



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

FEB 16 2016

Joe Lee, Mayor  
Moody Governmental Utility Services Corporation  
Post Office Box 730  
Moody, AL 35004

RE: Draft Permit  
NPDES Permit No. AL0055255  
Highway 411 WWTP  
St Clair County, Alabama

Dear Mr. Lee:

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, if you are not already participating in the Department's web-based electronic environmental (E2) Reporting System Program for submittal of discharge monitoring reports (DMRs), Part I.C.1.c of your permit will require you to apply for participation in the E2 Program within 180 days of the effective date of the permit unless valid justification as to why you cannot participate is submitted in writing. The E2 Program allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. The Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes> or you may obtain a hard copy by submitting a written request or by emailing [e2admin@adem.alabama.gov](mailto:e2admin@adem.alabama.gov).

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

Should you have any questions, please contact the undersigned by email at [dastokes@adem.state.al.us](mailto:dastokes@adem.state.al.us) or by phone at (334) 271-7808.

Sincerely,

Dustin Stokes  
Municipal Section  
Water Division

Enclosure

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





# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
POST OFFICE BOX 730  
MOODY, ALABAMA 35004

FACILITY LOCATION: HIGHWAY 411 WWTP (0.75 MGD)  
2400 JOEY ADKINS DRIVE  
MOODY, ALABAMA  
ST CLAIR COUNTY

PERMIT NUMBER: AL0055255

RECEIVING WATERS: LITTLE CAHABA RIVER

*In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (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-15, 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**

**MUNICIPAL SECTION  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
PERMIT**

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**ATTACHMENT:**  
FORM 421

NON-COMPLIANCE NOTIFICATION FORM

**PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS**

**A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS**

1. Outfall 0011 Discharge Limits - Headwater Flow <1.5 CFS

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 0011, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*					Monitoring Requirements**					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Oxygen, Dissolved (DO) 00300 1 0 0	*****	*****	*****	*****	6.5 mg/l	*****	*****	E	GRAB	C	*****
pH 00400 1 0 0	*****	*****	*****	*****	6.0 S.U.	8.5 S.U.	*****	E	GRAB	C	*****
Solids, Total Suspended 00530 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	C	*****
Solids, Total Suspended 00530 1 0 0	187 lbs/day	281 lbs/day	30.0 mg/l	45.0 mg/l	*****	*****	*****	E	COMP24	C	*****
Nitrogen, Ammonia Total (As N) 00610 1 0 0	5.3 lbs/day	7.9 lbs/day	0.85 mg/l	1.27 mg/l	*****	*****	*****	E	COMP24	C	S
Nitrogen, Ammonia Total (As N) 00610 1 0 0	12.5 lbs/day	18.7 lbs/day	2.0 mg/l	3.0 mg/l	*****	*****	*****	E	COMP24	C	W
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	17.5 lbs/day	26.2 lbs/day	2.8 mg/l	4.2 mg/l	*****	*****	*****	E	COMP24	C	S
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	25.0 lbs/day	37.5 lbs/day	4.0 mg/l	6.0 mg/l	*****	*****	*****	E	COMP24	C	W
Nitrite Plus Nitrate Total 1 Det. (As N) 00630 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	S
Phosphorus, Total (As P) 00665 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	S
Zinc Total Recoverable 01094 1 0 0	*****	*****	355 µg/l	*****	*****	355 µg/l	*****	E	GRAB	G (7)	*****
Copper Total Recoverable 01119 1 0 0	*****	*****	23.0 µg/l	*****	*****	34.6 µg/l	*****	E	GRAB	G (7)	*****

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

\*\* Monitoring Requirements

(1) Sample Location

I - Influent

E - Effluent

X - End Chlorine Contact Chamber

K - Percent Removal of the Monthly Avg. Influent Concentration

from the Monthly Avg. Effluent Concentration.

RS - Receiving Stream

(2) Sample Type:

CONTIN - Continuous

INSTAN - Instantaneous

COMP-8 - 8-Hour Composite

COMP24 - 24-Hour Composite

GRAB - Grab

CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.

A - 7 days per week

B - 5 days per week

C - 3 days per week

D - 2 days per week

E - 1 day per week

(4) Seasonal Limits:

S = Summer (April - October)

W = Winter (November - March)

ECS = E. coli Summer (June - September)

ECW = E. coli Winter (October - May)

J - Annual

Q - For Effluent Toxicity Testing, see Provision IV.B.

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

(6) A measurement of Total Residual Chlorine below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as NODI=B or \*B on the discharge monitoring reports.

(7) If only one sampling event occurs during a monitoring period, the sample result shall be reported on the DMRs as both the monthly average and daily maximum.

(8) Cyanide analysis should encompass available cyanide (free cyanide and weak acid dissociable cyanide).

Note: The limits for Outfall 0011 are applicable if any average daily flow is less than 1.5 cfs during any day of the month. If Outfall 0011 is applicable, the DMR for Outfall 0012 should be submitted with "No Discharge" marked for that month.

2. Outfall 0011 Discharge Limits - Headwater Flow <1.5 CFS (continued)

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 0011, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*						Monitoring Requirements**				
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT	*****	*****	*****	*****	REPORT	*****	E	CONTIN	A	*****
50050 l 0 0	MGD	*****	0.011 mg/l	*****	*****	MGD	*****	E	GRAB	C	*****
Chlorine, Total Residual See note (5) (6)	*****	*****	126 col/100mL	*****	*****	487 col/100mL	*****	E	GRAB	C	ECS
50060 l 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	C	ECW
E. Coli	*****	*****	5.2 µg/l	*****	*****	22.0 µg/l	*****	E	GRAB	G(7)	*****
51040 l 0 0	*****	*****	REPORT	*****	*****	*****	*****	I	COMP24	C	*****
E. Coli	REPORT	REPORT	REPORT	REPORT	REPORT	REPORT	*****	E	COMP24	C	S
51040 l 0 0	lbs/day	lbs/day	mg/l	mg/l	mg/l	mg/l	*****	E	GRAB	C	W
Cyanide, Free Available (8)	12.5 lbs/day	18.7 lbs/day	2.0 mg/l	3.0 mg/l	3.0 mg/l	3.0 mg/l	*****	E	GRAB	C	*****
51173 l 0 0	80082 G 0 0	80082 G 0 0	25.0 lbs/day	37.5 lbs/day	6.0 mg/l	6.0 mg/l	*****	E	GRAB	C	*****
BOD, Carbonaceous 05 Day, 20C	25.0 lbs/day	37.5 lbs/day	6.0 mg/l	6.0 mg/l	6.0 mg/l	6.0 mg/l	85.0%	K	CALCTD	G	*****
80082 l 0 0	80091 K 0 0	80091 K 0 0	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
BOD, Carb-5 Day, 20 Deg C, Percent Remv	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
80091 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
Solids, Suspended Percent Removal	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
81011 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****

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

\*\* Monitoring Requirements

(1) Sample Location

I - Influent

E - Effluent

X - End Chlorine Contact Chamber

K - Percent Removal of the Monthly Avg. Influent Concentration

from the Monthly Avg. Effluent Concentration.

RS - Receiving Stream

(2) Sample Type:

CONTIN - Continuous

INSTAN - Instantaneous

COMP-8 - 8-Hour Composite

COMP24 - 24-Hour Composite

GRAB - Grab

CALCTD - Calculated

(3) Measurement Frequency. See also Part I.B.2.

A - 7 days per week

B - 5 days per week

C - 3 days per week

D - 2 days per week

E - 1 day per week

F - 2 days per month

G - 1 day per month

H - 1 day per quarter

J - Annual

Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:

S = Summer (April - October)

W = Winter (November - March)

ECS = E. coli Summer (June - September)

ECW = E. coli Winter (October - May)

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

(6) A measurement of Total Residual Chlorine below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as NODI=B or \*B on the discharge monitoring reports.

(7) If only one sampling event occurs during a monitoring period, the sample result shall be reported on the DMRs as both the monthly average and daily maximum.

(8) Cyanide analysis should encompass available cyanide (free cyanide and weak acid dissociable cyanide).

Note: The limits for Outfall 0011 are applicable if any average daily flow is less than 1.5 cfs during any day of the month. If Outfall 0011 is applicable, the DMR for Outfall 0012 should be submitted with "No Discharge" marked for that month.

3. Outfall 0012 Discharge Limits - Headwater Flow  $\geq$  1.5 CFS

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 0012, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*					Monitoring Requirements**					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Flow Rate	*****	*****	*****	*****	1.5 cfs	REPORT cfs	*****	E	CONTIN	A	*****
00056 1 0 0	*****	*****	*****	*****	6.5 mg/l	*****	*****	E	GRAB	C	*****
Oxygen, Dissolved (DO)	*****	*****	*****	*****	6.0 S.U.	8.5 S.U.	*****	E	GRAB	C	*****
00300 1 0 0	*****	*****	*****	*****	*****	*****	*****	E	GRAB	C	*****
pH	*****	*****	*****	*****	*****	*****	*****	E	GRAB	C	*****
00400 1 0 0	*****	*****	*****	*****	*****	*****	*****	E	GRAB	C	*****
Solids, Total Suspended	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	C	*****
00530 G 0 0	187 lbs/day	281 lbs/day	30.0 mg/l	45.0 mg/l	*****	*****	*****	E	COMP24	C	*****
Solids, Total Suspended	6.2 lbs/day	9.3 lbs/day	1.0 mg/l	1.5 mg/l	*****	*****	*****	E	COMP24	C	S
00530 1 0 0	15.6 lbs/day	23.4 lbs/day	2.5 mg/l	3.7 mg/l	*****	*****	*****	E	COMP24	C	W
Nitrogen, Ammonia Total (As N)	21.8 lbs/day	32.8 lbs/day	3.5 mg/l	5.2 mg/l	*****	*****	*****	E	COMP24	C	S
00610 1 0 0	31.2 lbs/day	46.9 lbs/day	5.0 mg/l	7.5 mg/l	*****	*****	*****	E	COMP24	C	W
Nitrogen, Kjeldahl Total (As N)	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	S
00625 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	S
Nitrite Plus Nitrate Total 1 Det. (As N)	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	GRAB	G (7)	*****
00630 1 0 0	*****	*****	52.9 µg/l	*****	*****	79.4 µg/l	*****	E	GRAB	G (7)	*****
Phosphorus, Total (As P)	*****	*****	*****	*****	*****	*****	*****	E	GRAB	G (7)	*****
00665 1 0 0	*****	*****	*****	*****	*****	*****	*****	E	GRAB	G (7)	*****
Copper Total Recoverable	*****	*****	*****	*****	*****	*****	*****	E	GRAB	G (7)	*****
01119 1 0 0	*****	*****	*****	*****	*****	*****	*****	E	GRAB	G (7)	*****

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

\*\* Monitoring Requirements

(1) Sample Location

I - Influent

E - Effluent

X - End Chlorine Contact Chamber

K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.

RS - Receiving Stream

(2) Sample Type:

CONTIN - Continuous

INSTAN - Instantaneous

COMP-8 - 8-Hour Composite

COMP24 - 24-Hour Composite

GRAB - Grab

CALCTD - Calculated

(3) Measurement Frequency. See also Part I.B.2.

A - 7 days per week

B - 5 days per week

C - 3 days per week

D - 2 days per week

E - 1 day per week

(4) Seasonal Limits:

S = Summer (April - October)

W = Winter (November - March)

ECS = E. coli Summer (June - September)

ECW = E. coli Winter (October - May)

Q - For Effluent Toxicity Testing, see Provision IV.B.

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

(6) A measurement of Total Residual Chlorine below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as NOD]=B or \*B on the discharge monitoring reports.

(7) If only one sampling event occurs during a monitoring period, the sample result shall be reported on the DMRs as both the monthly average and daily maximum.

(8) Cyanide analysis should encompass available cyanide (free cyanide and weak acid dissociable cyanide).

Note: See Part IV.F (Special Requirements for Permit Limitations in Part I) for stream gauge requirements.

The limits for Outfall 0012 are applicable if all average daily flows are greater than or equal to 1.5 cfs during each day of the month. If all average stream flows are greater than or equal to 1.5 cfs during each day of the month then Outfall 0012 is applicable. If Outfall 0012 is applicable, the DMR for Outfall 0011 should be submitted with "No Discharge" marked for that month.

4. Outfall 0012 Discharge Limits - Headwater Flow  $\geq$  1.5 CFS (continued)

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 0012, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*						Monitoring Requirements**				
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT	*****	*****	*****	*****	REPORT	*****	E	CONTIN	A	*****
50050 l 0 0	MGD	*****	0.025 mg/l	*****	*****	0.044 mg/l	*****	E	GRAB	C	*****
Chlorine, Total Residual See note (5) (6)	*****	*****	126 col/100mL	*****	*****	487 col/100mL	*****	E	GRAB	C	ECS
50060 l 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	C	ECW
E. Coli	*****	*****	11.9 µg/l	*****	*****	50.4 µg/l	*****	E	GRAB	G (7)	*****
51040 l 0 0	*****	*****	REPORT	REPORT	*****	*****	*****	I	COMP24	C	*****
Cyanide, Free Available (8)	*****	*****	REPORT	REPORT	*****	*****	*****	E	GRAB	C	*****
51040 l 0 0	*****	*****	50.0 lbs/day	75.0 lbs/day	*****	*****	*****	E	GRAB	C	W
BOD, Carbonaceous 05 Day, 20C	REPORT	*****	REPORT	REPORT	*****	*****	*****	E	GRAB	C	W
80082 G 0 0	lbs/day	*****	50.0 lbs/day	75.0 lbs/day	*****	*****	*****	E	GRAB	C	W
BOD, Carbonaceous 05 Day, 20C	50.0 lbs/day	*****	4.0 mg/l	37.5 mg/l	*****	*****	*****	E	COMP24	C	S
80082 l 0 0	lbs/day	*****	REPORT	REPORT	*****	*****	*****	K	CALCTD	G	*****
BOD, Carbonaceous 05 Day, 20C	25.0 lbs/day	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
BOD, Carb-5 Day, 20 Deg C, Percent Remvl	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
80091 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
Solids, Suspended Percent Removal	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
81011 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****

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

\*\* Monitoring Requirements

(1) Sample Location

I - Influent

E - Effluent

X - End Chlorine Contact Chamber

K - Percent Removal of the Monthly Avg. Influent Concentration

from the Monthly Avg. Effluent Concentration.

RS - Receiving Stream

(2) Sample Type:

CONTIN - Continuous

INSTAN - Instantaneous

COMP-8 - 8-Hour Composite

COMP24 - 24-Hour Composite

GRAB - Grab

CALCTD - Calculated

(3) Measurement Frequency. See also Part I.B.2.

A - 7 days per week

B - 5 days per week

C - 3 days per week

D - 2 days per week

E - 1 day per week

F - 2 days per month

G - 1 day per month

H - 1 day per quarter

J - Annual

Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:

S = Summer (April - October)

W = Winter (November - March)

ECS = E. coli Summer (June - September)

ECW = E. coli Winter (October - May)

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

(6) A measurement of Total Residual Chlorine below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as NOD|=B or \*B on the discharge monitoring reports.

(7) If only one sampling event occurs during a monitoring period, the sample result shall be reported on the DMRs as both the monthly average and daily maximum.

(8) Cyanide analysis should encompass available cyanide (free cyanide and weak acid dissociable cyanide).

Note: See Part IV.F (Special Requirements for Permit Limitations in Part I) for stream gauge requirements.

The limits for Outfall 0012 are applicable if all average daily flows are greater than or equal to 1.5 cfs during each day of the month. If all average stream flows are greater than or equal to 1.5 cfs during each day of the month then Outfall 0012 is applicable. If Outfall 0012 is applicable, the DMR for Outfall 0011 should be submitted with "No Discharge" marked for that month.

5. Outfall 001A Discharge Limits - Annual

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

Parameter	Discharge Limitations*					Monitoring Requirements**					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Mercury Total Recoverable (5) (6) 71901100	*****	*****	REPORT ug/l	*****	*****	REPORT ug/l	*****	E	GRAB	J (7)	*****

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

\*\* Monitoring Requirements

(1) Sample Location

I - Influent

E - Effluent

X - End Chlorine Contact Chamber

K - Percent Removal of the Monthly Avg. Influent Concentration

from the Monthly Avg. Effluent Concentration.

RS - Receiving Stream

(2) Sample Type:

CONTIN - Continuous

INSTAN - Instantaneous

COMP-8 - 8-Hour Composite

COMP24 - 24-Hour Composite

GRAB - Grab

CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.

A - 7 days per week

B - 5 days per week

C - 3 days per week

D - 2 days per week

E - 1 day per week

(4) Seasonal Limits:

S = Summer (April - October)

W = Winter (November - March)

ECS = E. coli Summer (June - September)

ECW = E. coli Winter (October - May)

F - 2 days per month

G - 1 day per month

H - 1 day per quarter

J - Annual

Q - For Effluent Toxicity Testing, see Provision IV.B.

(5) EPA Methods 1631 E/1669, or alternative methods specifically approved by the Department, shall be used for the analysis of this parameter.

(6) If Outfall 0011 is utilized at any point during the calendar year, then the monitoring associated with Outfall 001A becomes applicable. If only Outfall 0012 is utilized during the calendar year, then the monitoring associated with Outfall 001A is not applicable. If monitoring is not applicable during the monitoring period, enter "NODI=9" on the Annual DMR.

(7) If only one sampling event occurs during a monitoring period, the sample result shall be reported on the DMRs as both the monthly average and daily maximum.

6. Outfall 001T Discharge Limits - Toxicity

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 001T, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*					Monitoring Requirements**					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Toxicity, Ceriodaphnia Chronic 614261 00	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****
Toxicity, Pimephales Chronic 614281 00	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****

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

\*\* Monitoring Requirements

(1) Sample Location

I - Influent

E - Effluent

X - End Chlorine Contact Chamber

K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.

RS - Receiving Stream

(2) Sample Type:

CONTIN - Continuous

INSTAN - Instantaneous

COMP-8 - 8-Hour Composite

COMP24 - 24-Hour Composite

GRAB - Grab

CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.

A - 7 days per week F - 2 days per month

B - 5 days per week G - 1 day per month

C - 3 days per week H - 1 day per quarter

D - 2 days per week J - Annual

E - 1 day per week Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:

S = Summer (April - October)

W = Winter (November - March)

ECS = E. coli Summer (June - September)

ECW = E. coli Winter (October - May)

(5) Toxicity shall be monitored quarterly (February, May, August, November) until four consecutive passed tests have occurred. Toxicity shall then be monitored annually in August.

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

## 1. Representative Sampling

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

## 2. Measurement Frequency

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

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

## 3. Test Procedures

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

- a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this permit the Permittee shall use the newly approved method.
- b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B. Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the Permittee during permit issuance, reissuance, modification, or during compliance schedule. In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.
- c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

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

## 4. Recording of Results

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

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

- b. The name(s) of person(s) who obtained the samples or measurements;
  - c. The dates and times the analyses were performed;
  - d. The name(s) of the person(s) who performed the analyses;
  - e. The analytical techniques or methods used, including source of method and method number; and
  - f. The results of all required analyses.
5. Records Retention and Production
- a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may 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) on the forms approved by the Department and in accordance with the following schedule:
- (1) **REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING** shall be submitted on a monthly basis. The first report is due on the 28th day of the month following the month the permit becomes effective. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.
  - (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 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.
  - (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.
  - (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.
- c. The Department is utilizing a web-based electronic environmental (E2) DMR reporting system for submittal of DMRs. **If the permittee is not already participating in the E2 DMR system, the permittee must apply for participation in the system within 180 days of coverage under this permit unless the facility submits in writing valid justification as to why they cannot participate and the Department approves in writing utilization of hard copy DMR submittals.** Once the permittee is enrolled in the E2 DMR system, the permittee must utilize the system for the submittal of DMRs unless otherwise allowed by this permit. To participate in the E2 DMR system, the Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes>. If the E2 DMR system is down (i.e., electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's 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 required submittal date. However, if the E2 DMR system is down on the 28<sup>th</sup> day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 DMR system resuming operation, the permittee shall enter the data into the E2 DMR system, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date). If a permittee is allowed to submit via the US Postal Service, 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. 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 form and the increased frequency shall be indicated on the DMR form. 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 form.
- 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. The Permittee may certify in writing that a discharge will not occur for an extended period of time and after such certification shall not be required to submit monitoring reports. Written notification of a planned resumption of discharge shall be submitted at least 30 days prior to resumption of the discharge. If an unplanned resumption of

discharge occurs, written notification shall be submitted within 7 days of the resumption. In any case, all discharges shall comply with all provisions of this permit.

- f. All reports and forms 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 36110-2059**

DMRs required to be submitted by this permit shall be addressed to:

**Alabama Department of Environmental Management  
Environmental Data Section, Permits & Services Division  
Post Office Box 301463  
Montgomery, Alabama 36130-1463**

- 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 Notification

- a. The Permittee must 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 report any of the above occurrences, describing the circumstances and potential effects, to the Department within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit a written report to the Director or Designee, as provided in Provision I.C.2.c, 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 must 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. Form 421 must be submitted to the Director or Designee in accordance with Provisions I.C.2a. or b. 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 not corrected by the due date of the written report, then the Permittee is to state the anticipated timeframe that is expected to transpire before the noncompliance is resolved; 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, including all steps taken to prevent 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. The Permittee shall also report notification of the noncompliance event to any other affected entity such as the public.
- e. The Permittee shall keep an updated record of all known wastewater discharge points that are not authorized as permitted outfalls, including but not limited to SSOs. The Permittee shall submit annual Municipal Water Pollution Prevention Plan (MWPP) reports to the Department each year by May 31st for the prior calendar year period beginning January 1st and ending December 31st. The Annual MWPP 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 MWPP shall also provide a list of any discharges reported in accordance with Provision I.C.2.a. The Permittee shall submit with its Annual MWPP Report the following information for each known unpermitted discharge that occurs:
  - (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 street address or any other appropriate method;
  - (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 or plans to eliminate future discharges.
- f. The Permittee shall report SSO and other illicit or anomalous discharge events on Form 415 in accordance with Part I.C.2.a. This form is available on the ADEM web page or upon request from the Permittee.

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

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

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

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

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

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

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

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

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

#### **E. SCHEDULE OF COMPLIANCE**

##### **1. Compliance with discharge limits**

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

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. Schedule

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

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

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

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

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

#### **2. Best Management Practices (BMP)**

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

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

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

### **B. OTHER RESPONSIBILITIES**

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

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

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

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

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

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

#### **1. Bypass**

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:
  - (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;
  - (2) It enters the same receiving stream as the permitted outfall; and
  - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
  - (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

- (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
  - (3) The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the Permittee is granted such authorization, and the Permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The Permittee has the burden of establishing that each of the conditions of Provision II. C. 1. b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.
2. Upset
- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
    - (1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
    - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that:
      - (i) An upset occurred;
      - (ii) The Permittee can identify the specific cause(s) of the upset;
      - (iii) The Permittee's facility was being properly operated at the time of the upset; and
      - (iv) The Permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
  - b. The Permittee has the burden of establishing that each of the conditions of Provision II C. 2. a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I. A. of this permit.

