	25
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

# CETIS Summary Report

Report Date: 19 Nov-24 09:42 (p 1 of 1)  
 Test Code/ID: 19CC622D / 04-3282-4877

## EC Ceriodaphnia Reproduction and Survival Test

Pace Analytical

<b>Batch ID:</b> 00-2106-3903	<b>Test Type:</b> Reproduction-Survival (6-8d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 05 Nov-24 13:36	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 11 Nov-24 13:58	<b>Species:</b> Ceriodaphnia dubia	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 6d 0h	<b>Taxon:</b> Branchiopoda	<b>Source:</b> In-House Culture <b>Age:</b> <24
<b>Sample ID:</b> 01-1767-5950	<b>Code:</b> 4112586	<b>Project:</b> Effluent Characterization (Quarterly)
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Source:</b> NPDES Permit # (AL0054631) (AL005
<b>Receipt Date:</b> 05 Nov-24 09:20	<b>CAS (PC):</b>	<b>Station:</b> 0011
<b>Sample Age:</b> 30h (1 °C)	<b>Client:</b> Clanton	

### Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
11-4433-7903	6d Reproduction	Equal Variance t Two-Sample Test	0.1768	75% passed 6d reproduction	1
01-8300-4186	6d Survival Rate	Fisher Exact Test	1.0000	75% passed 6d survival rate	1

### 6d Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	10	20.1	17.29	22.91	14	26	1.242	3.929	19.54%	0.00%
75		10	18.6	16.41	20.79	15	24	0.9684	3.062	16.46%	7.46%

### 6d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
75		10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

### 6d Reproduction Detail

MD5: F775FBE8F1AE492228730DF5AA3E1E1D

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	24	23	16	16	20	26	20	19	23	14
75		24	15	17	21	18	22	16	20	15	18

### 6d Survival Rate Detail

MD5: F85215C3900C24ABA031F8B2E812E335

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
75		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

### 6d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
75		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

**CETIS Analytical Report**

**Report Date:** 19 Nov-24 09:42 (p 1 of 2)  
**Test Code/ID:** 19CC622D / 04-3282-4877

**EC Ceriodaphnia Reproduction and Survival Test**

**Pace Analytical**

<b>Analysis ID:</b> 11-4433-7903	<b>Endpoint:</b> 6d Reproduction	<b>CETIS Version:</b> CETIS v2.1.5
<b>Analyzed:</b> 19 Nov-24 9:41	<b>Analysis:</b> Parametric-Two Sample	<b>Status Level:</b> 1
<b>Edit Date:</b> 19 Nov-24 0:00	<b>MD5 Hash:</b> F775FBE8F1AE492228730DF5AA3E1E1D	<b>Editor ID:</b> 005-502-078-6
<b>Batch ID:</b> 00-2106-3903	<b>Test Type:</b> Reproduction-Survival (6-8d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 05 Nov-24 13:36	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 11 Nov-24 13:58	<b>Species:</b> Ceriodaphnia dubia	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 6d 0h	<b>Taxon:</b> Branchiopoda	<b>Source:</b> In-House Culture <b>Age:</b> <24
<b>Sample ID:</b> 01-1767-5950	<b>Code:</b> 4112586	<b>Project:</b> Effluent Characterization (Quarterly)
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Source:</b> NPDES Permit # (AL0054631) (AL005
<b>Receipt Date:</b> 05 Nov-24 09:20	<b>CAS (PC):</b>	<b>Station:</b> 0011
<b>Sample Age:</b> 30h (1 °C)	<b>Client:</b> Clanton	

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	75% passed 6d reproduction endpoint	13.59%

**Equal Variance t Two-Sample Test**

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	18	0.9523	1.734	2.731	CDF	0.1768	Non-Significant Effect

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	20.1	15	>>	Yes	Passes Criteria
PMSD	0.1359	0.13	0.47	Yes	Passes Criteria

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	11.25	11.25	1	0.9069	0.3536	Non-Significant Effect
Error	223.3	12.4056	18			
Total	234.55		19			

**ANOVA Assumptions Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.646	6.541	0.4695	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9655	0.866	0.6594	Normal Distribution

**6d Reproduction Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	20.1	17.29	22.91	20	14	26	1.242	19.54%	0.00%
75		10	18.6	16.41	20.79	18	15	24	0.9684	16.46%	7.46%

**6d Reproduction Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	24	23	16	16	20	26	20	19	23	14
75		24	15	17	21	18	22	16	20	15	18

# CETIS Analytical Report

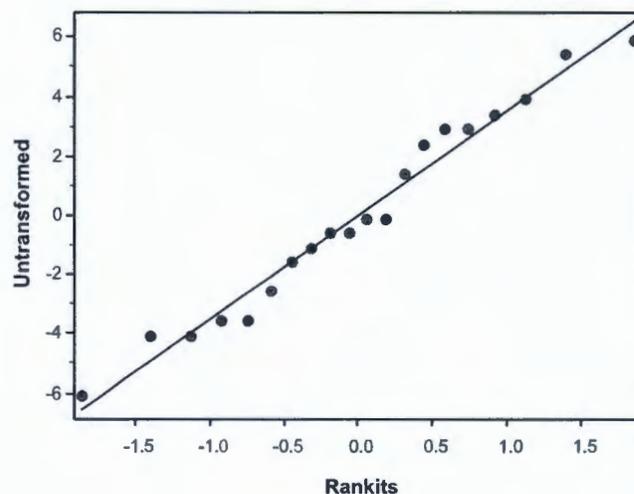
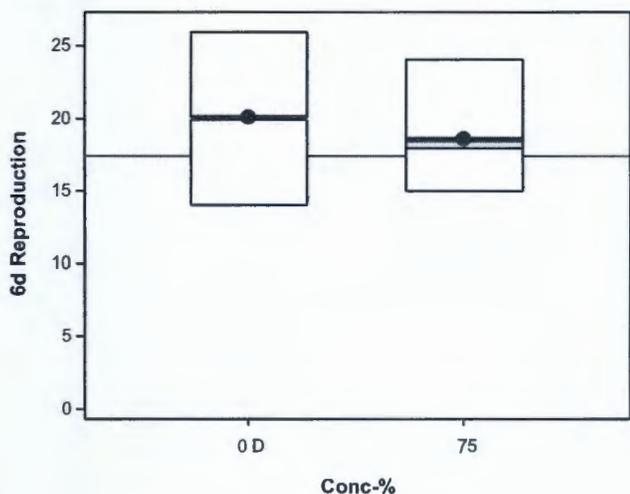
Report Date: 19 Nov-24 09:42 (p 2 of 2)  
Test Code/ID: 19CC622D / 04-3282-4877

## EC Ceriodaphnia Reproduction and Survival Test

Pace Analytical

Analysis ID: 11-4433-7903	Endpoint: 6d Reproduction	CETIS Version: CETIS v2.1.5
Analyzed: 19 Nov-24 9:41	Analysis: Parametric-Two Sample	Status Level: 1
Edit Date: 19 Nov-24 0:00	MD5 Hash: F775FBE8F1AE492228730DF5AA3E1E1D	Editor ID: 005-502-078-6

### Graphics



**CETIS Analytical Report**

**Report Date:** 19 Nov-24 09:42 (p 1 of 2)  
**Test Code/ID:** 19CC622D / 04-3282-4877

**EC Ceriodaphnia Reproduction and Survival Test**

**Pace Analytical**

<b>Analysis ID:</b> 01-8300-4186	<b>Endpoint:</b> 6d Survival Rate	<b>CETIS Version:</b> CETIS v2.1.5
<b>Analyzed:</b> 19 Nov-24 9:41	<b>Analysis:</b> Single 2x2 Contingency Table	<b>Status Level:</b> 1
<b>Edit Date:</b> 19 Nov-24 0:00	<b>MD5 Hash:</b> F85215C3900C24ABA031F8B2E812E335	<b>Editor ID:</b> 005-502-078-6
<b>Batch ID:</b> 00-2106-3903	<b>Test Type:</b> Reproduction-Survival (6-8d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 05 Nov-24 13:36	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 11 Nov-24 13:58	<b>Species:</b> Ceriodaphnia dubia	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 6d 0h	<b>Taxon:</b> Branchiopoda	<b>Source:</b> In-House Culture <b>Age:</b> <24
<b>Sample ID:</b> 01-1767-5950	<b>Code:</b> 4112586	<b>Project:</b> Effluent Characterization (Quarterly)
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Source:</b> NPDES Permit # (AL0054631) (AL005
<b>Receipt Date:</b> 05 Nov-24 09:20	<b>CAS (PC):</b>	<b>Station:</b> 0011
<b>Sample Age:</b> 30h (1 °C)	<b>Client:</b> Clanton	

Data Transform	Alt Hyp	Comparison Result
Untransformed	C > T	75% passed 6d survival rate endpoint

**Fisher Exact Test**

Control	vs	Conc-%	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	1.0000	Exact	1.0000	Non-Significant Effect

**Test Acceptability Criteria**

**TAC Limits**

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.8	>>	Yes	Passes Criteria

**6d Survival Rate Frequencies**

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	10	0	10	1.0000	0.0000	0.00%
75		10	0	10	1.0000	0.0000	0.00%

**6d Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
75		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

**6d Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
75		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

**6d Survival Rate Binomials**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
75		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

# CETIS Analytical Report

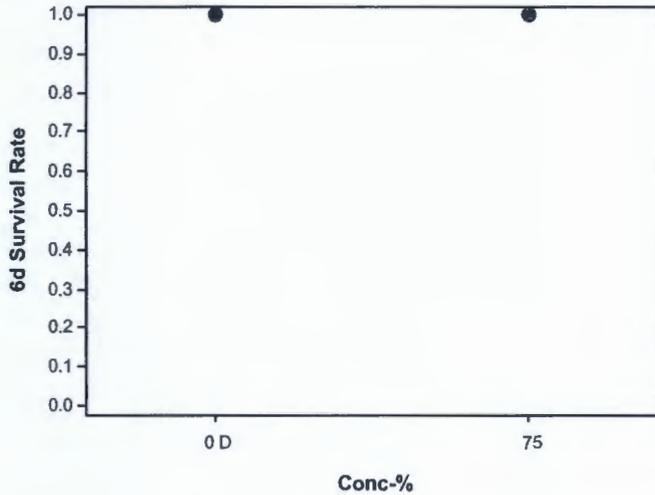
Report Date: 19 Nov-24 09:42 (p 2 of 2)  
Test Code/ID: 19CC622D / 04-3282-4877

## EC Ceriodaphnia Reproduction and Survival Test

Pace Analytical

<b>Analysis ID:</b> 01-8300-4186	<b>Endpoint:</b> 6d Survival Rate	<b>CETIS Version:</b> CETIS v2.1.5
<b>Analyzed:</b> 19 Nov-24 9:41	<b>Analysis:</b> Single 2x2 Contingency Table	<b>Status Level:</b> 1
<b>Edit Date:</b> 19 Nov-24 0:00	<b>MD5 Hash:</b> F85215C3900C24ABA031F8B2E812E335	<b>Editor ID:</b> 005-502-078-6

### Graphics



**CETIS Measurement Report**

**Report Date:** 19 Nov-24 09:42 (p 1 of 3)  
**Test Code/ID:** 19CC622D / 04-3282-4877

**EC Ceriodaphnia Reproduction and Survival Test**

**Pace Analytical**

<b>Batch ID:</b> 00-2106-3903	<b>Test Type:</b> Reproduction-Survival (6-8d)	<b>Analyst:</b> Lab Tech
<b>Start Date:</b> 05 Nov-24 13:36	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Diluent:</b> Mod-Hard Synthetic Water
<b>Ending Date:</b> 11 Nov-24 13:58	<b>Species:</b> Ceriodaphnia dubia	<b>Brine:</b> Not Applicable
<b>Test Length:</b> 6d 0h	<b>Taxon:</b> Branchiopoda	<b>Source:</b> In-House Culture <b>Age:</b> <24
<b>Sample ID:</b> 01-1767-5950	<b>Code:</b> 4112586	<b>Project:</b> Effluent Characterization (Quarterly)
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Source:</b> NPDES Permit # (AL0054631) (AL005
<b>Receipt Date:</b> 05 Nov-24 09:20	<b>CAS (PC):</b>	<b>Station:</b> 0011
<b>Sample Age:</b> 30h (1 °C)	<b>Client:</b> Clanton	

**Test Measurements 1**

Light Level-Lux

**Sample Measurements**

pH-Units  
Salinity-ppt

**Final Dissolved Oxygen-mg/L**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	6.756	6.261	7.251	6.06	7.39	0.07648	0.5353	7.92%	0
75		7	7.12	6.755	7.485	6.51	7.46	0.05636	0.3945	5.54%	0
Overall		14	6.938	6.655	7.221	6.06	7.46	0.1309	0.4897	7.06%	0 (0%)

**Initial Dissolved Oxygen-mg/L**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	7.107	6.759	7.455	6.46	7.45	0.05379	0.3766	5.30%	0
75		7	7.441	7.326	7.557	7.25	7.62	0.01783	0.1248	1.68%	0
Overall		14	7.274	7.089	7.459	6.46	7.62	0.08566	0.3205	4.41%	0 (0%)

**Final pH-Units**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	7.376	7.204	7.548	7.21	7.73	0.02657	0.186	2.52%	0
75		7	7.577	7.391	7.763	7.31	7.82	0.02871	0.201	2.65%	0
Overall		14	7.476	7.353	7.6	7.21	7.82	0.05703	0.2134	2.85%	0 (0%)

**Initial pH-Units**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	7.47	7.237	7.703	7.05	7.75	0.03599	0.2519	3.37%	0
75		7	7.571	7.394	7.749	7.33	7.86	0.0274	0.1918	2.53%	0
Overall		14	7.521	7.393	7.649	7.05	7.86	0.05918	0.2214	2.94%	0 (0%)

**Final Temperature-°C**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	25.09	24.86	25.31	24.8	25.5	0.03443	0.241	0.96%	0
75		7	25.07	24.92	25.22	24.9	25.4	0.02291	0.1604	0.64%	0
Overall		14	25.08	24.96	25.19	24.8	25.5	0.0526	0.1968	0.78%	0 (0%)

**Initial Temperature-°C**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	D	7	25.03	24.94	25.12	24.9	25.1	0.01359	0.09514	0.38%	0
75		7	25.07	24.98	25.16	25	25.2	0.01359	0.09511	0.38%	0
Overall		14	25.05	25	25.1	24.9	25.2	0.02514	0.09405	0.38%	0 (0%)

**CETIS Measurement Report**

Report Date: 19 Nov-24 09:42 (p 2 of 3)  
 Test Code/ID: 19CC622D / 04-3282-4877

**EC Ceriodaphnia Reproduction and Survival Test**

Pace Analytical

**Final Dissolved Oxygen-mg/L**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		6.06					
75				6.51					
0	D	2		7.39					
75				7.46					
0	D	3		6.89					
75				7.39					
0	D	4		7.18					
75				7.41					
0	D	5		7.19					
75				7.28					
0	D	6		6.21					
75				6.61					
0	D	7		6.37					
75				7.18					

**Initial Dissolved Oxygen-mg/L**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		7.39					
75				7.54					
0	D	2		7.45					
75				7.62					
0	D	3		6.46					
75				7.25					
0	D	4		6.7					
75				7.43					
0	D	5		7.21					
75				7.38					
0	D	6		7.22					
75				7.36					
0	D	7		7.32					
75				7.51					

**Final pH-Units**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		7.34					
75				7.46					
0	D	2		7.73					
75				7.82					
0	D	3		7.49					
75				7.71					
0	D	4		7.25					
75				7.39					
0	D	5		7.22					
75				7.31					
0	D	6		7.39					
75				7.56					
0	D	7		7.21					
75				7.79					

**CETIS Measurement Report**

Report Date: 19 Nov-24 09:42 (p 3 of 3)  
 Test Code/ID: 19CC622D / 04-3282-4877

**EC Ceriodaphnia Reproduction and Survival Test**

**Pace Analytical**

**Initial pH-Units**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		7.75					
75				7.86					
0	D	2		7.69					
75				7.75					
0	D	3		7.23					
75				7.37					
0	D	4		7.05					
75				7.33					
0	D	5		7.49					
75				7.61					
0	D	6		7.47					
75				7.5					
0	D	7		7.61					
75				7.58					

**Final Temperature-°C**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		25.5					
75				25.4					
0	D	2		24.8					
75				25.1					
0	D	3		25.1					
75				25					
0	D	4		25.1					
75				25					
0	D	5		25.1					
75				25					
0	D	6		25.2					
75				25.1					
0	D	7		24.8					
75				24.9					

**Initial Temperature-°C**

Conc-%	Code	Read	Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	D	1		25.1					
75				25					
0	D	2		24.9					
75				25.2					
0	D	3		24.9					
75				25					
0	D	4		25.1					
75				25.1					
0	D	5		25					
75				25					
0	D	6		25.1					
75				25.2					
0	D	7		25.1					
75				25					

**CETIS Test Data Worksheet**

**Report Date:** 19 Nov-24 09:42 (p 1 of 1)  
**Test Code/ID:** 19CC622D / 04-3282-4877

<b>EC Ceriodaphnia Reproduction and Survival Test</b>						<b>Pace Analytical</b>	
<b>Start Date:</b> 05 Nov-24 13:36	<b>Species:</b> Ceriodaphnia dubia			<b>Sample Code:</b> 4112586			
<b>End Date:</b> 11 Nov-24 13:58	<b>Protocol:</b> EPA/821/R-02-013 (2002)			<b>Sample Source:</b> NPDES Permit # (AL0054631)			
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent			<b>Sample Station:</b> 0011			

Conc-%	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	8d Survival	6d Neonates	7d Neonates	8d Neonates	Male	Notes
0	D	1	15	1	1	1	1	1	1	1			24			0	
0	D	2	6	1	1	1	1	1	1	1			23			0	
0	D	3	3	1	1	1	1	1	1	1			16			0	
0	D	4	19	1	1	1	1	1	1	1			16			0	
0	D	5	20	1	1	1	1	1	1	1			20			0	
0	D	6	11	1	1	1	1	1	1	1			26			0	
0	D	7	16	1	1	1	1	1	1	1			20			0	
0	D	8	1	1	1	1	1	1	1	1			19			0	
0	D	9	14	1	1	1	1	1	1	1			23			0	
0	D	10	7	1	1	1	1	1	1	1			14			0	
75		1	2	1	1	1	1	1	1	1			24			0	
75		2	12	1	1	1	1	1	1	1			15			0	
75		3	18	1	1	1	1	1	1	1			17			0	
75		4	8	1	1	1	1	1	1	1			21			0	
75		5	10	1	1	1	1	1	1	1			18			0	
75		6	9	1	1	1	1	1	1	1			22			0	
75		7	17	1	1	1	1	1	1	1			16			0	
75		8	5	1	1	1	1	1	1	1			20			0	
75		9	4	1	1	1	1	1	1	1			15			0	
75		10	13	1	1	1	1	1	1	1			18			0	

**CETIS Measurement Worksheet**

**Report Date:** 19 Nov-24 09:42 (p 1 of 2)  
**Test Code/ID:** 19CC622D / 04-3282-4877

EC Ceriodaphnia Reproduction and Survival Test										Pace Analytical
<b>Start Date:</b>	05 Nov-24 13:36	<b>Species:</b>	Ceriodaphnia dubia	<b>Sample Code:</b>	4112586					
<b>End Date:</b>	11 Nov-24 13:58	<b>Protocol:</b>	EPA/821/R-02-013 (2002)	<b>Sample Source:</b>	NPDES Permit # (AL0054631)					
<b>Sample Date:</b>	04 Nov-24 08:00	<b>Material:</b>	POTW Effluent	<b>Sample Station:</b>	0011					
Conc-%	Code	Parameter	Read	Measure	Qual	QA Measure	Qual	Date/Time	Instrument ID	Analyst
0	D	Final Dissolved Oxygen-mg/L	1	6.06						
0	D	Final Dissolved Oxygen-mg/L	2	7.39						
0	D	Final Dissolved Oxygen-mg/L	3	6.89						
0	D	Final Dissolved Oxygen-mg/L	4	7.18						
0	D	Final Dissolved Oxygen-mg/L	5	7.19						
0	D	Final Dissolved Oxygen-mg/L	6	6.21						
0	D	Final Dissolved Oxygen-mg/L	7	6.37						
0	D	Initial Dissolved Oxygen-mg/L	1	7.39						
0	D	Initial Dissolved Oxygen-mg/L	2	7.45						
0	D	Initial Dissolved Oxygen-mg/L	3	6.46						
0	D	Initial Dissolved Oxygen-mg/L	4	6.7						
0	D	Initial Dissolved Oxygen-mg/L	5	7.21						
0	D	Initial Dissolved Oxygen-mg/L	6	7.22						
0	D	Initial Dissolved Oxygen-mg/L	7	7.32						
0	D	Final pH-Units	1	7.34						
0	D	Final pH-Units	2	7.73						
0	D	Final pH-Units	3	7.49						
0	D	Final pH-Units	4	7.25						
0	D	Final pH-Units	5	7.22						
0	D	Final pH-Units	6	7.39						
0	D	Final pH-Units	7	7.21						
0	D	Initial pH-Units	1	7.75						
0	D	Initial pH-Units	2	7.69						
0	D	Initial pH-Units	3	7.23						
0	D	Initial pH-Units	4	7.05						
0	D	Initial pH-Units	5	7.49						
0	D	Initial pH-Units	6	7.47						
0	D	Initial pH-Units	7	7.61						
0	D	Final Temperature-°C	1	25.5						
0	D	Final Temperature-°C	2	24.8						
0	D	Final Temperature-°C	3	25.1						
0	D	Final Temperature-°C	4	25.1						
0	D	Final Temperature-°C	5	25.1						
0	D	Final Temperature-°C	6	25.2						
0	D	Final Temperature-°C	7	24.8						
0	D	Initial Temperature-°C	1	25.1						
0	D	Initial Temperature-°C	2	24.9						
0	D	Initial Temperature-°C	3	24.9						
0	D	Initial Temperature-°C	4	25.1						
0	D	Initial Temperature-°C	5	25						
0	D	Initial Temperature-°C	6	25.1						
0	D	Initial Temperature-°C	7	25.1						

**CETIS Measurement Worksheet**

Report Date: 19 Nov-24 09:42 (p 2 of 2)  
 Test Code/ID: 19CC622D / 04-3282-4877

Conc-%	Code	Parameter	Read	Measure	Qual	QA Measure	Qual	Date/Time	Instrument ID	Analyst
75		Final Dissolved Oxygen-mg/L	1	6.51						
75		Final Dissolved Oxygen-mg/L	2	7.46						
75		Final Dissolved Oxygen-mg/L	3	7.39						
75		Final Dissolved Oxygen-mg/L	4	7.41						
75		Final Dissolved Oxygen-mg/L	5	7.28						
75		Final Dissolved Oxygen-mg/L	6	6.61						
75		Final Dissolved Oxygen-mg/L	7	7.18						
75		Initial Dissolved Oxygen-mg/L	1	7.54						
75		Initial Dissolved Oxygen-mg/L	2	7.62						
75		Initial Dissolved Oxygen-mg/L	3	7.25						
75		Initial Dissolved Oxygen-mg/L	4	7.43						
75		Initial Dissolved Oxygen-mg/L	5	7.38						
75		Initial Dissolved Oxygen-mg/L	6	7.36						
75		Initial Dissolved Oxygen-mg/L	7	7.51						
75		Final pH-Units	1	7.46						
75		Final pH-Units	2	7.82						
75		Final pH-Units	3	7.71						
75		Final pH-Units	4	7.39						
75		Final pH-Units	5	7.31						
75		Final pH-Units	6	7.56						
75		Final pH-Units	7	7.79						
75		Initial pH-Units	1	7.86						
75		Initial pH-Units	2	7.75						
75		Initial pH-Units	3	7.37						
75		Initial pH-Units	4	7.33						
75		Initial pH-Units	5	7.61						
75		Initial pH-Units	6	7.5						
75		Initial pH-Units	7	7.58						
75		Final Temperature-°C	1	25.4						
75		Final Temperature-°C	2	25.1						
75		Final Temperature-°C	3	25						
75		Final Temperature-°C	4	25						
75		Final Temperature-°C	5	25						
75		Final Temperature-°C	6	25.1						
75		Final Temperature-°C	7	24.9						
75		Initial Temperature-°C	1	25						
75		Initial Temperature-°C	2	25.2						
75		Initial Temperature-°C	3	25						
75		Initial Temperature-°C	4	25.1						
75		Initial Temperature-°C	5	25						
75		Initial Temperature-°C	6	25.2						
75		Initial Temperature-°C	7	25						

**CETIS Measurement Worksheet**

**Report Date:** 19 Nov-24 09:43 (p 1 of 1)  
**Test Code/ID:** 19CC622D / 04-3282-4877

<b>EC Ceriodaphnia Reproduction and Survival Test</b>				<b>Pace Analytical</b>			
<b>Start Date:</b> 05 Nov-24 13:36	<b>Species:</b> Ceriodaphnia dubia	<b>Sample Code:</b> 4112586					
<b>End Date:</b> 11 Nov-24 13:58	<b>Protocol:</b> EPA/821/R-02-013 (2002)	<b>Sample Source:</b> NPDES Permit # (AL0054631)					
<b>Sample Date:</b> 04 Nov-24 08:00	<b>Material:</b> POTW Effluent	<b>Sample Station:</b> 0011					

Final Dissolved Oxygen-mg/L								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	6.06	7.39	6.89	7.18	7.19	6.21	6.37
75		6.51	7.46	7.39	7.41	7.28	6.61	7.18
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

Initial Dissolved Oxygen-mg/L								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	7.39	7.45	6.46	6.7	7.21	7.22	7.32
75		7.54	7.62	7.25	7.43	7.38	7.36	7.51
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

Final pH-Units								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	7.34	7.73	7.49	7.25	7.22	7.39	7.21
75		7.46	7.82	7.71	7.39	7.31	7.56	7.79
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

Initial pH-Units								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	7.75	7.69	7.23	7.05	7.49	7.47	7.61
75		7.86	7.75	7.37	7.33	7.61	7.5	7.58
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

Final Temperature-°C								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	25.5	24.8	25.1	25.1	25.1	25.2	24.8
75		25.4	25.1	25	25	25	25.1	24.9
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

Initial Temperature-°C								
Conc-%	Code	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Reading 6	Reading 7
0	D	25.1	24.9	24.9	25.1	25	25.1	25.1
75		25	25.2	25	25.1	25	25.2	25
<b>Measure Time:</b>								
<b>Instrument ID:</b>								
<b>Analyst:</b>								

ANALYST (s) Jac, ZTB, JLS, GAE  
 MHSF LIMS ID # 4048640  
 LIMS SAMPLE ID # 4112586  
 FATHEAD ID # 4049872  
 RANDOMIZATION Temp. 2  
 DATA REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_



CLIENT Clanton

Biomonitoring performed at (Choose one): Madisonville Pikeville

CONTROL							% <u>75</u>			% _____			% _____			% _____			% <u>100</u>						
	pH	DO	%C	ALK	HARD	COND	pH	DO	%c	pH	DO	%c	pH	DO	%c	pH	DO	%c	pH	DO	%c	ALK/TRC	HARD	COND	SAMPLE ID
Day 1	I	7.75	7.39	25.1	68	83	279	7.86	7.54	25.0						7.83	7.47	25.1	73	422	631				ANALYST: ZTB
	F	7.34	6.06	25.5				7.46	6.51	25.4									7.34	6.165	25.3	001			
Day 2	I	7.69	7.45	24.9	69	91	281	7.75	7.62	25.2						7.73	7.59	24.9	75	431	642				ANALYST: ZTB
	F	7.73	7.39	24.8				7.82	7.46	25.1									7.86	7.49	24.9				
Day 3	I	7.23	6.46	24.9	63	85	295	7.37	7.25	25.0						7.30	7.02	25.1	76	437	649				ANALYST: Jac
	F	7.49	6.89	25.1				7.71	7.39	25.6									7.63	7.18	25.0	0.01			
Day 4	I	7.05	6.70	25.1	67	80	296	7.33	7.43	25.1						7.49	7.60	25.0	79	449	657				ANALYST: Jac
	F	7.23	7.18	25.1				7.39	7.41	25.0									7.42	7.61	25.0				
Day 5	I	7.49	7.21	25.0	69	86	281	7.61	7.38	25.0						7.72	7.49	25.0	77	437	634				ANALYST: ZTB
	F	7.22	7.19	25.1				7.31	7.28	25.0									7.93	7.63	25.1	0.01			
Day 6	I	7.47	7.22	25.1	67	89	291	7.50	7.36	25.2						7.71	7.43	25.1	76	439	629				ANALYST: JLS
	F	7.39	6.21	25.2				7.56	6.61	25.1									7.82	6.83	25.1				
Day 7	I	7.61	7.32	25.1	68	87	286	7.58	7.51	25.0						7.73	7.42	25.1	77	436	628				ANALYST: JLS
	F	7.21	6.37	24.8				7.79	7.18	24.9									7.45	6.83	24.8				

UNITS: pH - STD, DISSOLVE OXYGEN (DO) - MG/L, HARDNESS - MG/L, ALKALINITY - MG/L, CONDUCTIVITY - UMHOS/CM, TOTAL RESIDUAL CHLORINE (TRC) - MG/L, BRINE SHRIMP (BS) - µl

EPA 821 - R - 02 - 013 METHOD 1000.0 STATIC RENEWAL

CLIENT Clanton

ANALYST Jac, ZTB, JMS, GMS SETUP DATE & TIME 11-05-24 13:46

FATHEAD BATCH # 4049872 AGE 224 hrs DATA REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_

# ORG/CONC. -FATHEAD 40 INITIAL FEEDING ID: \_\_\_\_\_

CONTROL	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
ANALYST	Jac	ZTB	Jac	ZTB	JMS	Jac	ZTB
DATE	11-06-24	11-07-24	11-08-24	11-09-24	11-10-24	11-11-24	11-12-24
TIME	13:52	14:10	13:51	14:11	14:17	13:51	14:01
1	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10
=	40	40	40	40	40	40	40
<b>75 %</b>							
1	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10
=	40	40	40	40	40	40	40
<del>%</del>	<del>DAY 1</del>	<del>DAY 2</del>	<del>DAY 3</del>	<del>DAY 4</del>	<del>DAY 5</del>	<del>DAY 6</del>	<del>DAY 7</del>
<del>1</del>	<del></del>						
<del>2</del>	<del></del>						
<del>3</del>	<del></del>						
<del>4</del>	<del></del>						
<del>=</del>	<del></del>						
<del>%</del>	<del>DAY 1</del>	<del>DAY 2</del>	<del>DAY 3</del>	<del>DAY 4</del>	<del>DAY 5</del>	<del>DAY 6</del>	<del>DAY 7</del>
<del>1</del>	<del></del>						
<del>2</del>	<del></del>						
<del>3</del>	<del></del>						
<del>4</del>	<del></del>						
<del>=</del>	<del></del>						
<del>%</del>	<del>DAY 1</del>	<del>DAY 2</del>	<del>DAY 3</del>	<del>DAY 4</del>	<del>DAY 5</del>	<del>DAY 6</del>	<del>DAY 7</del>
<del>1</del>	<del></del>						
<del>2</del>	<del></del>						
<del>3</del>	<del></del>						
<del>4</del>	<del></del>						
<del>=</del>	<del></del>						
<del>%</del>	<del>DAY 1</del>	<del>DAY 2</del>	<del>DAY 3</del>	<del>DAY 4</del>	<del>DAY 5</del>	<del>DAY 6</del>	<del>DAY 7</del>
<del>1</del>	<del></del>						
<del>2</del>	<del></del>						
<del>3</del>	<del></del>						
<del>4</del>	<del></del>						
<del>=</del>	<del></del>						
SAMPLE ID	4112586-01	4112586-01	4112586-02	4112586-03	4112586-03	4112586-03	4112586
BRINE SHRIMP ID	13171 41541562						

INCUBATOR ID: \_\_\_\_\_

DRYING OVEN ID: \_\_\_\_\_

WEIGHTS ID: \_\_\_\_\_

WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1282.67	1295.69
1279.62	1292.30
1279.89	1282.26
1283.73	1296.90
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
1303.22	1306.72
1296.13	1299.78
1283.92	1296.95
1297.96	1300.37
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)
WEIGHT BOAT (G)	WEIGHT FISH + WEIGH BOAT (G)

COMMENTS: \_\_\_\_\_

DATE DRIED 11-12-24  
 ANALYST ZTB  
 TEMP (°C) IN 100.5 TIME DRIED 14:11  
 0.001 g 6.001  
 0.100 g 0.1

DATE WEIGHED 11-13-24  
 ANALYST Jac  
 TEMP (°C) OUT 100.8 TIME OUT 14:18  
 0.001 g 0.001  
 0.100 g 0.1

ANALYST (s) Jac, ZTB, JMS, GAC  
 MHSF LIMS ID # 4048644  
 LIMS SAMPLE ID # 412586  
 CERIO TRAY # 10-23-24  
 RANDOMIZATION Temp 1  
 DATA REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_

CLIENT Clanton



Biomonitoring performed at (Choose one): Madisonville Pikeville

CONTROL							% <u>75</u>			% _____			% _____			% _____			% <u>100</u>				
	pH	DO	%C	ALK	HARD	COND	pH	DO	%C	pH	DO	%C	pH	DO	%C	pH	DO	%C	ALK/TRC	HARD	COND	SAMPLE ID	
Day 1	I	7.25	7.39	25.1	65	81	286	7.86	7.54	25.0						7.83	7.47	25.1	73.	422	631 286	ANALYST: JMS	
	F	7.34	6.06	25.5				7.46	6.51	25.4									7.31	6.65	25.3	0.01	
Day 2	I	7.69	7.45	24.9	67	87	291	7.75	7.62	25.2						7.75	7.59	24.9	75	431	642	ANALYST: ZTB	
	F	7.73	7.39	24.8				7.92	7.46	25.1									7.86	7.49	24.9		
Day 3	I	7.23	6.46	24.9	60	82	298	7.37	7.25	25.0						7.30	7.02	25.1	76	437	649	ANALYST: Jac	
	F	7.49	6.89	25.1				7.71	7.39	25.0									7.63	7.18	25.0	6.01	
Day 4	I	7.05	4.70	25.1	68	83	289	7.33	7.43	25.1						7.49	7.60	25.0	74	449	657	ANALYST: Jac	
	F	7.23	7.18	25.0				7.39	7.41	25.0									7.42	7.61	25.0		
Day 5	I	7.49	7.21	25.0	67	83	284	7.61	7.38	25.0						7.22	7.49	25.0	77	437	684	ANALYST: ZTB	
	F	7.21	7.19	25.1				7.31	7.28	25.0									7.43	7.63	25.1	0.01	
Day 6	I	7.47	7.22	24.1	68	87	289	7.50	7.36	25.2						7.71	7.43	25.1	76	439	689	ANALYST: Jac	
	F	7.39	6.21	25.2				7.56	6.61	25.1									7.82	6.83	25.1		
Day 7	I	7.61	7.32	24.1	69	86	283	7.58	7.51	25.0						7.93	7.42	25.1	77	436	628	ANALYST: Jac	
	F	7.21	6.37	24.8				7.79	7.18	24.9									7.45	6.33	24.8		

UNITS: pH - STD, DISSOLVE OXYGEN (DO) - MG/L, HARDNESS - MG/L, ALKALINITY - MG/L, CONDUCTIVITY - UMHOS/CM, TOTAL RESIDUAL CHLORINE (TRC) - MG/L  
 EPA 821 - R - 02 - 013 METHOD 1002.0 STATIC RENEWAL

C# Title: ENV-FRM-MADV-0135 v00\_Cerio Chronic  
 Effective Date: 02/01/2023

SET UP DATE & TIME 11-05-24 13:36  
 DATE REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_

CLIENT Clanton  
 CERIO TRAY # 10-23-24  
 # ORG/CONC. - CERIO \_\_\_\_\_ 10 \_\_\_\_\_

	LIMS ID #	AMOUNT FEED DAILY IN µl
ALGAE	<u>4047469</u>	<u>200</u>
YCT	<u>4047724</u>	<u>200</u>

CERIODAPHNIA/CONTROL/EFFLUENT # YNG = NUMBER OF BABIES, # ADT = NUMBER OF ADULTS, X = DEAD, 0 = NO BABIES AND NO MORTALITY

DAY	1	2	3	4	5	6	7	8
ANALYST	<u>2TB</u>	<u>2TB</u>	<u>Jac</u>	<u>2TB</u>	<u>Jms</u>	<u>Jac</u>		
DATE	<u>11-6-24</u>	<u>11-7-24</u>	<u>11-08-24</u>	<u>11-09-24</u>	<u>11-10-24</u>	<u>11-11-24</u>		
TIME	<u>13:51</u>	<u>14:03</u>	<u>13:47</u>	<u>14:10</u>	<u>14:13</u>	<u>13:58</u>		
SAMPLE ID	<u>4112586-01</u>	<u>4112586-01</u>	<u>4112586-02</u>	<u>4112586-03</u>	<u>4112586-03</u>	<u>4112586-03</u>		

Comments: Day 2 refresh did not arrive on 11-7-24. -2TB

Control	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	0	0	0	0	0	0	0	0	0	0	0	10
DAY 2	0	0	0	0	0	0	0	0	0	0	0	10
DAY 3	3	2	0	1	0	2	0	1	1	0	10	10
DAY 4	5	4	4	3	4	5	4	3	4	3	39	10
DAY 5	9	8	7	6	8	9	7	7	9	6	76	10
DAY 6	7	9	5	6	8	10	9	8	9	5	76	10
DAY 7												
TOTAL	<u>24</u>	<u>23</u>	<u>16</u>	<u>16</u>	<u>20</u>	<u>26</u>	<u>20</u>	<u>19</u>	<u>23</u>	<u>14</u>	<u>191</u>	<u>10</u>

75 %	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1	0	0	0	0	0	0	0	0	0	0	0	10
DAY 2	0	0	0	0	0	0	0	0	0	0	0	10
DAY 3	2	0	0	1	0	2	0	3	0	1	9	10
DAY 4	4	3	4	4	3	4	3	4	3	4	36	10
DAY 5	8	7	7	8	6	9	6	8	7	7	73	10
DAY 6	10	5	6	8	9	7	7	5	5	6	68	10
DAY 7												
TOTAL	<u>24</u>	<u>15</u>	<u>17</u>	<u>21</u>	<u>18</u>	<u>22</u>	<u>16</u>	<u>20</u>	<u>15</u>	<u>18</u>	<u>186</u>	<u>10</u>

%	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1												
DAY 2												
DAY 3												
DAY 4												
DAY 5												
DAY 6												
DAY 7												
TOTAL												

%	1	2	3	4	5	6	7	8	9	10	# YNG	# ADT
DAY 1												
DAY 2												
DAY 3												
DAY 4												
DAY 5												
DAY 6												
DAY 7												
TOTAL												



December 27, 2023

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: Clanton Chronic Toxicity AL005  
Pace Project No.: 20295719

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory between November 06, 2023 and November 10, 2023. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Cindy Simpson*

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



DC#\_Title: ENV-FRM-SROS-0009 v02\_NOLA SCUR Form  
 Effective Date: 3/23/2022

**WO#: 20295719**

PM: CRS Due Date: 11/20/23  
 CLIENT: TU-ClantonHW



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70087

Project

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals intact:  YES  NO

Samples on ice:  YES  NO

Type of Ice:  Wet  Blue  None

Date and Initials of person examining contents: RM 11.6

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: TUM13 Cooler Temp °C: (Observed) 3.6 (CF) 0.0 (Actual) 3.8  
 Cooler #2 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #3 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #4 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_

Tracking #: \_\_\_\_\_

Temperature Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If added record lot #.: HNO3 _____ H2SO4 _____ Date: _____ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



DC#\_Title: ENV-FRM-SROS-0009 v02\_NOLA SCUR Form  
 Effective Date: 3/23/2022



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70087

Project #

**WO#: 20295719**

PM: CRS

Due Date: 11/20/23

CLIENT: TU-ClantonWH

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals Intact:  YES  NO

Samples on ice:  YES  NO

Type of Ice:  Wet  Blue  None

Date and Initials of person examining contents: SM 11/10/23

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: <u>TUTM13</u>	Cooler Temp °C: (Observed) <u>1.3</u> (CF) <u>0</u> (Actual) <u>1.3</u>
Cooler #2 Thermometer Used: _____	Cooler Temp °C: (Observed) _____ (CF) _____ (Actual) _____
Cooler #3 Thermometer Used: _____	Cooler Temp °C: (Observed) _____ (CF) _____ (Actual) _____
Cooler #4 Thermometer Used: _____	Cooler Temp °C: (Observed) _____ (CF) _____ (Actual) _____

Tracking #: \_\_\_\_\_

Temperature Blank Present*?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No If added record lot #.:
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	HNO <sub>3</sub> _____ H <sub>2</sub> SO <sub>4</sub> _____ Date: _____ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_

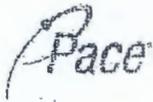
Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



DC# Title: ENV-FRM-SROS-0009 v02\_NOLA SCUR Form  
 Effective Date: 3/23/2022



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70087

**WO#: 20295719**

Project **PH: CRS** Due Date: **11/20/23**  
**CLIENT: TU-ClantonWW**

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals Intact:  YES  NO

Samples on ice:  YES  NO

Type of Ice:  Wet  Blue  None

Date and Initials of person examining contents: AS 11.8

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: TWTM13 Cooler Temp °C: (Observed) 0.3 (CF) φ (Actual) 0.3  
 Cooler #2 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #3 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #4 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_

Tracking #: \_\_\_\_\_

Temperature Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If added record lot #: _____ HNO3 _____ H2SO4 _____ Date: _____ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

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12065 LEBANON RD.  
 MT. JULIET, TN 37122  
 (800) 767-5859  
 WWW.ENVSCI.COM

December 27, 2023

Cindy Simpson  
 City of Clanton- Walnut Creek WWTP (Outfall0011)  
 1168 Whigham Place  
 Tuscaloosa, AL, 35405

Biomonitoring Results  
 Pace National Identification #: L1674532-01,-02,-03

Attached are the results for toxicity test performed: November 7-14, 2023

A summary of the findings is presented below:

Test Species	<b><i>Ceriodaphnia dubia</i></b>	<b><i>Pimephales promelas</i></b>
EPA Method	EPA Method 1002.0	EPA Method 1000.0
Test Concentrations	75%	75%
Permit Limit (IWC)	75%	75%
Test Endpoint	IWC (Pass/Fail)	IWC (Pass/Fail)
Test Result	<b>75% (PASS)</b>	<b>75% (PASS)</b>
	effluent successfully meets permit requirements for the period	effluent successfully meets permit requirements for the period
Next Test Date	<b>Please contact lab for any further testing.</b>	
Comments	City of Clanton- Walnut Creek WWTP (Outfall0011) AL0054631	

If you have any questions or comments concerning the enclosed report, please do not hesitate to contact us.



