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DIRECTOR

KAY IVEY
GOVERNOR

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(334) 271-7700 ▪ FAX (334) 271-7950

OCT 0 4 2021

Shane Cook, Director
City of Huntsville Water Pollution Control
1802 Vermont Road
Huntsville, AL 35802

RE: Draft Permit
NPDES Permit No. AL0057428
Chase Area WWTP
Madison County, Alabama

Dear Mr. Cook:

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 Part I.C.1.c of your permit requires participation in the Department's web-based Electronic Environmental (E2) Reporting System Program for submittal of DMRs upon issuance of this permit unless valid justification as to why you cannot participate is submitted in writing. Please also be aware that Part I.C.2.e of your permit requires participation in the Department's web-based electronic environmental (E2) reporting system for submittal of **SSOs** 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. The E2 Program allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. The Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes** or you may obtain a hard copy by submitting a written request or by emailing e2admin@adem.alabama.gov.

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.

Should you have any questions, please contact the undersigned by email at nicholas.lowe@adem.alabama.gov or by phone at (334) 271-7811.

Sincerely,

Nicholas Lowe

Nicholas Lowe
Municipal Section
Water Division

/mfc
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

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE:	CITY OF HUNTSVILLE WATER POLLUTION CONTROL 1802 VERMONT ROAD HUNTSVILLE, ALABAMA 35802
FACILITY LOCATION:	CHASE AREA WWTP (4.0 MGD) 907 WESS TAYLOR ROAD HUNTSVILLE, ALABAMA MADISON COUNTY
PERMIT NUMBER:	AL0057428
RECEIVING WATERS:	FLINT RIVER CHASE CREEK (STORMWATER)

*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

Alabama Department of Environmental Management

MUNICIPAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfall 0011 Discharge Limits - Effluent

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 0011, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Oxygen, Dissolved (DO) 00300 1 0 0	*****	*****	*****	*****	6.0 mg/l	*****	*****	E	GRAB	C	*****
pH 00400 1 0 0	*****	*****	*****	*****	6.0 S.U.	9.0 S.U.	*****	E	GRAB	C	*****
Solids, Total Suspended 00530 1 0 0	1000 lbs/day	1501 lbs/day	30.0 mg/l	45.0 mg/l	*****	*****	*****	E	COMP24	C	*****
Solids, Total Suspended 00530 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	C	*****
Nitrogen, Ammonia Total (As N) 00610 1 0 0	333 lbs/day	500 lbs/day	10.0 mg/l	15.0 mg/l	*****	*****	*****	E	COMP24	C	S
Nitrogen, Ammonia Total (As N) 00610 1 0 0	667 lbs/day	1000 lbs/day	20.0 mg/l	30.0 mg/l	*****	*****	*****	E	COMP24	C	W
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Nitrite Plus Nitrate Total 1 Det. (As N) 00630 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Phosphorus, Total (As P) 00665 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Zinc Total Recoverable 01094 1 0 0	*****	*****	2.9 mg/l	*****	*****	2.9 mg/l	*****	E	GRAB	G	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)
** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
US – Upstream
DS – Downstream
MW – Monitoring Well
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)

2. Outfall 0011 Discharge Limits - Effluent (continued)

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 0011, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Flow, In Conduit or Thru Treatment Plant 50050 1 0 0	REPORT MGD	*****	*****	*****	*****	REPORT MGD	*****	E	CONTIN	A	*****
Chlorine, Total Residual See note (5) 50060 1 0 0	*****	*****	0.133 mg/l	*****	*****	0.229 mg/l	*****	E	GRAB	C	*****
E. Coli 51040 1 0 0	*****	*****	126 col/100mL	*****	*****	298 col/100mL	*****	E	GRAB	C	ECS
E. Coli 51040 1 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	C	ECW
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	667 lbs/day	1000 lbs/day	20.0 mg/l	30.0 mg/l	*****	*****	*****	E	COMP24	C	S
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	834 lbs/day	1251 lbs/day	25.0 mg/l	37.5 mg/l	*****	*****	*****	E	COMP24	C	W
BOD, Carbonaceous 05 Day, 20C 80082 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	C	*****
BOD, Carb-5 Day, 20 Deg C, Percent Remvl 80091 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
Solids, Suspended Percent Removal 81011 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)
** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
US – Upstream
DS – Downstream
MW – Monitoring Well
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)

(5) 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" or "NODI=9" (if hard copy) on the monthly DMR.

3. Outfall 001A Discharge Limits - Mercury Monitoring

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 001A, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2)(5) Sample Type	(3) Measurement Frequency	(4) Seasonal
Mercury Total Recoverable 71901 1 0 0	*****	*****	REPORT ug/l	*****	*****	REPORT ug/l	*****	E	GRAB	J	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)
** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
US – Upstream
DS – Downstream
MW – Monitoring Well
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)

(5) EPA Method 1631E/1669, or alternative methods specifically approved by the Department, shall be used for the analysis of Total Recoverable Mercury.

4. Outfall 001T Discharge Limits - Toxicity

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 001T, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1)(5) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Toxicity, Ceriodaphnia Chronic 61426 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****
Toxicity, Pimephales Chronic 61428 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)
** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
US – Upstream
DS – Downstream
MW – Monitoring Well
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)

(5) See Part IV.B. for Effluent Toxicity Limitations And Biomonitoring Requirements For Chronic Toxicity

5. Outfall 002S Discharge Limits - Stormwater

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 002S, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
pH 00400 SW 0 0	*****	*****	*****	*****	REPORT S.U.	REPORT S.U.	*****	SW	GRAB	J	*****
Solids, Total Suspended 00530 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Oil & Grease 00556 SW 0 0	*****	*****	*****	*****	*****	15 mg/l	*****	SW	GRAB	J	*****
Nitrogen, Ammonia Total (As N) 00610 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Nitrogen, Kjeldahl Total (As N) 00625 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Nitrite Plus Nitrate Total 1 Det. (As N) 00630 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Phosphorus, Total (As P) 00665 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Flow, In Conduit or Thru Treatment Plant 50050 SW 0 0	*****	*****	*****	*****	*****	REPORT MGD	*****	SW	CALCTD	J	*****
E. Coli 51040 SW 0 0	*****	*****	*****	*****	*****	REPORT col/100mL	*****	SW	GRAB	J	*****
BOD, Carbonaceous 05 Day, 20C 80082 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)
** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
US – Upstream
DS – Downstream
MW – Monitoring Well
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)

(5) See Part IV.F. for Storm Water Requirements

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" 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" 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 he 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) on the forms approved by the Department and 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. by utilizing the Department's web-based Electronic Environmental (E2) Reporting System.

(1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's E2 Reporting 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 E2 Reporting 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 E2 Reporting System resuming operation, the permittee shall enter the data into the E2 Reporting System, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 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.

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.

(3) 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.

(4) 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.

(5) 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
Environmental Data Section, Permits & Services 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
Environmental Data Section, Permits & Services 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 a web-based electronic environmental (E2) reporting system for notification and submittal of SSO reports. **If the Permittee is not already participating in the E2 Reporting System for SSO reports, the Permittee must apply for participation in the system within 30 days of coverage under this permit unless the Permittee submits in writing valid justification as to why it cannot participate and the Department approves in writing utilization of verbal notifications and hard copy SSO report submittals.** Once the Permittee is enrolled in the E2 Reporting System for SSO reports, the Permittee must utilize the system for notification and submittal of all SSO reports unless otherwise allowed by this permit. The Permittee shall include in the SSO reports the information requested by ADEM Form 415. In addition, the Permittee shall include the latititude 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 E2 Reporting System for SSO reports, the Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes**. If the E2 Reporting 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 E2 Reporting System resuming operation, the Permittee shall enter the data into the E2 Reporting 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). Location should be shown on a USGS quad sheet or copy thereof; 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 (BMP)

   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 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

   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, for 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, any 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 30l(c), 30l(g), 30l(h), 30l(k), or 3l6(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.

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; or

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 direct 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 create a fire or explosion hazard in the treatment works;
2. Pollutants which will cause corrosive structural damage to the treatment works, or dischargers with a pH lower than 5.0 s.u., unless the works are specifically designed to accommodate such discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction of flow in sewers, or other interference with the treatment works;
4. Pollutants, including oxygen demanding pollutants, released in a discharge of such volume or strength as to cause interference in the treatment works;
5. Heat in amounts which will inhibit biological activity in the treatment plant resulting in interference or in such quantities that the temperature of the treatment plant influent exceeds 40°C (104° F) unless the treatment plant is designed to accommodate such heat; and
6. Pollutants in amounts which exceed any applicable pretreatment standard under Section 307 of FWPCA or any approved revisions thereof.

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 coustant 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. From which the discharge of pollutants did not commence 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 – 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; or

    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 0011.

   b. The samples shall be diluted using appropriate control water to the Instream Waste Concentration (IWC) which is **9 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 **October**. Should results from the Annual Toxicity test indicate that Outfall 001-1 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 APRIL, JULY, OCTOBER, and JANUARY.

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. Two copies of 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)
         (a) Name of firm
         (b) Telephone number
         (c) 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

         (a) Sampling point
         (b) Sample collection dates and times (to include composite sample start and finish times)
         (c) Sample collection method
         (d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
         (e) Lapsed time from sample collection to delivery
         (f) Lapsed time from sample collection to test initiation
         (g) Sample temperature when received at the laboratory

      (2) Dilution Water

(a) Source
(b) Collection/preparation date(s) and time(s)
(c) Pretreatment (if applicable)
(d) 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 relationsbip 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 tbe 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

1/ 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" or "NODI = 9" (if hard copy) 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 chlorine is not detected prior to actual discharge to the receiving stream using one of these methods (i.e., the analytical result is less than the detection level), the Permittee shall report on the DMR form "*B", "NODI = B" (if hard copy), 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. 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.

F. STORM WATER 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.F.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

G. 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: http://www.adem.alabama.gov/alEnviroRegLaws/files/Division6Vol1.pdf and http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html

(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)

(a) 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.

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

FACT SHEET

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

Date: June 10, 2021 **Prepared By:** Nicholas Lowe

NPDES Permit No. AL0057428

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

   City Of Huntsville Water Pollution Control
   1802 Vermont Road
   Huntsville, AL 35802

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

   Chase Area WWTP
   907 Wess Taylor Road
   Huntsville, Alabama 35811

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

   Waste Water Treatment Plant

4. **Applicant's Receiving Waters**

Receiving Waters	Classifications
Flint River	F&W
Chase Creek (Storm water)	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:

Jeffery W. Kitchens, Chief
ADEM-Water Division
1400 Coliseum Blvd.
[Mailing address: PO Box 301463; Zip 36130-1463]
Montgomery, Alabama 36110-2400

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

(334) 271-7823
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:

Jeffery W. Kitchens, Chief
ADEM-Water Division
1400 Coliseum Blvd.
[Mailing address: PO Box 301463; Zip 36130-1463]
Montgomery, Alabama 36110-2400
(334) 271-7823
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 36110-2059

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:	**AL0057428**	Date: 6/10/2021
Permit Applicant:	City Of Huntsville Water Pollution Control 1802 Vermont Road Huntsville, Alabama 35802	
Location:	Chase Area WWTP 907 Wess Taylor Road Huntsville, Alabama 35811	
Draft Permit is:	Initial Issuance: Reissuance due to expiration: Modification of existing permit: Revocation and Reissuance:	 X
Basis for Limitations:	Water Quality Model: Reissuance with no modification: Instream calculation at 7Q10: Toxicity based: Secondary Treatment Levels: Other (described below):	CBOD, NH3-N, DO DO, pH, TSS, NH3-N, TRC, CBOD, CBOD % Removal, TSS % Removal 9% TRC TSS, CBOD % Removal, TSS % Removal pH, E. coli, Zinc
Design Flow in Million Gallons per Day:	4 MGD	
Major:	Yes	
Description of Discharge:	Outfall Number 001; Effluent discharge to the Flint River, which is classified as Fish & Wildlife. Outfall Number 002; Stormwater discharge to Chase Creek, which is classified as Fish & Wildlife.	

Diseussion: This is a reissuance due to expiration.

The segment of the Flint River, containing the discharge is included in the most recent 303(d) list for turbidity impairment. Due to the nature of the discharge and the fact that total suspended solids associated with wastewater treatment plants are typically organic in nature, the Department does not expect this discharge to contribute to the turbidity impairment in the Flint River. The segment of the Flint River has an approved Total Maximum Daily Load (TMDL) for pathogens. The TMDL does not require any pathogen reduction for this source.

The limits for Five Day Carbonaceous Biochemical Oxygen Demand (CBOD), Total Ammonia as Nitrogen (NH3-N), and Dissolved Oxygen (DO) are based on the Waste Load Allocation (WLA) model that was completed by ADEM's Water Quality Branch on April 7, 2021. The monthly average limits for

CBOD are 20.0 mg/L (summer: May - November) and 25.0 mg/L (winter: December - April). The monthly average limits for NH3-N are 10.0 mg/L (summer) and 20.0 mg/L (winter). The limit for daily minimum DO is 6.0 mg/L.

The limits for Total Suspended Solids (TSS), TSS % removal, and CBOD % removal are 30.0 mg/L, 85%, and 85% respectively. These limits are based on requirements of 40 CFR part 133.102 regarding Secondary Treatment.

The Department revised bacteriological criteria in ADEM Administrative Code R.335-6-10-.09. As a result, this permit includes E. coli limits and seasons that are consistent with the revised regulations. The imposed E. coli limits were determined based on the water-use classification of the receiving stream. Since the Flint River is classified as Fish & Wildlife, the limits for May through October are 126 col/100ml (monthly average) and 298 col/100ml (daily maximum), while the limits for November through April are 548 col/100ml (monthly average) and 2507 col/100ml (daily maximum).

The pH limits were developed in accordance with the Water-Use designation of the receiving stream and to be consistent with the Department's permitting approach and procedures. The minimum pH limit of 6.0 S.U. and a maximum limit of 9.0 S.U. are imposed.

The Total Residual Chlorine (TRC) limits of 0.113 mg/L (monthly average) and 0.229 mg/L (maximum daily) are based on EPA's recommended water quality values and on the current Toxicity Rationale, which considers the available dilution and should be protective of acute and chronic criteria in the receiving stream. Monitoring for TRC is only applicable if chlorine is utilized for disinfection purposes. That is, if chlorine disinfection is not utilized, monitoring would not be applicable during the monitoring period, and "*9" should be entered on the monthly DMR.

This permit imposes monitoring for the following nutrient-related parameters: Total Kjeldahl Nitrogen (TKN), Nitrite plus Nitrate as Nitrogen (NO_2+NO_3-N), 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 nutrient limits on this discharge.

This permit imposes chronic toxicity testing with two species (Ceriodaphnia and Pimephales). Toxicity testing is imposed for both survival and life-cycle impairment (i.e. growth and reproduction). Chronic toxicity testing at the IWC of 9 percent is required during the month of October.

Since this facility is classified as a Major Municipal Wastewater plant (>1 MGD) and treats a mixture of municipal and industrial wastewater, the Department completed a reasonable potential analysis (RPA) of the discharge based on DMR data and laboratory data provided in the Permittee's application. The RPA indicates whether pollutants in treated effluent have the potential to contribute to excursions of Alabama's in-stream water quality standards. Based on the RPA, appears that there is reasonable potential to cause in-stream water quality criteria exceedances for Zinc and Mercury. The Total Recoverable Mercury data provided in the Permittee's application was not analyzed using a sufficient method detection limit for the Department to determine the impact on in-stream water quality standards. Therefore, this permit will require annual Total Recoverable Mercury monitoring utilizing Low Level Mercury EPA test method 1631E/1669 so that sufficient information will be available for future analysis. The reissuance of this permit will include a zinc limit of 2.9 mg/L (monthly average and daily maximum), calculated using the background hardness data for the Flint River from station FLIM-1.

In the permit application, the Permittee reported one stormwater outfall at the treatment plant. A segment of Chase Creek is on the most recent 303(d) list for pathogen impairment and has TMDLs for Organic

Enrichment/Dissolved Oxygen (OE/DO) and Siltation. However, the stormwater discharge from Chase Area WWTP is downstream of the segment of Chase Creek that is on the most recent 303(d) list and included in the OE/DO and Siltation TMDLs. The Chase Creek OE/DO TMDL indicates that point source discharges of stormwater are not considered to be significant contributors since the discharges would not occur during low flow conditions. The Chase Creek Siltation TMDL indicates that, in general for sediment loads to the receiving streams, the point source discharge levels are negligible in relation to the non-point sources. The stormwater discharge is also in close proximity to the Flint River which has a TMDL for pathogens and is on the most recent 303(d) list for turbidity. Due to the nature of the discharge and the fact that total suspended solids associated with wastewater treatment plants are typically organic in nature, the Department does not expect this discharge to contribute to the turbidity impairment in the Flint River. The Pathogens TMDL does not require any reductions on the point source discharges. Stormwater monitoring will be required from outfall 002S on an annual basis.

Monitoring will be conducted three days per week for most parameters. Percent removal for CBOD and TSS will be calculated once per month. Monitoring for nutrient-related parameters will be once per month. Monitoring for Zinc will be once per month. Flow will be monitored continuously, 7 days per week.

ADEM Administrative Rule 335-6-10-.04 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 which the waters are located. The application submitted by the facility is not for a new or expanded discharge to a Tier II stream, so the applicant is not required to demonstrate that the discharge is necessary for economic and social development.

Prepared by: Nicholas Lowe

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	**Chase Area WWTP**	
NPDES Permit Number:	**AL0057428**	
Receiving Stream:	**Flint River**	
Facility Design Flow (Q_w):	**4.000 MGD**	
Receiving Stream $7Q_{10}$:	**68.520 cfs**	
Receiving Stream $1Q_{10}$:	**64.090 cfs**	
Winter Headwater Flow (WHF):	**87.05 cfs**	
Summer Temperature for CCC:	**28 deg. Celsius**	
Winter Temperature for CCC:	**18 deg. Celsius**	
Summer Headwater Background NH_3-N Level:	**0.253 mg/l**	
Winter Headwater Background NH_3-N Level:	**0.942 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 Ration (SDR) is calculated using the 7Q10 for all stream classifications.

$$\text{Stream Dilution Ration (SDR)} = \frac{Qw}{7Q10 + Qw} = \textbf{8.28\%}$$

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.

$$\text{Limiting Dilution} = \frac{Q_w}{7Q_{10} + Q_w}$$

$$= \textbf{8.28\%} \quad \textbf{Effluent-Dominated, CCC Applies}$$

Criterion Maximum Concentration (CMC): $CMC=0.411/(1+10^{(7.204-pH)}) + 58.4/(1+10^{(pH-7.204)})$

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

	CMC	CCC
Allowable Summer Instream NH_3-N:	**36.09 mg/l**	**2.48 mg/l**
Allowable Winter Instream NH_3-N:	**36.09 mg/l**	**4.72 mg/l**

$$\text{Summer } NH_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream } NH_3\text{-N}) * (7Q_{10} + Q_w)] - [(\text{Headwater } NH_3\text{-N}) * (7Q_{10})]}{Q_w}$$

= 27.2 mg/l NH3-N at 7Q10

$$\text{Winter } NH_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream } NH_3\text{-N}) * (WHF + Q_w)] - [(\text{Headwater } NH_3\text{-N}) * (WHF)]}{Q_w}$$

= 57.9 mg/l NH3-N at Winter Flow

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.

	DO-based NH3-N limit	Toxicity-based NH3-N limit
Summer	**20.00 mg/l NH3-N**	**27.20 mg/l NH3-N**
Winter	**25.00 mg/l NH3-N**	**57.90 mg/l NH3-N**

Summer: The DO based limit of 20.00 mg/l NH3-N applies.
Winter: The DO based limit of 25.00 mg/l NH3-N applies.

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) = $\frac{Qw}{7Q10 + Qw}$ = **8.28%**

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)
E. Coli (applies to Non-coastal and Shellfish Harvesting Coastal)		
Monthly limit as monthly average (November through April):	548	**548**
Monthly limit as monthly aveage (May through October):	126	**126**
Daily Max (November through April):	2507	**2507**
Daily Max (May through October):	298	**298**
Enterococci (applies to Coastal)		
Monthly limit as geometric mean (November through April):	Not applicable	**Not applicable**
Monthly limit as geometric mean (May through October):	Not applicable	**Not applicable**
Daily Max (November through April):	Not applicable	**Not applicable**
Daily Max (May through October):	Not applicable	**Not applicable**

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:	0.133 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	0.229 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: Nicholas Lowe Date: 6/10/2021

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3784

From:	Nicholas Lowe	In Branch/Section	Municipal		
Date Submitted	3/16/2021	Date Required	4/15/2021	FUND Code	605
Date Permit application received by NPDES program	2/26/2021				
Receiving Waterbody	Flint River				
Previous Stream Name					
Facility Name	Huntsville Chase WWTP	(Name of Discharger-WQ will use to file)			
		Previous Discharger Name			
River Basin	Tennessee	Outfall Latitude	34.786982	(decimal degrees)	
*County	Madison	Outfall Longitude	-86.484112	(decimal degrees)	
Permit Number	AL0057428	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.	West Fork WWTP, Hazel Green WWTP, Buckhorn HS WWTP, Buckhorn WWTP, Integra Madison, Giles and Kendall, Central School, Madison County HS WWTP,Gurley WWTP,Huntsville Big Cove WWTP, Owens Cross Roads WWTP	Impacting dischargers permit numbers.	AL0078344, AL0066478, AL0051691, AL0078336, AL0078298, AL0071650, AL0048810,AL0070467,AL0070661, AL0055042, AL0053228

Existing Discharge Design Flow	4	MGD	Note: The flow rates given should be those requested for modeling.
Proposed Discharge Design Flow		MGD	

Comments included: ☐ Yes ☑ No

Information Verified By: JJM

Year File Was Created: 1984

Response ID Number: 1827

Lat/Long Method: GPS

12 Digit HUC Code	060300020403		
Use Classification	F&W		
Site Visit Completed?	☑ Yes ☐ No	Date of Site Visit	3/30/2021
Waterbody Impaired?	☑ Yes ☐ No	Date of WLA Response	4/7/2021
Antidegradation	☐ Yes ☑ No	Approved TMDL?	☑ Yes ☐ No
Waterbody Tier Level	Tier I		
Use Support Category	5	Approval Date of TMDL	9/26/2008

Waste Load Allocation Information

Modeled Reach Length	46.36	Miles	Date of Allocation	4/7/2021	
Name of Model Used	SWQM		Allocation Type	2 Seasons	
Model Completed by	James Mooney		Type of Model Used	Data-based	
Allocation Developed by	Water Quality Branch				

Waste Load Allocation Summary

Annual Effluent Limits	Conventional Parameters		Other Parameters	
	Qw 4 MGD	Qw 4 MGD	Qw MGD	Qw MGD
	Season Summer	Season Winter	Season	Season
Qw MGD	From May	From Dec	From	From
	Through Nov	Through Apr	Through	Through
CBOD5	CBOD5 20 mg/L	CBOD5 25 mg/L	TP	TP
NH3-N	NH3-N 10 mg/L	NH3-N 20 mg/L	TN	TN
TKN	TKN	TKN	TSS	TSS
D.O.	D.O. 6 mg/L	D.O. 6 mg/L		

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

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	2.1141	mg/l	3.8996	mg/l
NH3-N	0.253	mg/l	0.942	mg/l
Temperature	28	°C	18	°C
pH	7	su	7	su

Hydrology at Discharge Location

Drainage Area Qualifier: Exact

			Method Used to Calculate
Drainage Area	362.29	sq mi	
Stream 7Q10	68.52	cfs	ADEM Estimate w/USGS Gage Data
Stream 1Q10	64.09	cfs	ADEM Estimate w/USGS Gage Data
Stream 7Q2	87.05	cfs	ADEM Estimate w/USGS Gage Data
Annual Average	552.49	cfs	ADEM Estimate w/USGS Gage Data

Comments and/or Notations

Facility Name: **Chase Area WWTP**

NPDES No.: **AL0057428**

6/13/2017

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	**Enter** Max Daily Discharge as reported by Applicant (C_d) Max	**Enter** Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Stream / Lake)
				µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	1.69	0.56	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	0	0	0.574
3	Berylium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	4.82	3.02	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	4.82	3.02	
7	Copper**		Metals	0	0	0	0	10	8.15	0.388
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0.2	0.0697	0.302
10	Nickel**		Metals	0	0	0	0	33.5	27.7	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	1190	48.6	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	80400	70200	222000	203000	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**ChloroForm***	YES	VOC	0	0	0	0	0	0	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4.4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobromo-Methane***	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichlorethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dintro-2-methylophenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzidine***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-

4	**Enter** Q_d = wastewater discharge flow from facility (MGD)
6.188916	Q_d = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	**Enter flow from upstream discharge** Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
68.52	**Enter 7Q10,** Q_s = background stream flow in cfs above point of discharge
64.09	**Enter or estimated, 1Q10,** Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
552.49	**Enter Mean Annual Flow,** Q_s = background stream flow in cfs above point of discharge
87.05	**Enter 7Q2.** Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	**Enter** C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
$Q_d + Qd2 + Q_s$	Q_r = resultant in-stream flow, after discharge
Calculated on other sheets	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
70.2	**Enter,** Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.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

September 27, 2021

93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

Facility Name: Chase Area WWTP

NPDES No.: AL0057428

Freshwater F&W classification.						Freshwater Acute (µg/l) Q_s =1Q10						Freshwater Chronic (µg/l) Q_s = 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant (C_{emax})	Water Quality Criteria (C_T)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{davg})	Water Quality Criteria (C_T)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_T)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?
1	Antimony			0	1.69	-	-	-	-	0	0.56	-	-	-	-	3.73E+02	4.51E+03	9.01E+02	No
2	Arsenic		YES	0	0	592.334	6726.319	1345.264	No	0	0	261.324	3154.549	630.910	No	3.03E-01	2.74E+01	5.47E+00	No
3	Berylium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	6.048	68.682	13.736	No	0	0	0.815	9.839	1.968	No	-	-	-	-
5	Chromium/ Chromium III			0	4.82	2030.606	23058.756	4611.751	No	0	3.02	264.140	3188.541	637.708	No	-	-	-	-
6	Chromium/ Chromium VI			0	4.82	16.000	181.690	36.338	No	0	3.02	11.000	132.785	26.557	No	-	-	-	-
7	Copper			0	10	24.817	281.818	56.364	No	0	8.15	17.059	205.932	41.186	No	-	-	-	-
8	Lead			0	0	212.838	2416.907	483.381	No	0	0	8.294	100.120	20.024	No	-	-	-	-
9	Mercury	YES		0	0.2	2.400	27.253	5.451	No	0	0.0597	0.012	0.145	0.029	Yes	4.24E-02	5.12E-01	1.02E-01	No
10	Nickel			0	33.5	687.344	7805.215	1561.043	No	0	27.7	76.343	921.564	184.313	No	9.93E+02	1.20E+04	2.40E+03	No
11	Selenium			0	0	20.000	227.112	45.422	No	0	0	5.000	60.357	12.071	No	2.43E+03	2.93E+04	5.87E+03	No
12	Silver			0	0	1.750	19.876	3.975	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	3.30E+00	6.60E-01	No
14	Zinc	YES		0	1190	263.113	2987.811	597.562	Yes	0	48.6	265.265	3202.127	640.425	No	1.49E+04	1.80E+05	3.60E+04	No
15	Cyanide			0	0	22.000	249.823	49.965	No	0	0	5.200	62.771	12.554	No	9.33E+03	1.13E+05	2.25E+04	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	222000	-	-	-	-	0	203000	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	6.55E+01	1.31E+01	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	1.30E+01	2.60E+00	No
20	Aldrin		YES	0	0	3.000	34.067	6.813	No	0	0	-	-	-	-	2.94E-05	2.65E-03	5.31E-04	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	1.40E+03	2.79E+02	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	7.11E+03	1.42E+03	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	8.64E+01	1.73E+01	No
24	Chlordane		YES	0	0	2.400	27.253	5.451	No	0	0	0.0043	0.052	0.010	No	4.73E-04	4.27E-02	8.54E-03	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	1.09E+04	2.19E+03	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	6.69E+02	1.34E+02	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+02	9.21E+03	1.84E+03	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	1.64E-02	3.27E-03	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.16E-02	2.31E-03	No
32	4,4' - DDT		YES	0	0	1.100	12.491	2.498	No	0	0	0.001	0.012	0.002	No	1.28E-04	1.16E-02	2.31E-03	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	9.06E+02	1.81E+02	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	1.93E+03	3.86E+02	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	7.13E+04	1.43E+04	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	3.76E+05	7.52E+04	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	1.03E+02	2.05E+01	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	1.48E+02	2.96E+01	No
40	Dieldrin		YES	0	0	0.240	2.725	0.545	No	0	0	0.056	0.678	0.135	No	3.12E-05	2.82E-03	5.64E-04	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	1.50E+04	3.00E+03	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	1.05E+04	2.10E+03	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	3.12E+04	6.24E+03	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	2.11E+02	4.21E+01	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	1.73E+02	3.46E+01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	1.05E+05	2.11E+04	No
48	Toxaphene		YES	0	0	0.730	8.290	1.658	No	0	0	0.0002	0.002	0.000	No	1.62E-04	1.46E-02	2.92E-03	No
49	Tributyltin (TBT)		YES	0	0	0.460	5.224	1.045	No	0	0	0.072	0.869	0.174	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	8.21E+02	1.64E+02	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	1.58E+03	3.15E+02	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	1.29E+02	2.57E+01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	1.05E+03	2.10E+02	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	2.08E+03	4.15E+02	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.96E+02	6.01E+03	1.20E+03	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.76E+04	7.51E+03	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	1.49E+04	2.99E+03	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	2.41E-06	4.81E-07	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	99.059	19.812	No	0	0	6.893	80.789	16.158	No	1.77E+00	1.60E+02	3.19E+01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.90E+05	6.04E+06	1.21E+06	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	1.28E+02	2.55E+01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	6.98E+03	1.40E+03	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	2.82E+05	5.63E+04	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	1.40E-03	2.80E-04	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	9.62E-01	1.92E-01	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	9.62E-01	1.92E-01	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.29E-01	2.57E-02	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.29E-01	2.57E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	2.78E+01	5.55E+00	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	4.56E+05	9.12E+04	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	1.16E+02	2.31E+01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	1.36E+04	2.72E+03	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	1.12E+04	2.23E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	9.62E-01	1.92E-01	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	3.16E+04	6.33E+03	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	9.62E-01	1.92E-01	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	9.12E+03	1.82E+03	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	6.79E+03	1.36E+03	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	1.36E+03	2.72E+02	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E-02	1.50E+00	3.00E-01	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	3.09E+05	6.17E+04	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	7.82E+06	1.56E+06	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	1.79E+02	3.58E+01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	1.41E+00	2.83E-01	No
97	Endosulfan (alpha)		YES	0	0	0.22	2.498	0.500	No	0	0	0.056	0.676	0.135	No	5.19E+01	4.68E+03	9.36E+02	No
98	Endosulfan (beta)		YES	0	0	0.22	2.498	0.500	No	0	0	0.056	0.676	0.135	No	5.19E+01	4.68E+03	9.36E+02	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	4.68E+03	9.36E+02	No
100	Endrin		YES	0	0	0.086	0.977	0.195	No	0	0	0.036	0.435	0.087	No	3.53E-02	3.18E+00	6.37E-01	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E-01	1.59E+01	3.18E+00	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	9.80E+02	1.96E+02	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.76E+04	7.51E+03	No
104	Heptochlor		YES	0	0	0.52	5.905	1.181	No	0	0	0.0038	0.046	0.009	No	4.63E-05	4.18E-03	8.36E-04	No
105	Heptachlor Epoxide		YES	0	0	0.52	5.905	1.181	No	0	0	0.0038	0.046	0.009	No	2.29E-05	2.07E-03	4.13E-04	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	1.51E-02	3.03E-03	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	9.71E+02	1.94E+02	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	2.57E-01	5.14E-02	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	9.00E-01	1.80E-01	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	10.788	2.158	No	0	0	-	-	-	-	1.08E+00	9.72E+01	1.94E+01	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	7.79E+03	1.56E+03	No