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

- 1. Duty to Comply
  - a. The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.
  - b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a Permittee in an enforcement action.
  - c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.
  - d. The Permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.
  - e. Nothing in this permit shall be construed to preclude or negate the Permittee's responsibility to apply for, obtain, or comply with other Federal, State, or Local Government permits, certifications, or licenses or to preclude from obtaining other federal, state, or local approvals, including those applicable to other ADEM programs and regulations.
- 2. Removed Substances
 

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

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the Permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the

primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the Permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

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

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

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

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

This permit may not be transferred or the name of the Permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new Permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the Permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the Permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.
4. Permit Modification and Revocation
  - a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:
    - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;
    - (2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or
    - (3) If modification or revocation and reissuance is requested by the Permittee and cause exists, the Director may grant the request.
  - b. This permit may be modified during its term for cause, including but not limited to, the following:
    - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;

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

#### 5. Termination

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

- a. Violation of any term or condition of this permit;
- b. The Permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the Permittee's misrepresentation of any relevant facts at any time;
- c. Materially false or inaccurate statements or information in the permit application or the permit;
- d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- e. The Permittee's discharge threatens human life or welfare or the maintenance of water quality standards;
- f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;
- g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the Permittee; or
- h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

#### 6. Suspension

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

#### 7. Stay

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

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

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

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

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

**H. PROHIBITIONS**

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

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

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

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

#### **1. Tampering**

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

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

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

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

a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA, and as such, any terms, conditions, or limitations of the permit are enforceable under state and federal law.

b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes:

- (1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;
- (2) An action for damages;
- (3) An action for injunctive relief; or
- (4) An action for penalties.

c. If the Permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the Permittee has made a timely and complete application for reissuance of the permit:

- (1) Initiate enforcement action based upon the permit which has been continued;
- (2) Issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
- (3) Reissue the new permit with appropriate conditions; or
- (4) Take other actions authorized by these rules and AWPCA.

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

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

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

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

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

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

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

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

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

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

**F. COMPLIANCE WITH WATER QUALITY STANDARDS**

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

**G. GROUNDWATER**

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

**H. DEFINITIONS**

1. Average monthly discharge limitation – means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.
4. AWPCA – means the Alabama Water Pollution Control Act.
5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.
6. Bypass – means the intentional diversion of waste streams from any portion of a treatment facility.
7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
8. Daily discharge – means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
9. Daily maximum – means the highest value of any individual sample result obtained during a day.
10. Daily minimum – means the lowest value of any individual sample result obtained during a day.
11. Day – means any consecutive 24-hour period.
12. Department – means the Alabama Department of Environmental Management.
13. Director – means the Director of the Department.
14. Discharge – means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(9).
15. Discharge Monitoring Report (DMR) – means the form approved by the Director to accomplish reporting requirements of an NPDES permit.
16. DO – means dissolved oxygen.
17. 8HC – means 8-hour composite sample, including any of the following:
  - a. The mixing of at least 8 equal volume samples collected at 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. From which the discharge of pollutants did not commence prior to August 13, 1979, and which is not a new source; and

- c. Which has never received a final effective NPDES permit for dischargers at that site.
29. NH<sub>3</sub>-N -- means the pollutant parameter ammonia, measured as nitrogen.
30. Notifiable sanitary sewer overflow -- means an overflow, spill, release or diversion of wastewater from a sanitary sewer system that:
  - a. Reaches a surface water of the State; or
  - b. May imminently and substantially endanger human health based on potential for public exposure including but not limited to close proximity to public or private water supply wells or in areas where human contact would be likely to occur.
31. Permit application -- means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
32. Point source -- means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
33. Pollutant -- includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
34. Privately Owned Treatment Works -- means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".
35. Publicly Owned Treatment Works -- means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
36. Receiving Stream -- means the "waters" receiving a "discharge" from a "point source".
37. Severe property damage -- means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
38. Significant Source -- means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
39. TKN -- means the pollutant parameter Total Kjeldahl Nitrogen.
40. TON -- means the pollutant parameter Total Organic Nitrogen.
41. TRC -- means Total Residual Chlorine.
42. TSS -- means the pollutant parameter Total Suspended Solids.
43. 24HC -- means 24-hour composite sample, including any of the following:
  - a. The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
  - b. A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or
  - c. A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
44. Upset -- means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
45. Waters -- means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground, or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.
46. Week -- means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

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

**I. SEVERABILITY**

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

## PART IV SPECIFIC REQUIREMENTS, CONDITIONS, AND LIMITATIONS

### A. SLUDGE MANAGEMENT PRACTICES

1. Applicability
  - a. Provisions of Provision IV.A. apply to a sewage sludge generated or treated in treatment works that is applied to agricultural and non-agricultural land, or that is otherwise distributed, marketed, incinerated, or disposed in landfills or surface disposal sites.
  - b. Provisions of Provision IV.A. do not apply to:
    - (1) Sewage sludge generated or treated in a privately owned treatment works operated in conjunction with industrial manufacturing and processing facilities and which receive no domestic wastewater.
    - (2) Sewage sludge that is stored in surface impoundments located at the treatment works prior to ultimate disposal.
2. Submitting Information
  - a. If applicable, the Permittee must submit annually with its Municipal Water Pollution Prevention (MWPP) report the following:
    - (1) Type of sludge stabilization/digestion method;
    - (2) Daily or annual sludge production (dry weight basis);
    - (3) Ultimate sludge disposal practice(s).
  - b. The Permittee shall provide sludge inventory data to the Director as requested. These data may include, but are not limited to, sludge quantity and quality reported in Provision IV.A.2.a as well as other specific analyses required to comply with State and Federal laws regarding solid and hazardous waste disposal.
  - c. The Permittee shall give prior notice to the Director of at least 30 days of any change planned in the Permittee's sludge disposal practices.
3. Reopener or Modification
  - a. Upon review of information provided by the Permittee as required by Provision IV.A.2. or, based on the results of an on-site inspection, the permit shall be subject to modification to incorporate appropriate requirements.
  - b. If an applicable "acceptable management practice" or if a numerical limitation for a pollutant in sewage sludge promulgated under Section 405 of FWPCA is more stringent than the sludge pollutant limit or acceptable management practice in this permit. This permit shall be modified or revoked or reissued to conform to requirements promulgated under Section 405. The Permittee shall comply with the limitations no later than the compliance deadline specified in applicable regulations as required by Section 405 of FWPCA.

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

1. Chronic Toxicity Test
  - a. The permittee shall perform short-term chronic toxicity tests on the wastewater at Outfall 0011.
  - b. The samples shall be diluted using appropriate control water to the Instream Waste Concentration (IWC) which is **100 percent effluent at Outfall 0011** and **44 percent effluent at Outfall 0012**. 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 shall be monitored Quarterly during the months of FEBRUARY, MAY, AUGUST, and NOVEMBER until four consecutive passed tests have occurred. Toxicity shall then be monitored annually in **August**. Should results from the Quarterly or Annual Toxicity test indicate that Outfall 001I 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 again conduct toxicity testing in the months of FEBRUARY, MAY, AUGUST, and NOVEMBER.
3. Reporting Requirements
- a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
  - b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2 of this part, an effluent toxicity report containing the information in Sections 2 and 6 shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month that tests were performed.
4. Additional Testing Requirements
- a. If chronic toxicity is indicated (i.e., noncompliance with permit limit), then the Permittee must perform two additional valid chronic toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall run consecutively beginning on the first calendar week following the date that the Permittee became aware of the permit noncompliance. The results of these follow-up tests shall be submitted to the Department no later than 28 days following the month the tests were performed.
  - b. After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols and guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-91-003, EPA/600/R-92/081, EPA/833/B-99/022, and/or EPA/600/6-91/005F)
5. Test Methods
- The tests shall be performed in accordance with the latest edition of the "EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The Larval Survival and Growth Test, Method 1000.0, shall be used for the fathead minnow (*Pimephales promelas*) test and the Survival and Reproduction Test, Method 1002.0, shall be used for the cladoceran (*Ceriodaphnia dubia*) test.
6. Effluent Toxicity Testing Reports
- The following information shall be submitted with each DMR unless otherwise directed by the Department. The Department may at any times suspend or reinstate this requirement or may decrease or increase the frequency of submittals.
- a. Introduction
    - (1) Facility name, location and county
    - (2) Permit number
    - (3) Toxicity testing requirements of permit
    - (4) Name of receiving water body
    - (5) Contract laboratory information (if tests are performed under contract)
      - (a) Name of firm
      - (b) Telephone number
      - (c) Address
    - (6) Objective of test
  - b. Plant Operations
    - (1) Discharge Operating schedule (if other than continuous)
    - (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)

- c. Source of Effluent and Dilution Water
  - (1) Effluent samples
    - (a) Sampling point
    - (b) Sample collection dates and times (to include composite sample start and finish times)
    - (c) Sample collection method
    - (d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
    - (e) Lapsed time from sample collection to delivery
    - (f) Lapsed time from sample collection to test initiation
    - (g) Sample temperature when received at the laboratory
  - (2) Dilution Water
    - (a) Source
    - (b) Collection/preparation date(s) and time(s)
    - (c) Pretreatment (if applicable)
    - (d) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)
- d. Test Conditions
  - (1) Toxicity test method utilized
  - (2) End point(s) of test
  - (3) Deviations from referenced method, if any, and reason(s)
  - (4) Date and time test started
  - (5) Date and time test terminated
  - (6) Type and volume of test chambers
  - (7) Volume of solution per chamber
  - (8) Number of organisms per test chamber
  - (9) Number of replicate test chambers per treatment
  - (10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)
  - (11) Specify if aeration was needed
  - (12) Feeding frequency, amount, and type of food
  - (13) Specify if (and how) pH control measures were implemented
  - (14) Light intensity (mean)
- e. Test Organisms
  - (1) Scientific name
  - (2) Life stage and age
  - (3) Source
  - (4) Disease(s) treatment (if applicable)
- f. Quality Assurance
  - (1) Reference toxicant utilized and source
  - (2) Date and time of most recent chronic reference toxicant test(s), raw data, and current control chart(s). (The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.)
  - (3) Dilution water utilized in reference toxicant test
  - (4) Results of reference toxicant test(s) (NOEC, IC25, etc.); report concentration-response 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

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

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

1. If chlorine is not utilized for disinfection purposes, TRC monitoring under Part I of this Permit is not required. If TRC monitoring is not required, "NODI = 9" (conditional monitoring) 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 "NODI = B" or "0". The Permittee shall then be considered to be in compliance with the daily maximum concentration limit for TRC.
3. This permit contains a maximum allowable TRC level in the effluent. The Permittee is responsible for determining the minimum TRC level needed in the chlorine contact chamber to comply with E.coli limits. The effluent shall be dechlorinated if necessary to meet the maximum allowable effluent TRC level.
4. The sample collection point for effluent TRC shall be at a point downstream of the chlorine contact chamber (downstream of dechlorination if applicable). The exact location is to be approved by the Director.

**D. PLANT CLASSIFICATION**

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

**E. POLLUTANT SCANS**

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

**F. SPECIAL REQUIREMENTS FOR PERMIT LIMITATIONS IN PART 1**

1. The Permittee shall maintain a stream gauging station for the receiving stream. The stream gauging station shall be calibrated a minimum of twice per year for the duration of the permit. The measurements from each calibration shall be submitted to ADEM's Municipal Section no later than 60 days after the date of the calibration, unless an alternate date is approved by the Department.
2. The daily stream flow should be recorded for each day's 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.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 WATER DIVISION – INDUSTRIAL AND MUNICIPAL SECTIONS  
**NONCOMPLIANCE NOTIFICATION FORM**

PERMITTEE NAME: \_\_\_\_\_ PERMIT NO: \_\_\_\_\_

FACILITY LOCATION: \_\_\_\_\_

DMR REPORTING PERIOD: \_\_\_\_\_

1. DESCRIPTION OF DISCHARGE: (Include outfall number (s))

2. DESCRIPTION OF NON-COMPLIANCE: (Attach additional pages if necessary):

<b>LIST EFFLUENT VIOLATIONS (If applicable)</b>			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Result Reported (Include units)	Permit Limit (Include units)
<b>LIST MONITORING / REPORTING VIOLATIONS (If applicable)</b>			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Monitoring / Reporting Violation (Provide description)	

3. CAUSE OF NON-COMPLIANCE (Attach additional pages if necessary):

4. PERIOD OF NONCOMPLIANCE: (Include exact date(s) and time(s) or, if not corrected, the anticipated time the noncompliance is expected to continue):

5. DESCRIPTION OF STEPS TAKEN AND/OR BEING TAKEN TO REDUCE OR ELIMINATE THE NONCOMPLYING DISCHARGE AND TO PREVENT ITS RECURRENCE (attach additional pages if necessary):

"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 AND TITLE OF RESPONSIBLE OFFICIAL (type or print)

\_\_\_\_\_  
 SIGNATURE OF RESPONSIBLE OFFICIAL / DATE SIGNED

## NPDES PERMIT RATIONALE

NPDES Permit No: **AL0055255** Date: January 11, 2016

Permit Applicant: Moody Governmental Utility Services Corporation  
Post Office Box 730  
Moody, Alabama 35004

Location: Highway 411 WWTP  
2400 Joey Adkins Drive  
Moody, Alabama 35004

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

Basis for Limitations: Water Quality Model: DO, NH<sub>3</sub>-N, TKN, CBOD  
Reissuance with no modification: DO, pH, TSS % Removal  
Instream calculation at 7Q10: 100% (Outfall 0011), 44% (Outfall 0012)  
Toxicity based: TRC  
Secondary Treatment Levels: TSS, TSS % Removal, CBOD % Removal  
Other (described below): Flow Rate (0012), pH, E. coli, Total Recoverable  
Zinc (0011), Total Recoverable Copper, Free  
Available Cyanide

Design Flow in Million Gallons per Day: Outfall 0011– 0.75 MGD, stream flow < 1.5 cfs  
Outfall 0012 – 0.75 MGD, stream flow ≥ 1.5 cfs

Major: No

Description of Discharge: Outfall Number 001;  
Effluent discharge to Little Cahaba River, which is classified as  
Fish & Wildlife

Discussion: This is a permit reissuance due to expiration. The outfall location is the same for Outfall 0011 and Outfall 0012. When the flow of the receiving stream is less than 1.5 cfs, the limits associated with Outfall 0011 will apply. When the flow of the receiving stream is greater than or equal to 1.5 cfs, the limits associated with Outfall 0012 will apply. A daily minimum flow rate limit of 1.5 cfs is imposed at Outfall 0012.

The Department's Water Quality Branch completed Waste Load Allocation (WLA) models on April 17, 2015 and December 11, 2015 for Outfall 0011 and Outfall 0012, respectively. The WLA model for Outfall 0011 is based on zero flow in the receiving stream. The WLA model for Outfall 0012 is based on 1.5 cfs of flow in the receiving stream. Limits for Five Day Carbonaceous Biochemical Oxygen Demand (CBOD), Total Ammonia as Nitrogen (NH<sub>3</sub>-N), Total Kjeldahl Nitrogen (TKN), and Dissolved Oxygen (DO) are based on the WLA models. The monthly average CBOD limits are 2.0 mg/L (summer season) and 4.0 mg/L (winter season) at Outfall 0011 and 4.0 mg/L (summer season) and 8.0 mg/L (winter season) at Outfall 0012. The monthly

average NH<sub>3</sub>-N limits are 0.85 mg/L (summer season) and 2.0 mg/L (winter season) at Outfall 0011 and 1.0 mg/L (summer season) and 2.5 mg/L (winter season) at Outfall 0012. The monthly average TKN limits are 2.8 mg/L (summer season) and 4.0 mg/L (winter season) at Outfall 0011 and 3.5 mg/L (summer season) and 5.0 mg/L (winter season) at Outfall 0012. The daily minimum DO limit is 6.5 mg/L for both Outfall 0011 and Outfall 0012.

The pH daily minimum and daily maximum limits of 6.0 to 8.5 S.U, respectively, were developed to be supportive of the water-use classification of the receiving stream. For Outfall 0011, the Total Residual Chlorine (TRC) limits are 0.011 mg/L (monthly average) and 0.019 mg/L (daily maximum). For Outfall 0012, the Total Residual Chlorine (TRC) limits are 0.025 mg/L (monthly average) and 0.044 mg/L (daily maximum). Both outfalls are based on EPA's recommended water quality values and on the current Toxicity Rationale, which considers the available dilution in the receiving stream. In accordance with a letter dated August 11, 1998 from EPA Headquarters and a 1991 memorandum from EPA Region 4's Environmental Services Division (ESD), due to testing and method detection limitations, a Total Residual Chlorine measurement below 0.05 mg/L shall be considered below detection for compliance purposes. Monitoring for TRC is only applicable if chlorine is utilized for disinfection purposes.

The imposed E. coli limits were determined based on the water-use classification of the receiving streams. Since the Little Cahaba River is classified as Fish & Wildlife, the limits for June-September for the monthly average and daily maximum are 126 col/100mL and 487 col/100mL, respectively. The limits for October -May for the monthly average and daily maximum are 548 col/100mL and 2507 col/100mL, respectively. These limits apply to Outfall 0011 and Outfall 0012.

The Total Suspended Solids (TSS) and TSS % removal limits of 30.0 mg/L monthly average and 85.0%, respectively, are based on the requirements of 40 CFR part 133.102 regarding Secondary Treatment. A minimum percent removal limit of 85.0% is imposed for CBOD also in accordance with 40 CFR 133.102 regarding Secondary Treatment. These limits apply to Outfall 0011 and Outfall 0012.

This permit requires the Permittee to monitor and report during the summer (April-October) the nutrient-related parameters of Nitrate plus Nitrite Nitrogen (NO<sub>2</sub>+NO<sub>3</sub>-N) and Total Phosphorus (TP). Monitoring for these nutrient related parameters is imposed so that sufficient information will be available regarding the nutrient contribution from this point source, should it be necessary at some later time to impose nutrient limits on this discharge. This monitoring applies to Outfall 0011 and Outfall 0012.

The Department completed a reasonable potential analysis (RPA) of the discharge based on the receiving stream's historical low flows and laboratory data provided in the Permittee's application. The Department also considers background data upstream of the point of discharge in the RPA; however, there is no available background data for this discharge. The RPA indicates whether pollutants in treated effluent have the potential to contribute to excursions of Alabama's in-stream water quality standards. Based on the RPA, it was determined that there is a reasonable potential for in-stream water quality standards to be exceeded for copper, zinc, and cyanide at Outfall 0011 and for copper and cyanide at Outfall 0012. As a result, the Department is imposing the monthly average and daily maximum discharge limitations for Total Recoverable Copper of 23.0 µg/L and 34.6 µg/L for Outfall 0011, respectively, and 52.9 µg/L and 79.4 µg/L for Outfall 0012, respectively. The Department is imposing monthly average and daily maximum discharge limitations for Total Recoverable Zinc of 355 µg/L for Outfall 0011. The Department is imposing monthly average and daily maximum discharge limitations for Free Available Cyanide of 5.2 µg/L

and 22.0 µg/L for Outfall 0011, respectively, and 11.9 µg/L and 50.4 µg/L for Outfall 0012, respectively. The average discharge for Mercury reported by the Permittee was 0.0028 µg/L, which only slightly exceeded the Department's 20% threshold for RP determination (0.0024 µg/L) for Outfall 0011. In addition, the facility's Significant Industrial Discharger (SID) is not expected to contribute mercury from their discharge. Therefore, the Department is imposing annual monitoring for Total Recoverable Mercury to determine if RP truly exists if Outfall 0011 is utilized at any point during the calendar year.

For both Outfall 0011 and 0012, the monitoring frequency for DO, pH, TSS, NH<sub>3</sub>-N, TKN, TRC, E. coli and CBOD is thrice per month. The monitoring frequency for Total Recoverable Copper, Total Recoverable Zinc, Free Available Cyanide, N<sub>02</sub>+N<sub>03</sub>-N and TP is once per month. The monitoring frequency for Total Recoverable Mercury is once per year. TSS % Removal and CBOD % Removal are to be calculated once per month. Flow is to be continuously monitored daily. The flow rate of the Little Cahaba River, upstream of Outfall 0012, is to be monitored continuously, seven days per week.

Because this facility has SID-permitted industrial sources contributing wastewater and no previous toxicity data exists, this permit imposes quarterly monitoring (February, May, August, and November) for chronic toxicity with both Ceriodaphnia and Pimephales at the calculated In-Stream Waste Concentration (IWC) of 100 percent for Outfall 0011 and 44 percent for Outfall 0012 until four consecutive passed tests have occurred. Toxicity shall then be monitored annually in August if and when four consecutive passed tests have occurred. The monitoring frequency may be increased back to quarterly if toxicity is demonstrated in the future.

The Little Cahaba River is a Tier 1 stream and is not listed on the most recent 303(d) list. Note that the previous WLA and Permit incorrectly identified the Little Cahaba River as a Tier II stream. There are no TMDLs affecting this discharge.

ADEM Administrative Rule 335-6-10-.12 requires applicants for 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.

Prepared by: Dustin Stokes

## TOXICITY AND DISINFECTION RATIONALE

Facility Name:	Highway 411 WWTP	
NPDES Permit Number:	AL0055255	
Outfall	0011	
Receiving Stream:	Little Cahaba River	
Facility Design Flow (Q <sub>w</sub> ):	0.750 MGD	
Receiving Stream 7Q <sub>10</sub> :	0.000 cfs	
Receiving Stream 1Q <sub>10</sub> :	0.000 cfs	
Winter Headwater Flow (WHF):	0.00 cfs	
Summer Temperature for CCC:	28 deg. Celsius	
Winter Temperature for CCC:	18 deg. Celsius	
Headwater Background NH <sub>3</sub> -N Level:	0.01 mg/l	
Receiving Stream pH:	7.0 s.u.	
Headwater Background FC Level (summer):	N/A.	(Only applicable for facilities with diffusers.)
(winter)	N/A.	

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

$$\text{Stream Dilution Ratio (SDR)} = \frac{Q_w}{7Q_{10} + Q_w} = 100.00\%$$

### 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.

$$\begin{aligned} \text{Limiting Dilution} &= \frac{Q_w}{7Q_{10} + Q_w} \\ &= 100.00\% \quad \text{Effluent-Dominated, CCC Applies} \end{aligned}$$

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

	<u>CMC</u>	<u>CCC</u>
Allowable Summer Instream NH <sub>3</sub> -N:	36.09 mg/l	2.48 mg/l
Allowable Winter Instream NH <sub>3</sub> -N:	36.09 mg/l	4.72 mg/l

$$\begin{aligned} \text{Summer NH}_3\text{-N Toxicity Limit} &= \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (7Q_{10} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (7Q_{10})]}{Q_w} \\ &= 2.5 \text{ mg/l NH}_3\text{-N at 7Q}_{10} \end{aligned}$$

$$\begin{aligned} \text{Winter NH}_3\text{-N Toxicity Limit} &= \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (\text{WHF} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (\text{WHF})]}{Q_w} \\ &= 4.8 \text{ mg/l NH}_3\text{-N at Winter Flow} \end{aligned}$$

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

	<u>DO-based NH<sub>3</sub>-N limit</u>	<u>Toxicity-based NH<sub>3</sub>-N limit</u>
Summer	1.00 mg/l NH <sub>3</sub> -N	2.50 mg/l NH <sub>3</sub> -N
Winter	2.50 mg/l NH <sub>3</sub> -N	4.80 mg/l NH <sub>3</sub> -N

**Summer: The DO based limit of 1.00 mg/l NH<sub>3</sub>-N applies.**

**Winter: The DO based limit of 2.50 mg/l NH<sub>3</sub>-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.

**This is a minor facility with SID permit(s). Chronic toxicity testing is required.**

$$\text{Instream Waste Concentration (IWC)} = \frac{Q_w}{7Q_{10} + Q_w} = 100.00\% \quad \text{Note: This number will be rounded up for toxicity testing purposes.}$$

**DISINFECTION REQUIREMENTS**

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

See the attached Disinfection Guidance for applicable stream standards.

