LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
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Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

JUL 29 2020

David Denard, Director
Jefferson County Commission
716 Richard Arrington Jr. Blvd. N, Suite A300
Birmingham, AL 35203

RE: Draft Permit
NPDES Permit No. AL0026913
Five Mile Creek WRF
Jefferson County, Alabama

Dear Mr. Denard:

Transmitted herein is a draft of the referenced permit.

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

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

Please be aware that Part I.C.1.c of your permit requires that you apply for participation in the Department's web-based Electronic Environmental (E2) Reporting System Program for submittal of DMRs upon issuance of this permit unless valid justification as to why you cannot participate is submitted in writing. Please also be aware that Part I.C.2.e of your permit requires that you apply for participation in the Department's web-based electronic environmental (E2) reporting system for submittal of **SSOs** within 30 days of coverage under this permit unless valid justification as to why you cannot participate is submitted in writing. After issuance of the permit, SSO hotline notifications and hard copy Form 415 SSO reports may be used only with the written approval from the Department. The E2 Program allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. The Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes** or you may obtain a hard copy by submitting a written request or by emailing e2admin@adem.alabama.gov.

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

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

Should you have any questions, please contact the undersigned by email at dastokes@adem.alabama.gov 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

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

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

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

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

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: JEFFERSON COUNTY COMMISSION
716 RICHARD ARRINGTON JR. BLVD. N, SUITE A300
BIRMINGHAM, ALABAMA 35203

FACILITY LOCATION: FIVE MILE CREEK WRF (30 MGD)
3410 HAPPY HOLLOW LANE
FULTONDALE, ALABAMA
JEFFERSON COUNTY

PERMIT NUMBER: AL0026913

RECEIVING WATERS: FIVEMILE CREEK

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

Draft

Alabama Department of Environmental Management

MUNICIPAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

PART I

PART II

TABLE OF CONTENTS

ATTACHMENT:
FIVE MILE CREEK WRF PROCESS FLOW DIAGRAM

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

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

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Oxygen, Dissolved (DO) 00300 1 0 0	*****	*****	*****	*****	6.0 mg/l	*****	*****	E	GRAB	B	*****
pH 00400 1 0 0	*****	*****	*****	*****	6.0 S.U.	8.5 S.U.	*****	E	GRAB	B	*****
Solids, Total Suspended 00530 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	B	*****
Solids, Total Suspended 00530 1 0 0	7506 lbs/day	11259 lbs/day	30.0 mg/l	45.0 mg/l	*****	*****	*****	E	COMP24	B	*****
Nitrogen, Ammonia Total (As N) 00610 1 0 0	500 lbs/day	750 lbs/day	2.0 mg/l	3.0 mg/l	*****	*****	*****	E	COMP24	B	S
Nitrogen, Ammonia Total (As N) 00610 1 0 0	625 lbs/day	938 lbs/day	2.5 mg/l	3.75 mg/l	*****	*****	*****	E	COMP24	B	W
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	1000 lbs/day	1501 lbs/day	4.0 mg/l	6.0 mg/l	*****	*****	*****	E	COMP24	B	S
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	1251 lbs/day	1876 lbs/day	5.0 mg/l	7.5 mg/l	*****	*****	*****	E	COMP24	B	W
Phosphorus, Total (As P) (5) 00665 1 0 0	200^ lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	B	NTS
Phosphorus, Total (As P) (6)(7) 00665 1 0 0	125 lbs/day	200^ lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	B	NTS
Phosphorus, Total (As P) (8) 00665 1 0 0	125^ lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	B	NTS
Phosphorus, Total (As P) (9) 00665 1 0 0	REPORT lbs/day	REPORT lbs/day	0.25^ mg/L	REPORT mg/l	*****	*****	*****	E	COMP24	B	NTS
Phosphorus, Total (As P) 00665 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	NTW

* 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 (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)
Nutrient Summer (NTS) = March – October
Nutrient Winter (NTW) = November – February

