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NOVEMBER 30, 2022

Walt Maddox
Mayor
City of Tuscaloosa
2201 University Boulevard
Tuscaloosa, AL 35401

RE: Draft Permit
NPDES Permit No. AL0022713
Hilliard N. Fletcher WRRF
Tuscaloosa County, Alabama

Dear Mayor Maddox:

Transmitted herein is a draft of the referenced permit.

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

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

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

Our records indicate that you have utilized the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs) and sanitary sewer overflow (SSO) notifications/reports. The Department transitioned from the E2 Reporting System to the Alabama Environmental Permitting and Compliance System (AEPACS) for the submittal of DMRs and SSOs on November 15, 2021. AEPACS is an electronic system that allows facilities to apply for and maintain permits as well as submit other required applications, registrations, and certifications. In addition, the

system allows facilities to submit required compliance reports or other information to the Department. The Department has used the E2 User account information to set up a similar User Profile in AEPACS based on the following criteria:

1. The user has logged in to E2 since October 1, 2019; and
2. The E2 user account is set up using a unique email address.

E2 users that met the above criteria will only need to establish an ADEM Web Portal account (https://prd.adem.alabama.gov/awp) under the same email address as their E2 account to have the same permissions in AEPACS as they did in E2. They will also automatically be linked to the same facilities they were in E2.

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 slee@adem.alabama.gov

Sincerely,

Sandra Lee
Municipal Section
Water Division

Enclosure

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

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: CITY OF TUSCALOOSA
2201 UNIVERSITY BOULEVARD
TUSCALOOSA, AL 35401

FACILITY LOCATION: HILLIARD N. FLETCHER WRRF (24 MGD)
4010 REESE PHIFER AVENUE
TUSCALOOSA, ALABAMA
TUSCALOOSA COUNTY

PERMIT NUMBER: AL0022713

RECEIVING WATERS: CRIBBS MILL CREEK (002)
BLACK WARRIOR RIVER (WARRIOR LAKE) (001)

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

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PART I: DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. DSN 001-1: Municipal and Industrial Wastewater Primary Outfall

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
Oxygen, Dissolved (DO) (00300) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	*****	mg/l	5X Weekly	Grab	Not Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	9.0 Maximum Daily	S.U.	5X Weekly	Grab	Not Seasonal
Solids, Total Suspended (00530) Effluent Gross Value	6004 Monthly Average	9007 Weekly Average	lbs/day	*****	30.0 Monthly Average	45.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Solids, Total Suspended (00530) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	400 Monthly Average	600 Weekly Average	lbs/day	*****	2.0 Monthly Average	3.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	S
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	3002 Monthly Average	4503 Weekly Average	lbs/day	*****	15.0 Monthly Average	22.5 Weekly Average	mg/l	5X Weekly	24-Hr Composite	W
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	6004 Monthly Average	9007 Weekly Average	lbs/day	*****	30.0 Monthly Average	45.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	W
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	1200 Monthly Average	1801 Weekly Average	lbs/day	*****	6.0 Monthly Average	9.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	S
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

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

DSN 001-1 (Continued): Municipal and Industrial Wastewater Primary Outfall

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
Phosphorus, Total (As P) (00665) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Continuous	Not Seasonal
Chlorine, Total Residual (50060) See note (3) Effluent Gross Value	*****	*****	*****	*****	0.064 Monthly Average	0.111 Maximum Daily	mg/l	5X Weekly	Grab	Not Seasonal
E. Coli (51040) Effluent Gross Value	*****	*****	*****	*****	126 Monthly Average	298 Maximum Daily	col/100mL	5X Weekly	Grab	ECS
E. Coli (51040) Effluent Gross Value	*****	*****	*****	*****	548 Monthly Average	2507 Maximum Daily	col/100mL	5X Weekly	Grab	ECW
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	4003 Monthly Average	6004 Weekly Average	lbs/day	*****	20.0 Monthly Average	30.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	W
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	1601 Monthly Average	2401 Weekly Average	lbs/day	*****	8.0 Monthly Average	12.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	S
BOD, Carbonaceous 05 Day, 20C (80082) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
BOD, Carb-5 Day, 20 Deg C, Percent Remvl (80091) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

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

DSN 001-1 (Continued): Municipal and Industrial Wastewater Primary Outfall

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
Solids, Suspended Percent Removal (81011) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

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

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

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

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

3. DSN 002-1: Municipal and Industrial Wastewater HCR Wet Weather Backup

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1,4,5)	Sample Type	Seasonal See note (2)
Flow Rate (00058) Instream Monitoring	*****	*****	*****	(Report) Minimum Daily	*****	*****	CFS	Daily	Instantaneous	Not Seasonal
Oxygen, Dissolved (DO) (00300) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	*****	mg/l	5X Weekly	Grab	Not Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	5X Weekly	Grab	Not Seasonal
Solids, Total Suspended (00530) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	30.0 Monthly Average	45.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Solids, Total Suspended (00530) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	2.0 Monthly Average	3.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	S
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	7.5 Monthly Average	11.2 Weekly Average	mg/l	5X Weekly	24-Hr Composite	W

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

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

(4) Flow monitoring is only required on days when discharges occur (See Part IV.I)

(5) The daily stream flow should be recorded for each days discharge incidence. Records of daily stream flow should be kept on site. Summary data should be reported on the monthly DMR forms provided by ADEM.

DSN 002-1 (Continued): Municipal and Industrial Wastewater HCR Wet Weather Backup

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1,5,6)	Sample Type	Seasonal See note (2)
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Phosphorus, Total (As P) (00665) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Zinc Total Recoverable (01094) Effluent Gross Value	*****	*****	*****	*****	214 Monthly Average	214 Maximum Daily	ug/l	Monthly	Grab	Not Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	5X Weekly	Instantaneous	Not Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Raw Sew/Influent	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Continuous	Not Seasonal
Chlorine, Total Residual (50060) See notes (3, 4) Effluent Gross Value	*****	*****	*****	*****	0.014 Monthly Average	0.024 Maximum Daily	mg/l	5X Weekly	Grab	Not Seasonal
E. Coli (51040) Effluent Gross Value	*****	*****	*****	*****	548 Monthly Average	2507 Maximum Daily	col/100mL	5X Weekly	Grab	ECW
E. Coli (51040) Effluent Gross Value	*****	*****	*****	*****	126 Monthly Average	298 Maximum Daily	col/100mL	5X Weekly	Grab	ECS

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

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

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

(5) Flow monitoring is only required on days when discharges occur (See Part IV.I)

(6) The daily stream flow should be recorded for each days discharge incidence. Records of daily stream flow should be kept on site. Summary data should be reported on the monthly DMR forms provided by ADEM.

DSN 002-1 (Continued): Municipal and Industrial Wastewater HCR Wet Weather Backup

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1,4,5)	Sample Type	Seasonal See note (2)
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	20.0 Monthly Average	30.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	W
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	8.0 Monthly Average	12.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	S
BOD, Carbonaceous 05 Day, 20C (80082) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
BOD, Carb-5 Day, 20 Deg C, Percent Remvl (80091) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal
Solids, Suspended Percent Removal (81011) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

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

(4) Flow monitoring is only required on days when discharges occur (See Part IV.I)

(5) The daily stream flow should be recorded for each days discharge incidence. Records of daily stream flow should be kept on site. Summary data should be reported on the monthly DMR forms provided by ADEM.

4. DSN 002-T: HCR Wet Weather Backup 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 002, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

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

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

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

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

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

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

5. DSN 003-S: Stormwater Runoff

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

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

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

DSN 004-S: Stormwater Runoff

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

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

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

DSN 005-S: Stormwater Runoff

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

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

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

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

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

See Permit Requirements for Stormwater in Part IV.F

(2) S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

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

2. Measurement Frequency

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

a. Seven days per week shall mean daily.

b. Five days per week shall mean any five days of discharge during a calendar weekly period of Sunday through Saturday.

c. Three days per week shall mean any three days of discharge during a calendar week.

d. Two days per week shall mean any two days of discharge during a calendar week

e. One day per week shall mean any day of discharge during a calendar week.

f. Two days per month shall mean any two days of discharge during the month that are no less than seven days apart. However, if discharges occur only during one seven-day period in a month, then two days per month shall mean any two days of discharge during that seven day period.

g. One day per month shall mean any day of discharge during the calendar month.

h. Quarterly shall mean any day of discharge during each calendar quarter.

i. The Permittee may increase the frequency of sampling, listed in Provisions I.B.2.a through I.B.2.h; however, all sampling results are to be reported to the Department.

3. Test Procedures

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

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" or "*B" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.

b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

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

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

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

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

4. **Recording of Results**

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

   a. The facility name and location, point source number, date, time and exact place of sampling;

   b. The name(s) of person(s) who obtained the samples or measurements;

   c. The dates and times the analyses were performed;

   d. The name(s) of the person(s) who performed the analyses;

   e. The analytical techniques or methods used, including source of method and method number; and

   f. The results of all required analyses.

5. Records Retention and Production

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

   b. All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

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

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

   b. It remains the responsibility of the permittee to comply with the monitoring and reporting requirements of this permit until written authorization to reduce, suspend or terminate such monitoring and/or reporting is received by the permittee from the Director.

7. **Monitoring Equipment and Instrumentation**

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

C. DISCHARGE REPORTING REQUIREMENTS

1. **Reporting of Monitoring Requirements**

   a. The permittee shall conduct the required monitoring in accordance with the following schedule:

      (1) **MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY** shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.

      (2) **QUARTERLY MONITORING** shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring should be reported on the last DMR due for the quarter (i.e., March, June, September and December DMRs).

(3) **SEMIANNUAL MONITORING** shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be reported on the last DMR due for the month of the semiannual period (i.e., June and December DMRs).

(4) **ANNUAL MONITORING** shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be reported on the December DMR.

b. The permittee shall submit discharge monitoring reports (DMRs) in accordance with the following schedule:

(1) **REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING** shall be submitted on a monthly basis. The first report is due on the 28th day of the month following the month the permit becomes effective. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.

(2) **REPORTS OF QUARTERLY TESTING** shall be submitted on a quarterly basis. The first report is due on the 28th day of the month following the first complete calendar quarter the permit becomes effective. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.

(3) **REPORTS OF SEMIANNUAL TESTING** shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.

(4) **REPORTS OF ANNUAL TESTING** shall be submitted on an annual basis. Unless specified elsewhere in the permit, the first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period, unless otherwise directed by the Department.

c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b. electronically.

(1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's electronic system (this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the date specified in Provision I.C.1.b., unless otherwise directed by the Department.

If the Department's electronic system is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the Department's electronic system resuming operation, the permittee shall enter the data into the Department's electronic system, unless an alternate timeframe is approved by the Department. A comment should be included on the electronic DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date), if applicable.

(2) The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable.

(3) A permittee with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The permittee shall submit the Department-approved DMR forms to the address listed in Provision I.C.1.e.

(4) If a permittee is allowed to submit a hard copy DMR, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit.

(5) If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A. of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR and the increased frequency shall be indicated on the DMR.

(6) In the event no discharge from a point source identified in Provision I.A. of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR.

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules and Regulations, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

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

e. Discharge Monitoring Reports required by this permit, the AWPCA, and the Department's Rules that are being submitted in hard copy shall be addressed to:

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

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

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

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

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

Certified and Registered Mail shall be addressed to:

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

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

2. **Noncompliance Notifications and Reports**

a. The Permittee shall notify the Department if, for any reason, the Permittee's discharge:

(1) Does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I.A. of this permit which is denoted by an "(X)";

(2) Potentially threatens human health or welfare;

(3) Threatens fish or aquatic life;

(4) Causes an in-stream water quality criterion to be exceeded;

(5) Does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);

(6) Contains a quantity of a hazardous substance that may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);

(7) Exceeds any discharge limitation for an effluent parameter listed in Part I.A. as a result of an unanticipated bypass or upset; or

(8) Is an unpermitted direct or indirect discharge of a pollutant to a water of the state. (Note that unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision.)

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

b. If, for any reason, the Permittee's discharge does not comply with any limitation of this permit, then the Permittee shall submit a written report to the Director or Designee, as provided in Provision I.C.2.c below. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Provision I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.

c. Except for notifications and reports of notifiable SSOs which shall be submitted in accordance with the applicable Provisions of this permit, the Permittee shall submit the reports required under Provisions I.C.2.a. and b. to the Director or Designee on ADEM Form 421, available on the Department's website (http://www.adem.state.al.us/DeptForms/Form421.pdf). The completed Form must document the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates, times, and duration of the noncompliance. If the noncompliance is not corrected by the due date of the written report, then the Permittee shall provide an estimated date by which the noncompliance will be corrected; and

(3) A description of the steps taken by the Permittee and the steps planned to be taken by the Permittee to reduce or eliminate the noncompliant discharge and to prevent its recurrence.

d. Immediate notification

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

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

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

f. The Permittee shall maintain a record of all known wastewater discharge points that are not authorized as permitted outfalls, including but not limited to SSOs. The Permittee shall include this record in its **Municipal Water Pollution Prevention (MWPP) Annual Reports**, which shall be submitted to the Department each year by May 31st for the prior calendar year period beginning January 1st and ending December 31st. The MWPP Annual Reports shall contain a list of all known wastewater discharge points that are not authorized as permitted outfalls and any discharges that occur prior to the headworks of the wastewater treatment plant covered by this permit. The Permittee shall also provide in the MWPP Annual Reports a list of any discharges reported during the applicable time period in accordance with Provision I.C.2.a. The Permittee shall include in its MWPP Annual Reports the following information for each known unpermitted discharge that occurred:

(1) The cause of the discharge;

(2) Date, duration and volume of discharge (estimate if unknown);

(3) Description of the source (e.g., manhole, lift station);

(4) Location of the discharge, by latitude and longitude (or other appropriate method as approved by the Department);

(5) The ultimate destination of the flow (e.g., surface waterbody, municipal separate storm sewer to surface waterbody). 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

a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.

b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.

c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Certified Operator

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

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

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

2. Right of Entry and Inspection

a. The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

(1) Enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permits;

(3) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and

(4) Sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in b. and c. below:

b. A bypass is not prohibited if:

(1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;

(2) It enters the same receiving stream as the permitted outfall; and

(3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and

(3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.

d. The permittee has the burden of establishing that each of the conditions of Provision II. C. 1. b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. **Upset**

a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that:

(i) An upset occurred;

(ii) The Permittee can identify the specific cause(s) of the upset;

(iii) The Permittee's facility was being properly operated at the time of the upset; and

(iv) The Permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.

b. The permittee has the burden of establishing that each of the conditions of Provision II. C. 2. a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I. A. of this permit.

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

1. **Duty to Comply**

a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.

b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.

c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.

d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.

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

2. **Removed Substances**

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

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

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

4. **Compliance with Statutes and Rules**

a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Boulevard Montgomery, Alabama 36110-2059.

b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

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

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

a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.

b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. **Change in Discharge**

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

3. **Transfer of Permit**

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

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

4. **Permit Modification and Revocation**

a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;

(2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or

(3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.

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

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;

(2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

(3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;

(4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;

(5) Errors in calculation of discharge limitations or typographical or clerical errors were made;

(6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;

(7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;

(8) To agree with a granted variance under 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; or

5. **Termination**

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

a. Violation of any term or condition of this permit;

b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;

c. Materially false or inaccurate statements or information in the permit application or the permit;

d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;

f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;

g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee.

h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. **Suspension**

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

7. **Stay**

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

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

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

G. NOTICE TO DIRECTOR OF INDUSTRIAL USERS

1. The permittee shall not allow the introduction of wastewater, other than domestic wastewater, from a new 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;

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 constant time intervals of not more than 1 hour over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
    b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
18. **EPA** - means the United States Environmental Protection Agency.
19. **FC** – means the pollutant parameter fecal coliform.
20. **Flow** – means the total volume of discharge in a 24-hour period.
21. **FWPCA** - means the Federal Water Pollution Control Act.
22. **Geometric Mean** – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

23. **Grab Sample** – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

24. **Indirect Discharger** – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

25. **Industrial User** – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

26. **MGD** – means million gallons per day.

27. **Monthly Average** – means the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.

28. **New Discharger** – means a person, owning or operating any building, structure, facility, or installation:

    a) From which there is or may be a discharge of pollutants;

    b) That did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and

    c) Which has never received a final effective NPDES permit for dischargers at that site.

29. **NH3-N** – means the pollutant parameter ammonia, measured as nitrogen.

30. **Notifiable sanitary sewer overflow** - means an overflow, spill, release or diversion of wastewater from a sanitary sewer system that:

    a) Reaches a surface water of the State; or

    b) May imminently and substantially endanger human health based on potential for public exposure including but not limited to close proximity to public or private water supply wells or in areas where human contact would be likely to occur.

31. **Permit application** - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.

32. **Point source** - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).

33. **Pollutant** - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.

34. **Privately Owned Treatment Works** – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".

35. **Publicly Owned Treatment Works (POTW)** – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.

36. **Receiving Stream** – means the "waters" receiving a "discharge" from a "point source".

37. **Severe property damage** - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

38. **Significant Source** – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.

39. **TKN** – means the pollutant parameter Total Kjeldahl Nitrogen.

40. **TON** – means the pollutant parameter Total Organic Nitrogen.

41. **TRC** – means Total Residual Chlorine.

42. **TSS** – means the pollutant parameter Total Suspended Solids.

43. **24HC** – means 24-hour composite sample, including any of the following:

    a) The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;

    b) A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected;

    c) A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

44. **Upset** - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

45. **Waters** - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.

46. **Week** - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

47. **Weekly (7-day and calendar week) Average** – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

I. SEVERABILITY

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

PART IV: SPECIFIC REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. SLUDGE MANAGEMENT PRACTICES

1. Applicability

a. Provisions of Provision IV.A. apply to a sewage sludge generated or treated in treatment works that is applied to agricultural and non-agricultural land, or that is otherwise distributed, marketed, incinerated, or disposed in landfills or surface disposal sites.

b. Provisions of Provision IV.A. do not apply to:

(1) Sewage sludge generated or treated in a privately owned treatment works operated in conjunction with industrial manufacturing and processing facilities and which receive no domestic wastewater.

(2) Sewage sludge that is stored in surface impoundments located at the treatment works prior to ultimate disposal.

2. Submitting Information

a. If applicable, the Permittee must submit annually with its Municipal Water Pollution Prevention (MWPP) report the following:

(1) Type of sludge stabilization/digestion method;

(2) Daily or annual sludge production (dry weight basis);

(3) Ultimate sludge disposal practice(s).

b. The Permittee shall provide sludge inventory data to the Director as requested. These data may include, but are not limited to, sludge quantity and quality reported in Provision IV.A.2.a as well as other specific analyses required to comply with State and Federal laws regarding solid and hazardous waste disposal.

c. The Permittee shall give prior notice to the Director of at least 30 days of any change planned in the Permittee's sludge disposal practices.

3. Reopener or Modification

a. Upon review of information provided by the Permittee as required by Provision IV.A.2. or, based on the results of an on-site inspection, the permit shall be subject to modification to incorporate appropriate requirements.

b. If an applicable "acceptable management practice" or if a numerical limitation for a pollutant in sewage sludge promulgated under Section 405 of FWPCA is more stringent than the sludge pollutant limit or acceptable management practice in this permit. This permit shall be modified or revoked or reissued to conform to requirements promulgated under Section 405. The Permittee shall comply with the limitations no later than the compliance deadline specified in applicable regulations as required by Section 405 of FWPCA.

B. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR CHRONIC TOXICITY – Outfall 0011

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 **18 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 0011 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 JANUARY, APRIL, JULY, and OCTOBER.

3. **Reporting Requirements**

a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).

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

4. **Additional Testing Requirements**

a. If chronic toxicity is indicated (i.e., noncompliance with permit limit), then the Permittee must perform two additional valid chronic toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall run consecutively beginning on the first calendar week following the date that the Permittee became aware of the permit noncompliance. The results of these follow-up tests shall be submitted to the Department no later than 28 days following the month the tests were performed.

b. After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols and guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-91-003, EPA/600/R-92/081, EPA/833/B-99/022, and/or EPA/600/6-91/005F)

5. **Test Methods**

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

6. **Effluent Toxicity Testing Reports**

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

a. Introduction

(1) Facility name, location and county

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

(5) Contract laboratory information (if tests are performed under contract)

(i) Name of firm

(ii) Telephone number

(iii) Address

(6) Objective of test

b. Plant Operations

(1) Discharge Operating schedule (if other than continuous)

(2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)

(3) Design flow of treatment facility at time of sampling

c. Source of Effluent and Dilution Water

(1) Effluent samples

(2) Sampling point

(3) Sample collection dates and times (to include composite sample start and finish times)

(4) Sample collection method

(5) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)

(6) Lapsed time from sample collection to delivery

(7) Lapsed time from sample collection to test initiation

(8) Sample temperature when received at the laboratory

(9) Dilution Water

(10) Source

(11) Collection/preparation date(s) and time(s)

(12) Pretreatment (if applicable)

(13) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

(3) Deviations from referenced method, if any, and reason(s)

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

(10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)

(11) Specify if aeration was needed

(12) Feeding frequency, amount, and type of food

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

(14) Light intensity (mean)

e. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

(4) Disease(s) treatment (if applicable)

f. Quality Assurance

(1) Reference toxicant utilized and source

(2) Date and time of most recent chronic reference toxicant test(s), raw data, and current control chart(s). (The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.)

(3) Dilution water utilized in reference toxicant test

(4) Results of reference toxicant test(s) (NOEC, IC25, etc.); report concentration-response relationship and evaluate test sensitivity

(5) Physical and chemical methods utilized

g. Results

(1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate

(2) Provide table of endpoints: NOECs, IC25s, PASS/FAIL, etc. (as required in the applicable NPDES permit)

(3) Indicate statistical methods used to calculate endpoints

(4) Provide all physical and chemical data required by method

(5) Results of test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD) calculated for sublethal endpoints determined by hypothesis testing.

h. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Actions to be taken

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

C. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR CHRONIC TOXICITY – Outfall 0021

7. Chronic Toxicity Test

a. The permittee shall perform short-term chronic toxicity tests on the wastewater at Outfall 0021.

b. The samples shall be diluted using appropriate control water to the Instream Waste Concentration (IWC) which is **78 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.

8. 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 0011 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 JANUARY, APRIL, JULY, and OCTOBER.

9. **Reporting Requirements**

a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).

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

10. **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)

11. **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.

12. **Effluent Toxicity Testing Reports**

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

a. Introduction

(1) Facility name, location and county

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

(5) Contract laboratory information (if tests are performed under contract)

(i) Name of firm

(ii) Telephone number

(iii) Address

(6) Objective of test

b. Plant Operations

(1) Discharge Operating schedule (if other than continuous)

(2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)

(3) Design flow of treatment facility at time of sampling

c. Source of Effluent and Dilution Water

(1) Effluent samples

(2) Sampling point

(3) Sample collection dates and times (to include composite sample start and finish times)

(4) Sample collection method

(5) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)

(6) Lapsed time from sample collection to delivery

(7) Lapsed time from sample collection to test initiation

(8) Sample temperature when received at the laboratory

(9) Dilution Water

(10) Source

(11) Collection/preparation date(s) and time(s)

(12) Pretreatment (if applicable)

(13) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

(3) Deviations from referenced method, if any, and reason(s)

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

(10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)

(11) Specify if aeration was needed

(12) Feeding frequency, amount, and type of food

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

(14) Light intensity (mean)

e. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

(4) Disease(s) treatment (if applicable)

f. Quality Assurance

(1) Reference toxicant utilized and source

(2) Date and time of most recent chronic reference toxicant test(s), raw data, and current control chart(s). (The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.)

(3) Dilution water utilized in reference toxicant test

(4) Results of reference toxicant test(s) (NOEC, IC25, etc.); report concentration-response relationship and evaluate test sensitivity

(5) Physical and chemical methods utilized

g. Results

(1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate

(2) Provide table of endpoints: NOECs, IC25s, PASS/FAIL, etc. (as required in the applicable NPDES permit)

(3) Indicate statistical methods used to calculate endpoints

(4) Provide all physical and chemical data required by method

(5) Results of test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD) calculated for sublethal endpoints determined by hypothesis testing.

h. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Actions to be taken

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

D. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS

1. If chlorine is not utilized for disinfection purposes, TRC monitoring under Part I of this Permit is not required. If TRC monitoring is not required (conditional monitoring), "*9" should be reported on the DMR forms.

2. Testing for TRC shall be conducted according to either the amperometric titration method or the DPD colorimetric method as specified in Section 408(C) or (E), Standards Methods for the Examination of Water and Wastewater, 18th edition. If 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" 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.

E. 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.

F. MAJOR SOURCE STORMWATER REQUIREMENTS

1. Prohibitions

   a. The Permittee shall not allow the discharge of non-storm water into permitted storm water outfall(s) unless said discharge is already subject to an NPDES permit.

   b. Pollutants removed in the course of treatment or control shall be disposed in a manner that complies with all applicable Department rules and regulations.

2. Operational and Management Practices

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

   a. In the SWPP Plan, the Permittee shall:

      (1) Assess the treatment plant site by developing and presenting site drainage maps, materials inventory, and best management operational practices. The plan shall also include a description of all spill or leak sources;

      (2) Describe mechanisms and procedures to prevent the contact of sewage sludge, screenings, raw or partially treated wastewater, or any other waste product or pollutant with storm water discharged from the facility;

      (3) Provide for daily inspection on workdays of any structures that function to prevent storm water pollution or that remove pollutants from storm water;

      (4) Provide for daily inspection of the facility in general to ensure that the SWPP Plan is continually implemented and effective;

      (5) Include a Best Management Practices (BMP) Plan that, as a minimum, addresses housekeeping, preventative maintenance, spill prevention and response, and non-storm water discharges;

      (6) Describe mechanisms and procedures to provide sediment control sufficient to prevent or control storm water pollution storm water by particles resulting from soil or sediment migration from the site due to significant clearing, grading, or excavation activities;

      (7) Designate by position or name the person or persons responsible for the day to day implementation of the SWPP Plan; and

      (8) Bear the signature of an individual meeting signatory requirements as defined in ADEM Administrative Code, Rule 335-6-6-.09.

   b. The Director or his designee may notify the permittee at any time that the SWPP Plan is deficient and will require correction of the deficiency. The permittee shall correct any SWPP Plan deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

   c. Administrative Procedures

      (1) A copy of the SWPP Plan shall be maintained at the facility and shall be available for inspection by the Department.