**(Non-coastal limits apply)**

Applicable Stream Classification: **Fish & Wildlife**

Disinfection Type: **Chlorination**

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

	Stream Standard (colonies/100ml)	Effluent Limit (colonies/100ml)
<b><u>E. Coli (applies to Non-coastal and Shellfish Harvesting Coastal)</u></b>		
Monthly limit as monthly average (October through May):	548	<b>548</b>
Monthly limit as monthly average (June through September):	126	<b>126</b>
Daily Max (October through May):	2507	<b>2507</b>
Daily Max (June through September):	487	<b>487</b>
<b><u>Enterococci (applies to Coastal)</u></b>		
Monthly limit as geometric mean (October through May):	Not applicable	<b>Not applicable</b>
Monthly limit as geometric mean (June through September):	Not applicable	<b>Not applicable</b>
Daily Max (October through May):	Not applicable	<b>Not applicable</b>
Daily Max (June through September):	Not applicable	<b>Not applicable</b>

**MAXIMUM ALLOWABLE CHLORINATION LIMITS**

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

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

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

Dustin Stokes

Date:

2/4/2016

## TOXICITY AND DISINFECTION RATIONALE

Facility Name:	<b>Highway 411 WWTP</b>	
NPDES Permit Number:	<b>AL0055255</b>	
Outfall	<b>0012</b>	
Receiving Stream:	<b>Little Cahaba River</b>	
Facility Design Flow (Q <sub>w</sub> ):	<b>0.750 MGD</b>	
Receiving Stream 7Q <sub>10</sub> :	<b>1.500 cfs</b>	
Receiving Stream 1Q <sub>10</sub> :	<b>1.500 cfs</b>	
Winter Headwater Flow (WHF):	<b>1.50 cfs</b>	
Summer Temperature for CCC:	<b>28 deg. Celsius</b>	
Winter Temperature for CCC:	<b>18 deg. Celsius</b>	
Headwater Background NH <sub>3</sub> -N Level:	<b>0.01 mg/l</b>	
Receiving Stream pH:	<b>7.0 s.u.</b>	
Headwater Background FC Level (summer):	<b>N./A.</b>	<b>(Only applicable for facilities with diffusers.)</b>
(winter)	<b>N./A.</b>	

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

$$\text{Stream Dilution Ratio (SDR)} = \frac{Q_w}{7Q_{10} + Q_w} = 43.62\%$$

### 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.

$$\begin{aligned} \text{Limiting Dilution} &= \frac{Q_w}{7Q_{10} + Q_w} \\ &= 43.62\% \qquad \qquad \qquad \text{Effluent-Dominated, CCC Applies} \end{aligned}$$

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

	<u>CMC</u>	<u>CCC</u>
Allowable Summer Instream NH <sub>3</sub> -N:	<b>36.09 mg/l</b>	<b>2.48 mg/l</b>
Allowable Winter Instream NH <sub>3</sub> -N:	<b>36.09 mg/l</b>	<b>4.72 mg/l</b>

$$\begin{aligned} \text{Summer NH}_3\text{-N Toxicity Limit} &= \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (7Q_{10} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (7Q_{10})]}{Q_w} \\ &= 5.7 \text{ mg/l NH}_3\text{-N at 7Q}_{10} \end{aligned}$$

$$\begin{aligned} \text{Winter NH}_3\text{-N Toxicity Limit} &= \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (\text{WHF} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (\text{WHF})]}{Q_w} \\ &= 10.9 \text{ mg/l NH}_3\text{-N at Winter Flow} \end{aligned}$$

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

	<u>DO-based NH<sub>3</sub>-N limit</u>	<u>Toxicity-based NH<sub>3</sub>-N limit</u>
Summer	<b>1.00 mg/l NH<sub>3</sub>-N</b>	<b>5.70 mg/l NH<sub>3</sub>-N</b>
Winter	<b>2.50 mg/l NH<sub>3</sub>-N</b>	<b>10.90 mg/l NH<sub>3</sub>-N</b>

**Summer: The DO based limit of 1.00 mg/l NH<sub>3</sub>-N applies.**

**Winter: The DO based limit of 2.50 mg/l NH<sub>3</sub>-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.

**This is a minor facility with SID permit(s). Chronic toxicity testing is required.**

Instream Waste Concentration (IWC) =  $\frac{Q_w}{7Q_{10} + Q_w}$  = **43.62%** Note: This number will be rounded up for toxicity testing purposes.

**DISINFECTION REQUIREMENTS**

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

See the attached Disinfection Guidance for applicable stream standards.

(Non-coastal limits apply)  
 Applicable Stream Classification: **Fish & Wildlife**  
 Disinfection Type: **Chlorination**  
 Limit calculation method: **Limits based on meeting stream standards at the point of discharge.**

	Stream Standard (colonies/100ml)	Effluent Limit (colonies/100ml)
<b><u>E. Coli (applies to Non-coastal and Shellfish Harvesting Coastal)</u></b>		
Monthly limit as monthly average (October through May):	548	<b>548</b>
Monthly limit as monthly aveage (June through September):	126	<b>126</b>
Daily Max (October through May):	2507	<b>2507</b>
Daily Max (June through September):	487	<b>487</b>
<b><u>Enterococci (applies to Coastal)</u></b>		
Monthly limit as geometric mean (October through May):	Not applicable	<b>Not applicable</b>
Monthly limit as geometric mean (June through September):	Not applicable	<b>Not applicable</b>
Daily Max (October through May):	Not applicable	<b>Not applicable</b>
Daily Max (June through September):	Not applicable	<b>Not applicable</b>

**MAXIMUM ALLOWABLE CHLORINATION LIMITS**

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

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

Maximum allowable TRC in effluent: 0.025 mg/l (chronic) (0.011)/(SDR)  
 Maximum allowable TRC in effluent: 0.044 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: Dustin Stokes Date: 2/4/2016

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$							Enter Max Daily Discharge as reported by Applicant (C <sub>dmax</sub> )	Enter Avg Daily Discharge as reported by Applicant (C <sub>davg</sub> )	Partition Coefficient (Stream / Lake)
ID	Pollutant	Carcinogen "Yes"	Type	Background from upstream source (C <sub>d1</sub> ) Daily Max	Background from upstream source (C <sub>d2</sub> ) Monthly Ave	Background Instream (C <sub>s</sub> ) Daily Max			
1	Antimony		Metals	0	0	0	0	0	0
2	Arsenic**	YES	Metals	0	0	0	0	0	0.574
3	Beryllium		Metals	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	-
7	Copper**		Metals	0	0	0	0	38	0.388
8	Lead**		Metals	0	0	0	0	8	0.206
9	Mercury**		Metals	0	0	0	0	0.0061	0.0028
10	Nickel**		Metals	0	0	0	0	0	0.505
11	Selenium		Metals	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	134	0.330
15	Cyanide		Metals	0	0	0	0	21	16
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0
17	Hardness (As CaCO3)		Metals	0	0	0	0	133000	126000
18	Acrolein		VOC	0	0	0	0	0	-
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	-
20	Aldrin	YES	VOC	0	0	0	0	0	-
21	Benzene*	YES	VOC	0	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	-
24	Chloroform	YES	VOC	0	0	0	0	0	-
25	Chlorobenzene		VOC	0	0	0	0	0	-
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	-
29	Chloroform*	YES	VOC	0	0	0	0	8	6
30	4,4'-DDD	YES	VOC	0	0	0	0	0	-
31	4,4'-DDE	YES	VOC	0	0	0	0	0	-
32	4,4'-DDT	YES	VOC	0	0	0	0	0	-
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	-
34	1,1-Dichloroethane		VOC	0	0	0	0	0	-
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	0	-
36	Trans-1,2-Dichloro-Ethylene	YES	VOC	0	0	0	0	0	-
37	1,1-Dichloroethylene*	YES	VOC	0	0	0	0	0	-
38	1,2-Dichloropropane		VOC	0	0	0	0	0	-
39	1,3-Dichloro-Propylene		VOC	0	0	0	0	0	-
40	Dieldrin	YES	VOC	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	-
44	Methylene Chloride*	YES	VOC	0	0	0	0	0	-
45	1,1,2,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	-
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	-
48	Toxaphene	YES	VOC	0	0	0	0	0	-
49	Tributyltine (TBT)	YES	VOC	0	0	0	0	0	-
50	1,1,1-Trichloroethane		VOC	0	0	0	0	0	-
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	-
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	-
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	-
54	p-Chloro-m-Cresol		Acids	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	-
56	2,4-Dichlorophenol		Acids	0	0	0	0	0	-
57	2,4-Dimethylphenol		Acids	0	0	0	0	0	-
58	4,6-Dinitro-O-Cresol		Acids	0	0	0	0	0	-
59	2,4-Dinitrophenol		Acids	0	0	0	0	0	-
60	4,6-Dinitro-2-methylphenol		Acids	0	0	0	0	0	-
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	-
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	-
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	-
70	Benzo(a)anthracene*	YES	Bases	0	0	0	0	0	-
71	Benzo(a)anthracene*	YES	Bases	0	0	0	0	0	-
72	Benzo(a)pyrene*	YES	Bases	0	0	0	0	0	-
73	3,4-Benzo-Fluoranthene		Bases	0	0	0	0	0	-
74	Benzo(k)fluoranthene		Bases	0	0	0	0	0	-
75	Benzo(k)fluoranthene		Bases	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	-
77	Bis (2-Chloroethyl) Ether*	YES	Bases	0	0	0	0	0	-
78	Bis (2-Chloro-Propyl) Ether		Bases	0	0	0	0	0	-
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	-
84	Chrysene*	YES	Bases	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	-
87	Dibenz(a,h)anthracene*	YES	Bases	0	0	0	0	0	-
88	1,2-Dichlorobenzene		Bases	0	0	0	0	0	-
89	1,3-Dichlorobenzene		Bases	0	0	0	0	0	-
90	1,4-Dichlorobenzene		Bases	0	0	0	0	0	-
91	3,3-Dichlorobenzene*	YES	Bases	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	-
94	2,4-Dinitrotoluene*	YES	Bases	0	0	0	0	0	-
95	2,6-Dinitrotoluene*	YES	Bases	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	-
97	Endosulfan (alpha)	YES	Bases	0	0	0	0	0	-
98	Endosulfan (beta)	YES	Bases	0	0	0	0	0	-
99	Endosulfan sulfate	YES	Bases	0	0	0	0	0	-
100	Endrin	YES	Bases	0	0	0	0	0	-
101	Endrin Aldehyde	YES	Bases	0	0	0	0	0	-
102	Fluorene		Bases	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	-
104	Heptachlor	YES	Bases	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	-
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	-
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	-
108	Hexachlorocyclohexan (alpha)	YES	Bases	0	0	0	0	0	-
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	0	-
110	Hexachlorocyclohexan (gamma)	YES	Bases	0	0	0	0	0	-
111	Hexachlorodipentadecene		Bases	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	-
113	Indeno(1,2,3-CK)Pyrene*	YES	Bases	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	-
117	N-Nitrosodi-N-Propylamine*	YES	Bases	0	0	0	0	0	-
118	N-Nitrosodi-N-Methylamine*	YES	Bases	0	0	0	0	0	-
119	N-Nitrosodi-N-Phenylamine*	YES	Bases	0	0	0	0	0	-
120	PCB-1016	YES	Bases	0	0	0	0	0	-
121	PCB-1221	YES	Bases	0	0	0	0	0	-
122	PCB-1232	YES	Bases	0	0	0	0	0	-
123	PCB-1242	YES	Bases	0	0	0	0	0	-
124	PCB-1248	YES	Bases	0	0	0	0	0	-
125	PCB-1254	YES	Bases	0	0	0	0	0	-
126	PCB-1260	YES	Bases	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	-
129	1,2,4-Trichlorobenzene		Bases	0	0	0	0	0	-

0.75	Enter Q <sub>d</sub> = wastewater discharge flow from facility (MGD)
1.160422	Q <sub>d</sub> = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter or estimated, Q <sub>d2</sub> = background stream flow from upstream source (cfs)
0	Enter 7Q10, Q <sub>s</sub> = background stream flow in cfs above point of discharge
0	Enter or estimated, 1Q10, Q <sub>s</sub> = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0	Enter flow from upstream discharge Q <sub>d2</sub> = background stream flow in MGD above point of discharge
9.93	Enter Mean Annual Flow, Q <sub>s</sub> = background stream flow in cfs above point of discharge
1.5	Enter 7Q2, Q <sub>s</sub> = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C <sub>s</sub> = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q <sub>d</sub> + Q <sub>d2</sub> + Q <sub>s</sub>	Q <sub>r</sub> = resultant in-stream flow, after discharge
Calculated	C <sub>r</sub> = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100	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

February 4, 2018  
Modified: 6/4/09

Freshwater: F&W classification:				Max Daily Discharge as reported by Applicant (C <sub>max</sub> )	Freshwater Acute (µg/l) Q <sub>1</sub> = Q10				Avg Daily Discharge as reported by Applicant (C <sub>avg</sub> )	Freshwater Chronic (µg/l) Q <sub>1</sub> = 7Q10				Human Health Consumption Fish only (µg/l)			
ID	Pollutant	RPT	Carcinogen yes		Background from upstream source (C <sub>D2</sub> ) Daily Max	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>Dmax</sub> )	20% of Draft Permit Limit		RPT	Background from upstream source (C <sub>D2</sub> ) Monthly Ave	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>Dmax</sub> )	20% of Draft Permit Limit	RPT	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>Dmax</sub> )
1	Antimony			0	0				0					3.73E+02	3.73E+02	4.74E+01	No
2	Arsenic		YES	0	592.334	592.334	118.467	No	0	261.324	261.324	52.265	No	3.03E-01	2.90E+00	5.79E-01	No
3	Beryllium			0					0								
4	Cadmium			0	8.533	8.533	1.707	No	0	1.042	1.042	0.208	No				
5	Chromium Chromium III			0	2713.159	2713.159	542.632	No	0	352.928	352.928	70.585	No				
6	Chromium Chromium VI			0	18.000	18.000	3.200	No	0	11.000	11.000	2.200	No				
7	Copper	YES		38	34.837	34.837	6.927	Yes	25	23.082	23.082	4.616	Yes	1.30E+03	1.30E+03	2.60E+02	No
8	Lead			0	313.502	313.502	62.700	No	0	12.217	12.217	2.443	No				
9	Mercury	YES		0.0061	2.400	2.400	0.480	No	0.0028	0.012	0.012	0.0024	Yes	4.24E-02	4.24E-02	8.48E-03	No
10	Nickel			0	927.200	927.200	185.440	No	0	102.983	102.983	20.597	No	9.93E+02	9.93E+02	1.98E+02	No
11	Selenium			0	20.000	20.000	4.000	No	0	5.000	5.000	1.000	No	2.43E+03	2.43E+03	4.86E+02	No
12	Silver			0	3.217	3.217	0.643	No	0								
13	Thallium			0					0					2.74E-01	2.74E-01	5.47E-02	No
14	Zinc	YES		134	359.092	359.092	71.818	Yes	110	357.997	357.997	71.599	Yes	1.49E+04	1.49E+04	2.98E+03	No
15	Cyanide	YES		21	22.000	22.000	4.400	Yes	18	5.200	5.200	1.040	Yes	9.33E+03	9.33E+03	1.87E+03	No
16	Total Phenolic Compounds			0					0								
17	Hardness (As CaCO3)			133000					126000								
18	Acrolein			0					0					5.43E+00	5.43E+00	1.09E+00	No
19	Acrylonitrile	YES		0					0					1.44E-01	1.38E+00	2.75E-01	No
20	Aldrin	YES		0	3.000	3.000	0.600	No	0	1.300	1.300	0.260	No	2.94E-05	2.81E-04	5.62E-05	No
21	Benzene	YES		0					0					1.55E+01	1.48E+02	2.95E+01	No
22	Bromoform	YES		0					0					7.88E+01	7.53E+02	1.51E+02	No
23	Carbon Tetrachloride	YES		0					0					9.57E-01	9.15E+00	1.83E+00	No
24	Chlordane	YES		0	2.400	2.400	0.480	No	0	0.004	0.004	0.001	No	4.73E-04	4.52E-03	9.04E-04	No
25	Chlorobenzene			0					0					9.06E+02	9.06E+02	1.81E+02	No
26	Chlorodibromo-Methane	YES		0					0					7.41E+00	7.06E+01	1.42E+01	No
27	Chloroethane			0					0								
28	2-Chloro-Ethyl Vinyl Ether			0					0								
29	Chloroform	YES		8					8					1.02E+02	9.75E+02	1.95E+02	No
30	4,4'-DDD	YES		0					0					1.81E-04	1.73E-03	3.47E-04	No
31	4,4'-DDE	YES		0					0					1.28E-04	1.22E-03	2.45E-04	No
32	4,4'-DDT	YES		0					0					1.28E-04	1.22E-03	2.45E-04	No
33	Dichlorobromo-Methane	YES		0					0					1.00E+01	9.58E+01	1.92E+01	No
34	1,1-Dichloroethane			0					0								
35	1,2-Dichloroethane	YES		0					0					2.14E+01	2.04E+02	4.08E+01	No
36	Trans-1,2-Dichloro-Ethylene			0					0					5.81E+03	5.81E+03	1.16E+03	No
37	1,1-Dichloroethylene	YES		0					0					4.17E+03	3.98E+04	7.96E+03	No
38	1,2-Dichloropropene			0					0					8.49E+00	8.49E+00	1.70E+00	No
39	1,3-Dichloro-Propylene			0					0					1.23E+01	1.23E+01	2.46E+00	No
40	Dieldrin	YES		0	0.240	0.240	0.048	No	0	0.058	0.056	0.011	No	3.12E-05	2.98E-04	5.97E-05	No
41	Ethylbenzene			0					0					1.24E+03	1.24E+03	2.48E+02	No
42	Methyl Bromide			0					0					8.71E+02	8.71E+02	1.74E+02	No
43	Methyl Chloride			0					0								
44	Methylene Chloride	YES		0					0					3.46E+02	3.30E+03	6.61E+02	No
45	1,1,1,2-Tetrachloro-Ethane	YES		0					0					2.33E+00	2.23E+01	4.46E+00	No
46	Tetrachloro-Ethylene	YES		0					0					1.82E+00	1.83E+01	3.66E+00	No
47	Toluene			0					0					8.72E+03	8.72E+03	1.74E+03	No
48	Toxaphene	YES		0	0.730	0.730	0.146	No	0	0.0002	0.000	0.000	No	1.82E-04	1.55E-03	3.10E-04	No
49	Trabuthin (TBT)	YES		0	0.480	0.480	0.096	No	0	0.072	0.072	0.014	No				
50	1,1,1-Trichloroethane			0					0								
51	1,1,2-Trichloroethane	YES		0					0					9.10E+00	8.88E+01	1.74E+01	No
52	Trichloroethylene	YES		0					0					1.75E+01	1.67E+02	3.34E+01	No
53	Vinyl Chloride	YES		0					0					1.42E+00	1.36E+01	2.72E+00	No
54	p-Chloro-m-Cresol			0					0								
55	2-Chlorophenol			0					0					8.71E+01	8.71E+01	1.74E+01	No
56	2,4-Dichlorophenol			0					0					1.72E+02	1.72E+02	3.44E+01	No
57	4-Dimethylphenol			0					0					4.98E+02	4.98E+02	9.95E+01	No
58	4,6-Dinitro-O-Cresol			0					0								
59	2,4-Dinitrophenol			0					0								
60	4,6-Dinitro-2-methylphenol	YES		0					0					3.11E+03	3.11E+03	6.22E+02	No
61	Dioxin (2,3,7,8-TCDD)	YES		0					0					1.65E+02	1.58E+03	3.16E+02	No
62	2-Nitrophenol			0					0					2.67E-08	2.55E-07	5.10E-08	No
63	4-Nitrophenol			0					0								
64	Pentachlorophenol	YES		0	8.723	8.723	1.745	No	0	6.693	6.693	1.339	No	1.77E+00	1.68E+01	3.38E+00	No
65	Phenol			0					0					5.00E+05	5.00E+05	1.00E+05	No
66	2,4,6-Trichlorophenol	YES		0					0					1.41E+00	1.35E+01	2.70E+00	No
67	Acenaphthene			0					0					5.79E+02	5.79E+02	1.15E+02	No
68	Acenaphthylene			0					0								
69	Anthracene			0					0					2.33E+04	2.33E+04	4.67E+03	No
70	Benidine			0					0					1.18E-04	1.16E-04	2.32E-05	No
71	Benzo(A)Anthracene	YES		0					0					1.07E-02	1.02E-01	2.04E-02	No
72	Benzo(A)Pyrene	YES		0					0					1.07E-02	1.02E-01	2.04E-02	No
73	3,4-Benzo-Fluoranthene			0					0					1.07E-02	1.02E-01	2.04E-02	No
74	Benzo(Ch)Pyrene			0					0								
75	Benzo(K)Fluoranthene			0					0					1.07E-02	1.02E-01	2.04E-02	No
76	Bis (2-Chloroethoxy) Methane			0					0								
77	Bis (2-Chloroethyl) Ether	YES		0					0					3.07E-01	2.94E+00	5.88E-01	No
78	Bis (2-Chloro-Propyl) Ether			0					0					3.78E+04	3.78E+04	7.56E+03	No
79	Bis (2-Ethylhexyl) Phthalate	YES		0					0					1.28E+00	1.23E+01	2.45E+00	No
80	4-Bromophenyl Phenyl Ether			0					0								
81	Butyl Benzyl Phthalate			0					0								
82	2-Chloroaniline			0					0					1.13E+03	1.13E+03	2.25E+02	No
83	4-Chlorophenyl Phenyl Ether			0					0					9.24E+02	9.24E+02	1.85E+02	No
84	Chrysene	YES		0					0					1.07E-02	1.02E-01	2.04E-02	No
85																	