(TP) (5) From the permit effective date through February 28, 2021 – Nutrient Summer monthly average limit = 200 lbs/day
(6) From March 1, 2021 through February 28, 2022 – Nutrient Summer Growing Season average limit = 125 lbs/day
The Nutrient Summer Growing Season average limit for TP is a seasonal average that will encompass the entire 2021 Nutrient Summer monitoring period. All available data within the 2021 Nutrient Summer monitoring period (March-October) shall be used to calculate the seasonal average and reported on the October DMR.
(7) From March 1, 2021 through February 28, 2022 – Nutrient Summer weekly average limit = 200 lbs/day
(8) From March 1, 2022 through February 28, 2027 – Nutrient Summer monthly average limit = 125 lbs/day
(9) From March 1, 2027 forward – Nutrient Summer monthly average limit = 0.25 mg/l
^ TP should be reported for that monthly and weekly average only, as defined in Part III.H.27 & 47, respectively.

For complete schedule, see Part I.E.2

Limits for Outfall 0011 continued on next page

2. Outfall 0011 Discharge Limits (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
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	*****
Flow, In Conduit or Thru Treatment Plant 50050 1 0 0	REPORT MGD	*****	*****	*****	*****	REPORT MGD	*****	E	CONTIN	A	*****
Chlorine, Total Residual See note (5) (6) 50060 1 0 0	*****	*****	0.013 mg/l	*****	*****	0.022 mg/l	*****	E	GRAB	B	*****
E. Coli 51040 1 0 0	*****	*****	126 col/100mL	*****	*****	298 col/100mL	*****	E	GRAB	B	ECS
E. Coli 51040 1 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	B	ECW
BOD, Carbonaceous 05 Day, 20C 80082 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	B	*****
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	1501 lbs/day	2251 lbs/day	6.0 mg/l	9.0 mg/l	*****	*****	*****	E	COMP24	B	S
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	1751 lbs/day	2627 lbs/day	7.0 mg/l	10.5 mg/l	*****	*****	*****	E	COMP24	B	W
BOD, Carb-5 Day, 20 Deg C, Percent Remvl 80091 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
Solids, Suspended Percent Removal 81011 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****

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

** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream

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

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

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

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

(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.

3. Outfall 001Q Discharge Limits - This is an administrative outfall designation. Outfall 001Q is the same physical outfall as Outfall 0011. Discharge from this outfall 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) 71901 1 0 0	*****	*****	0.014 ug/l	*****	*****	2.66 ug/l	*****	E	GRAB	H	*****

* 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 (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)
Nutrient Summer (NTS) = March – October
Nutrient Winter (NTW) = November – February

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

(6) 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.

4. Outfall 001T Discharge Limits - This is an administrative outfall designation. Outfall 001T is the same physical outfall as Outfall 0011. Discharge from this outfall 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 61426 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****
Toxicity, Pimephales Chronic 61428 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****

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

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream

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

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

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

5. Outfalls 002S, 003S, & 006S Discharge Limits – Storm water

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 Outfalls 002S, 003S, & 006S, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) (5) Sample Type	(3) Measurement Frequency	(4) Seasonal
pH 00400 SW 0 0	*****	*****	*****	*****	REPORT S.U.	REPORT S.U.	*****	SW	GRAB	J	*****
Solids, Total Suspended 00530 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Oil & Grease 00556 SW 0 0	*****	*****	*****	*****	*****	15 mg/l	*****	SW	GRAB	J	*****
Nitrogen, Ammonia Total (As N) 00610 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Nitrogen, Kjeldahl Total (As N) 00625 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Nitrite Plus Nitrate Total 1 Det. (As N) 00630 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Phosphorus, Total (As P) 00665 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Flow, In Conduit or Thru Treatment Plant 50050 SW 0 0	*****	*****	*****	*****	*****	REPORT MGD	*****	SW	CALCTD	J	*****
E. Coli 51040 SW 0 0	*****	*****	*****	*****	*****	REPORT col/100mL	*****	SW	GRAB	J	*****
BOD, Carbonaceous 05 Day, 20C 80082 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****

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

** Monitoring Requirements

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

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

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

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

(5) See Part IV.G.3

6. Use of the "Emergency Bypass" line in the process flow diagram attached to this permit is subject to: 1) the bypass provisions in Part II.C.1 and the reporting requirements in Part I.C.2 of this permit, and 2) the bypass regulations at 40 Code of Federal Regulations Section 122.41 (m) and ADEM Admin. Code R.335-6-6-.12(m).