**Aquatic Biology Lab**  
 (615) 758-5858 ext. 7549  
 (615) 758-5858 ext. 7544





Facility/Discharger: City of Clanton- Walnut Creek WWTP (Outfall0011)  
 Lab Identification #: L1674532-01,-02,-03  
 Test Date: November 7-14, 2023

## SAMPLING SUMMARY

Sample	Sample Type Grab or Composite	Volume Collected	Sample Collection		Flow Rate (at collection)	Sample Temperature (when received at lab)
			Begin (MM/DD/Time)	End (MM/DD/Time)		
1	composite	1 gallon		11/6/2023 @ 08:00		3.9 deg C
2	composite	1 gallon		11/8/2023 @ 08:00		1.3 deg C
3	composite	1 gallons		11/10/2023 @ 08:00		0.5 deg C

Comments:

## TEST PERFORMANCE

### Species #1

***Ceriodaphnia dubia* (water flea)**  
 11/7/2023 @ 15:58 to 11/13/2023 @ 13:24

### Species Age

< 24 hrs old, within 8 hrs of the same age

### Organism Source

Pace National, in-house cultures

### Acclimation Procedure

cultured in Moderately Hard SDW at 25 deg C

### Test Duration

3-Brood

### Feeding Regime

0.15 mL YCT and 0.15 mL algal suspension, daily, upon renewal

### Type of Test Chamber

polystyrene cup

### Volume of Test Chamber

30 mL

### Volume of Solution Used Per Test Chamber

20 mL

### Number of Test Organisms Per Test Chamber

one (1)

### Number of Replicates Per Treatment

ten (10)

### Species #2

***Pimephales promelas* (fathead minnow)**  
 11/7/2023 @ 16:18 to 11/14/2023 @ 14:18

Species Age	Hatch Date	Pace National Lot #
24-36 hrs old	11/6/2023	110623HD

### Organism Source

Aquatic Bio Systems - Fort Collins, CO

### Acclimation Procedure

acclimated in 20% DMW at 25 deg C for about 2 hrs

### Test Duration

7-Day

### Feeding Regime

0.15 mL - 0.2 mL newly hatched brine shrimp nauplii, twice daily

### Type of Test Chamber

polypropylene beaker

### Volume of Test Chamber

500 mL

### Volume of Solution Used Per Test Chamber

250 mL

### Number of Test Organisms Per Test Chamber

ten (10)

### Number of Replicates Per Treatment

four (4)



Facility/Discharger: City of Clanton- Walnut Creek WWTP (Outfall0011)

Lab Identification #: L1674532-01,-02,-03

Test Date: November 7-14, 2023

## ADDITIONAL TOXICITY TEST INFORMATION

Copies of all bench sheets and statistical calculations and printouts obtained during the test are attached in the Appendix. Electronically entered data is entered in real time and digitally tracked to ensure traceability.

Methods/Instrumentation used in chemical analysis:

Dissolved Oxygen: Thermo Scientific RDO Probe (S/N: 087070MD 16501)

pH: Thermo Scientific Orion 8157 BNUMD (S/N: API-13303)

Conductivity: Thermo Scientific Orion 013005MD (S/N: ZW1-10283)

pH/RDO/Conductivity: Thermo Scientific Orion VersaStar (S/N: V16919)

Water Bath: Thermo Scientific Model TSCIR89 (S/N: 300380862)

Temperature: Fluke Thermometers calibrated to NIST certified thermometer ID 8265

Alkalinity: Method 2320 B2011

Hardness: Method 130.1

Total Residual Chlorine: Hach Pocket Colorimeter, Model #DR300 (S/N: 19110A002361)

Environmental Chambers: 25 degrees C + 1.0 degree - CrownTonka Walk-in

Environmental Chambers (for Colorado tests): 20 degrees C  $\pm$  1.0 degree - CrownTonka Walk-in

Light Quality: Ambient Lab Illumination

Light Intensity: 50-100 ft-c - Fisherbrand Traceable Model 06-662-63 11774266 (S/N: 221874790)

Photoperiod: 16 hours light, 8 hours dark

Drying: Overnight at greater than 60 degrees Celcius in Thermo Scientific Heretherm OGS400 (S/N: 41831936)

Mean Dry Weight: Determined using Mettler Toledo Balance XSE105 Dualrange (S/N B634906554)

Reference Weights (Set #1): Class 1, TREOMNER, Inc., serial number 85035

Reference Weights (Set #2): Class 1, TREOMNER, Inc., serial number 67812

EPA Acute Manual Edition and Date: EPA-821-R-02-012 October 2002, Fifth Edition

EPA Chronic Manual Edition and Date: EPA-821-R-02-013 October 2002, Fourth Edition

This method is performed only by Assistant Biologists, Biologists, and Senior Biologists that have experience with aquatic toxicity testing. Laboratory Technicians, Chemists, and any other laboratory personnel that are not experienced with toxicity testing will not handle test organisms during a toxicity evaluation. Lab Techs, Chemists, and others may assist (under supervision) with the gathering of data during the evaluation (pH, DO, conductivity, alkalinity, hardness, etc.), but will not be allowed to do any work with the test organisms themselves. The following analysts have met Technical Training Qualifications and their initials (in parenthesis) can be found on the bench sheets in this report: **Brandon Etheridge (BE); Cody Medley (CM); Nadjar Yakob (NY); Mike Lowe (ML); Hunter Holden (HH); Lizzy Orcutt (EO); Kathleen Orlik (KO); Nathan Hawkins (NH); Ashwaq Albeladi (AA); Rubaiya Jesmin (RJ);**

Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from EPA Methodology that were necessary for these tests as well as any sample manipulations which were performed, such as aeration, dechlorination with sodium thiosulfate (etc) and the justification for such manipulations or deviations. Attach additional pages as needed.

<no deviations to report>



City/Discharger: City of Clanton- Walnut Creek WWTP (Outfall0011)  
 Lab Identification #: L1674532-01,-02,-03  
 Test Date: November 7-14, 2023

### Toxicity Test Results

Results of a **Ceriodaphnia** **dubia** **3-Brood, Survival & Reproduction Test**  
 (Genus) (Species) (Type/Duration)

Conducted **11/7/2023** to **11/14/2023** Using Effluent from Outfall:  
 Effluent

Test Solution	Percent Surviving (time intervals used - days)							# of Young		
	0	1	2	3	4	5	6	7	Total	Mean
Control	100	100	100	100	100	100	100		262	26.2
75% Effluent	100	100	100	100	100	100	100		304	30.4

Permit Limit: (IWC) 75% NOEC Value: (AEC) **75%** survival **75%** reproduction

Coefficient of Variance (CV%): **24.6%**

Confidence Limits  
 Upper Limit:  Upper Limit  
 Lower Limit:  Lower Limit

Statistical methods used to determine NOEC (if applicable):

Fisher Exact Test, Dunnett Multiple Comparison Test, Equal Variance t Two-Sample Test, Variance Ratio F Test, Shapiro-Wilk W Normality Test

Percent Minimum Significant Difference: **22.5%**

$$PMSD = \frac{\text{Minimum Significant Difference} \times 100}{\text{Control Mean (reproduction)}}$$

The PMSD describes the variability that occurred within the test. If the PMSD value for a given test is less than or equal to the 90th PMSD (47 for *Ceriodaphnia*), the test's variability measure is within the normal range expected for the test.

### INTERPRETATION OF RESULTS

*Ceriodaphnia dubia* (water flea) - No toxicity was demonstrated. Using Fisher Exact Test, Dunnett Multiple Comparison Test, and Equal Variance t Two-Sample Test, it was determined there was no statistically significant difference between the 75% effluent and the Control with regards to both survival and reproduction. The NOEC (no observable effect concentration) is reported as being equal to 75% effluent. Permittee successfully meets permit requirements for the period.



Facility/Discharger: City of Clanton- Walnut Creek WWTP (Outfall0011)

Lab Identification #: L1674532-01,-02,-03

Test Date: November 7-14, 2023

### Toxicity Test Results

Results of a Pimephales (*Genus*) promelas (*Species*) 7-day, Survival & Growth Test (*Type/Duration*)

Conducted 11/7/2023 to 11/14/2023 Using Effluent from Outfall: Effluent

Test Solution	Percent Surviving (time intervals used - days)								Dry Weight (mg)	
	0	1	2	3	4	5	6	7	Total	Mean
Control	100	100	100	100	100	100	100	100	1.8630	0.4658
75% Effluent	100	100	100	100	100	100	100	97.5	1.9730	0.4933

Permit Limit:  
(IWC) 75%

NOEC Value:  
(AEC) 75% survival 75% growth

Coefficient of  
Variance  
(CV%): 7.8%

Confidence Limits  
Upper Limit:    
Lower Limit:  

Statistical methods used to determine NOEC (if applicable):

Wilcoxon Rank Sum Two-Sample Test, Equal Variance t Two-Sample Test, Dunnett Multiple Comparison Test, Variance Ratio F Test, Shapiro-Wilk W Normality Test, Levene Equality of Variance Test, Mod Levene Equality of Variance Test

Percent  
Minimum  
Significant  
Difference: 18.3%

$$PMSD = \frac{\text{Minimum Significant Difference} \times 100}{\text{Control Mean (growth)}}$$

The PMSD describes the variability that occurred within the test. If the PMSD value for a given test is less than or equal to the 90th PMSD (30 for fathead minnow), the test's variability measure is within the normal range expected for the test.

### INTERPRETATION OF RESULTS

*Pimephales promelas* (fathead minnow) - No toxicity was demonstrated. Using Wilcoxon Rank Sum Two-Sample Test, Equal Variance t Two-Sample Test, and Dunnett Multiple Comparison Test, it was determined that the AEC (Adverse Effect Concentration) for survival and growth is equal to 75% effluent. There was no statistically significant difference between the effluent concentration and the Control. Permittee successfully meets permit requirements for the period.



Facility/Discharger: City of Clanton- Walnut Creek WWTP (Outfall0011)  
Lab Identification #: L1674532-01,-02,-03  
Test Date: November 7-14, 2023

## APPENDIX



4. SAMPLE COLLECTION:

Split samples: N/A  Yes \_\_\_\_\_ (explain)

Samples Collected as Specified in the NPDES Permit: Yes  No (explain) \_\_\_\_\_

Receiving Water: \_\_\_\_\_ Design Flow: \_\_\_\_\_ (MGD)

Sample ID	Sample(s) Collected				Arrival Temp (°C)	Used in Test(s)	
	MM/DD/YY	HH:MM	- MM/DD/YY	HH:MM		MM/DD/YY	- MM/DD/YY
L1674532-01			11/6/2023	8:00	3.9	11/7/2023	11/8/2023
L1674532-02			11/8/2023	8:00	1.3	11/9/2023	11/10/2023
L1674532-03			11/10/2023	8:00	0.5	11/11/2023	11/13/2023

5. CONTROL / DILUTION WATER:

Type	Prepared MM/DD/YY	Begin Use MM/DD/YY	Initial Water Chemistries				
			Hardness	Alkalinity	pH	Spec. Con.	@ °C
MHSDW	L 11-6	11/7/2023	86.4	50.3	7.6	313.6	25
MHSDW	L 11-7	11/8/2023	77.2	45.1	7.6	319.3	25
MHSDW							
MHSDW							
MHSDW							
MHSDW							
MHSDW							

\*Alk/Hard not submitted due to lab error

6. TOXICITY TEST INFORMATION:

Test Species	Organism Age	Organism Source	Test Solution Concentrations (%)			
<i>Ceriodaphnia dubia</i>	< 24 hours old	in-house cultures	Control	75		
<i>Pimephales promelas</i>	< 36 hours old	Aquatic Bio Systems, Inc.	Control	75		

Test Species	Test Vessel Type	Vessel Volume (mL)	Solution Volume (mL)	Org. / Test Vessel	Replicates per Conc.
<i>Ceriodaphnia dubia</i>	polystyrene cups	30 mL	20 mL	1	10
<i>Pimephales promelas</i>	polypropylene cups	500 mL	250 mL	10	4

Test Species	Temperature Range	D.O. Range (mg/L)	pH Range (mg/L)	Light Intensity Average (ft-c)
<i>Ceriodaphnia dubia</i>	24.0 - 25.9	8.6 - 9.2	7.2 - 7.6	70.6
<i>Pimephales promelas</i>	24.4 - 25.9	8.6 - 9.2	7.2 - 7.6	70.6

7. FEEDING:

Not Fed: \_\_\_\_\_ Fed Daily:  Fed Irregular: \_\_\_\_\_ (explain in comments below)

Brine Shrimp: Fed 0.15 - 0.2 mL suspension of newly hatched larvae 2 times daily.  
 YCT: Fed 0.15 mL suspension containing 1.7 - 1.9 mg/L TSS daily.  
 Algae: Fed 0.15 mL suspension containing 3.0 X 10<sup>7</sup> algal cells/mL daily.

COMMENTS:

**8. REFERENCE TOXICANT TESTS:**

Toxicant: potassium chloride (KCl)

Source: Fisher

VWR Lot#: 225249

ESC Lot #: ESC53881

Solution concentration unit: \_\_\_\_\_ mg/L        X   g/L      \_\_\_\_\_ %      \_\_\_\_\_ Other (specify)

Test Organism	Test Date MM/DD - MM/DD	Control Water	Reference Test Solution Concentrations (control to highest concentration)					
			Control	0.05	0.1	0.2	0.4	0.8
<i>Ceriodaphnia dubia</i>	10/3 - 10/9	MHSDW	Control	0.05	0.1	0.2	0.4	0.8
<i>Pimephales promelas</i>	10/3 - 10/10	MHSDW	Control	0.1875	0.375	0.75	1.5	3.0

Test Organism	Results IC25	95% Confidence Interval	Upper and Lower CUSUM Chart Control Limit (this test)	Number (N)
<i>Ceriodaphnia dubia</i>	0.3975	0.0934-0.48	0.1570-0.4830	
<i>Pimephales promelas</i>	0.5568	0.4276-0.8146	0.3090-0.9280	

**9. TEST CONDITION VARIABILITY:**

**9.A. Deviations from standard test conditions:**

<< no deviations to report >>

**9.B. Test solution manipulations or test modifications:**

<< no manipulations or modifications to report >>

**10. REQUIRED REPORT ATTACHMENTS:**

Attach copies of Chain-of-Custody Forms, Reference Toxicant Tests, and Raw Data (bench sheets) pertaining to physical, chemical, and biological measurements for all tests. Include suspended, interrupted, or discontinued toxicity test data.

**COMMENTS:**

Facility Name:

City of Clanton- Walnut Creek WWTP

NPDES #: AL0054631

DSN:

Outfall 0011

Date: 12/27/2023

11.A. ACUTE SCREENING TOXICITY TEST RESULTS (freshwater):

TEST ORGANISM: \_\_\_\_\_

ACUTE TOXICITY INDICATED: \_\_\_\_\_ YES \_\_\_\_\_ NO

NO ACUTE STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_

SOLUTION CONC (%)	CONTROL				
MORTALITY (%)					

not

PERMITTED MORTALITY RATE (%): \_\_\_\_\_

Normally Distributed: YES \_\_\_\_\_ NO \_\_\_\_\_

Test Statistic: \_\_\_\_\_ Critical Value: \_\_\_\_\_ (Parametric)

Equal Variance: \_\_\_\_\_ Unequal Variance: \_\_\_\_\_

F Statistic: \_\_\_\_\_ Critical F: \_\_\_\_\_

t-Test Statistic: \_\_\_\_\_ t-Test Critical Value: \_\_\_\_\_

Sample Rank Sum: \_\_\_\_\_ # Reps: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non-Parametric)

COMMENTS:

applicable

TEST ORGANISM: \_\_\_\_\_

ACUTE TOXICITY INDICATED: \_\_\_\_\_ YES \_\_\_\_\_ NO

NO ACUTE STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_

SOLUTION CONC (%)	CONTROL				
MORTALITY (%)					

not

PERMITTED MORTALITY RATE (%): \_\_\_\_\_

Normally Distributed: YES \_\_\_\_\_ NO \_\_\_\_\_

Test Statistic: \_\_\_\_\_ Critical Value: \_\_\_\_\_ (Parametric)

Equal Variance: \_\_\_\_\_ Unequal Variance: \_\_\_\_\_

F Statistic: \_\_\_\_\_ Critical F: \_\_\_\_\_

t-Test Statistic: \_\_\_\_\_ t-Test Critical Value: \_\_\_\_\_

Sample Rank Sum: \_\_\_\_\_ # Reps: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non-Parametric)

COMMENTS:

applicable

11.C. CHRONIC SCREENING TOXICITY TEST RESULTS (freshwater):

TEST ORGANISM: Ceriodaphnia dubia

Were neonates used to begin the test within 8 hours of the same age? yes

Did 60% of the CONTROL females produce their third brood? yes

SURVIVAL

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X

NO SURVIVAL STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_

CONTROL (%)	24 h	100%	48 h	100%	END	100%	EFFLUENT (75%)	24 h	100%	48 h	100%	END	100%
Fisher's Exact Test:	A =		B =		a =		b =						

REPRODUCTION (Average Neonates/Female)

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X

CONTROL: 26.2 EFFLUENT: 30.4

NO REPRODUCTION STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_

Normally Distributed:	YES	<u>X</u>	NO	_____		
Test Statistic:	<u>0.8818</u>		Critical Value:	<u>0.866</u>		(Parametric)
Equal Variance:	<u>X</u>		Unequal Variance:	_____		
F Statistic:	<u>1.794</u>		Critical F:	<u>6.541</u>		
t-Test Statistic:	<u>-1.233</u>		t-Test Critical Value:	<u>1.734</u>		
Sample Rank Sum:	_____		# Repts:	<u>10</u>	Critical Rank Sum:	_____ (Non-Parametric)

COMMENTS: **PASS test**

TEST ORGANISM: Pimephales promelas

SURVIVAL

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X

NO SURVIVAL STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_

CONTROL (%)	24 h	100%	48 h	100%	END	100%	EFFLUENT (75%)	24 h	100%	48 h	100%	END	97.5%
-------------	------	------	------	------	-----	------	----------------	------	------	------	------	-----	-------

GROWTH 0.4933 (Mean Dry Weight - mg)

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X

CONTROL: 0.4658 EFFLUENT: 0.4933

NO GROWTH STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_

Normally Distributed:	YES	<u>X</u>	NO	_____		
Test Statistic:	<u>0.8837</u>		Critical Value:	<u>0.6451</u>		(Parametric)
Equal Variance:	<u>X</u>		Unequal Variance:	_____		
F Statistic:	<u>4.798</u>		Critical F:	<u>47.47</u>		
t-Test Statistic:	<u>-0.628</u>		t-Test Critical Value:	<u>1.943</u>		
Sample Rank Sum:	_____		# Repts:	<u>4</u>	Critical Rank Sum:	_____ (Non-Parametric)

COMMENTS: **PASS test**

**City of Clanton- Walnut Creek WWTP (OUTFALL 0011)**

NPDES #: AL0054631

Test Date: November 7 -14, 2023

Login #: L1674532 -01,-02,-03

**Tue 11/7/23**

Initials	pH	Con.	DO	Time	Analyst
Control	7.3	307.8	9	17:02:05	NY
Dup. Control	7.4	307.3	8.6	17:02:27	NY
76 (PL)	7.4	457.5	8.6	17:12:34	NY
Dup. 76 (PL)	7.4	457.5	8.6	17:13:47	NY
100	7.5	551.4	9.3	17:14:29	NY
Dup 100	7.5	551.4	9.3	17:14:32	NY

Comments:

Control 9
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**Wed 11/8/23**

Initials	pH	Con.	DO	Time	Analyst
Control	7.4	302.4	8.8	14:27:39	LG
76 (PL)	7.5	496.9	8.6	14:28:19	LG
100	7.5	562.6	9	14:30:52	LG

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH	DO	Time	Analyst	pH	DO	Time	Analyst
Control	7.4	8.7	15:15:46	LG	7.3	8.5	9:35:02	HH
Dup. Control	7.5	8.7	15:16:04	LG	7.3	8.5	9:35:49	HH
76 (PL)	7.7	8.7	15:16:51	LG	7.6	8.5	9:36:37	HH
Dup. 76 (PL)	7.8	8.7	15:17:10	LG	7.6	8.5	9:37:04	HH

**Thu 11/9/23**

Initials	pH	Con.	DO	Time	Analyst
Control	7.3	325.9	9.2	14:53:45	NY
76 (PL)	7.5	497.7	9.2	14:57:06	NY
100	7.5	567	9.3	14:58:00	NY

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH	DO	Time	Analyst	pH	DO	Time	Analyst
Control	7.6	8.6	16:48:28	NY	7.3	8.4	11:08:48	LG
76 (PL)	7.7	8.7	16:49:09	NY	7.5	8.2	11:09:39	LG

**Fri 11/10/23**

Initials	pH	Con.	DO	Time	Analyst
Control	7.2	342.4	8.9	14:31:00	BE
76 (PL)	7.4	514.3	8.9	14:31:32	BE
100	7.5	584.1	9.6	14:44:51	BE

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH	DO	Time	Analyst	pH	DO	Time	Analyst
Control	7.6	8.4	16:55:43	BE	7.3	7.8	9:32:55	HH
76 (PL)	7.6	8.3	16:56:07	BE	7.5	7.7	9:34:00	HH

**Sat 11/11/23**

Initials	pH	Con.	DO	Time	Analyst
Control	7.4	342.9	8.9	16:56:39	HH
76 (PL)	7.5	619.4	9.2	16:57:11	HH
100	7.4	723.9	10	16:57:49	HH

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH	DO	Time	Analyst	pH	DO	Time	Analyst
Control	7.6	8.3	17:19:30	HH	7.3	7.8	9:27:47	HH
76 (PL)	7.7	8.5	17:20:22	HH	7.5	7.9	9:28:46	HH

**Sun 11/12/23**

Initials	pH	Con.	DO	Time	Analyst
Control	7.5	324.5	8.6	12:00:52	NY
76 (PL)	7.4	607.5	8.9	12:02:41	NY
100	7.4	717.7	9.8	12:04:45	NY

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH	DO	Time	Analyst	pH	DO	Time	Analyst
Control	7.5	8.3	14:32:13	AA	7.4	7.9	9:33:33	ML
76 (PL)	7.7	8.3	14:32:52	AA	7.6	8	9:34:11	ML

**Mon 11/13/23**

Initials	pH	Con.	DO	Time	Analyst
Control	7.5	340	9.1	12:37:42	NY
76 (PL)	7.6	589.7	9	12:39:17	NY
100	7.6	724.6	9.6	12:39:48	NY

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH	DO	Time	Analyst	pH	DO	Time	Analyst
Control	7.6	8.4	15:25:21	NY	7.4	7.8	9:19:53	ML
76 (PL)	7.7	8.4	15:26:05	NY	7.6	7.8	9:20:44	ML

**Tue 11/14/23**

Initials	pH	Con.	DO	Time	Analyst
Control	/	/	/	/	/
76 (PL)	/	/	/	/	/

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH	DO	Time	Analyst	pH	DO	Time	Analyst
Control	/	/	/	/	7.3	7.9	9:20:21	HH
76 (PL)	/	/	/	/	7.4	7.5	9:21:11	HH

Initials	pH		Con		DO	
	range	mean	range	mean	range	mean
	Control	7.2-7.5	7.4	302.4-342.9	324	8.6-9.2
76 (PL)	7.4-7.6	7.5	457.5-619.4	530	8.6-9.2	8.9
100	7.4-7.6	7.5	551.4-724.6	623	9-10	9.6

Initials	<i>Ceriodaphnia dubia</i>				<i>Pimephales promelas</i>			
	pH		DO		pH		DO	
	range	mean	range	mean	range	mean	range	mean
Control	7.4-7.6	7.5	8.3-8.7	8.5	7.3-7.4	7.3	7.8-8.5	8.1
76 (PL)	7.6-7.8	7.7	8.3-8.7	8.5	7.4-7.6	7.5	7.5-8.5	8.0

# City of Clanton- Walnut Creek WWTP (OUTFALL 0011)

NPDES #: AL0054631

Test Date: November 7 -14, 2023

ESC Lab #: L1674532 -01,-02,-03

Thermometer Serial #: 38190150WS

## Record of Daily Temperatures (°C)

***Pimephales promelas* (fathead minnow)** - measurement taken in test chambers

	Tue 11/7/23	Wed 11/8/23	Thu 11/9/23	Fri 11/10/23	Sat 11/11/23	Sun 11/12/23	Mon 11/13/23	Tue 11/14/23
Analyst: (initial)	HH	NY	LG	BE	HH	NY	NY	
Temp of Sample Container	24.2°C	25.4°C	26.0°C	25.6°C	24.8°C	25.6°C	25.0°C	
Control (initial)	25.9°C	25.3°C	25.5°C	25.9°C	24.7°C	25.6°C	25.0°C	
75 (PL)	24.6°C	25.2°C	25.2°C	25.2°C	24.8°C	25.5°C	24.8°C	
	(final)	(final)	(final)	(final)	(final)	(final)	(final)	(final)
Analyst:	NY	NY	HH	HH	NY	NY	HH	
Control	24.6°C	24.6°C	24.9°C	25.0°C	24.6°C	24.5°C	25.0°C	
75 (PL)	24.5°C	24.5°C	24.8°C	25.0°C	24.6°C	24.6°C	25.0°C	

***Ceriodaphnia dubia* (water flea)** - measurement taken in surragote cup located on each tray

	Tue 11/7/23	Wed 11/8/23	Thu 11/9/23	Fri 11/10/23	Sat 11/11/23	Sun 11/12/23	Mon 11/13/23	Tue 11/14/23
Analyst: (initial)	HH	NY	NY	BE	HH	NY		
Control (initial)	24.7°C	25.4°C	25.2°C	25.9°C	24.7°C	25.6°C		
75 (PL)	24.0°C	25.3°C	25.0°C	25.6°C	24.8°C	25.3°C		
	(final)	(final)	(final)	(final)	(final)	(final)	(final)	(final)
Analyst:	NY	NY	HH	HH	NY	NY		
Control	24.5°C	24.6°C	25.3°C	25.6°C	24.6°C	24.6°C		
75 (PL)	24.6°C	24.5°C	25.5°C	25.6°C	24.5°C	24.5°C		

# City of Clanton- Walnut Creek WWTP (OUTFALL 0011)

NPDES # AL0054631

Test Dates: November 7 -14, 2023

L#: L1674532 -01,-02,-03

## Control

L# of Control		Alkalinity (mg/L)	Hardness (mg/L)	
L16759395-03	Tue 11/7/23	50.3	86.4	L 11-6
L1675051-02	Thu 11/9/23	45.1	77.2	L 11-7
L1675051-02	Sat 11/11/23	45.1	77.2	L 11-7

Alkalinity (mg/L)	
range: 45.1-50.3	mean: 46.8333333
Hardness (mg/L)	
range: 77.2-86.4	mean: 80.2666667

## 100% Effluent

	Alkalinity (mg/L)	Hardness (mg/L)
Tue 11/7/23	126	94.1
Thu 11/9/23	126	95.6
Sat 11/11/23	119	108

Alkalinity (mg/L)	
range: 119-126	mean: 123.666667
Hardness (mg/L)	
range: 94.1-108	mean: 99.2333333

	Total Res. Cl <sub>2</sub> (mg/L)	Analyst
Tue 11/7/23	<0.2	HH
Thu 11/9/23	<0.2	NY
Sat 11/11/23	<0.2	HH

## Record of Daily *Pimephales promelas* (fathead minnow) Feedings

Minnows in chronic WET tests are fed 0.15 - 0.2 mL (per test vessel) newly hatched brine shrimp nauplii, twice daily (morning & afternoon). At test initiation, minnows are fed only once (in the afternoon). On the final day of the test, minnows are not fed.

### Morning Feedings

	Tue 11/7/23	Wed 11/8/23	Thu 11/9/23	Fri 11/10/23	Sat 11/11/23	Sun 11/12/23	Mon 11/13/23	Tue 11/14/23
Time:	test initiation	07:28	07:45	06:50	06:58	07:25	07:35	test ends
Analyst:	not applicable	NY	NY	HH	HH	NY	NY	not fed

### Afternoon Feedings

	Tue 11/7/23	Wed 11/8/23	Thu 11/9/23	Fri 11/10/23	Sat 11/11/23	Sun 11/12/23	Mon 11/13/23	Tue 11/14/23
Time:	16:58	16:30	16:30	17:01	18:42	14:15	15:35	test ends
Analyst:	CM/LG	NY	NY	HH	HH	AA	NY	not fed

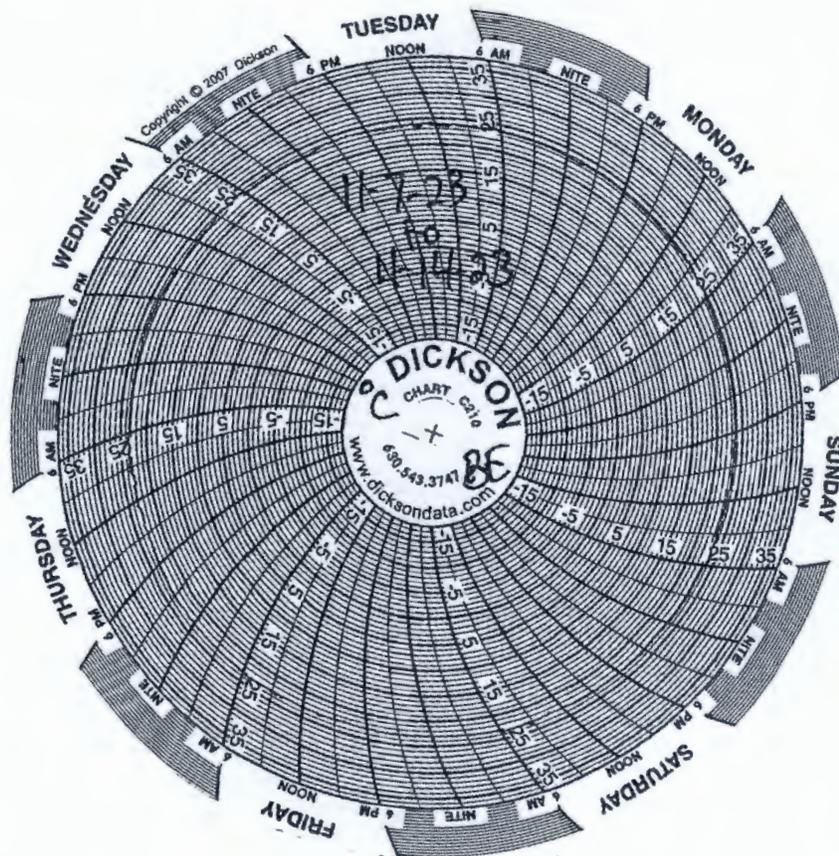
## Light Intensity (ft-c) of Test Incubator

	Tue 11/7/23	Wed 11/8/23	Thu 11/9/23	Fri 11/10/23	Sat 11/11/23	Sun 11/12/23	Mon 11/13/23	Tue 11/14/23
Top	76.4	72.4	70.4	68.1	74.8	71.8	71.2	76.3
Middle	76.2	73.6	68.4	70.1	71.1	69.6	72.5	73.7
Bottom	67.7	64.4	65.8	62.7	63.8	70.3	71.6	71.2
Average	73.4333333	70.1333333	68.2	66.9666667	69.9	70.5666667	71.7666667	73.7333333

Light Intensity (ft-c) - average of all days in test period **70.5875**

City of Clanton- Walnut Creek WWTP (OUTFALL 0011)

Chart Devices Used in  
CrownTonka Walk-in  
Incubator:  
Dickson (small chart)





Facility/Discharger: City of Clanton- Walnut Creek WWTP (Outfall0011)

Lab Identification #: L1674532-01,-02,-03

Test Date: November 7-14, 2023

## NOTATIONS USED BY ANALYSTS DURING TOXICITY EVALUATIONS

### *Ceriodaphnia dubia* (water flea)

- # numbers on the Reproduction bench sheets (chronic) indicate the number of live young produced
- @ if number is circled, this indicates movement of daphnid has become impaired either by actual algal growth on the organisms, or has become entrapped in substances found in the effluent sample, or has been covered in stalked cilia
- ME (molted embryo) often a stressed or poor condition female will abort all or some of a brood in response to a toxin, insufficient nutrition, or just an inability to sustain a certain level of reproduction
- P (pale) this is a noticeable reduction in coloration compared to that which is normal for the individual's age
- SS (small size) this observation is made in comparison to other individuals of the same brood or age group and generally represents a difference of at least 2X size difference
- ES (erratic swimming) this represents a locomotor behavior typified by unsustained swimming with the daphnid periodically "resting" on the bottom of the test vessel; this condition is often observed prior to a daphnid becoming totally immotile
- I (immotility) this denotes a total lack of motility; daphnid is on the bottom of the test vessel and is confirmed as living; daphnids are frequently dead within a short time
- LIT (lost in transfer) organism was lost during transfer process; stats are adjusted to represent this dilution as having one less organism
- NL (not loaded) organism was not loaded at test initiation; stats are adjusted to represent this dilution having one less organism
- NT (not transferred) organism was not present at the time of the next transfer; stats are adjusted to represent this dilution having one less organism loaded at the initiation of testing
- X (dead) dead daphnid is on bottom of test vessel and is confirmed dead by observation of no appendage movement and no visible heartbeat

### *Pimephales promelas* (fathead minnow)

- # numbers indicate the number of live organisms remaining
- BS (bent spine) fish appear to have a curved spine
- LR (loss of reflex) fish are alive, but slow to react to gentle prodding
- NL (not loaded) organism was not loaded at test initiation; stats are adjusted to represent this dilution having one less organism
- TS (top swimmers) fish appear to congregate only at the surface of the test solution (sometimes attributed to low dissolved oxygen levels)
- SS (small size) this observation is made in comparison to other individuals of the same age group and generally represents a difference of at least 2X size difference

Date(s) and Time(s) of Neonate Harvest: From 16:56 on 11/6/2023 to 23:02 on 11/6/2023

Neonates were Harvested from the Following Tray(s):  
Neonates were Harvested from the Following Cups:

110623XA2	Template Name:										
A3	A4	A5	A6	A7	B1	B2	B4	C1	C2		

Control Water Carboy Used

Description of Sample Being Analyzed Below:				CONTROL 9 City of Clanton- Walnut Creek WWTP (OUTFALL 0011)											AL0054631		
Set-up & Transfer Data				Identification of Replicate											# of Offspring at Renewal	# of Live Adults at Renewal	
Date	Time	Analyst		A: 1	B: 2	C: 3	D: 5	E: 4	F: 4	G: 5	H: 6	I: 6	J: 7				
L 11-6	Tue 11/7/23	15:58	NY	initiation	0	0	0	0	0	0	0	0	0	0	0	0	10
L 11-7	Wed 11/8/23	13:35	NY	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0	10
L 11-7	Thu 11/9/23	14:04	NY	48 hrs	0	0	0	0	0	0	0	0	0	0	0	0	10
L 11-7	Fri 11/10/23	14:49	BE	72 hrs	0	6	6	0	0	0	0	0	0	5	17	10	
L 11-7	Sat 11/11/23	16:08	NH	96 hrs	6	0	0	6	6	6	4	6	3	0	37	10	
L 11-7	Sun 11/12/23	11:33	AA	120 hrs	11	7	12	9	10	13	9	12	11	10	104	10	
	Mon 11/13/23	13:24	NY	144 hrs	16	12	15	18	10	0	14	4	0	15	104	10	
	Tue 11/14/23			168 hrs											0		
	Wed 11/15/23			192 hrs											0		
<b>Total # of Young Produced:</b>					<b>33</b>	<b>25</b>	<b>33</b>	<b>33</b>	<b>26</b>	<b>19</b>	<b>27</b>	<b>22</b>	<b>14</b>	<b>30</b>	<b>Total Offspring at Renewal</b>	<b>Total Young Produced</b>	
C. dubia Cup Batch/Lot: ESC55667					Algae Lot: 101023			YCT Lot: 101023			<b>262</b>	<b>262</b>					

Test Acceptability Criteria:

Survival ≥ 80%?	≥ 15 neonates/female?	≥ 60% 3rd brood?	Control Valid?
YES NO	YES NO	YES NO	YES NO
<input checked="" type="checkbox"/> <input type="checkbox"/>			

Description of Sample Being Analyzed Below:				75 (PL) City of Clanton- Walnut Creek WWTP (OUTFALL 0011)											AL0054631	
Set-up & Transfer Data				Identification of Replicate											# of Offspring at Renewal	# of Live Adults at Renewal
Date	Time	Analyst		A: 3	B: 3	C: 4	D: 3	E: 6	F: 7	G: 4	H: 2	I: 1	J: 2			
	Tue 11/7/23	15:58	NY	initiation	0	0	0	0	0	0	0	0	0	0	0	10
	Wed 11/8/23	13:37	NY	24 hrs	0	0	0	0	0	0	0	0	0	0	0	10
	Thu 11/9/23	14:06	NY	48 hrs	0	0	0	0	0	0	0	0	0	0	0	10
	Fri 11/10/23	14:57	BE	72 hrs	0	0	7	0	0	0	0	0	0	0	7	10
	Sat 11/11/23	16:12	NH	96 hrs	5	6	0	6	6	6	5	4	4	6	48	10
	Sun 11/12/23	11:36	AA	120 hrs	12	13	14	11	12	10	10	13	7	12	114	10
	Mon 11/13/23	13:27	NY	144 hrs	14	18	18	19	19	15	0	0	14	18	135	10
	Tue 11/14/23			168 hrs											0	
	Wed 11/15/23			192 hrs											0	
<b>Total # of Young Produced:</b>					<b>31</b>	<b>37</b>	<b>39</b>	<b>36</b>	<b>37</b>	<b>31</b>	<b>15</b>	<b>17</b>	<b>25</b>	<b>36</b>	<b>Total Offspring at Renewal</b>	<b>Total Young Produced</b>
Comments:					<b>304</b>	<b>304</b>										

**CETIS Summary Report**

Report Date: 16 Nov-23 14:22 (p 1 of 1)  
 Test Code/ID: L1674532 (CD) / 11-5573-3305

**Ceriodaphnia 7-d Survival and Reproduction Test**

Pace National

Batch ID: 02-7703-2738	Test Type: Reproduction-Survival (7d)	Analyst: Hunter Holden
Start Date: 07 Nov-23	Protocol: EPA/821/R-02-013 (2002)	Diluent:
Ending Date: 13 Nov-23	Species: Ceriodaphnia dubia	Brine:
Test Length: 6d 0h	Taxon: Branchiopoda	Source: In-House Culture
		Age: <24

Sample ID: 06-7526-6319	Code: 283FBF0F	Project:
Sample Date: 06 Nov-23 08:00	Material: POTW Effluent	Source: AL0054631
Receipt Date: 07 Nov-23 10:15	CAS (PC):	Station:
Sample Age: 16h	Client: City of Clanton- Walnut Creek WWTP (OUT)	

Comments: City of Clanton-Walnut Creek WWTP (Outfall-0011) (AL0054631) L1674532-01, -02, -03

**Single Comparison Summary**

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
06-1387-1316	7d Survival Rate	Fisher Exact Test	1.0000	75% passed 7d survival rate	1
07-3601-4614	Reproduction	Dunnett Multiple Comparison Test	0.8833	75% passed reproduction	1
04-5394-0702	Reproduction	Equal Variance t Two-Sample Test	0.8833	75% passed reproduction	1

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
06-1387-1316	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
04-5394-0702	Reproduction	Control Resp	26.2	15	<<	Yes	Passes Criteria
07-3601-4614	Reproduction	Control Resp	26.2	15	<<	Yes	Passes Criteria
04-5394-0702	Reproduction	PMSD	0.2254	0.13	0.47	Yes	Passes Criteria
07-3601-4614	Reproduction	PMSD	0.2254	0.13	0.47	Yes	Passes Criteria

**7d Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
75		10	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

**Reproduction Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	10	26.2	21.59	30.81	14	33	2.037	6.443	24.59%	0.00%
75		10	30.4	24.23	36.57	15	39	2.729	8.631	28.39%	-16.03%

**7d Survival Rate Detail**

MD5: F85215C3900C24ABA031F8B2E812E335

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
75		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

**Reproduction Detail**

MD5: 2D32BCBBE81FEEABACFD0CC6E839453

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	33	25	33	33	26	19	27	22	14	30
75		31	37	39	36	37	31	15	17	25	36

# CETIS Analytical Report

Report Date: 16 Nov-23 14:22 (p 1 of 2)  
 Test Code/ID: L1674532 (CD) / 11-5573-3305