      (2) A log of daily inspections required by Provision IV.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 the following: http://adem.alabama.gov/alEnviroRegLaws/files/Division6Vol1.pdf and http://adem.alabama.gov/wqmap.

(4) Identification of surface waterbodies within the collection system area which are not classified as Swimming as indicated in paragraph c above, but are known locally as areas where swimming occurs or as areas that are heavily recreated

d. Public Reporting of SSOs

(1) Contact information for the public to report an SSO to the Permittee, during both normal and outside of normal business hours (e.g., telephone number, website, email address, etc.)

(2) Information requested from the person reporting an SSO to assist the Permittee in identifying the SSO (e.g., date, time, location, contact information)

(3) Procedures for communication of the SSO report to the appropriate positions for follow-up investigation and response, if necessary

e. Procedures to immediately notify the Department, the county health department, and other affected entities (such as public water systems) upon becoming aware of notifiable SSOs

f. Public Notification Methods for SSOs

(1) A listing of methods that are feasible, as determined by the Permittee, for public notifications (e.g., flyers distributed to nearby residents; signs posted at the location of the SSO, where the SSO enters a water of the state, and/or at a central public location; signs posted at fishing piers, boat launches, parks, swimming waterbodies, etc.; website and/or social media notifications; local print or radio and broadcast media notifications; "opt in" email, text message, or automated phone message notifications)

(i) If signage is a feasible method for public notification, procedures for use and removal of signage (e.g., availability and maintenance of signs, appropriate duration of postings)

(2) Minimum information to be included in public notifications (e.g., identification that an SSO has occurred, date, duration if known, estimated volume if known, location of the SSO by street address or other appropriate method, initial destination of the SSO)

(3) Procedures developed by the Permittee for determining the appropriate public notification method(s) based upon the potential for public exposure to health risks associated with the SSO

g. Standard Procedures shall be developed by the Permittee and shall include, at a minimum

(1) General SSO Response Procedures (e.g., procedures for dispatching staff to assess/correct an SSO; procedures for routine SSO corrective actions such as those for sewer blockages, overflowing manholes, line breakages, pump station power failure, etc.; procedures for disinfection of affected area, if applicable);

(2) Procedures for collection and proper disposal of the SSO, if feasible.

(3) General procedures for coordinating instream water quality monitoring, including, but not limited to, procedures for mobilizing staff, collecting samples, and typical test methods should the Department or the Permittee determine monitoring is appropriate following an SSO. Identification of a contractor who will collect and analyze the sample(s) may be listed in lieu of the procedures.

(4) References to other documents (such as Standard Operating Procedures for SSO Responses) may be acceptable for this section; however, the referenced document shall be identified and shall be reviewed at a frequency of at least that required by the Administrative Procedures Section.

h. Date of the SSO Response Plan, dates of all modifications and/or reviews, the title and signature of the reviewer(s) for each date and the signature of the responsible official or the appropriate designee.

2. SSO Response Plan Implementation

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

3. Department Review of the SSO Response Plan

a. When requested by the Director or his designee, the Permittee shall make the SSO Response Plan available for review by the Department.

b. Upon review, the Director or his designee may notify the Permittee that the SSO Response Plan is deficient and require modification of the Plan.

c. Within thirty days of receipt of notification, or an alternate timeframe as approved by the Department, the Permittee shall modify any SSO Response Plan deficiency identified by the Director or his designee and shall certify to the Department that the modification has been made.

4. SSO Response Plan Administrative Procedures

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

b. The Permittee shall make a copy of the SSO Response Plan available to the public upon written request within 30 days of such request. The Permittee may redact information which may present security issues, such as location of public water supplies, identification of specific details of vulnerabilities, employee information, etc.

c. The Permittee shall provide training for any personnel required to implement the SSO Response Plan and shall retain at the facility documentation of such training. This documentation shall be available for inspection by the Department. Training shall be provided for existing personnel prior to the date by which implementation of the SSO Response Plan is required and for new personnel as soon as possible. Should significant revisions be made to the SSO Response Plan, training regarding the revisions shall be conducted as soon as possible.

d. The Permittee shall complete a review and evaluation of the SSO Response Plan at least once every three years. Documentation of the SSO Response Plan review and evaluation shall be signed and dated by the responsible official or the appropriate designee as part of the SSO Response Plan.

H. 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.

I. HYDROGRAPH CONTROL RELEASE SPECIAL REQUIREMENTS

1. Monitoring Frequency

   a. The monitoring frequency for effluent samples, except as otherwise noted, shall be once per discharge incidence, not to exceed **five times per week**. Results are subject to the records retention requirements of this permit. Summary data should be submitted on the monthly DMR forms provided by ADEM.

   b. The monitoring frequency for influent samples shall be **five times per week**. Summary data should be submitted on the monthly DMR forms provided by ADEM.

   c. Influent flow shall be recorded continuously. This flow data is subject to the records retention requirements of this permit. Summary data should be reported on the monthly DMR forms provided by the Department.

2. Discharge Requirements

   a. The allowable waste discharge shall be calculated using the following formulas:

      Summer season at stream flows less than or equal to 10.8 cfs: Waste Flow (MGD) = 0.3221(stream flow (cfs))^2 – 2.5609(stream flow(cfs))+ 11.639

      Summer season at stream flows greater than 10.8 cfs: Waste Flow (MGD) = 0.7655(stream flow (cfs))+16.36

      Winter season at all stream flows: Waste Flow (MGD) = 0.7927(stream flow (cfs)) - 0.3474

   b. Effluent flow to **Cribbs Mill Creek** shall be recorded instantaneously and reported for each day's discharge incidence on daily DMR forms provided by ADEM. Summary data should be submitted on the monthly DMR forms provided by ADEM.

   c. United States United States Geological Survey (USGS) stream gauge shall be maintained to determine stream flow. The Permittee shall contract with the USGS for calibration and maintenance of the USGS stream gauge, unless another entity is providing funding for the USGS gauge.

   d. A copy of the contract with the USGS, which includes calibration and maintenance of the gauge, and verification of payment shall be submitted to the Department so that they are received no later than January 31st of each year for the prior year. If another entity is providing funding for the USGS gauge, a statement verifying that the gauge has been calibrated and maintained by the USGS and the name of the entity that provided funding for the USGS gauge shall be submitted no later than January 31st of each year for the prior year.

   e. The daily stream flow, as measured by the USGS stream gauge, should be recorded for each day's discharge incidence on daily DMR forms provided by ADEM. Summary data should be reported on the monthly DMR forms provided by ADEM.

Alabama Department of Environmental Management Daily Discharge Monitoring Report (DMR)

Permittee Name: City of Tuscaloosa
Mailing Address: 2201 University Boulevard
Tuscaloosa, AL 35401
Facility Location: Hilliard N. Fletcher WRRF
Physical Location: 4010 Reese Phifer Ave, Tuscaloosa, AL
Receiving Stream: Cribbs Mill Creek
HCR Equations: Summer season at stream flows less than or equal to 10.8 cfs: Waste Flow (MGD) = 0.3221(stream flow (cfs))^2 – 2.5609(stream flow(cfs))+ 11.639

Summer season at stream flows greater than 10.8 cfs: Waste Flow (MGD) = 0.7655(stream flow (cfs))+16.36

Winter season at all stream flows: Waste Flow (MGD) = 0.7927(stream flow (cfs)) - 0.3474

Permit Number: AL0022713
County: Tuscaloosa
Monitoring Point: 0021
Month: _____
No. Discharges During this Month: ____

PARAMETER	Stream Flow	Waste Flow (Discharge to Receiving Stream)	Calculated Waste Flow
Parameter Code	00058 Instream	50050 Effluent	
MIN	-----	-----	
MAX	-------		See HCR eqn.
FREQ	daily for each discharge incidence	daily for each discharge incidence	
UNITS	cfs	MGD	MGD
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
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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 persons 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 _____

Printed Name & Title of Responsible Official _____

NPDES PERMIT RATIONALE

NPDES Permit No: **AL0022713** Date: August 26, 2022

Permit Applicant: City of Tuscaloosa
2201 University Boulevard
Tuscaloosa, AL 35401

Location: **Hilliard N. Fletcher WRRF**
4010 Reese Phifer Avenue
Tuscaloosa, AL 35401

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

Basis for Limitations: Water Quality Model: 0011 - DO, NH_3-N, $CBOD_5$, TKN
0021 - DO, NH_3-N, $CBOD_5$
Reissuance with no modification: 0011 – pH, DO, NH_3-N, $CBOD_5$, TKN, TSS, TSS Percent Removal, $CBOD_5$ Percent Removal
0021 - pH, DO, NH_3-N, $CBOD_5$, TSS, TSS Percent Removal, $CBOD_5$ Percent Removal
Instream calculation at 7Q10: 0011 - ~18%
0021 - ~78%
Toxicity based: TRC
Secondary Treatment Levels: TSS, TSS Percent Removal, $CBOD_5$ Percent Removal
Other (described below): E. Coli, pH, 0021: Total Recoverable Zinc

Design Flow in Million Gallons per Day: 24 MGD

Major: Yes

Description of Discharge:

Feature ID	Description	Receiving Water	WBC	303(d)	TMDL
001	Municipal and Industrial Wastewater Primary Discharge Point	Black Warrior River (Warrior Lake)	Fish and Wildlife (F&W)	No	No
002	Municipal and Industrial Wastewater HCR Backup	Cribbs Mill Creek	Fish and Wildlife (F&W)	No	No
003	Stormwater Discharge	Cribbs Mill Creek	Fish and Wildlife (F&W)	No	No
004	Stormwater Discharge	Cribbs Mill Creek	Fish and Wildlife (F&W)	No	No
005	Stormwater Discharge	Cribbs Mill Creek	Fish and Wildlife (F&W)	No	No

Discussion: This permit is a reissuance due to expiration. There are two available outfalls for the effluent. Outfall 0011 is the primary outfall. Outfall 0021 is an HCR discharge intended to be wet weather backup.

The pH limits for Outfall 0011 were developed consistent with the Water-Use designation of the receiving stream and the Municipal Section's Permit Development Rationale. The daily maximum pH limit is 9.0 s.u. and the daily minimum is 6.0 s.u. The monitoring frequency will be five times per week.

The pH limits for Outfall 0021 were developed consistent with the Water-Use designation of the receiving stream and the Municipal Section's Permit Development Rationale. The daily maximum pH limit is 8.5 s.u. and the daily minimum is 6.0 s.u. The monitoring frequency will be once per discharge, not to exceed five times per week.

For Outfall 0011, flow is to be monitored continuously, seven days per week. Outfall 0021 is a HCR discharge, therefore, the allowable discharge flow to the creek is limited by stream flow. The allowable discharge flows to the stream are given by the following equations developed by the Department's Water Quality Branch:

Summer season at stream flows less than or equal to 10.8 cfs: Waste Flow (MGD) = 0.3221(stream flow (cfs))^2 – 2.5609(stream flow(cfs))+ 11.639

Summer season at stream flows greater than 10.8 cfs: Waste Flow (MGD) = 0.7655(stream flow (cfs))+16.36

Winter season at all stream flows: Waste Flow (MGD) = 0.7927(stream flow (cfs)) - 0.3474

A daily DMR has been provided by the Department for HCR discharge. Effluent flow will be monitored instantaneously on days discharges occur, not to exceed five times per week. Influent flow will be monitored continuously, 7 days per week.

The discharge limits for Dissolved Oxygen (DO), 5-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) and Ammonia as Nitrogen (NH_3-N) for Outfalls 0011 and 0021 and additionally Total Kjeldahl Nitrogen (TKN) for Outfall 0011 were developed by the Municipal Permitting Section based on Waste Load Allocation (WLA) models performed by the Department's Water Quality Branch on October 21, 2021 and August 22, 2022, respectively. For Outfall 0011, the monthly average summer (May – November) limitations for $CBOD_5$, NH_3N, and TKN are 8.0 mg/l, 2.0 mg/l, and 6.0 mg/l, respectively, with monitoring frequencies of five times per week. The monthly average winter (December – April) limitations for $CBOD_5$, NH_3N, and TKN are 20.0 mg/l, 15.0 mg/l, and 30.0 mg/l, respectively, with monitoring frequencies of five times per week. DO has a daily minimum limitation of 6.0 mg/l for both seasons with a monitoring frequency of five times per week.

For Outfall 0021, the monthly average summer (May – November) limitations for $CBOD_5$ and NH_3N are 8.0 mg/l and 2.0 mg/l, respectively, with monitoring frequencies of once per discharge, not to exceed five times per week. The monthly average winter (December – April) limitations for $CBOD_5$ and NH_3N are 20.0 mg/l and 7.5 mg/l, respectively, with monitoring frequencies of once per discharge, not to exceed five times per week. For Outfall 0021, TKN will also be monitored and reported on a monthly basis. For Outfall 0021, DO has a daily minimum limitation of 6.0 mg/l for both seasons with a monitoring frequency of once per discharge, not to exceed five times per week.

For both Outfalls 0011 and 0021, a minimum percent removal of 85 percent is imposed for $CBOD_5$, based on 40 CFR Part 133.102. The percent removal will be calculated once per month.

For both outfalls, the monthly average Total Suspended Solids (TSS) limit is established at 30.0 mg/l in accordance with Department policy and 40 CFR 133.102. For both outfalls, a minimum percent removal of 85 percent is imposed for TSS. For Outfall 0011, TSS will have a monitoring frequency of five times per week. For Outfall 0021, TSS will have a monitoring frequency of once per discharge, not to exceed five times per week. TSS percent removal will be calculated once per month for both outfalls.

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 both the Black Warrior River and Cribbs Mill Creek are classified as Fish & Wildlife, the limits for both outfalls for May – October are 126 col/100mL (monthly average) and 298 col/100mL (daily maximum), while the limits for both outfalls for November

– April are 548 col/100mL (monthly average) and 2507 col/100mL (daily maximum). The monitoring frequency will be five times per week for Outfall 0011 and once per discharge, not to exceed five times per week for Outfall 0021.

This permit imposes monthly monitoring for both outfalls for the following nutrient-related parameters: Total Phosphorus (TP) and Nitrate plus Nitrite-Nitrogen (NO2+NO3-N). 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. The monitoring frequency will be once per month.

Daily maximum and monthly average TRC limitations of 0.111 mg/L and 0.064 mg/L, respectively, are being imposed at Outfall 0011. The monitoring frequency will be five times per week. Daily maximum and monthly average TRC limitations of 0.024 mg/L and 0.014 mg/L, respectively, are being imposed at Outfall 0021. The monitoring frequency will be once per discharge, not to exceed five times per week. A measurement of Total Residual Chlorine below 0.05 mg/L will be considered in compliance with the permit limitations above and should be reported as "*B" on the discharge monitoring reports.

Because this is a major facility (design capacity greater than 1 MGD) treating both municipal and industrial wastewater, chronic toxicity testing with two species (Ceriodaphnia and Pimephales) is being imposed on this permit. Toxicity testing is imposed for both survival and life-cycle impairment (i.e., growth and reproduction). For Outfall 0011, chronic toxicity at the IWC of 18 percent is required based on the November 16, 2021 Memo by ADEM's Water Quality Division. For Outfall 0021, chronic toxicity at the IWC of 78 percent is required. For both outfalls, toxicity testing will be conducted during the month of October.

ADEM completed a Reasonable Potential Analysis (RPA) of the data submitted in Part D of the Permittee's application (Per 40 CFR Part 122 Appendix J – Table 2). The RPA was based on DMR data, background data from the WARG-4 station for the Black Warrior River, and the permit application. There was no background data for Cribbs Mill Creek that would be appropriate to use in the RPA. The RPA indicates there is a reasonable potential to contribute to excursions of Alabama's in-stream water quality standards in Recoverable Zinc for Outfall 0021. The daily maximum and monthly average limitations for Total Recoverable Zinc are 214 ug/L with monitoring frequency of once per month.

Discharges from Outfall 0011 did not show reasonable potential to contribute to excursions of Alabama's in-stream water quality standards. Additionally, discharges from Outfall 0021 did not show RP to contribute to excursions of Copper, Mercury, or B2EP of the receiving water. Total Recoverable Mercury monitoring for Outfalls 001 and 002 is not included in this permit based on the Reasonable Potential reassessment showing no reasonable potential for mercury to contribute to excursions to the receiving water. The removal of mercury monitoring, copper limitations, B2EP limitations, and a minimum instream flow for the Black Warrior River is not considered backsliding because it is consistent with the Department's antidegradation policy and water quality standards are being attained.

The receiving streams are the Black Warrior River and Cribbs Mill Creek, Tier I waterbodies. The streams are not on the current 303(d) list for impaired waterbodies. There are no approved TMDLs for Cribbs Mill Creek or the Black Warrior River.

ADEM Administrative Rule 335-6-10-.12 requires applicants to new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in which the waters are located. The application submitted by the facility is not for a new or expanded discharge, so the applicant is not required to demonstrate that the discharge is necessary for economic and social development.

Annual stormwater monitoring will be required at Outfalls 003S, 004S, and 005S for pH, TSS, NH_3-N, TKN, NO_2+NO_3-N, TP, flow, $CBOD_5$, Oil and Grease, and E. coli.

Prepared by: Sandra Lee

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3766

From:	Sandy Lee	**In Branch/Section**	Municipal		
Date Submitted	2/2/2021	**Date Required**	3/4/2021	**FUND Code**	605
Date Permit application received by NPDES program	12/1/2020				
Receiving Waterbody	Black Warrior River (Warrior Lake)				
Previous Stream Name					
Facility Name	Tuscaloosa WWTP	(Name of Discharger-WQ will use to file)			
		Previous Discharger Name			
River Basin	Black Warrior	**Outfall Latitude**	33.112639	(decimal degrees)	
***County**	Tuscaloosa	**Outfall Longitude**	-87.607383	(decimal degrees)	
Permit Number	AL0022713	**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.	Northport WWTP (indirect from Mill Creek) Hunt Refining Company Tuscaloosa WWTP (0021-indirect from Cypress Creek) Moundville Lagoon Akron Lagoon
Impacting dischargers permit numbers.	AL0064394 AL0000973 AL0022713 AL0058122 AL0059714

Existing Discharge Design Flow	24	MGD	**Note: The flow rates given should be those requested for modeling.**
Proposed Discharge Design Flow	24	MGD	

Comments included ☑ Yes ☐ No

Information Verified By JBS

Year File Was Created 1991

Response ID Number 1818

Lat/Long Method GPS

12 Digit HUC Code	031601130204		
Use Classification	F&W		
Site Visit Completed?	☑ Yes ☐ No	**Date of Site Visit**	5/13/2021
Waterbody Impaired?	☐ Yes ☑ No	**Date of WLA Response**	10/21/2021
Antidegradation	☐ Yes ☑ No	**Approved TMDL?**	☐ Yes ☑ No
Waterbody Tier Level	Tier I		
Use Support Category	1	**Approval Date of TMDL**	

Waste Load Allocation Information

Modeled Reach Length	66.51	Miles	**Date of Allocation**	10/21/2021	
Name of Model Used	QUAL2K		**Allocation Type**	2 Seasons	
Model Completed by	JBS		**Type of Model Used**	Calibrated	
Allocation Developed by	Water Quality Branch				

Waste Load Allocation Summary

Annual Effluent Limits			Conventional Parameters			Conventional Parameters			Other Parameters			Other Parameters		
Qw		MGD	Qw	24	MGD	Qw	24	MGD	Qw		MGD	Qw		MGD
			Season	Summer		Season	Winter		Season			Season		
			From	May		From	Dec		From			From		
			Through	Nov		Through	Apr		Through			Through		
CBOD5			CBOD5	8	mg/L	CBOD5	20	mg/L	TP			TP		
NH3-N			NH3-N	2	mg/L	NH3-N	15	mg/L	TN			TN		
TKN			TKN	6	mg/L	TKN	30	mg/L	TSS			TSS		
D.O.			D.O.	6	mg/L	D.O.	6	mg/L						

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

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	0.11	mg/l	1.19	mg/l
NH3-N	0.0436	mg/l	0.1577	mg/l
Temperature	30	°C	20	°C
pH	7.87	su	7	su

Hydrology at Discharge Location

Drainage Area Qualifier			Method Used to Calculate
Estimated			
Drainage Area	4920	sq mi	
Stream 7Q10	179.57	cfs	ADEM Estimate w/USGS Gage Data
Stream 1Q10	134.68	cfs	75%of 7Q10
Stream 7Q2	455.73	cfs	ADEM Estimate w/USGS Gage Data
Annual Average	8517.55	cfs	ADEM Estimate w/USGS Gage Data

Comments and/or Notations This is for the primary discharge (0011) for Tuscaloosa WWTP. There is a wet weather discharge (0021) on Cribbs Mill Creek that has been input into this model. Flows have been updated from the most recent data.

Mixing Zone Analysis Summary

REQUEST INFORMATION

request number: 3767

From: (Responsible Engineer) Sandy Lee | In Branch/Section: Municipal

Date Submitted: 2/2/2021 | Date Required: 3/4/2021 | FUND Code: 605

Date Permit application received by NPDES program: 12/1/2020

Receiving Waterbody: Cribbs Mill Creek

Previous Stream Name:

Facility Name: Tuscaloosa WWTP (Name of Discharger-WQ will use to file)

Previous Discharger Name:

River Basin: Black Warrior | Outfall Latitude: 33.174046 (decimal degrees)

*County: Tuscaloosa | Outfall Longitude: -87.565431 (decimal degrees)

Permit Number: AL0022713 | 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.	Impacting dischargers permit numbers.

Existing Discharge Design Flow: 24 MGD

Proposed Discharge Design Flow: 24 MGD

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

Seasonal limits requested? ☐ Yes ☑ No

If not seasonal, only the summer sections will be used

Comments included: ☑ Yes ☐ No

Information Verified By: JBS

Year File Was Started: 1993

12 Digit HUC Code: 031601130204

Date of MZ Response: 11/16/2021

Use Classification: F&W

Site Visit Completed? ☑ Yes ☐ No

Date of Site Visit: 5/13/2021

Hydrology			Method Used to Calculate
Drainage Area	4920	sq mi	
Stream 7Q10	179.57	cfs	ADEM Estimate w/USGS Gage Data
Stream 1Q10	134.68	cfs	75%of 7Q10
Stream 7Q2	455.73	cfs	ADEM Estimate w/USGS Gage Data
Annual Average	8517.55	cfs	ADEM Estimate w/USGS Gage Data

Date of MZ Analysis: 11/16/2021

Model Completed by: JBS

Pollutant Category

Whole Effluent Toxicity (WET) ☑ | Thermal ☐ | Pathogens ☐

Mixing Zone Analysis Summary

WET Parameters

Summer

Acute

Ambient Streamflow		cfs
ZID Length		Meters
ZID IWC		%

Chronic

Ambient Streamflow	179.57	cfs
Mixing Zone Length		Meters
Mixing Zone IWC	17.14	%

Winter

Acute

Ambient Streamflow		cfs
ZID Length		Meters
ZID IWC		%

Chronic

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Mixing Zone IWC		%

Thermal Parameters

Summer

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Max. Effluent Temp		°C

Winter

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Max. Effluent Temp		°C

Pathogen Parameters

Summer

Ambient Streamflow		cfs
ZID Length		Meters
Max. Effluent Fecal Conc		Cols/100 mls
Max. Effluent E. coli Conc		Cols/100 mls
Monthly Average Effluent E. coli Conc		Cols/100 mls
Max. Effluent Enterococci Conc (for coastal waters)		Cols/100 mls

Winter

Ambient Streamflow		cfs
ZID Length		Meters
Max. Effluent Fecal Conc		Cols/100 mls
Max. Effluent E. coli Conc		Cols/100 mls
Monthly Average Effluent E. coli Conc		Cols/100 mls
Max. Effluent Enterococci Conc (for coastal waters)		Cols/100 mls

Comments and/or Notations

CORMIX predicted nearly instantaneous mixing for this discharge scenario; therefore, the limiting (complete mix) IWC of 17.14% is applicable.

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

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

November 16, 2021

MEMORANDUM

TO: Tuscaloosa WWTP MZ file

FROM: Jonathan Straiton, Water Quality Branch

RE: Mixing Zone Analysis for Tuscaloosa WWTP (AL0022713)

An updated mixing zone analysis was completed for the Tuscaloosa WWTP outfall 0011 discharge on November 16, 2021. The facility has a discharge flow rate of 24 MGD year-round which flows into the Black Warrior River (Warrior Lake). The Black Warrior River (Warrior Lake) at the discharge location is classified as Fish and Wildlife.

A limiting dilution of 5.84:1 was calculated from the design discharge flow rate (24 MGD) and the 7Q10 (179.57 cfs) of the Black Warrior River (Warrior Lake) at the point of discharge. Therefore, based on the established ADEM protocol for whole effluent toxicity determination, chronic toxicity using the ambient 7Q10 flow is applicable.

The discharge apparatus is a multi-port diffuser. The diffuser manifold is 40.5 meters long and has a diameter that tapers from 1.22 meters (48 inches) down to 0.51 meters (20 inches). The diffuser consists of four ports, all of which have a diameter of 20 inches. The discharge is located on the left bank, oriented to discharge with the ambient flow, and is submerged at the bottom of the Black Warrior River (Warrior Lake).

A CORMIX analysis was completed for the discharge scenario. CORMIX2 predicts nearly instantaneous mixing within the near field; as a result, it was determined that an assumption of complete mixing is appropriate for the discharge. Therefore, the limiting (complete mix) instream waste concentration (IWC) value is applicable.