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$						Enter Max Daily Discharge as reported by Applicant (C <sub>dmax</sub> )	Enter Avg Daily Discharge as reported by Applicant (C <sub>davg</sub> )	Partition Coefficient (Stream / Lake)
ID	Pollutant	Carcinogen "Yes"	Type	Background from upstream source (C <sub>d2</sub> ) Daily Max	Background from upstream source (C <sub>d2</sub> ) Monthly Avg			
				µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	-
2	Arsenic**	YES	Metals	0	0	0	0	0.574
3	Beryllium		Metals	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	-
7	Copper**		Metals	0	0	0	38	0.388
8	Lead**		Metals	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0.0061	0.0028
10	Nickel**		Metals	0	0	0	0	0.505
11	Selenium		Metals	0	0	0	0	-
12	Silver		Metals	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	-
14	Zinc**		Metals	0	0	0	134	110
15	Chloride		Metals	0	0	0	21	16
16	Total Phenolic Compounds		Metals	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	133000	126000
18	Acrolein		VOC	0	0	0	0	-
19	Acrylonitrile*	YES	VOC	0	0	0	0	-
20	Aldrin	YES	VOC	0	0	0	0	-
21	Benzene*	YES	VOC	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	-
24	Chloroethane	YES	VOC	0	0	0	0	-
25	Chlorobenzene	YES	VOC	0	0	0	0	-
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	-
27	Chloroethane	YES	VOC	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether	YES	VOC	0	0	0	0	-
29	Chloroform*	YES	VOC	0	0	0	0	-
30	4,4'-DDO	YES	VOC	0	0	0	0	-
31	4,4'-DDE	YES	VOC	0	0	0	0	-
32	4,4'-DDT	YES	VOC	0	0	0	0	-
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	-
34	1,1-Dichloroethane	YES	VOC	0	0	0	0	-
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	-
36	Trans-1,2-Dichloro-Ethylene	YES	VOC	0	0	0	0	-
37	1,1-Dichloroethylene*	YES	VOC	0	0	0	0	-
38	1,2-Dichloropropane	YES	VOC	0	0	0	0	-
39	1,3-Dichloro-Propylene	YES	VOC	0	0	0	0	-
40	Dieldrin	YES	VOC	0	0	0	0	-
41	Ethylbenzene	YES	VOC	0	0	0	0	-
42	Methyl Bromide	YES	VOC	0	0	0	0	-
43	Methyl Chloride	YES	VOC	0	0	0	0	-
44	Methylene Chloride*	YES	VOC	0	0	0	0	-
45	1,1,1,2,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	-
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	-
47	Toluene	YES	VOC	0	0	0	0	-
48	Toxaphene	YES	VOC	0	0	0	0	-
49	Tributyltine (TBT)	YES	VOC	0	0	0	0	-
50	1,1,1-Trichloroethane	YES	VOC	0	0	0	0	-
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	-
52	Trichloroethylene*	YES	VOC	0	0	0	0	-
53	Vinyl Chloride*	YES	VOC	0	0	0	0	-
54	p-Chloro-m-Cresol	YES	Acids	0	0	0	0	-
55	2-Chlorophenol	YES	Acids	0	0	0	0	-
56	2,4-Dichlorophenol	YES	Acids	0	0	0	0	-
57	2,4-Dimethylphenol	YES	Acids	0	0	0	0	-
58	4-Dinitro-p-Cresol	YES	Acids	0	0	0	0	-
59	4-Nitrophenol	YES	Acids	0	0	0	0	-
60	4,6-Dinitro-2-methylphenol	YES	Acids	0	0	0	0	-
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	-
62	2-Nitrophenol	YES	Acids	0	0	0	0	-
63	4-Nitrophenol	YES	Acids	0	0	0	0	-
64	Pentachlorophenol*	YES	Acids	0	0	0	0	-
65	Phenol	YES	Acids	0	0	0	0	-
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	-
67	Acenaphthene	YES	Bases	0	0	0	0	-
68	Acenaphthylene	YES	Bases	0	0	0	0	-
69	Anthracene	YES	Bases	0	0	0	0	-
70	Benzo(a)Anthracene*	YES	Bases	0	0	0	0	-
71	Benzo(a)Anthracene*	YES	Bases	0	0	0	0	-
72	Benzo(a)Pyrene*	YES	Bases	0	0	0	0	-
73	3,4-Benzo-Fluoranthene	YES	Bases	0	0	0	0	-
74	Benzo(GH)Perylene	YES	Bases	0	0	0	0	-
75	Benzo(K)Fluoranthene	YES	Bases	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane	YES	Bases	0	0	0	0	-
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	-
78	Bis (2-Chloro-Propyl) Ether	YES	Bases	0	0	0	0	-
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether	YES	Bases	0	0	0	0	-
81	Butyl Benzyl Phthalate	YES	Bases	0	0	0	0	-
82	2-Chloronaphthalene	YES	Bases	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether	YES	Bases	0	0	0	0	-
84	Chrysene*	YES	Bases	0	0	0	0	-
85	Di-N-Butyl Phthalate	YES	Bases	0	0	0	0	-
86	Di-N-Octyl Phthalate	YES	Bases	0	0	0	0	-
87	Dibenz(a,h)Anthracene*	YES	Bases	0	0	0	0	-
88	1,2-Dichlorobenzene	YES	Bases	0	0	0	0	-
89	1,3-Dichlorobenzene	YES	Bases	0	0	0	0	-
90	1,4-Dichlorobenzene	YES	Bases	0	0	0	0	-
91	3,3-Dichlorobenzene*	YES	Bases	0	0	0	0	-
92	Diethyl Phthalate	YES	Bases	0	0	0	0	-
93	Dimethyl Phthalate	YES	Bases	0	0	0	0	-
94	2,4-Dinitrotoluene*	YES	Bases	0	0	0	0	-
95	2,6-Dinitrotoluene	YES	Bases	0	0	0	0	-
96	1,2-Diphenylhydrazine	YES	Bases	0	0	0	0	-
97	Endosulfan (alpha)	YES	Bases	0	0	0	0	-
98	Endosulfan (beta)	YES	Bases	0	0	0	0	-
99	Endosulfan sulfate	YES	Bases	0	0	0	0	-
100	Endrin	YES	Bases	0	0	0	0	-
101	Endrin Aldehyde	YES	Bases	0	0	0	0	-
102	Fluoranthene	YES	Bases	0	0	0	0	-
103	Fluorene	YES	Bases	0	0	0	0	-
104	Heptachlor	YES	Bases	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	-
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	-
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	-
108	Hexachlorocyclohexan (alpha)	YES	Bases	0	0	0	0	-
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	-
110	Hexachlorocyclohexan (gamma)	YES	Bases	0	0	0	0	-
111	Hexachlorodipentadiene	YES	Bases	0	0	0	0	-
112	Hexachloroethane	YES	Bases	0	0	0	0	-
113	Indeno(1,2,3-CK)Pyrene*	YES	Bases	0	0	0	0	-
114	Isophorone	YES	Bases	0	0	0	0	-
115	Naphthalene	YES	Bases	0	0	0	0	-
116	Nitrobenzene	YES	Bases	0	0	0	0	-
117	N-Nitrosodi-N-Propylamine*	YES	Bases	0	0	0	0	-
118	N-Nitrosodi-N-Methylamine*	YES	Bases	0	0	0	0	-
119	N-Nitrosodi-N-Phenylamine*	YES	Bases	0	0	0	0	-
120	PCB-1016	YES	Bases	0	0	0	0	-
121	PCB-1221	YES	Bases	0	0	0	0	-
122	PCB-1232	YES	Bases	0	0	0	0	-
123	PCB-1242	YES	Bases	0	0	0	0	-
124	PCB-1248	YES	Bases	0	0	0	0	-
125	PCB-1254	YES	Bases	0	0	0	0	-
126	PCB-1260	YES	Bases	0	0	0	0	-
127	Phenanthrene	YES	Bases	0	0	0	0	-
128	Pyrene	YES	Bases	0	0	0	0	-
129	1,2,4-Trichlorobenzene	YES	Bases	0	0	0	0	-

0.75	Enter Q <sub>d</sub> = wastewater discharge flow from facility (MGD)
1.160422	Q <sub>w</sub> = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter or estimated, Q <sub>d2</sub> = background stream flow from upstream source (cfs)
1.5	Enter TQ10, Q <sub>s</sub> = background stream flow in cfs above point of discharge
1.5	Enter or estimated, 1Q10, Q <sub>s</sub> = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of TQ10)
0.807	Enter flow from upstream discharge Q <sub>d2</sub> = background stream flow in MGD above point of discharge
9.93	Enter Mean Annual Flow, Q <sub>s</sub> = background stream flow in cfs above point of discharge
1.5	Enter TQ2, Q <sub>s</sub> = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C <sub>s</sub> = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q <sub>d</sub> + Q <sub>d2</sub> + Q <sub>s</sub>	Q <sub>r</sub> = resultant in-stream flow, after discharge
Calculated on other	C <sub>r</sub> = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100	Enter: Background hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 & 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

February 4, 2018  
Modified: 8/4/09

Freshwater F&W classification:				Max Daily Discharge as reported by Applicant (C <sub>max</sub> )	Freshwater Acute (µg/l) C <sub>a</sub> = 1Q10				Avg Daily Discharge as reported by Applicant (C <sub>avg</sub> )	Freshwater Chronic (µg/l) C <sub>c</sub> = 7Q10				Human Health Consumption Flash only (µg/l) Carcinogen C <sub>c</sub> = Annual Average Non-Carcinogen C <sub>c</sub> = 7Q10				
ID	Pollutant	RP?	Carcinogen yes		Background from upstream source (C <sub>D2</sub> ) Daily Max	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit		RP?	Background from upstream source (C <sub>D2</sub> ) Monthly Ave	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit	RP?	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit
1	Antimony			0	0				0					3.73E+02	8.58E+02	1.71E+02	No	
2	Arsenic		YES	0	562.334	1358.006	271.601	No	0	261.324	599.120	119.824	No	3.03E+01	2.90E+00	5.79E+01	No	
3	Beryllium			0	0				0	0								
4	Cadmium			0	8.533	19.562	3.912	No	0	1.042	2.390	0.478	No					
5	Chromium/ Chromium III			0	2713.159	8220.280	1244.058	No	0	352.926	906.131	161.826	No					
6	Chromium/ Chromium VI			0	16.000	36.662	7.336	No	0	11.000	25.219	5.044	No					
7	Copper	YES		0	34.837	78.410	15.682	Yes	0	23.062	52.918	10.584	Yes	1.30E+03	2.98E+03	5.96E+02	No	
8	Lead			0	313.502	718.745	143.749	No	0	12.217	28.008	5.602	No					
9	Mercury			0.0081	2.400	5.502	1.100	No	0.0028	0.012	0.028	0.0056	No	4.24E-02	6.73E-02	1.95E-02	No	
10	Nickel			0	927.200	2125.720	425.146	No	0	102.983	236.103	47.221	No	9.93E+02	2.28E+03	4.55E+02	No	
11	Selenium			0	20.000	45.853	9.171	No	0	5.000	11.463	2.293	No	2.43E+03	5.57E+03	1.11E+03	No	
12	Silver			0	3.217	7.375	1.475	No	0									
13	Thallium			0	0				0					2.74E-01	8.27E-01	1.25E-01	No	
14	Zinc			0	134	358.092	814.096	162.819	No	0	357.987	620.756	164.151	No	1.49E+04	3.41E+04	6.83E+03	No
15	Cyanide	YES		0	21	22.000	50.438	10.088	Yes	0	5.200	11.922	2.384	Yes	9.33E+03	2.14E+04	4.28E+03	No
16	Total Phenolic Compounds			0	0				0									
17	Hardness (As CaCO3)			0	133000				128000									
18	Acrolein			0					0					5.43E+00	1.24E+01	2.49E+00	No	
19	Acrylonitrile	YES		0					0					1.44E-01	1.38E+00	2.75E-01	No	
20	Alliin	YES		0	3.000	6.878	1.378	No	0	1.300	2.950	0.598	No	2.94E-05	2.81E-04	5.62E-05	No	
21	Benzene	YES		0					0					1.55E+01	1.48E+02	2.96E+01	No	
22	Bromoforn	YES		0					0					7.86E+01	7.52E+02	1.51E+02	No	
23	Carbon Tetrachloride	YES		0					0					9.57E-01	9.15E+00	1.83E+00	No	
24	Chlordane	YES		0	2.400	5.502	1.100	No	0	0.004	0.010	0.002	No	4.73E-04	4.52E-03	9.04E-04	No	
25	Chlorobenzene			0					0					9.06E+02	2.08E+03	4.15E+02	No	
26	Chlorodibromo-Methane	YES		0					0					7.41E+00	7.08E+01	1.42E+01	No	
27	Chloroethane			0					0									
28	2-Chloro-Ethylvinyl Ether			0					0									
29	Chloroform	YES		0					8					1.02E+02	9.76E+02	1.95E+02	No	
30	4,4'- DDD	YES		0					0					1.81E-04	1.73E-03	3.47E-04	No	
31	4,4'- DDE	YES		0					0					1.28E-04	1.22E-03	2.45E-04	No	
32	4,4'- DDT	YES		0					0					1.28E-04	1.22E-03	2.45E-04	No	
33	Dichlorobromo-Methane	YES		0					0					1.00E+01	9.59E+01	1.92E+01	No	
34	1, 1-Dichloroethane			0					0									
35	1, 2-Dichloroethane	YES		0					0					2.14E+01	2.04E+02	4.08E+01	No	
36	Trans-1, 2-Dichloro-Ethylene			0					0					5.91E+03	1.35E+04	2.71E+03	No	
37	1, 1-Dichloroethylene	YES		0					0					4.17E+03	3.96E+04	7.98E+03	No	
38	1, 3-Dichloropropane			0					0					8.49E+00	1.95E+01	3.98E+00	No	
39	1, 3-Dichloro-Propylene			0					0					1.23E+01	1.82E+01	3.63E+00	No	
40	Dieldrin	YES		0	0.240	0.550	0.110	No	0	0.058	0.128	0.026	No	3.12E-05	2.98E-04	5.97E-05	No	
41	Ethylbenzene			0					0					1.24E+03	2.85E+03	5.71E+02	No	
42	Methyl Bromide			0					0					8.71E+02	2.00E+03	3.98E+02	No	
43	Methyl Chloride			0					0									
44	Methylene Chloride	YES		0					0					3.48E+02	3.30E+03	6.61E+02	No	
45	1, 1, 2, 2-Tetrachloro-Ethane	YES		0					0					2.33E+00	2.23E+01	4.46E+00	No	
46	Tetrachloro-Ethylene	YES		0					0					1.92E+00	1.83E+01	3.66E+00	No	
47	Toluene			0					0					8.72E+03	2.00E+04	4.00E+03	No	
48	Toxaphene	YES		0	0.730	1.874	0.335	No	0	0.0002	0.000	0.000	No	1.62E-04	1.55E-03	3.10E-04	No	
49	Tributyltin (TBT)	YES		0	0.460	1.055	0.211	No	0	0.072	0.165	0.033	No					
50	1, 1, 1-Trichloroethane			0					0									
51	1, 1, 2-Trichloroethane	YES		0					0					9.10E+00	8.69E+01	1.74E+01	No	
52	Trichloroethylene	YES		0					0					1.75E+01	1.67E+02	3.34E+01	No	
53	Vinyl Chloride	YES		0					0					1.42E+00	1.36E+01	2.72E+00	No	
54	p-Chloro-m-Cresol			0					0									
55	2-Chlorophenol			0					0					8.71E+01	2.00E+02	3.99E+01	No	
56	2, 4-Dichlorophenol			0					0					1.72E+02	3.94E+02	7.89E+01	No	
57	2, 4-Dimethylphenol			0					0					4.98E+02	1.14E+03	2.28E+02	No	
58	4, 6-Dinitro-O-Cresol			0					0									
59	2, 4-Dinitrophenol			0					0									
60	4, 6-Dinitro-2-methylphenol			0					0					3.11E+03	7.13E+03	1.43E+03	No	
61	Dioxin (2, 3, 7, 8-TCDD)	YES		0					0					1.65E+02	1.58E+03	3.16E+02	No	
62	2-Nitrophenol			0					0					2.87E-08	2.55E-07	5.10E-08	No	
63	4-Nitrophenol			0					0									
64	Pentachlorophenol	YES		0	8.723	19.999	4.000	No	0	6.693	15.344	3.069	No	1.77E+00	1.69E+01	3.38E+00	No	
65	Phenol			0					0					5.00E+05	1.15E+06	2.29E+05	No	
66	2, 4, 6-Trichlorophenol	YES		0					0					1.41E+00	1.35E+01	2.70E+00	No	
67	Acenaphthene			0					0					5.79E+02	1.33E+03	2.65E+02	No	
68	Acenaphthylene			0					0									
69	Anthracene			0					0					2.33E+04	5.35E+04	1.07E+04	No	
70	Benzo(a)Anthracene	YES		0					0					1.16E-04	2.86E-04	5.72E-05	No	
71	Benzo(a)Pyrene	YES		0					0					1.07E-02	1.02E-01	2.04E-02	No	
72	Benzo(a)Fluoranthene			0					0					1.07E-02	1.02E-01	2.04E-02	No	
73	3, 4 Benzo-Fluoranthene			0					0					1.07E-02	1.02E-01	2.04E-02	No	
74	Benzo(GH)Perylene			0					0									
75	Benzo(K)Fluoranthene			0					0					1.07E-02	2.44E-02	4.89E-03	No	
76	Bis (2-Chloroethoxy) Methane			0					0									
77	Bis (2-Chloroethyl) Ether	YES		0					0					3.07E-01	2.94E+00	5.89E-01	No	
78	Bis (2-Chloro-Propyl) Ether			0					0					3.76E+04	8.66E+04	1.73E+04	No	
79	Bis (2-Ethylhexyl) Phthalate	YES		0					0					1.28E+00	1.23E+01	2.45E+00	No	
80	4-Bromophenyl Phenyl Ether			0					0									
81	Buryl Benzyl Phthalate			0					0					1.13E+03	2.58E+03	5.17E+02	No	
82	2-Chloronaphthalene			0					0					9.24E+02	2.12E+03	4.24E+02	No	
83	4-Chlorophenyl Phenyl Ether			0					0									
84	Chrysene	YES		0					0					1.07E-02	1.02E-01	2.04E-02	No	
85	Di-N-Butyl Phthalate			0					0					2.62E+03	6.01E+03	1.20E+03	No	
86	Di-N-Octyl Phthalate			0					0									
87	Dibenz(a,h)Anthracene	YES		0					0					1.07E-02	1.02E-01	2.04E-02	No	
88	1, 2-Dichlorobenzene			0					0					7.55E+02	1.73E+03	3.46E+02	No	
89	1, 3-Dichlorobenzene			0					0					5.62E+02	1.29E+03	2.58E+02	No	
90	1, 4-Dichlorobenzene			0					0					1.12E+02	2.59E+02	5.19E+01	No	
91	3, 4-Dichlorobenzene	YES		0					0					1.66E-02	1.59E-01	3.18E-02	No	
92	Diethyl Phthalate			0					0					2.56E+04	5.86E+04	1.17E+04	No	
93	Dimethyl Phthalate			0					0					6.48E+05	1.49E+06	2.97E+05	No	
94	2, 4-Dinitrotoluene	YES		0					0					1.98E+00	1.88E+01	3.79E+00	No	
95	2, 6-Dinitrotoluene			0					0									
96	1,2-Diphenylhydrazine			0					0					1.17E-01	2.69E-01	5.37E-02	No	
97	Endosulfan (alpha)	YES		0	0.22	0.504	0.101	No	0	0.056	0.128	0.026	No	5.19E+01	4.96E+02	9.91E+01	No	
98	Endosulfan (beta)	YES																

# Waste Load Allocation Summary

Page 1

## REQUEST INFORMATION

request number: 3271

From:	Dustin Stokes	In Branch/Section	Municipal		
Date Submitted	11/16/2015	Date Required	12/16/2015	FUND Code	605
Receiving Waterbody	Little Cahaba River	Date Permit application received by NPDES program	6/30/2014		
Previous Stream Name		Facility Name	Highway 411 WWTP	(Name of Discharger-WQ will use to file)	
		Previous Discharger Name			
River Basin	Cahaba	Outfall Latitude	33.57692	(decimal degrees)	
*County	St. Clair	Outfall Longitude	-86.51226	(decimal degrees)	
Permit Number	AL0055255	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.	Leeds WWTP Woodruff Farms WWTP	Impacting dischargers permit numbers.	AL0067067 AL0082813
--------------------------------------	-----------------------------------	---------------------------------------	------------------------

Existing Discharge Design Flow	0.5	MGD	Note: The flow rates given should be those requested for modeling.
Proposed Discharge Design Flow	0.75	MGD	

Comments Included  Yes  No

Information Verified By JMD Year File Was Created

Lat/Long Method	GPS		
12 Digit HUC Code	031502020103		
Use Classification	F&W		
Site Visit Completed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date of Site Visit	2/17/2015
Waterbody Impaired?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date of WLA Response	12/11/2015
Antidegradation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Approved TMDL?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Waterbody Tier Level	Tier I	Approval Date of TMDL	
Use Support Category	1		

## Waste Load Allocation Information

Modeled Reach Length	12.29	Miles	Date of Allocation	11/17/2015
Name of Model Used	SWQM	Allocation Type	2 Seasons	
Model Completed by	Jessica Delgado	Type of Model Used	Desk-top	
Allocation Developed by	Water Quality Branch			

# Waste Load Allocation Summary

Annual Effluent Limits	Conventional Parameters				Other Parameters							
	Qw	0.75	MGD		Qw	0.75	MGD		Qw		MGD	
	Season		Summer	Season		Winter	Season		Season			
	From		May	From		Dec	From		From			
	Through		Nov	Through		Apr	Through		Through			
CBOD5			CBOD5	4	CBOD5		8	TP		TP		
NH3-N			NH3-N	1	NH3-N		2.5	TN		TN		
TKN			TKN	3.5	TKN		5	TSS		TSS		
D.O.			D.O.	6.5	D.O.		6.5	D.O.		D.O.		

"Monitor Only" Parameters for Effluent:				Parameter	Frequency	Parameter	Frequency
				NO2+NO3-N	Monthly(Apr-Oct)		
				TP	Monthly(Apr-Oct)		

Water Quality Characteristics Immediately Upstream of Discharge					
Parameter	Summer		Winter		
CBODu	1.9	mg/l	1.9	mg/l	
NH3-N	0.01	mg/l	0.01	mg/l	
Temperature	28	°C	18	°C	
pH	7	su	7	su	

Hydrology at Discharge Location			
Drainage Area Qualifier Estimated	Drainage Area	4.77	sq mi
	Stream 7Q10	0	cfs
	Stream 1Q10	0	cfs
	Stream 7Q2	0	cfs
	Annual Average	9.93	cfs
			Method Used to Calculate
			<5.0 sq mi
			<5.0 sq mi
			<5.0 sq mi
			ADEM Estimate w/USGS Gage Data

**Comments and/or Notations** -Limits above based on a HW flow of 1.5 cfs (requested by permittee). Previous WLA completed for a HW flow of 0 cfs (WLA response date 4/17/15). Permittee requested a tiered permit with limits for both HW flows (0 & 1.5 cfs) and indicated that a gage would be installed upstream of discharge to measure HW flow.  
 -WQ Branch modeling guidelines deem zero 7Q10 flow at headwater because headwater drainage area is less than 5 sq. miles.

# Waste Load Allocation Summary

Page 1

## REQUEST INFORMATION

request number: 3170

From: Dustin Stokes In Branch/Section Municipal  
Date Submitted 2/9/2015 Date Required 3/9/2015 FUND Code 605  
Receiving Waterbody Little Cahaba River Date Permit application received by NPDES program 6/30/2014  
Previous Stream Name  
Facility Name Highway 411 WWTP (Name of Discharger-WQ will use to file)  
River Basin Cahaba Outfall Latitude 33.57692 (decimal degrees)  
\*County St. Clair Outfall Longitude -86.51226 (decimal degrees)  
Permit Number AL0055255 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.

Leeds WWTP  
Woodruff Farms WWTP

Impacting dischargers permit numbers.

AL0067067  
AL0082813

Existing Discharge Design Flow  
Proposed Discharge Design Flow

0.5 MGD  
0.75 MGD

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

Comments Included

Yes  No

Information Verified By

JMD

Year File Was Created

11 Digit HUC Code  
12 Digit HUC Code 031502020103  
Use Classification F&W  
Site Visit Completed?  Yes  No  
Waterbody Impaired?  Yes  No  
Antidegradation  Yes  No  
Waterbody Tier Level Tier I  
Use Support Category 1

Lat/Long Method GPS

Date of Site Visit 2/17/2015

Date of WLA Response 4/17/2015

Approved TMDL?