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, unless otherwise directed by the Department.

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

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

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

c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b. by utilizing the Department's web-based Electronic Environmental (E2) Reporting System.

(1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's E2 Reporting System (this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the date specified in Provision I.C.1.b., unless otherwise directed by the Department.

If the E2 Reporting System is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 Reporting System resuming operation, the permittee shall enter the data into the E2 Reporting System, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date), if applicable.

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

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

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

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

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

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules and Regulations, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the

permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

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

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

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

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

Alabama Department of Environmental Management
Environmental Data Section, Permits & Services Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

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

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

Certified and Registered Mail shall be addressed to:

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

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

2. Noncompliance Notifications and Reports

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

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

(2) Potentially threatens human health or welfare;

(3) Threatens fish or aquatic life;

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

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

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

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

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

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

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

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

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

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

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

d. Immediate notification

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

e. The Department is utilizing a web-based electronic environmental (E2) reporting system for notification and submittal of SSO reports. **If the Permittee is not already participating in the E2 Reporting System for SSO reports, the Permittee must apply for participation in the system within 30 days of coverage under this permit unless the Permittee submits in writing valid justification as to why it cannot participate and the Department approves in writing utilization of verbal notifications and hard copy SSO report submittals.** Once the Permittee is enrolled in the E2 Reporting System for SSO reports, the Permittee must utilize the system for notification and submittal of all SSO reports unless otherwise allowed by this permit. The Permittee shall include in the SSO reports the information requested by ADEM Form 415. In addition, the Permittee shall include the latititude and longitude of the SSO in the report except when the SSO is a result of an extreme weather event (e.g., hurricane). To participate in the E2 Reporting System for SSO reports, the Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes**. If the E2 Reporting System is down (i.e., electronic submittal of SSO data cannot be completed due to technical problems originating with the Department's system), the Permittee is not relieved of its obligation to notify the Department or submit SSO reports to the Department by the required submittal date, and the Permittee shall submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include verbal reports, reports submitted via the SSO hotline, or reports submitted via fax, e-mail, mail, or hand-delivery such that they are received by the required reporting date. Within five calendar days of the E2 Reporting System resuming operation, the Permittee shall enter the data into the E2 Reporting System, unless an alternate timeframe is approved by the Department. For any alternate notification, records of the date, time, notification method, and person submitting the notification should be maintained by the Permittee. If a Permittee is allowed to submit SSO reports via an alternate method, the SSO report must be in a format approved by the Department and must be legible.

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

(1) The cause of the discharge;

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

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

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

(5) The ultimate destination of the flow (e.g., surface waterbody, municipal separate storm sewer to surface waterbody). Location should be shown on a USGS quad sheet or copy thereof; and

(6) Corrective actions taken and/or planned to eliminate future discharges.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

a. The Permittee shall inform the Director of any change in the Permittee's mailing address or telephone number or in the Permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the Permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

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

E. SCHEDULE OF COMPLIANCE

1. Compliance with discharge limits

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

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. Compliance with Total Phosphorus limits (Note: Summer Nutrient Season is March – October)

The Permittee shall achieve compliance with the discharge limitations for Total Phosphorus (TP) specified in Provision I.A according to the following schedule:

July 1, 2021 July 1, 2022 July 1, 2023 July 1, 2024 July 1, 2025 July 1, 2026	Submit report describing the Permittee's progress towards achieving compliance with TP limit of 0.25 mg/L. The report should include a discussion of the projects completed to date and a schedule for any projects that remain to be completed. The following should be included in the report, where applicable: pollution abatement program and preliminary plans; final plans, specifications, and drawings; date(s) of initiation of construction; and date(s) of attainment of operational status.
March 1, 2027	**Achieve compliance with TP limit of 0.25 mg/L (growing season monthly average)**