Chronic Toxicity:

Flow Rate	IWC
24 MGD	17.14%

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
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3767

From:	Sandy Lee	In Branch/Section	Municipal		
Date Submitted	2/2/2021	Date Required	3/4/2021	FUND Code	605
Date Permit application received by NPDES program	12/1/2020				
Receiving Waterbody	Cribbs Mill Creek				
Previous Stream Name					
Facility Name	Tuscaloosa WWTP	(Name of Discharger-WQ will use to file)			
		Previous Discharger Name			
River Basin	Black Warrior	Outfall Latitude	33.174046	(decimal degrees)	
*County	Tuscaloosa	Outfall Longitude	-87.565431	(decimal degrees)	
Permit Number	AL0022713	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.		Impacting dischargers permit numbers.			
Existing Discharge Design Flow	24 MGD	Note: The flow rates given should be those requested for modeling.			
Proposed Discharge Design Flow	24 MGD				
Comments included ☑ Yes ☐ No		Information Verified By	JBS	Year File Was Created	1998
				Response ID Number	1821
				Lat/Long Method	GPS
12 Digit HUC Code	031601130203				
Use Classification	F&W				
Site Visit Completed?	☑ Yes ☐ No	Date of Site Visit	5/13/2021		
Waterbody Impaired?	☐ Yes ☑ No	Date of WLA Response	8/22/2022		
Antidegradation	☐ Yes ☑ No	Approved TMDL?	☐ Yes ☑ No		
Waterbody Tier Level	Tier I				
Use Support Category	3	Approval Date of TMDL			

Waste Load Allocation Information

Modeled Reach Length	10.23	Miles	Date of Allocation	8/1/2022	
Name of Model Used	SWQM		Allocation Type	HCR	
Model Completed by	JBS		Type of Model Used	Desk-top	
Allocation Developed by	Water Quality Branch				

Waste Load Allocation Summary

Annual Effluent Limits	Conventional Parameters		Other Parameters	
	Qw 24 MGD	Qw 24 MGD	Qw MGD	Qw MGD
Qw MGD	Season Summer	Season Winter	Season	Season
	From May	From Dec	From	From
	Through Nov	Through Apr	Through	Through
CBOD5	CBOD5 8 mg/L	CBOD5 20 mg/L	TP	TP
NH3-N	NH3-N 2 mg/L	NH3-N 7.5 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
NO2+NO3-N	Monthly		
TP	Monthly		
TKN	Monthly		

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	2	mg/l	2	mg/l
NH3-N	0.11	mg/l	0.11	mg/l
Temperature	30	°C	20	°C
pH	7	su	7	su

Drainage Area Qualifier: Estimated

Hydrology at Discharge Location

			Method Used to Calculate
Drainage Area	10.5	sq mi	
Stream 7Q10	4.22	cfs	ADEM Estimate w/USGS Gage Data
Stream 1Q10	3.165	cfs	75%of 7Q10
Stream 7Q2	6	cfs	ADEM Estimate w/USGS Gage Data
Annual Average	21.82	cfs	ADEM Estimate w/USGS Gage Data

Comments and/or Notations

This is for the wet weather discharge (0021) on Cribbs Mill Creek. The following equations apply (x = stream flow in cfs, y = effluent flow in MGD):

Summer season at stream flows less than or equal to 10.8 cfs: $y = 0.3221x^2 - 2.5609x + 11.639$
Summer season at stream flows greater than 10.8 cfs: $y = 0.7655x + 16.36$

Winter season at all stream flows: $y = 0.7927x - 0.3474$

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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

August 18, 2022

MEMORANDUM

TO: Sandra Lee, Industrial/Municipal Branch

FROM: Jonathan Straiton, Water Quality Branch

RE: Waste Load Allocation for Tuscaloosa WWTP for permit renewal

A seasonal hydrograph controlled release (HCR) analysis was completed for the Tuscaloosa WWTP for outfall 0021 on August 1, 2022. The facility's existing design flow rate is 24 million gallons per day (MGD). The 0021 outfall is a wet weather backup discharge to the main outfall (0011) to the Black Warrior River (Warrior Lake). Outfall 0021 for Tuscaloosa WWTP discharges directly into Cribbs Mill Creek. The spreadsheet water quality model platform was used for the analysis. The model predicts that, utilizing the equations provided below, the following effluent limits will maintain the required dissolved oxygen concentration of 5.0 mg/L year-round.

Parameter	Summer Limits	Winter Limits
$CBOD_5$	8 mg/L	20 mg/L
NH_3-N	2 mg/L	7.5 mg/L
Minimum DO	6 mg/L	6 mg/L

Two HCR equations were derived for the summer season; only one equation was needed for the winter season. The equations for each season are given below (x = stream flow in cfs, y = effluent flow in MGD):

Summer (Stream flow ≤ 10.8 cfs): $y = 0.3221x^2 - 2.5609x + 11.639$
Summer (Stream flow > 10.8 cfs): $y = 0.7655x + 16.36$
Winter: $y = 0.7927x - 0.3474$

Cribbs Mill Creek at the point of discharge is classified as Fish and Wildlife (F&W) and is considered a Tier I water. The discharge site $7Q_{10}$ and $7Q_2$ flow rates were found to be 4.22 cfs and 6.0 cfs, respectively. For the model, an ultimate to five-day CBOD ratio of 3.0 was used. The summer ammonia-nitrogen limits/equations are based on DO requirements, and the winter ammonia-nitrogen limits/equation are based on both toxicity and DO requirements.

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
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	**Hilliard N. Fletcher WRRF**	
NPDES Permit Number:	**AL0022713**	
Receiving Stream:	**Black Warrior River (Warrior Lake)**	
Facility Design Flow (Q_w):	**24.000 MGD**	
Receiving Stream $7Q_{10}$:	**179.570 cfs**	
Receiving Stream $1Q_{10}$:	**134.680 cfs**	
Winter Headwater Flow (WHF):	**455.73 cfs**	
Summer Temperature for CCC:	**30 deg. Celsius**	
Winter Temperature for CCC:	**20 deg. Celsius**	
Headwater Background NH_3-N Level:	**0.16 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.

$$\text{Stream Dilution Ration (SDR)} = \frac{Qw}{7Q10 + Qw} = \textbf{17.14\%}$$

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.

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

$$= \textbf{17.14\%} \qquad \textbf{Effluent-Dominated, CCC Applies}$$

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**	**2.18 mg/l**
Allowable Winter Instream NH_3-N:	**36.09 mg/l**	**4.15 mg/l**

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

= 12.0 mg/l NH3-N at 7Q10

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

= 53.2 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	**2.00 mg/l NH3-N**	**12.00 mg/l NH3-N**
Winter	**15.00 mg/l NH3-N**	**53.20 mg/l NH3-N**

Summer: The DO based limit of 2.00 mg/l NH3-N applies.
Winter: The DO based limit of 15.00 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) = $\frac{Qw}{7Q10 + Qw}$ = **17.14%** 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 (October through May):	548	**548**
Monthly limit as monthly aveage (June through September):	126	**126**
Daily Max (October through May):	2507	**2507**
Daily Max (June through September):	298	**298**
Enterococci (applies to Coastal)		
Monthly limit as geometric mean (October through May):	Not applicable	**Not applicable**
Monthly limit as geometric mean (June through September):	Not applicable	**Not applicable**
Daily Max (October through May):	Not applicable	**Not applicable**
Daily Max (June through September):	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:	0.064 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	0.111 mg/l (acute)	(0.019)/(SDR)

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

Prepared By: Sandra Lee Date: 9/26/2022

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	**Hilliard N Fletcher WRRF**	
NPDES Permit Number:	**AL0022713**	
Receiving Stream:	**Cribbs Mill Creek**	
Calculated Flow from minimum summer stream flow(Q_w):	**24.600 MGD**	
Receiving Stream $7Q_{10}$:	**10.810 cfs**	Minimum Stream Flow (Summer)
Receiving Stream $1Q_{10}$:	**10.810 cfs**	Minimum Stream Flow (Summer)
Winter Headwater Flow (WHF):	**31.47 cfs**	Minimum Stream Flow at 24.6 MGD (Winter)
Summer Temperature for CCC:	**30 deg. Celsius**	
Winter Temperature for CCC:	**20 deg. Celsius**	
Headwater Background NH_3-N Level:	**0.11 mg/l**	
Receiving Stream pH:	**7.0 s.u.**	
Headwater Background FC Level (summer):	**N./A.**	**(Only applicable for facilities with diffusers.)**
(winter):	**N./A.**	

The Stream Dilution Ration (SDR) is calculated using the 7Q10 for all stream classifications.

$$\text{Stream Dilution Ration (SDR)} = \frac{Qw}{7Q10 + Qw} = \textbf{77.88\%}$$

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.

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

$$= \textbf{77.88\%} \quad \textbf{Effluent-Dominated, CCC Applies}$$

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**	**2.18 mg/l**
Allowable Winter Instream NH_3-N:	**36.09 mg/l**	**4.15 mg/l**

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

$$= \textbf{2.8 mg/l NH3-N at 7Q10}$$

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

$$= \textbf{7.5 mg/l NH3-N at Winter Flow}$$

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	**2.00 mg/l NH3-N**	**2.80 mg/l NH3-N**
Winter	**7.50 mg/l NH3-N**	**7.50 mg/l NH3-N**

Summer: The DO based limit of 2.00 mg/l NH3-N applies.
Winter: The toxicity-based limit of 7.50 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) = $\frac{Qw}{7Q10 + Qw}$ = **77.88%**

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 (October through May):	Not applicable	**Not applicable**
Monthly limit as geometric mean (June through September):	Not applicable	**Not applicable**
Daily Max (October through May):	Not applicable	**Not applicable**
Daily Max (June through September):	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:	0.014 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	0.024 mg/l (acute)	(0.019)/(SDR)

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

Prepared By: Sandra Lee Date: 11/2/2022

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	**Hilliard N Fletcher WRRF**	
NPDES Permit Number:	**AL0022713**	
Receiving Stream:	**Cribbs Mill Creek**	
Calculated Flow from iminimum summer stream flow (Q_w):	**21.550 MGD**	
Receiving Stream $7Q_{10}$:	**10.800 cfs**	Minimum Stream Flow (Summer)
Receiving Stream $1Q_{10}$:	**10.800 cfs**	Minimum Stream Flow (Summer)
Winter Headwater Flow (WHF):	**27.62 cfs**	Minimum Stream Flow at 21.55 MGD (Winter)
Summer Temperature for CCC:	**30 deg. Celsius**	
Winter Temperature for CCC:	**20 deg. Celsius**	
Headwater Background NH_3-N Level:	**0.11 mg/l**	
Receiving Stream pH:	**7.0 s.u.**	
Headwater Background FC Level (summer):	**N./A.**	**(Only applicable for facilities with diffusers.)**
(winter):	**N./A.**	

The Stream Dilution Ration (SDR) is calculated using the 7Q10 for all stream classifications.

$$\text{Stream Dilution Ration (SDR)} = \frac{Qw}{7Q10 + Qw} = \textbf{77.47\%}$$

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.

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

= **77.47%** **Effluent-Dominated, CCC Applies**

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

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

	CMC	CCC
Allowable Summer Instream NH_3-N:	**36.09 mg/l**	**2.18 mg/l**
Allowable Winter Instream NH_3-N:	**36.09 mg/l**	**4.15 mg/l**

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

= **2.9 mg/l NH3-N at 7Q10**

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

= **7.5 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	**2.00 mg/l NH3-N**	**2.90 mg/l NH3-N**
Winter	**7.50 mg/l NH3-N**	**7.50 mg/l NH3-N**

Summer: The DO based limit of 2.00 mg/l NH3-N applies.
Winter: The toxicity-based limit of 7.50 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) = $\frac{Qw}{7Q10 + Qw}$ = **75.53%**

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 (October through May):	Not applicable	**Not applicable**
Monthly limit as geometric mean (June through September):	Not applicable	**Not applicable**
Daily Max (October through May):	Not applicable	**Not applicable**
Daily Max (June through September):	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:	0.014 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	0.024 mg/l (acute)	(0.019)/(SDR)

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

Prepared By: Sandra Lee Date: 11/2/2022

Facility Name: **Tuscaloosa Hilliard N Fletcher WRRF - 0011**

NPDES No.: **AL0022713**

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 µg/l	Background from upstream source (C_{d2}) Monthly Ave µg/l	Background Instream (C_s) Daily Max µg/l	Background Instream (C_s) Monthly Ave µg/l	Enter Max Daily Discharge as reported by Applicant (C_d) Max µg/l	Enter Avg Daily Discharge as reported by Applicant (C_d) Ave µg/l	Partition Coefficient (Stream / Lake)
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	0	0	0.574
3	Beryllium		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	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	-
7	**Copper****		Metals	0	0	0	0	3.4	1.1	0.388
8	**Lead****		Metals	0	0	0	0	0	0	0.206
9	**Mercury****		Metals	0	0	0	0	0.008	0.00214	0.302
10	**Nickel****		Metals	0	0	0	0	2.4	1.3	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	90.5	52.97	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	105580	81357	69400	66667	-
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	-
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	-

24	Enter Q_d = wastewater discharge flow from facility (MGD)
37.133496	Q_d = wastewater discharge flow (cfs) (this value is calculated 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)
179.57	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
134.68	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
8517.55	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
455.73	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	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
81.35	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 26, 2022

Facility Name: Tuscaloosa Hilliard N Fletcher WRRF - 0011

NPDES No.: AL0022713

						Freshwater Acute ($\mu g/l$) Q_s =1Q10					Freshwater Chronic ($\mu g/l$) Q_s = 7Q10					Human Health Consumption Fish only (ug/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
Freshwater F&W classification				Max Daily Discharge as reported by Applicant (C_{max})						Avg Daily Discharge as reported by Applicant (C_{avg})									
ID	Pollutant	RP?	Carcinogen yes,	Background from upstream source (Cd2) Daily Max		Water Quality Criteria (C_t)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave		Water Quality Criteria (C_t)	Draft Permit Limit (C_{avg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	2.18E+03	4.36E+02	No
2	Arsenic		YES	0	0	592.334	2740.681	548.136	No	0	0	261.324	1525.034	305.007	No	3.03E-01	6.98E+01	1.40E+01	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	6.981	32.300	6.460	No	0	0	0.903	5.270	1.054	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2291.174	10601.067	2120.213	No	0	0	298.035	1739.270	347.854	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	74.031	14.806	No	0	0	11.000	64.194	12.839	No	-	-	-	-
7	Copper			0	3.4	28.515	131.936	26.388	No	0	1.1	19.360	112.920	22.584	No	-	-	-	-
8	Lead			0	0	250.226	1157.774	231.555	No	0	0	9.751	56.905	11.381	No	-	-	-	-
9	Mercury			0	0.008	2.400	11.105	2.221	No	0	0.00214	0.012	0.070	0.014	No	4.24E-02	2.48E-01	4.95E-02	No
10	Nickel			0	2.4	778.636	3602.692	720.538	No	0	1.3	86.483	504.695	100.939	No	9.93E+02	5.79E+03	1.16E+03	No
11	Selenium			0	0	20.000	92.538	18.508	No	0	0	5.000	29.179	5.836	No	2.43E+03	1.42E+04	2.84E+03	No
12	Silver			0	0	2.255	10.436	2.087	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.60E+00	3.19E-01	No
14	Zinc			0	90.5	298.117	1379.363	275.873	No	0	52.97	300.556	1753.983	350.797	No	1.49E+04	8.69E+04	1.74E+04	No
15	Cyanide			0	0	22.000	101.792	20.358	No	0	0	5.200	30.348	6.069	No	9.33E+03	5.45E+04	1.09E+04	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	69400	-	-	-	-	0	66867	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	3.17E+01	6.33E+00	No
19	Acryfonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	3.32E+01	6.64E+00	No
20	Aldrin		YES	0	0	3.000	13.881	2.776	No	0	0	-	-	-	-	2.94E-05	6.77E-03	1.35E-03	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	3.56E+03	7.13E+02	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	1.81E+04	3.63E+03	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	2.21E+02	4.41E+01	No
24	Chlordane		YES	0	0	2.400	11.105	2.221	No	0	0	0.0043	0.025	0.005	No	4.73E-04	1.09E-01	2.16E-02	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	5.29E+03	1.06E+03	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	1.71E+03	3.41E+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	2.35E+04	4.70E+03	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	4.18E-02	8.36E-03	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	2.95E-02	5.90E-03	No
32	4,4' - DDT		YES	0	0	1.100	5.090	1.018	No	0	0	0.001	0.006	0.001	No	1.28E-04	2.95E-02	5.90E-03	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	2.31E+03	4.62E+02	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	4.92E+03	9.85E+02	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	3.45E+04	6.89E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	9.60E+05	1.92E+05	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	4.96E+01	9.91E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	7.17E+01	1.43E+01	No
40	Dieldrin		YES	0	0	0.240	1.110	0.222	No	0	0	0.056	0.327	0.065	No	3.12E-05	7.19E-03	1.44E-03	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	7.26E+03	1.45E+03	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	5.08E+03	1.02E+03	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	7.96E+04	1.59E+04	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	5.38E+02	1.08E+02	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+00	4.42E+02	8.83E+01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	5.09E+04	1.02E+04	No
48	Toxaphene		YES	0	0	0.730	3.378	0.676	No	0	0	0.0002	0.001	0.000	No	1.62E-04	3.73E-02	7.46E-03	No
49	Tributyltin (TBT)		YES	0	0	0.460	2.128	0.426	No	0	0	0.072	0.420	0.084	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	2.10E+03	4.19E+02	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	4.02E+03	8.05E+02	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	3.28E+02	6.56E+01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	5.08E+02	1.02E+02	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	1.00E+03	2.01E+02	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	2.90E+03	5.81E+02	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.82E+04	3.63E+03	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	3.81E+04	7.62E+03	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	6.14E-06	1.23E-06	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	40.362	8.072	No	0	0	6.693	39.057	7.811	No	1.77E+00	4.07E+02	8.14E+01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	2.92E+06	5.84E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	3.26E+02	6.52E+01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	3.38E+03	6.75E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	1.36E+05	2.72E+04	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.19E-04	6.77E-04	1.35E-04	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	2.45E+00	4.91E-01	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	2.45E+00	4.91E-01	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	6.22E-02	1.24E-02	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	6.22E-02	1.24E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	7.08E+01	1.42E+01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	2.21E+05	4.41E+04	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	2.95E+02	5.91E+01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	6.58E+03	1.32E+03	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	5.39E+03	1.08E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	2.45E+00	4.91E-01	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	1.53E+04	3.06E+03	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	2.45E+00	4.91E-01	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	4.41E+03	8.82E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	3.28E+03	6.56E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	6.56E+02	1.31E+02	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	3.63E+00	7.66E-01	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.49E+05	2.98E+04	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	3.78E+06	7.56E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	4.56E+02	9.13E+01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
97	Endosulfan (alpha)		YES	0	0	0.22	1.018	0.204	No	0	0	0.056	0.327	0.065	No	5.19E+01	1.19E+04	2.39E+03	No
98	Endosulfan (beta)		YES	0	0	0.22	1.018	0.204	No	0	0	0.056	0.327	0.065	No	5.19E+01	1.19E+04	2.39E+03	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	1.19E+04	2.39E+03	No
100	Endrin		YES	0	0	0.086	0.398	0.080	No	0	0	0.036	0.210	0.042	No	3.53E-02	8.12E+00	1.62E+00	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E-01	4.06E+01	8.12E+00	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	6.12E+01	4.74E+02	9.47E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.82E+04	3.63E+03	No
104	Heptochlor		YES	0	0	0.52	2.406	0.481	No	0	0	0.0038	0.022	0.004	No	4.63E-06	1.07E-02	2.13E-03	No
105	Heptachlor Epoxide		YES	0	0	0.52	2.406	0.481	No	0	0	0.0038	0.022	0.004	No	2.29E-05	5.27E-03	1.05E-03	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.83E-04	3.87E-02	7.73E-03	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.06E+01	2.48E+03	4.96E+02	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	6.56E-01	1.31E-01	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	2.30E+00	4.59E-01	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	4.396	0.879	No	0	0	-	-	-	-	1.08E+00	2.48E+02	4.96E+01	No
111	HexachlorocyclоPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	3.45E+02	3.77E+03	7.53E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	1.12E+01	2.24E+00	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	2.45E+00	4.91E-01	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	3.27E+03	6.54E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	2.36E+03	4.71E+02	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	6.80E+01	1.36E+01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	4.05E+02	8.11E+01	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	8.07E+02	1.61E+02	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.082	0.016	No	3.74E-05	8.61E-03	1.72E-03	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.082	0.016	No	3.74E-05	8.61E-03	1.72E-03	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.082	0.016	No	3.74E-05	8.61E-03	1.72E-03	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.082	0.016	No	3.74E-05	8.61E-03	1.72E-03	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.082	0.016	No	3.74E-05	8.61E-03	1.72E-03	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.082	0.016	No	3.74E-05	8.61E-03	1.72E-03	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.082	0.016	No	3.74E-05	8.61E-03	1.72E-03	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	1.36E+04	2.72E+03	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	2.39E+02	4.78E+01	No

Tuscaloosa Hilliard N Fletcher WRRF (AL0022713) – Outfall 001Q

Total Recoverable Mercury DMR Data

Monitor Pd End Date	Monthly Average (ug/L)	Daily Maximum (ug/L)
9/30/2016	0.003	0.003
12/31/2016	0.007	0.007
3/31/2017	0.002	0.002
6/30/2017	0.005	0.005
9/30/2017	0.001	0.001
12/31/2017	0.002	0.002
3/31/2018	0.002	0.002
6/30/2018	0.001	0.001
9/30/2018	0.001	0.001
12/31/2018	0.001	0.001
3/31/2019	0.002	0.002
6/30/2019	0.002	0.002
9/30/2019	0.002	0.002
12/31/2019	0.002	0.002
3/31/2020	0.008	0.008
6/30/2020	0.00192	0.00192
9/30/2020	0.00207	0.00207
12/31/2020	0.002	0.002
3/31/2021	0	0
6/30/2021	0.002	0.002
9/30/2021	0	0
12/31/2021	0.00131	0.00131
3/31/2022	0.00299	0.00299
6/30/2022	0.0026	0.0026
	Monthly Average **0.00214**	**Maximum** **0.008**

Facility Name: **Tuscaloosa Hilliard N Fletcher WRRF - 0021**

NPDES No.: **AL0022713**

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 µg/l	Background from upstream source (C_{d2}) Monthly Ave µg/l	Background Instream (C_s) Daily Max µg/l	Background Instream (C_s) Monthly Ave µg/l	Enter Max Daily Discharge as reported by Applicant (C_d) Max µg/l	Enter Avg Daily Discharge as reported by Applicant (C_d) Ave µg/l	Partition Coefficient (Stream / Lake)
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	0	0	0.574
3	Beryllium		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	0	0	0.210
6	**Chromium / Chromium VI****		Metals	0	0	0	0	0	0	
7	**Copper****		Metals	0	0	0	0	3.4	0.0875	0.388
8	**Lead****		Metals	0	0	0	0	0	0	0.206
9	**Mercury****		Metals	0	0	0	0	0.008	0.00214	0.302
10	**Nickel****		Metals	0	0	0	0	2.4	1.3	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	90.5	52.97	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	0	0	69400	66867	-
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	-
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	**Heptachlor**	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	-

24	Enter Q_d = wastewater discharge flow from facility (MGD)
37.133496	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)
4.22	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
3.165	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
21.82	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
6	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	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
50	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 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 26, 2022