Yes  No

Approval Date of TMDL

## Waste Load Allocation Information

Modeled Reach Length 12.29 Miles Date of Allocation 4/17/2015  
Name of Model Used SWQM Allocation Type 2 Seasons  
Model Completed by Jessica Delgado Type of Model Used Desk-top  
Allocation Developed by Water Quality Branch

# Waste Load Allocation Summary

Annual Effluent Limits	Conventional Parameters				Other Parameters								
	Qw	0.75	MGD		Qw	0.75	MGD		Qw	MGD		Qw	MGD
				Season	Summer			Season	Winter			Season	
				From	May			From	Dec			From	
				Through	Nov			Through	Apr			Through	
CBOD5				CBOD5	2			CBOD5	4			TP	
NH3-N				NH3-N	0.85			NH3-N	2			TN	
TKN				TKN	2.85			TKN	4			TSS	
D.O.				D.O.	6.5			D.O.	6.5				

"Monitor Only" Parameters for Effluent:			
Parameter	Frequency	Parameter	Frequency
NO2+NO3-N	Monthly(Apr-Oct)		
TP	Monthly(Apr-Oct)		

Water Quality Characteristics Immediately Upstream of Discharge				
Parameter	Summer		Winter	
CBODu	1.9	mg/l	1.9	mg/l
NH3-N	0.01	mg/l	0.01	mg/l
Temperature	28	°C	18	°C
pH	7	su	7	su

Hydrology at Discharge Location			
<b>Drainage Area Qualifier</b>	<b>Drainage Area</b>	4.77	sq mi
Estimated	<b>Stream 7Q10</b>	0	cfs
	<b>Stream 1Q10</b>	0	cfs
	<b>Stream 7Q2</b>	0	cfs
	<b>Annual Average</b>	9.93	cfs

Method Used to Calculate
<5.0 sq mi
<5.0 sq mi
<5.0 sq mi
ADEM Estimate w/USGS Gage Data

**Comments and/or Notations:** -WQ Branch modeling guidelines deem zero 7Q10 flow at headwater because headwater drainage area is less than 5 sq. mile  
 - Little Cahaba River velocity and flow data based on previous intensive stream studies, models currently on file, and reference documents

Facility: HWY 411 WWTP  
Permit #: AL0055255

V. TOTAL KJELDAHL NITROGEN (TKN)

A Total Kjeldahl Nitrogen (TKN) limit was provided for discharging facilities in the 1994 calibrated and verified model for the Little Cahaba River. Leeds WWTP and HWY 411 WWTP have TKN limits set in their current permit. TKN limit can be defined by the sum of the allotted total organic nitrogen limit and ammonia limit.



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

November 17, 2015

**MEMORANDUM**

TO: Highway 411 WWTP WLA File  
FROM: Jessica Delgado, Water Quality Branch  
RE: Waste Load Allocation for Little Cahaba River

An updated seasonal SWQM model was performed for Highway 411 WWTP at a headwater flow of 1.5 cfs. The previous wasteload allocation (WLA) was completed for Highway 411 WWTP on Friday, April 17, 2015. The permittee has requested a tiered permit with limits for headwater flows of 0 and 1.5 cfs; therefore, the model was run at the requested tier II streamflow of 1.5 cfs. The facility requests permit reissuance with an expanded discharge rate of 0.75 MGD to Little Cahaba River. The schematic reach begins at HWY 411 and ends at the mouth of Lake Purdy. Model results, site visit information, and complete rationale can be found within the previous model report (April 17, 2015) and attached document.

Little Cahaba River is located in St. Clair and Jefferson County. The use classification for Little Cahaba River is Fish & Wildlife (F&W). The NH<sub>3</sub>-N limits are water quality based. The following TIER I and TIER II effluent limits are required to maintain a minimum in-stream dissolved oxygen concentration of at least 5.0 mg/L and meet background requirements:

TIER I: HW flow= 0 cfs		
PARAMETER	SUMMER LIMIT	WINTER LIMIT
CBOD <sub>5</sub>	2 mg/l	4 mg/l
NH <sub>3</sub> -N	0.85 mg/l	2 mg/l
TKN	2.85 mg/l	4 mg/l
Minimum D.O.	6.5 mg/l	6.5 mg/l

TIER II: HW flow= 1.5 cfs		
PARAMETER	SUMMER LIMIT	WINTER LIMIT
CBOD <sub>5</sub>	4 mg/l	8 mg/l
NH <sub>3</sub> -N	1 mg/l	2.5 mg/l
TKN	3.5 mg/l	5 mg/l
Minimum D.O.	6.5 mg/l	6.5 mg/l

Project: Highway 411 WWTP  
Permit: AL 0057255  
Receiving Waterbody: Little Cahaba River- Cahaba Basin  
County: St. Clair  
Date Completed: 11/17/2015  
Performed by: ISM, Water Quality



FORM <b>1</b> GENERAL	U.S. ENVIRONMENTAL PROTECTION AGENCY <b>GENERAL INFORMATION</b> Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER S F <b>AL0055255</b>
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LABEL ITEMS I. EPA I.D. NUMBER III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION	PLEASE PLACE LABEL IN THIS SPACE	GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.
---	----------------------------------	---

II. POLLUTANT CHARACTERISTICS

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

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

III. NAME OF FACILITY

c	1	SKIP	Highway 411 Wastewater Treatment Plant
---	---	------	--

IV. FACILITY CONTACT

c	2	A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
		Lee Joe Mayor Chairman of the GUSC Board	(205) 640-0307

V. FACILITY MAILING ADDRESS

c	3	A. STREET OR P.O. BOX	D. ZIP CODE
		P.O. Box 730	35004
c	4	B. CITY OR TOWN	C. STATE
		Moody	AL

VI. FACILITY LOCATION

c	5	A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	F. COUNTY CODE (if known)
		2400 Joey Adkins Drive	
c	6	B. COUNTY NAME	E. ZIP CODE
		ST Clair	35004
c	6	C. CITY OR TOWN	D. STATE
		Moody	AL

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)											
A. FIRST						B. SECOND					
C	7	4	9	7	2	C	7				
(specify) Sewer System						(specify)					
C. THIRD											
C	7					C	7				
(specify)						(specify)					

VIII. OPERATOR INFORMATION												
A. NAME											B. Is the name listed in Item VIII-A also the owner?	
C	8	Moody Governmental Utility Services Corporation										<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)											D. PHONE (area code & no.)	
F = FEDERAL	M = PUBLIC (other than federal or state)										C	
S = STATE	O = OTHER (specify)	M	(specify) Public									A
P = PRIVATE		56										(205) 640-3829

E. STREET OR P.O. BOX										
P.O. Box 730										

F. CITY OR TOWN						G. STATE	H. ZIP CODE	IX. INDIAN LAND			
C	B	Moody					AL	35004	Is the facility located on Indian lands?		
						40	41	42	47	51	
						<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			52		

X. EXISTING ENVIRONMENTAL PERMITS											
A. NPDES (Discharges to Surface Water)						D. PSD (Air Emissions from Proposed Sources)					
C	T	I				C	T	I			
9	N	AL0055255				9	P	None			

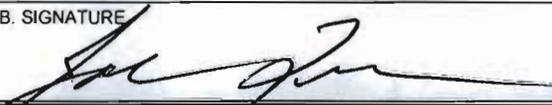
B. UIC (Underground Injection of Fluids)						E. OTHER (specify)					
C	T	I				C	T	I			
9	U	None				9		None			

C. RCRA (Hazardous Wastes)						E. OTHER (specify)					
C	T	I				C	T	I			
9	R	None				9		None			

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

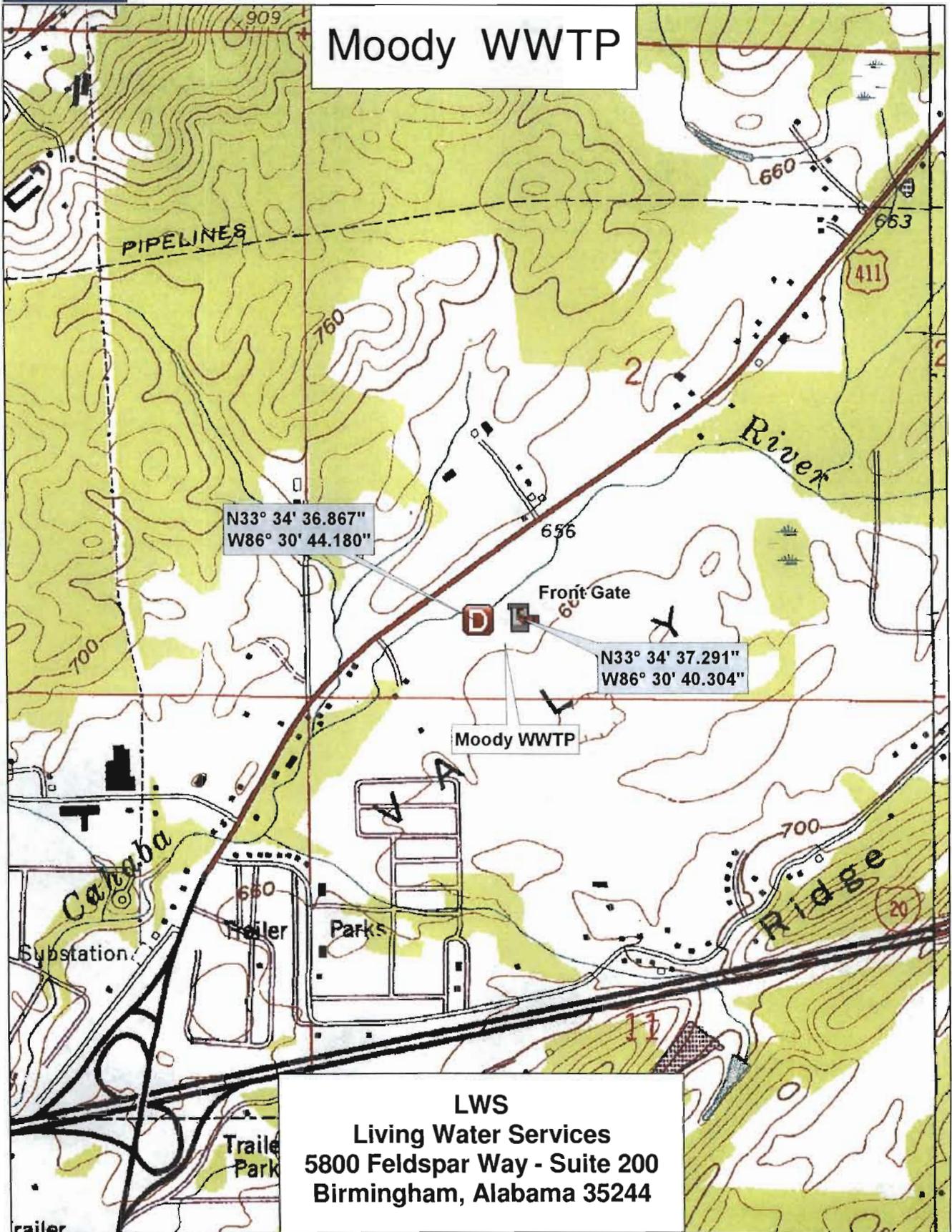
XII. NATURE OF BUSINESS (provide a brief description)  
 Public Wastewater Facility

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

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Joe Lee Mayor Chairman of The Board		07/07/14

COMMENTS FOR OFFICIAL USE ONLY											
C											
C											

# Moody WWTP

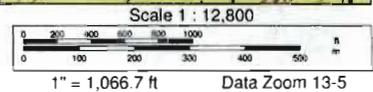


**LWS**  
**Living Water Services**  
**5800 Feldspar Way - Suite 200**  
**Birmingham, Alabama 35244**

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**FACILITY NAME AND PERMIT NUMBER:**

Highway 411 Wastewater Treatment Plant AL0055255

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

**BASIC APPLICATION INFORMATION**

**PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:**

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

**A.1. Facility Information.**

Facility name Highway 411 Wastewater Treatment Plant

Mailing Address P.O. Box 730  
Moody, Alabama 35004

Contact person Joe Lee

Title Mayor Chairman of The Moody GUSC Board

Telephone number (205) 640-0307

Facility Address 2400 Joey Adkins Drive  
(not P.O. Box) Moody, Alabama 35004

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

Applicant name Moody Governmental Utility Services Corporation

Mailing Address P.O. Box 730  
Moody, Alabama 35004

Contact person Joe Lee

Title Mayor Chairman of The GUSC Board

Telephone number (205) 640-3829

**Is the applicant the owner or operator (or both) of the treatment works?**

owner       operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

facility       applicant

**A.3. Existing Environmental Permits.** Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES AL0055255 PSD None

UIC None Other None

RCRA None Other None

**A.4. Collection System Information.** Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>City of Moody</u>	<u>12,150</u>	<u>Separate</u>	<u>Moody GUSC/Public</u>
_____	_____	_____	_____
_____	_____	_____	_____
<b>Total population served</b> <u>12,150</u>			



**FACILITY NAME AND PERMIT NUMBER:**

Highway 411 Wastewater Treatment Plant AL0055255

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

**A.5. Indian Country.**

a. Is the treatment works located in Indian Country?

Yes  No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

Yes  No

**A.6. Flow.** Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 0.75 mgd

	<u>Two Years Ago</u>	<u>Last Year</u>	<u>This Year</u>
b. Annual average daily flow rate	<u>0.35</u>	<u>0.38</u>	<u>0.41</u> mgd
c. Maximum daily flow rate	<u>0.64</u>	<u>0.80</u>	<u>0.91</u> mgd

**A.7. Collection System.** Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

Separate sanitary sewer 100.00 %  
 Combined storm and sanitary sewer \_\_\_\_\_ %

**A.8. Discharges and Other Disposal Methods.**

a. Does the treatment works discharge effluent to waters of the U.S.?  Yes  No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1  
ii. Discharges of untreated or partially treated effluent None  
iii. Combined sewer overflow points None  
iv. Constructed emergency overflows (prior to the headworks) None  
v. Other NA

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.?  Yes  No

If yes, provide the following for each surface impoundment:

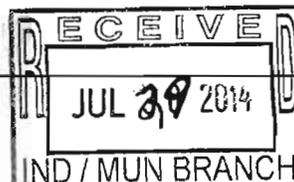
Location: NA  
Annual average daily volume discharged to surface impoundment(s) 0.00 mgd  
Is discharge \_\_\_\_\_ continuous or \_\_\_\_\_ intermittent?

c. Does the treatment works land-apply treated wastewater?  Yes  No

If yes, provide the following for each land application site:

Location: NA  
Number of acres: \_\_\_\_\_  
Annual average daily volume applied to site: \_\_\_\_\_ Mgd  
Is land application \_\_\_\_\_ continuous or \_\_\_\_\_ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works?  Yes  No



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If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Contact person: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

For each treatment works that receives this discharge, provide the following:

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Contact person: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

If known, provide the NPDES permit number of the treatment works that receives this discharge. \_\_\_\_\_

Provide the average daily flow rate from the treatment works into the receiving facility. \_\_\_\_\_ mgd

- e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? \_\_\_\_\_ Yes  No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method: NA

Is disposal through this method \_\_\_\_\_ continuous or \_\_\_\_\_ intermittent?

**FACILITY NAME AND PERMIT NUMBER:**

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OMB Number 2040-0086**WASTEWATER DISCHARGES:**

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

**A.9. Description of Outfall.**

- a. Outfall number 0011
- b. Location Moody 35004  
(City or town, if applicable) (Zip Code)  
ST Clair Alabama  
(County) (State)  
33°34'36.867" N 86°30'44.180" W  
(Latitude) (Longitude)
- c. Distance from shore (if applicable) \_\_\_\_\_ ft.
- d. Depth below surface (if applicable) \_\_\_\_\_ ft.
- e. Average daily flow rate \_\_\_\_\_ 0.41 mgd
- f. Does this outfall have either an intermittent or a periodic discharge?  
\_\_\_\_\_ Yes  No (go to A.9.g.)
- If yes, provide the following information:
- Number of times per year discharge occurs: \_\_\_\_\_
- Average duration of each discharge: \_\_\_\_\_
- Average flow per discharge: \_\_\_\_\_ mgd
- Months in which discharge occurs: \_\_\_\_\_
- g. Is outfall equipped with a diffuser?  Yes \_\_\_\_\_ No

**A.10. Description of Receiving Waters.**

- a. Name of receiving water Little Cahaba River
- b. Name of watershed (if known) Cahaba River  
United States Soil Conservation Service 14-digit watershed code (if known): \_\_\_\_\_
- c. Name of State Management/River Basin (if known): Cahaba River  
United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 03150202
- d. Critical low flow of receiving stream (if applicable):  
acute \_\_\_\_\_ cfs chronic \_\_\_\_\_ cfs
- e. Total hardness of receiving stream at critical low flow (if applicable): \_\_\_\_\_ mg/l of CaCO<sub>3</sub>

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**A.11. Description of Treatment.**

a. What levels of treatment are provided? Check all that apply.

- Primary                       Secondary  
 Advanced                       Other. Describe: \_\_\_\_\_

b. Indicate the following removal rates (as applicable):

Design BOD <sub>5</sub> removal <u>or</u> Design CBOD <sub>5</sub> removal	98.67	%
Design SS removal	98.80	%
Design P removal	_____	%
Design N removal	_____	%
Other _____	_____	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultra Violant Light

If disinfection is by chlorination, is dechlorination used for this outfall?                       Yes                       No

d. Does the treatment plant have post aeration?                       Yes                       No

**A.12. Effluent Testing Information.** All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: oo11

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.50	s.u.			
pH (Maximum)	7.80	s.u.			
Flow Rate	0.91	MGD	0.41	MGD	365.00
Temperature (Winter)	16.80	°C	14.40	°C	10.00
Temperature (Summer)	23.90	°C	21.40	°C	10.00

\* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

**CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.**

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5							
	CBOD-5	4.73	mg/l	1.99	mg/l	156.00	5210B	3.0/4.5 mg/l
FECAL COLIFORM		360.00	#/100ml	27.00	#/100ml	156.00	9222D	100/2000 col
TOTAL SUSPENDED SOLIDS (TSS)		13.50	mg/l	4.38	mg/l	156.00	2540D	30/45 mg/l

**END OF PART A.**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

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**BASIC APPLICATION INFORMATION**

**PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).**

All applicants with a design flow rate  $\geq$  0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

**B.1. Inflow and Infiltration.** Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

\_\_\_\_\_ 0.06 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

\_\_\_\_\_  
\_\_\_\_\_

**B.2. Topographic Map.** Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- a. The area surrounding the treatment plant, including all unit processes.
- b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- c. Each well where wastewater from the treatment plant is injected underground.
- d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

**B.3. Process Flow Diagram or Schematic.** Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

**B.4. Operation/Maintenance Performed by Contractor(s).**

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? \_\_\_\_ Yes  No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Responsibilities of Contractor: \_\_\_\_\_

**B.5. Scheduled Improvements and Schedules of Implementation.** Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

\_\_\_\_\_

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

\_\_\_\_ Yes \_\_\_\_ No

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c. If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

\_\_\_\_\_

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule	Actual Completion
	MM / DD / YYYY	MM / DD / YYYY
- Begin construction	__ / __ / ____	__ / __ / ____
- End construction	__ / __ / ____	__ / __ / ____
- Begin discharge	__ / __ / ____	__ / __ / ____
- Attain operational level	__ / __ / ____	__ / __ / ____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained?  Yes  No

Describe briefly: \_\_\_\_\_  
\_\_\_\_\_

**B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).**

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 0011 \_\_\_\_\_

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
<b>CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.</b>							
AMMONIA (as N)	0.78	mg/l	0.07	mg/l	156.00	4500-NH3N	1.0-1.5 mg/l
CHLORINE (TOTAL RESIDUAL, TRC)							0.02-0.03 mg/l
DISSOLVED OXYGEN	8.60	mg/l	7.60	mg/l	156.00	4500-O.G.	6.0 mg/l min
TOTAL KJELDAHL NITROGEN (TKN)	0.74	mg/l	0.15	mg/l	156.00	4500-Norg C	3.0-4.5 mg/l
NITRATE PLUS NITRITE NITROGEN	76.70	mg/l	50.70	mg/l	7.00	4500-E	Report
OIL and GREASE	5.00	mg/l	5.00	mg/l	3.00	EPA 1654A	Report
PHOSPHORUS (Total)	4.35	mg/l	3.30	mg/l	7.00	4500-P F	Report
TOTAL DISSOLVED SOLIDS (TDS)	3,639.00	mg/l	2,477.00	mg/l	3.00	SM2540C	Report
OTHER							

**END OF PART B.**

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

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**BASIC APPLICATION INFORMATION**

**PART C. CERTIFICATION**

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

**Indicate which parts of Form 2A you have completed and are submitting:**

- Basic Application Information packet
- Supplemental Application Information packet:
  - Part D (Expanded Effluent Testing Data)
  - Part E (Toxicity Testing: Biomonitoring Data)
  - Part F (Industrial User Discharges and RCRA/CERCLA Wastes)
  - Part G (Combined Sewer Systems)

**ALL APPLICANTS MUST COMPLETE 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 the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Joe Lee Mayor, Chairman of the GUSC Board

Signature 

Telephone number (205) 640-0307

Date signed 07/07/14

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

**SEND COMPLETED FORMS TO:**

FACILITY NAME AND PERMIT NUMBER:

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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART D. EXPANDED EFFLUENT TESTING DATA**

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

**Effluent Testing: 1.0 mgd and Pretreatment Treatment Works.** If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001-1 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
<b>METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.</b>											
ANTIMONY	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E200.9	0.005 mg/L
ARSENIC	<0.001	mg/L	<0.002	lb/day	<0.001	mg/L	<0.002	lb/day	3	E200.9	0.001 mg/L
BERYLLIUM	<0.001	mg/L	<0.002	lb/day	<0.001	mg/L	<0.002	lb/day	3	E200.7	0.001 mg/L
CADMIUM	<0.001	mg/L	<0.002	lb/day	<0.001	mg/L	<0.002	lb/day	3	E200.7	0.001 mg/L
CHROMIUM	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E200.7	0.010 mg/L
COPPER	0.038	mg/L	0.091	lb/day	0.025	mg/L	0.058	lb/day	3	E200.7	0.010 mg/L
LEAD	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E200.7	0.005 mg/L
MERCURY	6.1	ng/L	0.00023	oz/day	2.8	ng/L	0.00010	oz/day	3	E1631	0.40 ng/L
NICKEL	<0.050	mg/L	<0.120	lb/day	<0.050	mg/L	<0.114	lb/day	3	E200.7	0.050 mg/L
SELENIUM	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E200.9	0.005 mg/L
SILVER	<0.001	mg/L	<0.002	lb/day	<0.001	mg/L	<0.002	lb/day	3	E200.9	0.001 mg/L
THALLIUM	<0.001	mg/L	<0.002	lb/day	<0.001	mg/L	<0.002	lb/day	3	E200.9	0.001 mg/L
ZINC	0.134	mg/L	0.321	lb/day	0.110	mg/L	0.253	lb/day	3	E200.7	0.050 mg/L
CYANIDE	0.021	mg/L	0.050	lb/day	0.016	mg/L	0.037	lb/day	3	M4500-CN CE	0.010 mg/L
TOTAL PHENOLIC COMPOUNDS	<0.10	mg/L	<0.239	lb/day	<0.10	mg/L	<0.228	lb/day	3	M5330 BD 2005	0.10 mg/L
HARDNESS (AS CaCO <sub>3</sub> )	133	mg/L	313	lb/day	126	mg/L	286	lb/day	3	E200.7	1.00 mg/L

Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.