112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	2.32E+01	4.63E+00	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	9.62E-01	1.92E-01	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	6.77E+03	1.35E+03	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	4.87E+03	9.75E+02	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	2.66E+01	5.33E+00	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	1.59E+02	3.18E+01	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	3.16E+02	6.32E+01	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.169	0.034	No	3.74E-05	3.38E-03	6.75E-04	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.169	0.034	No	3.74E-05	3.38E-03	6.75E-04	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.169	0.034	No	3.74E-05	3.38E-03	6.75E-04	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.169	0.034	No	3.74E-05	3.38E-03	6.75E-04	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.169	0.034	No	3.74E-05	3.38E-03	6.75E-04	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.169	0.034	No	3.74E-05	3.38E-03	6.75E-04	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.169	0.034	No	3.74E-05	3.38E-03	6.75E-04	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	2.82E+04	5.63E+03	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	4.94E+02	9.88E+01	No

Chase Area WWTP AL0057428

Summary of Lab Data Submitted with Application

Parameter	1/14/2016	2/14/2017	10/14/2019	Maximum	Average
Chromium	4.82	4.24	0	4.82	3.02
Copper	7.96	6.5	10	10.00	8.15
Nickel	33.5	31.5	18.2	33.5	27.7
Zinc	56.4	17.7	0	56.4	24.7
Antimony	0	1.69	0	1.69	0.56
Hardness	192000	194000	222000	222000	202667

*Units in µg/L

Mercury Lab Data Submitted with Application

	8/19/2016	12/2/2016	10/16/2019	Maximum	Average
Mercury	4.82	4.33	200	200	69.72

*Units in ng/L

Chase Area WWTP AL0057428
Summary of DMR Data

Monitor Period	Parameter	Concentration		Unit
8/31/2016	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
9/30/2016	Zinc Total Recoverable	0.05	Maximum Daily	mg/l
10/31/2016	Zinc Total Recoverable	0.03	Maximum Daily	mg/l
11/30/2016	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
12/31/2016	Zinc Total Recoverable	0.03	Maximum Daily	mg/l
1/31/2017	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
2/28/2017	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
3/31/2017	Zinc Total Recoverable	0.04	Maximum Daily	mg/l
4/30/2017	Zinc Total Recoverable	0.06	Maximum Daily	mg/l
5/31/2017	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
6/30/2017	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
7/31/2017	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
8/31/2017	Zinc Total Recoverable	0.03	Maximum Daily	mg/l
9/30/2017	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
10/31/2017	Zinc Total Recoverable	0.01	Maximum Daily	mg/l
11/30/2017	Zinc Total Recoverable	0.13	Maximum Daily	mg/l
12/31/2017	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
1/31/2018	Zinc Total Recoverable	0.016	Maximum Daily	mg/l
2/28/2018	Zinc Total Recoverable	0.017	Maximum Daily	mg/l
3/31/2018	Zinc Total Recoverable	0.022	Maximum Daily	mg/l
4/30/2018	Zinc Total Recoverable	0.014	Maximum Daily	mg/l
5/31/2018	Zinc Total Recoverable	1.19	Maximum Daily	mg/l
6/30/2018	Zinc Total Recoverable	0.019	Maximum Daily	mg/l
7/31/2018	Zinc Total Recoverable	0.017	Maximum Daily	mg/l
8/31/2018	Zinc Total Recoverable	0.013	Maximum Daily	mg/l
9/30/2018	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
10/31/2018	Zinc Total Recoverable	0.024	Maximum Daily	mg/l
11/30/2018	Zinc Total Recoverable	0.02	Maximum Daily	mg/l
12/31/2018	Zinc Total Recoverable	0.014	Maximum Daily	mg/l
1/31/2019	Zinc Total Recoverable	0.026	Maximum Daily	mg/l
2/28/2019	Zinc Total Recoverable	0.022	Maximum Daily	mg/l
3/31/2019	Zinc Total Recoverable	0.05	Maximum Daily	mg/l
4/30/2019	Zinc Total Recoverable	0.01	Maximum Daily	mg/l
5/31/2019	Zinc Total Recoverable	0.015	Maximum Daily	mg/l
6/30/2019	Zinc Total Recoverable	0.021	Maximum Daily	mg/l
7/31/2019	Zinc Total Recoverable	0.029	Maximum Daily	mg/l
8/31/2019	Zinc Total Recoverable	0.056	Maximum Daily	mg/l
9/30/2019	Zinc Total Recoverable	0.034	Maximum Daily	mg/l
10/31/2019	Zinc Total Recoverable	0.035	Maximum Daily	mg/l
11/30/2019	Zinc Total Recoverable	0.049	Maximum Daily	mg/l
12/31/2019	Zinc Total Recoverable	0.042	Maximum Daily	mg/l
1/31/2020	Zinc Total Recoverable	0.022	Maximum Daily	mg/l

2/29/2020	Zinc Total Recoverable	0.041	Maximum Daily	mg/l
3/31/2020	Zinc Total Recoverable	0.017	Maximum Daily	mg/l
4/30/2020	Zinc Total Recoverable	0.018	Maximum Daily	mg/l
5/31/2020	Zinc Total Recoverable	0.011	Maximum Daily	mg/l
6/30/2020	Zinc Total Recoverable	0	Maximum Daily	mg/l
7/31/2020	Zinc Total Recoverable	0	Maximum Daily	mg/l
8/31/2020	Zinc Total Recoverable	0.024	Maximum Daily	mg/l
9/30/2020	Zinc Total Recoverable	0	Maximum Daily	mg/l
10/31/2020	Zinc Total Recoverable	0.011	Maximum Daily	mg/l
11/30/2020	Zinc Total Recoverable	0.056	Maximum Daily	mg/l
12/31/2020	Zinc Total Recoverable	0.043	Maximum Daily	mg/l
1/31/2021	Zinc Total Recoverable	0.065	Maximum Daily	mg/l
2/28/2021	Zinc Total Recoverable	0.025	Maximum Daily	mg/l
3/31/2021	Zinc Total Recoverable	0.035	Maximum Daily	mg/l
4/30/2021	Zinc Total Recoverable	0.037	Maximum Daily	mg/l
5/31/2021	Zinc Total Recoverable	0.08	Maximum Daily	mg/l
6/30/2021	Zinc Total Recoverable	0.12	Maximum Daily	mg/l
7/31/2021	Zinc Total Recoverable	0.023	Maximum Daily	mg/l
10/14/2019*	Zinc Total Recoverable	0		mg/l

***Sampling data included with EPA Form 2A**

Maximum	1.19	mg/l
Average	0.0486	mg/l

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F ALR000029439

LABEL ITEMS

I. EPA I.D. NUMBER	ALR000029439
III. FACILITY NAME	CHASE AREA WWTP
V. FACILITY MAILING ADDRESS	907 WESS TAYLOR ROAD
VI. FACILITY LOCATION	HUNTSVILLE, MADISION COUNTY, AL

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	X		X
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)		X	
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: CHASE AREA WWTP

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 SHANE COOK, PE	(256) 883-3719

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 1800 VERMONT ROAD

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 HUNTSVILLE	AL	35802

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 907 WESS TAYLOR ROAD

B. COUNTY NAME: MADISON

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 HUNTSVILLE	AL	35811	045

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
7 4952 (specify) SEWAGE TREATMENT PLANT	7 (specify)
C. THIRD	**D. FOURTH**
7 (specify)	7 (specify)

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
8 CITY OF HUNTSVILLE ALABAMA	☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

(specify)

D. PHONE *(area code & no.)*: A (256) 883-3719

E. STREET OR P.O. BOX: PO BOX 308

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
B HUNTSVILLE	AL	35804	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N AL0057428	9 P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U	9 (specify)
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R	9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

THIS IS A MUNICIPAL WASTEWATER TREATMENT FACILITY HAVING A DESIGN CAPACITY OF 4.0 MGD, HYDRAULIC TREATMENT PROCESSES INCLUDE LIFT PUMPING, SCREENING, ACTIVATED SLUDGE, SECONDARY CLARIFICATION, AND UV DISINFECITON. SLUDGE TREATEMENT CONSISTS OF HOLDING TANKS, SLUDGE DRYING BEDS AND INCENERATION AT MUNICIPAL SOLID WASTE DISPOSAL AUTHORITY. THERE ARE NO UNDERGROUND INJECTION OR HAZARDOUS WASTE STORAGE, TREATMENT, OR DISPOSAL AT THIS LOCATION.

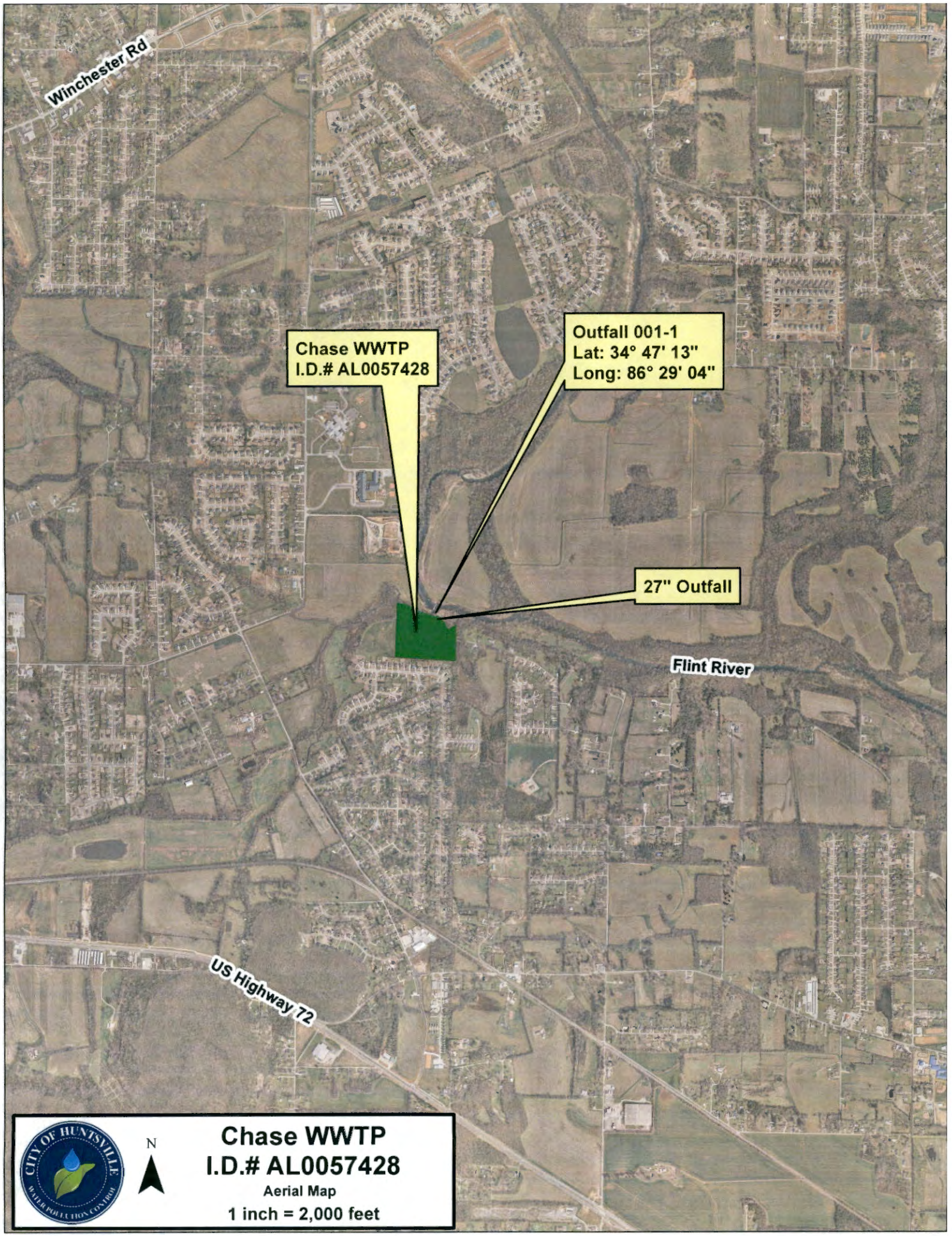
XIII. CERTIFICATION *(see instructions)*

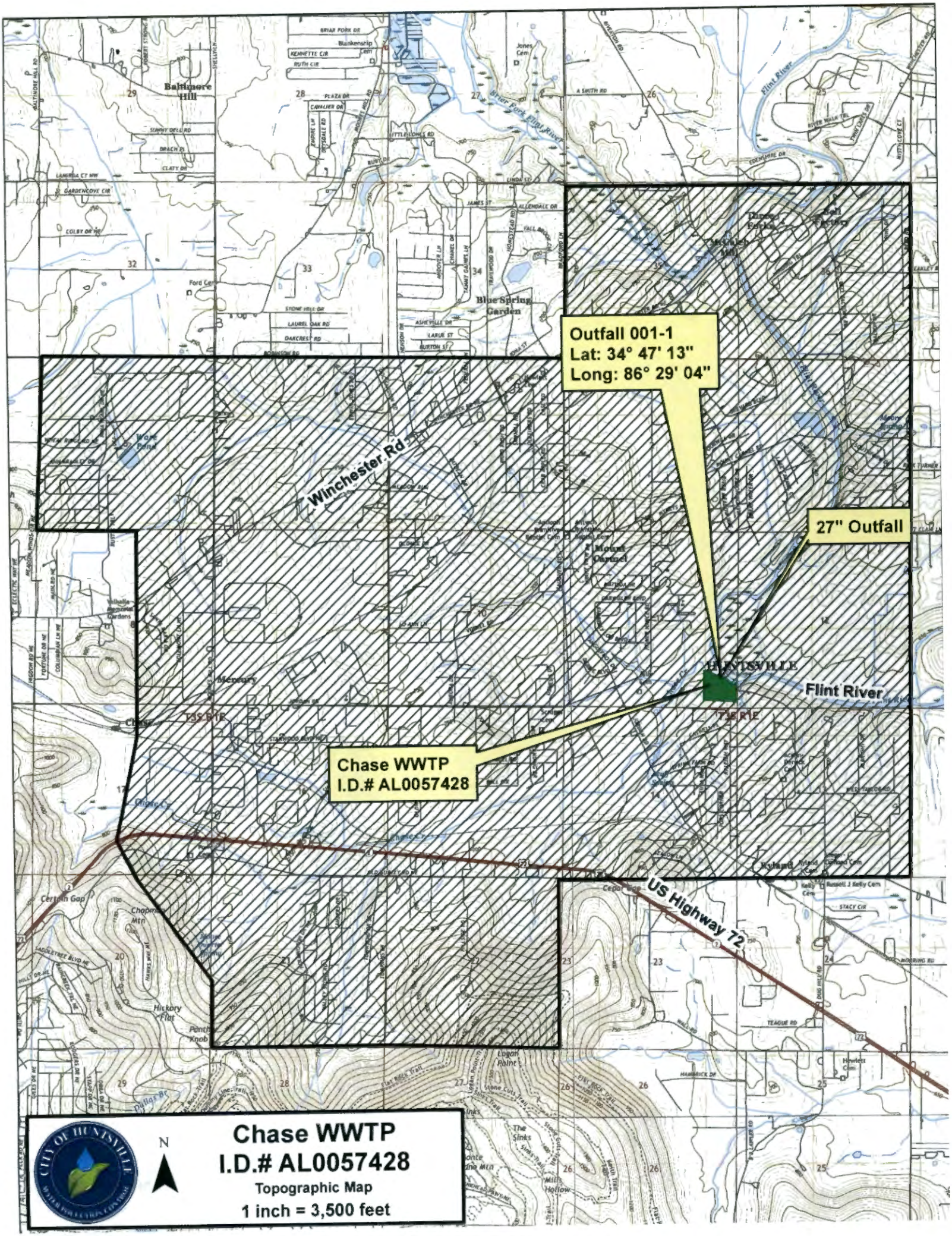
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
SHANE COOK, PE DIRECTOR HUNTSVILLE-WPC	Shane Cook	02/01/2021

COMMENTS FOR OFFICIAL USE ONLY

C


Winchester Rd
Chase WWTP
I.D.# AL0057428
Outfall 001-1
Lat: 34° 47' 13"
Long: 86° 29' 04"
27" Outfall
Flint River
US Highway 72
CITY OF HUNTSVILLE
WATER POLLUTION CONTROL
N
Chase WWTP
I.D.# AL0057428
Aerial Map
1 inch = 2,000 feet


Outfall 001-1
Lat: 34° 47' 13"
Long: 86° 29' 04"
27" Outfall
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Winchester Rd
Flint River
US Highway 72
HUNTSVILLE
Baltimore Hill
Blue Spring Garden
Mount Carmel
Mercury
Chase
Certain Gap
Hickory Flat
T3S R1E
T4S R1E
N
Chase WWTP
I.D.# AL0057428
Topographic Map
1 inch = 3,500 feet

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
ALR000029439	AL0057428	CHASE AREA WWTP	

Form 2A NPDES

EPA

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater
NEW AND EXISTING PUBLICLY OWNED TREATMENT WORKS

SECTION 1. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS (40 CFR 122.21(j)(1) and (9))

Facility Information

1.1 Facility name
CHASE AREA WWTP

Mailing address (street or P.O. box)
1802 VERMONT ROAD

City or town	State	ZIP code
HUNTSVILLE	ALABAMA	35802

Contact name (first and last)	Title	Phone number	Email address
MATTHEW B. REYNOLDS, PE	OPERATIONS SUPER	(256) 883-3719	MATTHEW.REYNOLDS@HUNT

Location address (street, route number, or other specific identifier) ☐ Same as mailing address
907 WESS TAYLOR ROAD

City or town	State	ZIP code
HUNTSVILLE	AL	35811

1.2 Is this application for a facility that has yet to commence discharge?
☐ Yes → See instructions on data submission requirements for new dischargers. ☑ No

Applicant Information

1.3 Is applicant different from entity listed under Item 1.1 above?
☐ Yes ☑ No → SKIP to Item 1.4.

Applicant name

Applicant address (street or P.O. box)

City or town	State	ZIP code

Contact name (first and last)	Title	Phone number	Email address

1.4 Is the applicant the facility's owner, operator, or both? (Check only one response.)
☐ Owner ☐ Operator ☑ Both

1.5 To which entity should the NPDES permitting authority send correspondence? (Check only one response.)
☐ Facility ☐ Applicant ☑ Facility and applicant (they are one and the same)

Existing Environmental Permits

1.6 Indicate below any existing environmental permits. (Check all that apply and print or type the corresponding permit number for each.)

Existing Environmental Permits

☑ NPDES (discharges to surface water) AL0057428	☐ RCRA (hazardous waste)	☐ UIC (underground injection control)
☐ PSD (air emissions)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☐ Other (specify)

Collection System and Population Served

1.7 Provide the collection system information requested below for the treatment works.

Municipality Served	Population Served	Collection System Type (indicate percentage)	Ownership Status
CITY OF HUNTSVILLE	12,000	100 % separate sanitary sewer ___ % combined storm and sanitary sewer ☐ Unknown	☑ Own ☑ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
		___ % separate sanitary sewer ___ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
		___ % separate sanitary sewer ___ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
		___ % separate sanitary sewer ___ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
Total Population Served	12,000		

	Separate Sanitary Sewer System	Combined Storm and Sanitary Sewer
Total percentage of each type of sewer line (in miles)	100 %	%

Indian Country

1.8 Is the treatment works located in Indian Country?

☐ Yes ☑ No

1.9 Does the facility discharge to a receiving water that flows through Indian Country?

☐ Yes ☑ No

Design and Actual Flow Rates

1.10 Provide design *and* actual flow rates in the designated spaces.

	Design Flow Rate
	4.0 mgd

Annual Average Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
1.10 mgd	1.09 mgd	1.36 mgd
Maximum Daily Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
4.48 mgd	5.18 mgd	6.30 mgd

Discharge Points by Type

1.11 Provide the total number of effluent discharge points to waters of the United States by type.

Total Number of Effluent Discharge Points by Type				
Treated Effluent	**Untreated Effluent**	**Combined Sewer Overflows**	**Bypasses**	**Constructed Emergency Overflows**
1	0	0	0	0

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Outfalls and Other Discharge or Disposal Methods

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	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ 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	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ 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 Continued

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

Receiving Facility Data		
Facility name	Mailing address (street or P.O. box)	
City or town	State	ZIP code
Contact name (first and last)	Title	
Phone number	Email address	
NPDES number of receiving facility (if any) ☐ None	Average daily flow rate mgd	

1.21 Is the wastewater disposed of in a manner other than those already mentioned in Items 1.14 through 1.21 that do not have outlets to waters of the United States (e.g., underground percolation, underground injection)?

☐ Yes ☑ No ➔ SKIP to Item 1.23.

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

Information on Other Disposal Methods				
Disposal Method Description	**Location of Disposal Site**	**Size of Disposal Site**	**Annual Average Daily Discharge Volume**	**Continuous or Intermittent (check one)**
		acres	gpd	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ Intermittent

Variance Requests

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

☐ Discharges into marine waters (CWA Section 301(h))

☐ Water quality related effluent limitation (CWA Section 302(b)(2))

☑ Not applicable

Contractor Information

1.24 Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?

☐ Yes ☑ No ➔ SKIP to Section 2.

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

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

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

Design Flow

Outfalls to Waters of the United States

2.1 Does the treatment works have a design flow greater than or equal to 0.1 mgd?

☑ Yes ☐ No ➔ SKIP to Section 3.

Inflow and Infiltration

2.2 Provide the treatment works' current average daily volume of inflow and infiltration.

Average Daily Volume of Inflow and Infiltration
400,000 gpd

Indicate the steps the facility is taking to minimize inflow and infiltration.

HUNTSVILLE WATER POLLUTION CONTOL HAS AN ACTIVE CMOM PROGRAM AND ANNUAL REOCCURING FUNDING TO SUPPORT CAPITAL IMPROVEMENTS AND REHABILITATION TO THE COLLECTION SYSTEM. IN ADDITION, WPC HAS A FULL TIME STAFF OF 60 PERSONNEL TASKED WITH REPAIR, MAINTENANCE AND INSPECTION OF THE COLLECTION SYSTEM.

Topographic Map

2.3 Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.)

☑ Yes ☐ No

Flow Diagram

2.4 Have you attached a process flow diagram or schematic to this application that contains all the required information? (See instructions for specific requirements.)

☑ Yes ☐ No

Scheduled Improvements and Schedules of Implementation

2.5 Are improvements to the facility scheduled?

☑ Yes ☐ No ➔ SKIP to Section 3.

Briefly list and describe the scheduled improvements.

1. IMPROVEMENTS TO WWTP INFLUENT PUMP STATION
2. CONSTRUCTION CHLORINE CONTACT CHAMBER AND SODIUM HYPO DISINFECTION SYSTEM
3. FULL SCALE WWTP SCADA MONITIORING AND CONTROL PROJECT
4.

2.6 Provide scheduled or actual dates of completion for improvements.

Scheduled or Actual Dates of Completion for Improvements

Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
1.	0011	10/01/2020	12/31/2020		
2.	0011	05/01/2021	09/01/2021		
3.	0011	10/01/2021	01/01/2022		
4.					

2.7 Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response.

☐ Yes ☐ No ☑ None required or applicable

Explanation:

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

Description of Outfalls

3.1 Provide the following information for each outfall. (Attach additional sheets if you have more than three outfalls.)

	Outfall Number 001	Outfall Number ____	Outfall Number ____
State	ALABAMA		
County	MADISON		
City or town	HUNTSVILLE		
Distance from shore	0 ft.	ft.	ft.
Depth below surface	2 ft.	ft.	ft.
Average daily flow rate	1.36 mgd	mgd	mgd
Latitude	34° 47′ 13.2″ N	° ′ ″	° ′ ″
Longitude	86° 29′ 3.06″ W	° ′ ″	° ′ ″

Seasonal or Periodic Discharge Data

3.2 Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges?

☐ Yes ☑ No ➔ SKIP to Item 3.4.

3.3 If so, provide the following information for each applicable outfall.

	Outfall Number ____	Outfall Number ____	Outfall Number ____
Number of times per year discharge occurs			
Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd
Months in which discharge occurs			

Diffuser Type

3.4 Are any of the outfalls listed under Item 3.1 equipped with a diffuser?

☐ Yes ☑ No ➔ SKIP to Item 3.6.

3.5 Briefly describe the diffuser type at each applicable outfall.

	Outfall Number ____	Outfall Number ____	Outfall Number ____

Waters of the U.S.

3.6 Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points?

☑ Yes ☐ No ➔ SKIP to Section 6.

Receiving Water Description

3.7 Provide the receiving water and related information (if known) for each outfall.

	Outfall Number 0011	Outfall Number _____	Outfall Number _____
Receiving water name	WHEELER RESERVIOR		
Name of watershed, river, or stream system	FLINT RIVER		
U.S. Soil Conservation Service 14-digit watershed code	060300020404		
Name of state management/river basin	FISH & WILDLIFE		
U.S. Geological Survey 8-digit hydrologic cataloging unit code	03575100		
Critical low flow (acute)	cfs	cfs	cfs
Critical low flow (chronic)	cfs	cfs	cfs
Total hardness at critical low flow	mg/L of $CaCO_3$	mg/L of $CaCO_3$	mg/L of $CaCO_3$

Treatment Description

3.8 Provide the following information describing the treatment provided for discharges from each outfall.

	Outfall Number 001	Outfall Number _____	Outfall Number _____
Highest Level of Treatment (check all that apply per outfall)	☐ Primary ☐ Equivalent to secondary ☑ Secondary ☐ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____
Design Removal Rates by Outfall	85		
BOD_5 or $CBOD_5$	88 %	%	%
TSS	88 %	%	%
Phosphorus	☑ Not applicable 83 %	☐ Not applicable %	☐ Not applicable %
Nitrogen	☐ Not applicable 67 %	☐ Not applicable %	☐ Not applicable %
Other (specify) _____	☑ Not applicable %	☐ Not applicable %	☐ Not applicable %

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Treatment Description Continued

3.9 Describe the type of disinfection used for the effluent from each outfall in the table below. If disinfection varies by season, describe below.