3. 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. NH3-N – means the pollutant parameter ammonia, measured as nitrogen.
30. Notifiable sanitary sewer overflow – means an overflow, spill, release or diversion of wastewater from a sanitary sewer system that:

a. Reaches a surface water of the State; or

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

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

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

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

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

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

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

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

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

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

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

41. TRC – means Total Residual Chlorine.

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

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

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

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

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

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

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

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

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

I. SEVERABILITY

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

PART IV SPECIFIC REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. SLUDGE MANAGEMENT PRACTICES

1. Applicability

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

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

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

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

2. Submitting Information

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

      (1) Type of sludge stabilization/digestion method;

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

      (3) Ultimate sludge disposal practice(s).

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

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

3. Reopener or Modification

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

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

B. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR CHRONIC TOXICITY

1. Chronic Toxicity Test

   a. The permittee shall perform short-term chronic toxicity tests on the wastewater at Outfall 0011.

   b. The samples shall be diluted using appropriate control water to the Instream Waste Concentration (IWC) which is **88 percent** effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 7-day, 10-year low flow period.

   c. Any test result that shows a statistically significant reduction in survival, growth, or reproduction between the control and test samples at the 95% confidence level indicates chronic toxicity and shall constitute noncompliance with this permit.

2. General Test Requirements

   a. A minimum of three (3) 24-hour composite samples shall be obtained for use in the above biomonitoring tests. Samples shall be collected every other day so that the laboratory receives water samples on the first, third, and fifth day of the seven-day test period. The holding time for each composite sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-013 (most current edition) or another control water selected by the Permittee and approved by the Department.

   b. Test results shall be deemed unacceptable and the Permittee shall rerun the tests as soon as practical within the monitoring period for the following:

      (1) For testing with P. promelas:, effluent toxicity tests with control survival of less than 80% or if dry weight per surviving control organism is less than 0.25 mg;

(2) For testing with C. dubia:, if the number of young per surviving control organism is less than 15 or if less than 60% of surviving control females produce three broods; or

(3) If the other requirements of the EPA Test Procedure are not met.

c. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are to be reported to the Department along with an explanation of the tests performed and the test results.

d. Toxicity tests shall be conducted for the duration of this permit in the month of **August**. Should results from the Annual Toxicity test indicate that Outfall 0011 exhibits chronic toxicity, then the Permittee must conduct the follow-up testing described in Part IV.B.4.a. In addition, the Permittee may then also be required to conduct toxicity testing in the months of 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)
(3) Design flow of treatment facility at time of sampling

c. Source of Effluent and Dilution Water

(1) Effluent samples

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

(2) Dilution Water

(a) Source
(b) Collection/preparation date(s) and time(s)
(c) Pretreatment (if applicable)
(d) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized
(2) End point(s) of test
(3) Deviations from referenced method, if any, and reason(s)
(4) Date and time test started
(5) Date and time test terminated
(6) Type and volume of test chambers
(7) Volume of solution per chamber
(8) Number of organisms per test chamber
(9) Number of replicate test chambers per treatment
(10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)
(11) Specify if aeration was needed
(12) Feeding frequency, amount, and type of food
(13) Specify if (and how) pH control measures were implemented
(14) Light intensity (mean)

e. Test Organisms

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

f. Quality Assurance

(1) Reference toxicant utilized and source
(2) Date and time of most recent chronic reference toxicant test(s), raw data, and current control chart(s). (The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.)
(3) Dilution water utilized in reference toxicant test
(4) Results of reference toxicant test(s) (NOEC, IC25, etc.); report concentration-response 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 (conditional monitoring), "*9" or "NODI = 9" (if hard copy) should be reported on the DMR forms.

2. Testing for TRC shall be conducted according to either the amperometric titration method or the DPD colorimetric method as specified in Section 408(C) or (E), Standards Methods for the Examination of Water and Wastewater, 18th edition. If chlorine is not detected prior to actual discharge to the receiving stream using one of these methods (i.e., the analytical result is less than the detection level), the Permittee shall report on the DMR form "*B", "NODI = B" (if hard copy), or "0". The Permittee shall then be considered to be in compliance with the daily maximum concentration limit for TRC.