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Outfall number: <u>001-1</u> (Complete once for each outfall discharging effluent to waters of the United States.)											
POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
<b>VOLATILE ORGANIC COMPOUNDS.</b>											
ACROLEIN	<0.100	mg/L	<0.239	lb/day	<0.100	mg/L	<0.228	lb/day	3	E624	0.100 mg/L
ACRYLONITRILE	<0.100	mg/L	<0.239	lb/day	<0.100	mg/L	<0.228	lb/day	3	E624	0.100 mg/L
BENZENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
BROMOFORM	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
CARBON TETRACHLORIDE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
CLOROBENZENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
CHLORODIBROMO-METHANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
CHLOROETHANE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E624	0.010 mg/L
2-CHLORO-ETHYLVINYL ETHER	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E624	0.010 mg/L
CHLOROFORM	0.008	mg/L	0.019	lb/day	0.006	mg/L	0.014	lb/day	3	E624	0.005 mg/L
DICHLOROBROMO-METHANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,1-DICHLOROETHANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,2-DICHLOROETHANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
TRANS-1,2-DICHLORO-ETHYLENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,1-DICHLOROETHYLENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,2-DICHLOROPROPANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,3-DICHLORO-PROPYLENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
ETHYLBENZENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
METHYL BROMIDE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E624	0.010 mg/L
METHYL CHLORIDE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
METHYLENE CHLORIDE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,1,2,2-TETRACHLORO-ETHANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
TETRACHLORO-ETHYLENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
TOLUENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L

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Outfall number: 001-1 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE			AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units			Number of Samples
1,1,1-TRICHLOROETHANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,1,2-TRICHLOROETHANE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
TRICHLOROETHYLENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
VINYL CHLORIDE	<0.002	mg/L	<0.005	lb/day	<0.002	mg/L	<0.005	lb/day	3	E624	0.002 mg/L

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

**ACID-EXTRACTABLE COMPOUNDS**

P-CHLORO-M-CRESOL	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
2-CHLOROPHENOL	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
2,4-DICHLOROPHENOL	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
2,4-DIMETHYLPHENOL	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
4,6-DINITRO-O-CRESOL	<0.051	mg/L	<0.122	lb/day	<0.050	mg/L	<0.115	lb/day	3	E625	0.050 mg/L
2,4-DINITROPHENOL	<0.051	mg/L	<0.122	lb/day	<0.050	mg/L	<0.115	lb/day	3	E625	0.050 mg/L
2-NITROPHENOL	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
4-NITROPHENOL	<0.051	mg/L	<0.122	lb/day	<0.050	mg/L	<0.115	lb/day	3	E625	0.050 mg/L
PENTACHLOROPHENOL	<0.026	mg/L	<0.062	lb/day	<0.025	mg/L	<0.058	lb/day	3	E625	0.025 mg/L
PHENOL	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
2,4,6-TRICHLOROPHENOL	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

**BASE-NEUTRAL COMPOUNDS**

ACENAPHTHENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
ACENAPHTHYLENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
ANTHRACENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BENZIDINE	<0.051	mg/L	<0.122	lb/day	<0.050	mg/L	<0.115	lb/day	3	E625	0.050 mg/L
BENZO(A)ANTHRACENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BENZO(A)PYRENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L

**FACILITY NAME AND PERMIT NUMBER:**  
 Highway 411 WWTP AL0055255

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

Outfall number: 001-1 (Complete once for each outfall discharging effluent to waters of the United States.)											
POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BENZO(GHI)PERYLENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BENZO(K)FLUORANTHENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BIS (2-CHLOROETHOXY) METHANE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BIS (2-CHLOROETHYL)-ETHER	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BIS (2-CHLOROISO-PROPYL) ETHER	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BIS (2-ETHYLHEXYL) PHTHALATE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
4-BROMOPHENYL PHENYL ETHER	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
BUTYL BENZYL PHTHALATE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
2-CHLORONAPHTHALENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
4-CHLORPHENYL PHENYL ETHER	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
CHRYSENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
DI-N-BUTYL PHTHALATE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
DI-N-OCTYL PHTHALATE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
DIBENZO(A,H) ANTHRACENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
1,2-DICHLOROBENZENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,3-DICHLOROBENZENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
1,4-DICHLOROBENZENE	<0.005	mg/L	<0.012	lb/day	<0.005	mg/L	<0.011	lb/day	3	E624	0.005 mg/L
3,3-DICHLOROBENZIDINE	<0.020	mg/L	<0.048	lb/day	<0.020	mg/L	<0.046	lb/day	3	E625	0.020 mg/L
DIETHYL PHTHALATE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
DIMETHYL PHTHALATE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
2,4-DINITROTOLUENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
2,6-DINITROTOLUENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
1,2-DIPHENYLHYDRAZINE	<0.051	mg/L	<0.122	lb/day	<0.050	mg/L	<0.115	lb/day	3	E625	0.050 mg/L

**FACILITY NAME AND PERMIT NUMBER:**

Highway 411 WWTP AL0055255

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

Outfall number: 001-1 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
FLUORENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
HEXACHLOROBENZENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
HEXACHLOROBUTADIENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
HEXACHLOROCYCLO-PENTADIENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
HEXACHLOROETHANE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
INDENO(1,2,3-CD)PYRENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
ISOPHORONE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
NAPHTHALENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
NITROBENZENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
N-NITROSODI-N-PROPYLAMINE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
N-NITROSODI- METHYLAMINE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
N-NITROSODI-PHENYLAMINE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
PHENANTHRENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
PYRENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L
1,2,4-TRICHLOROBENZENE	<0.010	mg/L	<0.024	lb/day	<0.010	mg/L	<0.023	lb/day	3	E625	0.010 mg/L

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

**END OF PART D.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM  
2A YOU MUST COMPLETE**

FACILITY NAME AND PERMIT NUMBER:

Highway 411 Wastewater Treatment Plant AL0055255

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

### SUPPLEMENTAL APPLICATION INFORMATION

#### PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

##### GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

Yes  No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. 1.00

b. Number of CIUs. \_\_\_\_\_

##### SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: Vulcun Industries

Mailing Address: 300 Display Drive Moody, Alabama 35004

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Industrial Waste Water Resulting From Metal Finishing Operations

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): \_\_\_\_\_

Raw material(s): \_\_\_\_\_

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

1,500.00 gpd ( continuous or  intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

\_\_\_\_\_ gpd ( continuous or  intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits  Yes  No

b. Categorical pretreatment standards  Yes  No

If subject to categorical pretreatment standards, which category and subcategory?

\_\_\_\_\_

**FACILITY NAME AND PERMIT NUMBER:**

Highway 411 Wastewater Treatment Plant AL0055255

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

**F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU.** Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

Yes  No If yes, describe each episode.

\_\_\_\_\_  
\_\_\_\_\_

**RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:**

**F.9. RCRA Waste.** Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?  Yes  No (go to F.12.)

**F.10. Waste Transport.** Method by which RCRA waste is received (check all that apply):

Truck  Rail  Dedicated Pipe

**F.11. Waste Description.** Give EPA hazardous waste number and amount (volume or mass, specify units).

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

**CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:**

**F.12. Remediation Waste.** Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

Yes (complete F.13 through F.15.)  No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

**F.13. Waste Origin.** Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**F.14. Pollutants.** List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

\_\_\_\_\_  
\_\_\_\_\_

**F.15. Waste Treatment.**

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

Yes  No

If yes, describe the treatment (provide information about the removal efficiency):

\_\_\_\_\_  
\_\_\_\_\_

b. Is the discharge (or will the discharge be) continuous or intermittent?

Continuous  Intermittent If intermittent, describe discharge schedule.

\_\_\_\_\_

**END OF PART F.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

**SUPPLEMENTARY INFORMATION**  
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**  
**PERMIT APPLICATION FORM 188- Municipal, Semi-Public & Private Facilities**

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
WATER DIVISION – MUNICIPAL PERMIT SECTION  
POST OFFICE BOX 301463  
MONTGOMERY, ALABAMA 36130-1463

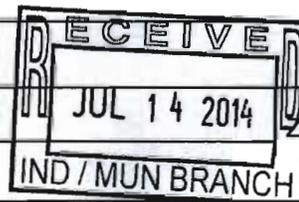
**INSTRUCTIONS:** APPLICATIONS SHOULD BE TYPED OR PRINTED IN INK AND SUBMITTED TO THE DEPARTMENT. PLEASE CONTINUE ON AN ATTACHED SHEET OF PAPER IF INSUFFICIENT SPACE IS AVAILABLE TO ADDRESS ANY ITEM BELOW. PLEASE MARK N/A IN THE APPROPRIATE BOX WHEN AN ITEM IS NON-APPLICABLE TO THE APPLICANT.

**PURPOSE OF THIS APPLICATION**

- |  |   |
|--|---|
| <input type="checkbox"/> INITIAL PERMIT APPLICATION FOR NEW FACILITY | <input type="checkbox"/> INITIAL PERMIT APPLICATION FOR EXISTING FACILITY |
| <input type="checkbox"/> MODIFICATION OF EXISTING PERMIT             | <input checked="" type="checkbox"/> REISSUANCE OF EXISTING PERMIT         |
| <input type="checkbox"/> REVOCATION & REISSUANCE OF EXISTING PERMIT  |   |

**SECTION A – GENERAL INFORMATION**

1. Facility Name: Highway 411 Wastewater Treatment Plant
- a. Operator Name: Moody Governmental Utility Services Corporation
- b. Is the operator identified in 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: \_\_\_\_\_  
*\*Permittee will be responsible for compliance with the conditions of the permit*
2. NPDES Permit Number AL 0055255 (Not applicable if initial permit application)
3. Facility Location: (**Attach a map with location marked; street, route no. or other specific identifier**)  
Street: 2400 Joey Adkins Dr  
City: Moody County: St Clair State: Alabama Zip: 35004  
Facility (Front Gate) Location: Latitude (Deg Min Sec): 33°34'37.291" N Longitude (Deg. Min Sec): 86°30'40.304" W
4. Facility Mailing Address (Street or Post Office Box): P.O. Box 730  
City: Moody County: St Clair State: Alabama Zip: 35004
5. Responsible Official (as described on page 7 of this application):  
Name and Title: Joe Lee Mayor Chairman of The GUSC Board  
Address: P.O. Box 730  
City: Moody State: Alabama Zip: 35004  
Phone Number: 205-640-0307  
Email Address: (Optional): jlee@moodyalabama.gov



6. Designated Facility/DMR Contact:

Name and Title: Jerry Terrell Operations Manager

Phone Number: 205-703-5332

DMR Email Address (Optional – for receipt of blank DMR Forms): bterrell@moodyalabama.gov

7. Please complete this section if the Applicant's business entity is a Proprietorship or limited liability Corporation with a responsible official not listed in Item 5.

a) Proprietor:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

8. 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:

<u>Permit Name</u>	<u>Permit Number</u>	<u>Held by</u>
<u>Highway 411 WWTP</u>	<u>AL0055255</u>	<u>Moody GUSC</u>
<u>Moody Kelly WWTP</u>	<u>AL0061581</u>	<u>Moody GUSC</u>
<u>Margaret WWTP</u>	<u>AL0078204</u>	<u>Moody GUSC</u>
_____	_____	_____

9. 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):

<u>Facility Name</u>	<u>Permit Number</u>	<u>Type of Action</u>	<u>Date of Action</u>
<u>NA</u>	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**SECTION B – WASTEWATER DISCHARGE INFORMATION**

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

<u>Outfall Number</u>	<u>Highest in Last 12 Months MGD</u>	<u>Highest Daily Flow MGD</u>	<u>Average Flow MGD</u>
<u>0011</u>	<u>0.4073</u>	<u>0.911</u>	<u>0.372</u>
_____	_____	_____	_____

2. Report E-coli (Freshwater) or Enterococci (Coastal Waters) monitoring results for the past five years for each outfall if available:

Outfall Number	Ecoli or Enterococci	Maximum Daily E-coli / Enterococci Discharge (per 100 ml)	Maximum Monthly Average E-Coli / Enterococci Discharge (per 100 ml)	No. of Analyses	Analytical Method	ML/MDL
NA						

3. Attached a process flow schematic of the treatment process, including the size of each unit operation.  
 4. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Current:	Flow Metering	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
	Sampling Equipment	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Planned:	Flow Metering	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
	Sampling Equipment	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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:  
 Flow meter Isco 3010 ultrasonic level measurement

Sigma 900 Refrigerated Composite (2) one @ influent head-works and one @ effluent flow meter.

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.)  
 NA

**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
Liquid sludge is held in digester until pumped to dewatering box then hauled to site for land application	

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*
Blade able sludge	1005	Land application

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

**SECTION D – INDUSTRIAL INDIRECT DISCHARGE CONTRIBUTORS**

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

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit? Y/N
Vulcan Industries	Industrial Waste Water Metal Finishing Operations	Existing	.0015	Yes

2. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance [Y/N]? If so, 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, then complete items A through M below:

	YES	NO
A. Does the project require new construction?	<input type="checkbox"/>	<input type="checkbox"/>
B. Will the project be a source of new air emissions?	<input type="checkbox"/>	<input type="checkbox"/>
C. Does the project involve dredging and/or filling of a wetland area or water way?	<input type="checkbox"/>	<input type="checkbox"/>
Has the Corps of Engineers (COE) permit been issued?	<input type="checkbox"/>	<input type="checkbox"/>
Corps Project Number _____		
D. Does the project involve wetlands and/or submersed grassbeds?	<input type="checkbox"/>	<input type="checkbox"/>
E. Are oyster reefs located near the project site? (Include a map showing project and discharge location with respect to oyster reefs)	<input type="checkbox"/>	<input type="checkbox"/>
F. Does the project involve the site development, construction and operation of an energy facility as defined in ADEM Admin. Code R. 335-8-1-.02(bb)?	<input type="checkbox"/>	<input type="checkbox"/>
G. Does the project involve mitigation of shoreline or coastal area erosion?	<input type="checkbox"/>	<input type="checkbox"/>
H. Does the project involve construction on beaches or dunes areas?	<input type="checkbox"/>	<input type="checkbox"/>
I. Will the project interfere with public access to coastal waters?	<input type="checkbox"/>	<input type="checkbox"/>
J. Does the project lie within the 100-year floodplain?	<input type="checkbox"/>	<input type="checkbox"/>
K. Does the project involve the registration, sale, use, or application of pesticides?	<input type="checkbox"/>	<input type="checkbox"/>
L. 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)?	<input type="checkbox"/>	<input type="checkbox"/>
M. Has the applicable permit for groundwater recovery or for groundwater well installation been obtained?	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION F – ANTI-DEGRADATION EVALUATION**

It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity, if subject to antidegradation requirements. In accordance with 40 CFR 131.12 and Section 335-6-10-.04 of the Alabama Department of Environmental Management Administrative Code, the following information must be provided, if applicable. 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 question 2 below. If "no", do not complete this section.

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

If "no" and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions A through F below and also ADEM forms 311 and 312 or 313, whichever is applicable, (attached). Form 312 or 313, whichever is applicable, must be provided for each treatment discharge alternative considered technically viable. If "yes", do not complete this section.

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

- A. What environmental or public health problem will the discharger be correcting?
- B. Explain if and to what degree the discharger will be increasing employment as a result of the proposed discharge, either at its existing facility or as the result of the start-up of a related new facility or industry.
- C. Explain if and to what degree the discharge will prevent employment reductions?
- D. Describe any additional state or local taxes that the prospective discharger will be paying.
- E. Describe any public service the discharger will be providing to the community.
- F. Describe the economic or social benefit the discharger will 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 municipal facility depending on the number and types of discharges or outfalls. The EPA application forms are found on the Department's website at <http://www.adem.state.al.us/> and are also listed in Attachment 4.

**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**

Receiving Water(s)	303(d) Segment? (Y / N)	Included in TMDL?*
		(Y / N)
Littel Cahaba River	N	N

\*If a TMDL Compliance Schedule is requested the following should be attached as supporting documentation: (1) Justification for the proposed 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 reported as available); (3) Requested interim limitations, if applicable; (4) Date of final compliance with the TMDL limitations; and (5) Any other additional information available to support the requested compliance schedule.

**SECTION J – APPLICATION CERTIFICATION**

THE INFORMATION CONTAINED IN THIS FORM MUST BE CERTIFIED BY A RESPONSIBLE OFFICIAL AS DEFINED IN ADEM ADMINISTRATIVE RULE 335-6-6-.09 "SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS" (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."

"I FURTHER CERTIFY UNDER PENALTY OF LAW THAT THE RESULTS OF ANY ANALYSES REPORTED AS LESS THAN DETECTABLE IN THIS APPLICATION OR IN ATTACHMENTS THERETO WERE PERFORMED USING THE EPA APPROVED TEST METHOD HAVING THE LOWEST DETECTION LIMIT READILY ACHIEVABLE FOR THE SUBSTANCE TESTED."

SIGNATURE OF RESPONSIBLE OFFICIAL:  DATE SIGNED: 07/07/14  
(TYPE OR PRINT)

NAME OF RESPONSIBLE OFFICIAL: Joe Lee

OFFICIAL TITLE OF RESPONSIBLE OFFICIAL: Mayor Chairman of The Moody GUSC Board

MAILING ADDRESS: P.O. Box 730 Moody, Alabama 35004

AREA CODE & PHONE NUMBER: 205-640-0307

**SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS**

Responsible official is defined as follows:

1. 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
2. In the case of a partnership, by a general partner
3. In the case of a sole proprietorship, by the proprietor, or
4. In the case of a municipal, state, federal, or other public facility, by either a principal executive officer, or a ranking elected official.
5. In the case of a private or semi-public facility, the responsible official is either a principal executive officer or the owner of the corporation or other entity.



June 2, 2015

Mr. Dustin Stokes  
Municipal Section, Water Division  
Alabama Department of Environmental Management  
P. O. Box 301463  
Montgomery, AL 36130-1463

**RE: Highway 411 WWTP  
NPDES Permit No. AL0055255  
Moody Government Utility Service Corporation**

Dear Mr. Stokes:

Enclosed herein is a corrected version of the Anti-degradation Report for Moody Highway 411 WWTP. A calculation error was identified in the report sent to you previously.

If you have any questions please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Grady Parsons", is written over a horizontal line.

Grady Parsons, General Manager  
Living Water Services, LLC

Cc. David Treadwell, Moody GUSC  
File

Enclosure





CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

**-ALTERNATIVES ANALYSIS FOR HIGHWAY 411 WWTP**

**1.0 INTRODUCTION**

The City of Moody Governmental Utility Services Corporation is proposing a capacity expansion to the Highway 411 WWTP currently authorized for surface water discharge to the Little Cahaba River under Permit Number AL0055255. The plant is currently owned, operated and maintained by the City of Moody Governmental Utility Services Corporation. The existing plant is presently permitted to discharge 0.5 MGD. The approximate location of the current surface water discharge site is indicated on the attached USGS Quadrangle map. (See Exhibit 1).

The purpose for this request for capacity expansion while maintaining the existing surface water discharge is to provide wastewater treatment for several proposed, conceptual, and new developments in the area. The expanded capacity will provide for wastewater treatment and disposal for residential, commercial and industrial users in areas of St. Clair County, Alabama.

The treatment facility will be owned, operated, and maintained by the City of Moody Governmental Utility Services Corporation. The wastewater treatment facility will be increased to handle a design flow of 750,000 gallons per day. The existing surface water discharge location will remain. The proposed treatment levels are herein included in the permit application forms.

The treated effluent will discharge to the current surface water discharge location at the Little Cahaba River. The site located approximately 0.05 mile north of the Highway 411 WWTP.

In accordance with 40 CFR 131.12 and the Alabama Department of Environmental Management Administrative Code, Section 336-6-10-.04 for anti-degradation, the following report for the Highway 411 WWTP hereby submitted with Permit Application Form 188 to ADEM for comment and approval.

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

2.0 Alternative Analysis

2.1 ADEM Form 311

Attachment 1 to Supplementary Form ADEM Form 311

*Alternatives Analysis Applicant/Project: Highway 411 WWTP*

All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of ADEM's anti-degradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate "... that the proposed discharge is necessary for important economic or social development." As a part of this demonstration, the applicant must complete an evaluation of the discharge alternatives listed below, including a calculation of the total annualized project costs for each technically feasible alternative (using ADEM Form 312 for public-sector projects and ADEM Form 313 for private-sector projects). Alternatives with total annualized project costs that are less than 110% of the total annualized project costs for the Tier 2 discharge proposal are considered viable alternatives.

Alternative	Viable	Non-Viable	Comment
1 Land Application		X	
2 Pretreatment/Discharge to POTW		X	
3 Relocation of Discharge		X	
4 Reuse/Recycle		X	
5 Process/Treatment Alternatives		X	
6 On-site/Sub-surface Disposal		X	
7 Proposed Project	X		Capacity Expansion

Pursuant to ADEM Administrative Code Rule 335-6-3-.04, I certify on behalf of the applicant that I have completed an evaluation of the discharge alternatives identified above, and reached the conclusions indicated.

Signature: *[Handwritten Signature]*  
 (Professional Engineer) No. 32464

Date: 5/29/15



(Supporting documentation to be attached, referenced, or otherwise handled as appropriate.)



CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.0 ADEM FORM 313**

**3.01 LAND APPLICATION**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)		<u>\$ 2,250,000 (1)</u>
Interest rate for Financing (Expressed as a decimal)		<u>.06 (i)</u>
Time Period of Financing (Assume 10 years*)		<u>10 years (n)</u>
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$		<u>.136 (2)</u>
Annualized Capital Cost [Calculate: (1) x (2)]		<u>\$ 305,703 (3)</u>
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**		<u>\$ 100,000 (n)</u>

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

<u>\$ 405,703 (5)</u>
-----------------------

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

**3.02 PRETREATMENT/DISCHARGE TO POTW (SEE SUMMARY THAT FOLLOWS)**

The option of Pretreatment/Discharge to POTW has not been included as part of this analysis. The proximity to a POTW has precluded this option from further consideration.

**3.03 RELOCATION OF DISCHARGE**

The option of Relocation of Discharge has not been included as part of this analysis. The current discharge is the Little Cahaba River.

**3.04 REUSE/RECYCLE**

The option of Reuse/Recycle has not been included as part of this analysis. Currently the state of Alabama does not have regulations on the Reuse/Recycle of treated sanitary sewer unless the entire disposal area is inclusive within the NPDES permit.

**3.05 PUBLIC ACCESS REUSE**

The option of Public Access Reuse has not been included as part of this analysis. Currently the state of Alabama does not have regulations on the Reuse/Recycle of treated sanitary sewer unless the entire disposal area is inclusive within the NPDES permit.



CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.06 ON-SITE/SUB-SURFACE DISPOSAL**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	\$ <u>2,250,000</u> (1)
Interest rate for Financing (Expressed as a decimal)	.06 (i)
Time Period of Financing (Assume 10 years*)	<u>10 years</u> (n)
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$	<u>.136</u> (2)
Annualized Capital Cost [Calculate: (1) x (2)]	\$ <u>305,703</u> (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 100,000</u> (n)

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

\$ 405,703 (5)

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.07 PROPOSED PROJECT (CAPACITY EXPANSION)**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	\$	300,000	(1)
Interest rate for Financing (Expressed as a decimal)		.06	(i)
Time Period of Financing (Assume 10 years*)		10 years	(n)
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$		.136	(2)
Annualized Capital Cost [Calculate: (1) x (2)]	\$	40,761	(3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	\$	25,000	(n)

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

**\$ 65,761 (5)**

\* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.

\*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

#### 4.0 SUMMARY

The Highway 411 WWTP is located in St. Clair County in the City of Moody. An increased ability for treatment would significantly benefit the Town of Moody's potential growth that may occur in the region.

The analysis of alternatives was based on several assumptions. We will discuss the methodology and assumptions, which went into the cost analysis for each alternative in this section.