## Ceriodaphnia 7-d Survival and Reproduction Test

Pace National

Analysis ID: 04-5394-0702      Endpoint: Reproduction      CETIS Version: CETISv2.1.4  
 Analyzed: 15 Nov-23 9:47      Analysis: Parametric-Two Sample      Status Level: 1  
 Edit Date: 15 Nov-23 9:47      MD5 Hash: 2D32BCBBE81FEEABACFD0CC6E839453      Editor ID: 004-240-257-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	75% passed reproduction endpoint	22.54%

### Equal Variance t Two-Sample Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	18	-1.233	1.734	5.906	CDF	0.8833	Non-Significant Effect

### ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	88.2	88.2	1	1.521	0.2334	Non-Significant Effect
Error	1044	58	18			
Total	1132.2		19			

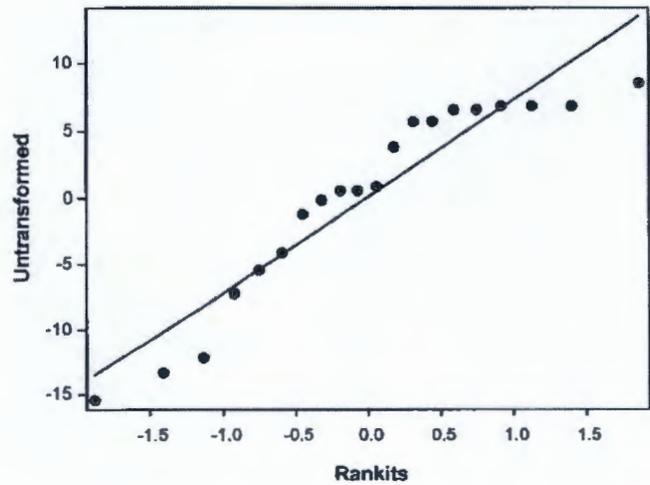
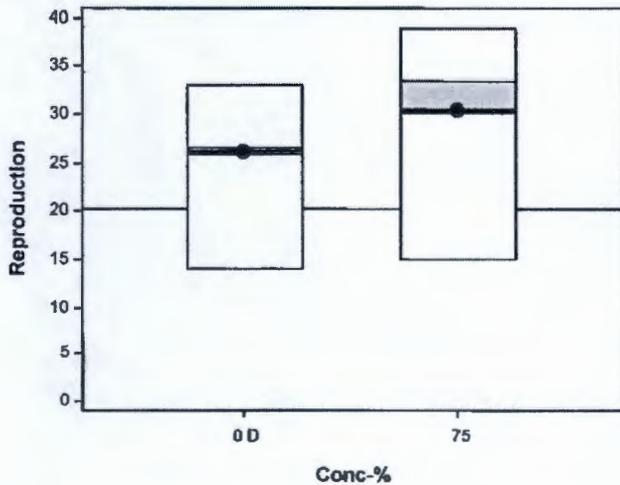
### ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.794	6.541	0.3968	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8818	0.866	0.0191	Normal Distribution

### Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	26.2	21.59	30.81	26.5	14	33	2.037	24.59%	0.00%
75		10	30.4	24.23	36.57	33.5	15	39	2.729	28.39%	-16.03%

### Graphics



**CETIS Analytical Report**

Report Date: 16 Nov-23 14:22 (p 2 of 2)  
 Test Code/ID: L1674532 (CD) / 11-5573-3305

**Ceriodaphnia 7-d Survival and Reproduction Test**

Pace National

Analysis ID: 07-3601-4614      Endpoint: Reproduction      CETIS Version: CETISv2.1.4  
 Analyzed: 15 Nov-23 9:47      Analysis: Parametric-Control vs Treatments      Status Level: 1  
 Edlt Date: 15 Nov-23 9:47      MD5 Hash: 2D32BCBBE81FEEABACFD0CC6E839453      Editor ID: 004-240-257-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	75% passed reproduction endpoint	22.54%

**Dunnett Multiple Comparison Test**

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	18	-1.233	1.734	5.906	CDF	0.8833	Non-Significant Effect

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	88.2	88.2	1	1.521	0.2334	Non-Significant Effect
Error	1044	58	18			
Total	1132.2		19			

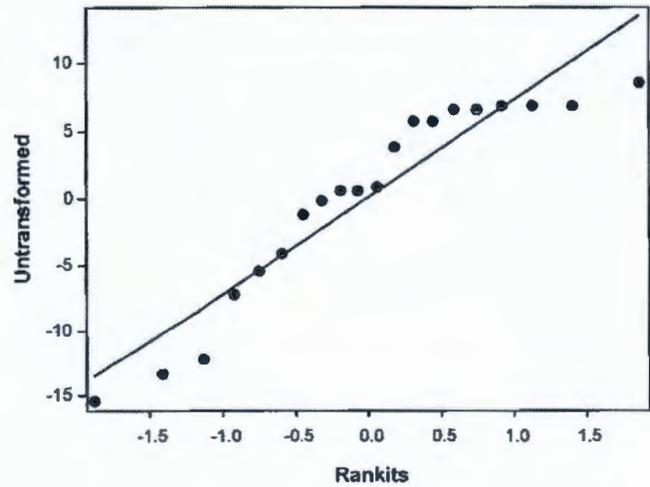
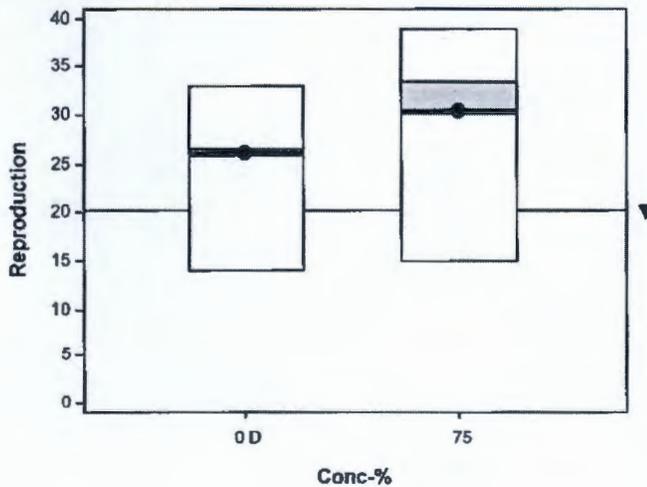
**ANOVA Assumptions Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.794	6.541	0.3968	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8818	0.866	0.0191	Normal Distribution

**Reproduction Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	26.2	21.59	30.81	26.5	14	33	2.037	24.59%	0.00%
75		10	30.4	24.23	36.57	33.5	15	39	2.729	28.39%	-16.03%

**Graphics**



**CETIS Analytical Report**

Report Date: 16 Nov-23 14:22 (p 1 of 1)  
 Test Code/ID: L1674532 (CD) / 11-5573-3305

**Ceriodaphnia 7-d Survival and Reproduction Test**

Pace National

Analysis ID: 06-1387-1316      Endpoint: 7d Survival Rate      CETIS Version: CETISv2.1.4  
 Analyzed: 15 Nov-23 9:47      Analysis: Single 2x2 Contingency Table      Status Level: 1  
 Edit Date: 15 Nov-23 9:47      MD5 Hash: F85215C3900C24ABA031F8B2E812E335      Editor ID: 004-240-257-9

Data Transform	Alt Hyp	Comparison Result
Untransformed	C > T	75% passed 7d survival rate endpoint

**Fisher Exact Test**

Control	vs	Conc-%	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	1.0000	Exact	1.0000	Non-Significant Effect

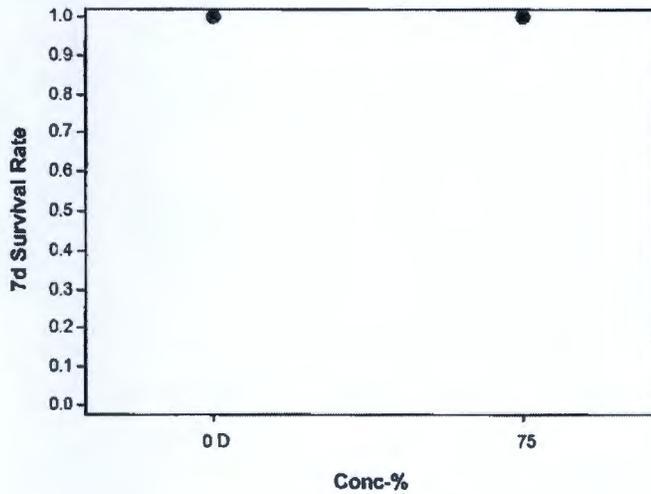
**7d Survival Rate Frequencies**

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	10	0	10	1.0000	0.0000	0.00%
75		10	0	10	1.0000	0.0000	0.00%

**7d Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
75		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

**Graphics**



## TOXICITY TEST DATA SHEET - *Pimephales promelas* (fathead minnow) 7-Day Survival & Weight Data

City of Clanton- Walnut Creek WWTP (OUTFALL 0011)

Test Date:

November 7 -14, 2023

NPDES #:

AL0054631

NUMBER OF SURVIVORS									
Sample Distribution		Sample #1 Tues/Wed		Sample #2 Thurs/Fri		Sample #3 Sat/Sun/Mon			
Day of the Week and Date		Tue 11/7/23	Wed 11/8/23	Thu 11/9/23	Fri 11/10/23	Sat 11/11/23	Sun 11/12/23	Mon 11/13/23	Tue 11/14/23
Effluent Conc. In%	ID of Rep.	0 hours	24 hours	48 hours	72 hours	96 hours	120 hours	144 hours	168 hours
<b>Control</b> 9	A: 1	10	10	10	10	10	10	10	10
	B: 2	10	10	10	10	10	10	10	10
	C: 1	10	10	10	10	10	10	10	10
	D: 2	10	10	10	10	10	10	10	10
<b>75 (PL)</b>	A: 2	10	10	10	10	10	10	10	10
	B: 1	10	10	10	10	10	10	10	9
	C: 2	10	10	10	10	10	10	10	10
	D: 1	10	10	10	10	10	10	10	10
Initials of Analyst Checking Survival		HH	NY	LG/NY	BE	NH	NY	NY	LG/NY
Time that Minnows were Harvested:		16:18	13:25	14:30	14:47	16:33	11:19	11:26	14:18
Carboy used to dilute sample:		L 11-6	L 11-7	LI 11-07	L 11-7	L 11-7	L 11-7	L 11-7	L 11-7

Fish Cup Batch/Lot: **ESC54281**

Brine Shrimp Lot: **281729**

COMMENTS: Minnows used in this test are from ESC Lot#

110723HD Minnows were hatched on

11/7/2023

Survival ≥ 80%?

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>

≥ 0.25mg Average Weight in Surviving Controls?

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Control Valid?

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>

WEIGHT DATA for SURVIVING MINNOWS						
Weight Empty Boat (mg)	Boat w/ Fish (mg)	Weight of Larvae (mg)	Mean Weight of Larvae (mg)	Total of Mean	Mean per Concentration	
A	1288.39	1292.91	4.52	0.452	<b>1.8630</b>	<b>0.4658</b>
B	1284.98	1299.6	4.62	0.462		
C	1288.52	1293.69	5.17	0.517		
D	1287.87	1292.19	4.32	0.432		
A	1288.12	1294.2	6.08	0.608	<b>1.9730</b>	<b>0.4933</b>
B	1288.31	1293.06	4.75	0.475		
C	1290.81	1295.47	4.66	0.466		
D	1289.83	1294.07	4.24	0.424		
Analyst:		NY	HH			

Date & Time Put in Oven	Date & Time Removed
11/14/2023 @14:18	11/16/2023 @ 08:43

Oven Temp:	75°C	Oven Temp:	75°C
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Analyst:	LG	Analyst:	HH
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Login #: L1674532 -01,-02,-03

**CETIS Summary Report**

Report Date: 16 Nov-23 14:25 (p 1 of 1)  
 Test Code/ID: L1674532 (PP) / 17-6627-4817

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace National**

Batch ID: 06-1749-8436	Test Type: Growth-Survival (7d)	Analyst: Hunter Holden
Start Date: 07 Nov-23	Protocol: EPA/821/R-02-013 (2002)	Diluent:
Ending Date: 14 Nov-23	Species: Pimephales promelas	Brine:
Test Length: 7d 0h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: <36

Sample ID: 11-6894-1546	Code: 45ACA1EA	Project:
Sample Date: 06 Nov-23 08:00	Material: POTW Effluent	Source: AL0054631
Receipt Date: 07 Nov-23 10:15	CAS (PC):	Station:
Sample Age: 16h	Client: City of Clanton- Walnut Creek WWTP (OUT)	

Comments: City of Clanton-Walnut Creek WWTP (Outfall-0011) (AL0054631) L1674532-01, -02, -03

**Single Comparison Summary**

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
15-1989-8798	7d Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.5000	75% passed 7d survival rate	1
11-8511-3404	Mean Dry Biomass-mg	Dunnett Multiple Comparison Test	0.7234	75% passed mean dry biomass-mg	1
13-3890-7538	Mean Dry Biomass-mg	Equal Variance t Two-Sample Test	0.7234	75% passed mean dry biomass-mg	1

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
15-1989-8798	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
11-8511-3404	Mean Dry Biomass-mg	Control Resp	0.4657	0.25	<<	Yes	Passes Criteria
13-3890-7538	Mean Dry Biomass-mg	Control Resp	0.4657	0.25	<<	Yes	Passes Criteria
11-8511-3404	Mean Dry Biomass-mg	PMSD	0.1827	0.12	0.3	Yes	Passes Criteria
13-3890-7538	Mean Dry Biomass-mg	PMSD	0.1827	0.12	0.3	Yes	Passes Criteria

**7d Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
75		4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	2.50%

**Mean Dry Biomass-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.4657	0.4079	0.5236	0.432	0.517	0.01818	0.03637	7.81%	0.00%
75		4	0.4932	0.3665	0.62	0.424	0.608	0.03983	0.07966	16.15%	-5.90%

**7d Survival Rate Detail**

MD5: 67A159F08AA165BF8D5EA74CABE430B1

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
75		1.0000	0.9000	1.0000	1.0000

**Mean Dry Biomass-mg Detail**

MD5: 1B5FE7FDCD5986A3E5FC4F3CCB5B1820

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.452	0.462	0.517	0.432
75		0.608	0.475	0.466	0.424

**CETIS Analytical Report**

Report Date: 16 Nov-23 14:25 (p 1 of 3)  
 Test Code/ID: L1674532 (PP) / 17-6627-4817

**Fathead Minnow 7-d Larval Survival and Growth Test**

Pace National

Analysis ID: 15-1989-8798      Endpoint: 7d Survival Rate      CETIS Version: CETISv2.1.4  
 Analyzed: 16 Nov-23 11:29      Analysis: Nonparametric-Two Sample      Status Level: 1  
 Edit Date: 16 Nov-23 11:28      MD5 Hash: 67A159F08AA165BF8D5EA74CABE430B1      Editor ID:

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	75% passed 7d survival rate endpoint	5.56%

**Wilcoxon Rank Sum Two-Sample Test**

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	6	16	—	1	Exact	0.5000	Non-Significant Effect

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0033199	0.0033199	1	1	0.3559	Non-Significant Effect
Error	0.0199195	0.0033199	6			
Total	0.0232394		7			

**ANOVA Assumptions Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.7065	0.6451	0.0027	Non-Normal Distribution

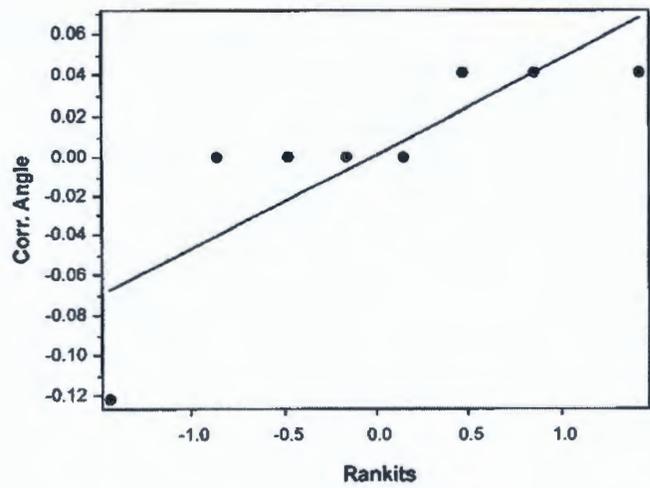
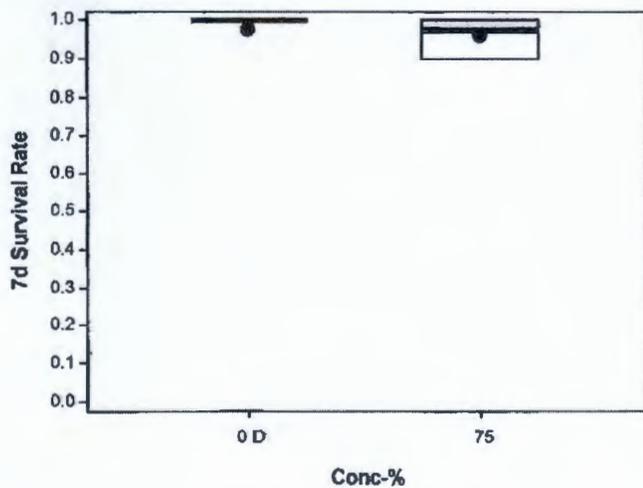
**7d Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
75		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%

**Angular (Corrected) Transformed Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
75		4	1.3710	1.2420	1.5010	1.4120	1.2490	1.4120	0.0407	5.94%	2.89%

**Graphics**



**CETIS Analytical Report**

Report Date: 16 Nov-23 14:25 (p 3 of 3)  
 Test Code/ID: L1674532 (PP) / 17-6627-4817

**Fathead Minnow 7-d Larval Survival and Growth Test**

Pace National

Analysis ID: 11-8511-3404      Endpoint: Mean Dry Biomass-mg      CETIS Version: CETISv2.1.4  
 Analyzed: 16 Nov-23 11:29      Analysis: Parametric-Control vs Treatments      Status Level: 1  
 Edit Date: 16 Nov-23 11:28      MD5 Hash: 1B5FE7FDCD5986A3E5FC4F3CCB5B182      Editor ID:

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	75% passed mean dry biomass-mg endpoint	18.27%

**Dunnett Multiple Comparison Test**

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	6	-0.628	1.943	0.08509	CDF	0.7234	Non-Significant Effect

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0015124	0.0015124	1	0.3944	0.5531	Non-Significant Effect
Error	0.0230066	0.0038344	6			
Total	0.0245191		7			

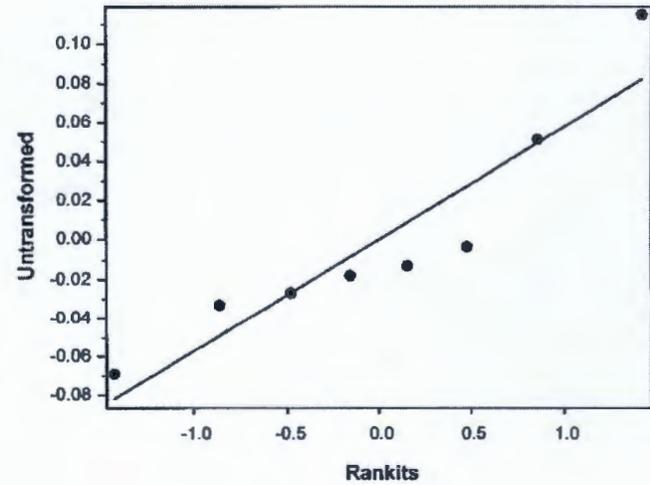
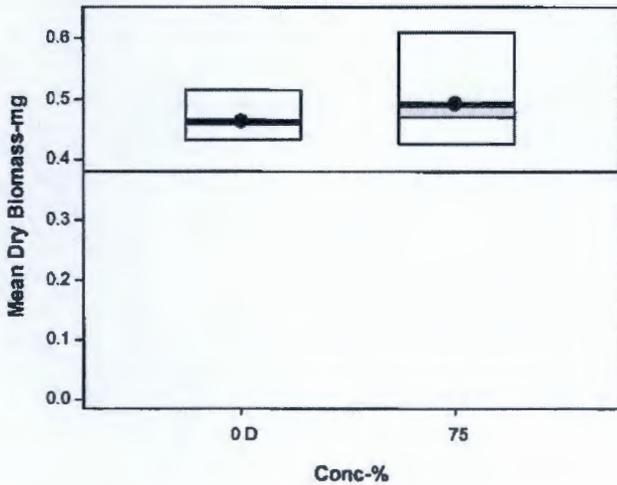
**ANOVA Assumptions Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	4.798	47.47	0.2302	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8837	0.6451	0.2041	Normal Distribution

**Mean Dry Biomass-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.4657	0.4079	0.5236	0.457	0.432	0.517	0.01818	7.81%	0.00%
75		4	0.4932	0.3665	0.62	0.4705	0.424	0.608	0.03983	16.15%	-5.90%

**Graphics**



**CETIS Analytical Report**

Report Date: 16 Nov-23 14:25 (p 2 of 3)  
 Test Code/ID: L1674532 (PP) / 17-6627-4817

**Fathead Minnow 7-d Larval Survival and Growth Test**

Pace National

Analysis ID: 13-3890-7538      Endpoint: Mean Dry Biomass-mg      CETIS Version: CETISv2.1.4  
 Analyzed: 16 Nov-23 11:29      Analysis: Parametric-Two Sample      Status Level: 1  
 Edit Date: 16 Nov-23 11:28      MD5 Hash: 1B5FE7FDCCD5986A3E5FC4F3CCB5B182      Editor ID:

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	75% passed mean dry biomass-mg endpoint	18.27%

**Equal Variance t Two-Sample Test**

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		75	6	-0.628	1.943	0.08508	CDF	0.7234	Non-Significant Effect

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0015124	0.0015124	1	0.3944	0.5531	Non-Significant Effect
Error	0.0230066	0.0038344	6			
Total	0.0245191		7			

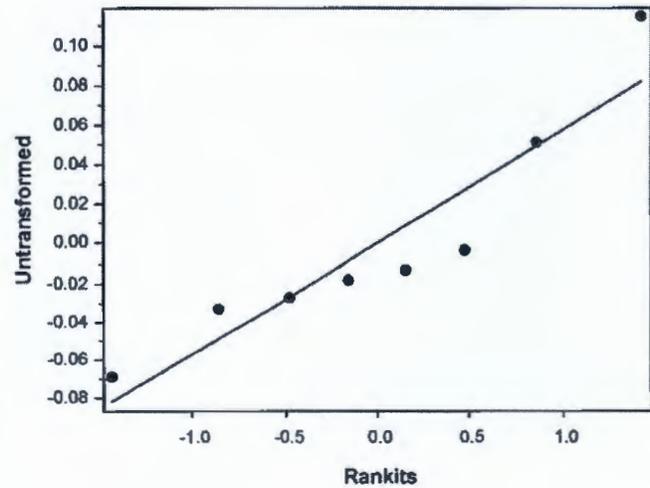
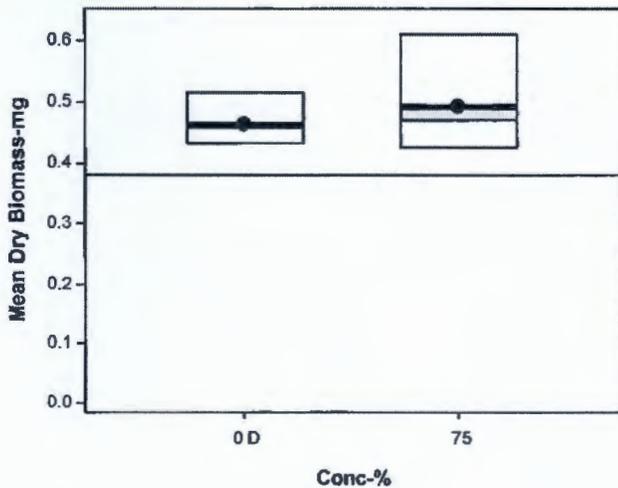
**ANOVA Assumptions Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	4.798	47.47	0.2302	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8837	0.6451	0.2041	Normal Distribution

**Mean Dry Biomass-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.4657	0.4079	0.5236	0.457	0.432	0.517	0.01818	7.81%	0.00%
75		4	0.4932	0.3665	0.62	0.4705	0.424	0.608	0.03983	16.15%	-5.90%

**Graphics**

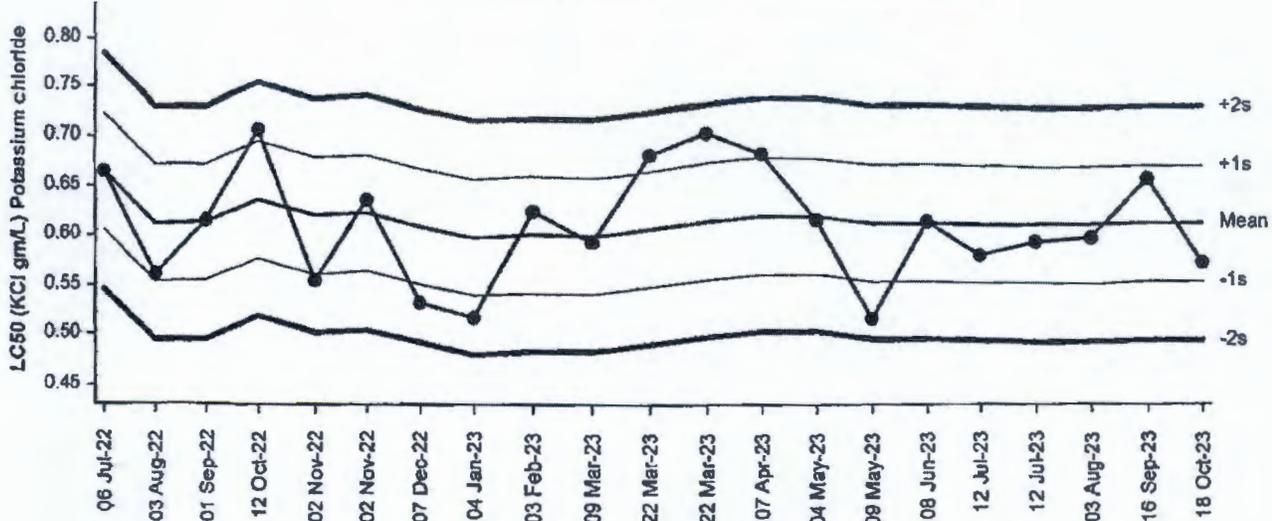


Control Chart Acute C. dubia 48-hr Survival for October 2023

Pace National

Test Type: Survival (48h) Organism: Ceriodaphnia dubia Material: Potassium chloride  
 Protocol: EPA/621/R-02-012 (2002) Endpoint: 48h Survival Rate Source: Reference Toxicant-REF

Control Chart Acute C. dubia 48-hr Survival for October 2023



Cumulative Mean Plot

Mean: 0.6137 Count: 20 -1s Warning Limit: 0.555 -2s Action Limit: 0.496  
 Sigma: 0.05903 CV: 9.62% +1s Warning Limit: 0.673 +2s Action Limit: 0.732

Quality Control Data

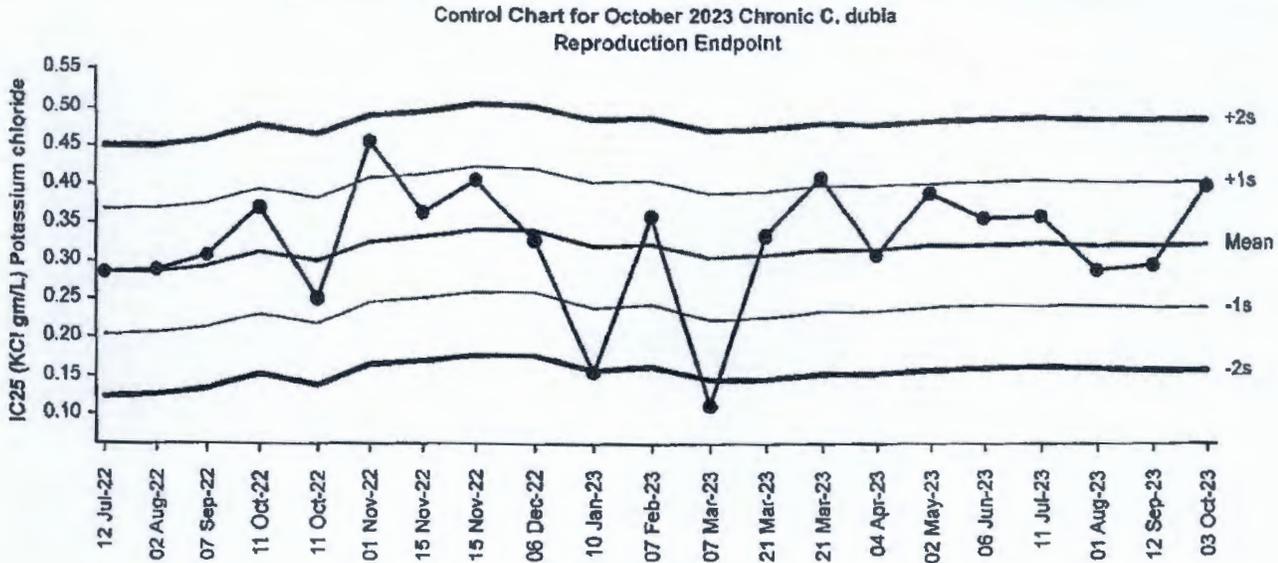
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	Jul	6	0:00	0.665	0.05128	0.8688			20-1883-1202	03-6685-7311
2		Aug	3	0:00	0.5608	-0.05285	-0.8953			20-6612-7622	14-0303-1707
3		Sep	1	0:00	0.6156	0.001872	0.03172			04-2752-1120	02-8623-0840
4		Oct	12	0:00	0.7079	0.0942	1.596	(+)		10-4753-2368	16-9748-6755
5		Nov	2	0:00	0.5548	-0.05892	-0.9981			14-3758-1715	01-9316-1155
6			2	0:00	0.6373	0.02358	0.3995			05-7376-4718	01-9269-7148
7		Dec	7	0:00	0.5339	-0.07982	-1.352	(-)		03-1977-7791	04-4658-9811
8	2023	Jan	4	15:38	0.5176	-0.09607	-1.627	(-)		19-2881-9771	08-7150-7134
9		Feb	3	0:00	0.6248	0.01108	0.1878			05-7248-9777	17-3233-5037
10		Mar	9	0:00	0.5946	-0.0191	-0.3235			03-9936-4411	15-1406-4476
11			22	0:00	0.683	0.06932	1.174	(+)		06-3469-5430	06-4786-0070
12			22	0:00	0.7071	0.09341	1.582	(+)		16-2347-2667	03-1919-8392
13		Apr	7	0:00	0.6864	0.07266	1.231	(+)		19-7511-7566	09-0761-4617
14		May	4	0:00	0.8174	0.003716	0.06296			08-0109-3518	16-9676-9083
15			9	0:00	0.6178	-0.09607	-1.627	(-)		02-5040-1659	09-1840-9022
16		Jun	8	0:00	0.6156	0.001872	0.03172			19-4588-8843	00-2894-1441
17		Jul	12	0:00	0.5815	-0.03216	-0.5448			05-2749-9546	19-1669-1936
18			12	0:00	0.5954	-0.01833	-0.3108			20-9189-3269	11-2463-2214
19		Aug	3	0:00	0.5982	-0.01553	-0.2631			21-3186-6195	14-1081-0881
20		Sep	16	0:00	0.6598	0.04605	0.7802			00-3543-5396	07-6258-6903
21		Oct	18	0:00	0.5743	-0.03935	-0.6666			05-7833-6281	04-9322-4291



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October 2023  
 Reference Toxicant Test

Control Chart for October 2023 Chronic C. dubia		Pace National
Test Type: Reproduction-Survival (7d)	Organism: Ceriodaphnia dubia	Material: Potassium chloride
Protocol: EPA/821/R-02-013 (2002)	Endpoint: Reproduction	Source: Reference Toxicant-REF



Cumulative Mean Plot

Mean: 0.32      Count: 20      -1s Warning Limit: 0.238      -2s Action Limit: 0.157  
 Sigma: 0.08153      CV: 25.50%      +1s Warning Limit: 0.401      +2s Action Limit: 0.483

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	Jul	12	0:00	0.2851	-0.03492	-0.4283			15-1307-8186	09-4631-8087
2		Aug	2	0:00	0.2881	-0.03186	-0.3908			18-1562-6647	16-6797-4975
3		Sep	7	0:00	0.3087	-0.01126	-0.1381			15-7526-9889	01-9788-9819
4		Oct	11	0:00	0.3708	0.05081	0.6232			13-9169-7267	11-8396-2557
5			11	0:00	0.2499	-0.07013	-0.8602			08-6317-6106	09-3990-0839
6		Nov	1	0:00	0.4536	0.1336	1.638	(+)		03-0407-5293	10-2163-8215
7			15	0:00	0.3633	0.04333	0.5315			03-4567-6864	15-4496-9675
8			15	0:00	0.4036	0.08364	1.026	(+)		11-9182-8221	14-2283-9617
9		Dec	6	0:00	0.3279	0.007869	0.09651			01-4008-8111	11-0808-9560
10	2023	Jan	10	0:00	0.1542	-0.1658	-2.034	(-)	(-)	12-2636-3897	00-7206-7033
11		Feb	7	0:00	0.3562	0.03618	0.4438			11-6882-0682	00-6162-2723
12		Mar	7	0:00	0.1095	-0.2105	-2.582	(-)	(-)	04-5210-7027	12-8218-2998
13			21	0:00	0.3336	0.01364	0.1673			07-3346-0360	04-1404-3465
14			21	0:00	0.4059	0.0859	1.054	(+)		00-7834-0566	01-6800-3889
15		Apr	4	0:00	0.3073	-0.01273	-0.1561			04-0144-7221	12-4856-2656
16		May	2	15:25	0.3875	0.08747	0.8275			07-3090-7506	16-5783-8486
17		Jun	6	0:00	0.3538	0.03381	0.4147			03-0317-5529	02-2251-7138
18		Jul	11	0:00	0.3579	0.03793	0.4652			10-4576-5476	16-0484-2772
19		Aug	1	0:00	0.2877	-0.03227	-0.3958			12-3871-4439	08-2119-6381
20		Sep	12	0:00	0.2946	-0.02538	-0.3113			08-2658-4206	12-4575-1377
21		Oct	3	0:00	0.3975	0.0775	0.9506			08-9805-9293	13-8290-3379

## October 2023 Reference Toxicant Test



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Analyst: BE  
CM      QA: CM

October 2023 Acute Minnow Reference Toxicant

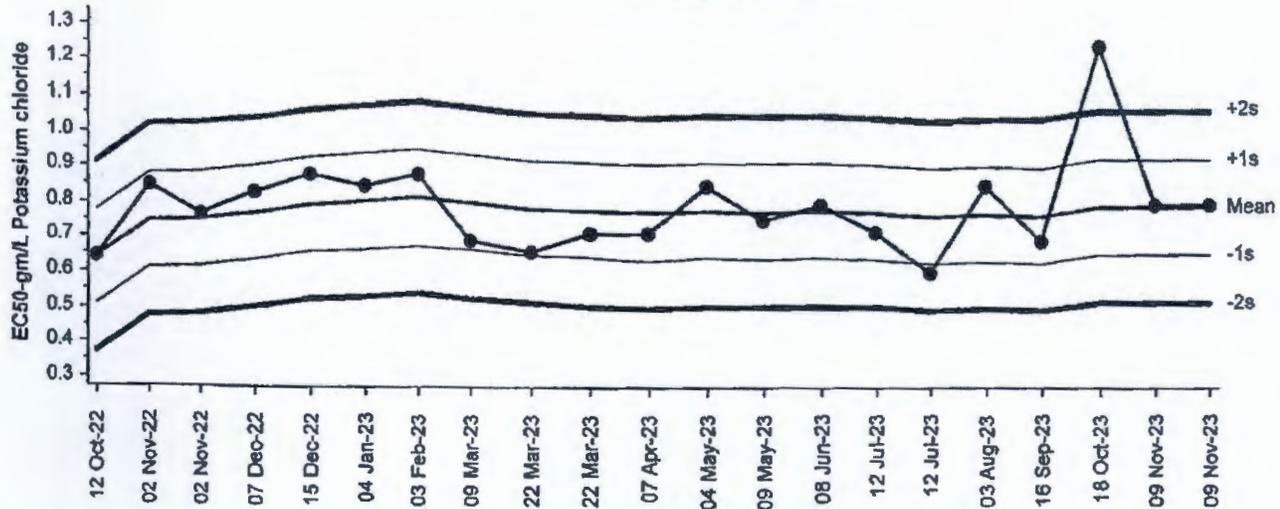
Pace National

Test Type: Survival (48h)  
Protocol: EPA/821/R-02-012 (2002)

Organism: Pimephales promelas  
Endpoint: 48h Survival Rate

Material: Potassium chloride  
Source: Reference Toxicant-REF

October 2023 Acute Minnow Reference Toxicant  
48h Survival Rate Endpoint



Cumulative Mean Plot

Mean: 0.7876    Count: 20    -1s Warning Limit: 0.652    -2s Action Limit: 0.516  
Sigma: 0.1356    CV: 17.20%    +1s Warning Limit: 0.923    +2s Action Limit: 1.06

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	Oct	12	0:00	0.6431	-0.1445	-1.066	(-)		10-4559-2416	04-3538-5448
2		Nov	2	0:00	0.8485	0.06093	0.4493			05-8280-4747	09-6092-6380
3			2	0:00	0.7647	-0.02286	-0.1686			08-9947-6221	01-5146-7539
4		Dec	7	0:00	0.8332	0.04559	0.3362			12-5403-4948	06-4767-7762
5			15	0:00	0.8785	0.09085	0.67			10-8488-5491	01-8284-8871
6	2023	Jan	4	16:35	0.8485	0.06093	0.4493			14-8417-7424	01-3680-7502
7		Feb	3	0:00	0.8785	0.09085	0.67			08-2744-6479	05-3269-2843
8		Mar	9	0:00	0.6892	-0.09838	-0.7255			08-8553-0359	10-7728-3794
9			22	0:00	0.6616	-0.126	-0.9291			17-9680-7686	07-1615-6986
10			22	0:00	0.7144	-0.07316	-0.5395			02-6333-0526	17-5639-5245
11		Apr	7	0:00	0.7135	-0.07408	-0.5463			11-3893-4807	06-5379-1088
12		May	4	0:00	0.8485	0.06093	0.4493			18-0222-7184	04-3445-4247
13			9	0:00	0.7493	-0.03834	-0.2827			12-9270-0151	02-5623-4967
14		Jun	8	0:00	0.7917	0.004105	0.03027			07-3743-5824	16-1505-9482
15		Jul	12	0:00	0.7177	-0.06994	-0.5158			01-7595-6026	20-7543-1580
16			12	0:00	0.6	-0.1876	-1.383	(-)		10-0130-7917	13-8603-1159
17		Aug	3	0:00	0.8485	0.06093	0.4493			18-3716-6191	05-2993-6361
18		Sep	16	0:00	0.6892	-0.09838	-0.7255			04-7411-0561	19-6222-6401
19		Oct	18	0:00	1.242	0.4547	3.353	(+)	(+)	00-8517-9439	10-8529-2015
20		Nov	9	0:00	0.7917	0.004105	0.03027			07-2389-8093	03-0644-9994
21			9	0:00	0.7917	0.004105	0.03027			17-1893-6483	16-3942-2741

13)  
A)

October 2023  
Reference Toxicant Test



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Analyst: FD    QA: em

Control Chart for October 2023 Fathead Minnow 7-d Larval Survival and Growth

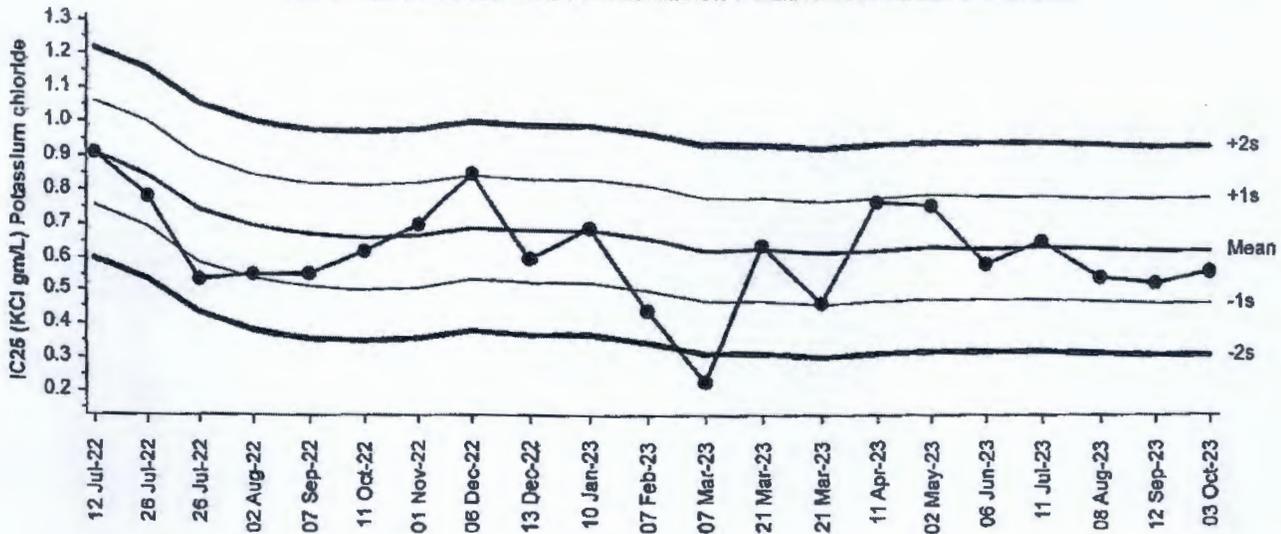
Pace National

Test Type: Growth-Survival (7d)  
Protocol: EPA/821/R-02-013 (2002)

Organism: Pimephales promelas  
Endpoint: Mean Dry Biomass-mg

Material: Potassium chloride  
Source: Reference Toxicant-REF

Control Chart for October 2023 Fathead Minnow 7-d Larval Survival and Growth Test



Cumulative Mean Plot

Mean: 0.6187      Count: 20      -1s Warning Limit: 0.464      -2s Action Limit: 0.309  
Sigma: 0.1546      CV: 25.00%      +1s Warning Limit: 0.773      +2s Action Limit: 0.928

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	Jul	12	0:00	0.9066	0.2879	1.862	(+)		16-6506-9443	15-0798-7314
2			26	0:00	0.7835	0.1648	1.066	(+)		19-0473-6151	12-6273-8432
3			26	0:00	0.6374	-0.08133	-0.526			19-4942-5191	04-5442-7316
4		Aug	2	0:00	0.555	-0.06366	-0.4118			19-1946-6261	11-8962-4924
5		Sep	7	0:00	0.5543	-0.06439	-0.4165			02-9571-6313	07-7130-6948
6		Oct	11	0:00	0.6219	0.003224	0.02085			13-4135-9262	14-1807-1570
7		Nov	1	0:00	0.7002	0.08161	0.5273			03-8298-1282	20-1630-0952
8		Dec	6	0:00	0.8507	0.232	1.5	(+)		11-8243-9955	18-2874-2180
9			13	0:00	0.598	-0.02075	-0.1342			19-4685-8141	18-1138-2883
10	2023	Jan	10	0:00	0.6866	0.06788	0.4391			20-7776-6309	01-8621-9663
11		Feb	7	0:00	0.4417	-0.177	-1.145	(-)		12-1351-4663	18-3544-8825
12		Mar	7	0:00	0.2295	-0.3892	-2.518	(-)	(-)	07-8764-0413	16-0757-3216
13			21	0:00	0.6367	0.01795	0.1161			18-1704-2013	18-3646-1702
14			21	0:00	0.4613	-0.1574	-1.018	(-)		19-3963-1398	07-5930-3144
15		Apr	11	0:00	0.7635	0.1448	0.9366			13-5889-0444	13-2829-8679
16		May	2	16:12	0.7524	0.1337	0.8649			12-0902-6907	00-6563-8574
17		Jun	6	0:00	0.5805	-0.0382	-0.2471			05-4260-8715	05-7522-8765
18		Jul	11	0:00	0.6475	0.02879	0.1862			10-0002-6135	08-7755-5351
19		Aug	8	0:00	0.5414	-0.0773	-0.5			11-1782-0090	11-1980-9997
20		Sep	12	0:00	0.5247	-0.09399	-0.608			20-5596-9430	20-6476-5785
21		Oct	3	0:00	0.5568	-0.06193	-0.4006			06-3515-8771	04-3928-9017



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October 2023  
Reference Toxicant Test



Reviewed by: BE

Control Water (Tank ID): F 101623

Control Water (Begin Use Date): 10/18/2023

## Ceriodaphnia dubia Acute Reference Toxicant Test

Month of: OCTOBER 2023

Test Start Date: October 18, 2023

Toxicant: potassium chloride (KCl)

Thermometer Serial #: 38190150WS

Measurements taken directly in test chamber. Temperatures recorded in degrees Celsius.