ULTRAVIOLET DISINFECTION

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	Outfall Number 001	Outfall Number ____	Outfall Number ____
Disinfection type	ULTRAVIOLET		
Seasons used	ALL		
Dechlorination used?	☑ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No

Effluent Testing Data

3.10 Have you completed monitoring for all Table A parameters and attached the results to the application package?

☑ Yes ☐ No

3.11 Have you conducted any WET tests during the 4.5 years prior to the date of the application on any of the facility's discharges or on any receiving water near the discharge points?

☑ Yes ☐ No → SKIP to Item 3.13.

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

	Outfall Number 001		Outfall Number ____		Outfall Number ____	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Number of tests of discharge water	4	4				
Number of tests of receiving water	0	0				

3.13 Does the treatment works have a design flow greater than or equal to 0.1 mgd?

☑ Yes ☐ No → SKIP to Item 3.16.

3.14 Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent?

☐ Yes → Complete Table B, including chlorine. ☑ No → Complete Table B, omitting chlorine.

3.15 Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package?

☑ Yes ☐ No

3.16 Does one or more of the following conditions apply?

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

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

3.17 Have you completed monitoring for all applicable Table C pollutants and attached the results to this application package?

☑ Yes ☐ No

3.18 Have you completed monitoring for all applicable Table D pollutants required by your NPDES permitting authority and attached the results to this application package?

☑ Yes ☐ No additional sampling required by NPDES permitting authority.

Effluent Testing Data Continued

3.19 Has the POTW conducted either (1) minimum of four quarterly WET tests for one year preceding this permit application or (2) at least four annual WET tests in the past 4.5 years?

☑ Yes ☐ No ➔ Complete tests and Table E and SKIP to Item 3.26.

3.20 Have you previously submitted the results of the above tests to your NPDES permitting authority?

☑ Yes ☐ No ➔ Provide results in Table E and SKIP to Item 3.26.

3.21 Indicate the dates the data were submitted to your NPDES permitting authority and provide a summary of the results.

Date(s) Submitted (MM/DD/YYYY)	Summary of Results
10/20/2020	PASS

3.22 Regardless of how you provided your WET testing data to the NPDES permitting authority, did any of the tests result in toxicity?

☐ Yes ☑ No ➔ SKIP to Item 3.26.

3.23 Describe the cause(s) of the toxicity:

3.24 Has the treatment works conducted a toxicity reduction evaluation?

☐ Yes ☑ No ➔ SKIP to Item 3.26.

3.25 Provide details of any toxicity reduction evaluations conducted.

3.26 Have you completed Table E for all applicable outfalls and attached the results to the application package?

☑ Yes ☐ Not applicable because previously submitted information to the NPDES permitting authority.

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

Industrial Discharges and Hazardous Wastes

4.1 Does the POTW receive discharges from SIUs or NSCIUs?

☑ Yes ☐ No ➔ SKIP to Item 4.7.

4.2 Indicate the number of SIUs and NSCIUs that discharge to the POTW.

Number of SIUs	Number of NSCIUs
8	0

4.3 Does the POTW have an approved pretreatment program?

☑ Yes ☐ No

4.4 Have you submitted either of the following to the NPDES permitting authority that contains information substantially identical to that required in Table F: (1) a pretreatment program annual report submitted within one year of the application or (2) a pretreatment program?

☐ Yes ☑ No ➔ SKIP to Item 4.6.

4.5 Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7.

4.6 Have you completed and attached Table F to this application package?

☑ Yes ☐ No

Industrial Discharges and Hazardous Wastes Continued

4.7 Does the POTW receive, or has it been notified that it will receive, by truck, rail, or dedicated pipe, any wastes that are regulated as RCRA hazardous wastes pursuant to 40 CFR 261?

☐ Yes ☑ No ➔ SKIP to Item 4.9.

4.8 If yes, provide the following information:

Hazardous Waste Number	Waste Transport Method (check all that apply)	Annual Amount of Waste Received	Units
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		

4.9 Does the POTW receive, or has it been notified that it will receive, wastewaters that originate from remedial activities, including those undertaken pursuant to CERCLA and Sections 3004(7) or 3008(h) of RCRA?

☐ Yes ☑ No ➔ SKIP to Section 5.

4.10 Does the POTW receive (or expect to receive) less than 15 kilograms per month of non-acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e)?

☑ Yes ➔ SKIP to Section 5. ☐ No

4.11 Have you reported the following information in an attachment to this application: identification and description of the site(s) or facility(ies) at which the wastewater originates; the identities of the wastewater's hazardous constituents; and the extent of treatment, if any, the wastewater receives or will receive before entering the POTW?

☐ Yes ☐ No

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

CSO Map and Diagram

5.1 Does the treatment works have a combined sewer system?

☐ Yes ☑ No ➔ SKIP to Section 6.

5.2 Have you attached a CSO system map to this application? (See instructions for map requirements.)

☐ Yes ☐ No

5.3 Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.)

☐ Yes ☐ No

CSO Outfall Description

5.4 For each CSO outfall, provide the following information. (Attach additional sheets as necessary.)

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
City or town			
State and ZIP code			
County			
Latitude	° ′ ″	° ′ ″	° ′ ″
Longitude	° ′ ″	° ′ ″	° ′ ″
Distance from shore	ft.	ft.	ft.
Depth below surface	ft.	ft.	ft.

CSO Monitoring

5.5 Did the POTW monitor any of the following items in the past year for its CSO outfalls?

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
Rainfall	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO flow volume	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO pollutant concentrations	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Receiving water quality	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO frequency	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Number of storm events	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

CSO Events in Past Year

5.6 Provide the following information for each of your CSO outfalls.

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
Number of CSO events in the past year	events	events	events
Average duration per event	hours ☐ Actual or ☐ Estimated	hours ☐ Actual or ☐ Estimated	hours ☐ Actual or ☐ Estimated
Average volume per event	million gallons ☐ Actual or ☐ Estimated	million gallons ☐ Actual or ☐ Estimated	million gallons ☐ Actual or ☐ Estimated
Minimum rainfall causing a CSO event in last year	inches of rainfall ☐ Actual or ☐ Estimated	inches of rainfall ☐ Actual or ☐ Estimated	inches of rainfall ☐ Actual or ☐ Estimated

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			
U.S. Soil Conservation Service 14-digit watershed code (if known)	☐ Unknown	☐ Unknown	☐ Unknown
Name of state management/river basin			
U.S. Geological Survey 8-Digit Hydrologic Unit Code (if known)	☐ Unknown	☐ Unknown	☐ 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))

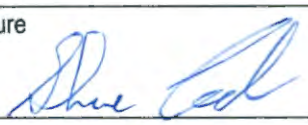
Checklist and Certification Statement

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.

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

6.2 **Certification Statement**

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

Name (print or type first and last name)	Official title
SHANE COOK, PE	DIRECTOR, HUNTSVILLE - WPC
Signature 	Date signed 02/01/2020

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALR000029439	AL0057428	CHASE AREA WWTP	001

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TABLE A. EFFLUENT PARAMETERS FOR ALL POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Biochemical oxygen demand ☐ BOD_5 or ☑ $CBOD_5$ (report one)	41.0	mg/L	2.80	mg/L	3 Days/Week	5210	2mg/L ☐ ML ☐ MDL
Fecal coliform	2420	col/100mL	34.95	col/100mL	3 Days/Week	9222 D	NA ☐ ML ☐ MDL
Design flow rate	6.30	MGD	1.12	MGD	COMP 24		
pH (minimum)	6.11	SU					
pH (maximum)	8.79	SU					
Temperature (winter)	N/A						
Temperature (summer)	N/A						
Total suspended solids (TSS)	32.0	mg/L	4.55	mg/L	3 Days/Week	2540 D	2mg/L ☐ ML ☐ MDL

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

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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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[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Ammonia (as N)	10.80	mg/L	0.58	mg/L	5 Days / Week	4500 NH3D	0.01 ☐ ML ☑ MDL
Chlorine (total residual, TRC)[2]	0	mg/L	0	mg/L	5 Days / Week	4500 Cl-G	0.01 ☐ ML ☑ MDL
Dissolved oxygen	11.36	mg/L	9.20	mg/L	5 Days / Week	4500-O G	0.5 ☐ ML ☑ MDL
Nitrate/nitrite	13.0	mg/L	6.69	mg/L	5 Days / Week	351.2	0.100 ☐ ML ☑ MDL
Kjeldahl nitrogen	7.01	mg/L	1.61	mg/L	5 Days / Week	300	1.00 ☐ ML ☑ MDL
Oil and grease	ND	-	ND	-	1	1664A	5.05 ☐ ML ☑ MDL
Phosphorus	2.38	mg/L	0.86	mg/L	5 Days / Week	365.2	1.00 ☐ ML ☑ MDL
Total dissolved solids	404	mg/L	404	mg/L	1	2540 C-2011	1.00 ☐ ML ☑ MDL

[1] 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).

[2] 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[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Metals, Cyanide, and Total Phenols							
Hardness (as $CaCO_3$)	222	mg/L	202.67	mg/L	3	200.7	250 ☐ ML ☑ MDL
Antimony, total recoverable	0.00169	mg/L	0.00169	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Arsenic, total recoverable	ND	mg/L	ND	mg/L	3	200.7	.0005 ☐ ML ☐ MDL
Beryllium, total recoverable	ND	mg/L	ND	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Cadmium, total recoverable	0.00424	mg/L	0.00424	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Chromium, total recoverable	0.0065	mg/L	0.0056	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Copper, total recoverable	0.01	mg/L	0.00898	mg/L	3	200.7	0.01 ☐ ML ☐ MDL
Lead, total recoverable	ND	mg/L	ND	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Mercury, total recoverable	5.73	ug/L	3.573	mg/L	4	1631E	0.05 ☐ ML ☑ MDL
Nickel, total recoverable	0.0182	mg/L	0.027	mg/L	3	200.7	0.01 ☐ ML ☐ MDL
Selenium, total recoverable	ND	mg/L	ND	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Silver, total recoverable	ND	mg/L	ND	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Thallium, total recoverable	ND	mg/L	ND	mg/L	3	200.7	.001 ☐ ML ☐ MDL
Zinc, total recoverable	1.19	mg/L	0.05	mg/L	3	200.7	0.05 ☐ ML ☑ MDL
Cyanide	ND	mg/L	ND	mg/L	3	D7511-09	.005 ☐ ML ☐ MDL
Total phenolic compounds	ND	mg/L	ND	mg/L	3	420.9	0.01 ☐ ML ☐ MDL
Volatile Organic Compounds							
Acrolein	ND	mg/L			3	624.1	☐ ML ☐ MDL
Acrylonitrile	ND	mg/L			3		☐ ML ☐ MDL
Benzene	ND	mg/L			3		☐ ML ☐ MDL
Bromoform	ND	mg/L			3		☐ ML ☐ MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride	ND	mg/L			3		☐ ML ☐ MDL
Chlorobenzene	ND	mg/L			3		☐ ML ☐ MDL
Chlorodibromomethane	ND	mg/L			3		☐ ML ☐ MDL
Chloroethane	ND	mg/L			3		☐ ML ☐ MDL
2-chloroethylvinyl ether	ND	mg/L			3		☐ ML ☐ MDL
Chloroform	ND	mg/L			3		☐ ML ☑ MDL
Dichlorobromomethane	ND	mg/L			3		☐ ML ☐ MDL
1,1-dichloroethane	ND	mg/L			3		☐ ML ☐ MDL
1,2-dichloroethane	ND	mg/L			3		☐ ML ☐ MDL
trans-1,2-dichloroethylene	ND	mg/L			3		☐ ML ☐ MDL
1,1-dichloroethylene	ND	mg/L			3		☐ ML ☐ MDL
1,2-dichloropropane	ND	mg/L			3		☐ ML ☐ MDL
1,3-dichloropropylene	ND	mg/L			3		☐ ML ☐ MDL
Ethylbenzene	ND	mg/L			3		☐ ML ☐ MDL
Methyl bromide	ND	mg/L			3		☐ ML ☐ MDL
Methyl chloride	ND	mg/L			3		☐ ML ☐ MDL
Methylene chloride	ND	mg/L			3		☐ ML ☐ MDL
1,1,2,2-tetrachloroethane	ND	mg/L			3		☐ ML ☐ MDL
Tetrachloroethylene	ND	mg/L			3		☐ ML ☐ MDL
Toluene	ND	mg/L			3		☐ ML ☐ MDL
1,1,1-trichloroethane	ND	mg/L			3		☐ ML ☐ MDL
1,1,2-trichloroethane	ND	mg/L			3		☐ ML ☐ MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene	ND	mg/L			3	624.1	☐ ML ☐ MDL
Vinyl chloride	ND	mg/L			3		☐ ML ☐ MDL
Acid-Extractable Compounds							
p-chloro-m-cresol	ND	mg/L			3	624.1	☐ ML ☐ MDL
2-chlorophenol	ND	mg/L			3		☐ ML ☐ MDL
2,4-dichlorophenol	ND	mg/L			3		☐ ML ☐ MDL
2,4-dimethylphenol	ND	mg/L			3		☐ ML ☐ MDL
4,6-dinitro-o-cresol	ND	mg/L			3		☐ ML ☐ MDL
2,4-dinitrophenol	ND	mg/L			3		☐ ML ☐ MDL
2-nitrophenol	ND	mg/L			3		☐ ML ☐ MDL
4-nitrophenol	ND	mg/L			3		☐ ML ☐ MDL
Pentachlorophenol	ND	mg/L			3		☐ ML ☐ MDL
Phenol	ND	mg/L			3		☐ ML ☐ MDL
2,4,6-trichlorophenol	ND	mg/L			3		☐ ML ☐ MDL
Base-Neutral Compounds							
Acenaphthene	ND	mg/L			3	625.1	☐ ML ☐ MDL
Acenaphthylene	ND	mg/L			3		☐ ML ☐ MDL
Anthracene	ND	mg/L			3		☐ ML ☐ MDL
Benzidine	ND	mg/L			3		☐ ML ☐ MDL
Benzo(a)anthracene	ND	mg/L			3		☐ ML ☐ MDL
Benzo(a)pyrene	ND	mg/L			3		☐ ML ☐ MDL
3,4-benzofluoranthene	ND	mg/L			3		☐ ML ☐ MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene	ND	mg/L			3	625.1	☐ ML ☐ MDL
Benzo(k)fluoranthene	ND	mg/L			3		☐ ML ☐ MDL
Bis (2-chloroethoxy) methane	ND	mg/L			3		☐ ML ☐ MDL
Bis (2-chloroethyl) ether	ND	mg/L			3		☐ ML ☐ MDL
Bis (2-chloroisopropyl) ether	ND	mg/L			3		☐ ML ☐ MDL
Bis (2-ethylhexyl) phthalate	ND	mg/L			3		☐ ML ☐ MDL
4-bromophenyl phenyl ether	ND	mg/L			3		☐ ML ☐ MDL
Butyl benzyl phthalate	ND	mg/L			3		☐ ML ☐ MDL
2-chloronaphthalene	ND	mg/L			3		☐ ML ☐ MDL
4-chlorophenyl phenyl ether	ND	mg/L			3		☐ ML ☐ MDL
Chrysene	ND	mg/L			3		☐ ML ☐ MDL
di-n-butyl phthalate	ND	mg/L			3		☐ ML ☐ MDL
di-n-octyl phthalate	ND	mg/L			3		☐ ML ☐ MDL
Dibenzo(a,h)anthracene	ND	mg/L			3		☐ ML ☐ MDL
1,2-dichlorobenzene	ND	mg/L			3		☐ ML ☐ MDL
1,3-dichlorobenzene	ND	mg/L			3		☐ ML ☐ MDL
1,4-dichlorobenzene	ND	mg/L			3		☐ ML ☐ MDL
3,3-dichlorobenzidine	ND	mg/L			3		☐ ML ☐ MDL
Diethyl phthalate	ND	mg/L			3		☐ ML ☐ MDL
Dimethyl phthalate	ND	mg/L			3		☐ ML ☐ MDL
2,4-dinitrotoluene	ND	mg/L			3		☐ ML ☐ MDL
2,6-dinitrotoluene	ND	mg/L			3		☐ ML ☐ MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine	ND	mg/L			3		☐ ML ☐ MDL
Fluoranthene	ND	mg/L			3		☐ ML ☐ MDL
Fluorene	ND	mg/L			3		☐ ML ☐ MDL
Hexachlorobenzene	ND	mg/L			3		☐ ML ☐ MDL
Hexachlorobutadiene	ND	mg/L			3		☐ ML ☐ MDL
Hexachlorocyclo-pentadiene	ND	mg/L			3		☐ ML ☐ MDL
Hexachloroethane	ND	mg/L			3		☐ ML ☐ MDL
Indeno(1,2,3-cd)pyrene	ND	mg/L			3		☐ ML ☐ MDL
Isophorone	ND	mg/L			3		☐ ML ☐ MDL
Naphthalene	ND	mg/L			3		☐ ML ☐ MDL
Nitrobenzene	ND	mg/L			3		☐ ML ☐ MDL
N-nitrosodi-n-propylamine	ND	mg/L			3		☐ ML ☐ MDL
N-nitrosodimethylamine	ND	mg/L			3		☐ ML ☐ MDL
N-nitrosodiphenylamine	ND	mg/L			3		☐ ML ☐ MDL
Phenanthrene	ND	mg/L			3		☐ ML ☐ MDL
Pyrene	ND	mg/L			3		☐ ML ☐ MDL
1,2,4-trichlorobenzene	ND	mg/L			3		☐ ML ☐ MDL

[1] 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 D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY

Pollutant (list)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
☑ No additional sampling is required by NPDES permitting authority.							
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
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							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL

[1] 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 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 Information

	Test Number 1	Test Number ____	Test Number ____
Test species	MINNOW / C. DUBIA		
Age at initiation of test			
Outfall number	001		
Date sample collected	10/20/2020		
Date test started	10/20/2020		
Duration			
Toxicity Test Methods			
Test method number	AQUATIC 1000.0 / 1002.0		
Manual title	AQUATIC TOXICITY		
Edition number and year of publication			
Page number(s)			
Sample Type			
Check one:	☐ Grab ☑ 24-hour composite	☐ Grab ☐ 24-hour composite	☐ Grab ☐ 24-hour composite
Sample Location			
Check one:	☐ Before Disinfection ☑ After Disinfection ☐ After Dechlorination	☐ Before Disinfection ☐ After Disinfection ☐ After Dechlorination	☐ Before disinfection ☐ After disinfection ☐ After dechlorination
Point in Treatment Process			
Describe the point in the treatment process at which the sample was collected for each test.	EFFLUENT SAMPLE POINT		
Toxicity Type			
Indicate for each test whether the test was performed to asses acute or chronic toxicity, or both. (Check one response.)	☐ Acute ☐ Chronic ☑ Both	☐ Acute ☐ Chronic ☐ Both	☐ Acute ☐ Chronic ☐ Both

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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 1	Test Number ____	Test Number ____
Test Type			
Indicate the type of test performed. (Check one response.)	☐ Static ☐ Static-renewal ☐ Flow-through	☐ Static ☐ Static-renewal ☐ Flow-through	☐ Static ☐ Static-renewal ☐ Flow-through
Source of Dilution Water			
Indicate the source of dilution water. (Check one response.)	☐ Laboratory water ☐ Receiving water	☐ Laboratory water ☐ Receiving water	☐ Laboratory water ☐ Receiving water
If laboratory water, specify type.			
If receiving water, specify source.			
Type of Dilution Water			
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	☑ Fresh water ☐ Salt water (specify)	☐ Fresh water ☐ Salt water (specify)	☐ Fresh water ☐ Salt water (specify)
Percentage Effluent Used			
Specify the percentage effluent used for all concentrations in the test series.			

Parameters Tested						
Check the parameters tested.	☐ pH ☐ Salinity ☑ Temperature	☐ Ammonia ☐ Dissolved oxygen	☐ pH ☐ Salinity ☐ Temperature	☐ Ammonia ☐ Dissolved oxygen	☐ pH ☐ Salinity ☐ Temperature	☐ Ammonia ☐ Dissolved oxygen
Acute Test Results						
Percent survival in 100% effluent	9 %		%		%	
LC_{50}						
95% confidence interval	%		%		%	
Control percent survival	%		%		%	

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 1		Test Number ____		Test Number ____	
Acute Test Results Continued						
Other (describe)						
Chronic Test Results						
NOEC	%		%		%	
IC_{25}	%		%		%	
Control percent survival	%		%		%	
Other (describe)						
Quality Control/Quality Assurance						
Is reference toxicant data available?	☑ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
Was reference toxicant test within acceptable bounds?	☑ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
What date was reference toxicant test run (MM/DD/YYYY)?						
Other (describe)						

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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 3
Name of SIU	HART AND COOLEY	DORMAKABA	TRI RX
Mailing address (street or P.O. box)	4910 MOORES MILL RD	3440 STANWOOD BLVD	120 VINTAGE DRIVE
City, state, and ZIP code	HUNTSVILLE, AL. 35811	HUNTSVILLE, AL. 35811	HUNTSVILLE, AL. 35811
Description of all industrial processes that affect or contribute to the discharge.	METAL FINISHING	METAL FINISHING	PHARMACEUTICAL MANUFACTURING
List the principal products and raw materials that affect or contribute to the SIU's discharge.	METAL SURFACE TREATMENT	METAL SURFACE TREATMENT, STEEL DOORS & FRAMES	PHARMACEUTICALS
Indicate the average daily volume of wastewater discharged by the SIU.	80,000 gpd	2,200 gpd	25,000 gpd
How much of the average daily volume is attributable to process flow?	79,800 gpd	2,000 gpd	24,800 gpd
How much of the average daily volume is attributable to non-process flow?	200 gpd	200 gpd	200 gpd
Is the SIU subject to local limits?	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No
Is the SIU subject to categorical standards?	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No

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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 3
Under what categories and subcategories is the SIU subject?	40 CFR 433.15 METAL FINISHING FOR EXISTING SOURCES	40 CFR 433.17 METAL FINISHING POINT SOURCE. PRETREATMENT STANDARDS FOR NEW SOURCES	40 CFR 439 PHARMACEUTICAL MANUFACTURING
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No
If yes, describe.			

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TABLE F. INDUSTRIAL DISCHARGE INFORMATION

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

	SIU 4	SIU 5	SIU 6
Name of SIU	UNITED PLATING-BEECHMONT(C)	UNITED PLATING-STANWOOD	UNITED PLATING-BEECHMONT
Mailing address (street or P.O. box)	3400 STANWOOD BLVD	3400 STANWOOD BLVD	3400 STANWOOD BLVD
City, state, and ZIP code	HUNTSVILLE, AL. 35811	HUNTSVILLE, AL. 35811	HUNTSVILLE, AL. 35811
Description of all industrial processes that affect or contribute to the discharge.	ELECTROPLATING	ELECTROPLATING & METAL FINISHING	ELECTROPLATING & METAL FINISHING
List the principal products and raw materials that affect or contribute to the SIU's discharge.	METAL SURFACE TREATMENT	METAL SURFACE TREATMENT	METAL SURFACE TREATMENT
Indicate the average daily volume of wastewater discharged by the SIU.	50,000 gpd	80,000 gpd	50,000 gpd
How much of the average daily volume is attributable to process flow?	49,800 gpd	79,800 gpd	49,800 gpd
How much of the average daily volume is attributable to non-process flow?	200 gpd	200 gpd	200 gpd
Is the SIU subject to local limits?	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No
Is the SIU subject to categorical standards?	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No

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TABLE F INDUSTRIAL DISCHARGE INFORMATION

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

	SIU 4	SIU 5	SIU 6
Under what categories and subcategories is the SIU subject?	40 CFR 433.17 METAL FINISHING POINT SOURCE. PRETREATMENT STANDARDS FOR NEW SOURCES	40 CFR 433.15 METAL FINISHING FOR EXISTING SOURCES	40 CFR 433.17 METAL FINISHING POINT SOURCE. PRETREATMENT STANDARDS FOR NEW SOURCES
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No
If yes, describe.			

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	SIU 7	SIU 8	SIU ___
Name of SIU	PPG INDUSTRIES, INC	TECHNICOLOR	
Mailing address (street or P.O. box)	1719 HIGHWAY 72 E	4905 MOORES MILL RD	
City, state, and ZIP code	HUNTSVILLE, AL. 35811	HUNTSVILLE, AL. 35811	
Description of all industrial processes that affect or contribute to the discharge.	AVIATION GLASS MANUFACTURING	METAL FINISHING	
List the principal products and raw materials that affect or contribute to the SIU's discharge.	METAL SURFACE TREATMENT AND MANUFACTURING OF GLASS PRODUCTS	METAL SURFACE TREATMENT	
Indicate the average daily volume of wastewater discharged by the SIU.	60,000 gpd	1500 gpd	gpd
How much of the average daily volume is attributable to process flow?	59,800 gpd	1300 gpd	gpd
How much of the average daily volume is attributable to non-process flow?	200 gpd	200 gpd	gpd
Is the SIU subject to local limits?	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☐ No
Is the SIU subject to categorical standards?	☐ Yes ☑ No	☑ Yes ☐ No	☐ Yes ☐ No

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

	SIU 7	SIU 8	SIU ___
Under what categories and subcategories is the SIU subject?	40 CFR 426.66 SUBPART F AUTOMOTIVE GLASS TEMPERING SUBCATEGORY FOR NEW SOURCES	40 CFR 433.17 PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS) FOR METAL FINISHING 40 CFR 463.16 PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS) FOR PLASTIC MOLDING & FORMING	
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☐ No
If yes, describe.			