The cost analysis for the proposed project is included as Part 3.07 *Proposed Project (Capacity Expansion – Highway 411 WWTP)*. The capital costs were based on typical \$/gallon treatment cost values for secondary treatment and estimated lengths of piping for the collection system multiplied by the respected current installation costs for gravity sewer installation. The operation and maintenance costs were estimated on the experience of the City of Moody Governmental Utility Services Corporation with the costs associated with other similar systems they own and operate. We anticipate the capacity addition to be built in one phase.

Option 3.01 Land Application was considered for this application. Highway 411 WWTP currently utilizes surface discharge at the Little Cahaba River, therefore in order to use land application the City of Moody Governmental Utility Services Corporation would need to acquire additional property. The current property surrounding the Highway 411 WWTP has been developed into residential subdivisions. The current property and NPDES permit does not allow for land discharge. In order to use land application the City of Moody Governmental Utility Services Corporation would have to acquire additional property and the proper NPDES permit. The proximity of available property, cost of acquiring the property, installing the necessary force main and spray fields, and other costs associated with the construction make this option economically infeasible.

The option of pretreatment and discharge to POTW (Part 3.02) has not been included as part of this analysis. The proximity to a POTW has precluded this option from further consideration.

The option of Relocation of Discharge (Part 3.03) has not been included as part of this analysis. Currently Highway 411 WWTP discharges to the Little Cahaba River, which they will maintain.

The option of Reuse/Recycle (Part 3.04) has not been included as part of this analysis. Currently the state of Alabama does not have regulations on discharging for the purpose of reuse/recycle unless the entire disposal area is inclusive within the NPDES permit.

The option of Public Access Reuse (Part 3.05) has not been included as part of this analysis. This option is essentially similar to alternative Part 3.04 and the state of Alabama does not currently have regulations on discharging for the purpose of reuse unless the entire disposal area is inclusive within the NPDES permit.

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

Two essentially similar options are Part 3.01 Land Application and Part 3.06 On-Site/Subsurface disposal. Both options will require the same level of treatment, storage and permitting. As previously discussed, there are several limitations with applying treated wastewater to the existing property. Therefore this option has been eliminated from consideration.

The option of maintaining the surface water discharge location to the Little Cahaba River and by adding a RAS line to the existing aerated emergency holding basin the existing holding basin can be converted to an additional aeration basin. By making these changes the capacity at the Highway 411 plant will increase from 500,000 gpd to 750,000 gpd. This option has been selected as the best option for this system. The treatment system will be a biological waste treatment plant that consists of six basic parts:

1. Preliminary Treatment (Head works)
2. Aeration Basins
3. Final Clarifiers
4. Tertiary Filters
5. Disinfection/Ultra Violet
6. Aerobic Holding/Digester/Sludge Dewatering

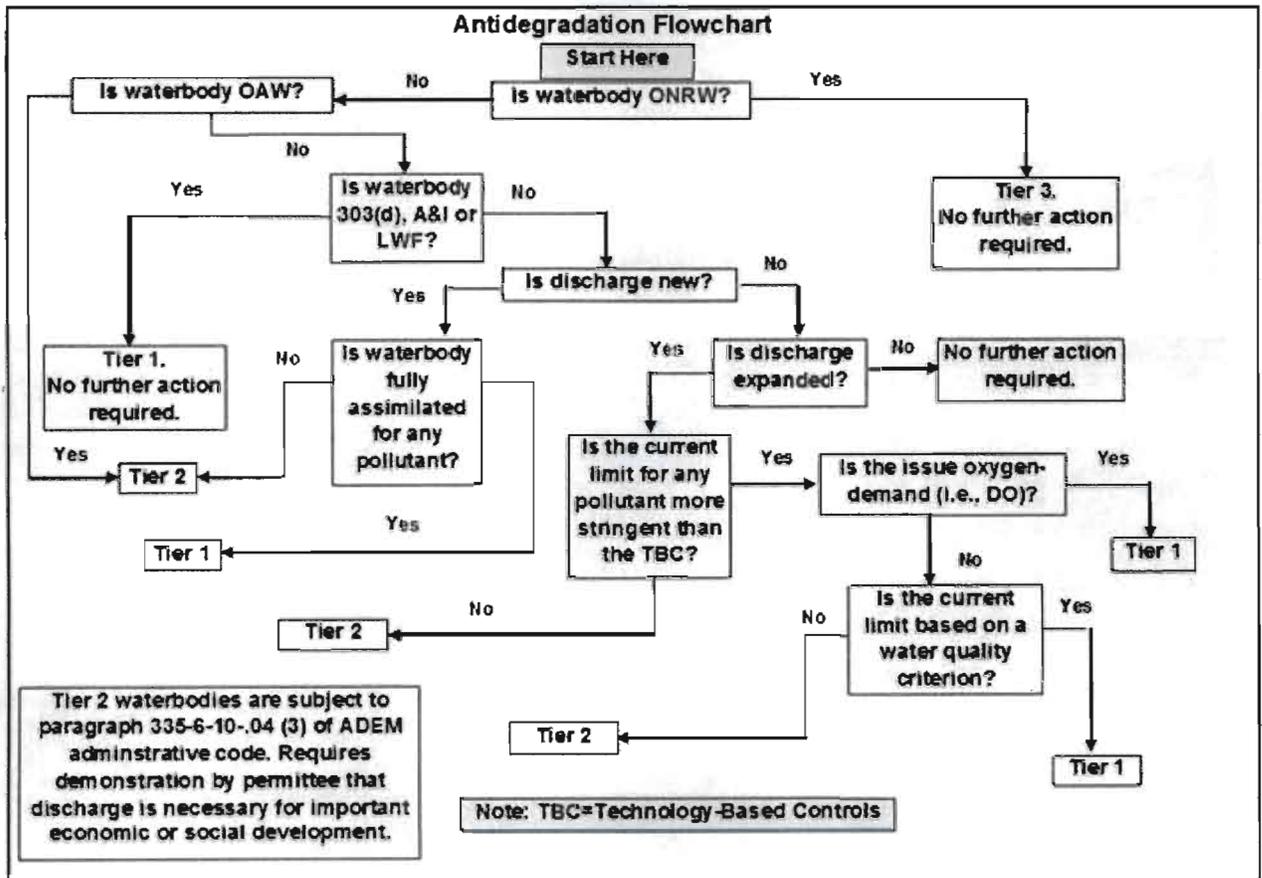
The purpose of the headworks is to meter the incoming flow of wastewater and remove large solids and materials that could damage or cause excessive wear to plant equipment following the headworks. Next, wastewater enters the Aeration Basins, where it is mixed with microorganisms (sludge) and aerated for a given period of time. This process is called activated sludge and will help stabilize the organic matter and to remove nutrients such as nitrogen. Combined sludge and water (Mixed Liquor) flows from the Aeration Basins into the Final Clarifiers for separation. In the Clarifiers, sludge is allowed to settle for returning to the Aeration Basins. Returned sludge is mixed with more raw sewage to repeat the process. Water separated from Mixed Liquor flow over a weir and into the Tertiary Filters and then to the Disinfection/Ultra Violet chamber. The purpose of the Ultra Violet chamber is disinfection of filtered wastewater so the effluent from this plant will not present a health hazard to those who are down stream of the discharge. A Sludge holding tank (or aerobic digester) is used to hold excess sludge that must be occasionally removed from the Clarifier to maintain a suitable degree of treatment.

**Stokes, Dustin A**

**From:** Delgado, Jessica J  
**Sent:** Monday, January 11, 2016 4:24 PM  
**To:** Stokes, Dustin A  
**Subject:** RE: Highway 411 Tier AL0055255

I'm not sure why the 2009 WLA classified waterbody as tier II. I think it might have been a mistake since they didn't check the antidegradation box. If it is a tier II antidegradation must be checked. Little Cahaba River at Moody's Outfall It is a tier I stream. Please refer to flowchart. They Let me know if you have questions.

**Figure 4**



Jessica Delgado  
Environmental Engineering Specialist, Senior  
Water Quality Branch  
Alabama Department of Environmental Management  
Phone: (334) 271-7842  
E-mail: [jdelgado@adem.state.al.us](mailto:jdelgado@adem.state.al.us)



Mission: Assure for all citizens of the state a safe, healthful and productive environment

**From:** Stokes, Dustin A  
**Sent:** Monday, January 11, 2016 3:20 PM

**To:** Delgado, Jessica J

**Subject:** Highway 411 Tier AL0055255

Jessica,

The 2009 WLA had the Little Cahaba River at Moody's Outfall as a Tier II stream, but the latest WLAs you gave me has it as a Tier I stream. Could you tell me why and when it changed?

Thanks,

Dustin



May 22, 201

Mr. Dustin Stokes  
Municipal Section, Water Division  
Alabama Department of Environmental Management  
P. O. Box 301463  
Montgomery, AL 36130-1463

**RE: Highway 411 WWTP  
NPDES Permit No. AL0055255  
Moody Government Utility Service Corporation**

Dear Mr. Stokes:

Enclosed herein is the requested anti-degradation report for the permit modification application for the Moody Highway 411 WWTP.

If you have any questions please feel free to contact me.

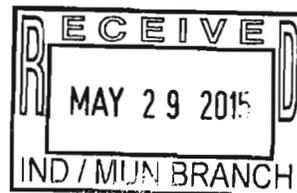
Sincerely,

A handwritten signature in black ink, appearing to read "Grady Parsons", is written over a light gray rectangular background.

Grady Parsons, General Manager  
Living Water Services, LLC

Cc. David Treadwell, Moody GUSC  
File

Enclosure





CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

**ALTERNATIVES ANALYSIS FOR HIGHWAY 411 WWTP**

**1.0 INTRODUCTION**

The City of Moody Governmental Utility Services Corporation is proposing a capacity expansion to the Highway 411 WWTP currently authorized for surface water discharge to the Little Cahaba River under Permit Number AL0055255. The plant is currently owned, operated and maintained by the City of Moody Governmental Utility Services Corporation. The existing plant is presently permitted to discharge 0.5 MGD. The approximate location of the current surface water discharge site is indicated on the attached USGS Quadrangle map. (See Exhibit 1).

The purpose for this request for capacity expansion while maintaining the existing surface water discharge is to provide wastewater treatment for several proposed, conceptual, and new developments in the area. The expanded capacity will provide for wastewater treatment and disposal for residential, commercial and industrial users in areas of St. Clair County, Alabama.

The treatment facility will be owned, operated, and maintained by the City of Moody Governmental Utility Services Corporation. The wastewater treatment facility will be increased to handle a design flow of 750,000 gallons per day. The existing surface water discharge location will remain. The proposed treatment levels are herein included in the permit application forms.

The treated effluent will discharge to the current surface water discharge location at the Little Cahaba River. The site located approximately 0.05 mile north of the Highway 411 WWTP.

In accordance with 40 CFR 131.12 and the Alabama Department of Environmental Management Administrative Code, Section 336-6-10-.04 for anti-degradation, the following report for the Highway 411 WWTP hereby submitted with Permit Application Form 188 to ADEM for comment and approval.

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**2.0 Alternative Analysis**

**2.1 ADEM Form 311**

**Attachment 1 to Supplementary Form ADEM Form 311**

*Alternatives Analysis Applicant/Project: Highway 411 WWTP*

All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of ADEM's anti-degradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate "... that the proposed discharge is necessary for important economic or social development." As a part of this demonstration, the applicant must complete an evaluation of the discharge alternatives listed below, including a calculation of the total annualized project costs for each technically feasible alternative (using ADEM Form 312 for public-sector projects and ADEM Form 313 for private-sector projects). Alternatives with total annualized project costs that are less than 110% of the total annualized project costs for the Tier 2 discharge proposal are considered viable alternatives.

Alternative	Viable	Non-Viable	Comment
1 Land Application		X	
2 Pretreatment/Discharge to POTW		X	
3 Relocation of Discharge		X	
4 Reuse/Recycle		X	
<b>5 Process/Treatment Alternatives</b>		X	
<b>6 On-site/Sub-surface Disposal</b>		X	
7 Proposed Project	X		Capacity Expansion

Pursuant to ADEM Administrative Code Rule 335-6-3-.04, I certify on behalf of the applicant that I have completed an evaluation of the discharge alternatives identified above, and reached the conclusions indicated.

Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_



(Supporting documentation to be attached, referenced, or otherwise handled as appropriate.)



CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.0 ADEM FORM 313**

**3.01 LAND APPLICATION**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	<u>\$ 2,250,000</u>	(1)
Interest rate for Financing (Expressed as a decimal)	<u>.06</u>	(i)
Time Period of Financing (Assume 10 years*)	<u>10 years</u>	(n)
Annualization Factor = $\frac{i}{(1+i)^{10}-1} + i$	<u>.0955</u>	(2)
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 214,906</u>	(3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 100,000</u>	(n)

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

\$ 314,906 (5)

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

### **3.02 PRETREATMENT/DISCHARGE TO POTW (SEE SUMMARY THAT FOLLOWS)**

The option of Pretreatment/Discharge to POTW has not been included as part of this analysis. The proximity to a POTW has precluded this option from further consideration.

### **3.03 RELOCATION OF DISCHARGE**

The option of Relocation of Discharge has not been included as part of this analysis. The current discharge is the Little Cahaba River.

### **3.04 REUSE/RECYCLE**

The option of Reuse/Recycle has not been included as part of this analysis. Currently the state of Alabama does not have regulations on the Reuse/Recycle of treated sanitary sewer unless the entire disposal area is inclusive within the NPDES permit.

### **3.05 PUBLIC ACCESS REUSE**

The option of Public Access Reuse has not been included as part of this analysis. Currently the state of Alabama does not have regulations on the Reuse/Recycle of treated sanitary sewer unless the entire disposal area is inclusive within the NPDES permit.

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.06 ON-SITE/SUB-SURFACE DISPOSAL**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	<u>\$ 2,250,000 (1)</u>
Interest rate for Financing (Expressed as a decimal)	<u>.06 (i)</u>
Time Period of Financing (Assume 10 years*)	<u>10 years (n)</u>
Annualization Factor = $\frac{i}{(1+i)^{10}-1} + i$	<u>.0955 (2)</u>
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 214,906 (3)</u>
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 100,000 (n)</u>

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

\$ 314,906 (5)

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).



CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.07 PROPOSED PROJECT (CAPACITY EXPANSION)**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	\$ 300,000 (1)
Interest rate for Financing (Expressed as a decimal)	.06 (i)
Time Period of Financing (Assume 10 years*)	10 years (n)
Annualization Factor = $\frac{i}{(1+i)^{10}-1} + i$	.0955 (2)
Annualized Capital Cost [Calculate: (1) x (2)]	\$ 28,655 (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	\$ 25,000 (n)

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

\$ 53,655 (5)
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\* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.

\*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

#### 4.0 SUMMARY

The Highway 411 WWTP is located in St. Clair County in the City of Moody. An increased ability for treatment would significantly benefit the Town of Moody's potential growth that may occur in the region.

The analysis of alternatives was based on several assumptions. We will discuss the methodology and assumptions, which went into the cost analysis for each alternative in this section.

The cost analysis for the proposed project is included as Part 3.07 *Proposed Project (Capacity Expansion – Highway 411 WWTP)*. The capital costs were based on typical \$/gallon treatment cost values for secondary treatment and estimated lengths of piping for the collection system multiplied by the respected current installation costs for gravity sewer installation. The operation and maintenance costs were estimated on the experience of the City of Moody Governmental Utility Services Corporation with the costs associated with other similar systems they own and operate. We anticipate the capacity addition to be built in one phase.

Option 3.01 Land Application was considered for this application. Highway 411 WWTP currently utilizes surface discharge at the Little Cahaba River, therefore in order to use land application the City of Moody Governmental Utility Services Corporation would need to acquire additional property. The current property surrounding the Highway 411 WWTP has been developed into residential subdivisions. The current property and NPDES permit does not allow for land discharge. In order to use land application the City of Moody Governmental Utility Services Corporation would have to acquire additional property and the proper NPDES permit. The proximity of available property, cost of acquiring the property, installing the necessary force main and spray fields, and other costs associated with the construction make this option economically infeasible.

The option of pretreatment and discharge to POTW (Part 3.02) has not been included as part of this analysis. The proximity to a POTW has precluded this option from further consideration.

The option of Relocation of Discharge (Part 3.03) has not been included as part of this analysis. Currently Highway 411 WWTP discharges to the Little Cahaba River, which they will maintain.

The option of Reuse/Recycle (Part 3.04) has not been included as part of this analysis. Currently the state of Alabama does not have regulations on discharging for the purpose of reuse/recycle unless the entire disposal area is inclusive within the NPDES permit.

The option of Public Access Reuse (Part 3.05) has not been included as part of this analysis. This option is essentially similar to alternative Part 3.04 and the state of Alabama does not currently have regulations on discharging for the purpose of reuse unless the entire disposal area is inclusive within the NPDES permit.

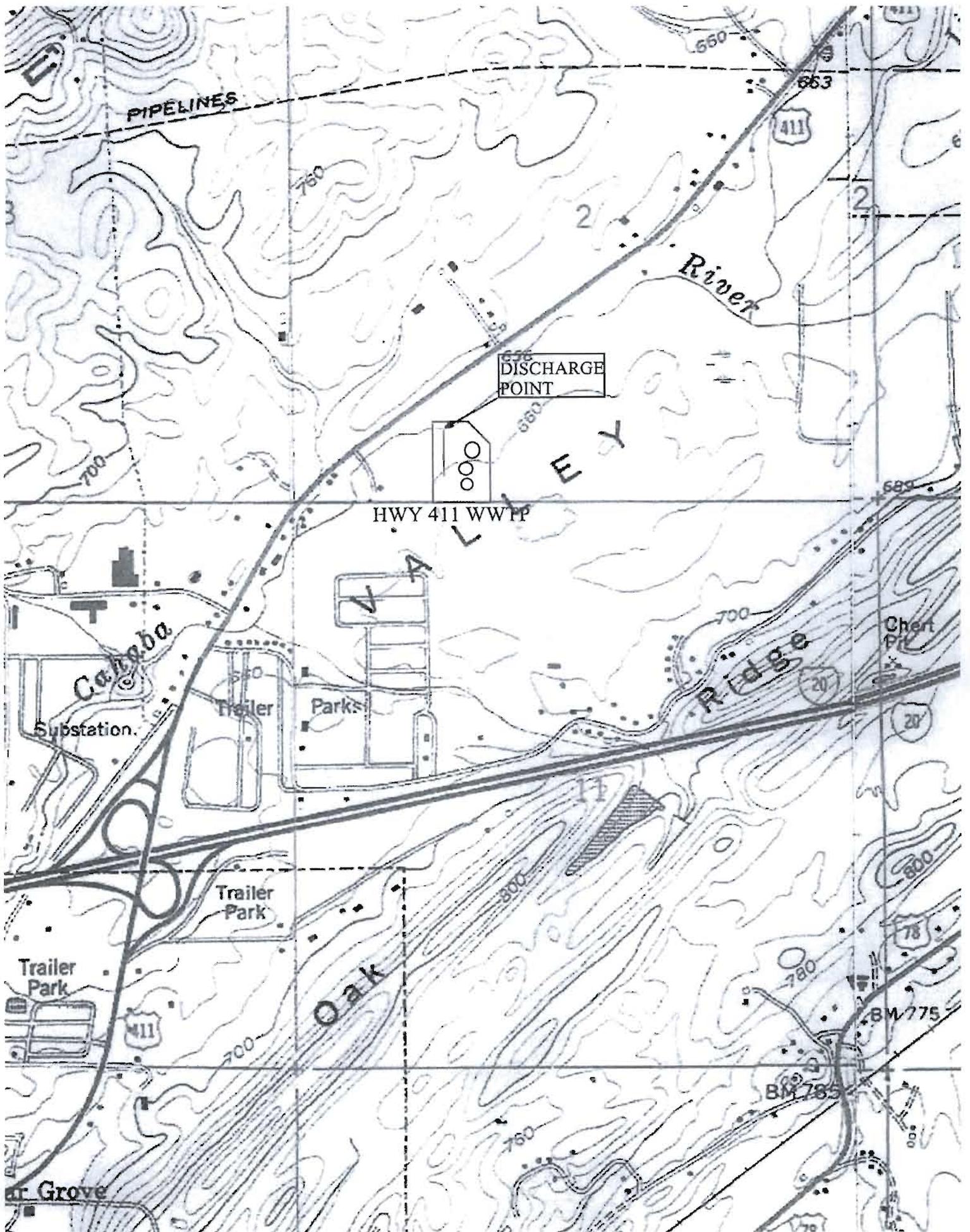
CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

Two essentially similar options are Part 3.01 Land Application and Part 3.06 On-Site/Subsurface disposal. Both options will require the same level of treatment, storage and permitting. As previously discussed, there are several limitations with applying treated wastewater to the existing property. Therefore this option has been eliminated from consideration.

The option of maintaining the surface water discharge location to the Little Cahaba River and by adding a RAS line to the existing aerated emergency holding basin the existing holding basin can be converted to an additional aeration basin. By making these changes the capacity at the Highway 411 plant will increase from 500,000 gpd to 750,000 gpd. This option has been selected as the best option for this system. The treatment system will be a biological waste treatment plant that consists of six basic parts:

1. Preliminary Treatment (Head works)
2. Aeration Basins
3. Final Clarifiers
4. Tertiary Filters
5. Disinfection/Ultra Violet
6. Aerobic Holding/Digester/Sludge Dewatering

The purpose of the headworks is to meter the incoming flow of wastewater and remove large solids and materials that could damage or cause excessive wear to plant equipment following the headworks. Next, wastewater enters the Aeration Basins, where it is mixed with microorganisms (sludge) and aerated for a given period of time. This process is called activated sludge and will help stabilize the organic matter and to remove nutrients such as nitrogen. Combined sludge and water (Mixed Liquor) flows from the Aeration Basins into the Final Clarifiers for separation. In the Clarifiers, sludge is allowed to settle for returning to the Aeration Basins. Returned sludge is mixed with more raw sewage to repeat the process. Water separated from Mixed Liquor flow over a weir and into the Tertiary Filters and then to the Disinfection/Ultra Violet chamber. The purpose of the Ultra Violet chamber is disinfection of filtered wastewater so the effluent from this plant will not present a health hazard to those who are down stream of the discharge. A Sludge holding tank (or aerobic digester) is used to hold excess sludge that must be occasionally removed from the Clarifier to maintain a suitable degree of treatment.





CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

**ALTERNATIVES ANALYSIS FOR HIGHWAY 411 WWTP**

**1.0 INTRODUCTION**

The City of Moody Governmental Utility Services Corporation is proposing a capacity expansion to the Highway 411 WWTP currently authorized for surface water discharge to the Little Cahaba River under Permit Number AL0055255. The plant is currently owned, operated and maintained by the City of Moody Governmental Utility Services Corporation. The existing plant is presently permitted to discharge 0.5 MGD. The approximate location of the current surface water discharge site is indicated on the attached USGS Quadrangle map. (See Exhibit 1).

The purpose for this request for capacity expansion while maintaining the existing surface water discharge is to provide wastewater treatment for several proposed, conceptual, and new developments in the area. The expanded capacity will provide for wastewater treatment and disposal for residential, commercial and industrial users in areas of St. Clair County, Alabama.

The treatment facility will be owned, operated, and maintained by the City of Moody Governmental Utility Services Corporation. The wastewater treatment facility will be increased to handle a design flow of 750,000 gallons per day. The existing surface water discharge location will remain. The proposed treatment levels are herein included in the permit application forms.

The treated effluent will discharge to the current surface water discharge location at the Little Cahaba River. The site located approximately 0.05 mile north of the Highway 411 WWTP.