Facility Name: Tuscaloosa Hilliard N Fletcher WRRF - 0021

NPDES No.: AL0022713

						Freshwater F&W classification					Freshwater Acute (µg/l) Q_s =1Q10				Avg Daily Discharge as reported by Applicant (C_{max})	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_{max})	Water Quality Criteria (C_T)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave		Water Quality Criteria (C_T)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_T)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	4.16E+02	8.32E+01	No
2	Arsenic		YES	0	0	592.334	642.821	128.564	No	0	0	261.324	291.022	58.204	No	3.03E-01	4.61E-01	9.62E-02	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	4.347	4.718	0.944	No	0	0	0.644	0.717	0.143	No	-	-	-	-
5	Chromium/ Chromium III			0	0	1537.913	1668.994	333.799	No	0	0	200.051	222.785	44.557	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	17.364	3.473	No	0	0	11.000	12.250	2.450	No	-	-	-	-
7	Copper			0	3.4	18.029	19.563	3.913	No	0	0.0875	12.765	14.216	2.843	No	-	-	-	-
8	Lead			0	0	146.291	158.760	31.752	No	0	0	5.701	6.349	1.270	No	-	-	-	-
9	Mercury			0	0.008	2.400	2.605	0.521	No	0	0.00214	0.012	0.013	0.003	No	4.24E-02	4.72E-02	9.45E-03	No
10	Nickel			0	2.4	515.824	559.790	111.958	No	0	1.3	57.292	63.803	12.761	No	9.93E+02	1.11E+03	2.21E+02	No
11	Selenium			0	0	20.000	21.705	4.341	No	0	0	5.000	5.568	1.114	No	2.43E+03	2.71E+03	5.41E+02	No
12	Silver			0	0	0.978	1.060	0.212	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	3.05E-01	6.09E-02	No
14	Zinc	YES		0	90.5	197.369	214.191	42.838	Yes	0	52.97	196.983	221.597	44.319	Yes	1.49E+04	1.66E+04	3.32E+03	No
15	Cyanide			0	0	22.000	23.875	4.775	No	0	0	5.200	5.791	1.158	No	9.33E+03	1.04E+04	2.08E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	69400	-	-	-	-	0	68887	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	6.04E+00	1.21E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	2.29E-01	4.57E-02	No
20	Aldrin		YES	0	0	3.000	3.256	0.651	No	0	0	-	-	-	-	2.94E-05	4.67E-05	9.33E-06	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	2.46E+01	4.91E+00	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	1.25E+02	2.50E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	1.52E+00	3.04E-01	No
24	Chlordane		YES	0	0	2.400	2.605	0.521	No	0	0	0.0043	0.005	0.001	No	4.73E-04	7.51E-04	1.50E-04	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	1.01E+03	2.02E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	1.18E+01	2.35E+00	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	1.62E+02	3.24E+01	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	2.88E-04	5.76E-05	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	2.03E-04	4.07E-05	No
32	4,4' - DDT		YES	0	0	1.100	1.194	0.239	No	0	0	0.001	0.001	0.000	No	1.28E-04	2.03E-04	4.07E-05	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	1.59E+01	3.19E+00	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	3.39E+01	6.78E+00	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.81E+03	6.58E+03	1.32E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+02	6.62E+03	1.32E+03	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	9.46E+00	1.69E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	3.23E+01	1.37E+01	2.74E+00	No
40	Dieldrin		YES	0	0	0.240	0.260	0.052	No	0	0	0.056	0.062	0.012	No	3.12E-05	4.96E-05	9.92E-06	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	1.39E+03	2.77E+02	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	9.70E+02	1.94E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.45E+02	5.49E+02	1.10E+02	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	3.70E+00	7.41E-01	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	3.04E+00	6.09E-01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	9.71E+03	1.94E+03	No
48	Toxaphene		YES	0	0	0.730	0.792	0.158	No	0	0	0.0002	0.000	0.000	No	1.62E-04	2.57E-04	5.14E-05	No
49	Tributyltin (TBT)		YES	0	0	0.460	0.499	0.100	No	0	0	0.072	0.080	0.016	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	1.44E+01	2.89E+00	No
52	Trichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	2.77E+01	5.55E+00	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	2.26E+00	4.52E-01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	9.70E+01	1.94E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	1.92E+02	3.83E+01	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	5.54E+02	1.11E+02	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.46E+03	6.93E+02	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	2.63E+02	5.25E+01	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	4.23E-08	8.47E-09	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	6.723	9.467	1.893	No	0	0	6.693	7.453	1.491	No	1.77E+00	2.81E+00	5.61E-01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	5.57E+05	1.11E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	2.25E+00	4.49E-01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.76E+02	6.44E+02	1.29E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	2.60E+04	5.20E+03	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	1.29E-04	2.58E-05	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.69E-02	3.38E-03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.69E-02	3.38E-03	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.19E-02	2.37E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.19E-02	2.37E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	4.88E-01	9.76E-02	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	4.21E+04	8.42E+03	No
79	Bis (2-Ethythexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	2.04E+00	4.07E-01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	1.26E+03	2.51E+02	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	1.03E+03	2.06E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.69E-02	3.38E-03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	2.92E+03	5.84E+02	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.69E-02	3.38E-03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	8.41E+02	1.68E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	6.26E+02	1.25E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	1.25E+02	2.51E+01	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	2.64E-02	5.28E-03	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	2.85E+04	5.70E+03	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	7.22E+05	1.44E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E+00	3.14E+00	6.29E-01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
97	Endosulfan (alpha)		YES	0	0	0.22	0.239	0.048	No	0	0	0.056	0.062	0.012	No	5.19E+01	8.23E+01	1.65E+01	No
98	Endosulfan (beta)		YES	0	0	0.22	0.239	0.048	No	0	0	0.056	0.062	0.012	No	5.19E+01	8.23E+01	1.65E+01	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	8.23E+01	1.65E+01	No
100	Endrin		YES	0	0	0.086	0.093	0.019	No	0	0	0.036	0.040	0.008	No	3.53E-02	5.60E-02	1.12E-02	No
101	Endrin Aldehyde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E-01	2.80E-01	5.60E-02	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	6.12E+01	9.04E+01	1.81E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.46E+03	6.93E+02	No
104	Heptochlor		YES	0	0	0.52	0.564	0.113	No	0	0	0.0038	0.004	0.001	No	4.63E-05	7.35E-05	1.47E-05	No
105	Heptachlor Epoxide		YES	0	0	0.52	0.564	0.113	No	0	0	0.0038	0.004	0.001	No	2.29E-05	3.63E-05	7.27E-06	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	2.66E-04	5.33E-05	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	1.71E+01	3.42E+00	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	4.52E-03	9.05E-04	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	1.58E-02	3.17E-03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	1.031	0.206	No	0	0	-	-	-	-	1.08E+00	1.71E+00	3.42E-01	No
111	HexachlorocyclоPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	7.18E+02	1.44E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	2.14E+00	4.27E-01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.69E-02	3.38E-03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	6.24E+02	1.25E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	4.50E+02	8.99E+01	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	4.68E-01	9.37E-02	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	2.79E+00	5.59E-01	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	5.56E+00	1.11E+00	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.016	0.003	No	3.74E-05	5.94E-05	1.19E-05	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.016	0.003	No	3.74E-05	5.94E-05	1.19E-05	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.016	0.003	No	3.74E-05	5.94E-05	1.19E-05	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.016	0.003	No	3.74E-05	5.94E-05	1.19E-05	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.016	0.003	No	3.74E-05	5.94E-05	1.19E-05	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.016	0.003	No	3.74E-05	5.94E-05	1.19E-05	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.016	0.003	No	3.74E-05	5.94E-05	1.19E-05	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	2.60E+03	5.20E+02	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	4.56E+01	9.12E+00	No

Tuscaloosa Hilliard N Fletcher WRRF (AL0022713) – Outfall 002Q

Total Recoverable Mercury DMR Data

Monitor Pd End Date	Monthly Average (ug/L)	Daily Maximum (ug/L)
9/30/2016	0.003	0.003
3/31/2017	0.002	0.002
6/30/2017	0.005	0.005
9/30/2017	0.001	0.001
12/31/2017	0.002	0.002
3/31/2018	0.002	0.002
6/30/2018	0.001	0.001
9/30/2018	0.001	0.001
12/31/2018	0.001	0.001
3/31/2019	0.002	0.002
6/30/2019	0.002	0.002
3/31/2020	0.008	0.008
6/30/2020	0.00192	0.00192
9/30/2020	0.00207	0.00207
12/31/2020	0.002	0.002
3/31/2021	0	0
6/30/2021	0.002	0.002
9/30/2021	0	0
12/31/2021	0.00131	0.00131
3/31/2022	0.00299	0.00299
6/30/2022	0.0026	0.0026
	Monthly Average **0.00214**	**Maximum** **0.008**

Tuscaloosa Hilliard N Fletcher WRRF (AL0022713) – Outfall 002Q

Bis-2-Ethylhexyl Pthalate DMR Data

Monitor Pd End Date	Monthly Average (ug/L)	Daily Maximum (ug/L)
9/30/2016	0	0
3/31/2017	0	0
6/30/2017	0	0
9/30/2017	0	0
12/31/2017	0	0
3/31/2018	0	0
6/30/2018	0	0
9/30/2018	0	0
12/31/2018	0	0
3/31/2019	0	0
6/30/2019	0	0
3/31/2020	0	0
6/30/2020	0	0
9/30/2020	0	0
3/31/2021	0	0
6/30/2021	0	0
9/30/2021	0	0
12/31/2021	0	0
3/31/2022	0	0
6/30/2022	0	0
Application	0	0
Application	0	0
Application	0	0
	Monthly Average **0**	**Maximum** **0**

Tuscaloosa Hilliard N Fletcher WRRF (AL0022713) – Outfall 0021

Total Recoverable Copper DMR Data

Monitor Pd End Date	Monthly Average (ug/L)	Daily Maximum (ug/L)
1/31/2017	0	0
2/28/2017	0	0
4/30/2017	0	0
6/30/2017	0	0
7/31/2017	0	0
12/31/2017	0	0
2/28/2018	0	0
3/31/2018	0	0
4/30/2018	0	0
5/31/2018	0	0
7/31/2018	0	0
8/31/2018	0	0
9/30/2018	0	0
11/30/2018	0	0
12/31/2018	0	0
1/31/2019	0	0
2/28/2019	0	0
3/31/2019	0	0
4/30/2019	0	0
5/31/2019	0	0
12/31/2019	0	0
1/31/2020	0.098	0.098
2/29/2020	0	0
3/31/2020	0	0
4/30/2020	0.001	0.001
10/31/2020	0	0
12/31/2020	0.14	0.14
1/31/2021	0.1	0.1
2/28/2021	0.001	0.001
3/31/2021	0.11	0.11
4/30/2021	0	0
5/31/2021	0.001	0.001
6/30/2021	0.003	0.003
7/31/2021	0.007	0.007
8/31/2021	*C	*C
9/30/2021	*9	*9
10/31/2021	*9	*9
11/30/2021	*C	*C
12/31/2021	0	0

1/31/2022		0		0
2/28/2022		0.004		0.004
3/31/2022		0		0
4/30/2022		0		0
5/31/2022		0		0
6/30/2022		*C		*C
7/31/2022		*C		*C
Application		1.1		3.4
Application		1.1		
Application		1.1		
	Monthly Average	**0.0875**	**Maximum**	**3.4**

FACT SHEET

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

Date Prepared: September 26, 2022 **By:** Sandra Lee

NPDES Permit No. AL0022713

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

   City of Tuscaloosa
   2201 University Boulevard
   Tuscaloosa, AL 35401

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

   Hilliard N. Fletcher WRRF
   4010 Reese Phifer Avenue
   Tuscaloosa, AL 35401

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

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

4. **Applicant's Receiving Waters**

Feature ID	Receiving Water	Classification
001	Black Warrior River (Warrior Lake)	Fish and Wildlife (F&W)
002	Cribbs Mill Creek	Fish and Wildlife (F&W)
003	Cribbs Mill Creek	Fish and Wildlife (F&W)
004	Cribbs Mill Creek	Fish and Wildlife (F&W)
005	Cribbs Mill Creek	Fish and Wildlife (F&W)

   For the Outfall latitude and longitude see the permit application.

5. **Permit Conditions:**

   See attached Rationale and Draft Permit.

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

   a. **Comment Period**

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

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

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

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: Post Office 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 36110-2400

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

City of TUSCALOOSA
INFRASTRUCTURE & PUBLIC SERVICES

November 30, 2020

Emily Anderson, Chief
Municipal Section
Water Division
1400 Coliseum Blvd. 36110-2400
Post Office Box 301463
Montgomery, AL 36130-1463

RE: National Pollutant Discharge Elimination System (NPDES)
Permit Renewal Application (Permit No. AL0022713)
Hilliard N. Fletcher Water Resource Recovery Facility (WRRF)
Tuscaloosa County/125

Dear Ms. Anderson:

Please find enclosed two copies the City of Tuscaloosa's National Pollutant Discharge Elimination System (NPDES) Permit Renewal Application Package as well as a check for the application fee in the amount of $7,060.00.

The current permit, No. AL0022713, expires May 31, 2021.

Should you have any questions, you may contact myself at (205) 248-5804 or Jarrod Milligan at (205) 248-5253.

Sincerely,

Tera Tubbs, Executive Director
Infrastructure and Public Services

Enclosures (3)

Cc: Sandra Lee, ADEM

INFRASTRUCTURE & PUBLIC SERVICES
2201 University Blvd. • Tuscaloosa, AL 35401 • Phone 205-248-5890 • Fax 205-248-5769 • City Hall 205-248-5311
TUSCALOOSA.COM @TuscaloosaCity

City of Tuscaloosa, Clearing Account

Invoice Number	Account	PO Number	Amount	Discount	Net Amount
ADEM ZONE PERMIT	60109041 3214		4,855.00		4,855.00

R#2 #53206

RECEIVED

MAY 14 2021

MUNICIPAL SECTION

IPS Admin

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
284480	ADEM	0286355	05/10/2021	4,855.00

City of
TUSCALOOSA
INFRASTRUCTURE & PUBLIC SERVICES

May 11, 2021

Alabama Department of Environmental Management, Water Division
ATTN: Ms. Sandra Lee
Post Office Box 301463
Montgomery, Alabama 36130

RE: Fee for Updated Mixing Zone Modeling
NPDES Permit No. AL0022713
Hilliard N. Fletcher Water Resource Recovery Facility (WRRF)

Dear Ms. Lee,

In regards to the current permit renewal of NPDES #AL0022713 for the City of Tuscaloosa Hilliard N. Fletcher WRRF, the City would like to request an updated mixing zone model for the outfall pipe and diffuser. Enclosed is a check in the amount of $4,855 to cover the fee.

If you have questions please feel free to contact me at (205) 248-5253.

Sincerely,

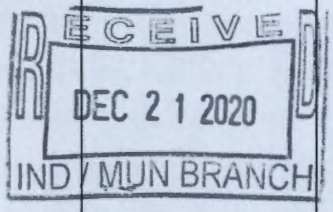
Jarrod Milligan, P.E.
Deputy Executive Director
Infrastructure and Public Services
City of Tuscaloosa

Enclosures

LOGISTICS & ASSET MANAGEMENT
2621 Kaulton Road • Tuscaloosa, AL 35401 • Phone 205-248-5950 • City Hall 205-248-5311
TUSCALOOSA.COM @TuscaloosaCity

City of Tuscaloosa, Clearing Account

Invoice Number	Account	PO Number	Amount	Discount	Net Amount
FLETCHER AL0022713.2	60109041 3102		1,015.00		1,015.00



R#21-52851

IPS Admin

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
284480	ADEM	0283214	12/14/2020	1,015.00

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

JAN 16 2020

MS TERA TUBBS
EXECUTIVE DIRECTOR
CITY OF TUSCALOOSA
2201 UNIVERSITY BOULEVARD
TUSCALOOSA AL 35401

RE: Permit Renewal Notice
NPDES Permit No. AL0022713
Hilliard N. Fletcher WWTP
Tuscaloosa County, Alabama

Dear Ms. Tubbs:

Our records show that the above referenced permit will expire on **May 31, 2021.** If you wish to renew the permit, permit regulations require the submittal of two (2) copies of the completed application for reissuance and the appropriate processing fee in such a manner that the documents and fee arrive at the Department's Montgomery office no later than **December 3, 2020,** which is **180 days** before the permit expiration date. If the permit will no longer be required, the regulations require the submittal of a notice to that effect. The notice is required to be submitted no later than 180 days prior to permit expiration.

If a complete permit application and fee are received by the required date, NPDES regulations automatically extend the permit until such time as the Department is able to issue it. If a complete permit application with fee is not submitted prior to the required date and if the Department is unable to reissue the permit prior to the expiration date, the permit is not continued and any discharge after the expiration date is unpermitted. The discharge of wastewater without a permit is a serious violation that may result in legal action by others and/or in enforcement action by the Department or the Environmental Protection Agency.

The required application forms (EPA Form 2A, EPA Form 2F, EPA Form 2S, and ADEM Form 188) can be found on the Department's website at http://www.adem.state.al.us/programs/water/waterforms.cnt. **Please be aware there are new EPA forms.**

Please note that as of December 21, 2016, all Permittees are required to submit DMRs electronically. If not already enrolled in the Department's web-based electronic environmental (E2) reporting system, please submit a completed Permittee Participation Package (PPP) **immediately**. The PPP 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 note that a hard copy PPP with original signature must be submitted to the Department to complete the enrollment process.

The fees for water permits are listed in Fee Schedule D of our regulations under **ADEM Administrative Code r. 335-1-6-.07**, which can also be viewed on our website at http://www.adem.state.al.us/alEnviroRegLaws/default.cnt.

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

Should you have any questions or comments concerning this letter, please feel free to contact **Sandra Lee** by email at **SLee@adem.alabama.gov** or by phone at **(334) 274-4223**.

Sincerely,

Emily D. Anderson

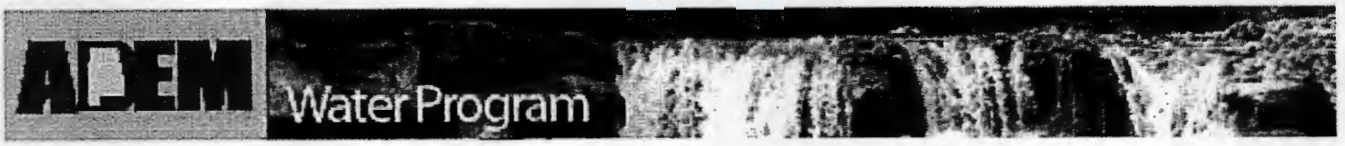
Emily Anderson, Chief
Municipal Section
Industrial/Municipal Branch
Water Division

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)



Individual NPDES Permit

Description: Covers process stormwater, and non-process water discharges to a Water of the State. Also covers facilities that land apply treated process or sanitary waste water.

Issuing Divison: Water **Branch:** Industrial/Municipal Branch, Stormwater Management Branch

When is a permit required? Any person who discharges or proposes to discharge pollutants to a Water of the State.

Permit is required ☐ before construction ☐ before operation ☒ before discharge

 # Days from complete application to issuance: 90 (minimum) approx. 180 (maximum)

Notes on approval timeline: An application is required to be submitted at least 180 days before intial discharge and 180 days prior to permit expiration. Facilities proposing a new discharge associated with industrial activity shall submit an application 180 days before the facility commences industrial activity which may result in a discharge of stormwater associated with that industrial activity.

Local approval required? No.

Application procedure: Submit application form(s) with appropriate fee.

Base permit fee: Typically ranges from $5,615 (minor industrial) to $17,990 (major industrial); or ranges from $4,290 (minor municipal) to $7,060 (major municipal).

Additive fees (explain): Greenfield fee $1,610; toxicity testing $1,015; Modeling $4,855 to $60,390; Cooling Water Intake $5,065.

`Term of permit: 5 years

Public notice required? ☒ Yes ☐ No **Length of notice:** 30 days

Public hearing required? ☐ Yes ☐ No ☒ Departmental discretion/based on comments

ADEM Contact Person: Scott Ramsey (Industrial) 334-271-7838; Emily Anderson (Municipal) 334-271-7801; Marla Smith (MS4) 334-270-5616

Additional Information: DIZ Study is required for facilities that discharge more than 1 million gallons per day (MGD) of process waste water which are located within the coastal zone. MS4 Phase I entities and MS4 Phase II entities, which require monitoring, should submit a permit request letter and monitoring information. Anti-degradation analysis is required for any new or expanded discharge after April 3, 1991 to Tier 2 waters.

Forms Required

Form #	Form	
EPA Form 1	General Information Form	All Facilities must fill out this form.
EPA Form 2A	Application for Permit to Discharge Wastewater - Publicly Owned Treatment Works	All WWTP discharges (including land application facilities.
EPA Form 2C	Wastewater Discharge Information	Facilities that Discharge Process Wastewater

EPA Form 2D	New Sources and New Discharges	Used for initial applications for new facilities that will be discharging to a Water of the State. Also to be used for an existing facility that will introduce a new discharge different from any existing discharges.
EPA Form 2E	Facilities Which Do Not Discharge Process Wastewaters	Facilities that do not discharge process wastewater but discharge non-contact cooling water.
EPA Form 2F	Application for Permit to Discharge Storm Water Associated with Industrial Activity	For all facilities that discharge storm water associated with an industrial activity.
187	NPDES Permit Application Supplementary Information	All Industrial Facilities must fill out this form.
188	Supplementary Information - Municipal, Semi-Public & Private Facilities	All WTP and WWTP discharges (including land application facilities).
311	Alternatives Analysis	New or expanded discharge to a Tier 2 water.
312 (or 313)	Calculation of Total Annualized Project Costs for Public-Sector (or Private-Sector) Projects	New or expanded discharge to a Tier 2 water
466	Transfer Agreement	Transfer of any permit to a new Permittee
455	Required Information for Mixing Zone Modeling	Facilities requesting application of effluent limitations beyond the Mixing Zone/Zone of Initial Dilution.

FEE SCHEDULE D
WATER PERMITS

Type of Activity	Initial Registration/Issuance Reissuance or Modification (effluent limit change) (injection zone change or compatibility study)	Modification (no effluent limit change) (no injection zone change or no compatibility study)
Major Industrial Discharger	$17,990	$3,940
Minor Industrial Discharger	$5,615	$3,120
Major Municipal & Private	$7,060	$3,140
Minor Municipal & Private & Water Treatment	$4,290	$2,250
Municipal Stormwater (MS-4)	$7,060	$3,275
Mineral/Resource Extraction Mining, Storage Transloading, Dry Processing	$5,820	$3,400
Wet Preparation, Processing, Beneficiation	$6,860	$3,940
Coalbed Methane	$6,860	$3,940
General Permit	$1,385	$800
Minor NPDES Modifications	-----	$800
ADDITIVE FEES		
Modeling with Data Collection (10 Stations)	$60,390	$60,390
Modeling with Data Collection (5 Stations)	$49,315	$49,315
Modeling - desktop	$4,855	$4,855
Review of Model Performed by Others	$2,705	$2,705
Seasonal Limits	$4,855/ additional season	$4,855/ additional season
Biomonitoring & Toxicity Limits	$1,015	$1,015
316b Phase I, Phase II, and Phase III Facilities [Permit Issuance/Re-issuance Modification]	$5,065	0

City of Tuscaloosa, Clearing Account

Invoice Number	Account	PO Number	Amount	Discount	Net Amount
RENEWAL NPDES PERM	60109041 3102		19,420.00		19,420.00

RECEIVED
JAN 27 2021
MUNICIPAL SECTION

Major
21-52939

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
284480	ADEM	0283862	01/19/2021	19,420.00

City of
TUSCALOOSA
INFRASTRUCTURE & PUBLIC SERVICES

January 19, 2021

RECEIVED
JAN 27 2021
MUNICIPAL SECTION

Alabama Department of Environmental Management, Water Division
ATTN: Ms. Sandra Lee
Post Office Box 301463
Montgomery, Alabama 36130

RE: Request for Discharge Modeling and Seasonal Limits
NPDES Permit No. AL0022713
Hilliard N. Fletcher Water Resource Recovery Facility (WRRF)

Dear Ms. Lee,

In regards to the current permit renewal of NPDES #AL0022713 for the City of Tuscaloosa Hilliard N. Fletcher WRRF, the City would like to request a desktop model analysis and a seasonal limits analysis for the outfalls at Black Warrior River and Cribbs Mill Creek. Based on ADEM's Water Permit Fee Schedule D, the cost for each analysis will be $4,855 which equals a combined total of $19,420. Enclosed is a check in the amount of $19,420 to cover the fees for the four analysis requested.

If you have questions please feel free to contact me at (205) 248-5925.

Sincerely,

Joshua D. Bonner, P.E.
Process Assets Manager
City of Tuscaloosa

Enclosures

LOGISTICS & ASSET MANAGEMENT
2621 Kaulton Road • Tuscaloosa, AL 35401 • Phone 205-248-5950 • City Hall 205-248-5311
TUSCALOOSA.COM @TuscaloosaCity

City of
TUSCALOOSA
INFRASTRUCTURE & PUBLIC SERVICES

November 30, 2020

Emily Anderson, Chief
Municipal Section
Water Division
1400 Coliseum Blvd. 36110-2400
Post Office Box 301463
Montgomery, AL 36130-1463

RE: National Pollutant Discharge Elimination System (NPDES)
Permit Renewal Application (Permit No. AL0022713)
Hilliard N. Fletcher Water Resource Recovery Facility (WRRF)
Tuscaloosa County/125

Dear Ms. Anderson:

Please find enclosed two copies the City of Tuscaloosa's National Pollutant Discharge Elimination System (NPDES) Permit Renewal Application Package as well as a check for the application fee in the amount of $7,060.00.

The current permit, No. AL0022713, expires May 31, 2021.

Should you have any questions, you may contact myself at (205) 248-5804 or Jarrod Milligan at (205) 248-5253.

Sincerely,

Tera Tubbs, Executive Director
Infrastructure and Public Services

Enclosures (3)

Cc: Sandra Lee, ADEM

INFRASTRUCTURE & PUBLIC SERVICES
2201 University Blvd. • Tuscaloosa, AL 35401 • Phone 205-248-5890 • Fax 205-248-5769 • City Hall 205-248-5311
TUSCALOOSA.COM @TuscaloosaCity

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

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))

RECEIVED
DEC 01 2020
IND/MUN BRANCH

Facility Information

1.1 Facility name
Hilliard N. Fletcher Water Resource Recovery Facility

Mailing address (street or P.O. box)
2201 University Boulevard

City or town	State	ZIP code
Tuscaloosa	AL	35401

Contact name (first and last)	Title	Phone number	Email address
Josh Bonner	Process Assets Manager	(205) 248-5925	jbonner@tuscaloosa.com

Location address (street, route number, or other specific identifier) ☐ Same as mailing address
4010 Reese Phifer Avenue

City or town	State	ZIP code
Tuscaloosa	AL	35401

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) AL0022713	☐ 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)

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

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
Tuscaloosa	101,113	100 % separate sanitary sewer 0 % 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	101,113		

	Separate Sanitary Sewer System	Combined Storm and Sanitary Sewer
Total percentage of each type of sewer line (in miles)	100 %	0 %

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
	24 (max. month) mgd

Annual Average Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
18.4 (2018) mgd	18.6 (2019) mgd	20.1 (2020) mgd

Maximum Daily Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
43.2 (2018) mgd	49.1 (2019) mgd	56.6 (2020) 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**
2	0	0	0	0

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			

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

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
Unknown gpd

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

The City is aware of significant clear water intrusion into the sewer system within certain areas and is actively taking steps including rehabilitation and replacement to address. The I&I volume has not been quantified. All sewer lift stations are maintained and upgrades are constantly being prepared/planned to the needs of the plant, sewer collections, etc.

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. Please see attached list for full improvements and scheduled dates of all scheduled improvements.
2.
3.
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.					
2.					
3.					
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:

Permits are not required for design/construction of improvements to the facility through ADEM. When required during construction, contractor will be responsible for obtaining all necessary permits.

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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 002	Outfall Number ____
State	Alabama	Alabama	
County	Tuscaloosa	Tuscaloosa	
City or town	Tuscaloosa	Tuscaloosa	
Distance from shore	100 ft.	N/A ft.	ft.
Depth below surface	20 ft.	N/A ft.	ft.
Average daily flow rate	19.9 mgd	0.258 mgd	mgd
Latitude	33° 6′ 46.6″ N	33° 10′ 26″ N	° ′ ″
Longitude	-87° 36′ 27.6″ W	-87° 33′ 56.2″ 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 002	Outfall Number ____	Outfall Number ____
Number of times per year discharge occurs	Variable (wet weather only)		
Average duration of each discharge (specify units)	Variable (wet weather only)		
Average flow of each discharge	39.29 mgd	mgd	mgd
Months in which discharge occurs	Variable (wet weather only)		

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 001	Outfall Number 002	Outfall Number ____
Buried outfall pipe; four (4), 20-inch risers spaced 10'-0" apart with 45-degree elbow to direct flow in direction of river.	No diffuser; Direct/open discharge to receiving water across energy dissipating apron (riprap).	

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 001	Outfall Number 002	Outfall Number _____
Receiving water name	Black Warrior River	Cribbs Mill Creek	
Name of watershed, river, or stream system	Upper Black Warrior River	Upper Black Warrior River	
U.S. Soil Conservation Service 14-digit watershed code			
Name of state management/river basin	Black Warrior River	Black Warrior River	
U.S. Geological Survey 8-digit hydrologic cataloging unit code	03160113	031601123	
Critical low flow (acute)	219.65 cfs	30.27 cfs	cfs
Critical low flow (chronic)	54.77 cfs	11.05 cfs	cfs
Total hardness at critical low flow	Unavailable mg/L of $CaCO_3$	Unavailable 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 002	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	001	002	
BOD_5 or $CBOD_5$	90 %	90 %	%
TSS	85 %	85 %	%
Phosphorus	☑ Not applicable %	☑ Not applicable %	☐ Not applicable %
Nitrogen	☐ Not applicable 90 %	☐ Not applicable 90 %	☐ Not applicable %
Other (specify) _____	☑ Not applicable %	☑ Not applicable %	☐ Not applicable %

Treatment Description Continued

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

For both outfalls, ultraviolet disinfection is utilized for disinfection.