Toxicant (g/L)		Analyst: NY	Analyst: NY	Analyst: NY	Analyst: BE
		0 hrs	24 hrs (morning)	24 hrs (afternoon)	48 hrs (morning)
CONTROL	<i>Ceriodaphnia</i>	25.8°C	24.6°C	24.6°C	24.9°C
0.0625	<i>Ceriodaphnia</i>	25.6°C	24.5°C	24.5°C	25.1°C
0.125	<i>Ceriodaphnia</i>	25.6°C	24.3°C	24.6°C	25.0°C
0.25	<i>Ceriodaphnia</i>	25.6°C	24.3°C	24.6°C	25.1°C
0.5	<i>Ceriodaphnia</i>	25.5°C	24.2°C	24.3°C	25.2°C
1	<i>Ceriodaphnia</i>	25.6°C	24.5°C	24.3°C	-

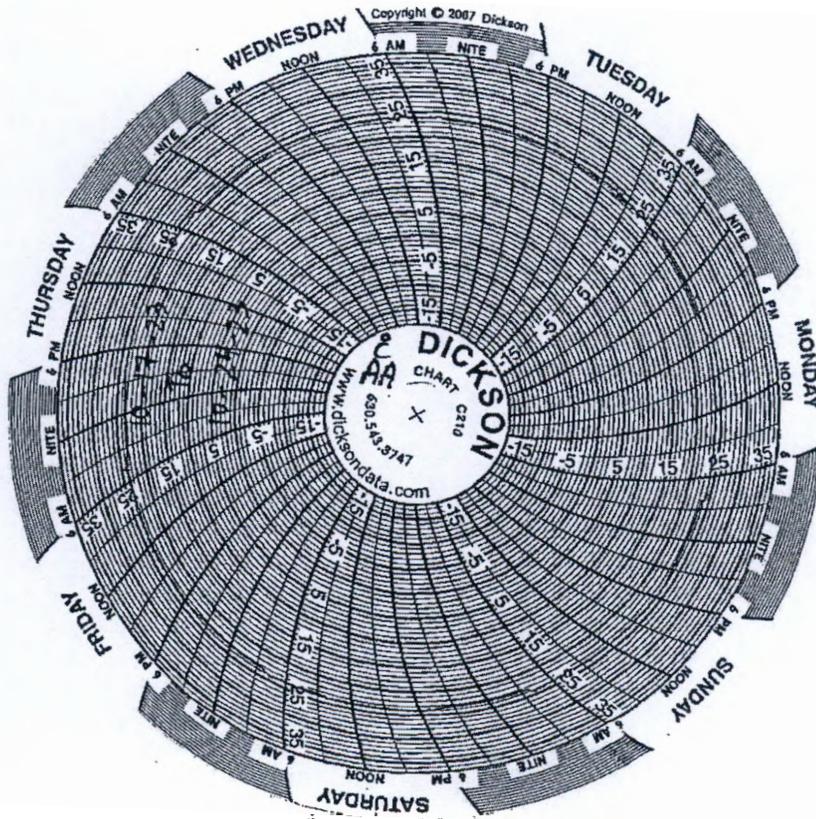
	Total Cl2 (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	
CONTROL	< 0.2	46.5	84	L1667326-04
1%	< 0.2	50.1	85.2	

## October 2023 Reference Toxicant Test

Sample ID: *Ceriodaphnia dubia* Acute Reference Toxicant Test

Chart Devices Used in  
CrownTonka Walk-in  
Incubator:

Dickson (small chart)



## October 2023 Reference Toxicant Test

ACUTE TOXICITY TEST DATA SHEET - *Ceriodaphnia dubia* (water flea)

Client **C. dubia 48-hr Acute Reference Toxicant Test**

Toxicant Used: potassium chloride

Template Name:  
Violet

Begin **October 18, 2023**

Time **15:00**

\*end test +/- 2 hr from start time Test Duration: **48 hours**

Month of:

End **20-Oct-23**

Time **14:12**

Dilution Water: Moderately Hard SDW

**OCTOBER**

TAC: Test Acceptability Criteria

Survival ≥ 90%

Control Valid?

C. dubia

Yes

No

**48-hr Acute Reference Toxicant Test**

Effluent In Percent (%)	Replicate Position	# OF LIVE <i>C. dubia</i>			
		0 hrs	24 hrs	48 hrs	
CONTROL	A:	1	5	5	5
	B:	2	5	5	5
	C:	5	5	5	5
	D:	5	5	5	5
0.0625	A:	2	5	5	5
	B:	1	5	5	5
	C:	4	5	5	5
	D:	6	5	5	5
0.125	A:	3	5	5	5
	B:	3	5	5	5
	C:	6	5	5	5
	D:	2	5	5	5
0.25	A:	4	5	5	5
	B:	5	5	5	5
	C:	3	5	5	5
	D:	1	5	5	5
0.5	A:	5	5	5	5
	B:	6	5	5	2
	C:	2	5	5	2
	D:	4	5	5	5
1.0	A:	6	5	0	0
	B:	4	5	0	0
	C:	1	5	0	0
	D:	3	5	0	0
Checked By: NY	Biologist	LG	NY	NH	
	Time	15:00	16:11	14:12	

Check here to confirm final temperatures have been recorded on the temperature benchsheet.

x

pH (std. units)		Dissolved Oxygen (mg/L)	
0 hrs	final	0 hrs	final
initial		initial	
7.2	7.7	8.6	8.6
initial		initial	
7.5	7.6 / 7.7	8.5	8.7 / 8.7
initial		initial	
7.5	7.6	8.4	8.7
initial		initial	
7.6	7.7	8.4	8.8
initial		initial	
7.8	7.7	8.3	8.8
initial		initial	
7.6	5.7	8.3	9.2

Conductivity (umhos/cm)	
0 hrs	final
initial	
322	344.3
initial	
434	462 / 461.9
initial	
548	576.3
initial	
770	813.2
initial	
1219	1277
initial	
2105	2186

Initial Readings By: NY  
Time: 14:25

Final Readings By: BE  
Time: 16:57

KCl Stock Solution Lot: 101823KCL

Intials Date

KCl Stock Solution Prepared: NH 101823

Mixing up dilution series: NY 10/18/2023



C. dubia Cup Batch/Lot:	ESC55242	Algae Lot:	092623	Yct Lot:	092623
-------------------------	----------	------------	--------	----------	--------

Data divided by a slash mark (/) indicates that a duplicate was run on that parameter.

C. dubia are < 24 hrs old; C. dubia were harvested from tray

101723AD1/AD2

on 10/17/2023

@

17:10

to

10/18/23

@

9:42

C. dubia were fed 10/18/2023 @ 11:30

**October 2023  
Reference Toxicant Test**

**CETIS Summary Report**

Report Date: 08 Nov-23 09:22 (p 1 of 1)  
 Test Code/ID: 101823(CDA) / 05-7833-6281

**Ceriodaphnia 48-h Acute Survival Test**

Pace National

Batch ID: 11-6022-3818	Test Type: Survival (48h)	Analyst:
Start Date: 18 Oct-23	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 20 Oct-23	Species: Ceriodaphnia dubia	Brine:
Test Length: 48h	Taxon: Branchiopoda	Source: In-House Culture
		Age: <24

Sample ID: 09-4543-6593	Code: 385A37B1	Project:
Sample Date: 18 Oct-23	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 18 Oct-23	CAS (PC):	Station: In House
Sample Age: —	Client: Reference Toxicant	

Comments: Reference Toxicant October 2023 Acute C. dubia

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
04-9322-4291	48h Survival Rate	Spearman-Kärber	LC50	0.574	0.498	0.662	1

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
04-9322-4291	48h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

**48h Survival Rate Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.0625		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.125		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.25		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.5		4	0.700	0.149	1.250	0.400	1.000	0.173	0.346	49.49%	30.00%
1		4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	—	100.00%

**48h Survival Rate Detail**

MD5: 8057EE39819B7A6121E7CA7D302342DA

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.000	1.000	1.000	1.000
0.0625		1.000	1.000	1.000	1.000
0.125		1.000	1.000	1.000	1.000
0.25		1.000	1.000	1.000	1.000
0.5		1.000	0.400	0.400	1.000
1		0.000	0.000	0.000	0.000

**October 2023  
 Reference Toxicant Test**

**CETIS Analytical Report**

Report Date: 08 Nov-23 09:22 (p 1 of 1)  
 Test Code/ID: 101823(CDA) / 05-7833-6281

**Ceriodaphnia 48-h Acute Survival Test**

Pace National

Analysis ID: 04-9322-4291      Endpoint: 48h Survival Rate      CETIS Version: CETISv2.1.4  
 Analyzed: 08 Nov-23 9:22      Analysis: Untrimmed Spearman-Kärber      Status Level: 1  
 Edit Date: 08 Nov-23 9:20      MD5 Hash: 8057EE39819B7A6121E7CA7D302342DA      Editor ID: 001-600-314-4

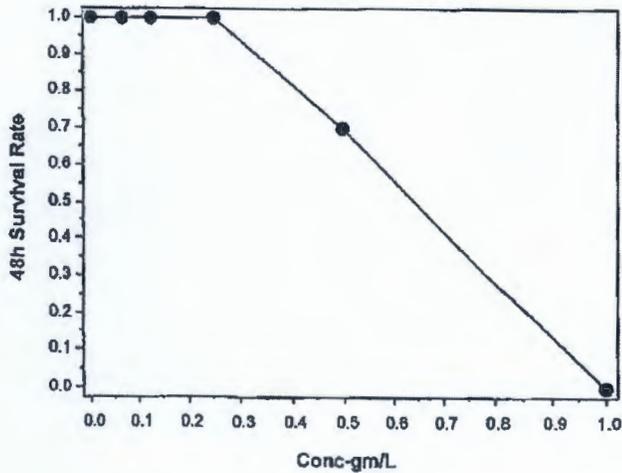
**Spearman-Kärber Estimates**

Threshold Option	Threshold	Trim	Mu	Sigma	LC50	95% LCL	95% UCL
Control Threshold	0	0.00%	-0.241	0.0308	0.574	0.498	0.652

**48h Survival Rate Summary**

Conc-gm/L	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	D	4	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.0625		4	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.125		4	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.25		4	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.5		4	0.700	0.700	0.400	1.000	49.49%	30.00%	14/20	0.700	30.00%
1		4	0.000	0.000	0.000	0.000	—	100.00%	0/20	0.000	100.00%

**Graphics**



**October 2023  
Reference Toxicant Test**

Reference Toxicant October 2023

NPDES #: KCI

Test Date: October 3-10, 2023

Login #: Potassium Chloride

Tue 10/3/23

Initials	pH	Cond.	DO	Time	Analyst
Control	8	376.4	7.7	16:55:05	LG
Dup. Control	8.1	376.2	8.3	16:55:36	LG
0.05	8.3	469.6	8.4	16:56:22	LG
Dup. 0.05	8.4	469.5	8.5	16:56:51	LG
0.1	8.4	584.7	8.5	16:57:17	LG
Dup. 0.1	8.4	584.7	8.6	16:57:44	LG
0.2	8.3	794.9	8.7	16:58:10	LG
Dup. 0.2	8.2	798.8	8.7	16:58:38	LG
0.4	8.1	1237	8.7	16:59:01	LG
Dup. 0.4	8	1231	8.6	16:59:25	LG
0.8	8	2001	8.6	17:00:35	LG
Dup. 0.8	8	2003	8.6	17:00:57	LG

Comments

Control # 11

KCI Stock Solution Lot: 100323KCI

	Initials	Date
KCI Stock Solution Prepared:	CM	10/3/2023
Mixing up dilution series:	BE	10/3/2023

Wed 10/4/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.8	348.2	9.8	9:37:59	LG
0.05	8.3	439.5	9.9	9:39:10	LG
0.1	8.3	552.5	9.7	9:39:47	LG
0.2	8.3	751.3	9.6	9:40:17	LG
0.4	8.2	1146	9.6	9:40:43	LG
0.8	8.1	1896	9.8	9:41:11	LG

Ceriodaphnia dubia (water flea)

Initials	pH	DO	Time	Analyst
Control	8	8.1	17:45:21	cm
Dup. Control	8	8.4	17:45:40	cm
0.05	8	8.4	17:46:03	cm
Dup. 0.05	8	8.5	17:46:22	cm
0.1	8	8.5	17:46:48	cm
Dup. 0.1	8	8.4	17:47:08	cm
0.2	8	8.3	17:47:32	cm
Dup. 0.2	8	8.2	17:47:50	cm
0.4	8	8.2	17:48:17	cm
Dup. 0.4	8	8.3	17:48:36	cm
0.8	8	8.3	17:49:09	cm
Dup. 0.8	8	8.4	17:49:27	cm

Thu 10/5/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.8	337.4	10.2	9:22:40	LG
0.05	8.2	436.3	10.5	9:24:08	LG
0.1	8.3	538.2	10.1	9:24:04	LG
0.2	8.3	745	10	9:25:09	LG
0.4	8.2	1124	10	9:25:34	LG
0.8					LG

Ceriodaphnia dubia (water flea)

Initials	pH	DO	Time	Analyst
Control	8	8.7	17:26:33	NH
0.05	8	8.7	17:27:42	NH
0.1	8.1	8.7	17:28:28	NH
0.2	8	8.7	17:29:01	NH
0.4	8	8.6	17:29:42	NH
0.8				NH

Fri 10/6/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.7	336.6	8.7	9:08:30	LG
0.05	8	429	10.1	9:09:36	LG
0.1	8.2	534.3	10.4	9:10:16	LG
0.2	8.2	735.7	10.4	9:10:48	LG
0.4	8.2	1120	10.4	9:11:10	LG
0.8					LG

Ceriodaphnia dubia (water flea)

Initials	pH	DO	Time	Analyst
Control	7.8	8.4	11:12:02	NH
0.05	7.9	8.5	11:12:36	NH
0.1	7.9	8.7	11:13:00	NH
0.2	7.9	8.8	11:13:20	NH
0.4	7.9	8.6	11:13:41	NH
0.8				NH

October 2023  
Reference Toxicant Test

Reference Toxicant October 2023

NPDES #: KCI

Test Date: October 3-10, 2023

LogIn #: Potassium Chloride

Sat 10/7/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.9	338.5	10.6	8:40:37	HH
0.05	8.1	437.1	10.7	8:41:36	HH
0.1	8.2	543.3	10.6	8:42:17	HH
0.2	8.2	746.8	10.6	8:42:42	HH
0.4	8.1	1136	10.5	8:43:08	HH
0.8					HH

Ceriodaphnia dubia (water flea)

Initials	pH	DO	Time	Analyst
Control	6.9	8.3	15:57:16	RJ
0.05	7.2	8.5	15:59:07	RJ
0.1	7.7	8.5	16:00:16	RJ
0.2	7.7	9	16:00:38	RJ
0.4	7.7	9	16:01:42	RJ
0.8				RJ

Sun 10/8/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.9	363	10.3	10:54:08	ML
0.05	8.2	449.5	10.5	10:55:02	ML
0.1	8.3	557.5	10.1	10:55:40	ML
0.2	8.3	761.5	10	10:56:44	ML
0.4	8.2	1166	10.1	10:57:42	ML
0.8					ML

Ceriodaphnia dubia (water flea)

Initials	pH	DO	Time	Analyst
Control	8.1	9	14:31:47	ML
0.05	8.1	8.9	14:32:09	ML
0.1	8.1	8.9	14:32:28	ML
0.2	8.1	8.8	14:32:47	ML
0.4	8.1	8.8	14:33:13	ML
0.8				ML

Mon 10/9/23

Initials	pH	Cond.	DO	Time	Analyst
Control					
0.05					
0.1					0
0.2					0
0.4					0
0.8					0

Ceriodaphnia dubia (water flea)

Initials	pH	DO	Time	Analyst
Control	8.1	8.9	16:32:09	ML
0.05	8	8.8	16:32:32	ML
0.1	8.1	8.7	16:33:01	ML
0.2	8.1	8.6	16:33:24	ML
0.4	8.1	8.6	16:33:44	ML
0.8				ML

Tue 10/10/23

Initials	pH	Cond.	DO	Time	Analyst
Control					
0.05					
0.1					0
0.2					0
0.4					0
0.8					0

Ceriodaphnia dubia (water flea)

Initials	pH	DO	Time	Analyst
Control				
0.05				
0.1				0
0.2				0
0.4				0
0.8				0

Initials	pH		Conductivity		DO	
	range	mean	range	mean	range	mean
Control	7.6-8.1	7.9	336.6-376.4	354	7.7-10.6	9.4
0.05	8-8.4	8.2	429-469.6	447	8.4-10.7	9.8
0.1	8.2-8.4	8.3	534.3-584.7	556	8.5-10.6	9.7
0.2	8.2-8.3	8.3	735.7-798.8	762	8.7-10.6	9.7
0.4	8-8.2	8.1	1120-1237	1166	8.6-10.5	9.7
0.8	8-8.1	8.0	1896-2093	1967	8.6-9.8	9.0

Initials	pH		DO	
	range	mean	range	mean
Control	6.9-8.1	7.8	8.1-9	8.5
0.05	7.2-8.1	7.9	8.4-8.9	8.6
0.1	7.7-8.1	8.0	8.4-8.9	8.6
0.2	7.7-8.1	8.0	8.2-9	8.6
0.4	7.7-8.1	8.0	8.2-9	8.6
0.8	8-8	8.0	8.3-8.4	8.4

October 2023  
Reference Toxicant Test

# Reference Toxicant October 2023

## Ceriodaphnia dubia (water flea)

Toxicant Potassium Chloride Test Date: October 3-10, 2023 Lot of KCl Used: 100323KCl

### Reference Toxicant Control SDW

L# of Control	Control Water Tank ID	Begin Use Date	Alkalinity	Hardness
L1662287-04	S 100223	10/3/2023	65.8	100
L1662287-05	Q 100223	10/3/2023	59.3	91.9
L1662287-06	F 100223	10/3/2023	63.8	95
L1662846-02	Reference Toxicant (0.8% KCl)	10/3/2023	59.6	93.7

### Temperature Data (in degrees Celsius)

### October 2023 Reference Toxicant Test



Temperature *Ceriodaphnia dubia* (measurement taken in test chambers)

	Tue 10/3/23	Wed 10/4/23	Thu 10/5/23	Fri 10/6/23	Sat 10/7/23	Sun 10/8/23	Mon 10/9/23	Tue 10/10/23					
Analyst:	Analyst:		Analyst:		Analyst:		Analyst:						
	AA	HH	AA	HH	HH	RJ	RJ	NH	RJ	AA	ML	BE	
Control	25.9°C	25.5°C	24.2°C	25.6°C	25.9°C	25.3°C	24.7°C	25.2°C	25.0°C	24.5°C	25.6°C	24.6°C	
0.05	25.9°C	25.4°C	24.7°C	25.6°C	25.6°C	25.2°C	24.8°C	24.9°C	25.0°C	24.5°C	25.4°C	24.7°C	
0.1	25.5°C	25.3°C	24.4°C	25.6°C	25.7°C	25.1°C	25.0°C	24.8°C	25.8°C	24.6°C	25.1°C	24.7°C	
0.2	25.4°C	25.3°C	25.0°C	25.6°C	25.6°C	25.0°C	24.3°C	24.8°C	25.2°C	24.7°C	25.7°C	24.8°C	
0.4	25.2°C	25.2°C	24.7°C	25.5°C	26.0°C	25.0°C	24.2°C	25.0°C	25.0°C	24.6°C	25.4°C	24.9°C	
0.8	24.9°C	25.2°C	24.4°C										

Thermometer serial number:

38190150WS

Reference Toxicant (C. dubia)



L #: Potassium Chloride

Date(s) and Time(s) of Neonate Harvest: From 23:58 on 10/2/2023 to 7:10 on 10/3/2023

Neonates were Harvested from the Following Tray(s):  
Neonates were Harvested from the Following Cups:

100223XA1	100223XA1	100223XA1	100223XA1	100223XA1	100223XA1	100223XA2	100223XA2	100223XA2	100223XA2	Template Name:
C2	C4	D3	D4	G2	G5	B4	C5	D3	E3	OSPREY

Control Water Carboys Used

Description of Sample Being Analyzed Below:				CONTROL 11 Reference Toxicant October 2023											KCI	
Set-up & Transfer Data				Identification of Replicate											# of Offspring at Renewal	# of Live Adults at Renewal
Date	Time	Analyst	Initiation	A: 1	B: 8	C: 5	D: 4	E: 3	F: 7	G: 6	H: 2	I: 1	J: 1			
QSF 10-2	Tue 10/3/23	17:20	AA	Initiation	0	0	0	0	0	0	0	0	0	0	0	10
QSF 10-2	Wed 10/4/23	17:12	AA	24 hrs	0	0	0	0	0	0	0	0	0	0	0	10
QSF 10-2	Thu 10/5/23	16:25	LG/HH	48 hrs	0	0	0	0	0	0	0	0	0	0	0	10
QSF 10-2	Fri 10/6/23	10:18	RJ	72 hrs	0	0	0	0	0	0	0	0	0	0	0	10
QSF 10-2	Sat 10/7/23	15:30	RJ	96 hrs	6	6	4	6	7	6	5	5	6	6	57	10
QSF 10-2	Sun 10/8/23	13:53	ML	120 hrs	10	8	16	9	11	8	15	6	0	11	94	10
	Mon 10/9/23	16:27	BE	144 hrs	13	15	17	14	0	0	18	0	0	5	82	10
	Tue 10/10/23			168 hrs											0	
	Wed 10/11/23			192 hrs											0	
<b>Total # of Young Produced:</b>					29	29	37	29	18	14	38	11	6	22	Total Offspring at Renewal	Total Young Produced
C. dubia Cup Batch/Lot: ESC55242					Algae Lot: 091923			YCT Lot: 091923					233	233		

Survival ≥ 80%?	≥ 15 neonates/female?	≥ 60% 3rd brood?	Is repro CV < 40%?	Control Valid?
YES NO	YES NO	YES NO	YES NO	YES NO
X	X	X	X	X

Description of Sample Being Analyzed Below:				0.05 Reference Toxicant October 2023											KCI		
Set-up & Transfer Data				Identification of Replicate											# of Offspring at Renewal	# of Live Adults at Renewal	
Date	Time	Analyst	Initiation	A: 3	B: 1	C: 2	D: 3	E: 4	F: 5	G: 1	H: 7	I: 6	J: 6				
	Tue 10/3/23	17:20	AA	initiation	0	0	0	0	0	0	0	0	0	0	0	10	
	Wed 10/4/23	17:12	AA	24 hrs	0	0	0	0	0	0	0	0	0	0	0	10	
	Thu 10/5/23	16:26	LG/HH	48 hrs	0	0	0	0	0	0	0	0	0	0	0	10	
	Fri 10/6/23	10:18	RJ	72 hrs	0	0	0	0	0	0	0	0	0	0	0	10	
	Sat 10/7/23	15:30	RJ	96 hrs	7	3	7	7	5	4	6	7	6	7	59	10	
	Sun 10/8/23	13:53	ML	120 hrs	15	13	13	10	14	8	13	10	0	12	108	10	
	Mon 10/9/23	16:30	BE	144 hrs	18	15	17	18	18	0	18	0	0	18	122	10	
	Tue 10/10/23			168 hrs											0		
	Wed 10/11/23			192 hrs											0		
<b>Total # of Young Produced:</b>					40	31	37	35	37	12	37	17	6	37	Total Offspring at Renewal	Total Young Produced	
Comments:																289	289

## October 2023 Reference Toxicant Test

Replicate I was removed as an outlier throughout the dat set due to inconsistent responses unrepresentative of the general trend.

Description of Sample Being Analyzed Below:				0.1 Reference Toxicant October 2023										KCl	
Set-up & Transfer Data				Identification of Replicate										# of Offspring at Renewal	# of Live Adults at Renewal
Date	Time	Analyst		A: 4	B: 1	C: 3	D: 1	E: 5	F: 6	G: 5	H: 5	I: 2	J: 2		
Tue 10/3/23	17:20	AA	Initiation	0	0	0	0	0	0	0	0	0	0	0	10
Wed 10/4/23	17:12	AA	24 hrs	0	0	0	0	0	0	0	0	0	0	0	10
Thu 10/5/23	16:26	LG/HH	48 hrs	0	0	0	0	0	0	0	0	0	0	0	10
Fri 10/6/23	10:18	RJ	72 hrs	0	0	0	0	0	0	0	0	0	0	0	10
Sat 10/7/23	15:30	RJ	96 hrs	5	4	5	5	6	6	3	6	5	6	51	10
Sun 10/8/23	13:53	ML	120 hrs	12	10	12	11	12	12	10	11	10	9	109	10
Mon 10/9/23	16:32	BE	144 hrs	0 X	0	16	18	8	0	18	0	0	16	76	9
Tue 10/10/23			168 hrs											0	
Wed 10/11/23			192 hrs											0	
Total # of Young Produced:				17	14	33	34	26	18	31	17	15	31	Total Offspring at Renewal	Total Young Produced
														236	236

Description of Sample Being Analyzed Below:				0.2 Reference Toxicant October 2023										KCl	
Set-up & Transfer Data				Identification of Replicate										# of Offspring at Renewal	# of Live Adults at Renewal
Date	Time	Analyst		A: 5	B: 5	C: 7	D: 7	E: 2	F: 2	G: 4	H: 4	I: 3	J: 3		
Tue 10/3/23	17:20	AA	Initiation	0	0	0	0	0	0	0	0	0	0	0	10
Wed 10/4/23	17:12	AA	24 hrs	0	0	0	0	0	0	0	0	0	0	0	10
Thu 10/5/23	16:26	LG/HH	48 hrs	0	0	0	0	0	0	0	0	0	0	0	10
Fri 10/6/23	10:18	RJ	72 hrs	0	0	0	0	0	0	0	0	0	0	0	10
Sat 10/7/23	15:30	RJ	96 hrs	7	6	4 X	8	7	7	4	6	6	6	59	9
Sun 10/8/23	13:53	ML	120 hrs	12	13	-	12	12	14	12	11	8	11	105	9
Mon 10/9/23	16:34	BE	144 hrs	0	0	-	21	19	0	12	0	1 X	9	62	8
Tue 10/10/23			168 hrs			-								0	
Wed 10/11/23			192 hrs			-								0	
Total # of Young Produced:				19	19	4	39	38	21	28	17	15	26	Total Offspring at Renewal	Total Young Produced
														226	226

\*X\* = indicates dead daphnid; death is confirmed by observation (no appendage movement and no visible heartbeat)

Comments:

Replicate I was removed as an outlier throughout the dat set due to inconsistent responses unrepresentative of the general trend.

## October 2023 Reference Toxicant Test

L #: Potassium Chloride

Description of Sample Being Analyzed Below:				0.4 Reference Toxicant October 2023										KCI		
Set-up & Transfer Data		Analyst	Inflation	Identification of Replicate										# of Offspring at Renewal	# of Live Adults at Renewal	
Date	Time			A: 6	B: 3	C: 4	D: 5	E: 6	F: 1	G: 2	H: 1	I: 5	J: 5			
Tue 10/3/23	17:20	AA	Initiation	0	0	0	0	0	0	0	0	0	0	0	0	10
Wed 10/4/23	17:12	AA	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0	10
Thu 10/5/23	16:26	LG/HH	48 hrs	0	0	0	0	0	0	0	0	0	0	0	0	10
Fri 10/6/23	10:18	RJ	72 hrs	0	0	0	0	0	0	0	0	0	0	0	0	10
Sat 10/7/23	15:30	RJ	96 hrs	5	6	5	5	6	7	4	4	5	7	54	10	
Sun 10/8/23	13:53	ML	120 hrs	10	11	10	10	9	8	10	9	8	10	95	10	
Mon 10/9/23	16:36	BE	144 hrs	0	18	11	11	0	0	0	0	0	15	55	10	
Tue 10/10/23			168 hrs											0		
Wed 10/11/23			192 hrs											0		
Total # of Young Produced:				15	35	26	26	15	15	14	13	13	32	Total Offspring at Renewal	Total Young Produced	
														204	204	

Description of Sample Being Analyzed Below:				0.8 Reference Toxicant October 2023										KCI	
Set-up & Transfer Data		Analyst	Inflation	Identification of Replicate										# of Offspring at Renewal	# of Live Adults at Renewal
Date	Time			A: 7	B: 2	C: 1	D: 6	E: 7	F: 4	G: 7	H: 3	I: 7	J: 7		
Tue 10/3/23	17:20	AA	Initiation	0	0	0	0	0	0	0	0	0	0	0	10
Wed 10/4/23	17:12	AA	24 hrs	0 X	0 X	0 X	0 X	0 X	0 X	0 X	0 X	0 X	0 X	0	0
Thu 10/5/23	16:26	LG/HH	48 hrs	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0	0
Fri 10/6/23	10:18	RJ	72 hrs	-	-	-	-	-	-	-	-	-	-	0	0
Sat 10/7/23	15:30	RJ	96 hrs	-	-	-	-	-	-	-	-	-	-	0	0
Sun 10/8/23			120 hrs	-	-	-	-	-	-	-	-	-	-	0	
Mon 10/9/23			144 hrs	-	-	-	-	-	-	-	-	-	-	0	
Tue 10/10/23			168 hrs	-	-	-	-	-	-	-	-	-	-	0	
Wed 10/11/23			192 hrs	-	-	-	-	-	-	-	-	-	-	0	
Total # of Young Produced:				0	0	0	0	0	0	0	0	0	0	Total Offspring at Renewal	Total Young Produced
														0	0

\*X\* = indicates dead daphnid; death is confirmed by observation (no appendage movement and no visible heartbeat)

Comments:

Replicate I was removed as an outlier throughout the dat set due to inconsistent responses unrepresentative of the general trend.

## October 2023 Reference Toxicant Test

**CETIS Summary Report**

Report Date: 21 Nov-23 16:52 (p 1 of 2)  
 Test Code/ID: 100323CD / 08-9805-9293

**Ceriodaphnia 7-d Survival and Reproduction Test**

Pace National

Batch ID: 07-8922-6840	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 03 Oct-23	Protocol: EPA/821/R-02-013 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 09 Oct-23	Species: Ceriodaphnia dubia	Brine:
Test Length: 6d 0h	Taxon: Branchiopoda	Source: In-House Culture
		Age: <24

Sample ID: 05-1072-5694	Code: 1E710E3E	Project:
Sample Date: 03 Oct-23	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 03 Oct-23	CAS (PC):	Station: In House
Sample Age: ---	Client: Reference Toxicant	

Comments: Reference Toxicant October 2023 Chronic C. dubia

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
03-0185-8103	7d Survival Rate	Linear Interpolation (ICPIN)	LC15	0.433	0.0905	0.46	1
			LC20	0.454	0.407	0.48	
			LC25	0.476	0.432	0.5	
			LC40	0.541	0.505	0.58	
			LC50	0.584	0.555	0.6	
13-9290-3379	Reproduction	Linear Interpolation (ICPIN)	✓ IC15	0.142	0.0736	0.437	1
			✓ IC20	0.27	0.084	0.458	
			✓ IC25	0.398	0.0934	0.48	
			✓ IC40	0.48	0.337	0.544	
			✓ IC50	0.533	0.44	0.586	

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
03-0185-8103	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
13-9290-3379	Reproduction	Control Resp	25.2	15	<<	Yes	Passes Criteria

**7d Survival Rate Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	9	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.05		9	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.1		9	0.889	0.633	1.150	0.000	1.000	0.111	0.333	37.50%	11.11%
0.2		9	0.889	0.633	1.150	0.000	1.000	0.111	0.333	37.50%	11.11%
0.4		9	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.8		9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	—	100.00%

**Reproduction Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	9	25.2	17.9	32.6	11	38	3.2	9.59	38.02%	0.00%
0.05		9	31.4	23.8	39.1	12	40	3.33	9.98	31.73%	-24.67%
0.1		9	24.6	18.4	30.7	14	34	2.67	8.02	32.65%	2.64%
0.2		9	23.4	15.1	31.8	4	39	3.63	10.9	46.39%	7.05%
0.4		9	21.2	14.6	27.8	13	35	2.86	8.57	40.38%	15.86%
0.8		9	0	0	0	0	0	0	0	—	100.00%

**October 2023  
Reference Toxicant Test**

**CETIS Summary Report**

Report Date: 21 Nov-23 16:52 (p 2 of 2)  
 Test Code/ID: 100323CD / 08-9805-9293

**Ceriodaphnia 7-d Survival and Reproduction Test**

Pace National

7d Survival Rate Detail		MD5: 5D5DAE329B3AACFD07FD3DCD172C3054									
Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
0.05		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
0.1		0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
0.2		1.000	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
0.4		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
0.8		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Reproduction Detail		MD5: 88E8446CFE3A65F6297DE2D5A8E84C1E									
Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	29	29	37	29	18	14	38	11	22	
0.05		40	31	37	35	37	12	37	17	37	
0.1		17	14	33	34	26	18	31	17	31	
0.2		19	19	4	39	38	21	28	17	26	
0.4		15	35	26	26	15	15	14	13	32	
0.8		0	0	0	0	0	0	0	0	0	

**October 2023  
 Reference Toxicant Test**

**CETIS Analytical Report**

Report Date: 21 Nov-23 16:52 (p 1 of 2)  
 Test Code/ID: 100323CD / 08-9805-9293

**Ceriodaphnia 7-d Survival and Reproduction Test**

Pace National

Analysis ID: 03-0185-8103      Endpoint: 7d Survival Rate      CETIS Version: CETISv2.1.4  
 Analyzed: 21 Nov-23 16:52      Analysis: Linear Interpolation (ICPIN)      Status Level: 1  
 Edit Date: 08 Nov-23 8:44      MD5 Hash: 5D5DAE329B3AACFD07FD3DCD172C305      Editor ID: 001-600-314-4

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1456810	1000	Yes	Two-Point Interpolation

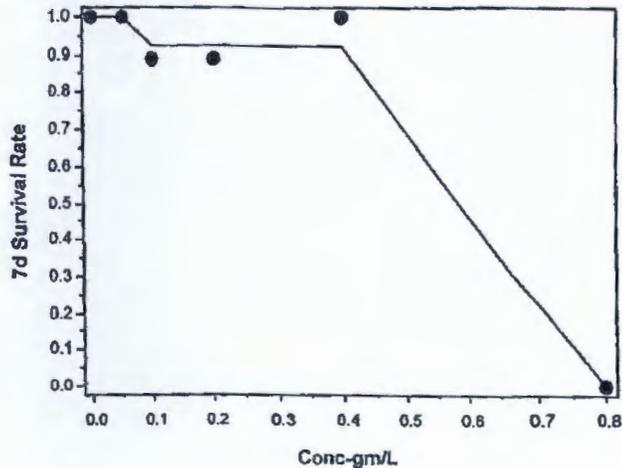
**Point Estimates**

Level	gm/L	95% LCL	95% UCL
LC15	0.433	0.0905	0.46
LC20	0.454	0.407	0.48
LC25	0.476	0.432	0.5
LC40	0.541	0.505	0.56
LC50	0.584	0.555	0.6

**7d Survival Rate Summary**

Conc-gm/L	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	D	9	1.000	1.000	1.000	1.000	0.00%	0.00%	9/9	1.000	0.00%
0.05		9	1.000	1.000	1.000	1.000	0.00%	0.00%	9/9	1.000	0.00%
0.1		9	0.889	1.000	0.000	1.000	37.50%	11.11%	8/9	0.926	7.40%
0.2		9	0.889	1.000	0.000	1.000	37.50%	11.11%	8/9	0.926	7.40%
0.4		9	1.000	1.000	1.000	1.000	0.00%	0.00%	9/9	0.926	7.40%
0.8		9	0.000	0.000	0.000	0.000	---	100.00%	0/9	0.000	100.00%

**Graphics**



**October 2023  
 Reference Toxicant Test**

**CETIS Analytical Report**

Report Date: 21 Nov-23 16:52 (p 2 of 2)  
 Test Code/ID: 100323CD / 08-9805-9293

**Ceriodaphnia 7-d Survival and Reproduction Test**

Pace National

Analysis ID: 13-9290-3379      Endpoint: Reproduction      CETIS Version: CETISv2.1.4  
 Analyzed: 21 Nov-23 16:52      Analysis: Linear Interpolation (ICPIN)      Status Level: 1  
 Edit Date: 08 Nov-23 8:44      MD5 Hash: 88E8446CFE3A65F6297DE2D5A8E84C1E      Editor ID: 001-600-314-4

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	918934	1000	Yes	Two-Point Interpolation

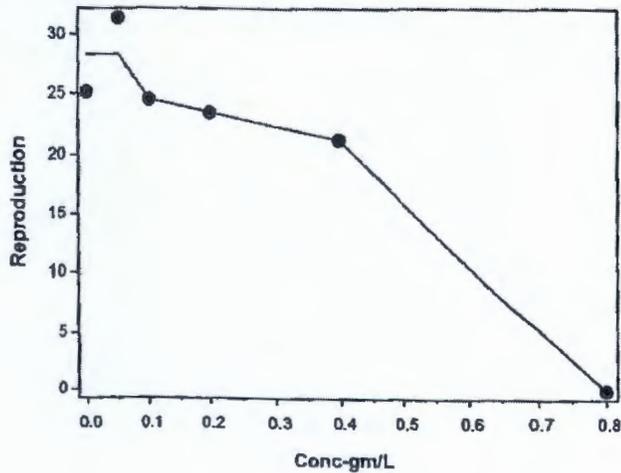
**Point Estimates**

Level	gm/L	95% LCL	95% UCL
IC15	0.142	0.0736	0.437
IC20	0.27	0.084	0.458
IC25	0.398	0.0934	0.48
IC40	0.48	0.337	0.544
IC50	0.533	0.44	0.586

**Reproduction Summary**

Conc-gm/L	Code	Count	Calculated Variate						Isotonic Variate	
			Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	D	9	25.2	29	11	38	38.02%	0.00%	28.3	0.00%
0.05		9	31.4	37	12	40	31.73%	-24.67%	28.3	0.00%
0.1		9	24.6	26	14	34	32.65%	2.64%	24.6	13.07%
0.2		9	23.4	21	4	39	46.39%	7.05%	23.4	17.31%
0.4		9	21.2	15	13	35	40.38%	15.86%	21.2	25.09%
0.8		9	0	0	0	0	—	100.00%	0	100.00%

**Graphics**



**October 2023  
Reference Toxicant Test**



Reviewed by: BE

Control Water (Tank ID): F 101623

Control Water (Begin Use Date): 10/18/2023

## *Pimephales promelas* 48-hr Acute Reference Toxicant Test

Month of: OCTOBER 2023

Test Start Date: October 18, 2023

Toxicant: potassium chloride (KCl)

Thermometer Serial #: 38190150WS

Measurements taken directly in test chamber. Temperatures recorded in degrees Celsius.