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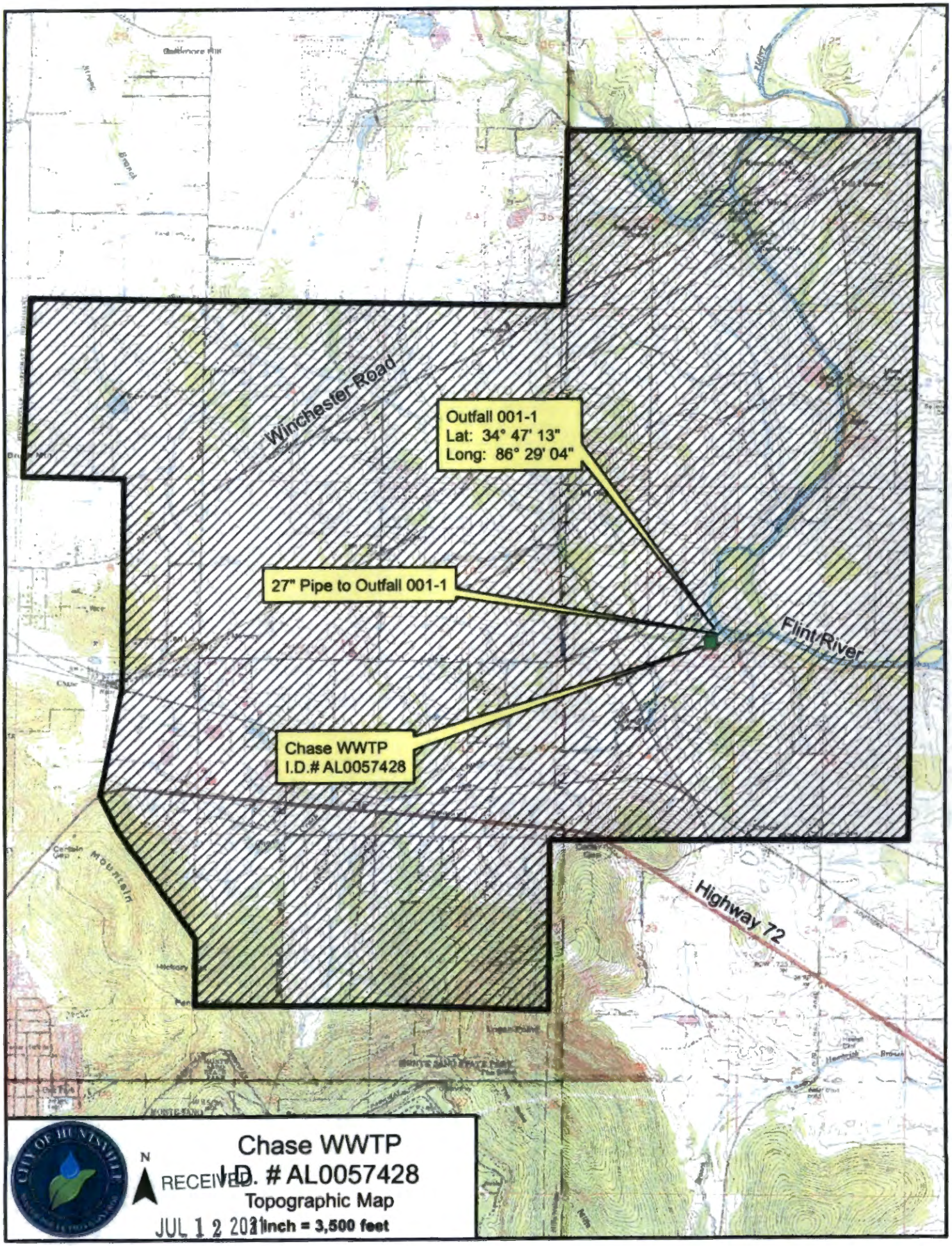

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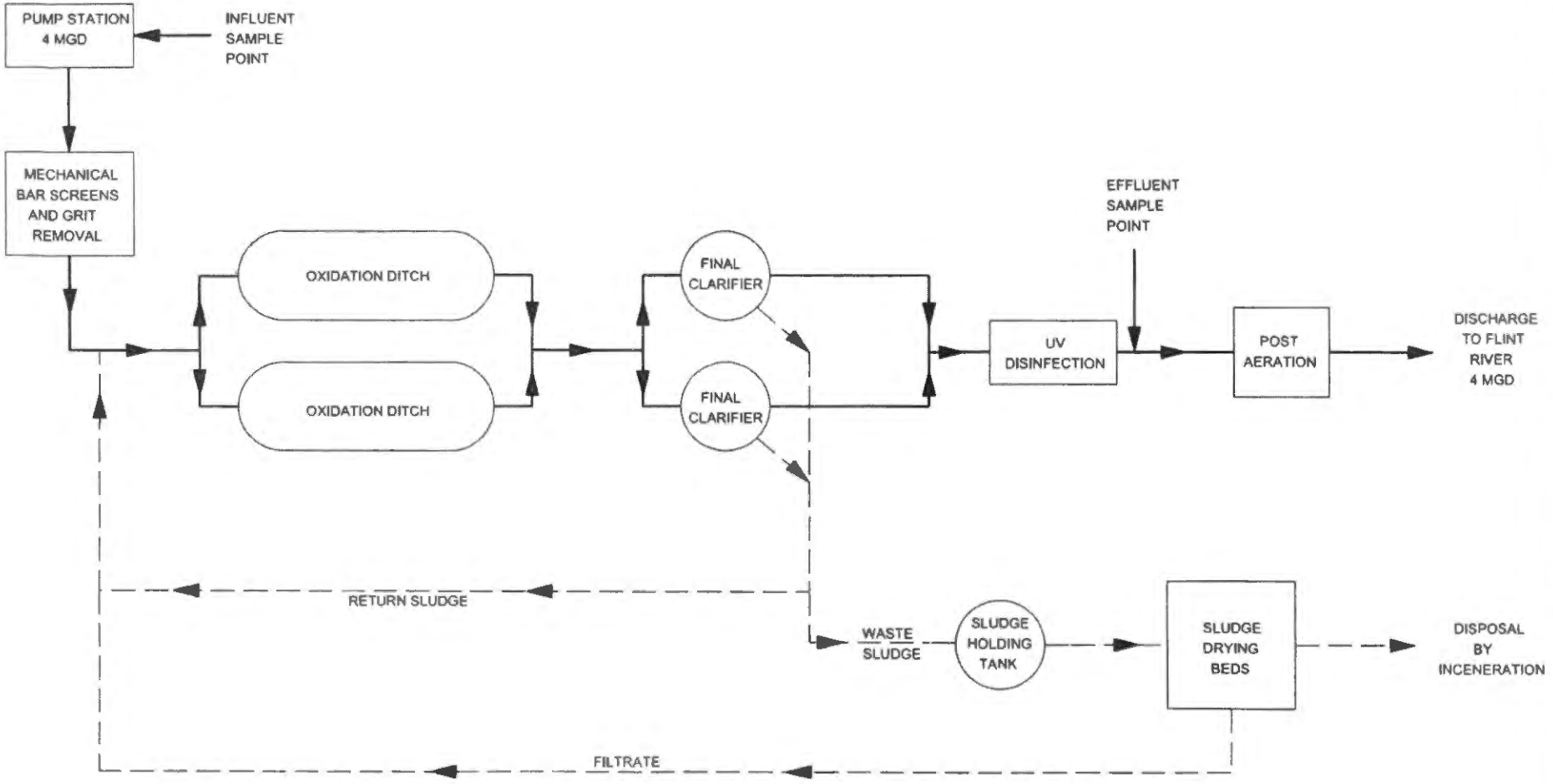
CHASE
WASTEWATER TREATMENT FACILITY
EPA I.D. NUMBER; AL0057428



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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
NPDES INDIVIDUAL PERMIT APPLICATION
SUPPLEMENTARY INFORMATION FOR PUBLICLY-OWNED TREATMENT WORKS (POTW), OTHER TREATMENT WORKS TREATING DOMESTIC SEWAGE (TWTDS), AND PUBLIC WATER SUPPLY TREATMENT PLANTS

Instructions: This form should be used to submit the required supplementary information for an application for an NPDES individual permit for Publicly Owned Treatment Works (POTW) and other Treatment Works Treating Domestic Sewage (TWTDS). The completed application should be submitted to ADEM in duplicate. If insufficient space is available to address any item, please continue on an attached sheet of paper. Please mark "N/A" in the appropriate box when an item is not applicable to the applicant. **Please type or print legibly in blue or black ink.** Mail the completed application to:

ADEM-Water Division
Municipal Section
P O Box 301463
Montgomery, AL 36130-1463

PURPOSE OF THIS APPLICATION

- ☐ Initial Permit Application for New Facility*
- ☐ Initial Permit Application for Existing Facility*
- ☐ Modification of Existing Permit
- ■ Reissuance of Existing Permit
- ☐ Revocation & Reissuance of Existing Permit

** An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.*

SECTION A – GENERAL INFORMATION

1. Facility Name: CHASE AREA WWTP Facility County: MADISON

   a. Operator Name: CITY OF HUNTSVILLE - WATER POLLUTION CONTROL

   b. Is the operator identified in A.1.a, the owner of the facility? ☐ Yes ☒ No

   If No, provide the following information:

   Operator Name: KENNETH GREENLEAF

   Operator Address (Street or PO Box): 1800 VERMONT ROAD

   City: HUNTSVILLE AL Zip: 35802

   Phone Number: 256-883-3719 Email Address: KENNETH.GREENLEAF@HUNTSVILLEAL.GOV

   Operator Status:

   ☐ Public-federal ☐ Public-state ☒ Public-other (please specify): MUNICIPAL
   ☐ Private ☐ Other (please specify):

   Describe the operator's scope of responsibility for the facility:

   MAINTAIN & COMPLY WITH ALL STATE AND FEDERAL REGULATIONS OF THE CLEAN WATER ACT & ASSOCIATED NPDES PERMIT.

   c. Name of Permittee* if different than Operator: CITY OF HUNTSVILLE - WATER POLLUTION CONTROL

   **Permittee will be responsible for compliance with the conditions of the permit*

2. NPDES Permit Number: AL 0057428 (Not applicable if initial permit application)

3. Facility Location (Front Gate): Latitude: 34°47'9.36" Longitude: -86°28'58.98"

4. Responsible Official (as described on last page of this application):

   Name and Title: SHANE COOK, PE

   Address: 1802 VERMONT ROAD

   City: HUNTSVILLE State: ALABAMA Zip: 35802

   Phone Number: 256-883-3719 Email Address: SHANE.COOK@HUNTSVILLEAL.GOV

5. Designated Facility/DMR Contact:

Name: MATTHEW B. REYNOLDS Title: OPERATIONS SUPERINTENDENT

Phone Number: 256-883-3719 Email Address: MATTHEW.REYNOLDS@HUNTSVILLEAL.GOV

6. Designated Emergency Contact:

Name: MATTHEW B. REYNOLDS Title: OPERATIONS SUPERINTENDENT

Phone Number: 256-883-3719 Email Address: MATTHEW.REYNOLDS@HUNTSVILLEAL.GOV

7. Please complete this section if the Applicant's business entity is a Proprietorship or Limited Liability Company (LLC) with a responsible official not listed in A.4.

Name: _____ Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

8. Identify all Administrative Complaints, Notices of Violation, Directives, or Administrative Orders, Consent Decrees, or Litigation concerning water pollution or other permit violations, if any against the Applicant within the State of Alabama in the past five years (attach additional sheets if necessary):

Facility Name	Permit Number	Type of Action	Date of Action

SECTION B – WASTEWATER DISCHARGE INFORMATION

1. Attach a process flow schematic of the treatment process, including the size of each unit operation and sample collection locations.

2. Do you share an outfall with another facility? ☐ Yes ☒ No (If no, continue to B.3)

For each shared outfall, provide the following:

Applicant's Outfall No.	Name of Other Permittee/Facility	NPDES Permit No.	Where is sample collected by Applicant?

3. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Current:	Flow Metering	☒ Yes	☐ No	☐ N/A
	Sampling Equipment	☒ Yes	☐ No	☐ N/A
Planned:	Flow Metering	☐ Yes	☐ No	☐ N/A
	Sampling Equipment	☐ Yes	☐ No	☐ N/A

If so, please attach a schematic diagram of the sewer system indicating the present or future location of this equipment and describe the equipment below:

ISCO IN-LINE EFFLUENT FLOW METER
ISCO INFLUENT AND EFFLUENT AUTOMATIC SAMPLER

4. 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 ☒ No

If Yes, briefly describe these changes and any potential or anticipated effects on the wastewater quality and quantity: (Attach additional sheets if needed.)

SECTION C – WASTE STORAGE AND DISPOSAL INFORMATION

Describe the location of all sites used for the storage of solids or liquids that have any potential for accidental discharge to a water of the state, either directly or indirectly via storm sewer, municipal sewer, municipal wastewater treatment plants, or other collection or distribution systems that are located at or operated by the subject existing or proposed NPDES- permitted facility. Indicate the location of any potential release areas and provide a map or detailed narrative description of the areas of concern as an attachment to this application:

Description of Waste	Description of Storage Location
DOMESTIC SANITARY SEWER SLUDGE	ON-SITE DRYING BEDS TO INCINERATOR

***Indicate any wastes disposed at an off-site treatment facility and any wastes that are disposed on-site**

SECTION D – INDUSTRIAL INDIRECT DISCHARGE CONTRIBUTORS

1. List the existing and proposed industrial source wastewater contributions to the municipal wastewater treatment system (Attach other sheets if necessary)

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit?
D&J ENTERPRISES	METAL PLATING	EX	0.0002	■ Yes ☐ No
PARKER HANNFIN CORPORATION	METAL PLATING	EX	0.0445	■ Yes ☐ No
PIT BULL PRODUCTIONS	METAL PLATING	EX	0.01005	■ Yes ☐ No
UNITED PLATING - BEECHMONT(C)	ELECTROPLATING	EX	0.05	■ Yes ☐ No
UNITED PLATING - STANWOOD	ELECTROPLATING & METAL FINISHING	EX	0.08	■ Yes ☐ No
UNITED PLATING - BEECHMONT	ELECTROPLATING & METAL FINISHING	EX	0.05	■ Yes ☐ No
PPG INDUSTRIES, INC	AVIATION GLASS MANUFACTURING	EX	0.06	☐ Yes ☐ No
TECHNICOLOR	METAL FINISHING	EX	0.0015	☐ Yes ☐ No
				☐ Yes ☐ No

2. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance? ■ Yes ☐ No

If yes, please attach a copy of the ordinance.

SECTION E – COASTAL ZONE INFORMATION

Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County? ☐ Yes ☒ No
If yes, complete items E.1 – E.12 below:

		Yes	No
1.	Does the project require new construction?	☐	☐
2.	Will the project be a source of new air emissions?	☐	☐
3.	Does the project involve dredging and/or filling of a wetland area or water way?	☐	☐
	If Yes, has the Corps of Engineers (COE) permit been received?	☐	☐
	COE Project No. _____		
4.	Does the project involve wetlands and/or submersed grassbeds?	☐	☐
5.	Are oyster reefs located near the project site?	☐	☐
	If Yes, include a map showing project and discharge location with respect to oyster reefs		
6.	Does the project involve the site developement, construction and operation of an energy facility as defined in ADEM Admin. Code r. 335-8-1-.02(bb)?	☐	☐
7.	Does the project involve mitigation of shoreline or coastal area erosion?	☐	☐
8.	Does the project involve construction on beaches or dune areas?	☐	☐
9.	Will the project interfere with public access to coastal waters?	☐	☐
10.	Does the project lie within the 100-year floodplain?	☐	☐
11.	Does the project involve the registration, sale, use, or application of pesticides?	☐	☐
12.	Does the project propose or require construction of a new well or to alter an existing groundwater well to pump more than 50 gallons per day (GPD)?	☐	☐
	If yes, has the applicable permit for groundwater recovery or for groundwater well installation been obtained?	☐	☐

SECTION F – ANTI-DEGRADATION EVALUATION

In accordance with 40 CFR §131.12 and the ADEM Admin. Code r. 335-6-10-.04 for anti-degradation, the following information must be provided, if applicable. It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity. If further information is required to make this demonstration, attach additional sheets to the application.

1. Is this a new or increased discharge that began after April 3, 1991? ☐ Yes ■ No
   If yes, complete F.2 below. If no, go to Section G.

2. Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced in F.1? ☐ Yes ☐ No

   If yes, do not complete this section.

   If no and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete F.2.A – F.2.F below, ADEM Form 311-Alternatives Analysis, and either ADEM Form 312 or ADEM Form 313- Calculation of Total Annualized Project Costs (Public-Sector or Private-Sector Projects, whichever is applicable). ADEM Form 312 or ADEM Form 313, whichever is applicable, must be provided for **each** treatment discharge alternative considered technically viable. ADEM forms can be found on the Department's website at http://adem.alabama.gov/DeptForms/.

   Information required for new or increased discharges to high quality waters:

   A. What environmental or public health problem will the discharger be correcting?

B. How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?

C. How much reduction in employment will the discharger be avoiding?

D. How much additional state or local taxes will the discharger be paying?

E. What public service to the community will the discharger be providing?

F. What economic or social benefit will the discharger be providing to the community?

SECTION G – 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 are found on the Department's website at http://adem.alabama.gov/programs/water/waterforms.cnt. The EPA application forms must be submitted in duplicate 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.

SECTION H– ENGINEERING REPORT/BMP PLAN REQUIREMENTS

See ADEM 335-6-6-.08(i) & (j).

SECTION I– RECEIVING WATERS

Outfall No.	Receiving Water(s)	303(d) Segment?	Included in TMDL?*
001-1	FLINT RIVER	■ Yes ☐ No	☐ Yes ■ No
		☐ Yes ☐ No	☐ Yes ☐ No
		☐ Yes ☐ No	☐ Yes ☐ No

*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, 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 requested compliance schedule.

SECTION J – APPLICATION CERTIFICATION

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."

Signature of Responsible Official: _____ Date Signed: 02/01/2021

Name: SHANE COOK, PE Title: DIRECTOR - WATER POLLUTION CONTROL

If the Responsible Official signing this application is <u>not</u> identified in Section A.4 or A.7, provide the following information:

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

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.

FACILITY NAME AND PERMIT NUMBER:
CHASE AREA WWTP - AL0057428

Form Approved 1/14/99
OMB Number 2040-0086

FORM 2S NPDES

NPDES FORM 2S APPLICATION OVERVIEW

PRELIMINARY INFORMATION

This page is designed to indicate whether the applicant is to complete Part 1 or Part 2. Review each category, and then complete Part 1 or Part 2, as indicated. For purposes of this form, the term "you" refers to the applicant. "This facility" and "your facility" refer to the facility for which application information is submitted.

FACILITIES INCLUDED IN ANY OF THE FOLLOWING CATEGORIES MUST COMPLETE PART 2 (PERMIT APPLICATION INFORMATION).

1. Facilities with a currently effective NPDES permit.

2. Facilities which have been directed by the permitting authority to submit a full permit application at this time.

ALL OTHER FACILITIES MUST COMPLETE PART 1 (LIMITED BACKGROUND INFORMATION).

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FACILITY NAME AND PERMIT NUMBER:
CHASE AREA WWTP - AL0057428

Form Approved 1/14/99
OMB Number 2040-0086

PART 1: LIMITED BACKGROUND INFORMATION

This part should be completed only by "sludge-only" facilities - that is, facilities that do not currently have, and are not applying for, an NPDES permit for a direct discharge to a surface body of water.

For purposes of this form, the term "you" refers to the applicant. "This facility" and "your facility" refer to the facility for which application information is submitted.

1. Facility Information.

a. Facility name: CHASE AREA WWTP

b. Mailing Address: 1802 VERMONT ROAD HUNTSVILLE, AL 35802

c. Contact person: MATTHEW B REYNOLDS, PE
Title: OPERATIONS SUPERINDENDENT
Telephone number: (256) 883-3719

d. Facility Address (not P.O. B ox): 1800 VERMONT ROAD HUNTSVILLE, AL 35802

e. Indicate the type of facility

✓ Publicly owned treatment works (POTW) ____ Privately owned treatment works

____ Federally owned treatment works ____ Blending or treatment operation

____ Surface disposal site ____ Sewage sludge incinerator

____ Other (describe)

2. Applicant Information.

a. Applicant name: CITY OF HUNTSVILLE - WATER POLLUTION CONTROL

b. Mailing Address: 1800 VERMONT ROAD HUNTSVILLE, AL 35802

c. Contact person: SHANE COOK, PE
Title: DIRECTOR
Telephone number: 256-883-3719

d. Is the applicant the owner or operator (or both) of this facility?

✓ owner ✓ operator

e. Should correspondence regarding this permit be directed to the facility or the applicant?

____ facility ✓ applicant

FACILITY NAME AND PERMIT NUMBER:
CHASE AREA WWTP - AL0057428

Form Approved 1/14/09
OMB Number 2040-0086

3. **Sewage Sludge Amount.** Provide the total dry metric tons per latest 365 day period of sewage sludge handled under the following practices:

a.	Amount generated at the facility	250	dry metric tons
b.	Amount received from off site	0	dry metric tons
c.	Amount treated or blended on site	0	dry metric tons
d.	Amount sold or given away in a bag or other container for application to the land	0	dry metric tons
e.	Amount of bulk sewage sludge shipped off site for treatment or blending	0	dry metric tons
f.	Amount applied to the land in bulk form	0	dry metric tons
g.	Amount placed on a surface disposal site	0	dry metric tons
h.	Amount fired in a sewage sludge incinerator	0	dry metric tons
i.	Amount sent to a municipal solid waste landfill	0	dry metric tons
j.	Amount used or disposed by another practice	0	dry metric tons
	Describe		

4. **Pollutant Concentrations.** Using the table below or a separate attachment, provide existing sewage sludge monitoring data for the pollutants for which limits in sewage sludge have been established in 40 CFR part 503 for this facility's expected use or disposal practices. If available, base data on three or more samples taken at least one month apart and no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
ARSENIC			
CADMIUM			
CHROMIUM			
COPPER			
LEAD			
MERCURY			
MOLYBDENUM			
NICKEL			
SELENIUM			
ZINC			

5. **Treatment Provided At Your Facility.**

a. Which class of pathogen reduction does the sewage sludge meet at your facility?

_____ Class A _____ Class B ✓ Neither or unknown

b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge:

PROCESSED AT INCINERATOR

c. Which vector attraction reduction option is met for the sewage sludge at your facility?

✓ Option 1 (Minimum 38 percent reduction in volatile solids)
_____ Option 2 (Anaerobic process, with bench-scale demonstration)
_____ Option 3 (Aerobic process, with bench-scale demonstration)
_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
_____ Option 5 (Aerobic processes plus raised temperature)
_____ Option 6 (Raise pH to 12 and retain at 11.5)
_____ Option 7 (75 percent solids with no unstabilized solids)
_____ Option 8 (90 percent solids with unstabilized solids)
_____ Option 9 (Injection below land surface)
_____ Option 10 (Incorporation into soil within 6 hours)
_____ Option 11 (Covering active sewage sludge unit daily)
_____ None or unknown

d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge:

GRAVITY AERATED THICKNER / HOLDING TANK

6. **Sewage Sludge Sent to Other Facilities.** Does the sewage sludge from your facility meet the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements, and one of the vector attraction options 1-8?
✓ Yes _____ No

If yes, go to question 8 (Certification).

If no, is sewage sludge from your facility provided to another facility for treatment, distribution, use, or disposal?
_____ Yes _____ No

If no, go to question 7 (Use and Disposal Sites).

If yes, provide the following information for the facility receiving the sewage sludge:

a. Facility name _____

b. Mailing address _____

_____

c. Contact person _____

Title _____

Telephone number _____

d. Which activities does the receiving facility provide? (Check all that apply)

_____ Treatment or blending
_____ Land application
_____ Incineration
_____ Sale or give-away in bag or other container
_____ Surface disposal
_____ Other (describe):

_____

_____

FACILITY NAME AND PERMIT NUMBER:
CHASE AREA WWTP - AL0057428

Form Approved 1/14/99
OMB Number 2040-0086

7. **Use and Disposal Sites.** Provide the following information for each site on which sewage sludge from this facility is used or disposed:

a. Site name or number: SOLID WASTE DISPOSAL AUTHORITY

b. Contact person: JOHN "DOC" HOLLADAY

Title: DIRECTOR

Telephone: (256) 880-6054

c. Site location (Complete 1 or 2)

1. Street or Route #: 5251 Triana Blvd SW

County: MADISON

City or Town: Huntsville State: AL Zip: 35805

2. Latitude: 34°40'10.92" Longitude: -86°36'43.73"

d. Site type (Check all that apply)

___ Agricultural	___ Lawn or home garden	___ Forest
___ Surface disposal	___ Public Contact	✓ Incineration
___ Reclamation	___ Municipal Solid Waste Landfill	___ Other (describe):

8. **Certification.** Sign the certification statement below. (Refer to instructions to determine who is an officer for purposes of this certification.)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with the 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 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 and official title: SHANE COOK, PE - DIRECTOR, HUNTSVILLE WPC

Signature: Shane Cook

Telephone number: (256) 883-3719

Date signed: 02/01/2021

SEND COMPLETED FORMS TO:

PART 2: PERMIT APPLICATION INFORMATION

Complete this part if you have an effective NPDES permit or have been directed by the permitting authority to submit a full permit application at this time. In other words, complete this part if your facility has, or is applying for, an NPDES permit.

For purposes of this form, the term "you" refers to the applicant. "This facility" and "your facility" refer to the facility for which application information is submitted.

APPLICATION OVERVIEW — SEWAGE SLUDGE USE OR DISPOSAL INFORMATION

Part 2 is divided into five sections (A-E). Section A pertains to all applicants. The applicability of Sections B, C, D, and E depends on your facility's sewage sludge use or disposal practices. The information provided on this page indicates which sections of Part 2 to fill out.

1. **SECTION A: GENERAL INFORMATION.**

   Section A must be completed by all applicants

2. **SECTION B: GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE.**

   Section B must be completed by applicants who either:

   1) Generate sewage sludge, or

   2) Derive a material from sewage sludge.

3. **SECTION C: LAND APPLICATION OF BULK SEWAGE SLUDGE.**

   Section C must be completed by applicants who either:

   1) Apply sewage to the land, or

   2) Generate sewage sludge which is applied to the land by others.

   NOTE: Applicants who meet either or both of the two above criteria are exempted from this requirement if <u>all</u> sewage sludge from their facility falls into one of the following three categories:

   1) The sewage sludge from this facility meets the ceiling and pollutant concentrations, Class A pathogen reduction requirements, and one of vector attraction reduction options 1-8, as identified in the instructions, or
   2) The sewage sludge from this facility is placed in a bag or other container for sale or give-away for application to the land, or
   3) The sewage sludge from this facility is sent to another facility for treatment or blending.

4. **SECTION D: SURFACE DISPOSAL**

   Section D must be completed by applicants who own or operate a surface disposal site.

5. **SECTION E: INCINERATION**

   Section E must be completed by applicants who own or operate a sewage sludge incinerator.

FACILITY NAME AND PERMIT NUMBER:
CHASE AREA WWTP - AL0057428

Form Approved 1/14/99
OMB Number 2040-0086

A. GENERAL INFORMATION

All applicants must complete this section.

A.1. Facility Information.

a. Facility name: CHASE AREA WWTP

b. Mailing Address: 1802 VERMONT ROAD HUNTSVILLE, AL 35802

c. Contact person: SHANE COOK, PE

Title: DIRECTOR

Telephone number: 256-883-3719

d. Facility Address (not P.O. Box): 1800 VERMONT ROAD HUNTSVILLE, AL 35802

e. Is this facility a Class I sludge management facility? ____ Yes ✓ No

f. Facility design flow rate: 4.0 mgd

g. Total population served: 12,000

h. Indicate the type of facility:

✓ Publicly owned treatment works (POTW) ____ Privately owned treatment works
____ Federally owned treatment works ____ Blending or treatment operation
____ Surface disposal site ____ Sewage sludge incinerator
____ Other (describe)

A.2. Applicant Information. If the applicant is different from the above, provide the following:

a. Applicant name

b. Mailing Address

c. Contact person

Title

Telephone number

d. Is the applicant the owner or operator (or both) of this facility?

✓ owner ✓ operator

e. Should correspondence regarding this permit should be directed to the facility or the applicant.

✓ facility ____ applicant

A.3. Permit Information.

a. Facility's NPDES permit number (if applicable): AL0057428

b. List, on this form or an attachment, all other Federal, State, and local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number	Type of Permit

A.4. Indian Country. Does any generation, treatment, storage, application to land, or disposal of sewage sludge from this facility occur in Indian Country?

____Yes ✓ No If yes, describe: _____

A.5. Topographic Map. Provide a topographic map or maps (or other appropriate map(s) if a topographic map is unavailable) that show the following information. Map(s) should include the area one mile beyond all property boundaries of the facility:

a. Location of all sewage sludge management facilities, including locations where sewage sludge is stored, treated, or disposed.

b. Location of all wells, springs, and other surface water bodies, listed in public records or otherwise known to the applicant within 1/4 mile of the facility property boundaries.

A.6. Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit, including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

A.7. Contractor Information.

Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? ____Yes ✓ No

If yes, provide the following for each contractor (attach additional pages if necessary):

a. Name

b. Mailing Address

c. Telephone Number

d. Responsibilities of contractor

FACILITY NAME AND PERMIT NUMBER:
CHASE AREA WWTP - AL0057428

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A.8. **Pollution 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 Part 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 four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
ARSENIC			
CADMIUM			
CHROMIUM			
COPPER			
LEAD			
MERCURY			
MOLYBDENUM			
NICKEL			
SELENIUM			
ZINC			

A.9. **Certification.** Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of Form 2S you have completed and are submitting:

✓ Part 1 Limited Background Information packet

Part 2 Permit Application Information packet:

✓ Section A (General Information)

✓ Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)

____ Section C (Land Application of Bulk Sewage Sludge)

____ Section D (Surface Disposal)

____ Section E (Incineration)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with the 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 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 and official title: SHANE COOK, PE - DIRECTOR, HUNTSVILLE WATER POLLUTION CONTROL

Signature: Shane Cook Date signed: 02/01/2021

Telephone number: (256) 883-3719

Upon request of the permitting authority, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

FACILITY NAME AND PERMIT NUMBER:
CHASE AREA WWTP - AL0057428

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B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge.

B.1. Amount Generated On Site.

Total dry metric tons per 365-day period generated at your facility: _____ dry metric tons

B.2. Amount Received from Off Site. If your facility receives sewage sludge from another facility for treatment, use, or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.

a. Facility name _____

b. Mailing Address _____

_____

c. Contact person _____

Title _____

Telephone number _____

d. Facility Address (not P.O. Box) _____

_____

e. Total dry metric tons per 365-day period received from this facility: _____ dry metric tons

f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics.

_____

_____

B.3. Treatment Provided At Your Facility.

a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?

_____ Class A _____ Class B ✓ Neither or unknown

b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge:
GRAVITY THICKENING / HOLDING TANK TO DRYING BEDS TO SWDA INCINERATION (SEE FLOW SCHEMATIC)

c. Which vector attraction reduction option is met for the sewage sludge at your facility?

✓ Option 1 (Minimum 38 percent reduction in volatile solids)
_____ Option 2 (Anaerobic process, with bench-scale demonstration)
_____ Option 3 (Aerobic process, with bench-scale demonstration)
_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
_____ Option 5 (Aerobic processes plus raised temperature)
_____ Option 6 (Raise pH to 12 and retain at 11.5)
_____ Option 7 (76 percent solids with no unstabilized solids)
_____ Option 8 (90 percent solids with unstabilized solids)
_____ None or unknown

B.3. Treatment Provided At Your Facility. (con't)

d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge:

e. Describe, on this form or another sheet of paper, any other sewage sludge treatment or blending activities not identified in (a) - (d) above:

Complete Section B.4 if sewage sludge from your facility meets the ceiling concentrations in Table 1 of 40 CFR 503.13, the pollutant concentrations in Table 3 of §503.13, the Class A pathogen reduction requirements in §503.32(a), and one of the vector attraction reduction requirements in § 503.33(b)(1)-(8) and is land applied. Skip this section if sewage sludge from your facility does not meet all of these criteria.

B.4. Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements, and One of Vector Attraction Reduction Options 1-8.

a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land: 0 dry metric tons

b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away for application to the land?

____ Yes ✓ No

Complete Section B.5. if you place sewage sludge in a bag or other container for sale or give-away for land application. Skip this section if the sewage sludge is covered in Section B.4.