	Outfall Number 001	Outfall Number 002	Outfall Number ____
Disinfection type	UV	UV	
Seasons used	Continuous	Continuous	
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 002		Outfall Number ____	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Number of tests of discharge water		4				
Number of tests of receiving water						

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

☑ Yes ☐ No ➔ SKIP to Item 3.16.

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

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

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

☑ Yes ☐ No

3.16 Does one or more of the following conditions apply?

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

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

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

☑ Yes ☐ No

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

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

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
10/11/2016	Also submitted: 10/03/2017, 10/02/2018, and 10/08/2019. All chronic toxicity tests were passed.

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

☐ 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
9	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
Walt Maddox	Mayor
Signature	Date signed
Walt Maddox	11-24-20

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0022713	Hilliard N. Fletcher WRRF	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)	13.5	mg/L	5.51	mg/L	> 350	5210	1.25 mg/L ☐ ML ☑ MDL
Fecal coliform	5370 (E. Coli)	C/100mL	92 (E. Coli)	C/100mL	> 450	9223B	1.0 MPN ☐ ML ☑ MDL
Design flow rate	75	MGD	18.5	MGD	N/A		
pH (minimum)	5.93	S.U.					
pH (maximum)	6.91	S.U.					
Temperature (winter)	24.6	deg-C	19.9	deg-C	178		
Temperature (summer)	27.8	deg-C	25.4	deg-C	184		
Total suspended solids (TSS)	160.2	mg/L	12.7	mg/L	> 350	2540	0.75 mg/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).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0022713	Hilliard N. Fletcher WRRF	002

Form Approved 03/05/19
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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)	14.42	mg/L	8.04	mg/L	> 125	5210	1.25 mg/L ☐ ML ☑ MDL
Fecal coliform	46110 (E. Coli)	C/100mL	1875 (E. Coli)	C/100mL	> 125	9223B	1.0 MPN ☐ ML ☑ MDL
Design flow rate	75	MGD	18.5	MGD	N/A		
pH (minimum)	5.96						
pH (maximum)	7.03						
Temperature (winter)	24.6	deg-C	19.5	deg-C	deg-C		
Temperature (summer)	No discharge	deg-C	No discharge	deg-C	0		
Total suspended solids (TSS)	317.0	mg/L	35.4	mg/L	> 125	2540	0.75 mg/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)	23.2	mg/L	1.0	mg/L	> 350	4500 - NH3	0.5 mg/L ☐ ML ☑ MDL
Chlorine (total residual, TRC)[2]	N/A	N/A	N/A	N/A	N/A		☐ ML ☐ MDL
Dissolved oxygen	13.3	mg/L	7.7	mg/L	> 350		☐ ML ☐ MDL
Nitrate/nitrite	16.9	mg/L	9.48	mg/L	4	4500 - NO2	1 ml/L ☐ ML ☑ MDL
Kjeldahl nitrogen	34.0	mg/L	2.6	mg/L	> 350	4500 - Norg B G	0.1 mg/L ☐ ML ☑ MDL
Oil and grease	2.5	mg/L	1.9	mg/L	2	1664A	5.2 mg/L ☐ ML ☑ MDL
Phosphorus	2.70	mg/L	0.9	mg/L	21	4500 - P	0.1 mg/L ☐ ML ☑ MDL
Total dissolved solids	795	mg/L	437.75	mg/L	4	2540 C	10 mg/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).

[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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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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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 $CaCO_3$)	69400	ug/L	66867	ug/L	3	SM 2340 B	5 ug/L ☐ ML ☑ MDL
Antimony, total recoverable			<1.0	ug/L	3	200.8	1.0 ug/L ☐ ML ☑ MDL
Arsenic, total recoverable			<1.0	ug/L	3	200.8	1.0 ug/L ☐ ML ☑ MDL
Beryllium, total recoverable			<1.0	ug/L	3	200.8	0.50 ug/L ☐ ML ☑ MDL
Cadmium, total recoverable			<1.0	ug/L	3	200.8	1.0 ug/L ☐ ML ☑ MDL
Chromium, total recoverable			<1.0	ug/L	3	200.8	1.0 ug/L ☐ ML ☑ MDL
Copper, total recoverable	3.4	ug/L	1.1	ug/L	3	200.8	3.0 ug/L ☐ ML ☑ MDL
Lead, total recoverable			<1.0	ug/L	3	200.8	1.0 ug/L ☐ ML ☑ MDL
Mercury, total recoverable	4.41	ng/L	2.23	ng/L	4	1631E	0.5 ng/L ☐ ML ☑ MDL
Nickel, total recoverable	2.4	ug/L	1.3	ug/L	3	200.8	1.0 ug/L ☐ ML ☑ MDL
Selenium, total recoverable			<1.0	ug/L	3	200.8	1.0 ug/L ☐ ML ☑ MDL
Silver, total recoverable			<0.5	ug/L	3	200.8	0.50 ug/L ☐ ML ☑ MDL
Thallium, total recoverable			<0.5	ug/L	3	200.8	0.50 ug/L ☐ ML ☑ MDL
Zinc, total recoverable	90.5	ug/L	52.97	ug/L	3	200.8	5.0 ug/L ☐ ML ☑ MDL
Cyanide			<0.02	mg/L	3	M4500	0.02 mg/L ☐ ML ☑ MDL
Total phenolic compounds			<0.02	mg/L	3	M5330 BD 2005	0.02 mg/L ☐ ML ☐ MDL
Volatile Organic Compounds							
Acrolein			<0.1	mg/L	3	624	20 ug/L ☐ ML ☑ MDL
Acrylonitrile			<0.1	mg/L	3	624	20 ug/L ☐ ML ☑ MDL
Benzene			<0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Bromoform			<0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0022713	Hilliard N. Fletcher WRRF	001, 002

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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			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Chlorobenzene			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Chlorodibromomethane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Chloroethane			< 0.010	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
2-chloroethylvinyl ether			< 0.010	mg/L	3	624	20 ug/L ☐ ML ☑ MDL
Chloroform			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Dichlorobromomethane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,1-dichloroethane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,2-dichloroethane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
trans-1,2-dichloroethylene			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,1-dichloroethylene			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,2-dichloropropane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,3-dichloropropylene			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Ethylbenzene			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Methyl bromide			< 0.010	mg/L	3	624	10.0 ug/L ☐ ML ☑ MDL
Methyl chloride			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Methylene chloride			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,1,2,2-tetrachloroethane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Tetrachloroethylene			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Toluene			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,1,1-trichloroethane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
1,1,2-trichloroethane			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0022713	Hilliard N. Fletcher WRRF	001, 002

Form Approved 03/05/19
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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			< 0.005	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Vinyl chloride			< 0.002	mg/L	3	624	5.0 ug/L ☐ ML ☑ MDL
Acid-Extractable Compounds							
p-chloro-m-cresol			< 0.010	mg/L	3	625	10.0 ug/L ☐ ML ☑ MDL
2-chlorophenol			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
2,4-dichlorophenol			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
2,4-dimethylphenol			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
4,6-dinitro-o-cresol			< 0.052	mg/L	3	625	52.0 ug/L ☐ ML ☑ MDL
2,4-dinitrophenol			< 0.052	mg/L	3	625	41.9 ug/L ☐ ML ☑ MDL
2-nitrophenol			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
4-nitrophenol			< 0.052	mg/L	3	625	41.9 ug/L ☐ ML ☑ MDL
Pentachlorophenol			< 0.026	mg/L	3	625	41.9 ug/L ☐ ML ☑ MDL
Phenol			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
2,4,6-trichlorophenol			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Base-Neutral Compounds							
Acenaphthene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Acenaphthylene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Anthracene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Benzidine			< 0.052	mg/L	3	625	31.4 ug/L ☐ ML ☑ MDL
Benzo(a)anthracene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Benzo(a)pyrene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
3,4-benzofluoranthene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0022713	Hilliard N. Fletcher WRRF	001, 002

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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			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Benzo(k)fluoranthene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Bis (2-chloroethoxy) methane			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Bis (2-chloroethyl) ether			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Bis (2-chloroisopropyl) ether			< 0.010	mg/L	1	625	10.5 ug/L ☐ ML ☑ MDL
Bis (2-ethylhexyl) phthalate			0.015	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
4-bromophenyl phenyl ether			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Butyl benzyl phthalate			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
2-chloronaphthalene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
4-chlorophenyl phenyl ether			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Chrysene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
di-n-butyl phthalate			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
di-n-octyl phthalate			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Dibenzo(a,h)anthracene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
1,2-dichlorobenzene			< 0.005	mg/L	3	624	5 ug/L ☐ ML ☑ MDL
1,3-dichlorobenzene			< 0.005	mg/L	3	624	5 ug/L ☐ ML ☑ MDL
1,4-dichlorobenzene			< 0.005	mg/L	3	624	5 ug/L ☐ ML ☑ MDL
3,3-dichlorobenzidine			< 0.021	mg/L	3	625	20.9 ug/ ☐ ML ☑ MDL
Diethyl phthalate			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Dimethyl phthalate			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
2,4-dinitrotoluene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
2,6-dinitrotoluene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0022713	Hilliard N. Fletcher WRRF	001, 002

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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			< 0.052	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Fluoranthene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Fluorene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Hexachlorobenzene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Hexachlorobutadiene			< 0.010	mg/L	3	625	20.9 ug/L ☐ ML ☑ MDL
Hexachlorocyclo-pentadiene			< 0.010	mg/L	3	625	41.9 ug/L ☐ ML ☑ MDL
Hexachloroethane			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Indeno(1,2,3-cd)pyrene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Isophorone			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Naphthalene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Nitrobenzene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
N-nitrosodi-n-propylamine			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
N-nitrosodimethylamine			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
N-nitrosodiphenylamine			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Phenanthrene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
Pyrene			< 0.010	mg/L	3	625	10.5 ug/L ☐ ML ☑ MDL
1,2,4-trichlorobenzene			< 0.010	mg/L	3	625	10.5 ug/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 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
							☐ 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 ____	Test Number ____	Test Number ____
Test species			
Age at initiation of test			
Outfall number			
Date sample collected			
Date test started			
Duration			
Toxicity Test Methods			
Test method number			
Manual title			
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.			
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

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

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

	Test Number ____	Test Number ____	Test Number ____
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		%		%		%
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 ____		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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EPA Identification Number	NPDES Permit Number	Facility Name
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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 01	SIU 02	SIU 03
Name of SIU	Mercedes-Benz US International, Inc.	GAF - Elk Corporation of Alabama	Peco Foods, Inc.
Mailing address (street or P.O. box)	1 Mercedes Drive	4600 Stillman Boulevard	3701 Kauloosa Avenue
City, state, and ZIP code	Vance, AL 35490	Tuscaloosa, AL 35401	Tuscaloosa, AL 35401
Description of all industrial processes that affect or contribute to the discharge.	Process wastewater from metal finishing operations and containerized wastewaters associated with automobile manufacturing.	Cooling water associated with the manufacture and shipment of asphalt roofing products.	Industrial wastewaters resulting from the slaughtering and processing of poultry.
List the principal products and raw materials that affect or contribute to the SIU's discharge.	The principle products and raw material that contribute to the SIU discharge include Metal Finishes.	The principle products and raw material that contribute to the SIU discharge include Asphalt roofing products.	The principle products and raw material that contribute to the SIU discharge include Poultry.
Indicate the average daily volume of wastewater discharged by the SIU.	200,000 gpd	4,500 gpd	251,200 gpd
How much of the average daily volume is attributable to process flow?	200,000 gpd	4,500 gpd	251,200 gpd
How much of the average daily volume is attributable to non-process flow?	0 gpd	0 gpd	0 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

TABLE F. INDUSTRIAL DISCHARGE INFORMATION

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

	SIU 01	SIU 02	SIU 02
Under what categories and subcategories is the SIU subject?	40 CFR 433.17 Subpart A - Metal Finishing Point Source Category - Pretreatment Standards for New Sources.	40 CFR 443 Subpart C - Asphalt Roofing Subcategory 40 CFR 443.36 Pretreatment Standards for new Sources	40 CFR 432 Subpart K - Poultry First Processing, PSES
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 04	SIU 05	SIU 06
Name of SIU	Southern Ionics, Inc.	Warrior Asphalt, Inc.	Phifer, Inc.
Mailing address (street or P.O. box)	410 Reichhold Road	3100 Warrior Road	Post Office Box 1700
City, state, and ZIP code	Tuscaloosa, AL 35404	Tuscaloosa, AL 35404	Tuscaloosa, AL 35404
Description of all industrial processes that affect or contribute to the discharge.	Process Wastewaters resulting from the manufacture of sodium sulfite and sodium bisulfite.	Process wastewater resulting from the manufacture and shipment of asphalt roofing products.	Process wastewater resulting from the manufacture of miscellaneous wire products and broad woven fabrics.
List the principal products and raw materials that affect or contribute to the SIU's discharge.	The principle products and raw material that contribute to the SIU discharge include Sodium sulfite and Sodium bisulfite.	The principle products and raw material that contribute to the SIU discharge include Asphalt roofing products	The principle products and raw material that contribute to the SIU discharge include Metal wire products,Aluminum, and broad woven fabrics (synthetic fibers).
Indicate the average daily volume of wastewater discharged by the SIU.	56,700 gpd	8,100 gpd	200,000 gpd
How much of the average daily volume is attributable to process flow?	56,700 gpd	8,100 gpd	200,000 gpd
How much of the average daily volume is attributable to non-process flow?	0 gpd	0 gpd	0 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

TABLE F. INDUSTRIAL DISCHARGE INFORMATION

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

	SIU 04	SIU 05	SIU 06
Under what categories and subcategories is the SIU subject?	40 CFR 415 Inorganic Chemical Manufacturing Point Source Category 40 CFR 415.206 Subpart T - Sodium Sulfite Production Subcategory, PSNS	40 CFR 443 Subpart C - Asphalt Roofing Subcategory 40 CFR 443.36 Pretreatment Standards for new Sources	40 CFR 467.55 Aluminum Forming Subpart E - Drawing with Neat Oils, PSES; 40 CFR 433.15 Metal Finishing Point Source Category - Subpart A - Metal Finishing, PSES; 40 CFR 463.15 - Plastic Molding & Forming, PSES; 40 CFR Past 410 Subpart D - Textile Mill - Woven Fabric Finishing, PSES (Section 410.44)
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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EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
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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 07	SIU 08	SIU 09
Name of SIU	Nucor Steel Tuscaloosa, Inc.	Merichem Company	Quest Liner, Inc.
Mailing address (street or P.O. box)	1700 Holt Rd. N.E.	2701 Warrior Road	1547 51st Avenue
City, state, and ZIP code	Tuscaloosa, AL 35404	Tuscaloosa, AL 35404	Tuscaloosa, AL 35401
Description of all industrial processes that affect or contribute to the discharge.	Process wastewater from continuous iron and steel casting operations and water softener backwash blowdown.	Process wastewaters resulting from chemical manufacturing and terminal operations.	Pretreated process wastewater from interior and exterior washing of tankers and tractor trailer rigs.
List the principal products and raw materials that affect or contribute to the SIU's discharge.	The principle products and raw material that contribute to the SIU discharge include Iron, steel, and Water Softener.	The principle products and raw material that contribute to the SIU discharge include Aliphatic Hydrocarbons.	The principle products and raw material that contribute to the SIU discharge include Washwater and Petroleum products.
Indicate the average daily volume of wastewater discharged by the SIU.	6,300 gpd	18,200 gpd	16,000 gpd
How much of the average daily volume is attributable to process flow?	6,300 gpd	18,200 gpd	16,000 gpd
How much of the average daily volume is attributable to non-process flow?	0 gpd	0 gpd	0 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

EPA Identification Number	NPDES Permit Number	Facility Name
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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 07	SIU 08	SIU 09
Under what categories and subcategories is the SIU subject?	40 CFR 420.66 Subpart F - Pretreatment standards for new sources (PSNS). 40 CFR 420.76 Subpart G - Hot Forming Subcategory	SIC 2911632 - Aliphatic hydrocarbons manufactured from purchased refinery products.	40 CFR 442.15 Subpart A - Pretreatment Standards for existing sources for Tank Trucks and Intermodal Tank Containers Transporting Chemical and Petroleum Cargos.
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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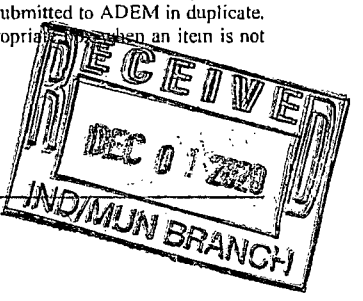
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
NPDES INDIVIDUAL PERMIT APPLICATION
SUPPLEMENTARY INFORMATION FOR PUBLICLY-OWNED TREATMENT WORKS (POTW), OTHER TREATMENT WORKS TREATING DOMESTIC SEWAGE (TWTDS), AND PUBLIC WATER SUPPLY TREATMENT PLANTS

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*
- ☐ Modification of Existing Permit
- ☐ Revocation & Reissuance of Existing Permit
- ☐ Initial Permit Application for Existing Facility*
- ☒ 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: Hilliard N. Fletcher Water Resource Recovery Facility

   a. Operator Name: City of Tuscaloosa

   b. Is the operator identified in A.1.a, the owner of the facility? ☒ Yes ☐ No
   If no, provide name and address of the operator and submit information indicating the operator's scope of responsibility for the facility.

   c. Name of Permittee* if different than Operator: City of Tuscaloosa
   **Permittee will be responsible for compliance with the conditions of the permit*

2. NPDES Permit Number: AL 0022713 (Not applicable if initial permit application)

3. Facility Physical Location: (**Attach a map with location marked; street, route no. or other specific identifier**)
   Street: 4010 Reese Phifer Avenue
   City: Tuscaloosa County: Tuscaloosa State: Alabama Zip: 35401
   Facility Location (Front Gate): Latitude: 33 10' 20" N Longitude: 87 33' 41" W

4. Facility Mailing Address: 2201 University Boulevard
   City: Tuscaloosa County: Tuscaloosa State: AL Zip: 35401

5. Responsible Official (as described on last page of this application):
   Name and Title: Walt Maddox, Mayor
   Address: 2201 University Boulevard
   City: Tuscaloosa State: AL Zip: 35401
   Phone Number: (205)-248-5001 Email Address: mayor@tuscaloosa.com

6. Designated Facility/DMR Contact:

Name and Title: Josh Bonner, Process Assets Manager

Phone Number: (205) 248-5925 Email Address: jbonner@tuscaloosa.com

7. Designated Emergency Contact:

Name and Title: Kevin Turner, Director of Logistics and Asset Management

Phone Number: (205) 248-5256 Email Address: kturner@tuscaloosa.com

8. 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.5.

Name and Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

9. Permit numbers for Applicant's previously issued NPDES Permits and identification of any other State Environmental Permits presently held by the Applicant within the State of Alabama:

Permit Type	Permit Number	Held By
NPDES	AL0022713	City of Tuscaloosa

10. 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. List the following historical monthly flow rates recorded for the past five years for each outfall:

Outfall No.	Highest Flow in Last 12 Months (MGD)	Highest Daily Flow (MGD)	Average Flow (MGD)
001	56.6	56.6	17.7
002	125.6 (inst. peak, not daily average)	125.6 (inst. peak, not daily average)	29.09 (inst. peak average)

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

3. Do you share an outfall with another facility? ☐ Yes ☒ No (If no, continue to B.4)
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?

4. 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:

Hilliard Fletcher WRRF includes continuous effluent flow metering capabilities (effluent parshall flume) and composite sampling equipment for influent and effluent flow monitoring.

5. 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

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

Describe the location of any sites used for the ultimate disposal of solid or liquid waste materials or residuals (e.g. sludges) generated by any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*
Dewatered digested biosolids	95,800 (47.9 tons/day)	Disposal to off-site landfill

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

SECTION D – INDUSTRIAL INDIRECT DISCHARGE CONTRIBUTORS

a. 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?
See Attached Sheet				■ Yes ☐ No
				■ Yes ☐ No
				■ Yes ☐ No
				■ Yes ☐ No

b. 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. All applicants must submit Form 1.
2. 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.
3. Applicants for new or existing land application of sanitary wastewater must submit Form 2A and, if the land application site is not completely bermed to prevent runoff, applicants must also submit Form 2F.
4. Applicants for new and existing discharges of process wastewater from water treatment facilities (i.e. public water supply treatment plants) must submit Form 2C.
5. 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

Any Engineering Report or Best Management Practice (BMP) Plans required to be submitted to ADEM by the applicant must be in accordance with ADEM 335-6-6-.08(i) & (j).

SECTION I– RECEIVING WATERS

Outfall No.	Receiving Water(s)	303(d) Segment?	Included in TMDL?*
001	Black Warrior River	☐ Yes ■ No	☐ Yes ■ No
002	Cribbs Mill Creek	☐ 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: 11-24-20

Name and Title: Walt Maddox, Mayor

If the Responsible Official signing this application is <u>not</u> identified in Section A.5 or A.8, 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.

EPA Form 2A
Topographic Map

NOTES:
1. ITEMS DENOTED WITH * HAVE BEEN TAKEN OFFLINE AND ARE NO LONGER IN SERVICE.

PROJECT NORTH

1 LAY-001 **EXISTING FACILITY LAYOUT**
SCALE: 1" = 80'

REV.	DATE	DESCRIPTION	BY

CITY OF TUSCALOOSA
TUSCALOOSA, AL

HILLIARD N. FLETCHER WRRF
NPDES PERMIT RENEWAL

EXISTING FACILITY LAYOUT

JOB NO.: 19W10400
DATE: AUGUST 2020
DESIGNED BY: RWC
DRAWN BY: ECB

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
LAY-001

SHEET NUMBER

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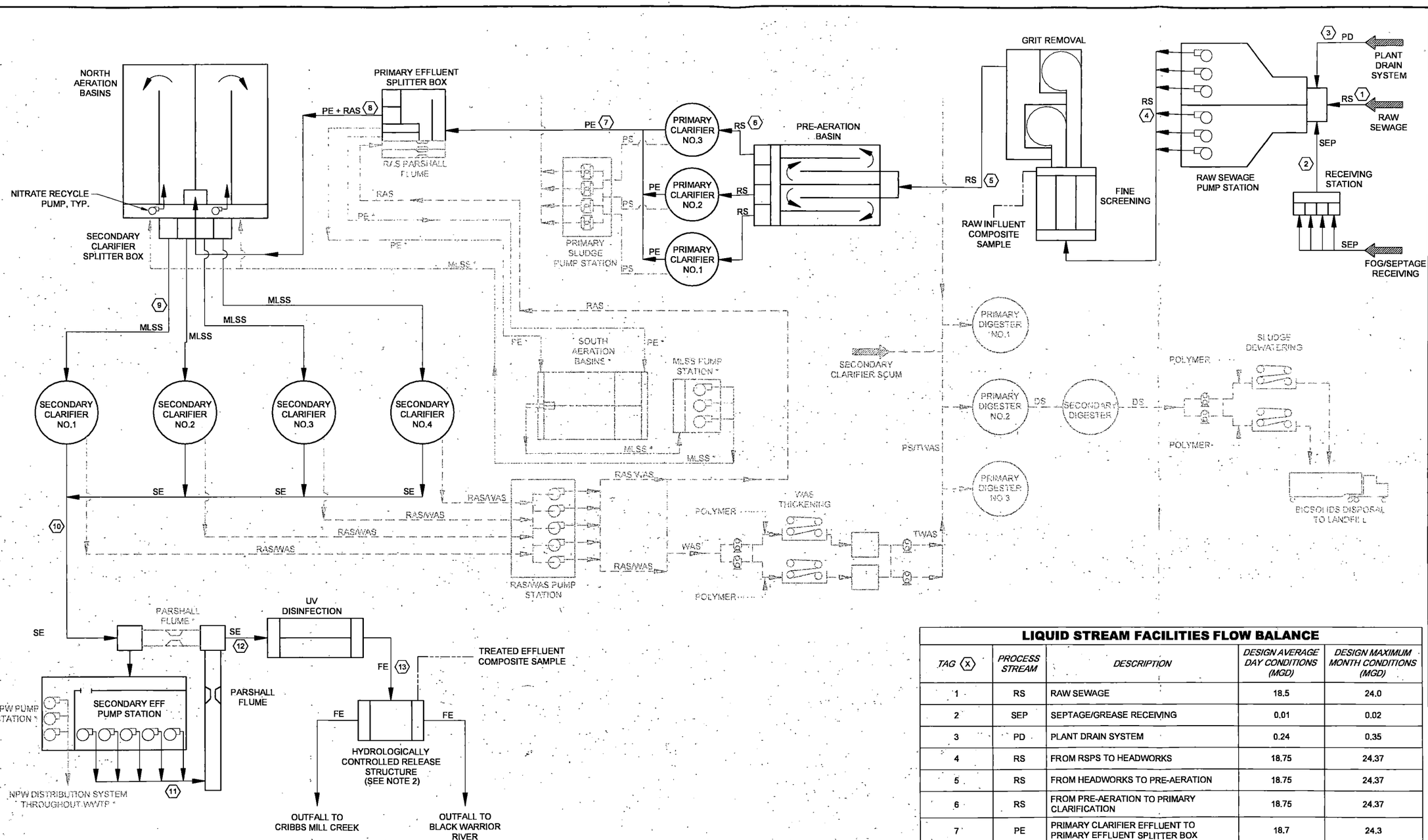
Last plotted by: Benner, Eric C. Plot Style: AECmono.ctb Plot Scale: 1:0.4259 Plot Date: 11/3/2020 10:57 AM Plotter used: DWG To PDF.pc3



LEGEND

- LIQUID STREAM
- SOLIDS STREAM
- CHEMICAL ADDITION
- PROCESSES AND/OR EQUIPMENT NO LONGER IN SERVICE (ALSO DENOTED WITH * BY LABEL)

NOTES:

1. FLOWS INDICATED ON THIS DIAGRAM SHOULD BE CONSIDERED DESIGN CONDITIONS AND DO NOT NECESSARILY REFLECT HISTORICAL OR CURRENT OPERATING CONDITIONS.
2. UNDER NORMAL FLOW AND RECEIVING WATER CONDITIONS, TREATED EFFLUENT IS DISCHARGED TO THE BLACK WARRIOR RIVER. DURING HIGH FLOW CONDITIONS AND/OR WHEN THE BLACK WARRIOR RIVER IS AT HIGH-WATER CONDITIONS, TREATED EFFLUENT IS DISCHARGED TO CRIBBS MILL CREEK.
3. TOTAL FLOW FROM PRE-AERATION TO PRIMARY CLARIFICATION AND FROM AERATION BASINS TO SECONDARY CLARIFICATION IS REPORTED AS TOTAL FLOW AND EVENLY DISTRIBUTED AMONG EACH ONLINE PRIMARY/CLARIFIER UNIT.
4. RAS FLOW ASSUMED TO BE 0.75 x RAW SEWAGE FLOW FOR PURPOSES OF THIS DIAGRAM BUT IS ADJUSTED BASED ON PLANT CONDITIONS, AS NECESSARY.
5. WAS FLOW ASSUMED TO BE 0.30 x RAW SEWAGE FLOW FOR PURPOSES OF THIS DIAGRAM BUT IS ADJUSTED BASED ON PLANT CONDITIONS, AS NECESSARY.