3. This permit contains a maximum allowable TRC level in the effluent. The Permittee is responsible for determining the minimum TRC level needed in the chlorine contact chamber to comply with E.coli limits. The effluent shall be dechlorinated if necessary to meet the maximum allowable effluent TRC level.

4. The sample collection point for effluent TRC shall be at a point downstream of the chlorine contact chamber (downstream of dechlorination if applicable). The exact location is to be approved by the Director.

D. PLANT CLASSIFICATION

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

E. POLLUTANT SCANS

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

F. STORM WATER REQUIREMENTS

1. Prohibitions

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

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

2. Operational and Management Practices

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

   a. In the SWPP Plan, the Permittee shall:

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

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

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

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

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

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

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

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

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

c. Administrative Procedures

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

(2) A log of daily inspections required by Provision IV.F.2.a.(3.) of the permit shall be maintained at the facility and shall be made available for inspection by the Department upon request. The log shall contain records of all inspections performed and each daily entry shall be signed by the person performing the inspection.

(3) The Permittee shall provide training for any personnel required to implement the SWPP Plan and shall retain documentation of such training at the facility. Training records for all personnel shall be available for inspection by the Department. Training shall be performed prior to the date implementation is required.

3. Monitoring Requirements

a. Storm water discharged through each storm water outfall shall be sampled once per calendar year, using first flush grab samples (FFGS) collected during the first 30 minutes of discharge.

b. The total volume of storm water discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for the storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained in accordance with Provision I.B.5. of this permit. The volume may be measured using flow measurement devices or may be estimated using any method approved in writing by the Department.

G. SANITARY SEWER OVERFLOW RESPONSE PLAN

1. SSO Response Plan

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

a. General Information:

(1) Approximate population of City/Town, if applicable

(2) Approximate number of customers served by the Permittee

(3) Identification of any subbasins designated by the Permittee, if applicable

(4) Identification of estimated linear feet of sanitary sewers

(5) Number of Pump/Lift Stations in the collection system

b. Responsibility Information:

(1) The title(s) and contact information of key position(s) who will coordinate the SSO response, including information for a backup coordinator in the event that the primary SSO coordinator is unavailable. The SSO coordinator is the person responsible for assessing the SSO and initiating a series of response actions based on the type, severity, and destination of the SSO, except for routine SSOs for which the coordinator may pre-approve written procedures. Routine SSOs are those for which the corrective action procedures are generally consistent.

(2) The title(s), and contact information of key position(s) who will respond to SSOs, including information for backup responder(s) in the event the primary responder(s) are unavailable (i.e., position(s) who provide notification to the Department, the public, the county health department, and other affected entities such as public water systems; position(s) responsible for organizing crews for response; position(s) responsible for addressing public inquiries)

c. SSO and Surface Water Assessment

(1) Identification of locations within the collection system at which an SSO is likely to occur (e.g., based upon historical SSOs, lift stations where electricity may be lost, etc.)

(2) A map of the general collection system area, including identification of surface waterbodies and the location(s) of public drinking water source(s). Mapping of all collection system piping, pump stations, etc. is not required; however, if this information is already available, it should be included.

(3) Identification of surface waterbodies within the collection system area which are classified as Swimming according to ADEM Admin. Code chap. 335-6-11. References available to assist in this requirement include: http://www.adem.state.al.us/alEnviroRegLaws/files/Division6Vol1.pdf and http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html