B.5. Sale or Give-Away in a Bag or Other Container for Application to the Land.

a. 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: 0 dry metric tons

b. Attach, with this application, 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.

Complete Section B.6 if sewage sludge from your facility is provided to another facility that provides treatment or blending. This section does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this section if the sewage sludge is covered in Sections B.4 or B.5. If you provide sewage sludge to more than one facility, attach additional pages as necessary.

B.6. Shipment Off Site for Treatment or Blending.

a. Receiving facility name

b. Mailing address

c. Contact person

Title

Telephone number

d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:

B.6. Shipment Off Site for Treatment or Blending. (con't)

e. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility? ____ Yes ____ No

Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?

_____ Class A _____ Class B _____ Neither or unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge:

_____

_____

f. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge?
_____Yes _____No

Which vector attraction reduction option is met for the sewage sludge at the receiving facility?

_____ Option 1 (Minimum 38 percent reduction in volatile solids)
_____ Option 2 (Anaerobic process, with bench-scale demonstration)
_____ Option 3 (Aerobic process, with bench-scale demonstration)
_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
_____ Option 5 (Aerobic processes plus raised temperature)
_____ Option 6 (Raise pH to 12 and retain at 11.5)
_____ Option 7 (75 percent solids with no unstabilized solids)
_____ Option 8 (90 percent solids with unstabilized solids)
_____ None

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge.

_____

_____

g. Does the receiving facility provide any additional treatment or blending activities not identified in (c) or (d) above? ____ Yes ____ No

If yes, describe, on this form or another sheet of paper, the treatment or blending activities not identified in (c) or (d) above:

_____

_____

h. If you answered yes to (e), (f), or (g), 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).

i. 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? _____ Yes _____ No

If yes, provide a copy of all labels or notices that accompany the product being sold or given away.

Complete Section B.7 if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in:

- **Section B.4 (it meets Table 1 ceiling concentrations, Table 3 pollutant concentrations, Class A pathogen requirements, and one of vector attraction reduction options 1-8); or**
- **Section B.5 (you place it in a bag or other container for sale or give-away for application to the land); or**
- **Section B.6 (you send it to another facility for treatment or blending).**

B.7. Land Application of Bulk Sewage Sludge.

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites: _____ dry metric tons

B.7. Land Application of Bulk Sewage Sludge. (con't)

b. Do you identify all land application sites in Section C of this application? _____ Yes _____ No

If no, submit a copy of the land application plan with application (see instructions).

c. Are any land application sites located in States other than the State where you generate sewage sludge or derive a material from sewage sludge? _____ Yes _____ No

If yes, describe, on this form or another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

_____

_____

Complete Section B.8 if sewage sludge from your facility is placed on a surface disposal site.

B.8. Surface Disposal.

a. Total dry metric tons of sewage sludge from your facility placed on all surface disposal sites per 365-day period: _____ dry metric tons

b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?

_____ Yes _____ No

If no, answer B.8.c through B.8.f for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one such surface disposal site, attach additional pages as necessary.

c. Site name or number _____

d. Contact person _____

Title _____

Telephone number _____

Contact is _____ Site owner _____ Site operator

e. Mailing address _____

_____

f. Total dry metric tons of sewage sludge from your facility placed on this surface disposal site per 365-day period: _____ dry metric tons

Complete Section B.9 if sewage sludge from your facility is fired in a sewage sludge incinerator.

B.9. Incineration.

a. Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period: _____ dry metric tons

b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired? ✓ Yes _____ No

If no, complete B.9.c through B.9.f for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one such sewage sludge incinerator, attach additional pages as necessary.

c. Incinerator name or number: SOLID WASTE DISPOSAL AUTHORITY

d. Contact person: JOHN "DOC" HOLLADAY

Title: DIRECTOR

Telephone number: (256) 880-6054

Contact is: ✓ Incinerator owner ✓ Incinerator operator

B.9. Incineration. (con't)

e. Mailing address: 5251 Triana Blvd SW, Huntsville, AL 35805

f. Total dry metric tons of sewage sludge from your facility fired in this sewage sludge incinerator per 365-day period: _____ dry metric tons

Complete Section B.10 if sewage sludge from this facility is placed on a municipal solid waste landfill.

B.10. Disposal in a Municipal Solid Waste Landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.

a. Name of landfill _____

b. Contact person _____

Title _____

Telephone number _____

Contact is _____ Landfill owner _____ Landfill operator

c. Mailing address _____

_____

d. Location of municipal solid waste landfill:

Street or Route # _____

County _____

City or Town _____ State _____ Zip _____

e. Total dry metric tons of sewage sludge from your facility placed in this municipal solid waste landfill per 365-day period:

_____ dry metric tons

f. List, on this form or an attachment, the numbers of all other Federal, State, and local permits that regulate the operation of this municipal solid waste landfill.

Permit Number	Type of Permit
_____	_____
_____	_____
_____	_____

g. Submit, with this application, 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)

h. Does the municipal solid waste landfill comply with applicable criteria set forth in 40 CFR Part 258?

_____ Yes _____ No

C. LAND APPLICATION OF BULK SEWAGE SLUDGE

Complete Section C for sewage sludge that is applied to the land, unless any of the following conditions apply:

- **The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements, and one of vector attraction reduction options 1-8 (fill out B.4 instead); or**
- **The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or**
- **You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).**

Complete Section C for every site on which the sewage sludge that you reported in Section B.7 is applied.

C.1. Identification of Land Application Site.

a. Site name or number _____

b. Site location (Complete 1 and 2).

1. Street or Route # _____

County _____

City or Town _____ State _____ Zip _____

2. Latitude _____ Longitude _____

Method of latitude/longitude determination

_____ USGS map _____ Field survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

C.2. Owner Information.

a. Are you the owner of this land application site? _____ Yes _____ No

b. If no, provide the following information about the owner:

Name _____

Telephone number _____

Mailing Address _____

_____

C.3. Applier Information.

a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site?
_____ Yes _____ No

b. If no, provide the following information for the person who applies:

Name _____

Telephone number _____

Mailing Address _____

_____

C.4. Site Type: Identify the type of land application site from among the following.

_____ Agricultural land _____ Forest _____ Public contact site

_____ Reclamation site _____ Other. Describe: _____

C.5. Crop or Other Vegetation Grown on Site.

a. What type of crop or other vegetation is grown on this site?

_____

b. What is the nitrogen requirement for this crop or vegetation?

_____

C.6. Vector Attraction Reduction.

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?
_____ Yes _____ No

If yes, answer C.6.a and C.6.b;

a. Indicate which vector attraction reduction option is met:

_____ Option 9 (Injection below land surface)

_____ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or another sheet of paper, any treatment processes used at the land application site to reduce vector attraction properties of sewage sludge:

_____

_____

Complete Question C.7 only if the sewage sludge applied to this site since July 20, 1993, is subject to the cumulative pollutant loading rates (CPLRs) in 40 CFR 503.13(b)(2).

C.7. Cumulative Loadings and Remaining Allotments.

a. Have you contacted the 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? _____ Yes _____ No

If no, sewage sludge subject to CPLRs may not be applied to this site.

If yes, provide the following information:

Permitting authority _____

Contact Person _____

Telephone number _____

b. Based upon this inquiry, has bulk sewage sludge subject to CPLRs been applied to this site since July 20, 1993?
_____ Yes _____ No

If no, skip C.7.c.

c. Provide the following information for every facility other than yours that is sending, or has sent, bulk sewage sludge 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.

Facility name _____

Mailing Address _____

_____

Contact person _____

Title _____

Telephone number _____

D. SURFACE DISPOSAL

Complete this section if you own or operate a surface disposal site.

Complete Sections D.1 - D.5 for each active sewage sludge unit.

D.1. Information on Active Sewage Sludge Units.

a. Unit name or number: _____

b. Unit location (Complete 1 and 2).

1. Street or Route # _____

County _____

City or Town _____ State _____ Zip _____

2. Latitude_____ Longitude_____

Method of latitude/longitude determination: _____ USGS map _____ Field survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period: _____ dry metric tons

e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit: _____ dry metric tons

f. Does the active sewage sludge unit have a liner with a maximum hydraulic conductivity of 1×10^{-7} cm/sec? _____ Yes _____ No

If yes, describe the liner (or attach a description):

_____

_____

g. Does the active sewage sludge unit have a leachate collection system? _____ Yes _____ No

If yes, describe the leachate collection system (or attach a description). Also describe the method used for leachate disposal and provide the numbers of any Federal, State, or local permit(s) for leachate disposal:

_____

_____

h. If you answered no to either D.1.f. or D.1.g., answer the following question:

Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site?
_____ Yes _____ No

If yes, provide the actual distance in meters: _____

Provide the following information:

Remaining capacity of active sewage sludge unit, in dry metric tons: _____ dry metric tons

Anticipated closure date for active sewage sludge unit, if known: _____ (MM/DD/YYYY)

Provide, with this application, a copy of any closure plan that has been developed for this active sewage sludge unit.

D.2. Sewage Sludge from Other Facilities. Is sewage sent to this active sewage sludge unit from any facilities other than your facility?

_____ Yes _____ No

If yes, provide the following information for each such facility. If sewage sludge is sent to this active sewage sludge unit from more than one such facility, attach additional pages as necessary.

a. Facility name _____

b. Mailing Address _____

_____

c. Contact person _____

Title _____

Telephone number _____

d. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?

_____ Class A _____ Class B _____ None or unknown

e. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge:

_____

_____

f. Which vector attraction reduction option is met for the sewage sludge at the receiving facility?

_____ Option 1 (Minimum 38 percent reduction in volatile solids)
_____ Option 2 (Anaerobic process, with bench-scale demonstration)
_____ Option 3 (Aerobic process, with bench-scale demonstration)
_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
_____ Option 5 (Aerobic processes plus raised temperature)
_____ Option 6 (Raise pH to 12 and retain at 11.5)
_____ Option 7 (75 percent solids with no unstabilized solids)
_____ Option 8 (90 percent solids with unstabilized solids)
_____ None or unknown

g. Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge

_____

_____

h. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in (d) - (g) above:

_____

_____

D.3. Vector Attraction Reduction

a. Which vector attraction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?

_____ Option 9 (Injection below and surface)
_____ Option 10 (Incorporation into soil within 6 hours)
_____ Option 11 (Covering active sewage sludge unit daily)

D.3. Vector Attraction Reduction. (con't)

b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge:

_____

_____

D.4. Ground-Water Monitoring.

a. Is ground-water monitoring currently conducted at this active sewage sludge unit, or are ground-water monitoring data otherwise available for this active sewage sludge unit?
_____ Yes _____ No

If yes, provide a copy of available ground-water monitoring data. Also, provide a written description of the well locations, the approximate depth to ground-water, and the ground-water monitoring procedures used to obtain these data.

_____

_____

b. Has a ground-water monitoring program been prepared for this active sewage sludge unit? _____ Yes _____ No

If yes, submit a copy of the ground-water monitoring program with this permit application.

c. Have you obtained a certification from a qualified ground-water scientist that the aquifer below the active sewage sludge unit has not been contaminated? _____ Yes _____ No

If yes, submit a copy of the certification with this permit application.

D.5. Site-Specific Limits. Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?
_____ Yes _____ No

If yes, submit information to support the request for site-specific pollutant limits with this application.

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E. INCINERATION

Complete this section if you fire sewage sludge in a sewage sludge incinerator.

Complete this section once for each incinerator in which you fire sewage sludge. If you fire sewage sludge in more than one sewage sludge incinerator, attach additional copies of this section s necessary.

E.1. Incinerator information.

a. Incinerator name or number: _____

b. Incinerator location (Complete 1 and 2).

1. Street or Route # _____

County _____

City or Town _____ State _____ Zip _____

2. Latitude_____ Longitude_____

Method of latitude/longitude determination: _____ USGS map _____ Field survey _____ Other

E.2. Amount Fired. Dry metric tons per 365-day period of sewage sludge fired in the sewage sludge incinerator: _____ dry metric tons

E.3. Beryllium NESHAP.

a. Is the sewage sludge fired in this incinerator "beryllium-containing waste," as defined in 40 CFR Part 61.31? _____ Yes _____ No

Submit, with this application, information, test data, and description of measures taken that demonstrate whether the sewage sludge incinerated is beryllium-containing waste, and will continue to remain as such.

b. If the answer to (a) is yes, 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.

E.4. Mercury NESHAP.

a. How is compliance with the mercury NESHAP being demonstrated?

_____ Stack testing (if checked, complete E.4.b)

_____ Sewage sludge sampling (if checked, complete E.4.c)

b. If stack testing is conducted, submit the following information with this application:

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.

Copies of mercury emission rate tests for the two most recent years in which testing was conducted.

c. If sewage sludge sampling is used to demonstrate compliance, 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.

E.5. Dispersion Factor.

a. Dispersion factor, in micrograms/cubic meter per gram/second: _____

b. Name and type of dispersion model: _____

c. Submit a copy of the modeling results and supporting documentation with this application.

E.6. Control Efficiency.

a. Control efficiency, in hundredths, for the following pollutants:

Arsenic: _____ Chromium: _____ Nickel: _____

Cadmium: _____ Lead: _____

b. Submit a copy of the results or performance testing and supporting documentation (including testing dates) with this application.

E.7. Risk Specific Concentration for Chromium.

a. Risk specific concentration (RSC) used for chromium, in micrograms per cubic meter: _____

b. Which basis was used to determine the RSC?

____Table 2 in 40 CFR 503.43

____Equation 6 in 40 CFR 503.43 (site-specific determination)

c. If Table 2 was used, identify the type of incinerator used as the basis:

____Fluidized bed with wet scrubber

____Fluidized bed with wet scrubber and wet electrostatic precipitator

____Other types with wet scrubber

____Other types with wet scrubber and wet electrostatic precipitator

d. If Equation 6 was used, provide the following:

Decimal fraction of hexavalent chromium concentration to total chromium concentration in stack exit gas: _____

Submit results of incinerator stack tests for hexavalent and total chromium concentrations, including date(s) of test, with this application.

E.8. Incinerator Parameters

a. Do you monitor Total Hydrocarbons (THC) in the sewage sludge incinerator's exit gas? _____ Yes _____ No

Do you monitor Carbon Monoxide (CO) in the sewage sludge incinerator's exit gas? _____ Yes _____ No

b. Incinerator type: _____

c. Incinerator stack height, in meters: _____

Indicate whether value submitted is: _____ Actual stack height _____ Creditable stack height

E.9. Performance Test Operating Parameters

a. Maximum Performance Test Combustion Temperature: _____

b. Performance test sewage sludge feed rate, in dry metric tons/day: _____

indicate whether value submitted is:

_____ Average use _____ Maximum design

Submit, with this application, supporting documents describing how the feed rate was calculated.

c. Submit, with this application, information documenting the performance test operating parameters for the air pollution control device(s) used for this sewage sludge incinerator.

E.10. **Monitoring Equipment.** List the equipment in place to monitor the following parameters:

a. Total hydrocarbons or carbon monoxide: _____

b. Percent oxygen: _____

c. Moisture content: _____

d. Combustion temperature: _____

e. Other: _____

E.11. **Air Pollution Control Equipment.** Submit, with this application, a list of all air pollution control equipment used with this sewage sludge incinerator.

_____

_____

_____

_____

Additional information, if provided, will appear on the following pages

RECEIVED

SEP 13 2021

MUNICIPAL SECTION

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
ALR000029439	AL0057428	CHASE AREA WWTF	

Form 2F NPDES

EPA

U.S Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

SECTION 1 OUTFALL LOCATION (40 CFR 122.21(g)(1))

Outfall Location

1.1 Provide information on each of the facility's outfalls in the table below

Outfall Number	Receiving Water Name	Latitude	Longitude
0025	CHASE CREEK	34° 47′ 13.88″ N	86° 29′ 11.39″ W
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

SECTION 2 IMPROVEMENTS (40 CFR 122.21(g)(6))

Improvements

2.1 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?

☐ Yes ☑ No → SKIP to Section 3.

2.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall numbers)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

2.3 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? (Optional Item)

☐ Yes ☑ No

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
ALR000029439	AL0057428	CHASE AREA WWTP	

SECTION 3. SITE DRAINAGE MAP (40 CFR 122.26(c)(1)(i)(A))

Site Drainage Map

3.1 Have you attached a site drainage map containing all required information to this application? (See instructions for specific guidance.)

☑ Yes ☐ No

SECTION 4. POLLUTANT SOURCES (40 CFR 122.26(c)(1)(i)(B))

Pollutant Sources

4.1 Provide information on the facility's pollutant sources in the table below.

Outfall Number	Impervious Surface Area (within a mile radius of the facility)		Total Surface Area Drained (within a mile radius of the facility)	
002S	1.02	*specify units* ACRES	3.11	*specify units* ACRES
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*

4.2 Provide a narrative description of the facility's significant material in the space below. (See instructions for content requirements.)

WWTP PRIMARILY OF PERVIOUS SURFACE OF OPEN GRASSY AREA. SECONDARY AREA CONSISTS OF STRUCTURES AND DRIVEWAYS.

4.3 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.)

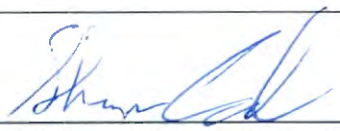
Stormwater Treatment		
Outfall Number	**Control Measures and Treatment**	**Codes from Exhibit 2F-1 (list)**

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
ALR000029439	AL0057428	CHASE AREA WWTP	

SECTION 5. NON STORMWATER DISCHARGES (40 CFR 122.26(c)(1)(i)(C))

Non-Stormwater Discharges

5.1 *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.*

Name (print or type first and last name)	Official title
SHANE COOK, PE	DIRECTOR - HUNTSVILLE WPC
Signature 	Date signed 02/01/2021

5.2 Provide the testing information requested in the table below.

Outfall Number	Description of Testing Method Used	Date(s) of Testing	Onsite Drainage Points Directly Observed During Test

SECTION 6. SIGNIFICANT LEAKS OR SPILLS (40 CFR 122.26(c)(1)(i)(D))

Significant Leaks or Spills

6.1 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.

7.1 Is this a new source or new discharge?

☐ Yes ➔ See instructions regarding submission of *estimated* data.

☑ No ➔ See instructions regarding submission of *actual* data.

Tables A, B, C, and D

7.2 Have you completed Table A for each outfall?

☑ Yes ☐ No

Discharge Information Continued

7.3	Is the facility subject to an effluent limitation guideline (ELG) or effluent limitations in an NPDES permit for its process wastewater? ☐ Yes ☑ No → SKIP to Item 7.5.
7.4	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? ☑ Yes ☐ No
7.5	Do you know or have reason to believe any pollutants in Exhibit 2F–2 are present in the discharge? ☑ Yes ☐ No → SKIP to Item 7.7.
7.6	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? ☑ Yes ☐ No
7.7	Do you qualify for a small business exemption under the criteria specified in the Instructions? ☐ Yes →SKIP to Item 7.18. ☑ No
7.8	Do you know or have reason to believe any pollutants in Exhibit 2F–3 are present in the discharge? ☐ Yes ☑ No → SKIP to Item 7.10.
7.9	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? ☐ Yes ☑ No
7.10	Do you expect any of the pollutants in Exhibit 2F–3 to be discharged in concentrations of 10 ppb or greater? ☐ Yes ☑ No → SKIP to Item 7.12.
7.11	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? ☐ Yes ☑ No
7.12	Do you expect acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol to be discharged in concentrations of 100 ppb or greater? ☐ Yes ☑ No → SKIP to Item 7.14.
7.13	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? ☐ Yes ☑ No
7.14	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)? ☐ Yes ☑ No
7.15	Do you know or have reason to believe any pollutants in Exhibit 2F–4 are present in the discharge? ☐ Yes ☑ No → SKIP to Item 7.17.
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? ☐ Yes ☐ No
7.17	Have you provided information for the storm event(s) sampled in Table D? ☑ Yes ☐ No

Discharge Information Continued

Used or Manufactured Toxics

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?

☐ Yes ☑ No ➔ SKIP to Section 8.

7.19 List the pollutants below, including TCDD if applicable.

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?

☐ Yes ☑ No ➔ SKIP to Section 9. 02/01/2021

8.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ 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 (on Tables A through C) performed by a contract laboratory or consulting firm?

☑ Yes ☐ No ➔ SKIP to Section 10.

9.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	Pace Analytical National		
Laboratory address	12065 Lebanon Rd Mount Juliet, TN 37122		
Phone number	(615) 773-9746		
Pollutant(s) analyzed			

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
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SECTION 10. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

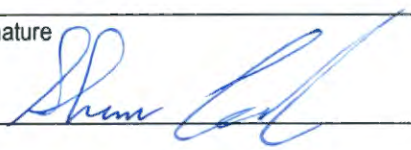
Checklist and Certification Statement

10.1 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.

Column 1	Column 2
☑ Section 1	☐ w/ attachments (e.g., responses for additional outfalls)
☑ Section 2	☐ w/ attachments
☑ Section 3	☑ w/ site drainage map
☑ Section 4	☐ w/ attachments
☑ Section 5	☐ w/ attachments
☑ Section 6	☐ w/ attachments
☑ Section 7	☑ Table A ☐ w/ small business exemption request ☐ Table B ☐ w/ analytical results as an attachment ☐ Table C ☑ Table D
☑ Section 8	☐ w/attachments
☑ Section 9	☑ w/attachments (e.g., responses for additional contact laboratories or firms)
☑ Section 10	☐

10.2 **Certification Statement**

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

Name (print or type first and last name)	Official title
SHANE COOK, PE	DIRECTOR - HUNTSVILLE WATER POLLUTION CONTROL
Signature 	Date signed 02/01/2021

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALR000029439	AL0057428	CHASE AREA WWTP	002S

Form Approved 03/05/19
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TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

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	<5.00		<5.00		1	
2.	Biochemical oxygen demand (BOD_5)	<2.00		<2.00		1	
3.	Chemical oxygen demand (COD)						
4.	Total suspended solids (TSS)	103		103		1	
5.	Total phosphorus	0.854		0.854		1	
6.	Total Kjeldahl nitrogen (TKN)	5.25		5.25		1	
7.	Total nitrogen (as N)	<1.00		<1.00		1	
8.	pH (minimum)	7.86		7.86		1	
	pH (maximum)	7.86		7.86		1	

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

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALR000029439	AL0057428	CHASE AREA WWTP	002S

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OMB No. 2040-0004

TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	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] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALR000029439	AL0057428	CHASE AREA WWTP	002S

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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	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] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
ALR000029439	AL0057428	CHASE AREA WWTP	002S

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)
09/24/2020	24	1.5	192 HRS	0.155 (cfs)	100,000

Provide a description of the method of flow measurement or estimate.

The Rational Method Equation
The Rational Method equation actually used to calculate peak storm water runoff rate is: Q = CiA (U.S. units), or Q = 0.0028 CiA (S.I. units) where:

- A = the area of the watershed (drainage area) that drains to the point for which the peak runoff rate is needed (acres for U.S. units) (ha for S.I. units)
- C = runoff coefficient for drainage area A. A physical interpretation is the faction of rainfall landing on the drainage area that becomes storm water runoff. (dimensionless for both U.S. and S.I. units)
- i = the intensity of the design storm for peak runoff calculation (in/hr for U.S. units) (mm/hr for S.I. units)
- Q = the peak storm water runoff rate from the drainage area, A, due to the design storm of intensity, i. (cfs for U.S. units) (m3 /s for S.I. units).


640
640
640
Flint River
650
Outfall 002-S
Lat: 34° 47' 15"
Long: 86° 29' 15"
Wess Taylor Rd
660
670
CITY OF HUNTSVILLE
WATER POLLUTION CONTROL
N
Chase WWTP
I.D.# AL0057428
Stormwater Runoff Map
1 inch = 150 feet

Chase Expanded Metals
Jan. 2016

January 28, 2016

Scott Vassar
City of Huntsville WPC
1800 Vermont Road
Huntsville, AL 35802-2064

We appreciate the opportunity to provide our services to you on this project. Please find attached the data for the sample(s) listed below:

LabNumber	Sample Description	Date/Time Collected	Date Submitted
1600609-01	Chase WWTP Composite	1/14/16 05:10	1/14/16
1600609-02	Chase WWTP Grab	1/14/16 05:30	1/14/16

ENERSOLV is accredited to ISO/IEC 17025:2005 by Laboratory Accreditation Bureau and to the TNI 2003 Standard by the Florida Department of Health. Our quality system also meets relevant quality system requirements of ISO 9001:2008. Not all tests performed by *ENERSOLV* are covered by these accreditations. Tests within our scope of accreditation are indicated by an asterisk (*) in the Test Result section of this report. Tests not included in the accreditations are performed in accordance with *ENERSOLV* Standard Operating Procedures and the quality control program using, where applicable, USEPA methodology.

This cover page and the attached chain-of-custody record(s) are integral parts of your report. *ENERSOLV* considers this report your official record. This information shall remain in *ENERSOLV*'s active database for a period of one (1) calendar year before archiving. Any replacement of this information after archiving may result in an administrative fee to cover the cost of retrieval.

If you have any questions or would like more information regarding these analyses, please call us at (256) 350-0846.

Karen Sutton

Karen Sutton
Vice President Client Services

ENERSOLV
a Solutions Company

SAMPLE RESULTS REPORT

Report Date/Time: 1/28/16 14:16

REPORT TO
Scott Vassar City of Huntsville WPC 1800 Vermont Road Huntsville, AL 35802-2064

NELAP Accredited Florida DOH #E871078

ENERSOLV maintains National Environmental Laboratory Accreditation Program (NELAP) accreditation through Florida Department of Health (#E871078). Some tests included in this report may not be covered by this accreditation.

ENERSOLV also maintains ISO/IEC 17025 accreditation through Laboratory Accreditation Bureau for the specific tests listed in L-A-B Certificate #L2239 scope of accreditation.

Cert# L2239 Testing

ADEM Drinking Water Certification No. 40160

Tests within the scope of accreditation are indicated by an asterisk (*).

This report may contain information that is confidential and/or proprietary. This information is intended for the addressee only and may not be copied or disseminated except in full without the written consent of ENERSOLV Corporation.

Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point:Chase WWTP Composite	**Sample ID: 1600609-01**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
Anions by IC				
Nitrate plus Nitrite-Nitrogen	1.19			
* Nitrate-Nitrogen CAS: 14797-55-8	1.19	mg/l		
* Nitrite-Nitrogen CAS: 14797-65-0	<0.150	mg/l		
Inorganics				
* Total Kjeldahl Nitrogen	<1.50	mg/l		
* Total Phosphorus	<1.00	mg/l		
Metals by ICP-MS				
* Total Recoverable Antimony CAS: 7440-36-0	<0.00100	mg/l		
* Total Recoverable Arsenic CAS: 7440-38-2	<0.000500	mg/l		
* Total Recoverable Beryllium CAS: 7440-41-7	<0.00100	mg/l		
* Total Recoverable Cadmium CAS: 7440-43-9	<0.00100	mg/l		
* Total Recoverable Chromium CAS: 7440-47-3	0.00482	mg/l		
* Total Recoverable Copper CAS: 7440-50-8	0.00796	mg/l		
* Total Recoverable Lead CAS: 7439-92-1	<0.00100	mg/l		
* Total Recoverable Nickel CAS: 7440-02-0	0.0335	mg/l		
* Total Recoverable Selenium CAS: 7782-49-2	<0.00100	mg/l		
* Total Recoverable Silver CAS: 7440-22-4	<0.00100	mg/l		
* Total Recoverable Thallium CAS: 7440-28-0	<0.00100	mg/l		
* Total Recoverable Zinc CAS: 7440-66-6	0.0564	mg/l		

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LABORATORY ACCREDITATION BUREAU
Cert# L2239 Testing

ADEM Drinking Water Certification No. 40160

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point:Chase WWTP Composite (Cont'd)	**Sample ID: 1600609-01**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
Metals by ICP-OES				
* Total Calcium CAS: 7440-70-2	66.3	mg/l		
Total Hardness	192			
* Total Magnesium CAS: 7439-95-4	5.58	mg/l		
Sample Point:Chase WWTP Grab	**Sample ID: 1600609-02**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
Inorganics				
* HEM (Oil and Grease)	<5.00	mg/l		
Phenolics (4AAP)	<0.0100	mg/l		
Total Cyanide	<0.00500	mg/l		
Semivolatiles by EPA 625				
1,2,4-Trichlorobenzene CAS: 120-82-1	<1.10 [1]	ug/l	Q	
2,4,6-Trichlorophenol CAS: 88-06-2	<1.55	ug/l		
2,4-Dichlorophenol CAS: 120-83-2	<1.20	ug/l		
2,4-Dimethylphenol CAS: 105-67-9	<2.35	ug/l		
2,4-Dinitrophenol CAS: 51-28-5	<5.00 [1]	ug/l	Q	
2,4-Dinitrotoluene CAS: 121-14-2	<1.10 [1]	ug/l	Q	
2,6-Dinitrotoluene CAS: 606-20-2	<1.25 [1]	ug/l	Q	
2-Chloronaphthalene CAS: 91-58-7	<1.60 [1]	ug/l	Q	
2-Chlorophenol CAS: 95-57-8	<1.30	ug/l		
2-Nitrophenol CAS: 88-75-5	<1.25 [1]	ug/l	Q	

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point:Chase WWTP Grab (Cont'd)	**Sample ID: 1600609-02**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
3,3'-Dichlorobenzidine CAS: 91-94-1	<3.10	ug/l		
4,6-Dinitro-2-methylphenol CAS: 534-52-1	<5.00 [1]	ug/l	Q	
4-Bromophenyl phenyl ether CAS: 101-55-3	<1.75	ug/l		
4-Chloro-3-methylphenol CAS: 59-50-7	<1.65	ug/l		
4-Chlorophenyl phenyl ether CAS: 7005-72-3	<1.40	ug/l		
4-Nitrophenol CAS: 100-02-7	<5.00	ug/l		
Acenaphthene CAS: 83-32-9	<1.15 [1]	ug/l	Q	
Acenaphthylene CAS: 208-96-8	<1.65 [1]	ug/l	Q	
Anthracene CAS: 120-12-7	<1.90	ug/l		
a-Terpineol CAS: 98-55-5	<1.00	ug/l		
Benzo[a]anthracene CAS: 56-55-3	<1.15	ug/l		
Benzo[a]pyrene CAS: 50-32-8	<1.55	ug/l		
Benzo[b]fluoranthene CAS: 205-99-2	<1.10	ug/l		
Benzo[g,h,i]perylene CAS: 191-24-2	<1.25 [1]	ug/l	Q	
Benzo[k]fluoranthene CAS: 207-08-9	<0.800	ug/l		
Bis(2-chloroethoxy)methane CAS: 111-91-1	<1.25	ug/l		
Bis(2-chloroethyl)ether CAS: 111-44-4	<1.10	ug/l		
Bis(2-chloroisopropyl)ether CAS: 39638-32-9	<1.20	ug/l		
Bis(2-ethylhexyl)phthalate CAS: 117-81-7	<2.90	ug/l		

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Cert# L2239 Testing

ADEM Drinking Water Certification No. 40160

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point:Chase WWTP Grab (Cont'd)	**Sample ID: 1600609-02**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
Butylbenzylphthalate CAS: 85-68-7	<2.45	ug/l		
Carbazole CAS: 86-74-8	<2.55	ug/l		
Chrysene CAS: 218-01-9	<0.850 [1]	ug/l	Q	
Dibenzo[a,h]anthracene CAS: 53-70-3	<1.50	ug/l		
Diethyl phthalate CAS: 84-66-2	<1.45	ug/l		
Dimethylphthalate CAS: 131-11-3	<1.40	ug/l		
Di-n-butylphthalate CAS: 84-74-2	<1.55	ug/l		
Di-n-octylphthalate CAS: 117-84-0	<2.45	ug/l		
Fluoranthene CAS: 206-44-0	<1.25	ug/l		
Fluorene CAS: 86-73-7	<1.50	ug/l		
Hexachlorobenzene CAS: 118-74-1	<1.30 [1]	ug/l	Q	
Hexachlorobutadiene CAS: 87-68-3	<0.900 [1]	ug/l	Q	
Hexachloroethane CAS: 67-72-1	<1.00 [1]	ug/l	Q	
Indeno(1,2,3-cd)pyrene CAS: 193-39-5	<2.25	ug/l		
Isophorone CAS: 78-59-1	<1.25	ug/l		
Naphthalene CAS: 91-20-3	<1.30 [1]	ug/l	Q	
n-Decane CAS: 124-18-5	<1.05	ug/l		
N-Nitrosodi-n-propylamine CAS: 621-64-7	<1.30	ug/l		
n-Octadecane CAS: 593-45-3	<1.80	ug/l		

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LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025
Cert# L2239 Testing

ADEM Drinking Water Certification No. 40160

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point:Chase WWTP Grab (Cont'd)	**Sample ID: 1600609-02**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
Pentachlorophenol CAS: 87-86-5	<5.00	ug/l		
Phenanthrene CAS: 85-01-8	<1.20 [1]	ug/l	Q	
Phenol CAS: 108-95-2	<0.800	ug/l		
Pyrene CAS: 129-00-0	<1.00	ug/l		
Volatiles by EPA 624				
* 1,1,1-Trichloroethane CAS: 71-55-6	<3.0	ug/l		
* 1,1,2,2-Tetrachloroethane CAS: 79-34-5	<3.0	ug/l		
* 1,1,2-Trichloroethane CAS: 79-00-5	<3.0	ug/l		
* 1,1-Dichloroethane CAS: 75-34-3	<3.0	ug/l		
* 1,1-Dichloroethylene CAS: 75-35-4	<3.0	ug/l		
* 1,2-Dichlorobenzene CAS: 95-50-1	<3.0	ug/l		
* 1,2-Dichloroethane CAS: 107-06-2	<3.0	ug/l		
* 1,2-Dichloropropane CAS: 78-87-5	<3.0	ug/l		
* 1,3-Dichlorobenzene CAS: 541-73-1	<3.0	ug/l		
* 1,4-Dichlorobenzene CAS: 106-46-7	<3.0	ug/l		
* 2-Chloroethylvinyl ether CAS: 110-75-8	<3.0	ug/l		
* Acrolein CAS: 107-02-8	<20	ug/l		
* Acrylonitrile CAS: 107-13-1	<20	ug/l		
* Benzene CAS: 71-43-2	<3.0	ug/l		

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SAMPLE RESULTS REPORT

Report Date/Time: 1/28/16 14:16

REPORT TO
Scott Vassar City of Huntsville WPC 1800 Vermont Road Huntsville, AL 35802-2064

NELAP Accredited Florida DOH #E871078

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point:Chase WWTP Grab (Cont'd)	**Sample ID: 1600609-02**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
* Bromodichloromethane CAS: 75-27-4	<3.0	ug/l		
* Bromoform CAS: 75-25-2	<3.0	ug/l		
* Bromomethane CAS: 74-83-9	<5.0	ug/l		
* Carbon tetrachloride CAS: 56-23-5	<3.0	ug/l		
* Chlorobenzene CAS: 108-90-7	<3.0	ug/l		
* Chloroethane CAS: 75-00-3	<5.0	ug/l		
* Chloroform CAS: 67-66-3	<3.0 [1]	ug/l	Q	
* Chloromethane CAS: 74-87-3	<1.5	ug/l		
* cis-1,3-Dichloropropylene CAS: 10061-01-5	<3.0	ug/l		
* Dibromochloromethane CAS: 124-48-1	<3.0	ug/l		
* Ethyl benzene CAS: 100-41-4	<3.0	ug/l		
* m & p-Xylene CAS: 108-38-3/106-42-3	<3.0	ug/l		
* Methylene chloride CAS: 75-09-2	<5.0	ug/l		
* o-Xylene CAS: 95-47-6	<3.0	ug/l		
* Tetrachloroethylene CAS: 127-18-4	<3.0	ug/l		
* Toluene CAS: 108-88-3	<3.0	ug/l		
* trans-1,2-Dichloroethylene CAS: 156-60-5	<3.0	ug/l		
* trans-1,3-Dichloropropylene CAS: 10061-02-6	<3.0	ug/l		
* Trichloroethylene CAS: 79-01-6	<3.0	ug/l		

ENERSOLV
A Solutions Company

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point:Chase WWTP Grab (Cont'd)	**Sample ID: 1600609-02**	**Collected: 01/14/2016**		**Submitted: 01/14/2016**
* Trichlorofluoromethane CAS: 75-69-4	<5.0	ug/l		
* Vinyl chloride CAS: 75-01-4	<1.5	ug/l		

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Data Qualifiers: Q: One or more quality control criteria (LCS, surrogate spike recovery, continuing calibration, etc) failed. Data may be estimated or biased.

<: Less than reporting limit

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SAMPLE RESULTS REPORT

Report Date/Time: 1/28/16 14:16

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Analysis Information

LabNumber	Analysis	SpecificMethod	Analyst	Analysis Start Date/Time	Analysis End Date/Time
1600609-01	Total Recoverable Silver	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Recoverable Arsenic	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Recoverable Beryllium	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Calcium	EPA 200.7/6010C	DJN	01/18/2016 08:30	
1600609-01	Total Recoverable Cadmium	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Recoverable Chromium	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Recoverable Copper	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Hardness	EPA 200.7	/DJN	01/18/2016 08:30	
1600609-01	Total Magnesium	EPA 200.7/6010C	DJN	01/18/2016 08:30	
1600609-01	Total Recoverable Nickel	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Nitrite-Nitrogen	EPA 300.0	DJN	01/14/2016 22:09	
1600609-01	Nitrate-Nitrogen	EPA 300.0	DJN	01/14/2016 22:09	
1600609-01	Nitrate plus Nitrite-Nitrogen	EPA 300.0	/DJN	01/14/2016 22:09	
1600609-01	Total Phosphorus	EPA 365.3	MD	01/18/2016 08:45	
1600609-01	Total Recoverable Lead	EPA 200.8	KW	01/21/2016 10:37	
1600609-01	Total Recoverable Antimony	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Recoverable Selenium	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Kjeldahl Nitrogen	SM 4500-Norg C	RAC	01/15/2016 06:00	
1600609-01	Total Recoverable Thallium	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-01	Total Recoveable Zinc	EPA 200.8/6020A	KW	01/21/2016 10:37	
1600609-02	Total Cyanide	ASTM D7511-09	JW	01/21/2016 10:20	
1600609-02	HEM (Oil and Grease)	EPA 1664A	JG	01/19/2016 06:50	
1600609-02	Phenolics (4AAP)	EPA 420.1	SH	01/15/2016 12:40	
1600609-02	BN/AE Semivolatiles	EPA 625	RH/AJW	01/18/2016 09:00	
1600609-02	Volatile Organic Analytes	EPA 624	ET	01/19/2016 13:11	

The results contained in this report are only representative of the sample(s) received.

ENERSOLV
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2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256) 350-0846

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COC NUMBER	358916		
PAGE	1	of	2
Chase Renewal			

COMPANY/CLIENT NAME	ACCOUNT NUMBER	CLIENT P O NUMBER	ENERSOLV PROJECT NUMBER
Water Pollution Control	1453		

CLIENT POINT OF CONTACT	CLIENT PHYSICAL ADDRESS	CITY/STATE/ZIP
Ed Fincher	1800 Vermont Road	Huntsville, AL 35802-2064

CLIENT EMAIL	PHONE NUMBER	OTHER INFORMATION

SAMPLE COLLECTED BY	EXPEDITED REPORT DELIVERY (SURCHARGE)
S. Vassar	DATE DUE (REQUIRED)

REQUESTED ANALYSES

ENERSOLV LAB NO	SAMPLE LOCATION CODE	SAMPLE DESCRIPTION	DATE	TIME	GRAB	COMP	TRSB2	TRAS2	TRBE2	TRCD2	TRCR2	TRCU2	TRPB2	HG-LL	TRNI2	TRSE2	TRAG2	TRTL2	TRZN2	#HARDNESS
1600609-01	Huntsville-WPC-Chase	Chase WWTP	1-14-16	05:16		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Comments: Collector to complete shaded areas, as applicable

SAMPLE TEMPERATURE RECEIVED @ 2.3°

Field Information

										Qty	Type	Vol.	Preserv.	Parameter
										1	Plastic	Quart	HNO3	Metals A
Sampler		pH su	N/A	TRC mg/l	N/A	DO mg/l	N/A	Temp deg C	N/A	1	Plastic	Pint	Ice	NO2+NO3 B
Start Date		Date	N/A	Date	N/A	Date	N/A	Date	N/A					
Start Time		Time	N/A	Time	N/A	Time	N/A	Time	N/A					
Stop Date		Analyst	N/A	Analyst	N/A	Analyst	N/A	Analyst	N/A					
Stop Time		SM 4500H+		SM 4500-Cl D		SM 4500-O G		SM 2550B						

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S. Vassa	1-14-16	13:01						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

RECEIVED FOR LABORATORY USE BY: (SIGNATURE)	DATE	TIME	SAMPLE STATUS
	1-14-16	1301	☑ Accepted ☐ Rejected ☐ Accepted with Exception

ENERSOLV
A Solutions Company

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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COC NUMBER 120656
PAGE 2 of 2
Chase

COMPANY/CLIENT NAME	ACCOUNT NUMBER	CLIENT P O NUMBER	ENERSOLV PROJECT NUMBER
Water Pollution Control	1453		

CLIENT POINT OF CONTACT	CLIENT PHYSICAL ADDRESS	CITY/STATE/ZIP
Ed Fincher	1800 Vermont Road	Huntsville, AL 35802-2064

CLIENT EMAIL	PHONE NUMBER	OTHER INFORMATION

SAMPLE COLLECTED BY	EXPEDITED REPORT DELIVERY (SURCHARGE)
S. Vassar	DATE DUE (REQUIRED)

ENERSOLV LAB NO	SAMPLE LOCATION CODE	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	GRAB	COMP	NO2-NO3 IC	TKN	P-T				Oil and Grease	#CN-T	PHENOLICS	$624-FORM 2A	$625-FORM 2C			
1600609-01	Huntsville-WPC-Chase	Chase WWTP	1-14-16	05:10		X	X	X	X											
-02			1-14-16	05:30	X								X	X	X	X	X			

Comments:
NO2-NO3 has a 48hr hold time
Collector to complete shaded areas, as applicable

SAMPLE TEMPERATURE RECEIVED @ 2.3c

Field Information

Sampler		pH su	N/A	TRC mg/l	N/A	DO mg/l	N/A	Temp deg C	N/A
Start Date	N/A	Date	N/A	Date	N/A	Date	N/A	Date	N/A
Start Time	N/A	Time	N/A	Time	N/A	Time	N/A	Time	N/A
Stop Date	N/A	Analyst	N/A	Analyst	N/A	Analyst	N/A	Analyst	N/A
Stop Time	N/A	SM 4500H+		SM 4500-Cl D		SM 4500-O G		SM 2550B	

Qty	Type	Vol.	Preserv.	Parameter
1	Plastic	Pint	NaOH	Cyanide A
1	Glass	Amber Liter	H2SO4	Phenolics B
2	Glass	Amber Liter	Plain	625 Form 2A CDE
2/2	Glass	40ml Vials	HCL/Plain	624 Form 2C FGHI
2	Glass	Liter	1:1 HCL	O/G JK
1	Plastic	Pint	H2SO4	L TKN,P

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S. Vassar	1-14-16	13:01						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

RECEIVED FOR LABORATORY USE BY: (SIGNATURE)	DATE	TIME	SAMPLE STATUS
	1.14.16	1301	☑ Accepted ☐ Rejected ☐ Accepted with Exception

ENERSOLV
a Solutions Company

February 21, 2017

Pat Morgan
City of Huntsville WPC
1800 Vermont Road
Huntsville, AL 35802-2064

We appreciate the opportunity to provide our services to you on this project. Please find attached the data for the sample(s) listed below:

LabNumber	Sample Description	Date/Time Collected	Date Submitted
1702074-01	Chase Permit Renewal Composite	2/14/17 06:10	2/14/17
1702074-02	Chase Permit Renewal Grab	2/14/17 06:30	2/14/17

ENERSOLV is accredited to ISO/IEC 17025:2005 by Laboratory Accreditation Bureau and to the TNI 2003 Standard by the Florida Department of Health. Our quality system also meets relevant quality system requirements of ISO 9001:2008. Not all tests performed by *ENERSOLV* are covered by these accreditations. Tests within our scope of accreditation are indicated by an asterisk (*) in the Test Result section of this report. Tests not included in the accreditations are performed in accordance with *ENERSOLV* Standard Operating Procedures and the quality control program using, where applicable, USEPA methodology.

This cover page and the attached chain-of-custody record(s) are integral parts of your report. *ENERSOLV* considers this report your official record. This information shall remain in *ENERSOLV*'s active database for a period of one (1) calendar year before archiving. Any replacement of this information after archiving may result in an administrative fee to cover the cost of retrieval.

If you have any questions or would like more information regarding these analyses, please call us at (256) 350-0846.

Karen Sutton

Karen Sutton
Vice President Client Services

ENERSOLV
a Solutions Company

SAMPLE RESULTS REPORT

Report Date/Time: 02/21/2017 16:12

REPORT TO

Pat Morgan
City of Huntsville WPC
1800 Vermont Road
Huntsville, AL 35802-2064

NELAP Accredited Florida DOH #E871078

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Cert# L2239 Testing

ADEM Drinking Water Certification No. 40160

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Chase Permit Renewal Composite	**Sample ID: 1702074-01**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Anions by IC				
Nitrate plus Nitrite-Nitrogen	9.76	mg/l		
* Nitrate-Nitrogen CAS: 14797-55-8	9.76	mg/l		
* Nitrite-Nitrogen CAS: 14797-65-0	<0.0600	mg/l		
Inorganics				
* Total Kjeldahl Nitrogen	<1.50	mg/l		
* Total Phosphorus	2.03	mg/l		
Metals by ICP-MS				
* Total Recoverable Antimony CAS: 7440-36-0	0.00169	mg/l		
* Total Recoverable Arsenic CAS: 7440-38-2	<0.000500	mg/l		
* Total Recoverable Beryllium CAS: 7440-41-7	<0.00100	mg/l		
* Total Recoverable Cadmium CAS: 7440-43-9	<0.00100	mg/l		
* Total Recoverable Chromium CAS: 7440-47-3	0.00424	mg/l		
* Total Recoverable Copper CAS: 7440-50-8	0.00650	mg/l		
* Total Recoverable Lead CAS: 7439-92-1	<0.00100	mg/l		
* Total Recoverable Nickel CAS: 7440-02-0	0.0315	mg/l		
* Total Recoverable Selenium CAS: 7782-49-2	<0.00100	mg/l		
* Total Recoverable Silver CAS: 7440-22-4	<0.00100	mg/l		
* Total Recoverable Thallium CAS: 7440-28-0	<0.00100	mg/l		
* Total Recoverable Zinc CAS: 7440-66-6	0.0177	mg/l		

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Chase Permit Renewal Composite (Cont'd)	**Sample ID: 1702074-01**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Metals by ICP-OES				
* Total Calcium CAS: 7440-70-2	65.7	mg/l		
Total Hardness	194	mg/l CaCO3		
* Total Magnesium CAS: 7439-95-4	6.35	mg/l		

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Chase Permit Renewal Grab	**Sample ID: 1702074-02**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Inorganics				
* HEM (Oil and Grease)	<5.00	mg/l		
Phenolics (4AAP)	<0.0100	mg/l		
Total Cyanide	<0.00500	mg/l		
Semivolatiles by EPA 625				
1,2,4-Trichlorobenzene CAS: 120-82-1	<5.15	ug/l	S	
1,2-Diphenylhydrazine as Azobenzene CAS: 122-66-7	<10.3	ug/l	S	
2,4,6-Trichlorophenol CAS: 88-06-2	<5.15	ug/l	S	
2,4-Dichlorophenol CAS: 120-83-2	<5.15	ug/l	S	
2,4-Dimethylphenol CAS: 105-67-9	<10.3	ug/l	S	
2,4-Dinitrophenol CAS: 51-28-5	<51.5	ug/l	S	
2,4-Dinitrotoluene CAS: 121-14-2	<5.15	ug/l	S	
2,6-Dinitrotoluene CAS: 606-20-2	<5.15	ug/l	S	
2-Chloronaphthalene CAS: 91-58-7	<5.15	ug/l	S	
2-Chlorophenol CAS: 95-57-8	<5.15	ug/l	S	
2-Nitrophenol CAS: 88-75-5	<5.15	ug/l	S	
3,3'-Dichlorobenzidine CAS: 91-94-1	<10.3	ug/l	S	
4,6-Dinitro-2-methylphenol CAS: 534-52-1	<51.5	ug/l	S	
4-Bromophenyl phenyl ether CAS: 101-55-3	<5.15	ug/l	S	

ENERSOLV
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SAMPLE RESULTS REPORT

Report Date/Time: 02/21/2017 16:12

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Cert# L2239 Testing

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Cbase Permit Renewal Grab (Cont'd)	**Sample ID: 1702074-02**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Semivolatiles by EPA 625 (Cont'd)				
4-Chloro-3-methylphenol CAS: 59-50-7	<5.15	ug/l	S	
4-Chlorophenyl phenyl ether CAS: 7005-72-3	<5.15	ug/l	S	
4-Nitrophenol CAS: 100-02-7	<10.3	ug/l	S	
Acenaphthene CAS: 83-32-9	<5.15	ug/l	S	
Acenaphthylene CAS: 208-96-8	<10.3	ug/l	S	
Anthracene CAS: 120-12-7	<20.6	ug/l	S	
Benzidine CAS: 92-87-5	<51.5	ug/l	S	
Benzo[a]anthracene CAS: 56-55-3	<5.15	ug/l	S	
Benzo[a]pyrene CAS: 50-32-8	<5.15	ug/l	S	
Benzo[b]fluoranthene CAS: 205-99-2	<5.15	ug/l	S	
Benzo[g,h,i]perylene CAS: 191-24-2	<10.3	ug/l	S	
Benzo[k]fluoranthene CAS: 207-08-9	<5.15	ug/l	S	
Bis(2-chloroethoxy)methane CAS: 111-91-1	<5.15	ug/l	S	
Bis(2-chloroethyl)ether CAS: 111-44-4	<5.15	ug/l	S	
Bis(2-chloroisopropyl)ether CAS: 39638-32-9	<5.15	ug/l	S	
Bis(2-ethylhexyl)phthalate CAS: 117-81-7	<10.3	ug/l	S	
Butylbenzylphthalate CAS: 85-68-7	<10.3	ug/l	S	

ENERSOLV
a Solutions Company

SAMPLE RESULTS REPORT

Report Date/Time: 02/21/2017 16:12

REPORT TO
Pat Morgan City of Huntsville WPC 1800 Vermont Road Huntsville, AL 35802-2064

NELAP Accredited Florida DOH #E871078

ENERSOLV maintains National Environmental Laboratory Accreditation Program (NELAP) accreditation through Florida Department of Health (#E871078). Some tests included in this report may not be covered by this accreditation.

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LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025
Cert# L2239 Testing

ADEM Drinking Water Certification No. 40160

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Chase Permit Renewal Grab (Cont'd)	**Sample ID: 1702074-02**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Semivolatiles by EPA 625 (Cont'd)				
Chrysene CAS: 218-01-9	<5.15	ug/l	S	
Dibenzo[a,h]anthracene CAS: 53-70-3	<10.3	ug/l	S	
Diethylphthalate CAS: 84-66-2	<10.3	ug/l	S	
Dimethylphthalate CAS: 131-11-3	<10.3	ug/l	S	
Di-n-butylphthalate CAS: 84-74-2	<5.15	ug/l	S	
Di-n-octylphthalate CAS: 117-84-0	<10.3	ug/l	S	
Fluoranthene CAS: 206-44-0	<5.15	ug/l	S	
Fluorene CAS: 86-73-7	<5.15	ug/l	S	
Hexachlorobenzene CAS: 118-74-1	<10.3	ug/l	S	
Hexachlorobutadiene CAS: 87-68-3	<10.3	ug/l	S	
Hexachlorocyclopentadiene CAS: 77-47-4	<10.3	ug/l	S	
Hexachloroethane CAS: 67-72-1	<10.3	ug/l	Q, S	
Indeno(1,2,3-cd)pyrene CAS: 193-39-5	<10.3	ug/l	S	
Isophorone CAS: 78-59-1	<5.15	ug/l	S	
Naphthalene CAS: 91-20-3	<5.15	ug/l	S	
Nitrobenzene CAS: 98-95-3	<5.15	ug/l	S	
N-Nitrosodimethylamine CAS: 62-75-9	<10.3	ug/l	S	

ENERSOLV
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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Chase Permit Renewal Grab (Cont'd)	**Sample ID: 1702074-02**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Semivolatiles by EPA 625 (Cont'd)				
N-Nitrosodi-n-propylamine CAS: 621-64-7	<10.3	ug/l	S	
N-Nitrosodiphenylamine CAS: 86-30-6	<5.15	ug/l	S	
Pentachlorophenol CAS: 87-86-5	<10.3	ug/l	S	
Phenanthrene CAS: 85-01-8	<5.15	ug/l	S	
Phenol CAS: 108-95-2	<2.58	ug/l	S	
Pyrene CAS: 129-00-0	<10.3	ug/l	S	
Volatiles by EPA 624				
* 1,1,1-Trichloroethane CAS: 71-55-6	<3.00	ug/l		
* 1,1,2,2-Tetrachloroethane CAS: 79-34-5	<3.00	ug/l		
* 1,1,2-Trichloroethane CAS: 79-00-5	<3.00	ug/l		
* 1,1-Dichloroethane CAS: 75-34-3	<3.00	ug/l		
* 1,1-Dichloroethylene CAS: 75-35-4	<3.00	ug/l		
* 1,2-Dichlorobenzene CAS: 95-50-1	<3.00	ug/l		
* 1,2-Dichloroethane CAS: 107-06-2	<3.00	ug/l		
* 1,2-Dichloropropane CAS: 78-87-5	<3.00	ug/l		
* 1,3-Dichlorobenzene CAS: 541-73-1	<3.00	ug/l		
* 1,4-Dichlorobenzene CAS: 106-46-7	<3.00	ug/l		

ENERSOLV
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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Chase Permit Renewal Grab (Cont'd)	**Sample ID: 1702074-02**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Volatiles by EPA 624 (Cont'd)				
* 2-Chloroethylvinyl ether CAS: 110-75-8	<3.00	ug/l		
* Acrolein CAS: 107-02-8	<3.00	ug/l	Q	
* Acrylonitrile CAS: 107-13-1	<3.00	ug/l		
* Benzene CAS: 71-43-2	<3.00	ug/l		
* Bromodichloromethane CAS: 75-27-4	<3.00	ug/l		
* Bromoform CAS: 75-25-2	<3.00	ug/l		
* Bromomethane CAS: 74-83-9	<5.00	ug/l		
* Carbon tetrachloride CAS: 56-23-5	<3.00	ug/l		
* Chlorobenzene CAS: 108-90-7	<3.00	ug/l		
* Chloroethane CAS: 75-00-3	<5.00	ug/l		
* Chloroform CAS: 67-66-3	<3.00	ug/l		
* Chloromethane CAS: 74-87-3	<1.50	ug/l		
* cis-1,3-Dichloropropylene CAS: 10061-01-5	<3.00	ug/l		
* Dibromochloromethane CAS: 124-48-1	<3.00	ug/l		
* Ethyl benzene CAS: 100-41-4	<3.00	ug/l		
* m & p-Xylene CAS: 108-38-3/106-42-3	<3.00	ug/l		
* Methylene chloride CAS: 75-09-2	<5.00	ug/l		

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Analyte Name	Result	Units	Qual	Regulatory Limit
Sample Point: Chase Permit Renewal Grab (Cont'd)	**Sample ID: 1702074-02**	**Collected: 02/14/2017**		**Submitted: 02/14/2017**
Volatiles by EPA 624 (Cont'd)				
* o-Xylene CAS: 95-47-6	<3.00	ug/l		
* Tetrachloroethylene CAS: 127-18-4	<3.00	ug/l		
* Toluene CAS: 108-88-3	<3.00	ug/l		
* trans-1,2-Dichloroethylene CAS: 156-60-5	<3.00	ug/l		
* trans-1,3-Dichloropropylene CAS: 10061-02-6	<3.00	ug/l		
* Trichloroethylene CAS: 79-01-6	<3.00	ug/l		
* Trichlorofluoromethane CAS: 75-69-4	<5.00	ug/l		
* Vinyl chloride CAS: 75-01-4	<1.50	ug/l		

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Cert# L2239 Testing

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All calculations are performed prior to rounding per EPA and *Standard Methods* requirements.

Data Qualifiers:

- **S** Surrogate recovery could not be determined due to required sample dilution or interference from co-eluting organic compounds present in the sample extract.
- **Q** One or more quality control criteria (LCS, continuing calibration, etc) failed. Data may be estimated or biased.
- **<** Less than reporting limit

Analysis Information

Lab Number	Analysis	SpecificMethod	Analyst	Analysis Start Date/Time	Analysis End Date/Time
1702074-01	Total Recoverable Silver	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Recoverable Arsenic	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Recoverable Beryllium	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Calcium	EPA 200.7/6010C	DJN	02/14/2017 16:00	
1702074-01	Total Recoverable Cadmium	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Recoverable Chromium	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Recoverable Copper	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Hardness	EPA 200.7	DJN	02/14/2017 16:00	
1702074-01	Total Magnesium	EPA 200.7/6010C	DJN	02/14/2017 16:00	
1702074-01	Total Recoverable Nickel	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Nitrite-Nitrogen	EPA 300.0	MD	02/14/2017 15:26	
1702074-01	Nitrate-Nitrogen	EPA 300.0	MD	02/14/2017 15:26	
1702074-01	Nitrate plus Nitrite-Nitrogen	EPA 300.0	MD	02/14/2017 15:26	
1702074-01	Total Phosphorus	EPA 365.3	JW	02/14/2017 15:30	
1702074-01	Total Recoverable Lead	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Recoverable Antimony	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Recoverable Selenium	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Kjeldahl Nitrogen	SM 4500-Norg C	RAC	02/15/2017 06:00	
1702074-01	Total Recoverable Thallium	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-01	Total Recoveable Zinc	EPA 200.8/6020A	KW	02/16/2017 08:45	
1702074-02	Total Cyanide	ASTM D7511-09	JW	02/16/2017 09:15	
1702074-02	HEM (Oil and Grease)	EPA 1664A	JG	02/18/2017 13:30	
1702074-02	Phenolics (4AAP)	EPA 420.1	SH	02/15/2017 09:00	
1702074-02	BN/AE Semivolatiles	EPA 625	AJL	02/16/2017 08:45	
1702074-02	Volatile Organic Analytes	EPA 624	ET	02/17/2017 01:22	

ENERSOLV
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SAMPLE RESULTS REPORT

Report Date/Time: 02/21/2017 16:12

REPORT TO
Pat Morgan City of Huntsville WPC 1800 Vermont Road Huntsville, AL 35802-2064

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LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025

Cert# L2239 Testing

ADEM Drinking Water Certification No. 40160

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The results contained in this report are only representative of the sample(s) received.