LIQUID STREAM FACILITIES FLOW BALANCE

TAG (X)	PROCESS STREAM	DESCRIPTION	DESIGN AVERAGE DAY CONDITIONS (MGD)	DESIGN MAXIMUM MONTH CONDITIONS (MGD)
1	RS	RAW SEWAGE	18.5	24.0
2	SEP	SEPTAGE/GREASE RECEIVING	0.01	0.02
3	PD	PLANT DRAIN SYSTEM	0.24	0.35
4	RS	FROM RSPS TO HEADWORKS	18.75	24.37
5	RS	FROM HEADWORKS TO PRE-AERATION	18.75	24.37
6	RS	FROM PRE-AERATION TO PRIMARY CLARIFICATION	18.75	24.37
7	PE	PRIMARY CLARIFIER EFFLUENT TO PRIMARY EFFLUENT SPLITTER BOX	18.7	24.3
8	PE + RAS	PRIMARY EFFLUENT AND RAS TO AERATION BASINS	32.6	42.3
9	MLSS	FROM AERATION BASINS TO SECONDARY CLARIFICATION	32.6	42.3
10	SE	SECONDARY EFFLUENT TO SECONDARY EFFLUENT PUMP STATION	18.5	24.0
11	SE	SECONDARY EFFLUENT PUMP STATION TO FINAL EFFLUENT PARSHALL FLUME	18.5	24.0
12	FE	FROM FINAL EFFLUENT PARSHALL FLUME TO DISINFECTION	18.5	24.0
13	FE	TREATED EFFLUENT TO HYDROLOGICALLY CONTROLLED RELEASE STRUCTURE	18.5	24.0

REV.	DATE	DESCRIPTION	BY

CITY OF TUSCALOOSA
TUSCALOOSA, AL.

HILLIARD N. FLETCHER WRRF
NPDES PERMIT RENEWAL

LIQUID STREAM - PROCESS FLOW DIAGRAM AND LIQUID STREAM FACILITIES FLOW BALANCE

JOB NO.: 19W10400
DATE: AUGUST 2020
DESIGNED BY: RWC
DRAWN BY: ECB

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DRAWING NUMBER
PFD-001

SHEET NUMBER

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Last plotted by: Bennar, Eric C. Plot Style: AECmono.ctb Plot Scale: 1.0 4259 Plot Date: 11/3/2020 10:47 AM Plotter used: DWG To PDF.pc3

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

USGS

The National Map
US Topo

TUSCALOOSA QUADRANGLE
ALABAMA - TUSCALOOSA COUNTY
7.5-MINUTE SERIES

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 16S
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

ROAD CLASSIFICATION

TUSCALOOSA, AL
2018

EPA Form 2S
Topographic Map

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

US Topo

TUSCALOOSA QUADRANGLE
ALABAMA - TUSCALOOSA COUNTY
7.5-MINUTE SERIES

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
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SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

TUSCALOOSA, AL
2016

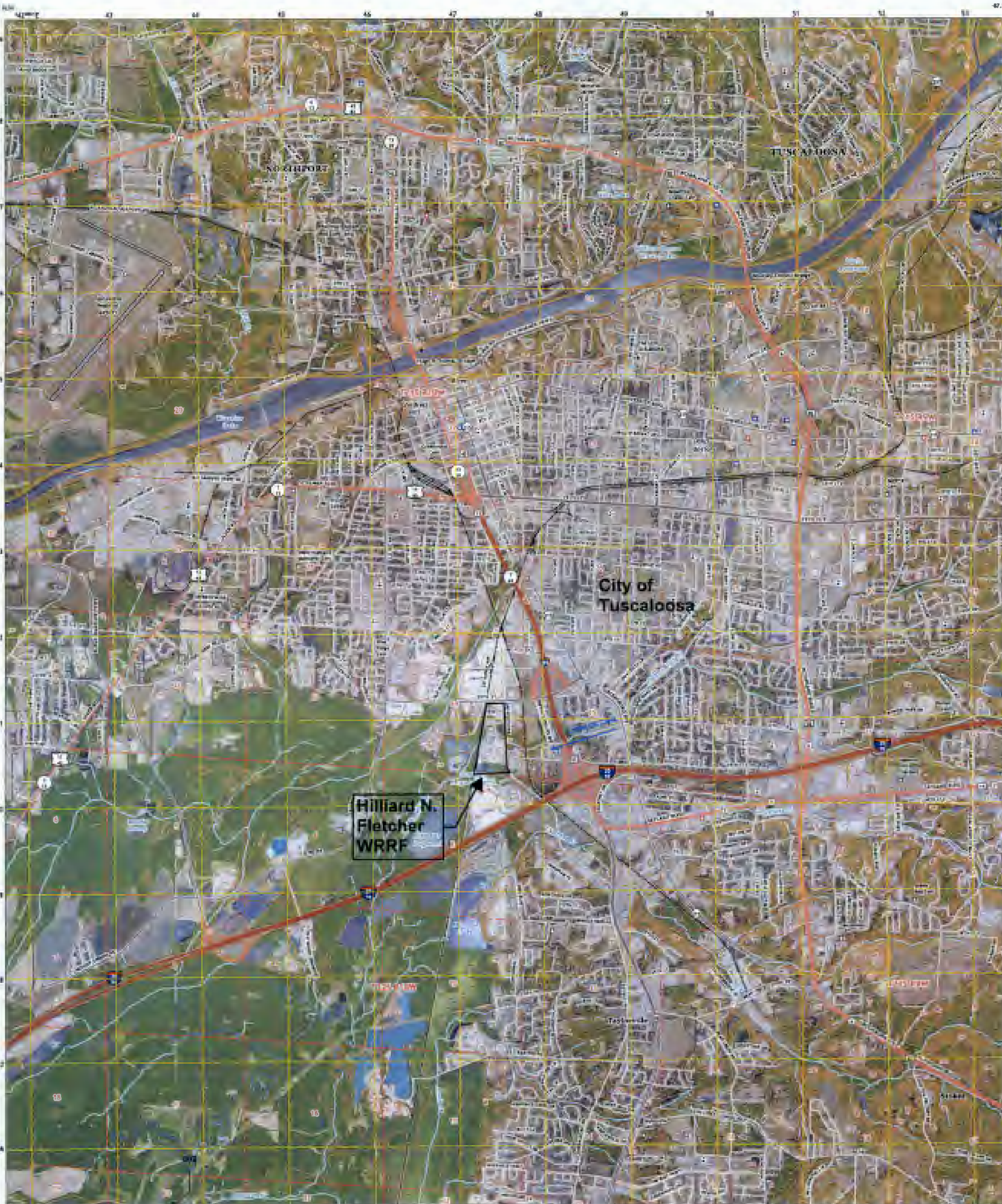
ADEM Form 188
Topographic Map

USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

TUSCALOOSA QUADRANGLE
ALABAMA - TUSCALOOSA COUNTY
7.5-MINUTE SERIES



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SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

ROAD CLASSIFICATION

TUSCALOOSA, AL
2018

RECEIVED

OCT 29 2021

MUNICIPAL SECTION

NOTES:
1. ITEMS DENOTED WITH * HAVE BEEN TAKEN OFFLINE AND ARE NO LONGER IN SERVICE.

PROJECT NORTH

1 LAY-001

EXISTING FACILITY LAYOUT

SCALE: 1" = 80'

GARVER

REV.	DATE	DESCRIPTION	BY

CITY OF TUSCALOOSA

TUSCALOOSA, AL

HILLIARD N. FLETCHER WRRF
NPDES PERMIT RENEWAL

EXISTING FACILITY LAYOUT

JOB NO.: 19W10400
DATE: AUGUST 2020
DESIGNED BY: RWC
DRAWN BY: ECB

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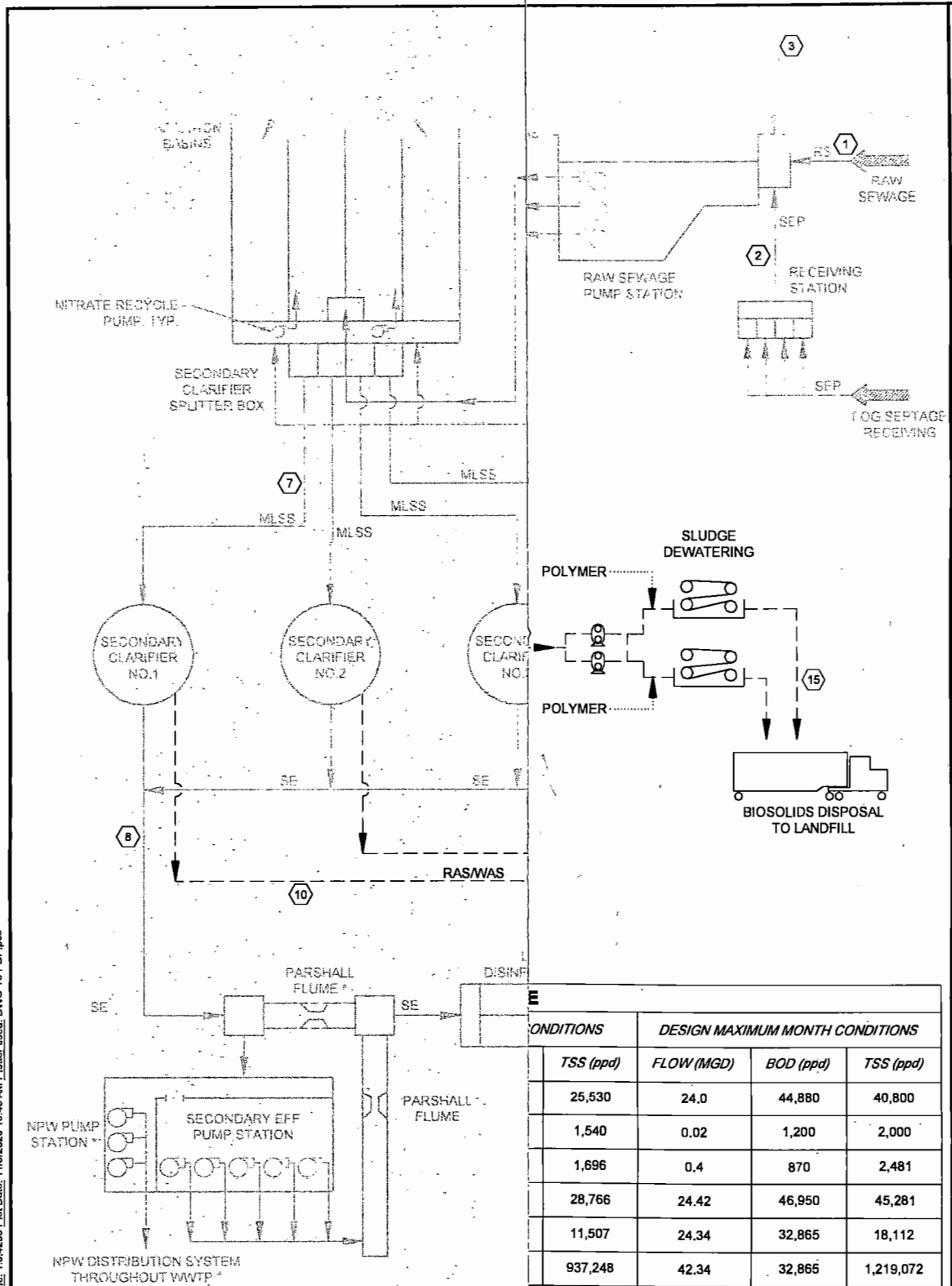
DRAWING NUMBER
LAY-001

SHEET NUMBER



LEGEND

- LIQUID STREAM
- SOLIDS STREAM
- CHEMICAL ADDITION
- PROCESSES AND/OR EQUIPMENT NO LONGER IN SERVICE (ALSO DENOTED WITH * BY LABEL)

NOTES

1. F
2. T

E

ONDITIONS		DESIGN MAXIMUM MONTH CONDITIONS		
TSS (ppd)	FLOW (MGD)	BOD (ppd)	TSS (ppd)	
25,530	24.0	44,880	40,800	
1,540	0.02	1,200	2,000	
1,696	0.4	870	2,481	
28,766	24.42	46,950	45,281	
11,507	24.34	32,865	18,112	
937,248	42.34	32,865	1,219,072	
942,354	42.34	4,003	1,223,966	
3,085	24.0	4,003	4,003	
17,259	0.08	14,085	27,168	
939,269	18.34	0	1,219,962	
925,740	18.0	0	1,200,960	
13,529	0.34	0	19,002	
12,852	0.04	0	18,052	
20,386	0.12	0	30,614	
19,366	0.02	0	29,084	

GARVER

REV.	DATE	DESCRIPTION	BY

CITY OF TUSCALOOSA
TUSCALOOSA, AL

HILLIARD N. FLETCHER WRRF
NPDES PERMIT RENEWAL

SOLIDS STREAM - PROCESS FLOW DIAGRAM AND MASS BALANCE

JOB NO.: 19W10400
DATE: AUGUST 2020
DESIGNED BY: RWC
DRAWN BY: ECB

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Hilliard N. Fletcher WRRF
City of Tuscaloosa, AL
Existing Process Design Criteria Summary

Plant Design Flows		
Total (North Aeration Basins + South Aeration Basins)		
	Annual Average	18.5 mgd
	Maximum Month	24 mgd
	Peak Hour	60 mgd
Raw Sewage Pump Station		
Raw Sewage Pumps		
	Number of Pumps	6
	Capacity, ea.	10,500 gpm
	Horsepower	215
	Speed	Variable
	Type	Submersible, Centrifugal
Preliminary Treatment		
Mechanical Screening		
	Number of Units	2
	Opening Size	0.25 inches
	Capacity, ea.	37.5 mgd
Manual Screen		
	Number of Units	1
	Opening Size	0.875 inches
	Capacity, ea.	37.5 mgd
Screening Conveyor		
	Number of Units	2
	Peak Load	30 ft^3/hr
Grit Chambers		
	Number of Units	2
	Capacity, ea.	30 mgd
	Type	Vortex
Grit Blowers		
	Number	2
	Capacity, ea.	75 scfm
	Horsepower	2
	Speed	1750 rpm
	Type	Positive Displacement
Grit Pumps		
	Number	2
	Capacity, ea.	225 gpm
	Horsepower	15
	Speed	1000 rpm
	Type	Centrifugal

Hilliard N. Fletcher WRRF
City of Tuscaloosa, AL
Existing Process Design Criteria Summary

Grit Cyclone		
	Number	2
	Capacity, ea.	220 gpm
	Design Inlet Pressure	5 psi
Grit Classifiers		
	Number	2
	Capacity, ea.	1.5 tons/hour
	Type	Shafted Screw, 12-inch
Pre-Aeration Basins		
	Number	2
	Type	Fixed Header, Coarse Bubble
	Volume Per Basin	225,000 gal.
	Detention Time *(All units in service, 24 mgd)*	27 min.
	Number of Blowers	2
	Blower Type	Positive Displacement
	Blower Capacity, ea.	10,000 scfm
Primary Treatment		
Primary Clarifier		
	Number	3
	Diameter	110 feet
	Side Water Depth	12 feet
	Detention Time *(All units in service, 24 mgd)*	2.5 hrs.
	Surface Overflow Rate *(All units in service, 24 mgd)*	842 gpd/ft^2
	Type	Circular, Center-feed
Primary Sludge and Scum Pumps		
	Number of Pumps	7
	Capacity, ea.	150 gpm
	Speed	0 – 40 strokes/min
	Type	Air Operated Diaphragm
Primary Air Compressor		
	Number of Compressors	2
	Capacity, ea.	360 scfm
	Horsepower	75
	Speed	1750 rpm
	Type	Rotary Screw

Hilliard N. Fletcher WRRF
City of Tuscaloosa, AL
Existing Process Design Criteria Summary

Secondary Treatment		
Blowers		
	Number	4 (2 Large, 2 Small)
	Capacity *(Large Blowers)*	10,600 scfm
	Capacity *(Small Blowers)*	5,310 scfm
	Horsepower *(Large Blowers)*	600
	Horsepower *(Small Blowers)*	350
	Design Operating Pressure	10.5 psig
	Speed	3,600 rpm
	Type	Centrifugal
North Aeration Basins		
	Number of Basins	2
	Number of Passes	2
	Length *(Each pass)*	440 feet
	Side Water Depth	20 feet
	Volume, ea. *(Including effluent channel)*	3.2 mgal.
	Detention Time *(All basins in service, 24 mgd)*	6.8 hrs.
	Diffusers, Aerobic Zone	Fine Bubble, Ceramic Diffusers
	Diffusers, Anoxic Zone	Coarse Bubble, SS Diffusers
South Aeration Basins		
	Number of Basins	2
	Number of Passes	4
	Length *(Each pass)*	720 feet
	Side Water Depth	15 feet
	Volume, ea.	2.2 mgal.
	Detention Time *(All basins in service, 9 mgd)*	11.7 hrs.
	Diffusers, Aerobic Zone	Fine Bubble, Ceramic Diffusers
	Diffusers, Anoxic Zone	Coarse Bubble, SS diffusers
Anoxic Mixers		
	Number *(North Aeration Basin)*	4
	Number *(South Aeration Basin)*	4
	Capacity, ea.	8100 gpm
	Horsepower	7.4
	Type	Submersible, Wall Mounted
Mixed Liquor Return Pumps		
	Number *(North Aeration Basin)*	2
	Number *(South Aeration Basin)*	2
	Capacity, ea. *(North Basin)*	6500 gpm
	Capacity, ea. *(South Basin)*	6200 gpm
	Horsepower	7.4
	Type	Submersible, Axial Flow

Hilliard N. Fletcher WRRF
City of Tuscaloosa, AL
Existing Process Design Criteria Summary

North Secondary Clarifiers	
Number of Units	4
Diameter	125 feet
Side Water Depth	14 feet
Surface Overflow Rate *(All units in service, 22.5 mgd)*	458 gpd/ft^2
Type	Center Feed, Suction Header
Secondary Clarifier (South)	
Number of Units	4
Length	135 feet
Side Water Depth	10 feet
Surface Overflow Rate *(All units in service, 9 mgd)*	406 gpd/ft^2
Type	Rectangular, Bottom Scraper
Secondary Sludge Pumps (North)	
Number of Units	5
Capacity, ea.	3600 gpm
Horsepower	50
Speed	Variable
Type	Vertical, centrifugal
Secondary Sludge Pumps (South)	
Number of Units	6
Capacity, ea.	1350 gpm
Speed	2 Constant, 4 Variable
Horsepower	15
Type	Vertical Turbine, Solids Handling
Secondary Scum Pump Station	
Number of Units	2
Number of Pumps	2
Capacity	180 gpm
Horsepower	5
Speed	1750 rpm
Type	Wet Pit, Vertical Chopper
Plant Water (W3) System	
W3 Water Pumps	
Number of Pumps	2
Capacity, ea.	1800 gpm
Horsepower	150
Speed	1800 rpm
Type	Vertical Turbine
W3 Jockey Pump	
Number	1
Capacity, ea.	300 gpm

	Horsepower	25
	Speed	1800 rpm
	Type	Vertical Turbine
Disinfection (*Currently Under Design)		
UV Disinfection		
	Number of Channels	3
	Design UVT	60%, min.
	Design Dose	30 MJ/cm^2 (MS2)
Sludge Thickening		
Sludge Flows and Loading		
	Design Sludge Flow *(at 24 mgd)*	0.402 mgd
	Feed Solids Concentration	0.80%
	Dry Solids *(at 24 mgd)*	26,800 lbs/day
	Thickened Solids Concentration	5 – 7%
	Solids Capture	95%
Gravity Belt Thickeners		
	Number of Units	2
	Size, ea.	2 meters
	Hydraulic Loading	300 gpm/unit
	Solids Loading	1200 lbs/hr/unit
	Design Daily Operating Duration	11.2 hours/day
	Belt Washwater Supply/Pressure	54 gpm, 120 psi/unit
Waste Sludge Pumps		
	Number of Units	2
	Capacity, ea.	300 gpm/unit
	Horsepower	7.5
	Speed	100 – 300 rpm
	Type	Rotary Lobe
Thickened Sludge Pumps		
	Number of Units	2
	Capacity, ea.	120 gpm
	Horsepower	15
	Speed	50 – 200 rpm
	Type	Rotary Lobe
Thickener Belt Water Pumps		
	Number of Units	2
	Capacity, ea.	45 gpm
	Horsepower	7.5
	Speed	3600 rpm
	Type	In-Line, Centrifugal

Hilliard N. Fletcher WRRF
City of Tuscaloosa, AL
Existing Process Design Criteria Summary

Anaerobic Sludge Digestion		
Sludge Flows and Loadings		
	Design Sludge Flow *(at 24 mgd)*	332,600 gpd
	Solids Content	4%
	Volatile Solids	40,912 lbs/day
Anaerobic Digestion		
	Number of Units	3
	Diameter	75 feet
	Side Water Depth	18 feet
	Total Volume *(Neglecting Cone)*	1.78 mgal.
	Detention Time *(at 24 mgd)*	13.6 days
	Volatile Solids Loading	0.154 ppd/ft^3
	Temperature	95-degree F
	Gas Production	262,000 ft^3/day
Anaerobic Digester Covers		
	Number of Units	3
	Type	Gasholder
	Diameter	75 feet
Anaerobic Digester Mixers		
	Number of Units	9
	Horsepower	15
	Type	Mechanical draft tube
Sludge Recirculation Pumps		
	Number of Pumps	3
	Capacity, ea.	250 gpm
	Horsepower	5
	Speed	1450 rpm
	Type	Recessed Impeller
Digester Sludge Transfer Pump		
	Number of Units	2
	Capacity, ea.	1600 gpm
	Horsepower	20
	Speed	1350 rpm
	Type	Recessed Impeller
Digester Grinder		
	Number	3
	Capacity, ea.	600 gpm
	Horsepower	3
Boilers (Currently Under Construction)		
	Number	2
	Capacity, ea.	2,400,000 BTU/hr.