Toxicant (g/L)		Analyst: NY	Analyst: NY	Analyst: NY	Analyst: BE
		0 hrs	24 hrs (morning)	24 hrs (afternoon)	48 hrs (morning)
CONTROL	<i>Pimephales promelas</i>	25.5°C	24.6°C	25.6°C	24.6°C
0.3	<i>Pimephales promelas</i>	25.6°C	24.5°C	25.3°C	24.6°C
0.6	<i>Pimephales promelas</i>	25.6°C	24.5°C	25.3°C	24.6°C
1.2	<i>Pimephales promelas</i>	25.6°C	24.6°C	25.2°C	24.6°C
2.4	<i>Pimephales promelas</i>	25.6°C	24.6°C	25.3°C	-
4.8	<i>Pimephales promelas</i>	25.6°C	24.3°C	25.3°C	-

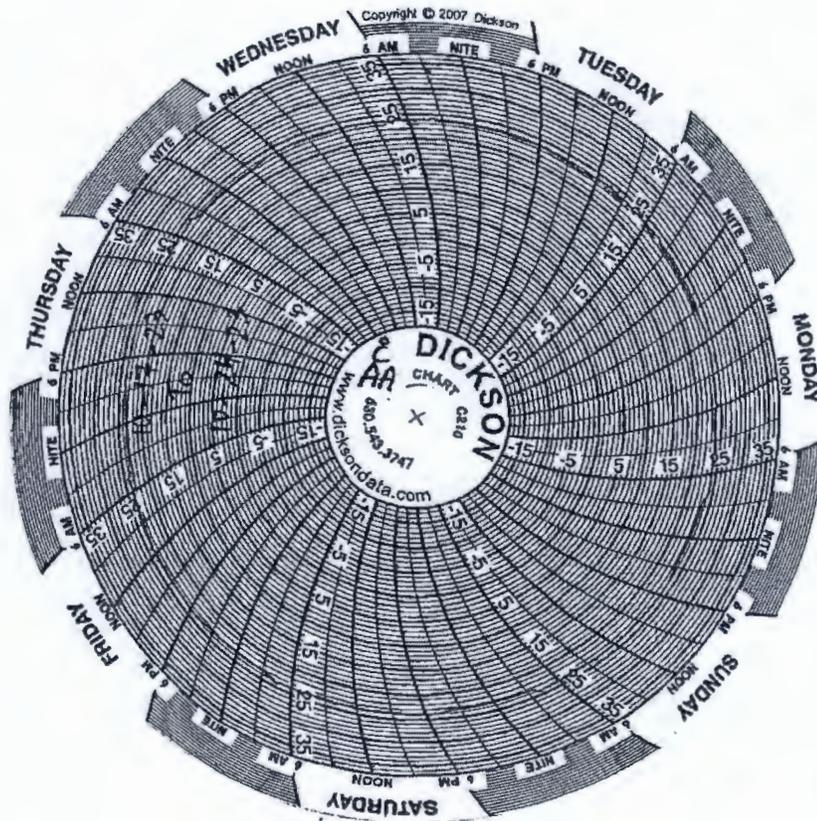
	Total Cl <sub>2</sub> (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	
CONTROL	< 0.2	46.5	84	L1667326-04
4.8%	< 0.2	46.2	80.8	L1669064-01

## October 2023 Reference Toxicant Test

Sample ID: *Pimephales promelas* 48-hr Acute Reference Toxicant Test

Chart Devices Used in  
Crown Tonka Walk-in  
Incubator:

Dickson (small chart)



## October 2023 Reference Toxicant Test

ACUTE TOXICITY TEST DATA SHEET - *Pimephales promelas* (fathead minnow)

Client **Minnow 48-hr Acute Reference Toxicant Test**

Toxicant Used: potassium chloride

Template Name:  
Violet  
Month of:  
**OCTOBER**

Begin **October 18, 2023**

Time **14:50**

Test Duration: **48 hours**

End **October 20, 2023**

Time **14:10**

Dilution Water: Moderately Hard SDW

TAC: Test Acceptability Criteria

Survival ≥ 90%

Control Valid?

Minnow

Yes

X

No

**48-hr Acute Reference Toxicant Test**

Effluent In Percent (%)	Replicate Position	# OF LIVE Minnows		
		0 hrs	24 hrs	48 hrs
CONTROL	A: 1	10	10	10
	B: 2	10	10	10
0.3	A: 2	10	10	10
	B: 3	10	10	10
0.6	A: 3	10	10	10
	B: 4	10	10	10
1.2	A: 4	10	7	7
	B: 5	10	7	4
2.4	A: 5	10	0	0
	B: 6	10	0	0
4.8	A: 6	10	0	0
	B: 1	10	0	0
Checked By: NY	Biologist: LG NY NH	Time: 14:50	16:08	14:10

Check here to confirm final temperatures have been recorded on the temperature benchsheet.

pH (std. units)		Dissolved Oxygen (mg/L)	
0 hrs	final	0 hrs	final
Initial	7.5	Initial	8
6.6		8.4	
Initial	7.3	Initial	7.4
7		8.4	
Initial	7.3	Initial	7.1
7.1		8.4	
Initial	7.3 / 7.3	Initial	6.9 / 6.8
7.2		8.3	
Initial	6.4	Initial	6.8
7.4		8.3	
Initial	6.7	Initial	6.2
7.5		8.1	
Initial Readings By: NY		Final Readings By: BE	
Time: 14:20		Time: 17:02	

Conductivity (umhos/cm)	
0 hrs	final
Initial	334.4
387	
Initial	958.5
921	
Initial	1552
1489	
Initial	2884 / 2679
2564	
Initial	4821
4699	
Initial	8982
8790	

KCl Stock Solution Lot: **101823KCL**

Intials	Date
NH	10/18/2023
NY	10/18/2023

KCl Stock Solution Prepared: **NH** **10/18/2023**

Mixing up dilution series: **NY** **10/18/2023**



Fish Cup Batch/Lot: <b>ESC54281</b>	Brine Shrimp Lot: <b>281729</b>	
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Data divided by a slash mark (/) indicates that a duplicate was run on that parameter. Minnows are 8 days old at test initiation and were taken from Pace Lot # 100923HD

Minnows were fed 10/18/2023 @ 11:30

**October 2023 Reference Toxicant Test**

**CETIS Summary Report**

Report Date: 08 Nov-23 09:29 (p 1 of 1)  
 Test Code/ID: 101823RTPPA / 00-8517-9439

Fathead Minnow 48-h Acute Survival Test

Pace National

Batch ID: 03-0729-0660	Test Type: Survival (48h)	Analyst:
Start Date: 18 Oct-23	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 20 Oct-23	Species: Pimephales promelas	Brine:
Test Length: 48h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: 8Da

Sample ID: 04-1607-7742	Code: 18CCD7AE	Project:
Sample Date: 18 Oct-23	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 18 Oct-23	CAS (PC):	Station: In House
Sample Age: —	Client: Reference Toxicant	

Comments: Reference Toxicant October 2023 Acute Minnow

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
10-8529-2015	48h Survival Rate	Spearmen-Kärber	LC50	1.24	1.06	1.45	1

**48h Survival Rate Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.3		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.6		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
1.2		2	0.550	-1.360	2.460	0.400	0.700	0.150	0.212	38.57%	45.00%
2.4		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	—	100.00%
4.8		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	—	100.00%

**48h Survival Rate Detail**

MD5: 6052A31FFFEAA4AE998EA6BC3C2438CB

Conc-gm/L	Code	Rep 1	Rep 2
0	D	1.000	1.000
0.3		1.000	1.000
0.6		1.000	1.000
1.2		0.700	0.400
2.4		0.000	0.000
4.8		0.000	0.000

**October 2023  
Reference Toxicant Test**

**CETIS Analytical Report**

Report Date: 08 Nov-23 09:29 (p 1 of 1)  
 Test Code/ID: 101823RTPPA / 00-8517-9439

Fathead Minnow 48-h Acute Survival Test

Pace National

Analysis ID: 10-8529-2015      Endpoint: 48h Survival Rate      CETIS Version: CETISv2.1.4  
 Analyzed: 08 Nov-23 9:29      Analysis: Untrimmed Spearman-Kärber      Status Level: 1  
 Edit Date: 08 Nov-23 9:29      MD5 Hash: 6052A31FFFEAA4AE998EA6BC3C2438CB      Editor ID: 001-600-314-4

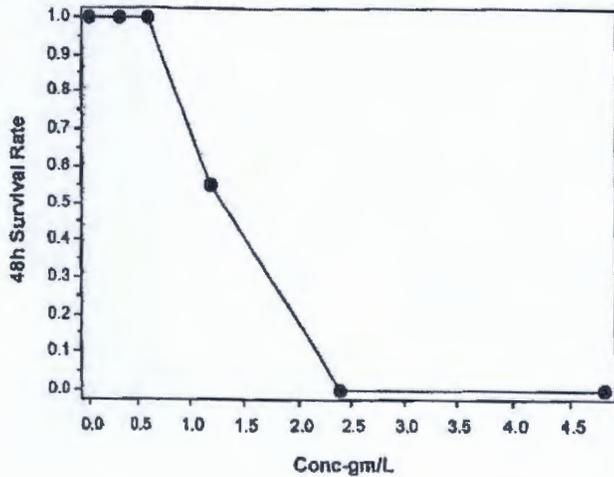
**Spearman-Kärber Estimates**

Threshold Option	Threshold	Trim	Mu	Sigma	LC50	95% LCL	95% UCL
Control Threshold	0	0.00%	0.0942	0.0335	1.24	1.06	1.45

**48h Survival Rate Summary**

Conc-gm/L	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	D	2	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.3		2	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.6		2	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
1.2		2	0.550	0.550	0.400	0.700	38.57%	45.00%	11/20	0.550	45.00%
2.4		2	0.000	0.000	0.000	0.000	—	100.00%	0/20	0.000	100.00%
4.8		2	0.000	0.000	0.000	0.000	—	100.00%	0/20	0.000	100.00%

**Graphics**



**October 2023  
Reference Toxicant Test**



Reviewed by: \_\_\_\_\_

Control Water (Tank ID): C 110623

Control Water (Begin Use Date): 11/8/2023

## Pimephales promelas 48-hr Acute Reference Toxicant Test

Month of: October

**"A"**

Test Start Date: November 9, 2023

Toxicant: potassium chloride (KCl)

Thermometer Serial #: 38190150WS

Measurements taken directly in test chamber. Temperatures recorded in degrees Celsius.

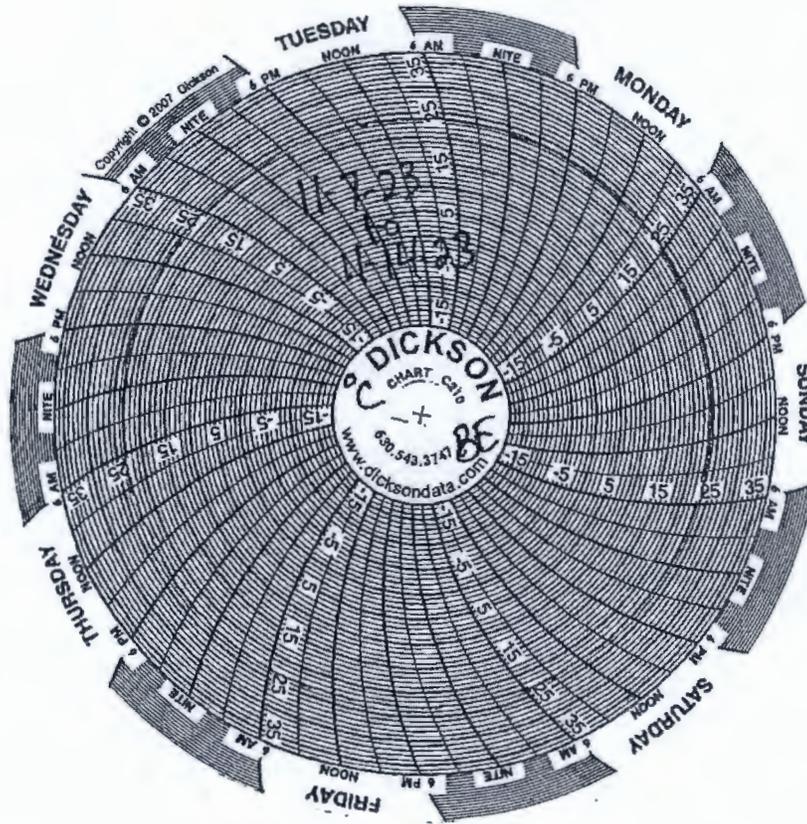
Toxicant (g/L)		Analyst: NY	Analyst: HH	Analyst: AA	Analyst: HH
		0 hrs	24 hrs (morning)	24 hrs (afternoon)	48 hrs (morning)
CONTROL	<i>Pimephales promelas</i>	24.6°C	25.0°C	24.5°C	24.9°C
0.3	<i>Pimephales promelas</i>	24.7°C	25.0°C	24.5°C	24.9°C
0.6	<i>Pimephales promelas</i>	24.8°C	25.0°C	24.4°C	24.9°C
1.2	<i>Pimephales promelas</i>	24.5°C	25.0°C	24.4°C	24.9°C
2.4	<i>Pimephales promelas</i>	24.6°C	25.0°C	24.4°C	-
4.8	<i>Pimephales promelas</i>	24.7°C	25.0°C	24.3°C	-

	Total Cl2 (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	
CONTROL	< 0.2	52	91.2	L1675395-04
4.8%	< 0.2	59	93.9	L1676711-02

## October 2023 Reference Toxicant Test

Chart Devices Used in  
CrownTonka Walk-in  
Incubator:

Dickson (small chart)



## October 2023 Reference Toxicant Test

ACUTE TOXICITY TEST DATA SHEET - *Pimephales promelas* (fathead minnow)

Client **Minnow 48-hr Acute Reference Toxicant Test "A"** Toxicant Used: potassium chloride

Begin **November 9, 2023** Time **16:11** \*end test +/- 2 hr from start time Test Duration: 48 hours  
 End **November 11, 2023** Time **14:37** Dilution Water: Moderately Hard SDW

Template Name:  
**Uranus**  
Month of:  
**Oct-23**

TAC: Test Acceptability Criteria

Survival ≥ 90%

Control Valid?

Minnow

Yes

X

No

**48-hr Acute Reference Toxicant Test**

Effluent In Percent (%)	Replicate Position	# OF LIVE Minnows		
		0 hrs	24 hrs	48 hrs
CONTROL	A: 1	10	10	10
	B: 2	10	10	10
0.3	A: 2	10	10	10
	B: 3	10	10	10
0.6	A: 3	10	9	8
	B: 4	10	10	10
1.2	A: 4	10	0	0
	B: 5	10	1	0
2.4	A: 5	10	0	0
	B: 6	10	0	0
4.8	A: 6	10	0	0
	B: 1	10	0	0
Checked By: NY	Biologist: Time	LG/NY 16:11	AA 11:46	NH 14:37

Check here to confirm final temperatures have been recorded on the temperature benchsheet.

pH (std. units)		Dissolved Oxygen (mg/L)	
0 hrs	final	0 hrs	final
Initial 7.5	7.4	Initial 8.4	8.2
7.5*	7.3/7.4	Initial 8.5*	7.7/7.6
Initial 7.5	7.4	Initial 8.3	7.7
Initial 7.6	7.4	Initial 8.2	7.6
Initial 7.6	7.4	Initial 8.3	8.1
Initial 7.6	7.4	Initial 8.2	7.6
Initial Readings By: NY			
Time: 18:10			

Conductivity (umhos/cm)	
0 hrs	final
Initial 326	349.2
Initial 922*	964.2 / 962.8
Initial 1437	1541
Initial 2526	2703
Initial 4573	4771
Initial 8351	8670
Final Readings By: HH	
Time: 15:20	

KCl Stock Solution Lot: 110923

Initials	Date
NY	11/9/2023
NY	11/9/2023



Fish Cup Batch/Lot: **ESC54281** Brine Shrimp Lot: **281729**

Data divided by a slash mark (/) indicates that a duplicate was run on that parameter.  
 Minnows are 3 days old at test initiation and were taken from Pace Lot # 110623HD

Minnows were fed 11/9/2023 @ 1305

\*Initial dup not taken analyst error. HH 11/15/2023 \* Final Readings for (2.4 and 4.8) Done by AA on 11/10/23 @ 12:11

**October 2023  
Reference Toxicant Test**

**CETIS Summary Report**

Report Date: 21 Nov-23 12:15 (p 1 of 1)  
 Test Code/ID: RTPPA110923(A) / 17-1893-6483

**Fathead Minnow 48-h Acute Survival Test**

Pace National

Batch ID: 06-8294-2210	Test Type: Survival (48h)	Analyst: Lizzy Orcutt
Start Date: 09 Nov-23	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 11 Nov-23	Species: <i>Pimephales promelas</i>	Brine:
Test Length: 48h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: <14

Sample ID: 05-8675-2099	Code: 22F92063	Project:
Sample Date: 08 Nov-23	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 09 Nov-23	CAS (PC):	Station:
Sample Age: 24h	Client: Reference Toxicant	

Comments: Reference Toxicant A Acute Fathead Minnow October, 2023

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
16-3942-2741	48h Survival Rate	Spearmen-Kärber	LC50	0.792	0.721	0.869	1

**48h Survival Rate Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.3		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.6		2	0.800	-0.371	2.170	0.800	1.000	0.100	0.141	15.71%	10.00%
1.2		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%
2.4		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%
4.8		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%

**48h Survival Rate Detail**

MD5: 3A37C17D6D0F6163ACCCCD7C003E92D

Conc-gm/L	Code	Rep 1	Rep 2
0	D	1.000	1.000
0.3		1.000	1.000
0.6		0.800	1.000
1.2		0.000	0.000
2.4		0.000	0.000
4.8		0.000	0.000

**October 2023  
Reference Toxicant Test**

CETIS Analytical Report

Report Date: 21 Nov-23 12:15 (p 1 of 2)  
 Test Code#D: RTPPA110923(A) / 17-1893-6483

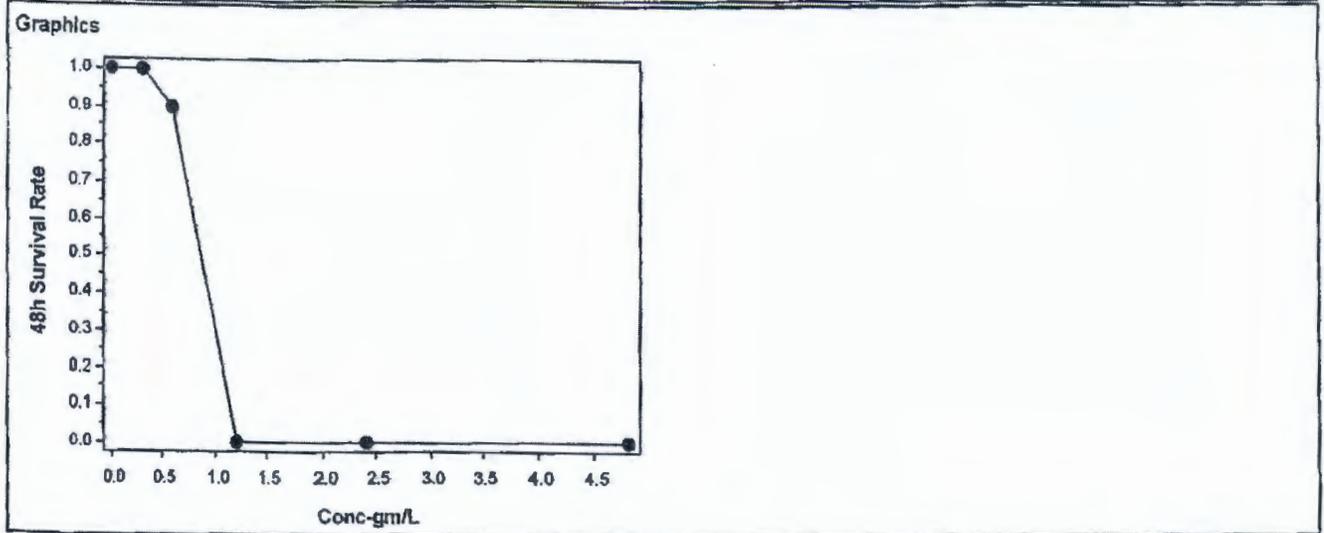
Fathead Minnow 48-h Acute Survival Test			Pace National								
Analysis ID: 16-3942-2741	Endpoint: 48h Survival Rate	CETIS Version: CETISv2.1.4									
Analyzed: 21 Nov-23 12:14	Analysis: Untrimmed Spearman-Kärber	Status Level: 1									
Edit Date: 21 Nov-23 12:12	MD5 Hash: 3A37C17D6D0F6163ACCCCD7C003E92	Editor ID: 001-600-314-4									
Batch ID: 06-8294-2210	Test Type: Survival (48h)	Analyst: Lizzy Orcutt									
Start Date: 09 Nov-23	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water									
Ending Date: 11 Nov-23	Species: Pimephales promelas	Brine:									
Test Length: 48h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: <14									
Sample ID: 05-8675-2099	Code: 22F92063	Project:									
Sample Date: 08 Nov-23	Material: Potassium chloride	Source: Reference Toxicant									
Receipt Date: 09 Nov-23	CAS (PC):	Station:									
Sample Age: 24h	Client: Reference Toxicant										
Comments: Reference Toxicant A Acute Fathead Minnow October, 2023											
Spearman-Kärber Estimates											
Threshold Option	Threshold	Trim	Mu	Sigma	LC50	95% LCL	95% UCL				
Control Threshold	0	0.00%	-0.101	0.0202	0.792	0.721	0.869				
48h Survival Rate Summary			Calculated Variate(A/B)				Isotonic Variate				
Conc-gm/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	D	2	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.3		2	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.6		2	0.900	0.900	0.800	1.000	15.71%	10.00%	18/20	0.900	10.00%
1.2		2	0.000	0.000	0.000	0.000	—	100.00%	0/20	0.000	100.00%
2.4		2	0.000	0.000	0.000	0.000	—	100.00%	0/20	0.000	100.00%
4.8		2	0.000	0.000	0.000	0.000	—	100.00%	0/20	0.000	100.00%
48h Survival Rate Detail											
Conc-gm/L	Code	Rep 1	Rep 2								
0	D	1.000	1.000								
0.3		1.000	1.000								
0.6		0.800	1.000								
1.2		0.000	0.000								
2.4		0.000	0.000								
4.8		0.000	0.000								
48h Survival Rate Binomials											
Conc-gm/L	Code	Rep 1	Rep 2								
0	D	10/10	10/10								
0.3		10/10	10/10								
0.6		8/10	10/10								
1.2		0/10	0/10								
2.4		0/10	0/10								
4.8		0/10	0/10								

## October 2023 Reference Toxicant Test

CETIS Analytical Report

Report Date: 21 Nov-23 12:15 (p 2 of 2)  
Test Code/ID: RTPPA110923(A) / 17-1893-6483

Fathead Minnow 48-h Acute Survival Test		Pace National
Analysis ID: 16-3942-2741	Endpoint: 48h Survival Rate	CETIS Version: CETISv2.1.4
Analyzed: 21 Nov-23 12:14	Analysis: Untrimmed Spearman-Kärber	Status Level: 1
Edit Date: 21 Nov-23 12:12	MD5 Hash: 3A37C17D6D0F6163ACCCCD7C003E92	Editor ID: 001-600-314-4



**October 2023  
Reference Toxicant Test**



Reviewed by: \_\_\_\_\_

Control Water (Tank ID): C 110623

Control Water (Begin Use Date): 11/8/2023

## Pimephales promelas 48-hr Acute Reference Toxicant Test

Month of: October

**"B"**

Test Start Date: November 9, 2023

Toxicant: potassium chloride (KCl)

Thermometer Serial #: 38190150WS

Measurements taken directly in test chamber. Temperatures recorded in degrees Celsius.

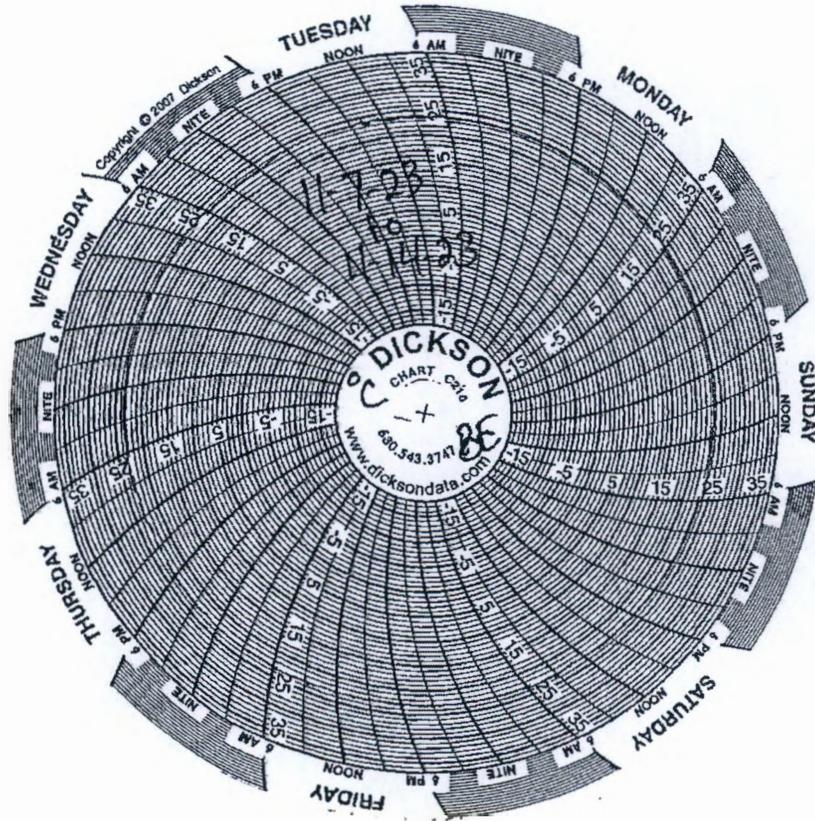
Toxicant (g/L)	Analyst: NY	Analyst: HH	Analyst: AA	Analyst: HH
	0 hrs	24 hrs (morning)	24 hrs (afternoon)	48 hrs (morning)
CONTROL <i>Pimephales promelas</i>	25.0°C	25.0°C	24.7°C	25.2°C
0.3 <i>Pimephales promelas</i>	25.3°C	25.0°C	24.6°C	25.1°C
0.6 <i>Pimephales promelas</i>	25.1°C	25.0°C	24.7°C	25.2°C
1.2 <i>Pimephales promelas</i>	25.4°C	25.0°C	24.5°C	°C
2.4 <i>Pimephales promelas</i>	25.3°C	25.0°C	24.5°C	°C
4.8 <i>Pimephales promelas</i>	25.4°C	25.0°C	24.5°C	°C

	Total Cl2 (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	
CONTROL	< 0.2	52	91.2	L1675395-04
4.8%	< 0.2	59	93.9	L1676711-02

## October 2023 Reference Toxicant Test

Chart Devices Used in  
CrownTonka Walk-in  
Incubator:

Dickson (small chart)



**October 2023  
Reference Toxicant Test**

ACUTE TOXICITY TEST DATA SHEET - *Pimephales promelas* (fathead minnow)

Client **Minnow 48-hr Acute Reference Toxicant Test "B"** Toxicant Used: potassium chloride

Template Name:  
**Earth**

Month of:  
**October**

Begin **November 9, 2023** Time **15:30** \*end test +/- 2 hr from start time Test Duration: 48 hours  
End **November 11, 2023** Time **14:26** Dilution Water: Moderately Hard SDW

TAC: Test Acceptability Criteria

Survival ≥ 90%

Control Valid?

Minnow

Yes

X

No

**48-hr Acute Reference Toxicant Test**

Effluent In Percent (%)	Replicate Position	# OF LIVE Minnows		
		0 hrs	24 hrs	48 hrs
CONTROL	A: 1	10	10	10
	B: 4	10	10	10
0.3	A: 2	10	10	10
	B: 5	10	10	10
0.6	A: 3	10	9	9
	B: 6	10	10	9
1.2	A: 4	10	0	0
	B: 1	10	0	0
2.4	A: 5	10	0	0
	B: 2	10	0	0
4.8	A: 6	10	0	0
	B: 3	10	0	0
Checked By: NY	Biologist: NH	AA	NH	
	Time: 15:30	11:58	14:26	

Check here to confirm final temperatures have been recorded on the temperature benchsheet.

pH (std. units)		Dissolved Oxygen (mg/L)	
0 hrs	final	0 hrs	final
initial 7.5	7.4	initial 8.4	7.8
initial 7.5	7.4	initial 8.5	7.6
initial 7.5*	7.4/7.4	initial 8.3*	7.6/7.5
initial 7.6	7.3	initial 8.2	8.1
initial 7.6	7.3	initial 8.3	7.8
initial 7.6	7.3	initial 8.2	7.5
Initial Readings By: NY		Final Readings By: HH	
Time: 15:10		Time: 15:25	

Conductivity (umhos/cm)	
0 hrs	final
initial 326	341.6
initial 922	957.6
initial 1437*	1511 / 1511
initial 2526	2653
initial 4573	4758
initial 8351	8722

KCl Stock Solution Lot: **110923**

Intials Date

KCl Stock Solution Prepared: NY **11/9/2023**

Mixing up dilution series: NY **11/9/2023**

Fish Cup Batch/Lot: <b>ESC54281</b>	Brine Shrimp Lot: <b>281729</b>
-------------------------------------	---------------------------------

Data divided by a slash mark (/) indicates that a duplicate was run on that parameter.

Minnows are 3 days old at test initiation and were taken from Pace Lot # 110623HD

Minnows were fed 11/9/2023 @ 1305

\*Initial dup not taken analyst error. HH 11/15/2023

\* Final Readings for (1.2, 2.4 and 4.8) Done by AA on 11/10/23 @ 12:14

**October 2023  
Reference Toxicant Test**

**CETIS Summary Report**

Report Date: 21 Nov-23 12:22 (p 1 of 1)  
 Test Code/ID: RTPP110923(B) / 07-2389-6093

**Fathead Minnow 48-h Acute Survival Test**

Pace National

Batch ID: 06-8294-2210	Test Type: Survival (48h)	Analyst: Lizzy Orcutt
Start Date: 09 Nov-23	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 11 Nov-23	Species: Pimephales promelas	Brine:
Test Length: 48h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: <14

Sample ID: 18-3412-1245	Code: 6D52781D	Project:
Sample Date: 08 Nov-23	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 09 Nov-23	CAS (PC):	Station:
Sample Age: 24h	Client: Reference Toxicant	

Comments: Reference Toxicant Acute Minnow October, 2023

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
03-0644-9894	48h Survival Rate	Spearman-Kärber	LC50	0.792	0.721	0.869	1

**48h Survival Rate Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.3		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.6		2	0.900	0.900	0.900	0.900	0.900	0.000	0.000	0.00%	10.00%
1.2		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	—	100.00%
2.4		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	—	100.00%
4.8		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	—	100.00%

**48h Survival Rate Detail**

MD5: 8E39805173FA8E441ECC5D9482F586B3

Conc-gm/L	Code	Rep 1	Rep 2
0	D	1.000	1.000
0.3		1.000	1.000
0.6		0.900	0.900
1.2		0.000	0.000
2.4		0.000	0.000
4.8		0.000	0.000

**October 2023  
Reference Toxicant Test**

**CETIS Analytical Report**

Report Date: 21 Nov-23 12:22 (p 1 of 2)  
 Test Code/ID: RTPP110923(B) / 07-2389-6093

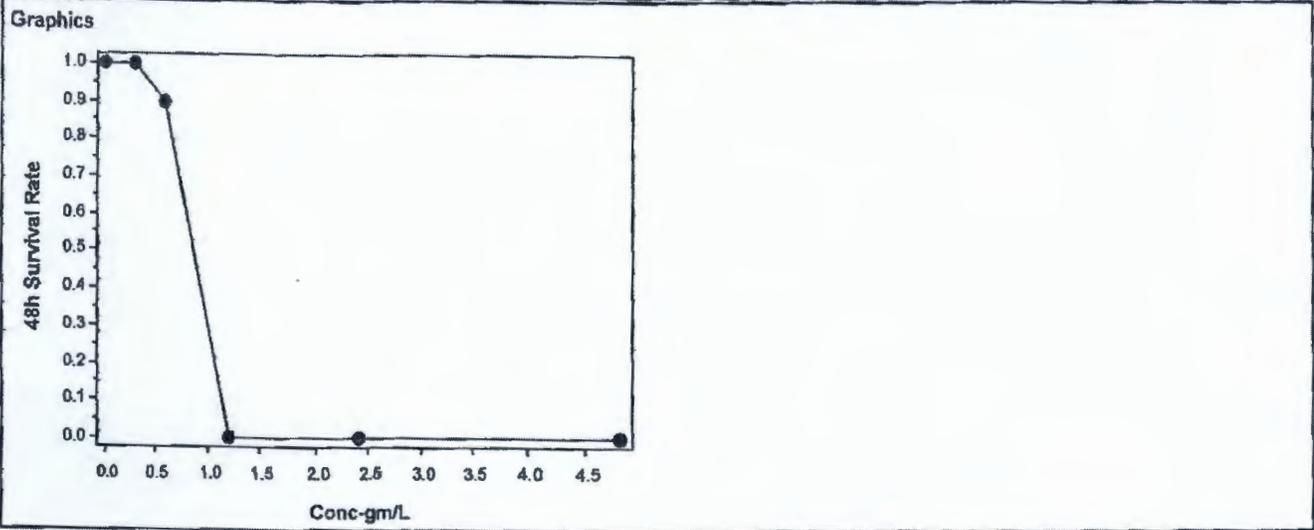
Fathead Minnow 48-h Acute Survival Test										Pace National	
Analysis ID: 03-0644-9994	Endpoint: 48h Survival Rate				CETIS Version: CETISv2.1.4						
Analyzed: 21 Nov-23 12:22	Analysis: Untrimmed Spearman-Kärber				Status Level: 1						
Edit Date: 21 Nov-23 12:21	MD5 Hash: 8E39805173FA8E441ECC5D9462F586B3				Editor ID: 001-600-314-4						
Batch ID: 06-8294-2210	Test Type: Survival (48h)				Analyst: Lizzy Orcutt						
Start Date: 09 Nov-23	Protocol: EPA/821/R-02-012 (2002)				Diluent: Mod-Hard Synthetic Water						
Ending Date: 11 Nov-23	Species: Pimephales promelas				Brine:						
Test Length: 48h	Taxon: Actinopterygii				Source: Aquatic Biosystems, CO	Age: <14					
Sample ID: 18-3412-1245	Code: 6D52781D				Project:						
Sample Date: 08 Nov-23	Material: Potassium chloride				Source: Reference Toxicant						
Receipt Date: 09 Nov-23	CAS (PC):				Station:						
Sample Age: 24h	Client: Reference Toxicant										
Comments: Reference Toxicant Acute Minnow October, 2023											
Spearman-Kärber Estimates											
Threshold Option	Threshold	Trim	Mu	Sigma	LC50	95% LCL	95% UCL				
Control Threshold	0	0.00%	-0.101	0.0202	0.792	0.721	0.869				
48h Survival Rate Summary											
			Calculated Variate(A/B)							Isotonic Variate	
Conc-gm/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	IA/IB	Mean	%Effect
0	D	2	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.3		2	1.000	1.000	1.000	1.000	0.00%	0.00%	20/20	1.000	0.00%
0.6		2	0.900	0.900	0.900	0.900	0.00%	10.00%	18/20	0.900	10.00%
1.2		2	0.000	0.000	0.000	0.000	---	100.00%	0/20	0.000	100.00%
2.4		2	0.000	0.000	0.000	0.000	---	100.00%	0/20	0.000	100.00%
4.8		2	0.000	0.000	0.000	0.000	---	100.00%	0/20	0.000	100.00%
48h Survival Rate Detail											
Conc-gm/L	Code	Rep 1	Rep 2								
0	D	1.000	1.000								
0.3		1.000	1.000								
0.6		0.900	0.900								
1.2		0.000	0.000								
2.4		0.000	0.000								
4.8		0.000	0.000								
48h Survival Rate Binomials											
Conc-gm/L	Code	Rep 1	Rep 2								
0	D	10/10	10/10								
0.3		10/10	10/10								
0.6		9/10	9/10								
1.2		0/10	0/10								
2.4		0/10	0/10								
4.8		0/10	0/10								

**October 2023  
Reference Toxicant Test**

CETIS Analytical Report

Report Date: 21 Nov-23 12:22 (p 2 of 2)  
Test Code/ID: RTPP110923(B) / 07-2389-8093

Fathead Minnow 48-h Acute Survival Test		Pace National	
Analysis ID: 03-0644-9994	Endpoint: 48h Survival Rate	CETIS Version: CETISv2.1.4	
Analyzed: 21 Nov-23 12:22	Analysis: Untrimmed Spearman-Kärber	Status Level: 1	
Edit Date: 21 Nov-23 12:21	MD5 Hash: 8E39805173FA8E441ECC5D9482F586B3	Editor ID: 001-600-314-4	



**October 2023  
Reference Toxicant Test**

# Reference Toxicant October 2023

NPDES #: KCI

Date: October 3-10, 2023

Login #: Potassium Chloride

Tue 10/3/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.4	362	8.2	16:45:38	LG
Dup. Control	7.6	366.1	8.6	16:46:29	LG
0.1875	7.8	761.1	8.6	16:47:23	LG
Dup. 0.1875	7.9	762.1	8.4	16:48:12	LG
0.375	7.9	1142	8.4	16:48:45	LG
Dup. 0.375	7.9	1143	8.4	16:49:20	LG
0.75	7.9	1879	8.5	16:49:52	LG
Dup. 0.75	7.8	1882	8.6	16:50:19	LG
1.5	7.8	3391	8.5	16:50:59	LG
Dup. 1.5	7.8	3390	8.4	16:51:24	LG
3	7.8	6203	8.3	16:52:06	LG
Dup. 3	7.9	6200	8.3	16:52:39	LG

Comments

Control # 10

KCI Stock Solution Lot: 100323KCI

Initials Date

KCI Stock Solution Prepared: 10/3/2023 CM

Mixing up dilution series: BE 10/3/2023

Wed 10/4/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.8	337.6	9.6	9:43:01	LG
0.1875	7.8	708.8	9.9	9:44:27	LG
0.375	7.8	1067	10	9:44:59	LG
0.75	7.8	1775	10	9:46:17	LG
1.5	7.8	3175	9.9	9:46:44	LG
3	7.7	5930	9.8	9:48:02	LG

*Pimephales promelas* (fathead minnow)

Initials	pH	DO	Time	Analyst
Control	7.8	8.9	8:28:46	LG
Dup. Control	7.8	8.8	8:29:19	LG
0.1875	7.8	8.9	8:30:05	LG
Dup. 0.1875	7.8	8.8	8:30:36	LG
0.375	7.8	8.8	8:31:02	LG
Dup. 0.375	7.8	8.7	8:31:22	LG
0.75	7.8	8.6	8:31:46	LG
Dup. 0.75	7.8	8.6	8:32:06	LG
1.5	7.8	8.5	8:32:31	LG
Dup. 1.5	7.8	8.4	8:32:56	LG
3	7.7	8.4	8:33:20	LG
Dup. 3	7.7	8.5	8:33:40	LG

Thu 10/5/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.8	339.7	10.6	9:18:25	LG
0.1875	7.7	694.6	10.5	9:19:01	LG
0.375	7.7	1062	10.5	9:19:28	LG
0.75	7.7	1757	10.4	9:19:56	LG
1.5	/	/	/	/	LG
3	/	/	/	/	LG

*Pimephales promelas* (fathead minnow)

Initials	pH	DO	Time	Analyst
Control	7.6	8.5	8:45:36	LG
0.1875	7.7	8.4	8:46:23	LG
0.375	7.7	8.3	8:46:51	LG
0.75	7.7	8.3	8:47:17	LG
1.5	/	/	/	LG
3	/	/	/	LG

Fri 10/6/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.9	341.3	8.9	9:02:22	LG
0.1875	7.9	687.8	10.2	9:03:00	LG
0.375	7.8	1036	10.6	9:03:27	LG
0.75	7.8	1720	10.6	9:03:48	LG
1.5	/	/	/	/	LG
3	/	/	/	/	LG

*Pimephales promelas* (fathead minnow)

Initials	pH	DO	Time	Analyst
Control	7.6	10.5	9:05:07	LG
0.1875	7.6	9.5	9:05:54	LG
0.375	7.6	8.8	9:06:35	LG
0.75	7.6	8.6	9:07:02	LG
1.5	/	/	/	LG
3	/	/	/	LG

## October 2023 Reference Toxicant Test

# Reference Toxicant October 2023

NPDES #:

KCI

Date: October 3-10, 2023

LogIn #: Potassium Chloride

## Sat 10/7/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7.9	341.2	9.2	8:37:30	HH
0.1875	7.9	697.7	9.6	8:38:17	HH
0.375	7.9	1055	9.8	8:38:56	HH
0.75	7.9	1745	9.9	8:39:31	HH
1.5	/	/	/	/	HH
3	/	/	/	/	HH