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

d. Public Reporting of SSOs

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

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

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

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

f. Public Notification Methods for SSOs

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

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

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

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

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

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

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

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

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

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

2. SSO Response Plan Implementation

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

3. Department Review of the SSO Response Plan

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

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

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

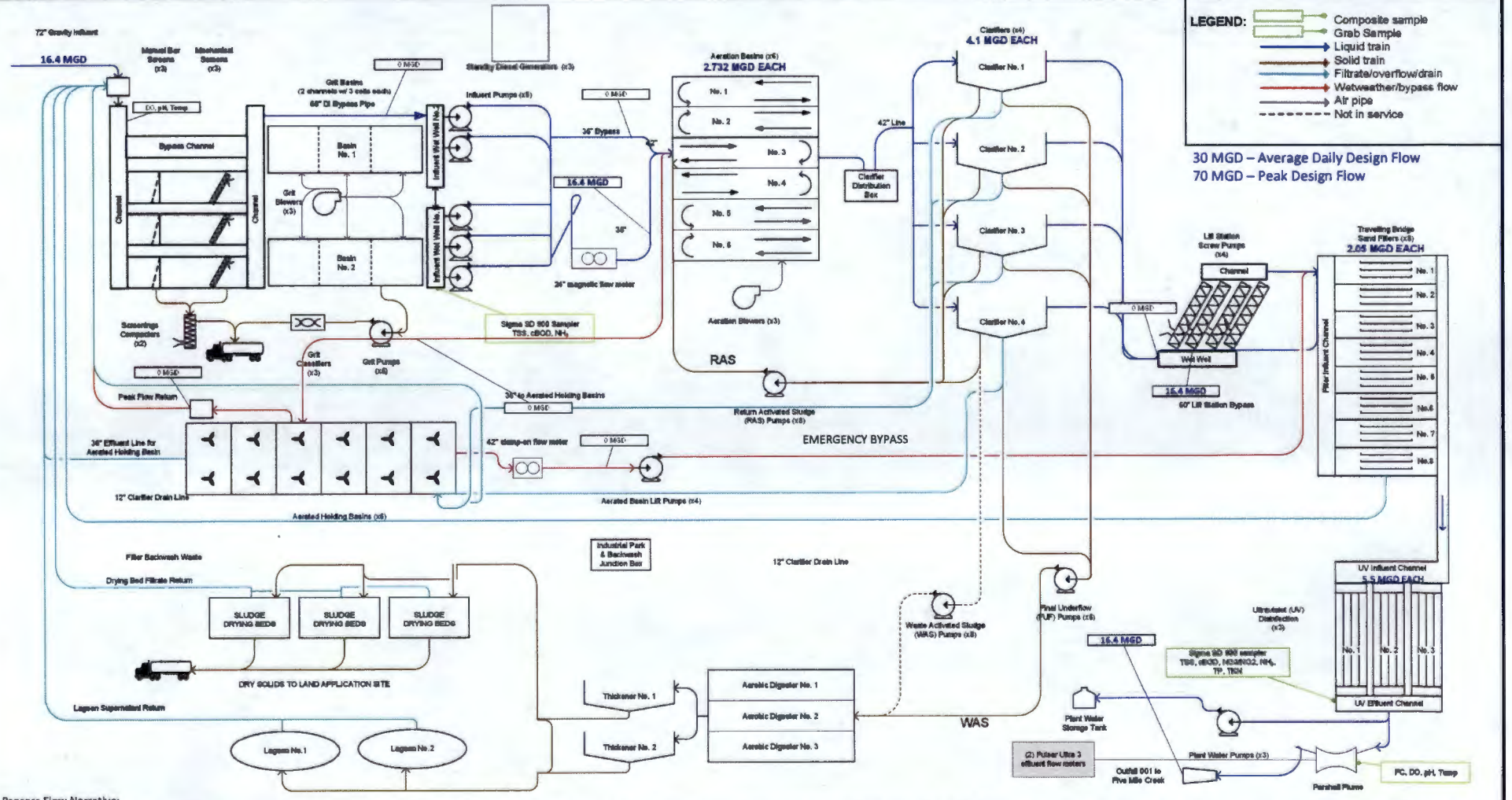
4. SSO Response Plan Administrative Procedures

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

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

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

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



Process Flow Narrative:
The 2018 calendar year annual average daily flow of 16.41 MGD enters the Five Mile Creek WWTP via a 72" gravity sewer. The plant has a design average daily flow rate of 30 MGD and a peak design rate of 70 MGD. The influent flow receives screening through fine screens and follows with grit removal. The flow is then pumped and equally split into six aeration basins with capacities of 5 MGD average daily flow each.The flow then receives final clarification before advanced treatment through traveling bridge sand filters. The flow receives disinfection from ultra-violet light prior to discharge through Outfall 0011 into Fivemile Creek.