In accordance with 40 CFR 131.12 and the Alabama Department of Environmental Management Administrative Code, Section 336-6-10-.04 for anti-degradation, the following report for the Highway 411 WWTP hereby submitted with Permit Application Form 188 to ADEM for comment and approval.



CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

2.0 Alternative Analysis

2.1 ADEM Form 311

Attachment 1 to Supplementary Form ADEM Form 311

*Alternatives Analysis Applicant/Project: Highway 411 WWTP*

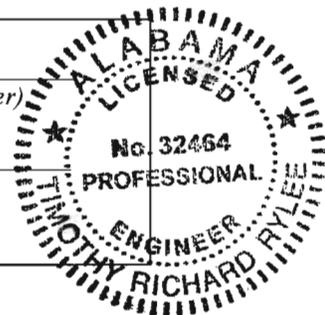
All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of ADEM's anti-degradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate "... that the proposed discharge is necessary for important economic or social development." As a part of this demonstration, the applicant must complete an evaluation of the discharge alternatives listed below, including a calculation of the total annualized project costs for each technically feasible alternative (using ADEM Form 312 for public-sector projects and ADEM Form 313 for private-sector projects). Alternatives with total annualized project costs that are less than 110% of the total annualized project costs for the Tier 2 discharge proposal are considered viable alternatives.

Alternative	Viable	Non-Viable	Comment
1 Land Application		X	
2 Pretreatment/Discharge to POTW		X	
3 Relocation of Discharge		X	
4 Reuse/Recycle		X	
5 Process/Treatment Alternatives		X	
6 On-site/Sub-surface Disposal		X	
7 Proposed Project	X		Capacity Expansion

*Pursuant to ADEM Administrative Code Rule 335-6-3-.04, I certify on behalf of the applicant that I have completed an evaluation of the discharge alternatives identified above, and reached the conclusions indicated.*

Signature: \_\_\_\_\_  
 (Professional Engineer)

Date: 6/9/15



*(Supporting documentation to be attached, referenced, or otherwise handled as appropriate.)*

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.0 ADEM FORM 313**

**3.01 LAND APPLICATION**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)		<u>\$ 2,250,000</u> (1)
Interest rate for Financing (Expressed as a decimal)		<u>.06</u> (i)
Time Period of Financing (Assume 10 years*)		<u>10 years</u> (n)
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$		<u>.136</u> (2)
Annualized Capital Cost [Calculate: (1) x (2)]		<u>\$ 305,703</u> (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**		<u>\$ 100,000</u> (n)
 <b>Total Annual Cost of Pollution Control Project [ (3) + (4) ]</b>		<u>\$ 405,703</u> (5)

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.02 PRETREATMENT/DISCHARGE TO POTW (SEE SUMMARY THAT FOLLOWS)**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	<u>\$ 16,250,000 (1)</u>
Interest rate for Financing (Expressed as a decimal)	<u>.06 (i)</u>
Time Period of Financing (Assume 10 years*)	<u>10 years (n)</u>
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$	<u>.136 (2)</u>
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 2,207,855 (3)</u>
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 200,000 (n)</u>

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

<u>\$ 2,407,855 (5)</u>
-------------------------

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.03 RELOCATION OF DISCHARGE**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	<u>\$ 8,250,000 (1)</u>
Interest rate for Financing (Expressed as a decimal)	<u>.06 (i)</u>
Time Period of Financing (Assume 10 years*)	<u>10 years (n)</u>
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$	<u>.136 (2)</u>
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 1,120,911 (3)</u>
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 150,000 (n)</u>

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

\$ 1,270,911 (5)

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

**3.04 REUSE/RECYCLE**

The option of Reuse/Recycle has not been included as part of this analysis. Currently the state of Alabama does not have regulations on the Reuse/Recycle of treated sanitary sewer unless the entire disposal area is inclusive within the NPDES permit.

**3.05 PUBLIC ACCESS REUSE**

The option of Public Access Reuse has not been included as part of this analysis. Currently the state of Alabama does not have regulations on the Reuse/Recycle of treated sanitary sewer unless the entire disposal area is inclusive within the NPDES permit.



CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.06 ON-SITE/SUB-SURFACE DISPOSAL**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	<u>\$ 2,250,000 (1)</u>
Interest rate for Financing (Expressed as a decimal)	<u>.06 (i)</u>
Time Period of Financing (Assume 10 years*)	<u>10 years (n)</u>
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$	<u>.136 (2)</u>
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 305,703 (3)</u>
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 100,000 (n)</u>

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

<u>\$ 405,703 (5)</u>
-----------------------

- \* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
- \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
 HIGHWAY 411 WWTP  
 ANTI-DEGRADATION REPORT

**3.07 PROPOSED PROJECT (CAPACITY EXPANSION)**

**Attachment 3 to Supplementary  
 Form ADEM Form 313  
 Calculation of Total Annualized Project Costs  
 for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	\$ 300,000 (1)
Interest rate for Financing (Expressed as a decimal)	.06 (i)
Time Period of Financing (Assume 10 years*)	10 years (n)
Annualization Factor = $\frac{i}{((1+i)^{(10)})-1} + i$	.136 (2)
Annualized Capital Cost [Calculate: (1) x (2)]	\$ 40,761 (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	\$ 25,000 (n)

**Total Annual Cost of Pollution Control Project [ (3) + (4) ]**

\$ 65,761 (5)

\* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.  
 \*\* For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

#### 4.0 SUMMARY

The Highway 411 WWTP is located in St. Clair County in the City of Moody. An increased ability for treatment would significantly benefit the Town of Moody's potential growth that may occur in the region.

The analysis of alternatives was based on several assumptions. We will discuss the methodology and assumptions, which went into the cost analysis for each alternative in this section.

The cost analysis for the proposed project is included as Part 3.07 *Proposed Project (Capacity Expansion – Highway 411 WWTP)*. The capital costs were based on typical \$/gallon treatment cost values for secondary treatment and estimated lengths of piping for the collection system multiplied by the respected current installation costs for gravity sewer installation. The operation and maintenance costs were estimated on the experience of the City of Moody Governmental Utility Services Corporation with the costs associated with other similar systems they own and operate. We anticipate the capacity addition to be built in one phase.

Option 3.01 Land Application was considered for this application. Highway 411 WWTP currently utilizes surface discharge at the Little Cahaba River, therefore in order to use land application the City of Moody Governmental Utility Services Corporation would need to acquire additional property. The current property surrounding the Highway 411 WWTP has been developed into residential subdivisions. The current property and NPDES permit does not allow for land discharge. In order to use land application the City of Moody Governmental Utility Services Corporation would have to acquire additional property and the proper NPDES permit. The proximity of available property, cost of acquiring the property, installing the necessary force main and spray fields, and other costs associated with the construction make this option economically infeasible.

Option 3.02 Pretreatment/Discharge to POTW was considered for this application. Highway 411 WWTP currently utilizes surface discharge at the Little Cahaba River, therefore in order to use pretreatment/discharge to POTW the City of Moody Governmental Utility Services Corporation would need to acquire R.O.W., install pumping stations, install piping, impact fees, and engineering fees. The cost and the proximity to a POTW have precluded this option from further consideration.

Option 3.03 Relocation of Discharge was considered for this application. Currently Highway 411 WWTP discharges to the Little Cahaba River, which is located on the Highway 411 WWTP property. Therefore in order to relocate the discharge the City of Moody Governmental Utility Services Corporation would need to acquire R.O.W., install pumping stations, install piping, and engineering fees. The cost to relocate the discharge location has precluded this option from further consideration. The Highway 411 WWTP will maintain the current outfall.

CITY OF MOODY GOVERNMENTAL UTILITY SERVICES CORPORATION  
HIGHWAY 411 WWTP  
ANTI-DEGRADATION REPORT

Option 3.04 Reuse/Recycle has not been included as part of this analysis. Currently the state of Alabama does not have regulations on discharging for the purpose of reuse/recycle unless the entire disposal area is inclusive within the NPDES permit.

Option 3.05 Public Access Reuse has not been included as part of this analysis. This option is essentially similar to alternative Part 3.04 and the state of Alabama does not currently have regulations on discharging for the purpose of reuse unless the entire disposal area is inclusive within the NPDES permit.

Two essentially similar options are Part 3.01 Land Application and Part 3.06 On-Site/Subsurface disposal. Both options will require the same level of treatment, storage and permitting. As previously discussed, there are several limitations with applying treated wastewater to the existing property. Therefore this option has been eliminated from consideration.

The option of maintaining the surface water discharge location to the Little Cahaba River and by adding a RAS line to the existing aerated emergency holding basin the existing holding basin can be converted to an additional aeration basin. By making these changes the capacity at the Highway 411 plant will increase from 500,000 gpd to 750,000 gpd. This option has been selected as the best option for this system. The treatment system will be a biological waste treatment plant that consists of six basic parts:

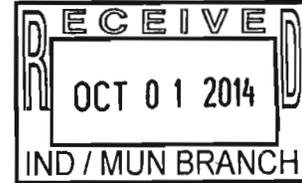
1. Preliminary Treatment (Head works)
2. Aeration Basins
3. Final Clarifiers
4. Tertiary Filters
5. Disinfection/Ultra Violet
6. Aerobic Holding/Digester/Sludge Dewatering

The purpose of the headworks is to meter the incoming flow of wastewater and remove large solids and materials that could damage or cause excessive wear to plant equipment following the headworks. Next, wastewater enters the Aeration Basins, where it is mixed with microorganisms (sludge) and aerated for a given period of time. This process is called activated sludge and will help stabilize the organic matter and to remove nutrients such as nitrogen. Combined sludge and water (Mixed Liquor) flows from the Aeration Basins into the Final Clarifiers for separation. In the Clarifiers, sludge is allowed to settle for returning to the Aeration Basins. Returned sludge is mixed with more raw sewage to repeat the process. Water separated from Mixed Liquor flow over a weir and into the Tertiary Filters and then to the Disinfection/Ultra Violet chamber. The purpose of the Ultra Violet chamber is disinfection of filtered wastewater so the effluent from this plant will not present a health hazard to those who are down stream of the discharge. A Sludge holding tank (or aerobic digester) is used to hold excess sludge that must be occasionally removed from the Clarifier to maintain a suitable degree of treatment.



September 29, 2014

Mr. Dustin Stokes  
Municipal Section  
Industrial/Municipal Branch  
Water Division  
Alabama Department of Environmental Management  
Post Office Box 301463  
Montgomery, Alabama 36130-1463



**Subject: Highway 411 Moody WWTP  
Moody, Alabama  
NPDES Permit No. AL0055255**

Dear Mr. Stokes:

Per your request, please find attached the following information related to the Moody Highway 411 WWTP:

1. Sketch/schematic of the existing facility.
2. Carr and Associates Drawing No. 78.01-02 "Process Schematic and Hydraulic Profile" – Note that this drawing indicates that the High Water Level ("HWL") shown on the Hydraulic Profile is calculated based on 1.5 MGD through each oxidation ditch. This indicates that the single train processes and structures (Influent Pumping Station, Screening Structure, Tertiary Filters, and Ultraviolet Disinfection) are capable of handling 3.0 MGD hydraulically; and the dual train processes and structures (Aeration Basins and Clarifiers) are capable of handling 1.5 MGD hydraulically.

From the above information and additional review of the original plant design, we remain comfortable that the Highway 411 Moody WWTP can treat up to 750,000 gallons per day on an extended basis.

If you have any questions or need any additional information, please give us a call at (205)733-9696.

Sincerely,  
InSite Engineering, LLC

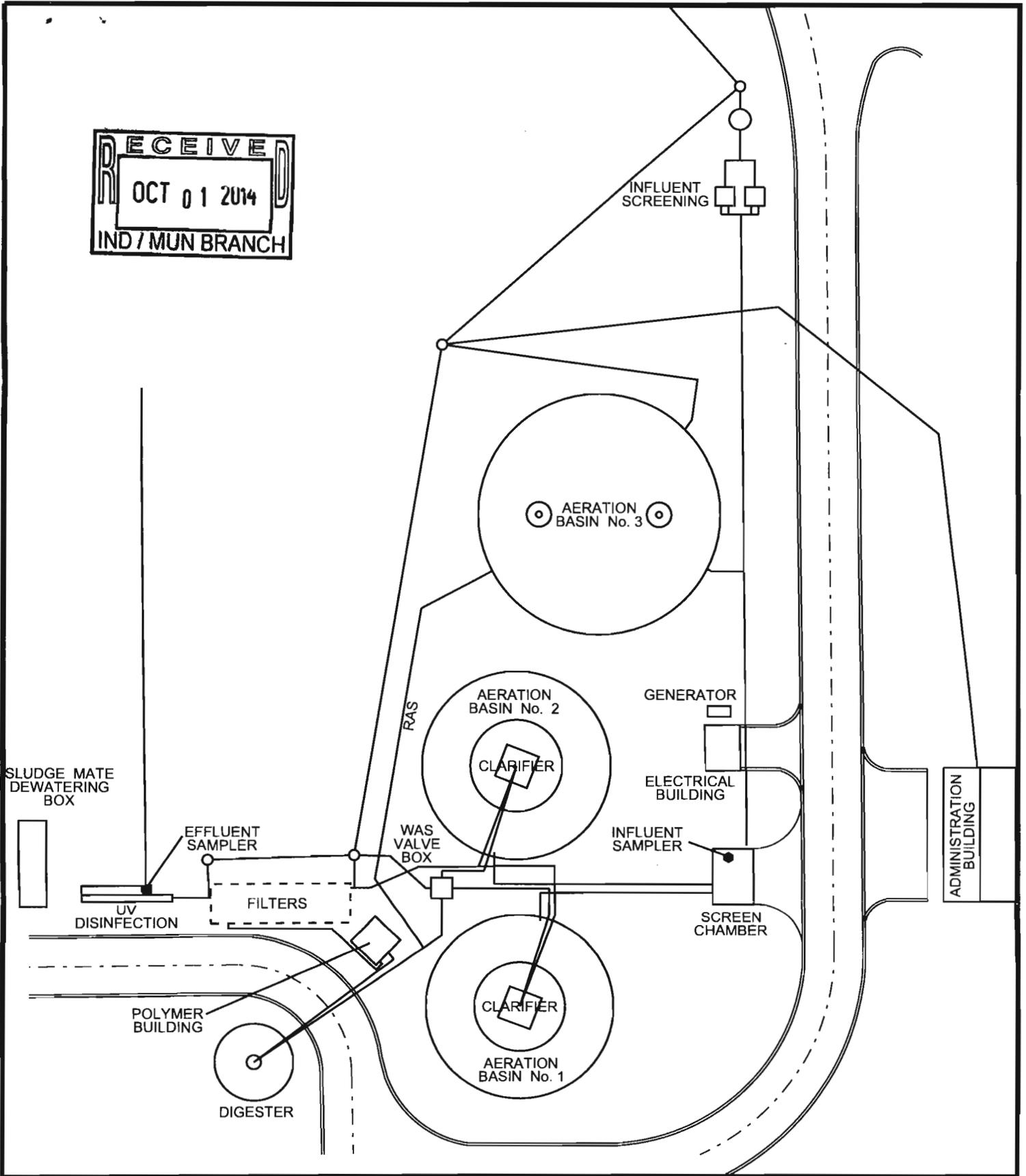
A handwritten signature in blue ink, appearing to read "BKP", with a long horizontal stroke extending to the right.

Bryan K. Pate, P.E.  
Principal

Attachments: As noted

Copy: David Treadwell, Moody GUSC  
Grady Parsons, Living Water Services  
InSite File: LWS/LWU Moody GUSC

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OCT 01 2014  
IND / MUN BRANCH



**LWS**

LIVING WATER SERVICES

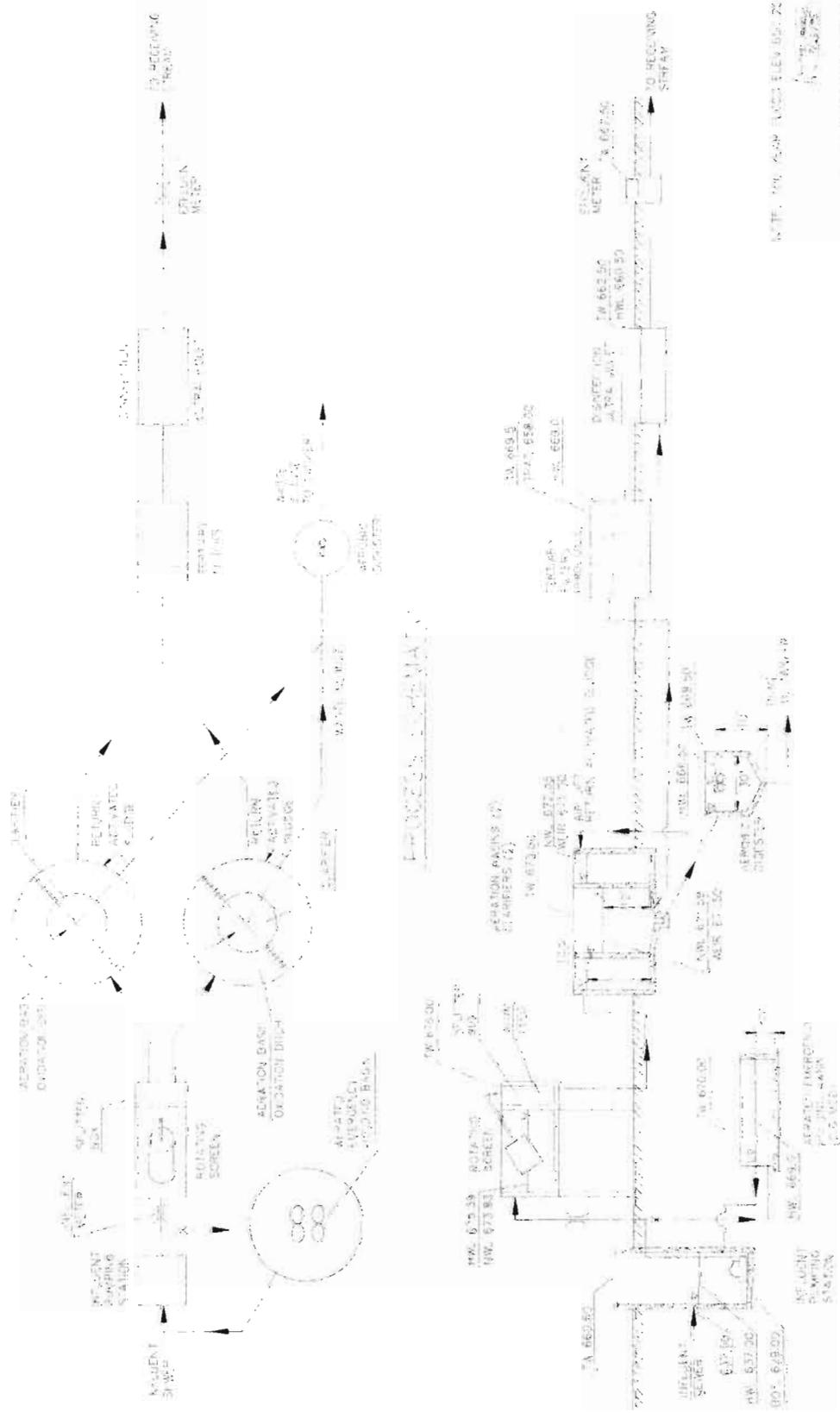
5800 Feldspar Way - Suite 200  
Hoover, Alabama 35244  
Office (205) 985-2113  
Fax (205) 733-9697

MOODY  
WWTP

PLANT SCHEMATIC

NPDES PERMIT No. AL0055255

SI-1



PROCESS SCHEMATIC

NOTE: THE SEWER FLOOD ELEV. IS 72'

The WATER WORKS and SEWER BOARD  
of the CITY of BRIMMINGHAM

DESIGNED BY: INVESTIGATION REPORT BOARD  
DRAWN BY: C. J. BROWN  
CHECKED BY: J. L. BROWN  
DATE: 11/1/72

PROCESS SCHEMATIC AND HYDRAULIC PROFILE

SCALE: 1" = 100' HORIZ. 1" = 10' VERT.

DATE: 11/1/72

PROJECT: 78-01-02

DATE: 11/1/72

PROJECT: 78-01-02

SCALE: 1" = 100' HORIZ. 1" = 10' VERT.

DATE: 11/1/72

PROJECT: 78-01-02



February 6, 2015

Mr. Dustin Stokes  
Municipal Section  
Industrial/Municipal Branch  
Water Division  
Alabama Department of Environmental Management  
Post Office Box 301463  
Montgomery, Alabama 36130-1463

**Subject: Highway 411 Moody WWTP  
Moody, Alabama  
NPDES Permit No. AL0055255**

Dear Mr. Stokes:

Please allow us to offer the following clarification to our letter of February 2, 2015:

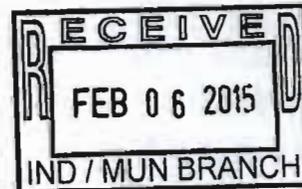
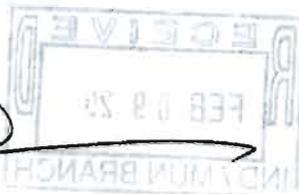
Per the manufacturer's literature, the ultraviolet disinfection basin at the Highway 411 Moody WWTP was originally designed for 1.5 MGD. However, the current facility includes only one of the two banks that the original design included. Therefore the actual capacity of the ultraviolet disinfection process at the Moody WWTP is 750,000 gallons per day. This is the limiting process at the plant.

If you have any questions or need any additional information, please give us a call at (205)733-9696.

Sincerely,  
InSite Engineering, LLC

A handwritten signature in black ink, appearing to read "Bryan K. Pate".

Bryan K. Pate, P.E.  
Principal



Copy: David Treadwell, Moody GUSC  
Grady Parsons, Living Water Services  
InSite File: LWS/LWU Moody GUSC



February 2, 2015

Mr. Dustin Stokes  
Municipal Section  
Industrial/Municipal Branch  
Water Division  
Alabama Department of Environmental Management  
Post Office Box 301463  
Montgomery, Alabama 36130-1463

**Subject: Highway 411 Moody WWTP  
Moody, Alabama  
NPDES Permit No. AL0055255**

Dear Mr. Stokes:

Per your request, please find the additional information related to the design capacities of each treatment unit at the Moody Highway 411 WWTP. This information is based on the original design drawings prepared by Carr and Associates and the Operations and Maintenance Manual at the site:

1. Fine Screen (Currently Out of Service) – 1.5 MGD (The Owner is in the process of installing a new influent screen with a hydraulic capacity in excess of 30MGD)
2. Oxidation Ditches – 1.1 MGD
3. Clarifiers – 1.50 MGD
4. Tertiary Filters – 1.50 MGD
5. Ultraviolet Disinfection – 1.50 MGD

From the above information and additional review of the original plant design, we remain comfortable that the Highway 411 Moody WWTP can treat up to 750,000 gallons per day on an extended basis.

If you have any questions or need any additional information, please give us a call at (205)733-9696.

Sincerely,  
InSite Engineering, LLC

A handwritten signature in black ink, appearing to read 'B. Pate', written over a horizontal line.

Bryan K. Pate, P.E.  
Principal

Attachments: As noted

Copy: David Treadwell, Moody GUSC  
Grady Parsons, Living Water Services  
InSite File: LWS/LWU Moody GUSC

5800 Feldspar Way  
Hoover, Alabama 35244

Phone 205.733-9696  
Fax 205.733-9697

[www.insiteengineering.org](http://www.insiteengineering.org)