*Pimephales promelas (fathead minnow)*

Initials	pH	DO	Time	Analyst
Control	7.7	8.2	8:34:49	HH
0.1875	7.6	8.2	8:35:21	HH
0.375	7.6	8.1	8:35:49	HH
0.75	7.6	8.1	8:36:18	HH
1.5	/	/	/	HH
3	/	/	/	HH

## Sun 10/8/23

Initials	pH	Cond.	DO	Time	Analyst
Control	8	334.8	9.8	10:49:48	ML
0.1875	7.9	712.9	9.6	10:50:24	ML
0.375	7.9	1057	9.8	10:51:22	ML
0.75	7.9	1789	10.3	10:52:29	ML
1.5	/	/	/	/	ML
3	/	/	/	/	ML

*Pimephales promelas (fathead minnow)*

Initials	pH	DO	Time	Analyst
Control	7.6	7.5	9:07:50	AA
0.1875	7.6	7.3	9:08:17	AA
0.375	7.6	7.3	9:08:44	AA
0.75	7.6	7.3	9:09:04	AA
1.5	/	/	/	AA
3	/	/	/	AA

## Mon 10/9/23

Initials	pH	Cond.	DO	Time	Analyst
Control	7	334.3	10.1	11:50:25	BE
0.1875	7.2	685.4	10.7	11:51:49	BE
0.375	7.4	1029	11.1	11:53:48	BE
0.75	7.5	1727	11.2	12:00:46	BE
1.5	/	/	/	/	BE
3	/	/	/	/	BE

*Pimephales promelas (fathead minnow)*

Initials	pH	DO	Time	Analyst
Control	7.7	8.2	9:50:46	BE
0.1875	7.7	8.2	9:51:12	BE
0.375	7.7	8.2	9:51:29	BE
0.75	7.7	8.2	9:51:47	BE
1.5	/	/	/	BE
3	/	/	/	BE

## Tue 10/10/23

*Pimephales promelas (fathead minnow)*

Initials	pH	DO	Time	Analyst
Control	7.7	8.7	9:02:19	LG
0.1875	7.7	8.6	9:02:55	LG
0.375	7.7	8.5	9:03:22	LG
0.75	7.7	8.4	9:03:47	LG
1.5	/	/	/	LG
3	/	/	/	LG

### Initials

	pH		Conductivity		DO	
	range	mean	range	mean	range	mean
Control	7-8	7.7	334.3-365.1	345	8.2-10.6	9.4
0.1875	7.2-7.9	7.8	683.4-752.1	714	8.4-10.7	9.7
0.375	7.4-7.9	7.8	1029-1143	1074	8.4-11.1	9.8
0.75	7.5-7.9	7.8	1720-1882	1784	8.5-11.2	9.9
1.5	7.8-7.8	7.8	3175-3391	3319	8.4-8.9	8.9
3	7.7-7.9	7.8	5930-6203	6111	8.3-9.8	8.8

### Finals

*Pimephales promelas (fathead minnow)*

	pH		DO	
	range	mean	range	mean
Control	7.6-7.8	7.7	7.5-10.5	8.7
0.1875	7.6-7.8	7.7	7.3-8.5	8.5
0.375	7.6-7.8	7.7	7.3-8.8	8.3
0.75	7.6-7.8	7.7	7.3-8.6	8.3
1.5	7.8-7.8	7.8	8.4-8.5	8.5
3	7.7-7.7	7.7	8.4-8.5	8.5

# October 2023 Reference Toxicant Test

***Pimephales promelas* (fathead minnow)**  
**Reference Toxicant October 2023**

Toxicant: potassium chloride (KCl) Test Date: October 3-10, 2023

**Reference Toxicant Control**

L# of Control	Control Water Tank ID	Begin Use Date	Alkalinity (mg/L)	Hardness (mg/L)
L1662287-04	S 100223	Tue 10/3/23	65.8	100
L1662287-05	Q 100223	Tue 10/3/23	59.3	91.9
L1662287-06	F 100223	Tue 10/3/23	63.8	95

**Reference Toxicant (KCl Stock Solution)**

Begin Use Date	Alkalinity (mg/L)	Hardness (mg/L)	L# of 3% KCl
Tue 10/3/23	48.7	88	L1662846-01

Lot # of KCl Stock Solution used: 100323KCl



**Temperature *Pimephales promelas*** (measurement taken in test chambers)

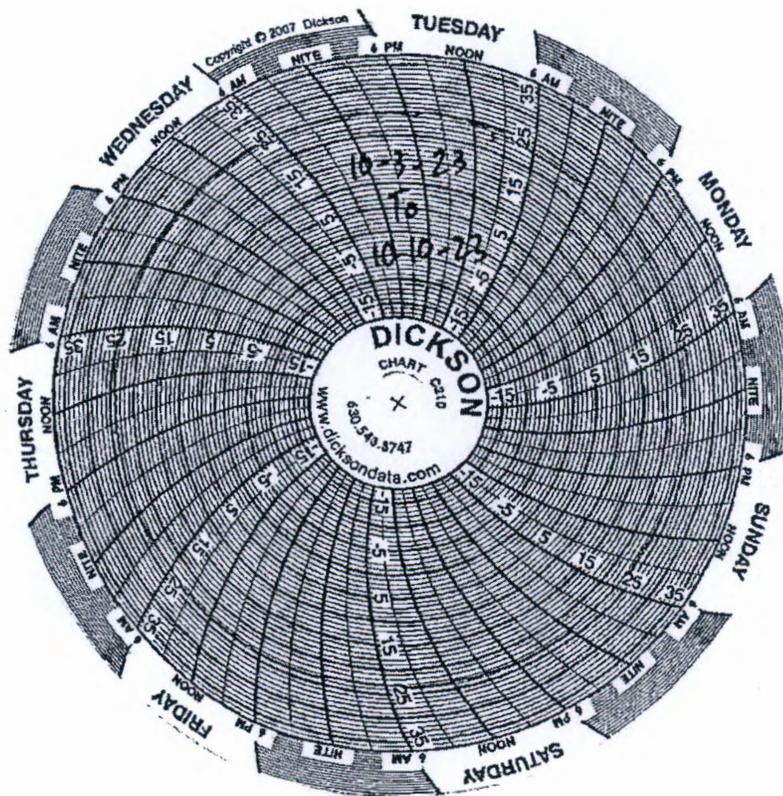
	Tue 10/3/23	Wed 10/4/23		Thu 10/5/23		Fri 10/6/23		Sat 10/7/23		Sun 10/8/23		Mon 10/9/23		Tue 10/10/23
	Analyst	Analyst		Analyst										
	BE	HH	HH	HH	BE	RJ	RJ	NH	HH	AA	AA	BE	ML	HH
Control	25.9°C	25.6°C	25.3°C	25.4°C	25.1°C	24.8°C	25.9°C	24.8°C	25.9°C	24.2°C	24.9°C	24.7°C	25.3°C	24.7°C
0.1875	25.8°C	25.5°C	24.8°C	25.4°C	25.9°C	24.7°C	25.8°C	24.7°C	26.0°C	24.1°C	25.0°C	24.6°C	25.0°C	24.7°C
0.375	25.5°C	25.4°C	24.7°C	25.4°C	25.9°C	24.6°C	25.7°C	24.5°C	25.8°C	24.2°C	24.9°C	24.6°C	25.2°C	24.6°C
0.75	24.9°C	25.5°C	24.7°C	25.2°C	25.5°C	24.8°C	25.9°C	24.1°C	25.6°C	24.2°C	25.3°C	24.3°C	25.4°C	24.6°C
1.5	25.2°C	25.4°C	/	/	/	/	/	/	/	/	/	/	/	/
3	24.8°C	25.5°C	/	/	/	/	/	/	/	/	/	/	/	/
	(initial)	(final)	(initial)	(final)	(initial)	(final)	(initial)	(final)	(initial)	(final)	(initial)	(final)	(initial)	(final)

Thermometer serial number: 38190150WS

**Reference Toxicant October 2023**

**October 2023**  
**Reference Toxicant Test**

Chart Devices Used in  
CrownTonka Walk-in  
Incubator:  
Dickson (small chart)



## October 2023 Reference Toxicant Test

**TOXICITY TEST DATA SHEET - *Pimephales promelas* (fathead minnow) 7-Day Survival & Weight Data**

Reference Toxicant October 2023

Test Date: October 3-10, 2023

NPDES #: KCI

Sample Distribution		NUMBER OF SURVIVORS							
		Sample #1 Tues/Wed		Sample #2 Thurs/Fri		Sample #3 Sat/Sun/Mon			
Day of the Week and Date	ID of Rep.	Tue 10/3/23	Wed 10/4/23	Thu 10/5/23	Fri 10/6/23	Sat 10/7/23	Sun 10/8/23	Mon 10/9/23	Tue 10/10/23
Effluent Conc. In%		0 hours	24 hours	48 hours	72 hours	96 hours	120 hours	144 hours	168 hours
<b>Control</b> <b>11</b>	A: 1	10	10	10	10	10	10	10	10
	B: 3	10	10	10	10	10	10	10	10
	C: 2	10	10	10	10	10	10	10	10
	D: 6	10	10	10	10	10	10	10	10
<b>0.1875</b>	A: 2	10	10	10	10	10	10	10	10
	B: 5	10	10	10	10	10	10	10	10
	C: 1	10	10	10	10	10	10	10	10
	D: 4	10	10	10	10	10	10	10	10
<b>0.375</b>	A: 3	10	10	10	10	10	10	10	10
	B: 1	10	10	10	10	10	10	10	10
	C: 4	10	10	9	8	8	8	8	8
	D: 5	10	10	10	10	10	10	10	10
<b>0.75</b>	A: 4	10	9	9	9	8	7	7	7
	B: 6	10	8	8	7	7	7	7	6
	C: 3	10	9	9	9	8	8	5	4
	D: 2	10	7	4	3	2	1	0	0
<b>1.5</b>	A: 5	10	0	0	0	0	0	0	0
	B: 2	10	0	0	0	0	0	0	0
	C: 6	10	0	0	0	0	0	0	0
	D: 3	10	0	0	0	0	0	0	0
<b>3</b>	A: 6	10	0	0	0	0	0	0	0
	B: 4	10	0	0	0	0	0	0	0
	C: 5	10	0	0	0	0	0	0	0
	D: 1	10	0	0	0	0	0	0	0

Initials of Analyst Checking Survival	BE	LG/HH	BE	RJ	HH	AA	ML	LG/HH
Time that Minnows were Examined:	17:33	17:19	16:17	13:20	15:35	13:58	13:09	12:58

Carboy used to dilute sample:	QSF 10-2	QSF 10-2	QSF 10-2	QSF 10-2	QSF 10-2	QSF 10-2	QSF 10-2
Fish Cup Batch/Lot:	ESC54281		Brine Shrimp Lot:		281729		

COMMENTS: Minnows used in this test are from ESC Lot# 100223HD Minnows were hatched on 10/2/2023

Survival ≥ 80%?	≥ 0.25mg Average Weight In Surviving Controls?	Is (growth) CV < 40%?	Control Valid?
YES NO	YES NO	YES NO	YES NO
X	X	X	X

WEIGHT DATA for SURVIVING MINNOWS							
	Weight Empty Box (mg)	Boat w/ Fish (mg)	Weight of Larvae (mg)	Mean Weight of Larvae (mg)	Total of Mean	Mean per Concentration	
Control	A	1271.06	1275.01	3.95	0.395	1.5770	0.3943
	B	1264.11	1287.83	3.52	0.352		
	C	1273.04	1277.46	4.42	0.442		
	D	1258.36	1262.24	3.88	0.388		
0.1875	A	1263.92	1268.68	4.76	0.476	1.6130	0.4032
	B	1270.24	1273.26	3.02	0.302		
	C	1265.42	1269.57	4.15	0.415		
	D	1269.48	1293.68	4.2	0.42		
0.375	A	1289.47	1293.68	4.21	0.421	1.6300	0.4075
	B	1286.65	1290.31	3.66	0.366		
	C	1264.95	1269.17	4.22	0.422		
	D	1293.25	1297.46	4.21	0.421		
0.75	A	1289.5	1292.59	3.09	0.309	0.7780	0.1945
	B	1278.63	1281.29	2.66	0.266		
	C	1287.48	1289.51	2.03	0.203		
	D	0	0	0	0		
1.5	A			#VALUE!		#####	#####
	B			#VALUE!			
	C			#VALUE!			
	D			#VALUE!			
3	A			#VALUE!		#####	#####
	B			#VALUE!			
	C			#VALUE!			
	D			#VALUE!			

Analyst: NH ML

Date & Time Put in Oven	Date & Time Removed
10/10/2023 13:08	10/11/2023 @ 4:51 PM

Oven Temp:	74°C	Oven Temp:	75°C
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Analyst:	HH	Analyst:	ML
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Login #: Potassium Chloride

**October 2023  
Reference Toxicant Test**

**CETIS Summary Report**

Report Date: 22 Nov-23 09:43 (p 1 of 2)  
 Test Code/ID: 100323PP / 06-3515-8771

**Fathead Minnow 7-d Larval Survival and Growth Test**

**Pace National**

Batch ID: 18-1826-2579	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 03 Oct-23	Protocol: EPA/821/R-02-013 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 10 Oct-23	Species: Pimephales promelas	Brine:
Test Length: 7d 0h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: <36

Sample ID: 08-7972-9177	Code: 346F9A19	Project:
Sample Date: 03 Oct-23	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 03 Oct-23	CAS (PC):	Station: In House
Sample Age: --	Client: Reference Toxicant	

Comments: Reference Toxicant October 2023 Chronic Minnow

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	gm/L	95% LCL	95% UCL	S
07-9351-0455	7d Survival Rate	Linear Interpolation (ICPIN)	✓ LC15	0.4464	0.3321	0.5721	1
			✓ LC20	0.4821	0.3857	0.6307	
			✓ LC25	0.5179	0.4156	0.6893	
			✓ LC40	0.625	0.4733	0.9173	
			✓ LC50	0.6964	0.5132	1.059	
04-3926-9017	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)	IC15	0.4841	0.376	0.6293	1
			IC20	0.5204	0.4054	0.7203	
			IC25	0.5568	0.4276	0.8146	
			IC40	0.6658	0.4754	1.012	
			IC50	0.7385	0.501	1.133	

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
07-9351-0455	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
04-3926-9017	Mean Dry Biomass-mg	Control Resp	0.3942	0.25	<<	Yes	Passes Criteria

**7d Survival Rate Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.1875		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
0.375		4	0.9500	0.7909	1.1090	0.8000	1.0000	0.0500	0.1000	10.53%	5.00%
0.75		4	0.4250	-0.0676	0.9176	0.0000	0.7000	0.1548	0.3096	72.84%	57.50%
1.5		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	--	100.00%
3		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	--	100.00%

**Mean Dry Biomass-mg Summary**

Conc-gm/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.3942	0.3354	0.4531	0.352	0.442	0.01849	0.03699	9.38%	0.00%
0.1875		4	0.4033	0.2872	0.5193	0.302	0.476	0.03647	0.07294	18.09%	-2.28%
0.375		4	0.4075	0.3635	0.4515	0.366	0.422	0.01384	0.02767	6.79%	-3.36%
0.75		4	0.1945	-0.02314	0.4121	0	0.309	0.06839	0.1368	70.32%	50.87%
1.5		4	0	0	0	0	0	0	0	--	100.00%
3		4	0	0	0	0	0	0	0	--	100.00%

**October 2023  
Reference Toxicant Test**

**CETIS Summary Report**

Report Date: 22 Nov-23 09:43 (p 2 of 2)  
 Test Code/ID: 100323PP / 06-3515-8771

**Fathead Minnow 7-d Larval Survival and Growth Test**

Pace National

7d Survival Rate Detail MD5: C4628B0D5BB9C710905007266D97813A

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
0.1875		1.0000	1.0000	1.0000	1.0000
0.375		1.0000	1.0000	0.8000	1.0000
0.75		0.7000	0.6000	0.4000	0.0000
1.5		0.0000	0.0000	0.0000	0.0000
3		0.0000	0.0000	0.0000	0.0000

Mean Dry Biomass-mg Detail MD5: 05D6829FD21B5B3DF36650D3C2A6D8CA

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.395	0.352	0.442	0.388
0.1875		0.476	0.302	0.415	0.42
0.375		0.421	0.366	0.422	0.421
0.75		0.309	0.266	0.203	0
1.5		0	0	0	0
3		0	0	0	0

**October 2023  
 Reference Toxicant Test**

**CETIS Analytical Report**

Report Date: 22 Nov-23 09:43 (p 1 of 2)  
 Test Code/ID: 100323PP / 06-3515-8771

**Fathead Minnow 7-d Larval Survival and Growth Test**

Pace National

Analysis ID: 07-9351-0455      Endpoint: 7d Survival Rate      CETIS Version: CETISv2.1.4  
 Analyzed: 08 Nov-23 9:06      Analysis: Linear Interpolation (ICPIN)      Status Level: 1  
 EdIt Date: 08 Nov-23 9:02      MD5 Hash: C4628B0D5BB9C710905007266D97813A      Editor ID: 001-600-314-4

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	391021	1000	Yes	Two-Point Interpolation

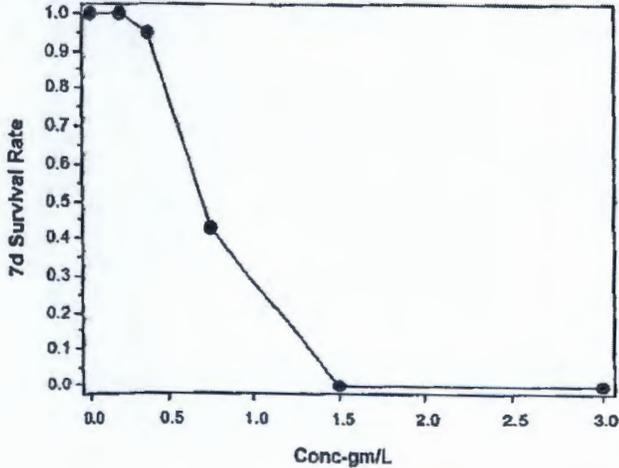
**Point Estimates**

Level	gm/L	95% LCL	95% UCL
LC15	0.4484	0.3321	0.5721
LC20	0.4821	0.3857	0.6307
LC25	0.5179	0.4156	0.6893
LC40	0.625	0.4733	0.9173
LC50	0.6864	0.5132	1.059

**7d Survival Rate Summary**

Conc-gm/L	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Median	Min	Max	CV%	%Effect	IA/EB	Mean	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
0.1875		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
0.375		4	0.9500	1.0000	0.8000	1.0000	10.53%	5.00%	38/40	0.9500	5.00%
0.75		4	0.4250	0.5000	0.0000	0.7000	72.84%	57.50%	17/40	0.4250	57.50%
1.5		4	0.0000	0.0000	0.0000	0.0000	—	100.00%	0/40	0.0000	100.00%
3		4	0.0000	0.0000	0.0000	0.0000	—	100.00%	0/40	0.0000	100.00%

**Graphics**



**October 2023  
 Reference Toxicant Test**

**CETIS Analytical Report**

Report Date: 22 Nov-23 09:43 (p 2 of 2)  
 Test Code/ID: 100323PP / 06-3515-8771

**Fathead Minnow 7-d Larval Survival and Growth Test**

Pace National

Analysis ID: 04-3926-9017      Endpoint: Mean Dry Biomass-mg      CETIS Version: CETISv2.1.4  
 Analyzed: 08 Nov-23 9:06      Analysis: Linear Interpolation (ICPIN)      Status Level: 1  
 Edit Date: 08 Nov-23 9:02      MD5 Hash: 05D6829FD21B5B3DF36650D3C2A6D8CA      Editor ID: 001-600-314-4

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1854186	1000	Yes	Two-Point Interpolation

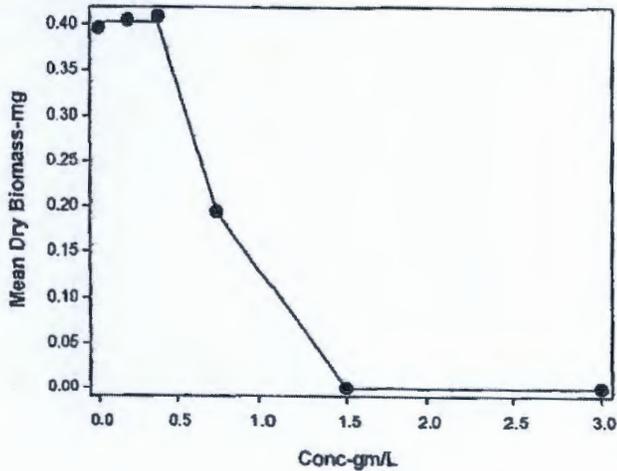
**Point Estimates**

Level	gm/L	95% LCL	95% UCL
IC15	0.4841	0.376	0.6293
IC20	0.5204	0.4054	0.7203
IC25	0.5568	0.4276	0.8146
IC40	0.6658	0.4754	1.012
IC60	0.7365	0.501	1.139

**Mean Dry Biomass-mg Summary**

Conc-gm/L	Code	Count	Calculated Variate						Isotonic Variate	
			Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	D	4	0.3942	0.3915	0.352	0.442	9.38%	0.00%	0.4017	0.00%
0.1875		4	0.4033	0.4175	0.302	0.476	18.09%	-2.28%	0.4017	0.00%
0.375		4	0.4075	0.421	0.366	0.422	6.79%	-3.36%	0.4017	0.00%
0.75		4	0.1945	0.2345	0	0.309	70.32%	50.67%	0.1945	51.58%
1.5		4	0	0	0	0	---	100.00%	0	100.00%
3		4	0	0	0	0	---	100.00%	0	100.00%

**Graphics**



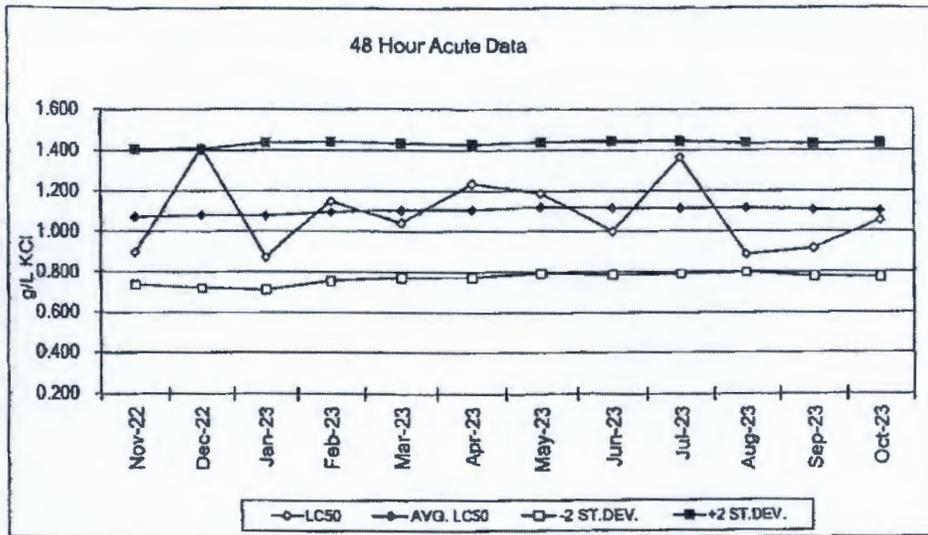
**October 2023  
 Reference Toxicant Test**

1300 Blue Spruce Drive, Suite  
Fort Collins, Colorado 80524



Toll Free: 800/331-5916  
Tel:970/484-5091 Fax:970/484-2514

REFERENCE TOXICANT LC50  
*Pimephales promelas*



48 HOUR ACUTE TOXICITY DATA FOR  
*Pimephales promelas*

DATE	LC50 (g/L KCl)	95% CONFIDENCE (upper)	(lower)	AVG.LC50 (g/L KCl)	METHOD	+2 STD	-2 STD
May 23	1.189	1.309	1.080	1.119	SPKR	1.4444	0.7929
Jun 23	1.000	1.117	0.895	1.115	SPKR	1.4444	0.7861
Jul 23	1.366	1.434	1.302	1.113	SPKR	1.4343	0.7916
Aug 23	0.886	1.001	0.779	1.114	SPKR	1.4313	0.7976
Sep 23	0.917	1.028	0.818	1.106	SPKR	1.4340	0.7784
Oct 23	1.053	1.181	0.940	1.100	SPKR	1.4260	0.7734

\*\*Current Test Dates: 10/4-6/2023

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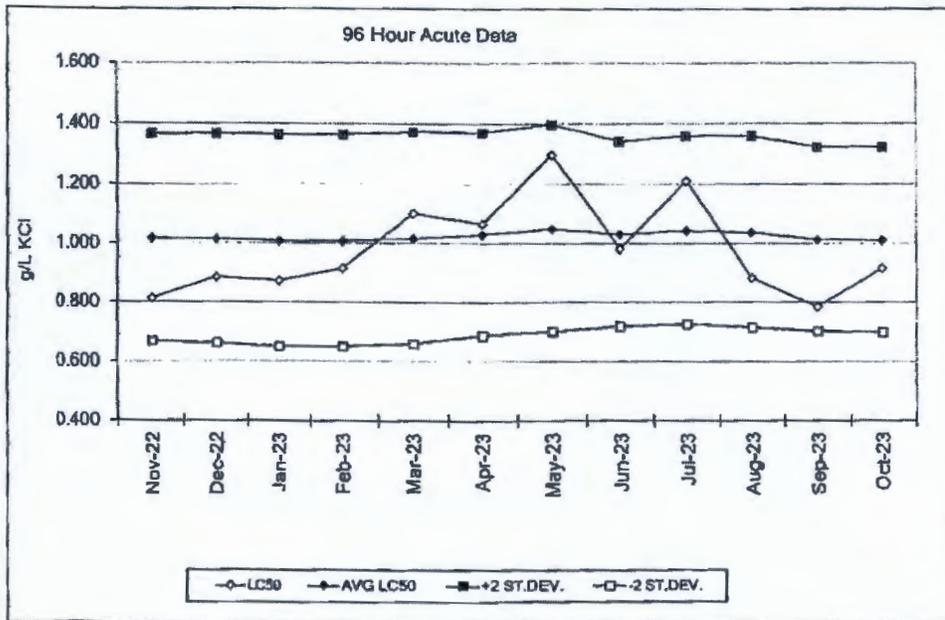
October 2023  
Reference Toxicant Test

1300 Blue Spruce Drive, Suite C  
Fort Collins, Colorado 80524



Toll Free: 800/331-5916  
Tel:970/484-5091 Fax:970/484-2514

REFERENCE TOXICANT LC50  
*Pimephales promelas*



96 Hour Acute Toxicity Data For  
*Pimephales promelas*

Date	LC50 (g/L KCl)	95% Confidence (upper) (lower)	AVG.LC50 (g/L KCl)	Method	+2 STD	-2 STD
May-23	1.297	1.396 1.205	1.049	SPKR	1.3969	0.7013
Jun-23	0.983	1.098 0.880	1.030	SPKR	1.3420	0.7187
Jul-23	1.210	1.330 1.099	1.043	SPKR	1.3592	0.7268
Aug-23	0.883	1.001 0.779	1.036	SPKR	1.3592	0.7135
Sep-23	0.785	0.868 0.709	1.012	SPKR	1.3229	0.7013
Oct-23	0.917	1.028 0.818	1.010	SPKR	1.3227	0.6973

\*\*Current Test Dates: 10/4-8/2023

Aquatic BioSystems, Inc • Quality Research Organisms

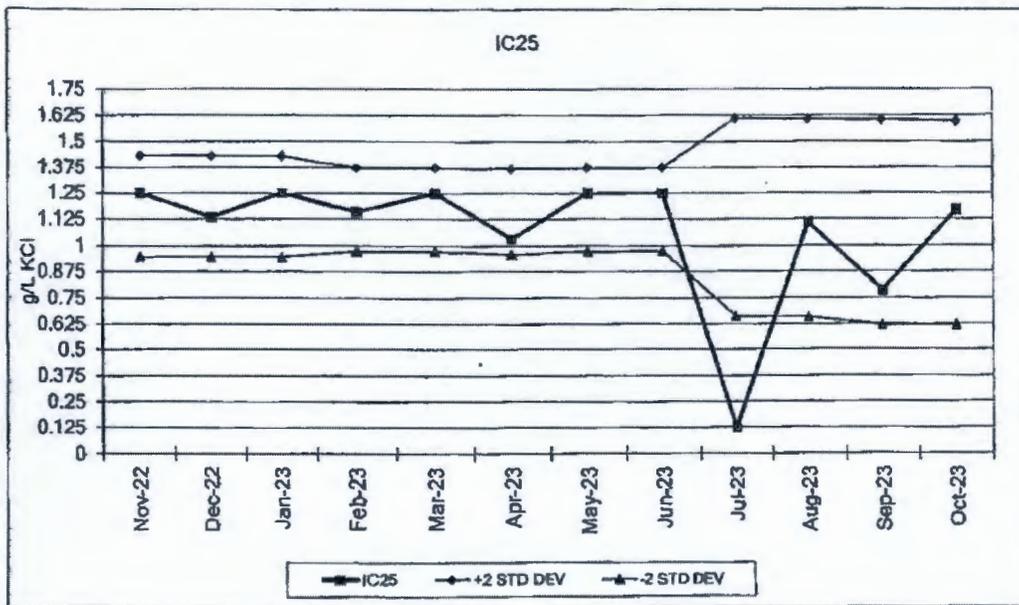
**October 2023  
Reference Toxicant Test**

1300 Blue Spruce Drive, Suite C  
Fort Collins, Colorado 80524



Toll Free: 800/331-5916  
Tel:970/484-5091 Fax:970/484-2514

*Pimephales promelas*



Chronic 7 Day Survival Test Data

Date	NOEC (g/L KCl)	LOEC (g/L KCl)
May-23	0.50	1.0
Jun-23	0.50	1.0
Jul-23	0.50	1.0
Aug-23	0.50	1.0
Sep-23	0.50	1.0
Oct-23	0.50	1.0

IC 25 for Growth Test

Date	IC25 (g/L KCl)	95% Confidence (upper)	95% Confidence (lower)	Avg. IC25 (g/L KCl)	+2 STD DEV	-2 STD DEV
May-23	1.250	1.250	1.141	1.173	1.374	0.973
Jun-23	1.250	1.250	1.250	1.173	1.374	0.973
Jul-23	0.125	1.705	0.074	1.136	1.611	0.660
Aug-23	1.110	1.316	0.320	1.131	1.606	0.657
Sep-23	0.785	0.868	0.709	1.110	1.603	0.618
Oct-23	1.169	1.287	0.796	1.107	1.596	0.617

\*\*Current Test Dates: 10/4-11/2023

Aquatic BioSystems, Inc • Quality Research Organisms

**October 2023  
Reference Toxicant Test**



# Internal Transfer Chain of Custody



Rush Multiplier      X  
 Samples Pre-Logged into eCOC

State Of Origin: AL  
 Cert. Needed:  Yes  No

Workorder: 20295719    Workorder Name: Clanton Chronic Toxicity AL005

Owner Received Date: 11/6/2023    Results Requested By: 11/20/2023

Report To		Subcontract To				Requested Analysis																					
Cindy Simpson Pace Analytical Tuscaloosa 1168 Whigham Place Tuscaloosa, AL 35405 Phone (205)614-6630		Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858																									
						Chronic Toxicity Day 1																					
						Preserved Containers																					
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	Day 1 Monday WWTP Effluent	PS	11/6/2023 08:00	20295719001	Water	5	1																				
2																											
3																											
4																											
5																											
LAB USE ONLY 41674532 -01																											
Comments																											
Transfers	Released By	Date/Time	Received By	Date/Time																							
1	<i>[Signature]</i>	11/1/23/1609	<i>[Signature]</i>	11-7-23/1015																							
2																											
3																											
Cooler Temperature on Receipt		°C	Custody Seal <input checked="" type="checkbox"/> or N		Received on Ice <input checked="" type="checkbox"/> or N		Samples Intact <input checked="" type="checkbox"/> or N																				

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist  
 Seal Present Intact  Y  N    If Applicable  
 PIC signed Accurate  Y  N    VCA Zero Headspace  Y  N  
 Bottles arrive intact  Y  N    Pres. Correct Check  Y  N  
 Correct bottles used  Y  N  
 Sufficient volume sent  Y  N  
 PA Screen <0.5 uR/hr  Y  N  
**DIAT 3.9**

PHOTOGRAPHED  
 CRB-20221V  
 PH-10BDH4321 TRC, 11/16/23  
 CRB-20221V



Ship To:  
 Pace National  
 12065 Lebanon Rd  
 Mt. Juliet, TN 37122  
 Phone (615) 758-5858

INTER\_LABORATORY WORK ORDER # 20295719

(To be completed by sending lab)

L1674532

Sending Project No.	20295719
Receiving Project No.	
Check Box for Consolidated Invoice.	<input type="checkbox"/>
Date Prepared.	11/06/23
REQUESTED COMPLETION DATE.	11/20/2023

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR850-Pace National	External Client	Clanton - WWTP -WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Chronic Toxicity Day 1	BP2U		Unpreserved	1	SI-21WET	SUB PASI WET

Special Requirements: Simple, not TNI Compliant (NTC), FR Only no EDD (0)

**FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO**

Return Samples to Sending Region:  Yes  No

**DISPOSITION of FORM**

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

H138

# Internal Transfer Chain of Custody



Rush Multiplier      X  
 Samples Pre-Logged into eCOC

State Of Origin: AL  
 Cert. Needed:  Yes  No

Workorder: 20295719    Workorder Name: Clanton Chronic Toxicity AL005

Owner Received Date: 11/8/2023    Results Requested By: 11/20/2023

Report To		Subcontract To				Requested Analysis															
Cindy Simpson Pace Analytical Tuscaloosa 1168 Whigham Place Tuscaloosa, AL 35405 Phone (205)614-6630		Pace Analytical SE Kansas 808 West McKay Frontenac, KS 66763 Phone (620)235-0003																			
						Preserved Containers															
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unassayed															
1	Day 2 Wednesday WWTP Effluent	PS	11/8/2023 08:00	20295719002	Water	Y	G														
2							CC	1/9/23													
3																					
4																					
5																					

Chronic Toxicity Day 2

L 1674532  
LAB USE ONLY  
-02

					Comments									
Transfers	Released By	Date/Time	Received By	Date/Time										
1			<i>CC</i> (18)	11/9/23 0905	IR62 IWC dilution is 75%.									
2														
3														

Cooler Temperature on Receipt: 74.02°C    MSAT Custody Seal  or N    Received on Ice  or N    Samples Intact  or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

sample Receipt Checklist  
 COC Seal Present-Intact:  Y  N    Airs \_\_\_\_\_  
 COC Signed/Accurate:  Y  N    size: \_\_\_\_\_ 1L \_\_\_\_\_ 6L \_\_\_\_\_ 1.4L  
 Bottles arrive intact:  Y  N    Tag Color: G \_\_\_\_\_ W \_\_\_\_\_ P \_\_\_\_\_ B \_\_\_\_\_  
 Correct bottles used:  Y  N    Tubing \_\_\_\_\_ Shunt \_\_\_\_\_

PH-10BDH4321 TRC-2352167  
 CR6-20221V

T/PP: \_\_\_\_\_

Page 86 of 88



L1674523<sup>32</sup> NF 11/9/23

Ship To:  
Pace Analytical SE Kansas  
808 West McKay  
Frontenac, KS 66763  
Phone (620)235-0003

INTER LABORATORY WORK ORDER # 20295719

(To be completed by sending lab)

Sending Project No:	20295719
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	11/08/23
REQUESTED COMPLETION DATE:	11/20/2023

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR62-SE Kansas	External Client	Clanton - WWTP -WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Chronic Toxicity Day 2	BP1U		Unpreserved	1	SI-21WET	SUB PASI WET

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region:  Yes  No

DISPOSITION of FORM

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

# Internal Transfer Chain of Custody

E064



Rush Multiplier  X  
 Samples Pre-Logged into eCOC

State Of Origin: AL  
 Cert. Needed:  Yes  No

Workorder: 20295719    Workorder Name: Clanton Chronic Toxicity AL005    Owner Received Date: 11/6/2023    Results Requested By: 11/20/2023

Report To		Subcontract To				Requested Analysis																	
Cindy Simpson Pace Analytical Tuscaloosa 1168 Whigham Place Tuscaloosa, AL 35405 Phone (205)614-6630		Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858																					
						Preserved Containers																	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved																	
1	Day 1 Monday WWTP Effluent	PS	11/6/2023 08:00	20295719001	Water	1																	
2	Day 2 Wednesday WWTP Effluent	PS	11/8/2023 08:00	20295719002	Water	1																	
3	Day 3 Friday WWTP Effluent	PS	11/10/2023 08:00	20295719003	Water	1																	
4																							
5																							

UL674532  
LAB USE ONLY

-03

Transfers					Comments									
Released By	Date/Time	Received By	Date/Time											
<i>[Signature]</i>	11/14/23 15:29	<i>[Signature]</i>	11/14/23 18:27		PH-10BDH4321 TRC 0362M2 CRS-20221V PH-10BDH4321 TRC 0362M2 CRS-20221V									

Cooler Temperature on Receipt 0.5 °C    Custody Seal  or N    Received on Ice  or N    Samples Intact  or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present Intact	<input checked="" type="checkbox"/>	If Applicable	
COC Signed/Accurate	<input checked="" type="checkbox"/>	VSA Zero Headspace	<input checked="" type="checkbox"/>
Bottles arrive intact	<input checked="" type="checkbox"/>	Pres. Correct Check	<input checked="" type="checkbox"/>
Correct bottles used	<input checked="" type="checkbox"/>		
Sufficient volume sent	<input checked="" type="checkbox"/>		
AA Screen <0.5 µm/hc	<input checked="" type="checkbox"/>		



Ship To:  
 Pace National  
 12065 Lebanon Rd  
 Mt. Juliet, TN 37122  
 Phone (615) 758-5858

INTER\_LABORATORY WORK ORDER # 20295719 <sup>4474532</sup>  
 (To be completed by sending lab)

Sending Project No	20295719
Receiving Project No	
Check Box for Consolidated Invoice	<input type="checkbox"/>
Date Prepared	11/10/23
REQUESTED COMPLETION DATE	11/20/2023

Sending Region	IR20-New Orleans	Sending Project Mgr.	Cindy Simpson
Receiving Region	IR850-Pace National	External Client	Clanton - WWTP -WW
State of Sample Origin	AL	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units \_\_\_\_\_ Report Wet or Dry Weight? Wet Cert. Needed \_\_\_\_\_

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
Chronic Toxicity Day 1	BP2U		Unpreserved	1	SI-21WET	SUB PASI WET
Chronic Toxicity Day 2	BP1U		Unpreserved	1	SI-21WET	SUB PASI WET
Chronic Toxicity Day 3	BP2U		Unpreserved	1	SI-21WET	SUB PASI WET

Special Requirements: Simple, not TNI Compliant (NTC),FR Only no EDD (0)

**FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO**

Return Samples to Sending Region:  Yes  No

**DISPOSITION of FORM**

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.