JEFFERSON COUNTY, ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT 716 Richard Arrington Jr. Blvd, N, Suite A300 Birmingham, AL 35203	FIVE MILE CREEK WATER RECLAMATION FACILITY AL0026913 NPDES Permit Application	Form 2A, B.3 ATTACHMENT 6 PROCESS FLOW AND WATER BALANCE

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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

FACT SHEET

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

Date: May 11, 2020 **Prepared By:** Dustin Stokes

NPDES Permit No. AL0026913

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

   Jefferson County Commission
   716 Richard Arrington Jr. Blvd. N, Suite A300
   Birmingham, AL 35203

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

   Five Mile Creek WRF
   3410 Happy Hollow Lane
   Fultondale, Alabama 35068

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

   Waste Water Treatment Plant

4. **Applicant's Receiving Waters**

Receiving Waters	Classifications
Fivemile Creek	F&W

   For the Outfall latitude and longitude see the permit application.

5. **Permit Conditions:**

   See attached Rationale and Draft Permit.

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

   a. **Comment Period**

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

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

   Russell A. Kelly, Chief
   Permits and Services Division

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

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

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

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

Alabama Department of Environmental Management
1400 Coliseum Blvd

(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059
(334) 271-7714

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

b. Public Hearing

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

Russell A. Kelly, Chief
Permits and Services Division
Alabama Department of Environmental Management
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059
(334) 271-7714

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

c. Issuance of the Permit

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

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

d. Appeal Procedures

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

Alabama Environmental Management Commission
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059

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

NPDES PERMIT RATIONALE

NPDES Permit No:	**AL0026913**	Date: May 6, 2020
Permit Applicant:	Jefferson County Commission 716 Richard Arrington Jr. Blvd. N, Suite A300 Birmingham, Alabama 35203	
Location:	Five Mile Creek WRF 3410 Happy Hollow Lane Fultondale, Alabama 35068	
Draft Permit is:	Initial Issuance: Reissuance due to expiration: Modification of existing permit: Revocation and Reissuance:	 X
Basis for Limitations:	Water Quality Model: Reissuance with no modification: Instream calculation at 7Q10: Toxicity based: Secondary Treatment Levels: Other (described below):	DO, NH3-N, TKN, CBOD DO, pH, TSS, NH_3-N, TKN, CBOD, CBOD % Removal, TSS % Removal 88% TRC TSS, TSS % Removal, CBOD % Removal pH, E. coli, Total Recoverable Mercury
Design Flow in Million Gallons per Day:	30 MGD	
Major:	Yes	
Description of Discharge:	Outfall Number 001; Effluent discharge to Fivemile Creek, which is classified as Fish & Wildlife. Outfall Numbers 002S, 003S, & 006S; Storm water discharges to Fivemile Creek, which is classified as Fish & Wildlife.	

Discussion:

This is a permit reissuance due to expiration. Limits for Five Day Carbonaceous Biochemical Oxygen Demand (CBOD), Total Ammonia-Nitrogen (NH_3-N), Total Kjeldahl Nitrogen (TKN), and Dissolved Oxygen (DO) were developed based on a Waste Load Allocation (WLA) model that was completed by ADEM's Water Quality Branch (WQB) on August 15, 2019. The monthly average limits for CBOD summer (May-November) and winter (December-April) are 6.0 mg/L and 7.0 mg/L, respectively. The monthly average limits for NH_3-N summer (May-November) and winter (December-April) are 2.0 mg/L and 2.5 mg/L, respectively. The monthly average limits for TKN summer (May-November) and winter (December-April) are 4.0 mg/L and 5.0 mg/L, respectively. The daily minimum DO limit is 6.0 mg/L.