Hilliard N. Fletcher WRRF
City of Tuscaloosa, AL
Existing Process Design Criteria Summary

Auxiliary Fuel	Natural Gas
Type	Water Tube
Boiler Circulation Pump	
Number	2
Capacity, ea.	120 gpm
Horsepower	1.5
Speed	1150 rpm
Type	Centrifugal
Digester Heating Water Pumps	
Number	3
Capacity, ea.	200 gpm
Horsepower	3
Speed	1750 rpm
Type	Centrifugal
Sludge Heat Exchangers	
Number	3
Capacity, ea.	1,000,000 BTU/hr.
Type	Spiral
Digested Sludge Holding Tank Mixers	
Number of Units	3
Capacity, ea.	11,300 gpm
Horsepower	10
Speed	600 rpm
Type	Submersible
Sludge Dewatering	
Digested Sludge Feed Pumps	
Number of Pumps	2
Capacity, ea.	200 gpm
Horsepower	Rotary Lobe with AFD
Speed	Variable
Type	Rotary Lobe
Digested Sludge Flows and Loadings	
Design Sludge Flow *(at 24 mgd)*	0.182 mgd
Feed Solids Concentration	3.20%
Dry Solids *(at 24 mgd)*	48,685 lbs/day
Dewatered Cake Concentration	16 – 20%
Solids Capture	92%, min.
Belt Filter Presses	
Number of Units	2
Size, ea.	2 meters
Hydraulic Loading	74 gpm/unit

Hilliard N. Fletcher WRRF
City of Tuscaloosa, AL
Existing Process Design Criteria Summary

	Solids Loading	1200 lbs/hr/unit
	Hrs. Per Day Operation	20.5
	Belt Washwater	90 gpm, 120 psi
Belt Washwater Pumps		
	Number of Units	2
	Capacity, ea.	90 gpm, 120 psi
	Horsepower	7.5
	Speed	3600 gpm
	Type	In-Line, Centrifugal
	Polymer System	
Polymer Characteristics		
	Bulk Polymer	30 – 60% active
	Polymer Mix/Feed Tank	0.5 – 1% active
Viscosities		
	Bulk Polymer	50,000 cps, max.
	Polymer Mix/Feed	5,000 cps, max.
Bulk Polymer Storage Tanks		
	Number of Tanks	2
	Height	12 feet
	Diameter	8 feet
	Capacity, ea.	4,500 gal.
	Type	FRP, closed top
Polymer Mix/Feed Tanks		
	Number of Tanks	4
	Height	8 feet
	Diameter	7 feet
	Capacity, ea.	1,730 gal.
	Type	FRP, open top
Polymer Mixers		
	Number of Units	4
	Horsepower	3
	Speed	56 rpm
	Type	Tank Mounted, Mechanical
Liquid Polymer Transfer Pumps		
	Number of Units	4
	Capacity, ea.	24 gpm
	Horsepower	1.5
	Speed	145 rpm
	Type	Rotary Lobe
Thickening Polymer Feed Pumps		
	Number of Units	3

Hilliard N. Fletcher WRRF *City of Tuscaloosa, AL* *Existing Process Design Criteria Summary*		
	Capacity, ea.	3.3 gpm
	Horsepower	0.5
	Speed	70 – 286 rpm
	Type	Rotary Lobe
Dewatering Polymer Feed Pumps		
	Number of Units	3
	Capacity, ea.	5.4 gpm
	Horsepower	0.5
	Speed	75 – 300 rpm
	Type	Rotary Lobe
Secondary Effluent Pump Station		
Secondary Effluent Pumps		
	Number	6
	Capacity, ea.	10,000 gpm
	Horsepower	75
	Speed	Variable
	Type	Vertical Turbine
Septage/Grease Receiving Facility		
Receiver Tank		
	Number	4
	Capacity, ea.	3,000 gal.
Holding Tank		
	Capacity, ea.	18,000 gal.
Septage Pump		
	Number	1
	Capacity, ea.	300 gpm
	Horsepower	5
	Speed	700 rpm
	Type	Centrifugal

Form 2A, Sections 2.5 and 2.6

List and Describe the Scheduled Improvements	Affected Outfalls	Begin Construction	End Construction	Begin Discharge	Attainment of Operational Level
Primary Solids Pumping Upgrade	001, 002	Spring 2021	Summer 2021	Summer 2021	Summer 2021
UV Disinfection Improvements	001, 002	Spring 2021	Winter 2021	Winter 2021	Winter 2021
Raw Sewage Pump Station and Aeration Improvements	001, 002	Spring 2021	Fall 2021	Fall 2021	Fall 2021
Anaerobic Digester Heating Improvements	001, 002	Spring 2021	Summer 2021	Summer 2021	Summer 2021
Anaerobic Digester Rehabilitation	001, 002	Fall 2022	Fall 2023	Fall 2023	Fall 2023
Raw Sewage Screening Upgrade	001, 002	Fall 2021	Fall 2022	Fall 2022	Fall 2022
Flow Equalization Upgrades	001, 002	Fall 2022	Fall 2023	Fall 2023	Fall 2023
Miscellaneous WWTP/WRRF Upgrades per Master Plan	001, 002	Fall 2022	Summer 2024	Summer 2024	Summer 2024

EPA Form 2S, Part 2.52

	Sample Results (ppm, mg/kg)							
Analyte	3/11/2019	Detection Level of Analysis	6/19/2018	Detection Level of Analysis	4/28/2017	Detection Level of Analysis	6/3/2016	Detection Level of Analysis
Arsenic	< 3.31	3.31	< 2.94	2.94	< 3.20	3.20	< 3.17	3.17
Cadmium	< 0.33	0.33	< 0.29	0.29	< 0.32	0.32	< 0.32	0.32
Chromium	15.80	3.31	26.00	2.94	21.60	3.20	27.10	3.17
Copper	158.00	3.31	269.00	2.94	209.00	3.20	254.00	3.17
Lead	12.10	1.65	< 1.47	1.47	< 1.60	1.60	< 1.59	1.59
Mercury	0.46	0.34	0.73	0.31	0.36	0.32	0.46	0.34
Molybdenum	< 16.5	16.50	15.60	14.70	35.50	16.00	< 15.9	15.90
Nickel	22.70	16.50	40.90	14.70	28.10	16.00	23.70	15.90
Selenium	< 3.31	3.31	< 2.94	2.94	< 3.20	3.20	< 3.17	3.17
Zinc	1,550.00	16.50	2,360.00	14.70	2,000.00	16.00	2,410.00	15.90
Ammonium-Nitrogen	1,370.00	0.05	1,710.00	18.80	2,350.00	62.50	1,230.00	62.50
Nitrate-Nitrogen	2.24	1.00	< 1.0	1.00	1.84	1.00	< 1.0	1.00
Total Kjeldahl Nitrogen	9,620.00	12.50	2,530.00	12.50	3,580.00	25.00	2,890.00	12.50
Total Solids	145,000.00	1,000.00	149,000.00	1,000.00	150,000.00	1,000.00	148,000.00	1,000.00

ADEM Form 188, Section D a.

Industrial Discharge Contributors

Company Name	Description of Industrial Wastwewater	Existing or Proposed?	Flow (MGD)	Subject to SID Permit?
Mercedes-Benz US International, Inc.	Process wastewater from metal finishing operations and containerized wastewaters associated with automobile manufacturing.	Existing	0.2000	Yes
GAF - Elk Corporation of Alabama	Cooling water associated with the manufacture and shipment of asphalt roofing products.	Existing	0.0450	Yes
Peco Foods, Inc.	Industrial wastewaters resulting from the slaughtering and processing of poultry.	Existing	0.2512	Yes
Southern Ionics, Inc.	Process Wastewaters resulting from the manufacture of sodium sulfite and sodium bisulfite.	Existing	0.0567	Yes
Warrior Asphalt, Inc.	Process wastewater resulting from the manufacture and shipment of asphalt roofing products.	Existing	0.0081	Yes
Phifer, Inc.	Process wastewater resulting from the manufacture of miscellaneous wire products and broad woven fabrics.	Existing	0.2000	Yes
Nucor Steel Tuscaloosa, Inc.	Process wastewater from continuous iron and steel casting operations and water softener backwash blowdown.	Existing	0.0063	Yes
Merichem Company	Process wastewaters resulting from chemical manufacturing and terminal operations.	Existing	0.0182	Yes
Quest Liner, Inc.; Barnett Transportation, Inc.	Pretreated process wastewater from interior and exterior washing of tankers and tractor trailer rigs.	Existing	0.0160	Yes

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL 0022713	Hiliard N. Fletcher WRRF	

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
003S	Cribbs Mill Creek	33° 10′ 29.18″	87° 33′ 48.58″ W
004S	Cribbs Mill Creek	33° 10′ 30.10″	87° 33′ 51.96″ W
005S	Cribbs Mill Creek	33° 10′ 29.51″ N	87° 33′ 48.34″ 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
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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)	
003S	2.7	specify units: acres	9.2	specify units: acres
004S	5.0	specify units: acres	9.2	specify units: acres
005S	3.2	specify units: acres	15.4	specify units: acres
		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.)

In general, the City of Tuscaloosa maintains a separate stormwater and wastewater management system and at no location are the flow streams designed to combine. Stormwater "enters" the flow stream within the Hilliard N. Fletcher WRRF through open surface tanks (uncovered channels, process tanks, etc.), thereby becoming process flow and receiving all downstream treatment before being discharge through a permitted outfall location for treated effluent. Within the treatment facility, stormwater that falls on plant roads is collected through a dedicated stormwater conveyance system (grate inlets, curb and gutter, etc.) and routed to permitted stormwater discharge locations.

Within the facility, fuel is stored in three locations. All locations have secondary containment areas which are not drained until visual inspection is made of the stormwater to ensure no oily sheen as specified in the City's stormwater Pollution Prevention Plan (SWPPP).

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)
003S	Vegetation surrounding impervious areas and Rip Rap below outfall to prevent erosion.	4-A
004S	Vegetation surrounding impervious areas and Rip Rap below outfall to prevent erosion.	4-A
005S	Vegetation surrounding impervious areas and Rip Rap below outfall to prevent erosion.	4-A

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
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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
Christy Heaps	Wastewater Lab Superisor
Signature	**Date signed**
Christy D Heaps	04/02/2021

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
003S	Visual Inspection	12/04/2020	Outfall 003S
004S	Visual Inspection	12/04/2020	Outfall 004S
005S	Visual Inspection	12/04/2020	Outfall 005S

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.

None.

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. 04/02/2021

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		
Laboratory address	3516 Greensboro Ave, Tuscaloosa, AL 35401		
Phone number	(205) 614-6630		
Pollutant(s) analyzed	All pollutants listed, except for BOD and pH, were analyzed by Pace Analytical.		

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL 0022713	Hiliard N. Fletcher WRRF	

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
Walt Maddox	Mayor
Signature	**Date signed**
Walt Maddox	4/6/2021

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL 0022713	Hiliard N. Fletcher WRRF	005S

Form Approved 03/05/19
OMB No. 2040-0004

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	< 15 mg/L		N/A		3	N/A
2.	Biochemical oxygen demand (BOD_5)	7.07 mg/L	N/A	N/A	N/A	3	N/A
3.	Chemical oxygen demand (COD)	N/A	N/A	N/A	N/A	N/A	N/A
4.	Total suspended solids (TSS)	220.23 mg/L	N/A	N/A	N/A	3	N/A
5.	Total phosphorus	1.49 mg/L	N/A	N/A	N/A	3	N/A
6.	Total Kjeldahl nitrogen (TKN)	0.83 mg/L	N/A	N/A	N/A	3	N/A
7.	Total nitrogen (as N)	0.21 mg/L	N/A	N/A	N/A	3	N/A
8.	pH (minimum)	6.55		N/A		3	N/A
	pH (maximum)	6.55		N/A		3	N/A

[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).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL 0022713	Hiliard N. Fletcher WRRF	004S

Form Approved 03/05/19
OMB No. 2040-0004

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	< 15 mg/L		N/A		3	N/A
2.	Biochemical oxygen demand (BOD_5)	7.37 mg/L	N/A	N/A	N/A	3	N/A
3.	Chemical oxygen demand (COD)	N/A	N/A	N/A	N/A	N/A	N/A
4.	Total suspended solids (TSS)	261.63 mg/L	N/A	N/A	N/A	3	N/A
5.	Total phosphorus	0.23 mg/L	N/A	N/A	N/A	3	N/A
6.	Total Kjeldahl nitrogen (TKN)	1.19 mg/L	N/A	N/A	N/A	3	N/A
7.	Total nitrogen (as N)	0.21 mg/L	N/A	N/A	N/A	3	N/A
8.	pH (minimum)	6.31		N/A		3	N/A
	pH (maximum)	6.32		N/A		3	N/A

[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).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL 0022713	Hilliard N. Fletcher WRRF	005S

Form Approved 03/05/19
OMB No. 2040-0004

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	< 15 mg/L		N/A		3	N/A
2.	Biochemical oxygen demand (BOD_5)	7.00 mg/L	N/A	N/A	N/A	3	N/A
3.	Chemical oxygen demand (COD)	N/A	N/A	N/A	N/A	N/A	N/A
4.	Total suspended solids (TSS)	216.03 mg/L	N/A	N/A	N/A	3	N/A
5.	Total phosphorus	0.70 mg/L	N/A	N/A	N/A	3	N/A
6.	Total Kjeldahl nitrogen (TKN)	0.84 mg/L	N/A	N/A	N/A	3	N/A
7.	Total nitrogen (as N)	0.22 mg/L	N/A	N/A	N/A	3	N/A
8.	pH (minimum)	6.39		N/A		3	N/A
	pH (maximum)	6.40		N/A		3	N/A

[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
	AL 0022713	Hiliard N. Fletcher WRRF	003S

Form Approved 03/05/19
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		
Nitrogen Ammonia (NH3) as N - 007664417	0.32 mg/L	N/A	N/A	N/A	3	N/A
E. Coli	4848.67 col/100 mL	N/A	N/A	N/A	3	N/A

[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).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL 0022713	Hilliard N. Fletcher WRRF	004S

Form Approved 03/05/19
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		
Nitrogen Ammonia (NH3) as N - 007664417	0.44 mg/L	N/A	N/A	N/A	3	N/A
E. Coli	5310.33 col/100 mL	N/A	N/A	N/A	3	N/A

[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).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL 0022713	Hilliard N. Fletcher WRRF	005S

Form Approved 03/05/19
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		
Nitrogen Ammonia (NH3) as N - 007664417	0.28 mg/L	N/A	N/A	N/A	3	N/A
E. Coli	4753.67 col/100 mL	N/A	N/A	N/A	3	N/A

[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
	AL 0022713	Hiliard N. Fletcher WRRF	005S

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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
	AL 0022713	Hiliard N. Fletcher WRRF	005S

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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)
04/19/2020	24	5.76	28	3630 gpm	5,240,000 gallons

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

The estimated flow rate reported above is calculated based on the peak historical rainfall volume (on the date indicated) measured at a nearby weather station and the approximate drainage area based on existing facility drawings over a 24 hour period.

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

TUSCALOOSA QUADRANGLE
ALABAMA - TUSCALOOSA COUNTY
7.5-MINUTE SERIES

Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid Universal Transverse Mercator, Zone 16S

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

SCALE 1:24 000

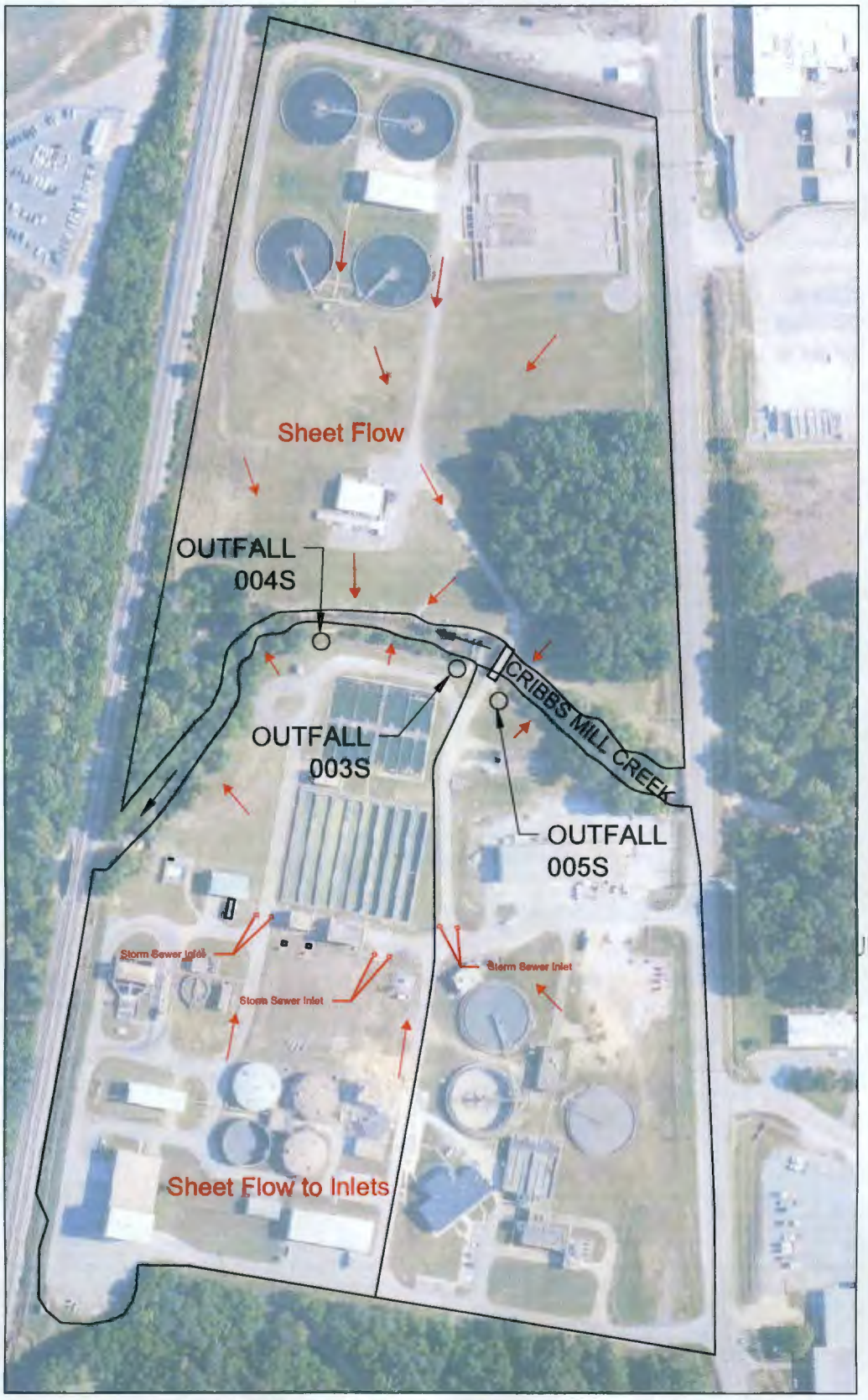
CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011. A metadata file associated with this product is draft version 0.6.19

ROAD CLASSIFICATION

TUSCALOOSA, AL
2018

764301635265O



0 125' 250' 500' 750'

(IN FEET)

EPA FORM 2F	HILLIARD N. FLETCHER WRRF TUSCALOOSA, AL	
SITE DRAINAGE MAP	NPDES PERMIT NUMBER AL0022713	

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

Form 2S NPDES

U.S Environmental Protection Agency
Application for NPDES Permit for Sewage Sludge Management
NEW AND EXISTING TREATMENT WORKS TREATING DOMESTIC SEWAGE

PRELIMINARY INFORMATION

Does your facility currently have an effective NPDES permit or have you been directed by your NPDES permitting authority to submit a full Form 2S permit application?

☑ Yes ➔ Complete Part 2 of application package (begins p. 7). ☐ No ➔ Complete Part 1 of application package (below).

PART 1 — LIMITED BACKGROUND INFORMATION (40 CFR 122.21(c)(2)(ii))

Complete this part only if you are a "sludge-only" facility (i.e., a facility that does not currently have, and is not applying for, an NPDES permit for a direct discharge to a surface body of water).

PART 1, SECTION 1. FACILITY INFORMATION (40 CFR 122.21(c)(2)(ii)(A))

Facility Information

1.1	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
	Location address (street, route number, or other specific identifier)			☐ Same as mailing address
	City or town		State	ZIP code
1.2	**Ownership Status**			
	☐ Public—federal ☐ Public—state ☐ Other public (specify)_____			
	☐ Private ☐ Other (specify) _____			

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PART 1, SECTION 2. APPLICANT INFORMATION (40 CFR 122.21(c)(2)(ii)(B))

Applicant Information

2.1	Is applicant different from entity listed under Item 1.1 above? ☐ Yes ☐ No ➔ SKIP to Item 2.3 (Part 1, Section 2).			
2.2	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
2.3	Is the applicant the facility's owner, operator, or both? (Check only one response.) ☐ Owner ☐ Operator ☐ Both			
2.4	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)			

PART 1, SECTION 3. SEWAGE SLUDGE AMOUNT (40 CFR 122.21(c)(2)(ii)(D))

Sewage Sludge Amount

3.1 Provide the total dry metric tons per the latest 365-day period of sewage sludge generated, treated, used, and disposed of:

Practice	Dry Metric Tons per 365-Day Period
Amount generated at the facility	
Amount treated at the facility	
Amount used (i.e., received from off site) at the facility	
Amount disposed of at the facility	

PART 1, SECTION 4. POLLUTANT CONCENTRATIONS (40 CFR 122.21(c)(2)(ii)(E))

Pollutant Concentrations

4.1 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 503 for your 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 4.5 years old.

☐ Check here if you have provided a separate attachment with this information.

Pollutant	Concentration (mg/kg dry weight)	Analytical Method	Detection Level for Analysis
Arsenic			
Cadmium			
Chromium			
Copper			
Lead			
Mercury			
Molybdenum			
Nickel			
Selenium			
Zinc			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

PART 1, SECTION 5. TREATMENT PROVIDED AT YOUR FACILITY (40 CFR 122.21(c)(2)(ii)(C))

Treatment Provided at Your Facility

5.1 For each sewage sludge use or disposal practice, indicate the amount of sewage sludge used or disposed of, the applicable pathogen class and reduction alternative, and the applicable vector attraction reduction option. Attach additional pages, as necessary.

Use or Disposal Practice (check one)	Amount (dry metric tons)	Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option
☐ Land application of bulk sewage ☐ Land application of biosolids (bulk) ☐ Land application of biosolids (bags) ☐ Surface disposal in a landfill ☐ Other surface disposal ☐ Incineration		☐ Not applicable ☐ Class A, Alternative 1 ☐ Class A, Alternative 2 ☐ Class A, Alternative 3 ☐ Class A, Alternative 4 ☐ Class A, Alternative 5 ☐ Class A, Alternative 6 ☐ Class B, Alternative 1 ☐ Class B, Alternative 2 ☐ Class B, Alternative 3 ☐ Class B, Alternative 4 ☐ Domestic septage, pH adjustment	☐ Not applicable ☐ Option 1 ☐ Option 2 ☐ Option 3 ☐ Option 4 ☐ Option 5 ☐ Option 6 ☐ Option 7 ☐ Option 8 ☐ Option 9 ☐ Option 10 ☐ Option 11

5.2 For each of the use and disposal practices specified in Item 5.1, identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge. (Check all that apply.)

- ☐ Preliminary operations (e.g., sludge grinding and degritting)
- ☐ Thickening (concentration)
- ☐ Stabilization
- ☐ Anaerobic digestion
- ☐ Composting
- ☐ Conditioning
- ☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)
- ☐ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
- ☐ Heat drying
- ☐ Thermal reduction
- ☐ Methane or biogas capture and recovery
- ☐ Other (specify) _____

PART 1, SECTION 6. SEWAGE SLUDGE SENT TO OTHER FACILITIES (40 CFR 122.21(c)(2)(ii)(C))

Sewage Sludge Sent to Other Facilities

6.1 Does the sewage sludge from your facility meet the ceiling concentrations in Table 1 of 40 CFR 503.13, the pollutant concentrations in Table 3 of 40 CFR 503.13, Class A pathogen reduction requirements at 40 CFR 503.32(a), *and* one of the vector attraction reduction requirements at 40 CFR 503.33(b)(1)–(8)?

☐ Yes ➔ SKIP to Part 1, Section 8 (Certification). ☐ No

6.2 Is sewage sludge from your facility provided to another facility for treatment, distribution, use, or disposal?

☐ Yes ☐ No ➔ SKIP to Part 1, Section 7.

6.3 Receiving 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

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

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

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

PART 1, SECTION 7. USE AND DISPOSAL SITES (40 CFR 122.21(c)(2)(ii)(C))

Use and Disposal Sites

Provide the following information for each site on which sewage sludge from this facility is used or disposed of.

☐ Check here if you have provided separate attachments with this information.

7.1

Site name or number			
Mailing address (street or P.O. box)			
City or town		State	ZIP code
Contact name (first and last)	Title	Phone number	Email address
Location address (street, route number, or other specific identifier)			☐ Same as mailing address
City or town		State	ZIP code
County		County code	☐ Not available

7.2 Site type (check all that apply)

☐ Agricultural	☐ Lawn or home garden	☐ Forest
☐ Surface disposal	☐ Public contact	☐ Incineration
☐ Reclamation	☐ Municipal solid waste landfill	☐ Other (describe)

PART 1, SECTION 8. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

8.1 In Column 1 below, mark the sections of Form 2S, Part 1, 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: Facility Information	☐ w/ attachments
☑ Section 2: Applicant Information	☑ w/ attachments
☐ Section 3: Sewage Sludge Amount	☐ w/ attachments
☐ Section 4: Pollutant Concentrations	☐ w/ attachments
☐ Section 5: Treatment Provided at Your Facility	☐ w/ attachments
☐ Section 6: Sewage Sludge Sent to Other Facilities	☐ w/ attachments
☐ Section 7: Use and Disposal Sites	☐ w/ attachments
☐ Section 8: Checklist and Certification Statement	

Checklist and Certification Statement Continued	8.2	**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	Phone number
		Signature		Date signed

PART 1 APPLICANTS STOP HERE.

Submit completed application package to your NPDES permitting authority.

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EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

PART 2 **PERMIT APPLICATION INFORMATION (40 CFR 122.21(q))**

Complete this part if you have an effective NPDES permit or have been directed by the NPDES permitting authority to submit a full permit application. In other words, complete this part if your facility has, or is applying for, an NPDES permit.
Part 2 is divided into five sections. Section 1 pertains to all applicants. The applicability of Sections 2 to 5 depends on your facility's sewage sludge use or disposal practices. See the instructions to determine which sections you are required to complete.

PART 2, SECTION 1. GENERAL INFORMATION (40 CFR 122.21(q)(1 7) AND (q)(13))

General Information

All Part 2 applicants must complete this section.

Facility Information

1.1	Facility name Hilliard N. Fletcher Water Resource Recovery Facility			
	Mailing address (street or P.O. box) 2201 University Boulevard			
	City or town Tuscaloosa	State Alabama	ZIP code 35401	Phone number (205) 248-5925
	Contact name (first and last) Josh Bonner	Title Process Assets Manager	Email address jbonner@tuscaloosa.com	
	Location address (street, route number, or other specific identifier) 4010 Reese Phifer Avenue		☐ Same as mailing address	
	City or town Tuscaloosa	State Alabama	ZIP code 35401	
1.2	Is this facility a Class I sludge management facility? ☐ Yes ☑ No			
1.3	**Facility Design Flow Rate**	24 million gallons per day (mgd)		
1.4	**Total Population Served**	101,113		
1.5	**Ownership Status** ☐ Public—federal ☐ Public—state ☑ Other public (specify) City ☐ Private ☐ Other (specify) _____			

Applicant Information

1.6	Is applicant different from entity listed under Item 1.1 above? ☐ Yes ☑ No ➔SKIP to Item 1.8 (Part 2, Section 1).			
1.7	Applicant name			
	Applicant mailing address (street or P.O. box)			
	City or town		State	ZIP code
	Contact name (first and last)	Title	Phone number	Email address
1.8	Is the applicant the facility's owner, operator, or both? (Check only one response.) ☐ Operator ☐ Owner ☑ Both			
1.9	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)			

1.10	Facility's NPDES permit number ☐ Check here if you do not have an NPDES permit but are otherwise required to submit Part 2 of Form 2S.	AL0022713
1.11	Indicate all other federal, state, and local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices below.	

☐ RCRA (hazardous wastes)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ PSD (air emissions)	☐ Dredge or fill (CWA Section 404)	☐ Other (specify)
☐ Ocean dumping (MPRSA)	☐ UIC (underground injection of fluids)	

Indian Country

1.12	Does any generation, treatment, storage, application to land, or disposal of sewage sludge from this facility occur in Indian Country? ☐ Yes ☑ No ➔ SKIP to Item 1.14 (Part 2, Section 1) below.
1.13	Provide a description of the generation, treatment, storage, land application, or disposal of sewage sludge that occurs.

Topographic Map

1.14	Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.) ☑ Yes ☐ No

Line Drawing

1.15	Have you attached a line drawing and/or a narrative description that identifies all sewage sludge practices that will be employed during the term of the permit containing all the required information to this application? (See instructions for specific requirements.) ☑ Yes ☐ No

Contractor Information

1.16	Do contractors have any operational or maintenance responsibilities related to sewage sludge generation, treatment, use, or disposal at the facility? ☐ Yes ☑ No ➔ SKIP to Item 1.18 (Part 2, Section 1) below.
1.17	Provide the following information for each contractor. ☐ Check here if you have attached additional sheets to the application package.