Pace Analytical Services, LLC  
1168 Whigham Place  
Tuscaloosa, AL 35405  
(205) 614-6630

November 21, 2022

Anthony Robinson  
City of Clanton - WWTP  
1574 County Road 51  
P. O. Box 580  
Clanton, AL 35046

RE: Project: Clanton Chronic Toxicity AL005  
Pace Project No.: 20260648

Dear Anthony Robinson:

Enclosed are the analytical results for sample(s) received by the laboratory between November 07, 2022 and November 11, 2022. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:  
• Pace Analytical Services - SE Kansas

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cindy Simpson  
cindy.simpson@pacelabs.com  
(205)614-6630  
Project Manager

Enclosures

cc: Kyle Woodham

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, LLC**  
1168 Whigham Place  
Tuscaloosa, AL 35405  
(205) 614-6630

## CERTIFICATIONS

Project: Clanton Chronic Toxicity AL005  
Pace Project No.: 20260648

---

### **Pace Analytical Services Southeast Kansas**

808 West McKay, Frontenac, KS 66763  
Arkansas Certification #: 22-031-0  
Iowa Certification #: 431  
Kansas/NELAP Certification #: E-10426

Louisiana Certification #: 05115  
Oklahoma Certification #: 2022-060  
Texas Certification #: T104704558-21-3  
Utah Certification #: KS009402022-1

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## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC  
1168 Whigham Place  
Tuscaloosa, AL 35405  
(205) 614-6630

### SAMPLE ANALYTE COUNT

Project: Clanton Chronic Toxicity AL005  
Pace Project No.: 20260648

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
20260648001	Day 1 Monday WWTP Effluent	EPA 821/R-02/013	MEB	1	PASI-SEKS

PASI-SEKS = Pace Analytical Services - SE Kansas

### REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC  
1168 Whigham Place  
Tuscaloosa, AL 35405  
(205) 614-6630

### ANALYTICAL RESULTS

Project: Clanton Chronic Toxicity AL005  
Pace Project No.: 20260648

---

Sample: Day 1 Monday WWTP Effluent      Lab ID: 20260648001      Collected: 11/07/22 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Toxicity, Chronic	Complete		1.0	1	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Clanton Chronic Toxicity AL005  
Pace Project No.: 20260648

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

## REPORT OF LABORATORY ANALYSIS

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**WO#: 20260648**



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70087

Project #

PM: CRS Due Date: 11/21/22  
 CLIENT: TU-ClantonWW

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals Intact:  YES  NO

Samples on ice:  YES  NO Type of Ice: Wet Blue None

Date and Initials of person examining contents: BG 11/11/22

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #2 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #3 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #4 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_

Tracking #: \_\_\_\_\_

Temperature Blank Present*?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sample Labels match COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	If added record lot #.: HNO3 _____ H2SO4 _____ Date: _____ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_



**WO#: 20260648**



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70067

Project #

PM: CRS Due Date: 11/21/22  
 CLIENT: TU-ClantonWW

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals Intact:  YES  NO

Samples on ice:  YES  NO

Type of Ice:  Wet  Blue  None

Date and Initials of person examining contents: SM 11/10/22

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: TUTM13 Cooler Temp °C: (Observed) 2.6 (CF) 10.1 (Actual) 2.7  
 Cooler #2 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #3 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #4 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_

Tracking #: \_\_\_\_\_

Temperature Blank Present*?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No If added record lot #.:
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	HNO3 _____ H2SO4 _____ Date: _____ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_



**WO#: 20260648**



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70087

Project #: **PM: CRS** Due Date: **11/21/22**  
**CLIENT: TU-ClantonWW**

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals intact:  YES  NO

Samples on ice:  YES  NO Type of Ice:  Wet  Blue  None

Date and Initials of person examining contents: \_\_\_\_\_

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: T2M13 Cooler Temp °C: (Observed) 1.8 (CF) +0.1 (Actual) 1.9  
 Cooler #2 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #3 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #4 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_

Tracking #: \_\_\_\_\_

Temperature Blank Present**	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If added record lot #.: HNO3 _____ H2SO4 _____ Date: _____ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_



Pace Analytical Services, LLC  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

November 18, 2022

Cindy Simpson  
Pace NOLA  
1000 Riverbend Blvd.  
Suite F  
Saint Rose, LA 70087

RE: Project: 20260648 CLANTON CHRONIC TOX  
Pace Project No.: 60415092

Dear Cindy Simpson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2022. This report is a summary of the results based upon our understanding of your data quality objectives. Please contact us if itemized quality control results are needed. These results relate only to the samples included in this report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:  
• Pace Analytical Services - SE Kansas

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Haley  
jennifer.haley@pacelabs.com  
(913)599-5665  
PM Lab Management

Enclosures

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, LLC**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

### CERTIFICATIONS

Project: 20260648 CLANTON CHRONIC TOX

Pace Project No.: 60415092

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**Pace Analytical Services Southeast Kansas**

808 West McKay, Frontenac, KS 66763

Arkansas Certification #: 22-031-0

Iowa Certification #: 431

Kansas/NELAP Certification #: E-10426

Louisiana Certification #: 05115

Oklahoma Certification #: 2022-060

Texas Certification #: T104704558-21-3

Utah Certification #: KS009402022-1

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### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20260648 CLANTON CHRONIC TOX  
Pace Project No.: 60415092

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
20260648001	Day 1 Monday WWTP Effluent	EPA 821/R-02/013	MEB	1	PASI-SE

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PASI-SE = Pace Analytical Services - SE Kansas

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### ANALYTICAL RESULTS

Project: 20260648 CLANTON CHRONIC TOX  
Pace Project No.: 60415092

---

Sample: Day 1 Monday WWTP Effluent      Lab ID: 20260648001      Collected: 11/07/22 08:00

Parameters	Results	Units	Report Limit	DF	Qualifiers
Toxicity, Chronic	Complete		1.0	1	

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## QUALIFIERS

Project: 20260648 CLANTON CHRONIC TOX  
Pace Project No.: 60415092

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

## REPORT OF LABORATORY ANALYSIS

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DC#\_Title: ENV-FRM-LENE-0009\_Sample (

Revision: 2

Effective Date: 01/12/2022

WO#: 60415092



Client Name:

Clanton Cindy Simpson

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Xroads  Client  Other

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

60415092

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-111 Type of Ice: Wet Blue  None

Cooler Temperature (°C): As-read 2.6 Corr. Factor -0.5 Corrected 2.1

Date and initials of person examining contents: 11/8/22 938

Temperature should be above freezing to 6°C

Chain of Custody present:	XYes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	XYes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	XYes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Correct containers used:	XYes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Pace containers used:	XYes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Containers intact:	XYes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	XYes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Samples contain multiple phases? Matrix:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

# Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: AL  
 Cert. Needed:  Yes  No

Workorder: 20260648 Workorder Name: Clanton Chronic Toxicity AL005

Owner Received Date: 11/7/2022 Results Requested By: 11/21/2022

Report To		Subcontract To				Requested Analysis															
Cindy Simpson Pace Analytical Tuscaloosa 1168 Whigham Place Tuscaloosa, AL 35405 Phone (205)614-6630		Pace Analytical SE Kansas 808 West McKay Frontenac, KS 66763 Phone (620)235-0003				<div style="float: right; text-align: center;"> <p>LAB USE ONLY</p> <p style="font-size: 2em; transform: rotate(-15deg);">60415092</p> </div>															
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix											Unpreserved	Preserved Containers				Chronic Toxicity Day1
1	Day 1 Monday WWTP Effluent	PS	11/7/2022 08:00	20260648001	Water											1					
2																					
3																					
4																					
5																					
Transfers												Comments									
Released By	Date/Time	Received By	Date/Time																		
<i>[Signature]</i>	11-7 1535	<i>[Signature]</i>	11/8/22 9:30	IR62 IWC dilution is 75%.																	
Cooler Temperature on Receipt 2.1 °C		Custody Seal <input checked="" type="checkbox"/> or N		Received on Ice <input checked="" type="checkbox"/> or N		Samples Intact <input checked="" type="checkbox"/> or N															

*Sample*  
 In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

**REVIEWED**  
 By Jennifer Haley at 9:49 am, 11/14/22

Page 8 of 8

REFERENCE #60415092

CHRONIC TOXICITY TEST FOR  
City of Clanton (Walnut Creek)

PERMIT # AL0054631

PERFORMED ON:

Pimephales promelas

and

Ceriodaphnia dubia

PREPARED FOR:

City of Clanton (Walnut Creek)  
1574 County Road 51  
Clanton, Alabama 35046

PREPARED BY:  
Pace Analytical Services, Inc.  
808 West McKay  
Frontenac, KS 66763  
1-620-235-0003

November 17, 2022

REFERENCE #60415092

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APPENDIX B - CHAIN OF CUSTODY FORMS	

## REFERENCE #60415092

### SUMMARY

A Chronic Whole Effluent Toxicity Test using the 7-day chronic fathead minnows (*Pimephales promelas*), static renewal larval survival and growth test, and three brood 7-day chronic Cladoceran (*Ceriodaphnia dubia*), static renewal survival and reproduction test, was conducted on effluent discharge water collected at CITY OF CLANTON (WALNUT CREEK) effluent discharge from November 7, 2022 to November 11, 2022. All the test methods followed are as listed in EPA 821-R-02-013, "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms."

Statistically significant ( $p < 0.05$ ) mortality is determined by Dunnet's procedure using average percent survival of each test concentration versus the average survival of the controls. If significant mortality occurs, median lethal concentrations are calculated using effluent concentrations and their corresponding percent mortality data. The 95% confidence intervals are calculated where appropriate by the Spearman-Kärber method. Statistical analysis is accomplished by following steps in EPA 821-R-02-013, November 2002 and by use of Toxstat version 3.4.

In minnow section of testing, it was observed that the effluent had no significant effect on the survival of the larvae at the 75% concentration after the 7-day exposure period. The No Observed Effect Concentration (NOEC) was determined to be 75% for survival. No significant reduction in growth was observed in the 75% effluent concentration. The Toxic Units is  $< 1.33$ . The IC25 is  $> 75$ . The NOEC for growth in effluent was determined to be 75%.

In Cladoceran section of testing, it was observed that the effluent had no significant effect on the survival of the organisms in the 75% effluent concentration. The No Observed Effect Concentration (NOEC) was determined to be 75% for survival. No significant reduction in reproduction was observed in the 75% effluent concentrations. The Toxic Units is  $< 1.33$ . The IC25 is  $> 75$ . The NOEC for reproduction in effluent was determined to be 75%.

The chronic toxicity exhibited by the fathead minnows and the *Ceriodaphnia* treated by the effluent sampled from November 7 to November 11 from the CITY OF CLANTON (WALNUT CREEK) effluent discharge, is acceptable as described in EPA 821-R-02-013.

## REFERENCE #60415092

### INTRODUCTION

Pace Analytical was contracted to perform this chronic toxicity test on effluent from CITY OF CLANTON (WALNUT CREEK) effluent discharge. Chronic toxicity was measured using the Pimephales promelas at larval for survival and growth test and the Ceriodaphnia dubia survival and reproduction test described in EPA 821-R-02-013, "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The raw data of the study is stored at Pace Analytical Services, INC. 808 West McKay, Frontenac, KS 66763.

### TEST MATERIAL

CITY OF CLANTON (WALNUT CREEK) personnel collected sampling of the effluent. A sample of the effluent was delivered to Pace by commercial carrier on 11-8-22. Subsequent samples followed by delivery on 11-10-22 and on 11-12-22. All samples were stored at  $\leq 6^{\circ}$  Celsius. Moderately Hard Synthetic Water was used as a control in the test as described in EPA 821-R-02-013.

### TEST METHODS

Pace used EPA test method 1000.0 for conducting the Fathead Minnow, Pimephales promelas, Larval Survival and Growth Test. EPA test method 1002.0 was used for conducting the Cladoceran, Ceriodaphnia dubia, Survival and Reproduction Test. The tests were conducted to estimate the NOEC, and LOEC for survival, growth, and reproduction of these test species.

The Pimephales and Ceriodaphnia tests were initiated on 11-8-22 and carried out until 11-15-22. The Pimephales tests were conducted in 500 ml plastic jars with 250 ml of test solution. Ten larvae were placed in each of at least 4 replicates to make a total of 40 larvae per sample concentration. The Ceriodaphnia tests were carried out in 35ml vials containing 25 ml of test solution. One Neonate was placed in each of 10 replicates to make a total of 10 neonates per sample concentration.

### TEST ORGANISMS

The organisms used in these tests were cultured at Pace under controlled temperature and photoperiod conditions and/or were purchased from an external supplier. Pace maintains records of all culture techniques used in producing organisms.



REFERENCE #60415092

Permittee: CITY OF CLANTON (WALNUT CREEK) Effluent discharge.

CERIODAPHNIA SURVIVAL AND REPRODUCTION

DATA TABLE FOR CERIODAPHNIA YOUNG PRODUCTION

Replicate	Control 0%	Dilution 1 75%
1	19	17
2	22	22
3	16	18
4	17	19
5	23	23
6	25	21
7	15	18
8	22	25
9	24	25
10	19	25
Mean	20.2	21.3
SD	3.490	3.164
CV %	17.28	14.85

Permittee: CITY OF CLANTON (WALNUT CREEK) Effluent discharge.

CERIODAPHNIA MEAN PERCENT SURVIVAL

Time Elapsed	Control 0%	Dilution 1 75%
24 hrs	100	100
48 hrs	100	100
7-day	100	100
SD	0.000	0.000
CV %	0.00	0.00

**TABLE 2**  
**SUMMARY OF TEST CONDITIONS FOR THE FATHEAD MINNOW**  
**(*Pimephales promelas*) LARVAL SURVIVAL AND GROWTH TEST**

1. Test type	Static renewal
2. Temperature	25 degrees Celsius
3. Light quality	Ambient laboratory light
4. Light intensity	Ambient laboratory levels
5. Photoperiod	16 hr light, 8 hr dark
6. Test chamber size	500 ml
7. Test solution volume	250 ml
8. Renewal of test concentrations	Daily
9. Age of test organism	< 24 hours
10. No. larvae/chamber	10
11. No. replicates/concentration	4
12. No. larvae/concentration	40
13. Feeding regime	Feed 0.15 g newly hatched brine shrimp nauplii two times daily. Larvae are not fed 12 hours prior to termination of test.
14. Cleaning	Siphon daily, immediately before test solution renewal
15. Aeration	None
16. Dilution Water	Moderately Hard Synthetic Water prepared with MILLI-Q deionized water and reagent grade chemicals
17. Effluent concentrations	0%, 75%
18. Test duration	7 days
19. Endpoints	Survival and growth
20. Test acceptability	80% or greater survival in the controls, Average dry weight in controls >0.25 mg, Coefficient of variation in the control must not exceed 40%.

REFERENCE #60415092

**TABLE 2 (CONT.)  
SUMMARY OF TEST CONDITIONS FOR THE CLADOCERAN  
(Ceriodaphnia dubia) SURVIVAL AND REPRODUCTION TEST**

1. Test type	Static renewal
2. Temperature	25 degrees Celsius
3. Light quality	Ambient laboratory light
4. Light intensity	Ambient laboratory levels
5. Photoperiod	16 hr light, 8 hr dark
6. Test chamber size	30 ml
7. Test solution volume	25 ml
8. Renewal of test concentrations	Daily
9. Age of test organism	< 24 hours
10. No. larvae/chamber	1
11. No. replicates/concentration	10
12. No. larvae/concentration	10
13. Feeding regime	Feed 0.1 ml YCT and 0.1 ml of Algae daily. Larvae are not fed 12 hours prior to termination of test.
14. Cleaning	Siphon daily, immediately before test solution renewal
15. Aeration	None
16. Dilution Water	Moderately Hard Synthetic Water prepared with MILLI-Q deionized water and reagent grade chemicals
17. Effluent concentrations	0%, 75%
18. Test duration	Until 60% or more surviving control females have three broods or a maximum of 8 days.
19. Endpoints	Survival and Reproduction
20. Test acceptability	80% or greater survival in the controls, Average reproduction rate of 15 young / adult. Coefficient of variation in the control must not exceed 40%.

TABLE 2 (SECTION 2)

BIOMONITORING CHRONIC TOXICITY REPORT  
FATHEAD MINNOW (Pimephales promelas)  
CHEMICAL PARAMETERS CHART

Permittee: CITY OF CLANTON (WALNUT CREEK) Effluent discharge.

ANALYSTS: Pace Analytical Services, Inc.  
Timothy Harrell  
Mike Bollin

TABLE 2 (SECTION 2)  
INITIAL WATER QUALITY  
EFFLUENT CONCENTRATION

	Control	100%
PH	7.7	7.7
D.O.	8.1	9.2
Temp	25.0	25.0
Alk	60	100
Hard	96	92
Cond	299	607
Chlorine	<0.1	<0.1

\* D.O. is reported as mg/L  
Alkalinity is reported as mg/L CaCO<sub>3</sub>  
Hardness is reported as mg/L CaCO<sub>3</sub>  
Conductance is reported as umhos  
Chlorine is reported as mg/L

REFERENCE #60415092

TEST WATER QUALITY

24-Hour Water Quality Measurements

Effluent Concentration (%)	PH	D.O. (mg/l)	Temperature (C)
0% Control	7.7	7.1	25.1
75% Effluent	7.9	7.5	25.0

48-Hour Water Quality Measurements

Effluent Concentration (%)	PH	D.O. (mg/l)	Temperature (C)
0% Control	7.8	7.3	25.2
75% Effluent	8.0	7.6	24.9

- \* D.O. is reported as mg/L
- Alkalinity is reported as mg/L CaCO<sub>3</sub>
- Hardness is reported as mg/L CaCO<sub>3</sub>
- Conductance is reported as umhos

TEST VALIDITY

The Pimephales promelas control survival rate was 100. The mean dry weight (growth) of the Pimephales promelas was determined at 0.537 g/organism in the controls. The percent coefficient of variation (%CV) values for the fathead minnow control for survival and growth were 0.00 and 2.31. The Ceriodaphnia dubia survival rates were 100 in the control. The Ceriodaphnia in the control produced an average of 20.2 young over the seven-day exposure period. Percent CV values for Ceriodaphnia dubia control survival and reproduction was 0.00 and 17.28. Control data met or exceeded all criteria set out by EPA 821-R-02-013 for test acceptance.

REFERENCE #60415092

REFERENCE TOXICANTS

The absence of significant control mortality during this test indicated the health of the organisms and indicated that any significant mortality in the test concentrations was not due to contaminants or variations in testing conditions.

Reference toxicity testing is routinely performed by staff members in our biomonitoring - bioassay laboratory.

Start: 10/25/22 10:50

End: 11/1/22 11:00

Reference Toxicant (NaCl) Pimephales promelas

Concentration of Toxicant	Avg. # of Live Organisms/replicate			
	0 hrs	24 hrs	48 hrs	7 days
10 g/l	40	7	1	0
8 g/l	40	37	28	4
6 g/l	40	40	35	22
4 g/l	40	40	40	40
2 g/l	40	40	40	40

IC25 (4.98 g/l Sodium Chloride)

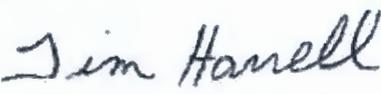
Survival NOEC: 4.0 g/l

Reference Toxicant (NaCl) Ceriodaphnia Dubia

Concentration of Toxicant	Avg. # of Live Organisms/replicate			
	0 hrs	24 hrs	48 hrs	7 days
2.5 g/l	10	5	3	0
2.0 g/l	10	10	10	3
1.5 g/l	10	10	10	10
1.0 g/l	10	10	10	10
0.5 g/l	10	10	10	10

IC25 (1.25 g/l Sodium Chloride)

Survival NOEC: 1.5 g/l

Submitted By:   
 Timothy Harrell, Technical Director

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
TOXICITY TEST REPORT SUMMARY

**1. GENERAL:**

NPDES PERMIT NO.: AL0054631 DSN: 001 COUNTY: Chilton County

Permittee: City of Clanton

Facility Name: Walnut Creek WWTP, Clanton, Alabama

Agent submitting Report: City of Clanton, 1574 County Road 51, Clanton, Alabama 35046

Lab Conducting Toxicity Test(s): Pace Analytical, 808 West McKay, Frontenac, KS 66763

Months To Test: \_\_\_\_\_

This Report for Toxicity Test(s) Required for the Month of: \_\_\_\_\_

Scheduled Test(s): Yes  No  Accelerated Test(s): Yes  No

Accelerated Test Number \_\_\_\_\_ of \_\_\_\_\_ For Failed Scheduled Test Date: \_\_\_\_\_

Test Type Required: 48-Hr Acute Screening: \_\_\_\_\_ -Hr Acute Definitive: \_\_\_\_\_

Short-term Chronic Screening:  Short-term Chronic Definitive: \_\_\_\_\_

Test Organism: *Pimephales promelas*

Test Organism: *Ceriodaphnia dubia*

Sam No.	Date/Time MM/DD/YY	Start HH:MM	Date/Time MM/DD/YY	Ended HH:MM	Control Valid	Date/Time MM/DD/YY	Start HH:MM	Date/Time MM/DD/YY	Ended HH:MM	Control Valid
1	11/8/22	11:40	11/15/22	11:00	Yes	11/8/22	11:40	11/15/22	11:00	Yes

**2A. SUMMARY OF RESULTS FOR SCREENING TEST:**

Test Org.	Eff. Conc.	Test Number											
		(1)			(2)			(3)			(4)		
		Sur	Rep	Gro	Sur	Rep	Gro	Sur	Rep	Gro	Sur	Rep	Gro
C.d.	75%	Pass	Pass										
P.p.	75%	Pass		Pass									

**2B. SUMMARY OF RESULTS FOR DEFINITIVE TEST:**

Test Organism	Test Solution Concentration (%)					LC50	NOEC	Not Determined

**3. LABORATORY ANALYSIS OF UNDILUTED SAMPLES:**

Sample ID	pH s.u.	Alk mg/L	Hard mg/L	Spec Cond umhos/cm				
1	7.7	100	92	607				
2	7.9	160	92	612				
3	7.8	144	122	625				

*Municipal Facilities Only*

Sample ID	Arsenic (g/L)	Cadium (g/L)	Chromium (g/L)	Copper (g/L)	Lead (g/L)	Hexavalent Chromium (g/L)
Sample ID	Mercury (g/L)	Nickel (g/L)	Silver (g/L)	Zinc (g/L)	Total Cyanide (g/L)	Other(s) (g/L)

Chemical Analysis Performed By (LAB): Pace Analytical.

Instantaneous Flow: (1) \_\_\_\_\_ GPM (2) \_\_\_\_\_ GPM (3) \_\_\_\_\_ GPM  
 Total 24-Hour Flow: (1) \_\_\_\_\_ MGD (2) \_\_\_\_\_ MGD (3) \_\_\_\_\_ MGD

Comments:

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.

SIGNATURE OF RESPONSIBLE OFFICIAL: \_\_\_\_\_ DATE: \_\_\_\_\_

Facility Name: Clanton WWTP NPDES #: AL0054631 DSN: 001 Date: 11/17/22

4. SAMPLE COLLECTION:

Split Samples: N/A X Yes \_\_\_\_\_ (explain) \_\_\_\_\_

Samples Collected as Specified in the NPDES Permit: Yes X No (explain) \_\_\_\_\_

Receiving Water: \_\_\_\_\_ Design Flow: \_\_\_\_\_ (MGD)

Sample ID	Sample(s) Collected MM/DD/YY HHMM - MM/DD/YY HHMM	Arrival Temp (C)	Used in Test(s) MM/DD/YY - MM/DD/YY
1	11/7/22 8:00	2.1	11/8-11/9/22
2	11/9/22 8:00	2.3	11/10-11/11/22
3	11/11/22 8:00	4.3	11/12-11/14/22

5. CONTROL / DILUTION WATER:

Type	Prepared MM/DD/YY	Begin Use MM/DD/YY	Initial Water Chemistries				
			Hard.	Alk.	pH	Cond.	@ °C
MHSW	11/6/22	11/8/22	96	60	7.7	299	25.0
MHSW	11/6/22	11/11/22	90	62	7.5	326	25.0

6. TOXICITY TEST INFORMATION:

Test Species	Organism Age	Organism Source	Test Solution Concentrations (%)				
Pp	<24 hrs	AquaTox	00	75			
Cd	<24 hrs	In-house Culture	00	75			

Test Species	Test Vessel Type	Vessel Vol. (mL)	Solution Vol. (mL)	Org. / Test Vessel	Replicates per Conc.
Pp	Plastic Beakers	500	250	10	4
Cd	Plastic Beakers	30	15	1	10

Test Species	Temp. Range (C)	D.O. Range (mg/L)	pH Range (s.u.)	Light Intensity Avg. (ft-c)
Pp	24.7-25.0	7.0-9.2	7.6-8.1	68.6
Cd	24.7-25.0	7.0-9.2	7.6-8.1	68.6

7. FEEDING:

Not Fed: \_\_\_\_\_ Fed Daily: X Fed Irregular: \_\_\_\_\_ (Explain in comments below)

Brine Shrimp: Fed 0.15 mL Suspension of Newly Hatched Larvae 2 Times Daily.

YCT: Fed 0.1 mL Suspension Containing 1.8 mg/L TSS Daily.

Algae: Fed 0.1 mL Suspension Containing 3.0x10<sup>7</sup> Algal Cells/mL Daily.

COMMENTS: \_\_\_\_\_

Facility Name: Clanton WWTP NPDES #: AL0054631 DSN: 001 Date: 11/17/22

8. REFERENCE TOXICANT TESTS:

Toxicant: Sodium Chloride, NaCl Source: Fisher Lot 215892 CAS#: 7647-14-5

Solution concentration unit: mg/L \_\_\_ g/L X % \_\_\_ other (specify): \_\_\_

Test Org.	Test Date MM/DD - MM/DD	Control Water	Reference Test Solution Concentrations (Cont. to Highest Conc.)						
			00	2	4	6	8	10	
Pp	10/25/22-11/1/22	MHSW	00	2	4	6	8	10	
Cd	10/25/22-11/1/22	MHSW	00	.5	1.0	1.5	2.0	2.5	

Test Org.	Results	95% Confidence Interval	Upper and Lower CUSUM Chart Control Limit (This Test)	Number (N)
Pp	4.98	4.7666-5.2443	4.76-5.29	40
Cd	1.25	1.1509-1.3325	1.09-1.29	10

9. TEST CONDITION VARIABILITY:

9.A. Deviations From Standard Test Conditions:

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9.B. Test Solution Manipulations or Test Modifications:

None.

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10. REQUIRED REPORT ATTACHMENTS:

Attach copies of Chain-of-Custody Forms, Reference Toxicant Tests, and Raw Data (Bench Sheets) Pertaining to Physical, Chemical, and Biological Measurements for All Tests. Include Suspended, Interrupted, or Discontinued Toxicity Tests Data.

COMMENTS:

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11.C. CHRONIC SCREENING TOXICITY TESTS RESULTS (Freshwater):

TEST ORGANISM: *Ceriodaphnia dubia*

Were Neonates Used to Begin the Test Within 8 Hours of the Same Age?: Yes: X No: \_\_\_\_\_  
 Did 60% of the CONTROL Females Produce Their Third Brood?: Yes: X No: \_\_\_\_\_

**SURVIVAL**

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO SURVIVAL STATISTICAL ANALYSIS NECESSARY: X  
 CONTROL(%) 24h 100 48h 100 END 100 EFFLUENT(%) 24h 100 48h 100 END 100  
 Fishers Exact Test: A = \_\_\_\_\_ B = \_\_\_\_\_ a = \_\_\_\_\_ b = \_\_\_\_\_

**REPRODUCTION** (Average Neonates/Female)

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO REPRODUCTION STATISTICAL ANALYSIS NECESSARY: \_\_\_\_\_  
 CONTROL(%): 20.2 EFFLUENT(%): 21.3  
 Normally Distributed: YES X NO \_\_\_\_\_  
 Test Statistic: \_\_\_\_\_ Critical Value: \_\_\_\_\_ (Parametric)  
 Equal variance: \_\_\_\_\_ Unequal variance: \_\_\_\_\_  
 F Statistic: 0.545 Critical F: 4.41  
 t - Test Statistic: \_\_\_\_\_ t - Test Critical Value: \_\_\_\_\_  
 Sample Rank Sum: \_\_\_\_\_ # Reps.: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non - Parametric)  
 COMMENTS: No Ceriodaphnia survival statistical analysis was necessary since effluent survival equaled control survival.

TEST ORGANISM: *Pimephale promelas*

**SURVIVAL**

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO SURVIVAL STATISTICAL ANALYSIS NECESSARY: X  
 CONTROL(%) 24h 100 48h 100 END 100 EFFLUENT(%) 24h 100 48h 100 END 97.5  
 Normally Distributed: YES \_\_\_\_\_ NO \_\_\_\_\_  
 Test Statistic: \_\_\_\_\_ Critical Value: \_\_\_\_\_ (Parametric)  
 Equal variance: \_\_\_\_\_ Unequal variance: \_\_\_\_\_  
 F Statistic: 1.00 Critical F: 5.99  
 t - Test Statistic: \_\_\_\_\_ t - Test Critical Value: \_\_\_\_\_  
 Sample Rank Sum: \_\_\_\_\_ # Reps.: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non - Parametric)

**GROWTH** (Mean Dry Weight - mg)

CHRONIC TOXICITY INDICATED: YES \_\_\_\_\_ NO X  
 NO GROWTH STATISTICAL ANALYSIS NECESSARY: X  
 CONTROL: 0.537 EFFLUENT: 0.507  
 Normally Distributed: YES \_\_\_\_\_ NO \_\_\_\_\_  
 Test Statistic: \_\_\_\_\_ Critical Value: \_\_\_\_\_ (Parametric)  
 Equal variance: \_\_\_\_\_ Unequal variance: \_\_\_\_\_  
 F Statistic: 10.741 Critical F: 47.50  
 t - Test Statistic: \_\_\_\_\_ t - Test Critical Value: \_\_\_\_\_  
 Sample Rank Sum: \_\_\_\_\_ # Reps.: \_\_\_\_\_ Critical Rank Sum: \_\_\_\_\_ (Non - Parametric)  
 COMMENTS: No fathead minnow survival statistical analysis was necessary since effluent survival exceeded control survival. No fathead minnow growth statistical analysis was necessary since effluent growth exceeded control growth.

60415092 Clanton FATHEAD SURVIVAL  
File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

Chi-square test for normality: actual and expected frequencies

---

INTERVAL	<-1.5	-1.5 to <-0.5	-0.5 to 0.5	>0.5 to 1.5	>1.5
EXPECTED	0.536	1.936	3.056	1.936	0.536
OBSERVED	0	1	7	0	0

---

Calculated Chi-Square goodness of fit test statistic = 8.5506  
Table Chi-Square value (alpha = 0.01) = 13.277

Data PASS normality test. Continue analysis.

60415092 Clanton FATHEAD SURVIVAL  
File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.020

W = 0.706

Critical W (P = 0.05) (n = 8) = 0.818

Critical W (P = 0.01) (n = 8) = 0.749

---

Data FAIL normality test. Try another transformation.

Warning - The F-test of homogeneity is sensitive to non-normal data and should not be performed.

60415092 Clanton FATHEAD SURVIVAL  
File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

Hartley's test for homogeneity of variance  
Bartlett's test for homogeneity of variance

---

These two tests can not be performed because at least one group has zero variance.

Data FAIL to meet homogeneity of variance assumption.  
Additional transformations are useless.

---

60415092 Clanton FATHEAD SURVIVAL

File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	4	1.412	1.412	1.412
2	75%	4	1.249	1.412	1.371

60415092 Clanton FATHEAD SURVIVAL

File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	0.000	0.000	0.000	0.00
2	75%	0.007	0.081	0.041	5.94

60415092 Clanton FATHEAD SURVIVAL

File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	1	0.003	0.003	1.000
Within (Error)	6	0.020	0.003	
Total	7	0.023		

Critical F value = 5.99 (0.05,1,6)  
Since F < Critical F FAIL TO REJECT Ho: All equal

60415092 Clanton FATHEAD SURVIVAL

File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 1 OF 2 Ho: Control < Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	CONTROL	1.412	1.000		
2	75%	1.371	0.975	1.000	

Dunnett table value = 1.94 (1 Tailed Value, P=0.05, df=6,1)

60415092 Clanton FATHEAD SURVIVAL

File: 6415092A Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 2 OF 2

Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	CONTROL	4			
2	75%	4	0.031	3.1	0.025

60415092 Clanton FATHEAD GROWTH  
File: 6415092B Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality

---

D = 0.005

W = 0.939

Critical W (P = 0.05) (n = 8) = 0.818

Critical W (P = 0.01) (n = 8) = 0.749

---

Data PASS normality test at P=0.01 level. Continue analysis.

60415092 Clanton FATHEAD GROWTH  
File: 6415092B Transform: NO TRANSFORMATION

F-Test for equality of two variances

---

GROUP	IDENTIFICATION	VARIANCE	F
1	CONTROL	0.000	
2	75%	0.002	10.741

---

Critical F = 47.50 (P=0.01, 3, 3)

Since F <= Critical F, FAIL TO REJECT Ho: Equal Variances.

60415092 Clanton FATHEAD GROWTH  
File: 6415092B Transform: NO TRANSFORMATION

---

Bartlett's test for homogeneity of variance

Calculated B1 statistic = 3.00

---

Table Chi-square value = 6.63 (alpha = 0.01, df = 1)

Table Chi-square value = 3.84 (alpha = 0.05, df = 1)

---

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

60415092 Clanton FATHEAD GROWTH  
 File: 6415092B Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	4	0.519	0.547	0.537
2	75%	4	0.453	0.550	0.507

60415092 Clanton FATHEAD GROWTH  
 File: 6415092B Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	0.000	0.012	0.006	2.31
2	75%	0.002	0.041	0.020	8.02

60415092 Clanton FATHEAD GROWTH  
 File: 6415092B Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	1	0.002	0.002	2.030
Within (Error)	6	0.005	0.001	
Total	7	0.007		

Critical F value = 5.99 (0.05,1,6)  
 Since  $F < \text{Critical } F$  FAIL TO REJECT  $H_0$ : All equal

60415092 Clanton FATHEAD GROWTH  
 File: 6415092B Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho: Control < Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	CONTROL	0.537	0.537		
2	75%	0.507	0.507	1.425	

Dunnett table value = 1.94 (1 Tailed Value, P=0.05, df=6,1)

60415092 Clanton FATHEAD GROWTH  
File: 6415092B Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	CONTROL	4			
2	75%	4	0.041	7.7	0.030

FISHER'S EXACT TEST

IDENTIFICATION	NUMBER OF		
	ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
75%	10	0	10
TOTAL	20	0	20

CRITICAL FISHER'S VALUE (10,10,10) (p=0.05) IS 6. b VALUE IS 10.  
 Since b is greater than 6 there is no significant difference  
 between CONTROL and TREATMENT at the 0.05 level.

SUMMARY OF FISHER'S EXACT TESTS

GROUP	IDENTIFICATION	NUMBER EXPOSED	NUMBER DEAD	SIG (P=.05)
1	CONTROL	10	0	
	75%	10	0	

60415092 Clanton CERIODAPHNIA DUBIA SUR  
File: 6415092D Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

---

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	10	1.000	1.000	1.000
2	75%	10	1.000	1.000	1.000

---

60415092 Clanton CERIODAPHNIA DUBIA SUR  
File: 6415092D Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

---

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	0.000	0.000	0.000	0.00
2	75%	0.000	0.000	0.000	0.00

---

60415092 Clanton CERIODAPHNIA DUBIA REP  
File: 6415092E Transform: NO TRANSFORMATION

Chi-square test for normality: actual and expected frequencies

---

INTERVAL	<-1.5	-1.5 to <-0.5	-0.5 to 0.5	>0.5 to 1.5	>1.5
EXPECTED	1.340	4.840	7.640	4.840	1.340
OBSERVED	0	7	4	9	0

---

Calculated Chi-Square goodness of fit test statistic = 8.9537  
Table Chi-Square value (alpha = 0.01) = 13.277

Data PASS normality test. Continue analysis.

60415092 Clanton CERIODAPHNIA DUBIA REP  
File: 6415092E Transform: NO TRANSFORMATION

F-Test for equality of two variances

---

GROUP	IDENTIFICATION	VARIANCE	F
1	CONTROL	12.178	
2	75%	10.011	1.216

---

Critical F = 6.54 (P=0.01, 9, 9)

Since  $F \leq$  Critical F, FAIL TO REJECT  $H_0$ : Equal Variances.

60415092 Clanton CERIODAPHNIA DUBIA REP  
File: 6415092E Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance  
Calculated B1 statistic = 0.08

---

Table Chi-square value = 6.63 (alpha = 0.01, df = 1)  
Table Chi-square value = 3.84 (alpha = 0.05, df = 1)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

60415092 Clanton CERIODAPHNIA DUBIA REP  
 File: 6415092E Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	10	15.000	25.000	20.200
2	75%	10	17.000	25.000	21.300

60415092 Clanton CERIODAPHNIA DUBIA REP  
 File: 6415092E Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	12.178	3.490	1.104	17.28
2	75%	10.011	3.164	1.001	14.85

60415092 Clanton CERIODAPHNIA DUBIA REP  
 File: 6415092E Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	1	6.050	6.050	0.545
Within (Error)	18	199.700	11.094	
Total	19	205.750		

Critical F value = 4.41 (0.05,1,18)  
 Since F < Critical F FAIL TO REJECT Ho: All equal

60415092 Clanton CERIODAPHNIA DUBIA REP  
 File: 6415092E Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	CONTROL	20.200	20.200		
2	75%	21.300	21.300	-0.738	

Dunnett table value = 1.73 (1 Tailed Value, P=0.05, df=18,1)

60415092 Clanton CERIODAPHNIA DUBIA REP  
File: 6415092E Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	CONTROL	10			
2	75%	10	2.577	12.8	-1.100



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

20260648

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

Project Number 60415092

Date and Time Arrived 11/8/22 9:30

Date and Time Used 11/8/22 11:40

Age of Fish 24 hours old

Age of Water Fleas <24 hours old

Analyst TH MB

Synthetic Number F-11-63

Dilution water used: Synthetic x

Clanton

TS 11/8/22  
Chemical  
Upstream  
TS 11/10/22  
TS 11/12/22

	SYN	100	600	600				
pH (S.U.)	7.7	7.7	7.9	7.8				
D.O. (mg/L)	8.1	9.2	9.2	9.2				
Temperature (°C)	25.0	25.0	25.0	25.0				
Alkalinity <sup>1</sup>	mL titrant	3.0	5.0	8.0	6.2	TS 11/12/22		
	mg CaCO <sub>3</sub> /L	60	100	160	122	144		
Hardness <sup>1</sup>	mL titrant	9.8	4.6	4.6	6.2	6.1		
	mg CaCO <sub>3</sub> /L	98	92	92	124	122		
Conductance (µmhos/cm)	299	607	612	625				
Chlorine (mg/L)	<.1	<.1	<.1	<.1				

Comments: L.I. 608.6

<sup>1</sup> Section 9, ENV-SOP-FRON-0007, Bioassay Chemical Tests.



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

**Ceriodaphnia dubia Survival & Reproduction**

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Synthetic	0	0	0	0	6	0	13	0
2				4	0	10	0	8
3				0	5	0	11	0
4				4	5	0	8	0
5				0	4	7	12	0
6				3	0	12	10	0
7				3	0	0	12	0
8				0	5	7	10	0
9				4	0	9	11	0
10				5	4	0	0	10

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
75%	0	0	0	6	0	11	0	
2			3	0	8	0	11	
3			0	6	0	12	0	
4			0	8	0	11	0	
5			0	5	0	9	9	
6			5	0	8	8	0	
7			0	0	7	11	0	
8			4	0	9	0	12	
9			4	0	0	10	11	
10			0	5	0	9	11	



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

### Fathead Minnow Survival

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Synthetic	10	10	10	10	10	10	10	10
2	↓	↓	↓	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	↓
5								
75 %	10	10	10	10	10	10	10	10
2	↓	↓	↓	↓	↓	10	10	10
3						10	10	10
4	↓	↓	↓	↓	↓	9	9	9
5						10	10	10
%								
2								
3								
4								
5								
%								
2								
3								
4								
5								
%								
2								
3								
4								
5								
%								
2								
3								
4								
5								



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

Fathead Growth

Oven: T-138 As-Read 103 CF 0.0 Corrected: 103

	# Alive	Initial Weight (g)	Final Weight (g)	Difference (g)
Synthetic	10	1.05140	1.05683	0.00 543
2	10	1.04860	1.05407	0.00 547
3	10	1.04779	1.05267	0.00 538
4	10	1.04562	1.05081	0.00 519
5				0.00
75 %	10	1.06813	1.07316	0.00 503
2	10	1.06001	1.06521	0.00 520
3	9	1.06055	1.06508	0.00 453
4	10	1.05412	1.05962	0.00 550
5				0.00
%				0.00
2				0.00
3				0.00
4				0.00
5				0.00
%				0.00
2				0.00
3				0.00
4				0.00
5				0.00
%				0.00
2				0.00
3				0.00
4				0.00
5				0.00
%				0.00
2				0.00
3				0.00
4				0.00
5				0.00
%				0.00
2				0.00
3				0.00
4				0.00
5				0.00

In 1145 Out 0900

Initial weight is the tare weight of pan. Final weight is the pan and surviving fish after drying. Record weights to the nearest 0.01 mg.

Qualtrax ID: 89888

	DC#_Title: ENV-FRM-FRON-0003_Chronic Aquatic Toxicity Log		
	Revision: 1	Effective Date: 07/19/2022	Issued By: Lenexa

24-Hour Old Reading *GP 1135*

Eff Con.	SYN	75				100%	
pH (S.U.)	7.7	7.9					
D.O. (mg/L)	7.1	7.5					
Temp (°C)	25.1	25.0					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.7	7.7					
D.O. (mg/L)	8.0	8.2					

24-Hour Old Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.8	8.0					
D.O. (mg/L)	7.3	7.6					
Temp (°C)	25.2	24.9					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.7	7.7					
D.O. (mg/L)	8.0	8.3					

24-Hour Old Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.8	8.0					
D.O. (mg/L)	7.2	7.3					
Temp (°C)	25.2	24.7					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.7	7.6					
D.O. (mg/L)	8.1	8.2					

24-Hour Old Reading *TS 1124*

Eff Con.	SYN					100%	
pH (S.U.)	7.8	8.0					
D.O. (mg/L)	7.3	7.3					
Temp (°C)	25.1	24.8					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.6	7.6					
D.O. (mg/L)	8.0	8.2					

	DC#_Title: ENV-FRM-FRON-0003_Chronic Aquatic Toxicity Log		
	Revision: 1	Effective Date: 07/19/2022	Issued By: Lenexa

24-Hour Old Reading *Ep 11<sup>31</sup>*

Eff Con.	SYN	75				100%	
pH (S.U.)	7.8	8.1					
D.O. (mg/L)	7.3	7.2					
Temp (°C)	25.2	24.9					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.6	7.7					
D.O. (mg/L)	8.3	8.3					

24-Hour Old Reading *98 11<sup>32</sup>*

Eff Con.	SYN					100%	
pH (S.U.)	7.8	7.9					
D.O. (mg/L)	7.3	7.0					
Temp (°C)	24.8	24.8					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.6	7.7					
D.O. (mg/L)	8.1	8.2					

Final Wet Chemistry

Ending Date and Time:

*11/15/22 11:00 MB*

	SYN	75					
pH (S.U.)	7.8	7.9					
D.O. (mg/L)	7.1	7.0					
Temperature (°C)	25.1	25.0	TS				
Alkalinity <sup>†</sup>	mL titrant	3.0	5.1	6.1			
	mg CaCO <sub>3</sub> /L	60	102	122			
Hardness <sup>†</sup>	mL titrant	4.6	6.1	5.1			
	mg CaCO <sub>3</sub> /L	92	122	102			
Conductance (µmhos/cm)	358	842					
Chlorine (mg/L)	<.1	<.1					

<sup>†</sup> Section 9, ENV-SOP-FRON-0007, Bioassay Chemical Tests.