ENERSOLV
a Solutions Company

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256) 350-0846

www.enersolv.com

PAGE	1	of	1
Chase Permit Renewal			

COMPANY/CLIENT NAME	CLIENT P O. NUMBER	ENERSOLV PROJECT NUMBER
Huntsville WPC		
CLIENT POINT OF CONTACT	**CLIENT PHYSICAL ADDRESS**	**CITY/STATE/ZIP**
Scott Vassar	1800 Vermont Road	Huntsville, AL 35802
CLIENT EMAIL	**PHONE NUMBER**	**OTHER INFORMATION**
scott.vassar@huntvilleal.gov	256-883-3756	
SAMPLE COLLECTED BY	**EXPEDITED REPORT DELIVERY (SURCHARGE)**	
Kenneth Greenlee	**DATE DUE (REQUIRED)**	

ENERSOLV LAB NUMBER	SAMPLE DESCRIPTION	SAMPLE TRANSFER/GRAB DATE	SAMPLE TRANSFER/GRAB TIME	GRAB	COMP	AGTR2, ASTR2, BETR2	CDTR2, CRTR2, CUTR2	NITR2, PBTR2, SBTR2	SETR2, TLTR2, ZNTR2	HG-AA	HARD	NO3NO2IC	P TOTAL	TKN	CN	OG	PHENOLICS	SV 625 PER.RENEWAL	VOA 624 Form2A
170214-01	Chase Permit Renewal Comp.	2/14/17	6:10a		X	X	X	X	X	X	X	X	X	X					
02	Chase Permit Renewal Grab	2/14/17	6:30a	X											X	X	X	X	X

Comments:

Collector to complete shaded areas, as applicable

SAMPLE TEMPERATURE RECEIVED @ 5.6

SAMPLER INFORMATION		FIELD INFORMATION							
Start Date		pH su		TRC mg/l		DO mg/l		Temp deg C	
Start Time		Date		Date		Date		Date	
Stop Date		Time		Time		Time		Time	
Stop Time		Analyst		Analyst		Analyst		Analyst	
		SM 4500H+B		SM 4500-Cl D		SM 4500-O G		SM 2550B	

Qty	TYPE	Parameter	
1	Poly Qrt HNO3	A	Metals
1	Poly Pint Cool 6c	B	NO3NO2
1	Poly Pint H2SO4 Cool 6c	C	P, TKN
1	Poly Pint NAOH Cool 6c	A	CN
2	Glass WM 1000ml HCL Cool 6c	BC	OG
1	Amb Glass 1000ml H2SO4 Cool 6c	D	Phenolics
4	Amb Glass 1000ml Cool 6c	EFGH	625
2/2	VOA 40ml HCL/Iced	IJKL	624

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Kenneth Greenlee	2-14-17	8:00		2/14/17	11:24			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
	2/14/17	8:00						
RECEIVED FOR LABORATORY USE BY: (SIGNATURE)	**DATE**	**TIME**	**SAMPLE STATUS**					
	2-14-17	1154	☑ Accepted	☐ Rejected	☐ Accepted with Exception			

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 24, 2019

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Gl
7 Al
8 Sc

City of Huntsville WPC

Sample Delivery Group:	L1149680
Samples Received:	10/14/2019
Project Number:	Chase
Description:	~~Aldridge~~ Permit Renewal

Report To: Pat Morgan
1800 Vermont Road
Huntsville, AL 35802-2064

Entire Report Reviewed By:

Kelly Mercer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

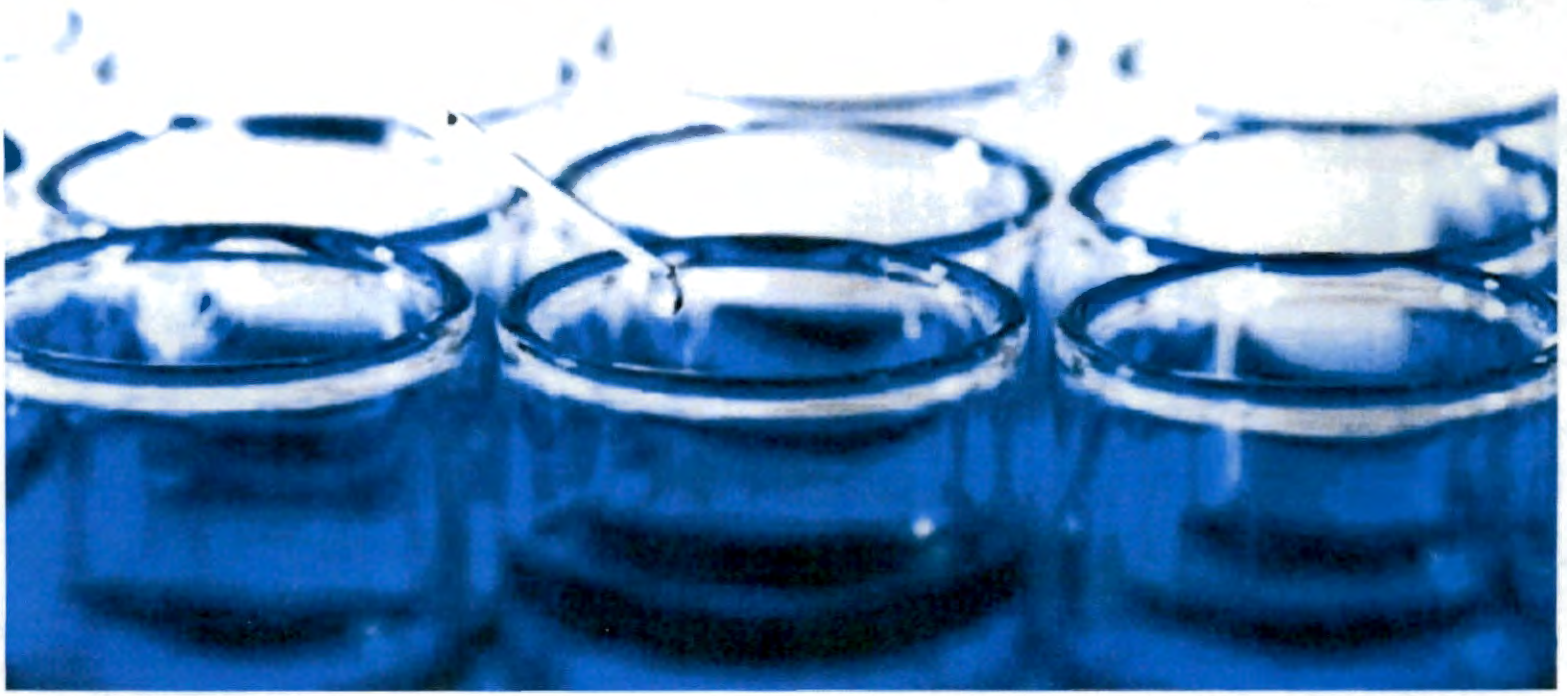

TABLE OF CONTENTS

ONE LAB. NATIONWIDE.

CHASE P. RENEWAL COMP L1149680-01 WW

Collected by: Client | Collected date/time: 10/14/19 06:36 | Received date/time: 10/14/19 11:47

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1364644	1	10/21/19 12:03	10/21/19 12:03	CCE	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG1363807	1	10/15/19 08:00	10/16/19 11:00	JDR	Decatur, AL
Wet Chemistry by Method 300.0	WG1362495	1	10/14/19 13:22	10/14/19 13:22	LLW	Decatur, AL
Wet Chemistry by Method 4500-Norg C	WG1363908	1	10/16/19 08:00	10/16/19 12:00	BMW	Decatur, AL
Wet Chemistry by Method EPA 365.3	WG1363778	1	10/17/19 09:00	10/17/19 12:00	JTM	Decatur, AL
Mercury by Method 245.1	WG1362847	1	10/15/19 19:00	10/16/19 10:34	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1364644	1	10/19/19 11:00	10/21/19 12:03	CCE	Mt. Juliet, TN

CHASE P. RENEWAL GRAB L1149680-02 WW

Collected by: Client | Collected date/time: 10/14/19 06:45 | Received date/time: 10/14/19 11:47

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 1664A	WG1364371	1	10/17/19 06:55	10/17/19 17:00	MBP	Mt. Juliet, TN
Wet Chemistry by Method 420.4	WG1364310	1	10/17/19 12:23	10/18/19 18:01	SDL	Mt. Juliet, TN
Wet Chemistry by Method ASTM D7511-09	WG1363913	1	10/16/19 14:16	10/16/19 14:16	SDH	Decatur, AL
Volatile Organic Compounds (GC/MS) by Method 624.1	WG1367503	1	10/23/19 03:27	10/23/19 03:27	HJF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG1364808	1	10/17/19 20:49	10/18/19 14:12	AO	Mt. Juliet, TN

Cp
Tc
Ss
Cn
Sr
Gl
Al
Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Kelly Mercer
Project Manager

Sample Delivery Group (SDG) Narrative

VOC pH outside of method requirement.

Lab Sample ID	Project Sample ID	Method
L1149680-02	CHASE P. RENEWAL GRAB	624.1

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	222		2.50	1	10/21/2019 12:03	WG1364644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	404		1.00	1	10/16/2019 11:00	WG1363807

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	9.51		0.0600	1	10/14/2019 13:22	WG1362495

Wet Chemistry by Method 4500-Norg C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	2.17		1.50	1	10/16/2019 12:00	WG1363908

Wet Chemistry by Method EPA 365.3

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Phosphorus	1.22		1.00	1	10/17/2019 12:00	WG1363778

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/16/2019 10:34	WG1362847

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.0100	1	10/21/2019 12:03	WG1364644
Arsenic	ND		0.0100	1	10/21/2019 12:03	WG1364644
Beryllium	ND		0.00200	1	10/21/2019 12:03	WG1364644
Cadmium	ND		0.00200	1	10/21/2019 12:03	WG1364644
Calcium	76.4		1.00	1	10/21/2019 12:03	WG1364644
Chromium	ND		0.0100	1	10/21/2019 12:03	WG1364644
Copper	0.0100		0.0100	1	10/21/2019 12:03	WG1364644
Lead	ND		0.00500	1	10/21/2019 12:03	WG1364644
Magnesium	7.59		1.00	1	10/21/2019 12:03	WG1364644
Nickel	0.0182		0.0100	1	10/21/2019 12:03	WG1364644
Selenium	ND		0.0100	1	10/21/2019 12:03	WG1364644
Silver	ND		0.00500	1	10/21/2019 12:03	WG1364644
Thallium	ND		0.0100	1	10/21/2019 12:03	WG1364644
Zinc	ND		0.0500	1	10/21/2019 12:03	WG1364644

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Oil & Grease (Hexane Ext)	ND		5.05	1	10/17/2019 17:00	WG1364371

Wet Chemistry by Method 420.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Total Phenol by 4AAP	ND		0.0400	1	10/18/2019 18:01	WG1364310

Wet Chemistry by Method ASTM D7511-09

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/16/2019 14:16	WG1363913

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acrolein	ND		0.0500	1	10/23/2019 03:27	WG1367503
Acrylonitrile	ND		0.0100	1	10/23/2019 03:27	WG1367503
Benzene	ND		0.00100	1	10/23/2019 03:27	WG1367503
Bromoform	ND		0.00100	1	10/23/2019 03:27	WG1367503
Carbon tetrachloride	ND		0.00100	1	10/23/2019 03:27	WG1367503
Chlorobenzene	ND		0.00100	1	10/23/2019 03:27	WG1367503
Chlorodibromomethane	ND		0.00100	1	10/23/2019 03:27	WG1367503
Chloroethane	ND		0.00500	1	10/23/2019 03:27	WG1367503
2-Chloroethyl vinyl ether	ND		0.0500	1	10/23/2019 03:27	WG1367503
Chloroform	ND		0.00500	1	10/23/2019 03:27	WG1367503
Bromodichloromethane	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,1-Dichloroethane	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,2-Dichloroethane	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,1-Dichloroethene	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,2-Dichloropropane	ND		0.00100	1	10/23/2019 03:27	WG1367503
cis-1,3-Dichloropropene	ND		0.00100	1	10/23/2019 03:27	WG1367503
trans-1,3-Dichloropropene	ND		0.00100	1	10/23/2019 03:27	WG1367503
Ethylbenzene	ND		0.00100	1	10/23/2019 03:27	WG1367503
Bromomethane	ND		0.00500	1	10/23/2019 03:27	WG1367503
Chloromethane	ND		0.00250	1	10/23/2019 03:27	WG1367503
Methylene Chloride	ND		0.00500	1	10/23/2019 03:27	WG1367503
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/23/2019 03:27	WG1367503
Tetrachloroethene	ND		0.00100	1	10/23/2019 03:27	WG1367503
Toluene	ND		0.00100	1	10/23/2019 03:27	WG1367503
trans-1,2-Dichloroethene	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,1,1-Trichloroethane	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,1,2-Trichloroethane	ND		0.00100	1	10/23/2019 03:27	WG1367503
Trichloroethene	ND		0.00100	1	10/23/2019 03:27	WG1367503
Vinyl chloride	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,2-Dichlorobenzene	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,3-Dichlorobenzene	ND		0.00100	1	10/23/2019 03:27	WG1367503
1,4-Dichlorobenzene	ND		0.00100	1	10/23/2019 03:27	WG1367503
(S) Toluene-d8	*96.6*		*80.0-120*		*10/23/2019 03:27*	WG1367503
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*10/23/2019 03:27*	WG1367503
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*10/23/2019 03:27*	WG1367503

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acenaphthene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Acenaphthylene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Anthracene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Benzidine	ND		0.0100	1	10/18/2019 14:12	WG1364808
Benzo(a)anthracene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Benzo(a)pyrene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Benzo(b)fluoranthene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Benzo(g,h,i)perylene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Benzo(k)fluoranthene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Bis(2-chlorethoxy)methane	ND		0.0100	1	10/18/2019 14:12	WG1364808
Bis(2-chloroethyl)ether	ND		0.0100	1	10/18/2019 14:12	WG1364808
Bis(2-chloroisopropyl)ether	ND		0.0100	1	10/18/2019 14:12	WG1364808
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	10/18/2019 14:12	WG1364808
4-Bromophenyl-phenylether	ND		0.0100	1	10/18/2019 14:12	WG1364808
Benzylbutyl phthalate	ND		0.00300	1	10/18/2019 14:12	WG1364808
2-Chloronaphthalene	ND		0.00100	1	10/18/2019 14:12	WG1364808
4-Chlorophenyl-phenylether	ND		0.0100	1	10/18/2019 14:12	WG1364808
Chrysene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Dibenz(a,h)anthracene	ND		0.00100	1	10/18/2019 14:12	WG1364808
3,3-Dichlorobenzidine	ND		0.0100	1	10/18/2019 14:12	WG1364808
Diethyl phthalate	ND		0.00300	1	10/18/2019 14:12	WG1364808
Dimethyl phthalate	ND		0.00300	1	10/18/2019 14:12	WG1364808
Di-n-butyl phthalate	ND		0.00300	1	10/18/2019 14:12	WG1364808
2,4-Dinitrotoluene	ND		0.0100	1	10/18/2019 14:12	WG1364808
2,6-Dinitrotoluene	ND		0.0100	1	10/18/2019 14:12	WG1364808
Di-n-octyl phthalate	ND		0.00300	1	10/18/2019 14:12	WG1364808
1,2-Diphenylhydrazine	ND		0.0100	1	10/18/2019 14:12	WG1364808
Fluoranthene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Fluorene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Hexachlorobenzene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Hexachloro-1,3-butadiene	ND		0.0100	1	10/18/2019 14:12	WG1364808
Hexachloroethane	ND		0.0100	1	10/18/2019 14:12	WG1364808
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Isophorone	ND		0.0100	1	10/18/2019 14:12	WG1364808
Naphthalene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Nitrobenzene	ND		0.0100	1	10/18/2019 14:12	WG1364808
n-Nitrosodimethylamine	ND		0.0100	1	10/18/2019 14:12	WG1364808
n-Nitrosodi-n-propylamine	ND		0.0100	1	10/18/2019 14:12	WG1364808
n-Nitrosodiphenylamine	ND		0.0100	1	10/18/2019 14:12	WG1364808
Phenanthrene	ND		0.00100	1	10/18/2019 14:12	WG1364808
Pyrene	ND		0.00100	1	10/18/2019 14:12	WG1364808
1,2,4-Trichlorobenzene	ND		0.0100	1	10/18/2019 14:12	WG1364808
2-Chlorophenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
2,4-Dichlorophenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
2,4-Dimethylphenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
4,6-Dinitro-2-methylphenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
2,4-Dinitrophenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
2-Nitrophenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
4-Nitrophenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
4-Chloro-3-methylphenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
Pentachlorophenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
Phenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
2,4,6-Trichlorophenol	ND		0.0100	1	10/18/2019 14:12	WG1364808
(S) 2-Fluorophenol	*41.9*		*10.0-120*		*10/18/2019 14:12*	WG1364808
(S) Phenol-d5	*25.5*		*8.00-424*		*10/18/2019 14:12*	WG1364808
(S) Nitrobenzene-d5	*55.6*		*15.0-314*		*10/18/2019 14:12*	WG1364808

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	*61.6*		*22.0-127*		*10/18/2019 14:12*	WG1364808
(S) 2,4,6-Tribromophenol	*61.5*		*10.0-153*		*10/18/2019 14:12*	WG1364808
(S) p-Terphenyl-d14	*73.3*		*29.0-141*		*10/18/2019 14:12*	WG1364808

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Cp
1 Tc
3 Ss
4 Cn
5 Sr
6 GI
7 AI
8 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

Pace Analytical
National Center for Testing & Innovation

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256) 350-0846
www.pacenational.com

T155248
PAGE 1 of 1
Chase Permit Renewal
HUNTWPCHAL

COMPANY/CLIENT NAME	CLIENT P.O. NUMBER	ENERSOLV PROJECT NUMBER
Huntsville WPC		
CLIENT POINT OF CONTACT	**CLIENT PHYSICAL ADDRESS**	**CITY/STATE/ZIP**
Pat Morgan	1800 Vermont Road	Huntsville, AL 35802
CLIENT EMAIL	**PHONE NUMBER**	**OTHER INFORMATION**
pat.morgan@huntsvilleal.gov	256-883-3756	
SAMPLE COLLECTED BY	**EXPEDITED REPORT DELIVERY (SURCHARGE)**	
	DATE DUE (REQUIRED)	

REQUESTED ANALYSES

PACE ANALYTICAL LAB NUMBER	SAMPLE DESCRIPTION	SAMPLE TRANSFER/GRAB DATE	SAMPLE TRANSFER/GRAB TIME	GRAB	COMP	AGICP, ASICP, BEICP (MT)	CDICP, CRICP, CUICP (MT)	NIICP, PBICP, SBICP (MT)	SEICP, TLICP, ZNICP (MT)	HG, CAICP, MGICP (MT)	HARDMETALS (MT)	DECN03N02, DECTOS	DECPT, DECTKN	DECCN	OGHEX (MT)	PHT	625.1F2C (MT)	V624.1F2C (MT)	
L1149060-1	Chase Permit Renewal Comp	10-14-19	0636		X	X	X	X	X	X	X	X	X						
-2	Chase Permit Renewal Grab	10-14-19	0645	X			X	X	X	X	X	X	X	X	X	X	X	X	

Comments: Field parameters performed by client

Collector to complete shaded areas, as applicable

SAMPLE TEMPERATURE RECEIVED @ 1.9

COMPOSITE SAMPLER INFO	FIELD INFORMATION				Qty	TYPE	Parameter
	SM 4500H+B	SM 4500-Cl D	SM 4500-O G	SM 2550B	1	Poly Pint HNO3	Metals
Start Date	pH su	TRC mg/l	DO mg/l	Temp deg C	1	Poly Qrt Cool 6c	NN, TDS
Start Time	Date	Date	Date	Date	1	Poly Pint H2SO4 Cool 6c	P, TKN
Stop Date	Time	Time	Time	Time	1	Poly Pint NAOH Cool 6c	CN
Stop Time	Analyst	Analyst	Analyst	Analyst	2	GL WM 1000ml HCL Cool 6c	OG
					1	Amber 1000ml H2SO4 Cool 6c	Phenolics
					2	Amber 100ml Cool 6c	625
					3	VOA 40ml Vials Cool 6c	624

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
	10-14-19	837A		10/14/19	1147A		10/14/19	1700
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	10/14/19	837A		10/14/19	1147			

RECEIVED FOR LABORATORY USE BY (SIGNATURE) | DATE 10/14/19 | TIME 1147 | SAMPLE STATUS ☒ Accepted ☐ Rejected ☐ Accepted with Exception

Enersolv Form FLD-020-SOP A rev. 5

ENERSOLV
a Solutions Company

Chase Qtly Mercury
02/16

RECEIVED
JUN 21 2021
MUNICIPAL SECTION

March 8, 2016

Scott Vassar
City of Huntsville WPC
1800 Vermont Road
Huntsville, AL 35802

We appreciate the opportunity to provide our services to you for this project.

ENERSOLV is accredited to ISO/IEC 17025:2005 by Laboratory Accreditation Bureau and to the TNI 2003 Standard by the Florida Department of Health. Our quality system also meets relevant quality system requirements of **ISO 9001:2008**. Not all tests performed by *ENERSOLV* are covered by these accreditations. Tests within our scope of accreditation are indicated by an asterisk (*) in the Test Result section of this report. Tests not included in the accreditations are performed in accordance with *ENERSOLV* Standard Operating Procedures and the quality control program using, where applicable, USEPA methodology.

This cover page and the attached chain-of-custody record(s) are integral parts of your report. This information shall remain in *ENERSOLV's* active database for a period of one (1) calendar year before archiving. Any replacement of this information after archiving may result in an administrative fee to cover the cost of retrieval.

If you have any questions or would like more information regarding these analyses, please call us at (256) 350-0846.

Sincerely,

Karen Sutton

Karen Sutton
Vice President Client Services

2220 Beltline Road SW • Decatur, Alabama 35601
P.O. Box 1646 • Decatur, Alabama 35602 • (256) 350-0846 • Fax: (256) 350-0686

eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

20 February 2016

Margaret Aiken
Enersolv
2220 Beltline Road SW
Decatur, AL 35601

RE: EPA 1631 Total Hg In Wastewater 2016

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

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

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

eurofins
Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1601681-03 Field Blank	1602250-01	Water	08-Feb-16 08:35	09-Feb-16 09:30
1601681-01 Effluent	1602250-02	Water	08-Feb-16 08:40	09-Feb-16 09:30
1601681-02 Duplicate	1602250-03	Water	08-Feb-16 08:43	09-Feb-16 09:30

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Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 2/9/2016 9:30:00 AM . The samples were received intact, within a sealed cooler at ambient temperature.

SAMPLE PREPARATION AND ANALYSIS

Samples were prepared and analyzed for total mercury by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631E.

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

Eurofins Frontier Global Sciences, Inc.

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Amy Goodall

Amy Goodall, Project Manager

eurofins

1602250

Sample Receipt Checklist

EFGS Work Order: ~~1601225~~ 1602250 2/9/16 CM

Client: Enersolv Date & Time Received: 2/9/16 9:30 Date Labeled: 2/9/16 Labeled By: CSP

Project: Received By: LSM Label Verified By: CMR

# of Coolers Received: 1 Samples Arrived By: ✓ Shipping Service ____ Courier ____ Hand ____ Other (Specify: ____)

Coolant: ☑ None/Ambient ☐ Loose Ice ☐ Gel Ice ☐ Dry Ice Coolant Required: Y / N Temp Blank Used: Y/N for Cooler(s): ____

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	N	
Custody seals signed:	N	

TID:	CF:	°C	Date/time:	By:		
Cooler 1:	°C	w/ CF: °C	Cooler 4:	°C	w/ CF:	°C
Cooler 2:	°C	w/ CF: °C	Cooler 5:	°C	w/ CF:	°C
Cooler 3:	°C	w/ CF: °C	Cooler 6:	°C	w/ CF:	°C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by:	Y	
Preservation type:	Y	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	N	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	Y	

Anomalies/Non-conformances (attach additional pages if needed):

1601225

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Chain of Custody Record & Laboratory Analysis Request: Air, Water, Sediments, Plant and Animal Tissue, Hydrocarbon & Other Samples

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
Phone: 425-686-1996
Fax: 425-686-3096
info@frontiergs.com
http://www.frontiergs.com

Page ___ of ___

Client: EnerSolu	Contact:		EFGS PM:
Address: 2220 Beltline Rd. Decatur, AL 35601	Phone: Fax:		Date:
Project Name: Chase WWTP	E-mail:		TAT (business days): **20** (std) **15 10 5 4 3 2 24 hrs.** (For TAT < 10 days, contact PM. Surcharges apply for expedited TAT)
Report To: Margaret Aiken	Contract/PO:		Saturday delivery? ☐ Y ☐ N (If yes, please contact PM)
Address:	Invoice To:		EDD ☐ Y ☐ N
Phone: Fax:	Address:		QA ☐ Standard ☐ High
E-mail: maiken@enersolu.com	Phone: Fax:		
	E-mail:		

No.	Engraved Bottle ID	Sample ID	# of Bottles	Matrix	Date & Time	Sampled By	Field Filtered (Y/N)	Field Preserved: HNO_3, HCl BrCl Other (%)	Analyses Requested: Hg1631	Comments
1	-03	Trip Field Blank	1		2-5-16 0835	TD	N	N/A	X	Sampled by Trent Derrick
2	1601681-01	Effluent	1		2-5-16 0840	TD	N	N/A	X	
3	-02	Duplicate	1		2-5-16 0843	TD	N	N/A	X	
4										
5										
6										
7										P.O. E-11129
8										
9										
10										
11										
12										

For Laboratory Use Only

COC Seal: N/A
Cooler Temp: Ambient
Carrier: FedEx
VTSR: 9:30
# of Coolers:

Comments:

Matrix Codes:
FW: Fresh Water
WW: Waste Water
SB: Sea and Brackish Water
SS: Soil and Sediment
TS: Plant and Animal Tissue
HC: Hydrocarbons
TR: Trap
OT: Other

Relinquished By: To FedEx	Received By:	Received By:
Name: Trent Derrick	Name: Lan Mittet	Name:
Organization: EnerSolu	Organization: EFGS	Organization:
Date & Time: 2-8-16 1024	Date & Time: 2/4/16 9:30	Date & Time:

Tracking number: 7755 9673 0823

Sample Disposal:
☐ Return (shipping fees may apply)
☐ Standard Disposal – 30 Days after report
☐ Retain for ____ weeks after report (storage fees may apply)

By signing, you declare that you agree with EFGS' terms and conditions, and that you authorize EFGS to perform the specified analyses.