	Contractor 1	Contractor 2	Contractor 3
Contractor company name			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Contact name (first and last)			
Telephone number			
Email address			

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

PART 2, SECTION 2. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE (40 CFR 122.21(q)(8) THROUGH (12))

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge

2.1 Does your facility generate sewage sludge or derive a material from sewage sludge?

☑ Yes ☐ No ➔ SKIP to Part 2, Section 3.

Amount Generated Onsite

2.2 Total dry metric tons per 365-day period generated at your facility: 17,483 tons/year

Amount Received from Off Site Facility

2.3 Does your facility receive sewage sludge from another facility for treatment use or disposal?

☐ Yes ☑ No ➔ SKIP to Item 2.7 (Part 2, Section 2) below.

2.4 Indicate the total number of facilities from which you receive sewage sludge for treatment, use, or disposal:

Provide the following information for each of the facilities from which you receive sewage sludge.

☐ Check here if you have attached additional sheets to the application package.

2.5 Name of facility

Mailing address (street or P.O. box)

City or town	State	ZIP code

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

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

City or town	State	ZIP code

County	County code	☐ Not available

2.6 Indicate the amount of sewage sludge received, the applicable pathogen class and reduction alternative, and the applicable vector reduction option provided at the offsite facility.

Amount (dry metric tons)	Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option
	☐ Not applicable ☐ Class A, Alternative 1 ☐ Class A, Alternative 2 ☐ Class A, Alternative 3 ☐ Class A, Alternative 4 ☐ Class A, Alternative 5 ☐ Class A, Alternative 6 ☐ Class B, Alternative 1 ☐ Class B, Alternative 2 ☐ Class B, Alternative 3 ☐ Class B, Alternative 4 ☐ Domestic septage, pH adjustment	☐ Not applicable ☐ Option 1 ☐ Option 2 ☐ Option 3 ☐ Option 4 ☐ Option 5 ☐ Option 6 ☐ Option 7 ☐ Option 8 ☐ Option 9 ☐ Option 10 ☐ Option 11

2.7 Identify the treatment process(es) that are known to occur at the offsite facility, including blending activities and treatment to reduce pathogens or vector attraction properties. (Check all that apply.)

☐ Preliminary operations (e.g., sludge grinding and degritting)	☐ Thickening (concentration)
☐ Stabilization	☐ Anaerobic digestion
☐ Composting	☐ Conditioning
☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	☐ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
☐ Heat drying	☐ Thermal reduction
☐ Methane or biogas capture and recovery	☐ Other (specify) _____

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

Treatment Provided at Your Facility

2.8 For each sewage sludge use or disposal practice, indicate the applicable pathogen class and reduction alternative and the applicable vector attraction reduction option provided at your facility. Attach additional pages, as necessary.

Use or Disposal Practice (check one)	Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option
☐ Land application of bulk sewage	☐ Not applicable	☐ Not applicable
☐ Land application of biosolids (bulk)	☐ Class A, Alternative 1	☑ Option 1
☐ Land application of biosolids (bags)	☐ Class A, Alternative 2	☐ Option 2
☑ Surface disposal in a landfill	☐ Class A, Alternative 3	☐ Option 3
☐ Other surface disposal	☐ Class A, Alternative 4	☐ Option 4
☐ Incineration	☐ Class A, Alternative 5	☐ Option 5
	☐ Class A, Alternative 6	☐ Option 6
	☐ Class B, Alternative 1	☐ Option 7
	☑ Class B, Alternative 2	☐ Option 8
	☐ Class B, Alternative 3	☐ Option 9
	☐ Class B, Alternative 4	☐ Option 10
	☐ Domestic septage, pH adjustment	☐ Option 11

2.9 Identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge? (Check all that apply.)

- ☑ Preliminary operations (e.g., sludge grinding and degritting)
- ☑ Stabilization
- ☐ Composting
- ☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)
- ☐ Heat drying
- ☑ Methane or biogas capture and recovery
- ☑ Thickening (concentration)
- ☑ Anaerobic digestion
- ☐ Conditioning
- ☑ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
- ☐ Thermal reduction

2.10 Describe any other sewage sludge treatment or blending activities not identified in Items 2.8 and 2.9 (Part 2, Section 2) above.

☐ Check here if you have attached the description to the application package.

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

2.11 Does the sewage sludge from your facility meet the ceiling concentrations in Table 1 of 40 CFR 503.13, the pollutant concentrations in Table 3 of 40 CFR 503.13, Class A pathogen reduction requirements at 40 CFR 503.32(a), *and* one of the vector attraction reduction requirements at 40 CFR 503.33(b)(1)–(8) and is it land applied?

☐ Yes ☑ No ➔ SKIP to Item 2.14 (Part 2, Section 2) below.

2.12 Total dry metric tons per 365-day period of sewage sludge subject to this subsection that is applied to the land:

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

☐ Yes ☐ No

☐ Check here once you have completed Items 2.11 to 2.13, then ➔ SKIP to Item 2.32 (Part 2, Section 2) below.

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

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

2.14	Do you place sewage sludge in a bag or other container for sale or give-away for land application? ☐ Yes ☑ No ➔ SKIP to Item 2.17 (Part 2, Section 2) below.	
2.15	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:	
2.16	Attach a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land. ☐ Check here to indicate that you have attached all labels or notices to this application package.	

☐ Check here once you have completed Items 2.14 to 2.16, then ➔ SKIP to Part 2, Section 2, Item 2.32.

Shipment Off Site for Treatment or Blending

2.17	Does another facility provide treatment or blending of your facility's sewage sludge? (This question does not pertain to dewatered sludge sent directly to a land application or surface disposal site.) ☐ Yes ☑ No ➔ SKIP to Item 2.32 (Part 2, Section 2) below.	
2.18	Indicate the total number of facilities that provide treatment or blending of your facility's sewage sludge. Provide the information in Items 2.19 to 2.26 (Part 2, Section 2) below for each facility. ☐ Check here if you have attached additional sheets to the application package.	

2.19	Name of receiving facility			
	Mailing address (street or P.O. box)			
	City or town		State	ZIP code
	Contact name (first and last)	Title	Phone number	Email address
	Location address (street, route number, or other specific identifier)			☐ Same as mailing address
	City or town		State	ZIP code
2.20	Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:			
2.21	Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility or reduce the vector attraction properties of sewage sludge from your facility? ☐ Yes ☐ No ➔ SKIP to Item 2.24 (Part 2, Section 2) below.			

2.22 Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge at the receiving facility.

Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option
☐ Not applicable	☐ Not applicable
☐ Class A, Alternative 1	☐ Option 1
☐ Class A, Alternative 2	☐ Option 2
☐ Class A, Alternative 3	☐ Option 3
☐ Class A, Alternative 4	☐ Option 4
☐ Class A, Alternative 5	☐ Option 5
☐ Class A, Alternative 6	☐ Option 6
☐ Class B, Alternative 1	☐ Option 7
☐ Class B, Alternative 2	☐ Option 8
☐ Class B, Alternative 3	☐ Option 9
☐ Class B, Alternative 4	☐ Option 10
☐ Domestic septage, pH adjustment	☐ Option 11

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

2.23 Which treatment process(es) are used at the receiving facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge from your facility? (Check all that apply.)

- ☐ Preliminary operations (e.g., sludge grinding and degritting)
- ☐ Thickening (concentration)
- ☐ Stabilization
- ☐ Anaerobic digestion
- ☐ Composting
- ☐ Conditioning
- ☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)
- ☐ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
- ☐ Heat drying
- ☐ Thermal reduction
- ☐ Methane or biogas capture and recovery
- ☐ Other (specify) _____

2.24 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).

☐ Check here to indicate that you have attached material.

2.25 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 ➔ SKIP to Item 2.32 (Part 2, Section 2) below.

2.26 Attach a copy of all labels or notices that accompany the product being sold or given away.

☐ Check here to indicate that you have attached material.

☐ Check here once you have completed Items 2.17 to 2.26 (Part 2, Section 2), then ➔ SKIP to Item 2.32 (Part 2, Section 2) below.

Land Application of Bulk Sewage Sludge

2.27 Is sewage sludge from your facility applied to the land?

☐ Yes ☐ No ➔ SKIP to Item 2.32 (Part 2, Section 2) below.

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

2.29 Did you identify all land application sites in Part 2, Section 3 of this application?

☐ Yes ☐ No ➔ Submit a copy of the land application plan with your application.

2.30 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 ➔ SKIP to Item 2.32 (Part 2, Section 2) below.

2.31 Describe how you notify the NPDES permitting authority for the states where the land application sites are located. Attach a copy of the notification.

☐ Check here if you have attached the explanation to the application package.

☐ Check here if you have attached the notification to the application package.

Surface Disposal

2.32 Is sewage sludge from your facility placed on a surface disposal site?

☐ Yes ☑ No ➔ SKIP to Item 2.39 (Part 2, Section 2) below.

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

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

☐ Yes ➔ SKIP to Item 2.39 (Part 2, Section 2) below. ☐ No

2.35	Indicate the total number of surface disposal sites to which you send your sewage sludge. (Provide the information in Items 2.36 to 2.38 of Part 2, Section 2, for each facility.) ☐ Check here if you have attached additional sheets to the application package.	

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

2.36	Site name or number of surface disposal site you do not own or operate			
	Mailing address (street or P.O. box)			
	City or Town		State	ZIP Code
	Contact Name (first and last)	Title	Phone Number	Email Address
2.37	Site Contact (Check all that apply.) ☐ Owner ☐ Operator			
2.38	Total dry metric tons of sewage sludge from your facility placed on this surface disposal site per 365-day period:			

Incineration

2.39	Is sewage sludge from your facility fired in a sewage sludge incinerator? ☐ Yes ☑ No ➔ SKIP to Item 2.46 (Part 2, Section 2) below.			
2.40	Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period:			
2.41	Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired? ☐ Yes ➔ SKIP to Item 2.46 (Part 2, Section 2) below. ☐ No			
2.42	Indicate the total number of sewage sludge incinerators used that you do not own or operate. (Provide the information in Items 2.43 to 2.45 directly below for each facility.) ☐ Check here if you have attached additional sheets to the application package.			
2.43	Incinerator name or number			
	Mailing address (street or P.O. box)			
	City or town		State	ZIP code
	Contact name (first and last)	Title	Phone number	Email address
	Location address (street, route number, or other specific identifier)			☐ Same as mailing address
	City or town		State	ZIP code
2.44	Contact (check all that apply) ☐ Incinerator owner ☐ Incinerator operator			
2.45	Total dry metric tons of sewage sludge from your facility fired in this sewage sludge incinerator per 365-day period:			

Disposal in a Municipal Solid Waste Landfill

2.46	Is sewage sludge from your facility placed on a municipal solid waste landfill? ☑ Yes ☐ No ➔ SKIP to Part 2, Section 3.	
2.47	Indicate the total number of municipal solid waste landfills used. (Provide the information in Items 2.48 to 2.52 directly below for each facility.) ☐ Check here if you have attached additional sheets to the application package.	1

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

2.48 Name of landfill
Black Warrior Solid Waste Facility

Mailing address (street or P.O. box)
Black Warrior Solid Waste Facility, 3301 Landfill Drive

City or town	State	ZIP code
Coker	AL	35452

Contact name (first and last)	Title	Phone number	Email address
Ken Thrasher	Executive Director	(205) 339-7330	kent@bwswa.com

Location address (street, route number, or other specific identifier) ☑ Same as mailing address

County	County code	☐ Not available

City or town	State	ZIP code

2.49 Total dry metric tons of sewage sludge from your facility placed in this municipal solid waste landfill per 365-day period: 17,483.5 tons/year

2.50 List 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
63-01	Solid Waste Disposal Facility Permit

2.51 Attach to the 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).

☑ Check here to indicate you have attached the requested information.

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

☑ Yes ☐ No

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

PART 2, SECTION 3 LAND APPLICATION OF BULK SEWAGE SLUDGE (40 CFR 122.21(q)(9))

Land Application of Bulk Sewage Sludge

3.1 Does your facility apply sewage sludge to land?

☐ Yes ☑ No ➔ SKIP to Part 2, Section 4.

3.2 Do any of the following conditions apply?

- The sewage sludge meets the ceiling concentrations in Table 1 of 40 CFR 503.12, the pollutant concentrations in Table 3 of 40 CFR 503.13, Class A pathogen reduction requirements at 40 CFR 503.32(a), *and* one of the vector attraction reduction requirements at 40 CFR 503.33(b)(1)–(8);
- The sewage sludge is sold or given away in a bag or other container for application to the land; or
- You provide the sewage sludge to another facility for treatment or blending.

☐ Yes ➔ SKIP to Part 2, Section 4. ☐ No

3.3 Complete Section 3 for every site on which the sewage sludge is applied.

☐ Check here if you have attached sheets to the application package for one or more land application sites.

Identification of Land Application Site

3.4 Site name or number

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

County	County code ☐ Not available

City or town	State	ZIP code

Latitude/Longitude of Land Application Site (see instructions)

Latitude	Longitude
° ′ ″	° ′ ″

Method of Determination

☐ USGS map ☐ Field survey ☐ Other (specify) _____

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

☐ Check here to indicate you have attached a topographic map for this site.

Owner Information

3.6 Are you the owner of this land application site?

☐ Yes ➔ SKIP to Item 3.8 (Part 2, Section 3) below. ☐ No

3.7 Owner name

Mailing address (street or P.O. box)

City or town	State	ZIP code

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

Applier Information

3.8 Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site?

☐ Yes ➔ SKIP to Item 3.10 (Part 2, Section 3) below. ☐ No

3.9 Applier's name

Mailing address (street or P.O. box)

City or town	State	ZIP code

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

Land Application of Bulk Sewage Sludge Continued

Site Type

3.10 Type of land application:

☐ Agricultural land ☐ Forest

☐ Reclamation site ☐ Public contact site

☐ Other (describe)

Crop or Other Vegetation Grown on Site

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

3.12 What is the nitrogen requirement for this crop or vegetation?

Vector Attraction Reduction

3.13 Are the vector attraction reduction requirements at 40 CFR 503.33(b)(9) and (b)(10) met when sewage sludge is applied to the land application site?

☐ Yes ☐ No ➔ SKIP to Item 3.16 (Part 2, Section 3) below.

3.14 Indicate which vector attraction reduction option is met. (Check only one response.)

☐ Option 9 (injection below land surface) ☐ Option 10 (incorporation into soil within 6 hours)

3.15 Describe any treatment processes used at the land application site to reduce vector attraction properties of sewage sludge.

☐ Check here if you have attached your description to the application package.

Cumulative Loadings and Remaining Allotments

3.16 Is the sewage sludge applied to this site since July 20, 1993, subject to the cumulative pollutant loading rates (CPLRs) in 40 CFR 503.13(b)(2)?

☐ Yes ☐ No ➔ SKIP to Part 2, Section 4.

3.17 Have you contacted the NPDES permitting authority in the state where the bulk sewage sludge subject to CPLRs will be applied to ascertain whether bulk sewage sludge subject to CPLRs has been applied to this site on or since July 20, 1993?

☐ Yes ☐ No ➔ Sewage sludge subject to CPLRs may not be applied to this site. SKIP to Part 2, Section 4.

3.18 Provide the following information about your NPDES permitting authority:

NPDES permitting authority name	
Contact person	
Telephone number	
Email address	

3.19 Based on your inquiry, has bulk sewage sludge subject to CPLRs been applied to this site since July 20, 1993?

☐ Yes ☐ No ➔ SKIP to Part 2, Section 4.

3.20 Provide the following information for every facility other than yours that is sending, or has sent, bulk sewage sludge subject to CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

☐ Check here to indicate that additional pages are attached.

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

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0022713	Hilliard N. Fletcher WRRF	

PART 2, SECTION 4 SURFACE DISPOSAL (40 CFR 122.21(q)(10))

Surface Disposal

4.1	Do you own or operate a surface disposal site? ☐ Yes ☑ No ➔ SKIP to Part 2, Section 5.			
4.2	Complete all items in Section 4 for each active sewage sludge unit that you own or operate. ☐ Check here to indicate that you have attached material to the application package for one or more active sewage sludge units.			
	Information on Active Sewage Sludge Units			
4.3	Unit name or number			
	Mailing address (street or P.O. box)			
	City or town		State	ZIP code
	Contact name (first and last)	Title	Phone number	Email address
	Location address (street, route number, or other specific identifier) ☐ Same as mailing address			
	County		County code ☐ Not available	
	City or town		State	ZIP code
	Latitude/Longitude of Active Sewage Sludge Unit (see instructions)			
	Latitude: ° ' "	**Longitude**: ° ' "		
	Method of Determination ☐ USGS map ☐ Field survey ☐ Other (specify) _____			
4.4	Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location. ☐ Check here to indicate that you have completed and attached a topographic map.			
4.5	Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:			
4.6	Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:			
4.7	Does the active sewage sludge unit have a liner with a maximum permeability of 1×10^{-7} centimeters per second (cm/sec)? ☐ Yes ☐ No ➔ SKIP to Item 4.9 (Part 2, Section 4) below.			
4.8	Describe the liner. ☐ Check here to indicate that you have attached a description to the application package.			
4.9	Does the active sewage sludge unit have a leachate collection system? ☐ Yes ☐ No ➔ SKIP to Item 4.11 (Part 2, Section 4) below.			
4.10	Describe the leachate collection system and the method used for leachate disposal and provide the numbers of any federal, state, or local permit(s) for leachate disposal. ☐ Check here to indicate that you have attached the description to the application package.			

Surface Disposal Continued

4.11	Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? ☐ Yes ☐ No ➔ SKIP to Item 4.13 (Part 2, Section 4) below.	
4.12	Provide the actual distance in meters:	meters
4.13	Remaining capacity of active sewage sludge unit in dry metric tons:	dry metric tons
4.14	Anticipated closure date for active sewage sludge unit, if known (MM/DD/YYYY):	
4.15	Attach a copy of any closure plan that has been developed for this active sewage sludge unit. ☐ Check here to indicate that you have attached a copy of the closure plan to the application package.	

Sewage Sludge from Other Facilities

4.16	Is sewage sludge sent to this active sewage sludge unit from any facilities other than your facility? ☐ Yes ☐ No ➔ SKIP to Item 4.21 (Part 2, Section 4) below.	
4.17	Indicate the total number of facilities (other than your facility) that send sewage sludge to this active sewage sludge unit. (Complete Items 4.18 to 4.20 directly below for each such facility.) ☐ Check here to indicate that you have attached responses for each facility to the application package.	

4.18

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

4.19 Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge before leaving the other facility.

Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option
☐ Not applicable	☐ Not applicable
☐ Class A, Alternative 1	☐ Option 1
☐ Class A, Alternative 2	☐ Option 2
☐ Class A, Alternative 3	☐ Option 3
☐ Class A, Alternative 4	☐ Option 4
☐ Class A, Alternative 5	☐ Option 5
☐ Class A, Alternative 6	☐ Option 6
☐ Class B, Alternative 1	☐ Option 7
☐ Class B, Alternative 2	☐ Option 8
☐ Class B, Alternative 3	☐ Option 9
☐ Class B, Alternative 4	☐ Option 10
☐ Domestic septage, pH adjustment	☐ Option 11

4.20 Which treatment process(es) are used at the other facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge before leaving the other facility? (Check all that apply.)

☐ Preliminary operations (e.g., sludge grinding and degritting)	☐ Thickening (concentration)
☐ Stabilization	☐ Anaerobic digestion
☐ Composting	☐ Conditioning
☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	☐ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
☐ Heat drying	☐ Thermal reduction
☐ Methane or biogas capture and recovery	☐ Other (specify) _____

Surface Disposal Continued

Vector Attraction Reduction

4.21 Which vector attraction reduction 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)

☐ None

4.22 Describe any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge.

☐ Check here if you have attached your description to the application package.

Groundwater Monitoring

4.23 Is groundwater monitoring currently conducted at this active sewage sludge unit, or are groundwater monitoring data otherwise available for this active sewage sludge unit?

☐ Yes

☐ No → SKIP to Item 4.26 (Part 2, Section 4) below.

4.24 Provide a copy of available groundwater monitoring data.

☐ Check here to indicate you have attached the monitoring data.

4.25 Describe the well locations, the approximate depth to groundwater, and the groundwater monitoring procedures used to obtain these data.

☐ Check here if you have attached your description to the application package.

4.26 Has a groundwater monitoring program been prepared for this active sewage sludge unit?

☐ Yes

☐ No → SKIP to Item 4.28 (Part 2, Section 4) below.

4.27 Submit a copy of the groundwater monitoring program with this permit application.

☐ Check here to indicate you have attached the monitoring program.

4.28 Have you obtained a certification from a qualified groundwater scientist that the aquifer below the active sewage sludge unit has not been contaminated?

☐ Yes

☐ No → SKIP to Item 4.30 (Part 2, Section 4) below.

4.29 Submit a copy of the certification with this permit application.

☐ Check here to indicate you have attached the certification to the application package.

Site-Specific Limits

4.30 Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?

☐ Yes

☐ No → SKIP to Part 2, Section 5.

4.31 Submit information to support the request for site-specific pollutant limits with this application.

☐ Check here to indicate you have attached the requested information.

PART 2, SECTION 5 INCINERATION (40 CFR 122.21(q)(11))

Incineration

Incinerator Information

5.1 Do you fire sewage sludge in a sewage sludge incinerator?

☐ Yes ☑ No ➔ SKIP to END.

5.2 Indicate the total number of incinerators used at your facility. (Complete the remainder of Section 5 for each such incinerator.)

☐ Check here to indicate that you have attached information for one or more incinerators.

5.3 Incinerator name or number

Location address (street, route number, or other specific identifier)

County	County code ☐ Not available	
City or town	State	ZIP code

Latitude/Longitude of Incinerator (see instructions)

Latitude	Longitude
° ' "	° ' "

Method of Determination

☐ USGS map ☐ Field survey ☐ Other (specify) _____

Amount Fired

5.4 Dry metric tons per 365-day period of sewage sludge fired in the sewage sludge incinerator:

Beryllium NESHAP

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

☐ Check here to indicate that you have attached this material to the application package.

5.6 Is the sewage sludge fired in this incinerator "beryllium-containing waste" as defined at 40 CFR 61.31?

☐ Yes ☐ No ➔ SKIP to Item 5.8 (Part 2, Section 5) below.

5.7 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.

☐ Check here to indicate that you have attached this information.

Mercury NESHAP

5.8 Is compliance with the mercury NESHAP being demonstrated via stack testing?

☐ Yes ☐ No ➔ SKIP to Item 5.11 (Part 2, Section 5) below.

5.9 Submit a complete report of stack testing and documentation of ongoing incinerator operating parameters indicating that the incinerator has met and will continue to meet the mercury NESHAP emission rate limit.

☐ Check here to indicate that you have attached this information.

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

☐ Check here to indicate that you have attached this information.

5.11 Do you demonstrate compliance with the mercury NESHAP by sewage sludge sampling?

☐ Yes ☐ No ➔ SKIP to Item 5.13 (Part 2, Section 5) below.

5.12 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.

☐ Check here to indicate that you have attached this information.

Incineration Continued

Dispersion Factor

5.13	Dispersion factor in micrograms/cubic meter per gram/second:	
5.14	Name and type of dispersion model:	
5.15	Submit a copy of the modeling results and supporting documentation. ☐ Check here to indicate that you have attached this information.	

Control Efficiency

5.16 Provide the control efficiency, in hundredths, for each of the pollutants listed below.

Pollutant	Control Efficiency, in Hundredths
Arsenic	
Cadmium	
Chromium	
Lead	
Nickel	

5.17	Attach a copy of the results or performance testing and supporting documentation (including testing dates). ☐ Check here to indicate that you have attached this information.	

Risk-Specific Concentration for Chromium

5.18	Provide the risk-specific concentration (RSC) used for chromium in micrograms per cubic meter:	
5.19	Was the RSC determined via Table 2 in 40 CFR 503.43? ☐ Yes ☐ No ➔ SKIP to Item 5.21 (Part 2, Section 5) below.	
5.20	Identify the type of incinerator used as the basis. ☐ Fluidized bed with wet scrubber ☐ Other types with wet scrubber ☐ Fluidized bed with wet scrubber and wet electrostatic precipitator ☐ Other types with wet scrubber and wet electrostatic precipitator	
5.21	Was the RSC determined via Table 6 in 40 CFR 503.43 (site-specific determination)? ☐ Yes ☐ No ➔ SKIP to Item 5.23 (Part 2, Section 5) below.	
5.22	Provide the decimal fraction of hexavalent chromium concentration to total chromium concentration in stack exit gas:	
5.23	Attach the results of incinerator stack tests for hexavalent and total chromium concentrations, including the date(s) of any test(s), with this application. ☐ Check here to indicate that you have attached this information. ☐ Not applicable	

Incinerator Parameters

5.24	Do you monitor total hydrocarbons (THC) in the exit gas of the sewage sludge incinerator? ☐ Yes ☐ No	
5.25	Do you monitor carbon monoxide (CO) in the exit gas of the sewage sludge incinerator? ☐ Yes ☐ No	
5.26	Indicate the type of sewage sludge incinerator.	
5.27	Incinerator stack height in meters:	
5.28	Indicate whether the value submitted in Item 5.27 is (check only one response): ☐ Actual stack height ☐ Creditable stack height	

Incineration Continued

Performance Test Operating Parameters

5.29	Maximum performance test combustion temperature:	
5.30	Performance test sewage sludge feed rate, in dry metric tons/day	
5.31	Indicate whether value submitted in Item 5.30 is (check only one response): ☐ Average use ☐ Maximum design	
5.32	Attach supporting documents describing how the feed rate was calculated. ☐ Check here to indicate that you have attached this information.	
5.33	Submit information documenting the performance test operating parameters for the air pollution control device(s) used for this sewage sludge incinerator. ☐ Check here to indicate that you have attached this information.	

Monitoring Equipment

5.34 List the equipment in place to monitor the listed parameters.

Parameter	Equipment in Place for Monitoring
Total hydrocarbons or carbon monoxide	
Percent oxygen	
Percent moisture	
Combustion temperature	
Other (describe)	

Air Pollution Control Equipment

5.35 List all air pollution control equipment used with this sewage sludge incinerator.

☐ Check here if you have attached the list to the application package for the noted incinerator.

END of PART 2

Submit completed application package to your NPDES permitting authority.

Click to go back to the beginning of Form