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

Project Number Ref TOP  
 Date and Time Arrived                       
 Date and Time Used 12/25/22 10:50  
 Age of Fish C24  
 Age of Water Fleas <24 hours old  
 Analyst TH, MB  
 Synthetic Number F-1163  
 Dilution water used: Synthetic X upstream B10/25

N a c l F-1461  
 VTC F-1520  
 Algae F-1521

		SYN	109raw					
pH (S.U.)		7.6	7.6					
D.O. (mg/L)		7.9	8.1					
Temperature (°C)		25.0	25.0					
Alkalinity <sup>1</sup>	mL titrant	3.1	3.6					
	mg CaCO <sub>3</sub> /L	62	72					
Hardness <sup>1</sup>	mL titrant	4.6	5.3					
	mg CaCO <sub>3</sub> /L	92	106					
Conductance (µmhos/cm)		317	15,300					
Chlorine (mg/L)		CL	CL					

Comments: CF 64.3

<sup>1</sup> Section 9, ENV-SOP-FRON-0007, Bioassay Chemical Tests.



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

Ceriodaphnia dubia Survival & Reproduction

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Synthetic	0	0	0	3	0	8	0	10
2				4	8	0	9	0
3				0	5	0	13	0
4				5	0	8	9	0
5				3	6	0	0	11
6				0	0	7	0	12
7				0	7	7	0	7
8				3	0	7	10	0
9				3	0	9	0	11
10				0	8	8	0	0

LS %	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
15 %	0	0	0	0	5	7	0	12
2				3	5	0	10	0
3				0	0	7	0	12
4				0	5	6	0	11
5				3	4	0	10	0
6				0	0	8	8	0
7				0	5	5	0	8
8				5	8	0	11	0
9				4	7	0	0	11
10				0	3	6	10	0



DC# Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

Ceriodaphnia dubia Survival & Reproduction

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1.0 %	0	0	0	3	0	5	10	0
2				0	0	8	0	8
3				0	7	6	0	10
4				0	5	7	0	11
5				3	0	9	11	0
6				0	0	7	0	10
7				0	0	9	0	10
8				4	7	0	10	0
9				4	0	5	10	0
10				0	8	0	8	0

1.5 %	0	0	0	0	3	0	7	0
2					0	6	0	0
3					4	6	0	8
4					5	0	6	0
5					0	0	7	0
6					0	7	0	8
7					4	0	8	0
8					4	0	0	0
9					0	0	9	0
10					3	5	0	7



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

**Ceriodaphnia dubia Survival & Reproduction**

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
2.0%	0	0	0	0	0	X	X	X
2				0	0	0	X	X
3				0	2	0	3	0
4				0	0	0	X	X
5				0	0	X	X	X
6				0	0	X	X	X
7				0	0	0	0	0
8				X	X	X	X	X
9				0	0	0	0	3
10				0	X	X	X	X

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
2.5%	0	X	X	X				
2		0	0					
3		0	X					
4		X	X					
5		X	X					
6		0	0					
7		X	X					
8		X	X					
9		0	X					
10		0	0					

Upstream	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
2								
3								
4								
5								
6								
7								
8								
9								
10								



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

Fathead Minnow Survival

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Synthetic	10	10	10	10	10	10	10	10
2	↓	↓	↓	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	↓
5								
2%	10	10	10	10	10	10	10	10
2	↓	↓	↓	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	↓
5								
4%	10	10	10	20	10	10	10	10
2	↓	↓	↓	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	↓
5								
6%	10	10	7	5	5	5	4	3
2	↓	↓	9	7	7	7	7	7
3	↓	↓	10	7	7	7	6	6
4	↓	↓	9	8	6	6	0	0
5								
8%	10	8	6	3	2	1	1	1
2	↓	10	7	5	4	2	2	1
3	↓	10	8	4	3	3	1	1
4	↓	9	7	5	3	2	1	1
5								
10%	10	4	1	0	0	0	0	0
2	↓	0	0	↓	↓	↓	↓	↓
3	↓	2	0	↓	↓	↓	↓	↓
4	↓	1	0	↓	↓	↓	↓	↓
5								
%								
2								
3								
4								
5								
%								
2								
3								
4								
5								



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

Fathead Growth Oven: T-138 As-Read w/ CF 0.0 Corrected: 101

	# Alive	Initial Weight (g)	Final Weight (g)	Difference (g)
Synthetic	10	1.06573	1.07114	0.00541
2	↓	1.05857	1.06360	0.00503
3	↓	1.05578	1.06115	0.00537
4	↓	1.06137	1.06638	0.00501
5				0.00
2 %	10	1.05647	1.06239	0.00592
2	↓	1.06016	1.06515	0.00499
3	↓	1.07342	1.07879	0.00537
4	↓	1.03920	1.04423	0.00503
5				0.00
4 %	10	1.06678	1.07199	0.00521
2	↓	1.05610	1.06115	0.00505
3	↓	1.04932	1.05481	0.00549
4	↓	1.05611	1.06144	0.00533
5				0.00
6 %	3	1.07214	1.07356	0.00142
2	7	1.07767	1.08116	0.00349
3	6	1.08116	1.08382	0.00266
4	0	1.06542	1.06828	0.00286
5				0.00
8 %	1	1.03319	1.03351	0.00032
2	1	1.03967	1.04030	0.00063
3	1	1.05001	1.05047	0.00047
4	1	1.04233	1.04285	0.00052
5				0.00
10 %	0	NA	NA	0.000
2	↓	↓	↓	0.00
3	↓	↓	↓	0.00
4	↓	↓	↓	0.00
5				0.00
%				0.00
2				0.00
3				0.00
4				0.00
5				0.00
%				0.00
2				0.00
3				0.00
4				0.00
5				0.00

In 1135  
Out 0840

Initial weight is the tare weight of pan. Final weight is the pan and surviving fish after drying. Record weights to the nearest 0.01 mg.

Qualtrax ID: 89888



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

24-Hour Old Reading *T5 11:00*

Eff Con.	SYN	105				100%	
pH (S.U.)	7.6	7.6					
D.O. (mg/L)	7.2	7.0					
Temp (°C)	25.1	24.6					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	8.2	7.9					
D.O. (mg/L)	7.6	7.8					

24-Hour Old Reading *T5 11:05*

Eff Con.	SYN					100%	
pH (S.U.)	7.6	7.6					
D.O. (mg/L)	7.2	7.4					
Temp (°C)	24.9	24.8					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.8	7.7					
D.O. (mg/L)	7.5	7.6					

24-Hour Old Reading *T4 11:15*

Eff Con.	SYN					100%	
pH (S.U.)	7.7	7.6					
D.O. (mg/L)	7.0	6.8					
Temp (°C)	25.0	24.7					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.7	7.8					
D.O. (mg/L)	7.5	7.6					

24-Hour Old Reading *07 11:00*

Eff Con.	SYN					100%	
pH (S.U.)	7.6	7.6					
D.O. (mg/L)	7.2	7.1					
Temp (°C)	25.0	25.0					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.7	7.7					
D.O. (mg/L)	7.5	7.7					

Qualtrax ID: 89888



DC#\_Title: ENV-FRM-FRON-0003\_Chronic Aquatic Toxicity Log

Revision: 1

Effective Date: 07/19/2022

Issued By: Lenexa

24-Hour Old Reading MB 1040

Eff Con.	SYN	10 g/L				100%	
pH (S.U.)	7.7	7.6					
D.O. (mg/L)	6.9	7.2					
Temp (°C)	25.0	24.8					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.6	7.5					
D.O. (mg/L)	8.1	8.1					

24-Hour Old Reading

Eff Con.	SYN	9.8 10.57				100%	
pH (S.U.)	7.7	7.7					
D.O. (mg/L)	6.9	7.1					
Temp (°C)	24.8	25.2					

Renewed Reading

Eff Con.	SYN					100%	
pH (S.U.)	7.6	7.6					
D.O. (mg/L)	8.0	8.0					

Final Wet Chemistry

Ending Date and Time:

11/1/22 1:00  
MB

		SYN	10 g/L				
pH (S.U.)		7.7	7.6				
D.O. (mg/L)		6.7	7.0				
Temperature (°C)		25.0	25.2				
Alkalinity <sup>1</sup>	mL titrant	3.0	N/A				
	mg CaCO <sub>3</sub> /L	60					
Hardness <sup>1</sup>	mL titrant	4.6					
	mg CaCO <sub>3</sub> /L	92					
Conductance (µmhos/cm)		356	16600				
Chlorine (mg/L)		2.1	2.1				

<sup>1</sup> Section 9, ENV-SOP-FRON-0007, Bioassay Chemical Tests.

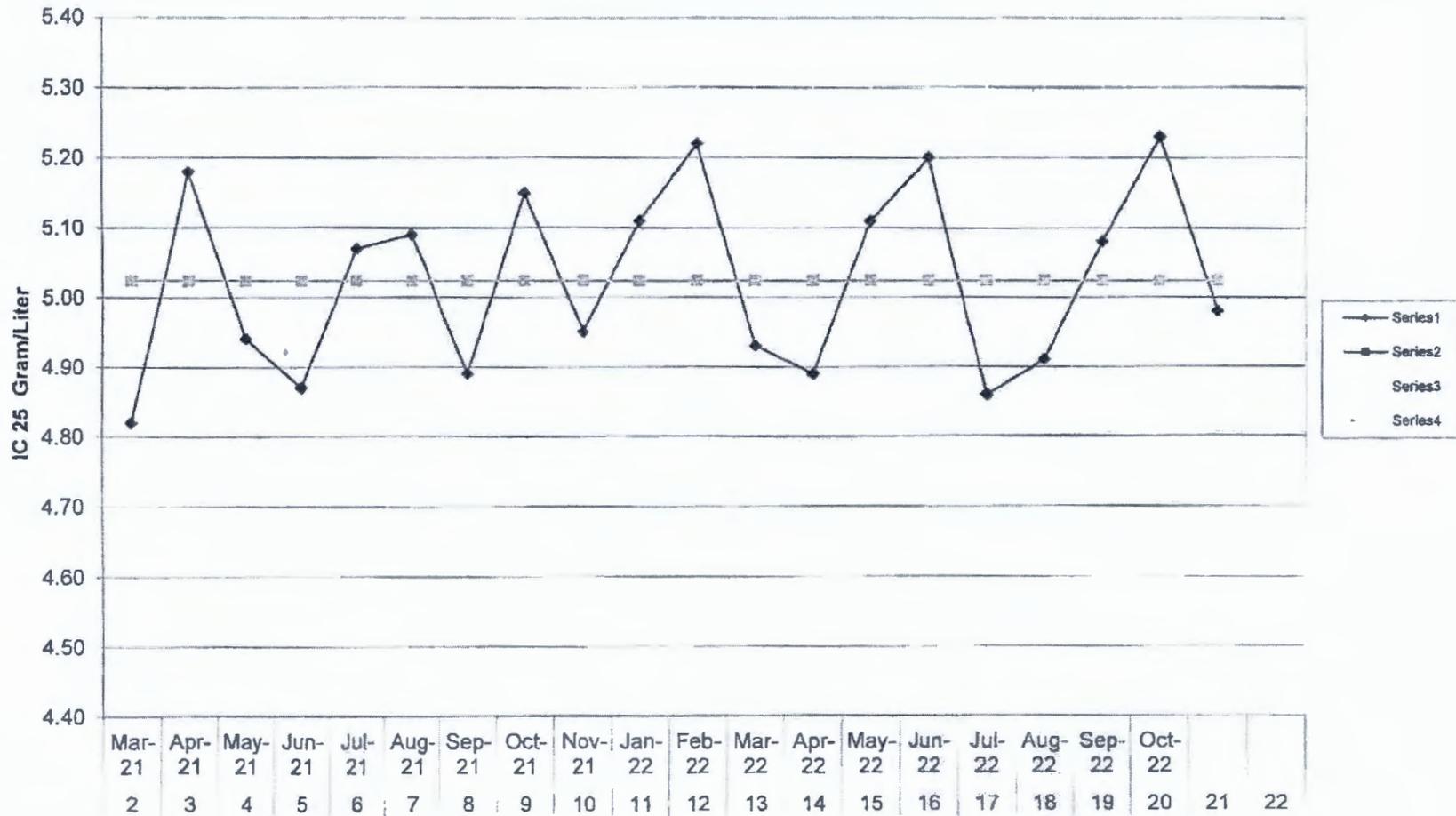
REVIEWED

BY [Signature]

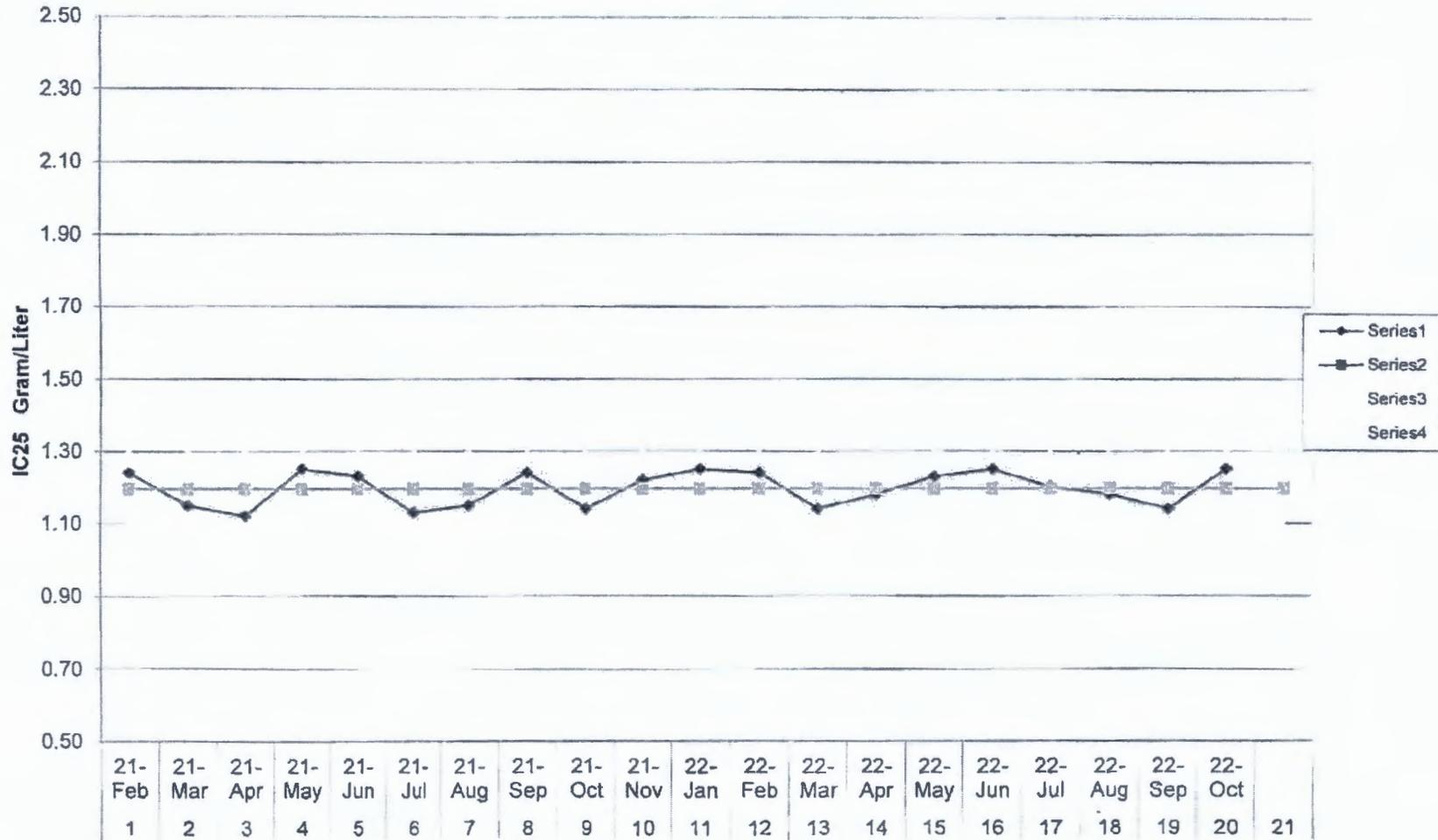
TS  
11/2/22

P95 1-64

**Sodium Chloride Reference Toxicant for Fathead Minnows  
Pace Analytical Frontenac, KS**



Sodium Chloride Reference Toxicant Control Chart For Ceriodaphnia dubia  
Pace Analytical Frontenac, Kansas



DC#\_Title:

Version: | Effective Date: | Issued by:

Month: November  
Year: 2022

Fish observation	
Tanks	# Dead or sick

Monitor when using fish  
for reproduction.

Date	Glass Chamber	AM Feed	PM Feed	Initials	
1	A	✓	✓	EP	
2		✓	✓	TS	
3	B	✓	✓	GP	
4		✓	✓	GP	
5	A	✓	✓	GP	
6		✓	✓	MB	
7	B	✓	✓	MB	
8		✓	✓	EP	
9	A	✓	✓	EP	
10		✓	✓	EP	
11	B	✓	✓	GP	
12		✓	✓	TS	
13	A	✓	✓	EP	
14		✓	✓	EP	
15	B	✓	✓	EP	
16		✓	✓	EP	
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

**Reference Toxicant Report**  
*Pimephales promelas*

**Prepared for:**  
**Aquatox Inc.**  
**416 Twin Points Road**  
**Hot Springs, Arkansas 71913**

**September 2022**

**Prepared by: Arkansas Analytical**  
**8100 National Drive**  
**Little Rock, Arkansas 72209**  
**(501) 455-3233**  
**[www.arkansasanalytical.com](http://www.arkansasanalytical.com)**

### **Chronic Test Methods**

EPA Method 1000.0, Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test, was used in this bioassay. Larvae are exposed in a static renewal system for seven days and the results are based on the survival and growth (increase in weight) of the larvae. There were no deviations from the reference method. The test chambers were 500 ml plastic cups, and each chamber contained ten organisms in a test solution volume of 250 mls. Four replicates of exactly ten < 48 hour old larvae are exposed to 5 different dilutions of a known toxicant. The control is moderately hard water. The subsequent dilutions increase gradually in concentration. They are in order: 125, 250, 500, 1,000 and 2,000 ppm (parts per million). The test is deemed valid when it falls within control limits. The test temperature was 25 degrees Centigrade. Test organisms were obtained from Aquatox, Inc. in Hot Springs, AR. The fathead minnows used in this test hatched on September 19<sup>th</sup>, 2022 between 1500-1600 CST.

### **Acute Test Methods**

The analysis performed was a 48 Hour Static Renewal Acute Toxicity Test using the fathead minnow, *Pimephales promelas*. The test was conducted according to EPA-821-R-02-012, October 2002. Three replicates of exactly ten, 3-14 day old minnows are exposed to 5 different dilutions of a known toxicant. The control is moderately hard water. The subsequent dilutions increase gradually in concentration. They are in order: 125, 250, 500, 1,000 and 2,000 ppm (parts per million). The test is deemed valid when it falls within control limits. The test temperature was 25 degrees Centigrade. The endpoint of the test is death, established by either no movement or no reaction to gentle prodding. Test organisms were obtained from Aquatox, Inc. in Hot Springs, AR. The fathead minnows used in this test hatched on September 20<sup>th</sup>, 2022 between 1500-1600 CST.

## Table of Contents

Descriptions of test procedures for chronic and acute testing

### Chronic testing

Appendix A.....Chronic data sheets & Statistics

Appendix B.....Chronic toxicity QA/QC charts

### Acute Testing

Appendix C.....Acute data sheets & statistics

Appendix D.....Acute toxicity QA/QC charts

**CETIS Summary Report**

Report Date: 18 Oct-22 15:13 (p 1 of 2)  
 Test Code/ID: 474645FD / 11-9578-7773

**Fathead Minnow 7-d Larval Survival and Growth Test**

Arkansas Analytical

Batch ID: 18-2238-1927	Test Type: Growth-Survival (7d)	Analyst: Jettie Pamell
Start Date: 20 Sep-22 12:25	Protocol: EPA/821/R-02-013 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 27 Sep-22 11:16	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 6d 23h	Taxon: Actinopterygii	Source: Aquatox, AR Age: <24
Sample ID: 18-9169-7378	Code: 70C102E2	Project: WET Monthly Compliance Test (SEP)
Sample Date: 20 Sep-22	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 20 Sep-22	CAS (PC):	Station: In House
Sample Age: 12h	Client: Internal Lab	

**Multiple Comparison Summary**

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	TU	PMSD	S
02-5266-4040	7d Survival Rate	Steel Many-One Rank Sum Test	✓	500	1000	707.1		7.95%	1
02-5941-3424	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	✓	500	1000	707.1		14.2%	1

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
02-5266-4040	7d Survival Rate	Control Resp	0.975	0.8	>>	Yes	Passes Criteria

**7d Survival Rate Summary**

Conc-ppm	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	L	4	0.9750	0.8954	1.0000	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%
125		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
250		4	0.9750	0.8954	1.0000	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%
500		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
1000		4	0.1000	0.0000	0.2299	0.0000	0.2000	0.0408	0.0817	81.65%	89.74%
2000		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		100.00%

**Mean Dry Weight-mg Summary**

Conc-ppm	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	L	4	0.6605	0.6227	0.6983	0.639	0.687	0.01186	0.02373	3.59%	0.00%
125		4	0.666	0.6016	0.7304	0.615	0.707	0.02023	0.04046	6.07%	-0.83%
250		4	0.6357	0.5646	0.7069	0.589	0.674	0.02235	0.04471	7.03%	3.75%
500		4	0.7037	0.5957	0.8118	0.61	0.766	0.03397	0.06793	9.65%	-6.55%
1000		4	0.07975	-0.05369	0.2132	0	0.197	0.04193	0.08386	105.16%	87.93%
2000		4	0	0	0	0	0	0	0		100.00%

**7d Survival Rate Detail**

Conc-ppm	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	L	1.0000	1.0000	0.9000	1.0000
125		1.0000	1.0000	1.0000	1.0000
250		1.0000	0.9000	1.0000	1.0000
500		1.0000	1.0000	1.0000	1.0000
1000		0.0000	0.1000	0.2000	0.1000
2000		0.0000	0.0000	0.0000	0.0000

**Mean Dry Weight-mg Detail**

Conc-ppm	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	L	0.639	0.642	0.674	0.687
125		0.707	0.654	0.615	0.688
250		0.589	0.674	0.606	0.674
500		0.61	0.738	0.701	0.766
1000		0	0.073	0.197	0.049
2000		0	0	0	0

**CETIS Summary Report**

Report Date: 18 Oct-22 15:13 (p 2 of 2)  
Test Code/ID: 474645FD / 11-9578-7773

**Fathead Minnow 7-d Larval Survival and Growth Test**

Arkansas Analytical

**7d Survival Rate Binomials**

Conc-ppm	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	L	10/10	10/10	9/10	10/10
125		10/10	10/10	10/10	10/10
250		10/10	9/10	10/10	10/10
500		10/10	10/10	10/10	10/10
1000		0/10	1/10	2/10	1/10
2000		0/10	0/10	0/10	0/10

SURVIVAL DATA FOR FATHEAD MINNOW LARVAL SURVIVAL AND GROWTH TEST

LAB # / SAMPLE ID	TEST START DATE	TIME	TEST END DATE	TIME	AGE AND SOURCE OF MINNOWS < 24 hrs, Aquatox							SURVIVAL	
CLIENT					DAY (NUMBER SURVIVING)							MEAN %	CV
CONC:	REP #	start	1	2	3	4	5	6	7%	MEAN %	CV		
C	A	10	10	10	10	10	10	10	100	97.5	5.13		
	B	10	10	10	10	10	10	10	100				
	C	10	10	10	10	10	10	10	100				
	D	10	10	10	10	10	10	10	100				
	E	10	10	10	10	10	10	10	100				
135	A	10	10	10	10	10	10	10	100	100	0		
	B	10	10	10	10	10	10	10	100				
	C	10	10	10	10	10	10	10	100				
	D	10	10	10	10	10	10	10	100				
	E	10	10	10	10	10	10	10	100				
130	A	10	10	10	10	10	10	10	100	97.5	5.13		
	B	10	10	10	10	10	10	10	100				
	C	10	10	10	10	10	10	10	100				
	D	10	10	10	10	10	10	10	100				
	E	10	10	10	10	10	10	10	100				
130	A	10	10	10	10	10	10	10	100	100	0		
	B	10	10	10	10	10	10	10	100				
	C	10	10	10	10	10	10	10	100				
	D	10	10	10	10	10	10	10	100				
	E	10	10	10	10	10	10	10	100				
1000	A	10	4	1	0	0	0	0	0	10.0	81.7		
	B	10	6	3	2	2	1	1	10				
	C	10	7	2	2	2	2	2	20				
	D	10	6	3	2	2	2	1	10				
	E	10	10	10	10	10	10	10	100				
3000	A	10	1	0	0	0	0	0	0	-	-		
	B	10	3	0	0	0	0	0	0				
	C	10	0	0	0	0	0	0	0				
	D	10	1	0	0	0	0	0	0				
	E	10	10	10	10	10	10	10	100				
ANALYST		AP	SD	AP	mb	mb	mb	mb	Hb				
DATE:		9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27				
TIME:		1225	1054	1225	1032	0745	0720	1224	1244				

CV = PERCENT COEFFICIENT OF VARIATION: STANDARD DEVIATION/MEAN \* 100

Pil. nales promelas

FATHEAD MINNOW

TEST 1000.0

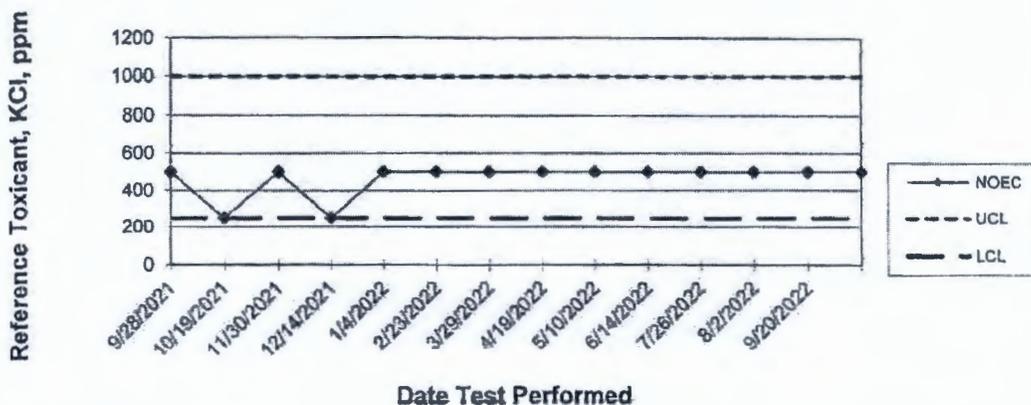
WEIGHT DATA FOR LARVAL SURVIVAL AND GROWTH TEST

LAB # / #s:						TEST DATES (BEGIN / END): 9/20-27/20	
CLIENT: K&E Environmental						WEIGHING DATE / TIME: 10/27/20	
ANALYSTS: J.S.						DRYING TEMP (DEGREES C):	
SAMPLE ID:						DRYING TIME (HOURS): 24	
	REP#	FINAL DRY WEIGHT TIN+LARVAE (g)	INITIAL WEIGHT TIN (g)	TOTAL DRY WEIGHT OF LARVAE (g)	NUMBER OF LARVAE	DRY WEIGHT OF LARVAE (mg)	
0 ppm	A B1	1.00581	0.1000			0.639	AVG DRY WEIGHT (mg) 0.661
	B B2	1.00760	0.2418			0.642	
	C B3	1.00734	0.2454			0.674	
	D B4	1.00744	0.00542			0.687	CV 3.59
	E						
125 ppm	A B5	1.00733	0.1000			0.707	AVG DRY WEIGHT (mg) 0.666
	B B6	1.00734	0.0470			0.654	
	C B7	1.00737	0.0472			0.615	
	D B8	1.00760	0.0072			0.688	CV 6.07
	E						
256 ppm	A B9	0.91505	0.1000			0.589	AVG DRY WEIGHT (mg) 0.636
	B B10	1.00705	0.0421			0.674	
	C B11	1.00337	0.0421			0.606	
	D B12	1.00713	0.0023			0.674	CV 7.03
	E						
500 ppm	A B13	1.00805	0.01015			0.610	AVG DRY WEIGHT (mg) 0.704
	B B14	1.00814	0.00070			0.738	
	C B15	1.00805	0.0102			0.761	
	D B16	1.00800	0.01020			0.766	CV 9.65
	E						
1000 ppm	A B17	—	0.00818			—	AVG DRY WEIGHT (mg) 0.080
	B B18	1.00105	0.00012			0.073	
	C B19	0.91131	0.00024			0.197	
	D B20	1.00049	0.0001			0.049	CV 105.2
	E						
2000 ppm	A B21	—	—			—	AVG DRY WEIGHT (mg) —
	B B22	—	—			—	
	C B23	—	—			—	
	D B24	—	—			—	CV —
	E						

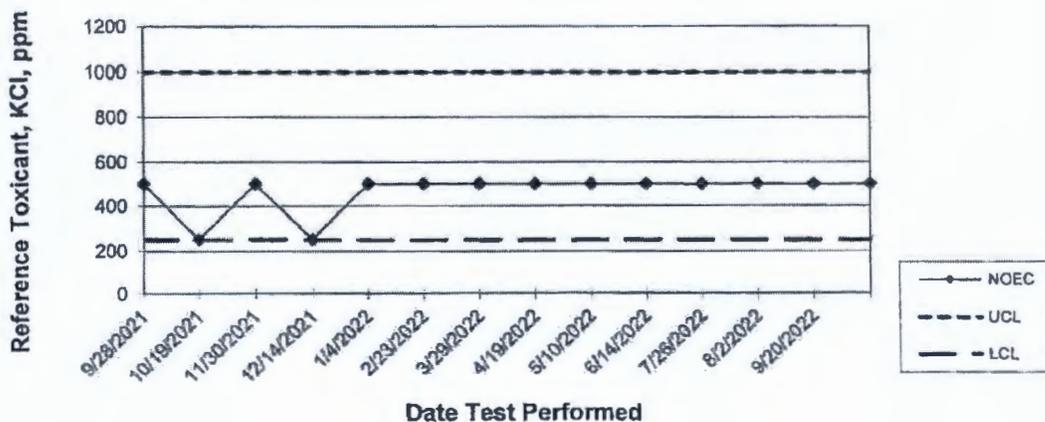
CV = (STANDARD DEVIATION/MEAN)\*100

REMARKS:

**ARKANSAS ANALYTICAL, INC.**  
**FATHEAD MINNOW SURVIVAL 7 Day**  
**QUALITY ASSURANCE**



**ARKANSAS ANALYTICAL, INC.**  
**FATHEAD MINNOW GROWTH 7 Day**  
**QUALITY ASSURANCE**



**CETIS Summary Report**

Report Date: 18 Oct-22 14:55 (p 1 of 1)  
 Test Code/ID: 5FFEB771 / 16-1052-8625

**Fathead Minnow 48-h Acute Survival Test**

Arkansas Analytical

Batch ID: 04-1200-0669	Test Type: Survival (48h)	Analyst: Jettie Parnell
Start Date: 28 Sep-22 09:47	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 30 Sep-22 08:51	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 47h	Taxon: Actinopterygii	Source: Aquatox, AR Age: 8d
Sample ID: 15-4542-1369	Code: 5C1D4239	Project: WET Monthly Compliance Test (SEP)
Sample Date: 28 Sep-22	Material: Potassium chloride	Source: Reference Toxicant
Receipt Date: 28 Sep-22	CAS (PC):	Station: In House
Sample Age: 10h	Client: Internal Lab	

**Multiple Comparison Summary**

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	TU	PMSD	S
05-0762-0845	48h Survival Rate	Dunnett Multiple Comparison Test	500	1000	707.1		6.78%	1

**Point Estimate Summary**

Analysis ID	Endpoint	Point Estimate Method	✓ Level	ppm	95% LCL	95% UCL	TU	S
02-8639-8327	48h Survival Rate	Spearman-Kärber	LC50	977.2	861.2	1109		1

**48h Survival Rate Summary**

Conc-ppm	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	L	3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
125		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
250		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
500		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
1000		3	0.4667	0.1798	0.7535	0.4000	0.6000	0.0667	0.1155	24.74%	53.33%
2000		3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		100.00%

**48h Survival Rate Detail**

Conc-ppm	Code	Rep 1	Rep 2	Rep 3
0	L	1.0000	1.0000	1.0000
125		1.0000	1.0000	1.0000
250		1.0000	1.0000	1.0000
500		1.0000	1.0000	1.0000
1000		0.4000	0.6000	0.4000
2000		0.0000	0.0000	0.0000

**48h Survival Rate Binomials**

Conc-ppm	Code	Rep 1	Rep 2	Rep 3
0	L	10/10	10/10	10/10
125		10/10	10/10	10/10
250		10/10	10/10	10/10
500		10/10	10/10	10/10
1000		4/10	6/10	4/10
2000		0/10	0/10	0/10

Bio-monitoring Report for Reference Toxicants

Acu 1/48 Hour Static Test

Date/ Time Started: 7/27/22	Organisms:
Date/ Time Ended: 11/2/22	Fathead Minnow 8d Daphnia pulex 224 hrs.
Synthetic Water Used: 100% (4.2)	
Test Type: 48hr. Static Renewal Acute	

**REFERENCE TOXICANT**

Daphnia pulex (KCI) 9/27/22-0837						Fathead Minnow (KCI) 9/27/22-0047					
Conc:	Rep	# Live Organisms			Mortality	Conc:	Rep	# Live Organisms			Mortality
ppm	#	0 hour	24 hour	48 hour	%	ppm	#	0 hour	24 hour	48 hour	%
Control	A	5	5	5	0	Control	A	10	10	10	0
Control	B	5	5	5	0	Control	B	10	10	10	0
Control	C	5	5	5	0	Control	C	10	10	10	0
Control	D	5	4	4	20						
125	A	5	4	4	20	125	A	10	10	10	0
125	B	5	5	5	0	125	B	10	10	10	0
125	C	5	1	1	0	125	C	10	10	10	0
125	D	5	1	1	0						
250	A	5	5	5	0	250	A	10	10	10	0
250	B	5	5	5	0	250	B	10	10	10	0
250	C	5	4	4	20	250	C	10	10	10	0
250	D	5	4	5	0						
500	A	5	4	4	20	500	A	10	10	10	0
500	B	5	5	5	0	500	B	10	10	10	0
500	C	5	1	1	0	500	C	10	10	10	0
500	D	5	1	1	0						
1000	A	5	2	2	60	1000	A	10	10	4	60
1000	B	5	1	1	80	1000	B	10	10	6	40
1000	C	5	1	1	80	1000	C	10	10	4	60
1000	D	5	0	0	100						
2000	A	5	0	0	100	2000	A	10	10	0	100
2000	B	5	1	1	100	2000	B	10	10	0	100
2000	C	5	1	1	100	2000	C	10	10	0	100
2000	D	5	1	1	100						

Notes: 7/27/22

**24 hour results**

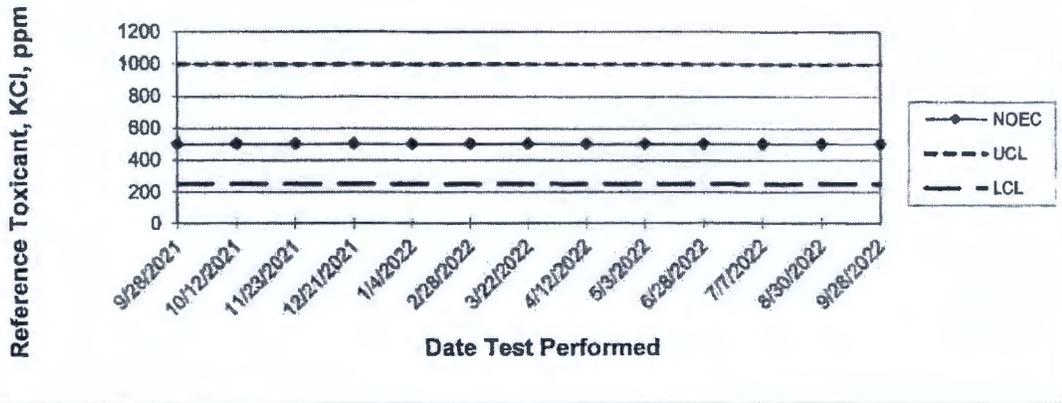
Daphnia pulex LC50 =	
Daphnia pulex NOEC =	
Fathead Minnow LC50 =	
Fathead Minnow NOEC =	

**48 hour results**

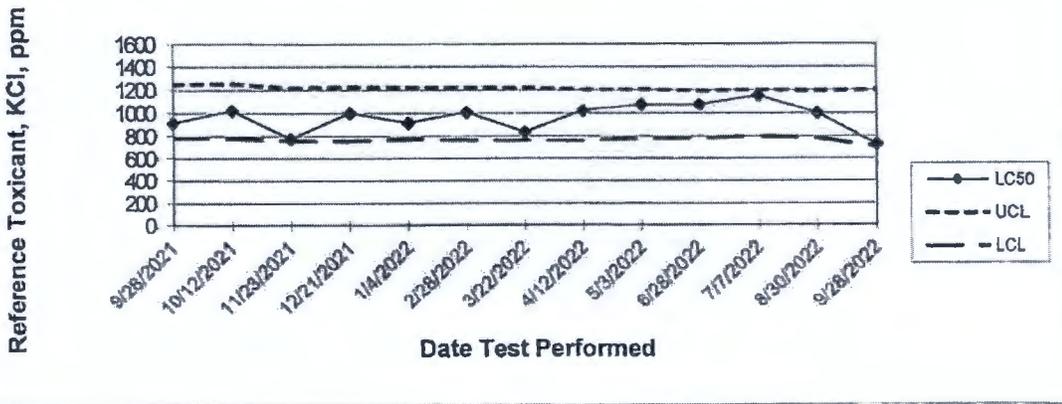
Daphnia pulex LC50 =	818.2
Daphnia pulex NOEC =	500
Fathead Minnow LC50 =	977.2
Fathead Minnow NOEC =	500

11/30/10

**ARKANSAS ANALYTICAL, INC.**  
**FATHEAD MINNOW NOEC**  
**QUALITY ASSURANCE**  
**48 HOUR ACUTE**



**ARKANSAS ANALYTICAL, INC.**  
**FATHEAD MINNOW LC50**  
**QUALITY ASSURANCE**  
**48 HOUR ACUTE**







	DC#_Title: ENV-FRM-LENE-0009_Sample Condition Upon Receipt (SCUR)	
	Revision: 2	Effective Date: 01/12/2022

Client Name: Clanton

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Xroads  Client  Other

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-111 Type of Ice:  Wet  Blue  None

Cooler Temperature (°C): As-read 2.8 Corr. Factor -0.5 Corrected 2.3

Date and initials of person examining contents: 15/11/01/22  
1095

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

# Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: AL

Cert. Needed:  Yes  No

Workorder: 20260648 Workorder Name: Clanton Chronic Toxicity AL005

Owner Received Date: 11/7/2022 Results Requested By: 11/21/2022

Report To		Subcontract To				Requested Analysis																																																																																																																																											
Cindy Simpson Pace Analytical Tuscaloosa 1168 Whigham Place Tuscaloosa, AL 35405 Phone (205)614-6630		Pace Analytical SE Kansas 808 West McKay Frontenac, KS 66763 Phone (620)235-0003				<table border="1"> <tr> <th colspan="10">Preserved Containers</th> <th>Chronic Toxicity Day 2</th> <th>Chronic Toxicity Day 3</th> <th>Chronic Toxicity Day 1</th> <th colspan="3">LAB USE ONLY</th> </tr> <tr> <th>Item</th> <th>Sample ID</th> <th>Sample Type</th> <th>Collect Date/Time</th> <th>Lab ID</th> <th>Matrix</th> <th>Unpreserved</th> <th></th> </tr> <tr> <td>1</td> <td>Day 1 Monday WWTP Effluent</td> <td>PS</td> <td>11/7/2022 08:00</td> <td>20260648001</td> <td>Water</td> <td>1</td> <td></td> <td>X</td> </tr> <tr> <td>2</td> <td>Day 2 Wednesday WWTP Effluent</td> <td>PS</td> <td>11/9/2022 08:00</td> <td>20260648002</td> <td>Water</td> <td>1</td> <td></td> <td>X</td> </tr> <tr> <td>3</td> <td>Day 3 Friday WWTP Effluent</td> <td>PS</td> <td>11/11/2022 08:00</td> <td>20260648003</td> <td>Water</td> <td>1</td> <td></td> <td>X</td> </tr> <tr> <td>4</td> <td></td> </tr> <tr> <td>5</td> <td></td> </tr> </table>										Preserved Containers										Chronic Toxicity Day 2	Chronic Toxicity Day 3	Chronic Toxicity Day 1	LAB USE ONLY			Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved													1	Day 1 Monday WWTP Effluent	PS	11/7/2022 08:00	20260648001	Water	1												X	2	Day 2 Wednesday WWTP Effluent	PS	11/9/2022 08:00	20260648002	Water	1												X	3	Day 3 Friday WWTP Effluent	PS	11/11/2022 08:00	20260648003	Water	1												X	4																			5																		
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3 Sample																																																																																																																																																	
Cooler Temperature on Receipt 4.3 °C				Custody Seal <input checked="" type="checkbox"/> or N				Received on Ice <input checked="" type="checkbox"/> or N				Samples Intact <input checked="" type="checkbox"/> or N																																																																																																																																					

Leg 3

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.



DC#\_Title: ENV-FRM-LENE-0009\_Sample Condition Upon Receipt (SCUR)

Revision: 2

Effective Date: 01/12/2022

Issued By: Lenexa

Client Name: Clanton

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Xroads  Client  Other

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Leg 3

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-111 Type of Ice: Wet Blue  None

Cooler Temperature (°C): As-read 4.8 Corr. Factor -0.5 Corrected 4.3

Date and initials of person examining contents: TS  
930

Temperature should be above freezing to 6°C

11/12/22

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
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Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
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Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
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Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_