Customer Approval: _____ Date: 2-8-16

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Frontier Global Sciences

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Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

1601681-03 Field Blank

1602250-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	ND	-	0.50	ng/L	1	F602200	09-Feb-16	6B11011	11-Feb-16	EPA 1631E	U

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The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amy Goodall

Amy Goodall, Project Manager

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425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

1601681-01 Effluent

1602250-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	4.82	-	0.50	ng/L	1	F602200	09-Feb-16	6B11011	11-Feb-16	EPA 1631E	

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Amy Goodall

Amy Goodall, Project Manager

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

1601681-02 Duplicate

1602250-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	**5.73**	-	0.50	ng/L	1	F602200	09-Feb-16	6B11011	11-Feb-16	EPA 1631E	

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Amy Goodall, Project Manager

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F602200 - EPA 1631E BrCl Oxidation											
Blank (F602200-BLK1)					Prepared & Analyzed: 11-Feb-16						
Mercury	ND	-	0.50	ng/L							U
Blank (F602200-BLK2)					Prepared & Analyzed: 11-Feb-16						
Mercury	ND	-	0.50	ng/L							U
Blank (F602200-BLK3)					Prepared & Analyzed: 11-Feb-16						
Mercury	ND	-	0.50	ng/L							U
Blank (F602200-BLK4)					Prepared & Analyzed: 11-Feb-16						
Mercury	ND	-	0.52	ng/L							QB-06, U
LCS (F602200-BS1)					Prepared & Analyzed: 11-Feb-16						
Mercury	15.37	-	0.50	ng/L	15.679		98.0	80-120			
LCS Dup (F602200-BSD1)					Prepared & Analyzed: 11-Feb-16						
Mercury	15.29	-	0.50	ng/L	15.679		97.5	80-120	0.522	24	
Duplicate (F602200-DUP1)		Source: 1602250-02			Prepared & Analyzed: 11-Feb-16						
Mercury	4.37	-	0.50	ng/L		4.82			9.75	24	
Matrix Spike (F602200-MS1)		Source: 1602250-02			Prepared & Analyzed: 11-Feb-16						
Mercury	25.25	-	0.50	ng/L	20.240	4.82	101	71-125			
Matrix Spike (F602200-MS2)		Source: 1602287-01			Prepared & Analyzed: 11-Feb-16						
Mercury	18.61	-	0.50	ng/L	20.240	6.31	60.8	71-125			QM-07
Matrix Spike (F602200-MS3)		Source: 1602287-01			Prepared & Analyzed: 11-Feb-16						
Mercury	25.34	-	0.50	ng/L	20.240	6.31	94.0	71-125			

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425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F602200 - EPA 1631E BrCl Oxidation											
Matrix Spike Dup (F602200-MSD1)		**Source: 1602250-02**			Prepared & Analyzed: 11-Feb-16						
Mercury	25.50	-	0.50	ng/L	20.240	4.82	102	71-125	0.981	24	
Matrix Spike Dup (F602200-MSD2)		**Source: 1602287-01**			Prepared & Analyzed: 11-Feb-16						
Mercury	18.69	-	0.50	ng/L	20.240	6.31	61.2	71-125	0.444	24	QM-07
Matrix Spike Dup (F602200-MSD3)		**Source: 1602287-01**			Prepared & Analyzed: 11-Feb-16						
Mercury	24.23	-	0.50	ng/L	20.240	6.31	88.6	71-125	4.48	24	

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: EPA 1631 Total Hg In Wastewater 2016	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	20-Feb-16 12:16

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on LCS and LCSD recoveries within control limits and, when analysis permits, acceptable AS/ASD.
QB-06	The blank was preserved to 5% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

ENERSOLV
A Solutions Company

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256) 350-0846

www.enersolv.com

COC NUMBER	27895		
Page	1	of	1

COMPANY/CLIENT NAME	ACCOUNT NUMBER	CLIENT P O NUMBER	ENERSOLV PROJECT NUMBER
City of Huntsville WPC	1453		

CLIENT POINT OF CONTACT	CLIENT PHYSICAL ADDRESS	CITY/STATE/ZIP
Ed Fincher	1800 Vermont Road	Huntsville AL 35802-2064

CLIENT EMAIL	PHONE NUMBER	OTHER INFORMATION
ed.fincher@hsvcity.com	256 883-3756	

SAMPLE COLLECTED BY: CT

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE (REQUIRED)

REQUESTED ANALYSES

ENERSOLV LAB NO	SAMPLE LOCATION CODE	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	GRAB	COMP	IHG 1631
160681-01	Huntsville-WPC-Chase	Chase Wastewater	2-8-16	0840	X		X
02		Duplicate	2-8-16	0843	X		X
03		Travel Blank	2-8-16	0835	X		X

Comments: Collector to complete shaded areas, as applicable

Field Information

									Qty	Type	Vol.	Preserv.	Parameter
Sampler		pH su	N/A	TRC mg/l	N/A	DO mg/l	N/A	Temp deg C	N/A					
Start Date		Date	N/A	Date	N/A	Date	N/A	Date	N/A					
Start Time		Time	N/A	Time	N/A	Time	N/A	Time	N/A					
Stop Date		Analyst	N/A	Analyst	N/A	Analyst	N/A	Analyst	N/A					
Stop Time		SM 4500H+		SM 4500-Cl D		SM 4500-O G		SM 2550B						

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
CT	2-8-16	1024						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

RECEIVED FOR LABORATORY USE BY (SIGNATURE): [signature] DATE: 2/8/16 TIME: 1024

SAMPLE STATUS: ☑ Accepted ☐ Rejected ☐ Accepted with Exception

ENERSOLV
a Solutions Company

Chase Qtrly Mercury
08/16

August 23, 2016

RECEIVED
JUN 21 2021
MUNICIPAL SECTION

Scott Vassar
City of Huntsville WPC
1800 Vermont Road
Huntsville, AL 35802-2064

We appreciate the opportunity to provide our services to you for this project.

ENERSOLV is accredited to ISO/IEC 17025:2005 by Laboratory Accreditation Bureau and to the TNI 2003 Standard by the Florida Department of Health. Our quality system also meets relevant quality system requirements of **ISO 9001:2008**. Not all tests performed by *ENERSOLV* are covered by these accreditations. Tests within our scope of accreditation are indicated by an asterisk (*) in the Test Result section of this report. Tests not included in the accreditations are performed in accordance with *ENERSOLV* Standard Operating Procedures and the quality control program using, where applicable, USEPA methodology.

This cover page and the attached chain-of-custody record(s) are integral parts of your report. This information shall remain in *ENERSOLV's* active database for a period of one (1) calendar year before archiving. Any replacement of this information after archiving may result in an administrative fee to cover the cost of retrieval.

If you have any questions or would like more information regarding these analyses, please call us at (256) 350-0846.

Sincerely,

Karen Sutton

Karen Sutton
Vice President Client Services

2220 Beltline Road SW • Decatur, Alabama 35601
P.O. Box 1646 • Decatur, Alabama 35602 • (256) 350-0846 • Fax: (256) 350-0686

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Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

19 August 2016

Margaret Aiken
Enersolv
2220 Beltline Road SW
Decatur, AL 35601

RE: EPA 1631 Total Hg In Wastewater 2016

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

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

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

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Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Chase - Effluent	1608318-01	Water	03-Aug-16 13:23	10-Aug-16 08:30
Chase - Duplicate	1608318-02	Water	03-Aug-16 13:25	10-Aug-16 08:30
Chase - Blank	1608318-03	Water	03-Aug-16 13:19	10-Aug-16 08:30

Eurofins Frontier Global Sciences, Inc.

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Amy Goodall

Amy Goodall, Project Manager

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Frontier Global Sciences

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425.686.1996 Phone
425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 8/10/2016 8:30:00 AM . The samples were received intact, within a sealed cooler at ambient temperature.

SAMPLE PREPARATION AND ANALYSIS

Samples were prepared and analyzed for total mercury by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631E.

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

Eurofins Frontier Global Sciences, Inc.

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Amy Goodall

Amy Goodall, Project Manager

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Frontier Global Sciences

Sample Receipt Checklist

EFGS Work Order: 1608318

Client: Enersolv Date & Time Received: 8/10/16 8:30 Date Labeled: 8/10/16 Labeled By: DML

Project: _____ Received By: BGW Label Verified By: CSP

# of Coolers Received: 1 Samples Arrived By: ____ Shipping Service ____ Courier ____ Hand ____ Other (Specify: _____)

Coolant: ☑ None/Ambient ☐ Loose Ice ☐ Gel Ice ☐ Dry Ice Coolant Required: Y /(N) Temp Blank Used: Y/(N) for Cooler(s): _____

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	N	
Custody seals signed:	N	

TID:	CF:	°C	Date/time:		By:	
Cooler 1:	°C	w/ CF: °C	Cooler 4:	°C	w/ CF:	°C
Cooler 2:	°C	w/ CF: °C	Cooler 5:	°C	w/ CF:	°C
Cooler 3:	°C	w/ CF: °C	Cooler 6:	°C	w/ CF:	°C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by:	Y	
Preservation type:	Y	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	NA	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	Y	

Anomalies/Non-conformances (attach additional pages if needed):

1608318

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Frontier Global Sciences

Chain of Custody Record & Laboratory Analysis Request: Air, Water, Sediments, Plant and Animal Tissue, Hydrocarbon & Other Samples

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Bothell, WA 98011
Phone: 425-686-1996
Fax: 425-686-3096
info@frontiergs.com
http://www.frontiergs.com

Page ___ of ___

Client: Enersolv	Contact:
Address: 2220 Beltline Road Decatur, Al 35603	Phone: Fax:
	E-mail:
Project Name: Huntsville - Chase	Contract/PO:
Report To: Margaret Aiken	Invoice To:
Address:	Address:
Phone: Fax:	Phone: Fax:
E-mail:	E-mail:

EFGS PM:
Date:
TAT (business days): 20 (std) 15 10 5 4 3 2 24 hrs. (For TAT < 10 days, contact PM. Surcharges apply for expedited TAT)
Saturday delivery? ☐ Y ☐ N (If yes, please contact PM)
EDD ☐ Y ☐ N
QA ☐ Standard ☐ High

No.	Engraved Bottle ID	Sample ID	# of Bottles	Matrix	Date & Time	Sampled By	Field Filtered (Y/N)	Field Preserved: HNO₃ HCl BrCl Other (%)	Analyses Requested: HG 1631					
1		Chase - Effluent	1	WW	8-3-16 1323	DM	N		X					
2		Chase - Duplicate	1	WW	8-3-16 1325	DM	N		X					
3		Chase - Blank	1	WW	8-3-16 1319	DM	N		X					
4														
5														
6														
7														
8														
9														
10														
11														
12														

Comments:
Sampled By: Darrin Miller
1609875.01
1609875.02
1609875.03
P.O. E11563

For Laboratory Use Only
COC Seal: NA
Cooler Temp: Ambient
Carrier: FedEx
VTSR: 8:30
# of Coolers:
Comments:

Matrix Codes:
FW: Fresh Water
WW: Waste Water
SB: Sea and Brackish Water
SS: Soil and Sediment
TS: Plant and Animal Tissue
HC: Hydrocarbons
TR: Trap
OT: Other

Relinquished By:	Received By:	Received By:
Darrin Miller To FedEx	BGW	
Name: Darrin Miller	Name: Brian Wright	Name:
Organization: Enersolv	Organization: EFGS	Organization:
Date & Time: 8-4-16 0800	Date & Time: 8/10/16 8:30	Date & Time:

Tracking number: 7764 1664 3187

Sample Disposal:
☐ Return (shipping fees may apply)
☐ Standard Disposal – 30 Days after report
☐ Retain for ____ weeks after report (storage fees may apply)

By signing, you declare that you agree with EFGS' terms and conditions, and that you authorize EFGS to perform the specified analyses.

Customer Approval: ______________ Date: ________

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

Chase - Effluent

1608318-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	4.33	-	0.50	ng/L	1	F608287	10-Aug-16	6H13001	12-Aug-16	EPA 1631E	

Eurofins Frontier Global Sciences, Inc.

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Amy Goodall

Amy Goodall, Project Manager

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

Chase - Duplicate

1608318-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	3.60	-	0.50	ng/L	1	F608287	10-Aug-16	6H13001	12-Aug-16	EPA 1631E	

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Amy Goodall, Project Manager

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425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

Chase - Blank

1608318-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	ND	-	0.50	ng/L	1	F608287	10-Aug-16	6H13001	12-Aug-16	EPA 1631E	U

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F608287 - EPA 1631E BrCl Oxidation											
Blank (F608287-BLK1)					Prepared & Analyzed: 12-Aug-16						
Mercury	ND		0.50	ng/L							U
Blank (F608287-BLK2)					Prepared & Analyzed: 12-Aug-16						
Mercury	ND		0.50	ng/L							U
Blank (F608287-BLK3)					Prepared & Analyzed: 12-Aug-16						
Mercury	ND		0.50	ng/L							U
Blank (F608287-BLK4)					Prepared & Analyzed: 12-Aug-16						
Mercury	ND		9.90	ng/L							QB-08, U
LCS (F608287-BS1)					Prepared & Analyzed: 12-Aug-16						
Mercury	14.83		0.50	ng/L	15.679		94.6	80-120			
LCS Dup (F608287-BSD1)					Prepared & Analyzed: 12-Aug-16						
Mercury	15.02		0.50	ng/L	15.679		95.8	80-120	1.22	24	
Duplicate (F608287-DUP1)		Source: 1608316-01			Prepared & Analyzed: 12-Aug-16						
Mercury	3.63		0.50	ng/L		3.81			4.86	24	
Matrix Spike (F608287-MS1)		Source: 1608316-01			Prepared & Analyzed: 12-Aug-16						
Mercury	12.72		0.50	ng/L	10.120	3.81	88.0	71-125			
Matrix Spike (F608287-MS2)		Source: 1608316-03			Prepared & Analyzed: 12-Aug-16						
Mercury	22.77		0.50	ng/L	20.240	4.53	90.1	71-125			
Matrix Spike Dup (F608287-MSD1)		Source: 1608316-01			Prepared & Analyzed: 12-Aug-16						
Mercury	12.86		0.50	ng/L	10.120	3.81	89.4	71-125	1.06	24	

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Amy Goodall

Amy Goodall, Project Manager

eurofins
Frontier Global Sciences

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Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F608287 - EPA 1631E BrCl Oxidation											
Matrix Spike Dup (F608287-MSD2)		**Source: 1608316-03**			Prepared & Analyzed: 12-Aug-16						
Mercury	23.10	-	0.50	ng/L	20.240	4.53	91.7	71-125	1.44	24	

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Huntsville Chase	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	19-Aug-16 15:51

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
QB-08	The blank was preserved to 50% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Amy Goodall

Amy Goodall, Project Manager

ENERSOLV
A Solutions Company

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256) 350-0846

www.enersolv.com

COC NUMBER	23170		
Page	1	of	1

COMPANY/CLIENT NAME	ACCOUNT NUMBER	CLIENT P O NUMBER	ENERSOLV PROJECT NUMBER
City of Huntsville WPC	1453		

CLIENT POINT OF CONTACT	CLIENT PHYSICAL ADDRESS	CITY/STATE/ZIP
Ed Fincher	1800 Vermont Road	Huntsville AL 35802-2064

CLIENT EMAIL	PHONE NUMBER	OTHER INFORMATION
ed.fincher@hsvcity.com	256 883-3756	

SAMPLE COLLECTED BY: Dana Miller

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE (REQUIRED)

REQUESTED ANALYSES

ENERSOLV LAB NO	SAMPLE LOCATION CODE	SAMPLE DESCRIPTION	DATE	TIME	GRAB	COMP	IHG 1631
1609875-01	Huntsville-WPC-Chase	Chase Wastewater	8-3-16	1323	X		X
02		Duplicate	8-3-16	1325	X		X
03		Travel Blank	8-3-16	1319	X		X

Comments: Collector to complete shaded areas, as applicable

Field Information

									Qty	Type	Vol	Preserv.	Parameter
Sampler		pH su	N/A	TRC mg/l	N/A	DO mg/l	N/A	Temp deg C	N/A					
Start Date		Date	N/A	Date	N/A	Date	N/A	Date	N/A					
Start Time		Time	N/A	Time	N/A	Time	N/A	Time	N/A					
Stop Date		Analyst	N/A	Analyst	N/A	Analyst	N/A	Analyst	N/A					
Stop Time		SM 4500H+		SM 4500-Cl D		SM 4500-O G		SM 2550B						

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Dana Miller	8-4-16	0800						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
RECEIVED FOR LABORATORY USE BY: (SIGNATURE)	**DATE**	**TIME**	**SAMPLE STATUS**					
[signature]	8-4-16	0800	☑ Accepted	☐ Rejected	☐ Accepted with Exception			

ENERSOLV
a Solutions Company

Chase Qtrly Mercury
11/16

December 7, 2016

RECEIVED
JUN 21 2021
MUNICIPAL SECTION

Scott Vassar
City of Huntsville WPC
1800 Vermont Road
Huntsville, AL 35802-2064

We appreciate the opportunity to provide our services to you for this project.

ENERSOLV is accredited to ISO/IEC 17025:2005 by Laboratory Accreditation Bureau and to the TNI 2003 Standard by the Florida Department of Health. Our quality system also meets relevant quality system requirements of **ISO 9001:2008**. Not all tests performed by *ENERSOLV* are covered by these accreditations. Tests within our scope of accreditation are indicated by an asterisk (*) in the Test Result section of this report. Tests not included in the accreditations are performed in accordance with *ENERSOLV* Standard Operating Procedures and the quality control program using, where applicable, USEPA methodology.

This cover page and the attached chain-of-custody record(s) are integral parts of your report. This information shall remain in *ENERSOLV's* active database for a period of one (1) calendar year before archiving. Any replacement of this information after archiving may result in an administrative fee to cover the cost of retrieval.

If you have any questions or would like more information regarding these analyses, please call us at (256) 350-0846.

Sincerely,

Karen Sutton

Karen Sutton
Vice President Client Services

2220 Beltline Road SW • Decatur, Alabama 35601
P.O. Box 1646 • Decatur, Alabama 35602 • (256) 350-0846 • Fax: (256) 350-0686

ENERSOLV
a Solutions Company

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256) 350-0846

www.enersolv.com

COC NUMBER	1495		
Page	1	of	1

COMPANY/CLIENT NAME	ACCOUNT NUMBER	CLIENT P O NUMBER	ENERSOLV PROJECT NUMBER
City of Huntsville WPC	1453		

CLIENT POINT OF CONTACT	CLIENT PHYSICAL ADDRESS	CITY/STATE/ZIP
Ed Fincher	1800 Vermont Road	Huntsville AL 35802-2064

CLIENT EMAIL	PHONE NUMBER	OTHER INFORMATION
ed.fincher@hsvcity.com	256 883-3756	

SAMPLE COLLECTED BY: [signature]

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE (REQUIRED)

REQUESTED ANALYSES

ENERSOLV LAB NO	SAMPLE LOCATION CODE	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	GRAB	COMP	IHG 1631
1614393 01	Huntsville-WPC-Chase	Chase Wastewater	11-10-16	1202			
02		Duplicate	11-10-16	1204			
03		Travel Blank	11-10-16	1208			

Comments: Collector to complete shaded areas, as applicable

Field Information

									Qty	Type	Vol.	Preserv.	Parameter
Sampler		pH su	N/A	TRC mg/l	N/A	DO mg/l	N/A	Temp deg C	N/A					
Start Date		Date	N/A	Date	N/A	Date	N/A	Date	N/A					
Start Time		Time	N/A	Time	N/A	Time	N/A	Time	N/A					
Stop Date		Analyst	N/A	Analyst	N/A	Analyst	N/A	Analyst	N/A					
Stop Time		SM 4500H+		SM 4500-Cl D		SM 4500-O G		SM 2550B						

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11-10-16	1459						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

RECEIVED FOR LABORATORY USE BY: (SIGNATURE) [signature] | DATE 11-10-16 | TIME 1459

SAMPLE STATUS: ☑ Accepted ☐ Rejected ☐ Accepted with Exception

ENERSOLV
a Solutions Company

Chase Qtrly Mercury
11/16

December 7, 2016

RECEIVED
JUN 21 2021
MUNICIPAL SECTION

Scott Vassar
City of Huntsville WPC
1800 Vermont Road
Huntsville, AL 35802-2064

We appreciate the opportunity to provide our services to you for this project.

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Sincerely,

Karen Sutton

Karen Sutton
Vice President Client Services

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425.686.3096 Fax

02 December 2016

Margaret Aiken
Enersolv
2220 Beltline Road SW
Decatur, AL 35601

RE: EPA 1631 Total Hg In Wastewater 2016

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

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

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

eurofins
Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Chase WWTP Effluent	1611581-01	Water	10-Nov-16 12:02	17-Nov-16 08:50
Duplicate	1611581-02	Water	10-Nov-16 12:04	17-Nov-16 08:50
Field Blank	1611581-03	Water	10-Nov-16 12:00	17-Nov-16 08:50

Eurofins Frontier Global Sciences, Inc.

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amy Goodall

Amy Goodall, Project Manager

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 11/17/2016 8:50:00 AM . The samples were received intact, within a sealed cooler at ambient temperature.

SAMPLE PREPARATION AND ANALYSIS

Samples were prepared and analyzed for total mercury by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631E.

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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Sample Receipt Checklist

EFGS Work Order: 1611581

Client: Enersolv Date & Time Received: 11/17/16 8:50 Date Labeled: 11/18/16 Labeled By: BCW

Project: Received By: LM Label Verified By: CSP

# of Coolers Received: 1 Samples Arrived By: ✓ Shipping Service ____ Courier ____ Hand ____ Other (Specify: ____)

Coolant: ☑ None/Ambient ☐ Loose Ice ☐ Gel Ice ☐ Dry Ice Coolant Required: Y / (N) Temp Blank Used: Y/N for Cooler(s): ____

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	N	
Custody seals signed:	N	

TID:	CF:	°C	Date/time:	By:		
Cooler 1:	°C	w/ CF: °C	Cooler 4:	°C	w/ CF:	°C
Cooler 2:	°C	w/ CF: °C	Cooler 5:	°C	w/ CF:	°C
Cooler 3:	°C	w/ CF: °C	Cooler 6:	°C	w/ CF:	°C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by:	Y	
Preservation type:	NA	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	N	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	Y	

Anomalies/Non-conformances (attach additional pages if needed):

1611587

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Frontier Global Sciences

Chain of Custody Record & Laboratory Analysis Request: Air, Water, Sediments, Plant and Animal Tissue, Hydrocarbon & Other Samples

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
Phone: 425-486-1996
Fax: 425-486-3096
info@frontiergs.com
http://www.frontiergs.com

Page ___ of ___

Client: Enersolv	Contact:		EFGS PM:
Address: 2220 Beltline Rd. Decatur, AL 35603	Phone: Fax:		Date:
	E-mail:		TAT (business days): 20 (std) 15 10 5 4 3 2 24 hrs. (For TAT < 10 days, contact PM. Surcharges apply for expedited TAT)
Project Name: Chase WWTP	Contract/PO:		Saturday delivery? ☐ Y ☐ N (If yes, please contact PM)
Report To: Margaret Aiken	Invoice To:		EDD ☐ Y ☐ N
Address:	Address:		QA ☐ Standard ☐ High
Phone: Fax:	Phone: Fax:		
E-mail: maiken@enersolv.com	E-mail:		

No.	Engraved Bottle ID	Sample ID	# of Bottles	Matrix	Date & Time	Sampled By	Field Filtered (Y/N)	Field Preserved: HNO_3 HCl BrCl Other (%)	Analyses Requested: Hg 1631	Comments
1		Chase WWTP				1				Sampled By.
2		Effluent	1		11.10.16 1202	TD	N	NA	X	
3		Duplicate	1		11.10.16 1204	TD	N	NA	X	1614393.01
4		Field Blank	1		11.10.16 1200	TD	N	NA	X	1614393.02
5										1614393.03
6										
7										P.O E11212
8										
9										
10										
11										
12										

For Laboratory Use Only		Matrix Codes:	Relinquished By: TB FedEx Trent Derrick	Received By:	Received By:
COC Seal: NA	Comments:	FW: Fresh Water WW: Waste Water SB: Sea and Brackish Water SS: Soil and Sediment TS: Plant and Animal Tissue HC: Hydrocarbons TR: Trap OT: Other	Name: Trent Derrick	Name: Lisa M. Hall	Name:
Cooler Temp: 4.6			Organization: Enersolv	Organization: EFGS	Organization:
Carrier: FedEx			Date & Time: 11.10.16 1435	Date & Time: 11/7/16 8:50	Date & Time:
VTSR: 8:50			Tracking number: 7776 9638 3264		
# of Coolers:					

Sample Disposal:
☐ Return (shipping fees may apply)
☐ Standard Disposal – 30 Days after report
☐ Retain for ____ weeks after report (storage fees may apply)

By signing, you declare that you agree with EFGS' terms and conditions, and that you authorize EFGS to perform the specified analyses.

Customer Approval: _____ Date: 11.10.16

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Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

Chase WWTP Effluent

1611581-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	**3.17**	-	0.50	ng/L	1	F611491	18-Nov-16	6K29018	29-Nov-16	EPA 1631E	

Eurofins Frontier Global Sciences, Inc.

Amy Goodall

Amy Goodall, Project Manager

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

Duplicate

1611581-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	2.98	-	0.50	ng/L	1	F611491	18-Nov-16	6K29018	29-Nov-16	EPA 1631E	

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Amy Goodall, Project Manager

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Frontier Global Sciences

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425.686.3096 Fax

Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	Reported:
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

Field Blank

1611581-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EPA 1631E BrCl Oxidation											
Mercury	ND	-	0.50	ng/L	1	F611491	18-Nov-16	6K29018	29-Nov-16	EPA 1631E	U

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F611491 - EPA 1631E BrCl Oxidation											
Blank (F611491-BLK1)					Prepared & Analyzed: 29-Nov-16						
Mercury	ND	-	0.50	ng/L							U
Blank (F611491-BLK2)					Prepared & Analyzed: 29-Nov-16						
Mercury	ND	-	0.50	ng/L							U
Blank (F611491-BLK3)					Prepared & Analyzed: 29-Nov-16						
Mercury	ND	-	0.50	ng/L							U
Blank (F611491-BLK4)					Prepared & Analyzed: 29-Nov-16						
Mercury	ND	-	0.50	ng/L							QB-04, U
Blank (F611491-BLK5)					Prepared & Analyzed: 29-Nov-16						
Mercury	ND	-	9.90	ng/L							QB-08, U
LCS (F611491-BS1)					Prepared & Analyzed: 29-Nov-16						
Mercury	16.28	-	0.50	ng/L	15.679		104	80-120			
LCS Dup (F611491-BSD1)					Prepared & Analyzed: 29-Nov-16						
Mercury	15.58	-	0.50	ng/L	15.679		99.4	80-120	4.40	24	
Duplicate (F611491-DUP1)		Source: 1611580-01			Prepared & Analyzed: 29-Nov-16						
Mercury	25.53	-	0.50	ng/L		25.95			1.61	24	
Matrix Spike (F611491-MS1)		Source: 1611581-01			Prepared & Analyzed: 29-Nov-16						
Mercury	12.68	-	0.50	ng/L	10.120	3.17	94.0	71-125			
Matrix Spike (F611491-MS2)		Source: 1611685-03			Prepared & Analyzed: 29-Nov-16						
Mercury	23.34	-	0.50	ng/L	20.240	4.47	93.2	71-125			

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Amy Goodall, Project Manager

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F611491 - EPA 1631E BrCl Oxidation											
Matrix Spike Dup (F611491-MSD1)		**Source: 1611581-01**			Prepared & Analyzed: 29-Nov-16						
Mercury	12.57	-	0.50	ng/L	10.120	3.17	92.9	71-125	0.856	24	
Matrix Spike Dup (F611491-MSD2)		**Source: 1611685-03**			Prepared & Analyzed: 29-Nov-16						
Mercury	23.84	-	0.50	ng/L	20.240	4.47	95.7	71-125	2.13	24	

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Frontier Global Sciences

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Enersolv	Project: EPA 1631 Total Hg In Wastewater 2016	
2220 Beltline Road SW	Project Number: Chase WWTP	**Reported:**
Decatur AL, 35601	Project Manager: Margaret Aiken	02-Dec-16 13:47

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
QB-08	The blank was preserved to 50% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
QB-04	The blank was preserved to 2% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Eurofins Frontier Global Sciences, Inc.

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Amy Goodall

Amy Goodall, Project Manager

ENERSOLV
a Solutions Company

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256) 350-0846

www.enersolv.com

COC NUMBER	1495		
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COMPANY/CLIENT NAME	ACCOUNT NUMBER	CLIENT P O NUMBER	ENERSOLV PROJECT NUMBER
City of Huntsville WPC	1453		

CLIENT POINT OF CONTACT	CLIENT PHYSICAL ADDRESS	CITY/STATE/ZIP
Ed Fincher	1800 Vermont Road	Huntsville AL 35802-2064

CLIENT EMAIL	PHONE NUMBER	OTHER INFORMATION
ed.fincher@hsvcity.com	256 883-3756	

SAMPLE COLLECTED BY: [signature]

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE (REQUIRED)

REQUESTED ANALYSES

ENERSOLV LAB NO	SAMPLE LOCATION CODE	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	GRAB	COMP	IHG 1631
1604393 01	Huntsville-WPC-Chase	Chase Wastewater	11-10-16	1202			
02		Duplicate	11-10-16	1204			
03		Travel Blank	11-10-16	1200			

Comments:

Collector to complete shaded areas, as applicable

Field Information

									Qty	Type	Vol.	Preserv.	Parameter
Sampler		pH su	N/A	TRC mg/l	N/A	DO mg/l	N/A	Temp deg C	N/A					
Start Date		Date	N/A	Date	N/A	Date	N/A	Date	N/A					
Start Time		Time	N/A	Time	N/A	Time	N/A	Time	N/A					
Stop Date		Analyst	N/A	Analyst	N/A	Analyst	N/A	Analyst	N/A					
Stop Time		SM 4500H+		SM 4500-Cl D		SM 4500-O G		SM 2550B						

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11-10-16	1459						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

RECEIVED FOR LABORATORY USE BY: (SIGNATURE) [signature] DATE 11-10-16 TIME 1459

SAMPLE STATUS: ☑ Accepted ☐ Rejected ☐ Accepted with Exception