This facility was included in the EPA approved 2017 Nutrient Locust Fork and Village Creek Total Maximum Daily Loads (TMDL) with a discharge capacity of 30 MGD. The TMDL set a Total Phosphorus (TP) limit for this

Class 1 facility (design capacity greater than or equal to 1.0 MGD), which is to be applied as a monthly average limit of 0.25 mg/L during the nutrient summer season months (March-October). In combination with the provided schedule and the Department's Best Professional Judgement, the Permit requires compliance with a nutrient summer season monthly average TP limit of 200 lbs/day through February 28, 2021. The Permit requires compliance with a nutrient summer growing season average and nutrient summer weekly average TP limits of 125 lbs/day and 200 lbs/day, respectively, from March 1, 2021 through February 28, 2022. The Permit requires compliance with a nutrient summer monthly average TP limit of 125 lbs/day from March 1, 2022 through February 28, 2027, and compliance with the final nutrient summer monthly average TP limit of 0.25 mg/l effective March 1, 2027. The 200 lbs/day monthly and weekly average limits were developed by calculating the greatest monthly and weekly averages (after excluding the two greatest outliers) from the previous five years and rounding to 200 lbs/day. Note that the 2021 nutrient summer growing season average is a seasonal average that will encompass the entire 2021 Nutrient Summer monitoring period. All available data within the 2021 Nutrient Summer monitoring period (March-October) shall be used to calculate the summer growing seasonal average and reported on the October Discharge Monitoring Report (DMR).

Per the Permittee's October 26, 2018 letter, "the facilities required to meet the final (Phase 3) effluent phosphorus limit consist of a new chemical feed system and piping to convey the chemicals to the application point within the clarifier distribution box. A secondary feed location at the influent filters will also be provided to allow for additional phosphorus polishing. The estimated construction and engineering cost to complete the treatment upgrades and achieve compliance with the final total phosphorus effluent concentration (Phase 3) is $1,070,000. Operation costs are estimated at roughly $25,000 annually for treatment to 0.25 mg/L. An initial growing season versus monthly TP limit will also be critical in achieving nutrient reduction in the most economical and practical manner."

As indicated in ADEM Admin. Code r. 335-6-6-.16(a)(2), the Department has the authority to establish a compliance schedule within the timeframe determined by the Director for implementation of an applicable TMDL. The Permittee requested the final TMDL limit to be 63 lbs/day; however, the TMDL is presently written with the TP limit for Class 1 facilities as 0.25 mg/L. Based upon the facts presented to the Department, the final compliance deadline for the TMDL limit of 0.25 mg/L is March 1, 2027.

This permit imposes monitoring for the nutrient-related parameter Nitrite plus Nitrate-Nitrogen (NO_2+NO_3-N) and winter monitoring (November – February) for 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 further nutrient limits on this discharge.

The pH daily minimum and daily maximum limits of 6.0 and 8.5 S.U, respectively, were developed to be supportive of the water-use classification of the receiving stream. The Total Residual Chlorine (TRC) limits of 0.013 mg/L (monthly average) and 0.022 mg/L (daily maximum) are based on EPA's recommended water quality values and on the current Toxicity Rationale, which considers the available dilution in the receiving stream. The increased TRC limitation is not backsliding since the increase would result in water quality standards being obtained and the revision is consistent with the Department's anti-degradation policy. 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 Department revised bacteriological criteria in ADEM Administrative Code R.335-6-10-.09. As a result, this permit includes E. coli limits and seasons that are consistent with the revised regulations. The imposed E. coli limits were determined based on the water-use classification of the receiving stream. Since Fivemile Creek is classified as Fish & Wildlife, the limits for May – October are 126 col/100ml (monthly average) and 298 col/100ml

(daily maximum), while the limits for November – April are 548 col/100ml (monthly average) and 2507 col/100ml (daily maximum).
The 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.

Because this is a major facility (design capacity greater than 1 MGD) treating both municipal and industrial wastewater, chronic toxicity testing with two species (Ceriodaphnia and Pimephales) is being imposed on this permit. Toxicity testing is imposed for both survival and life-cycle impairment (i.e., growth and reproduction). Chronic toxicity at the IWC of 88 percent is required once per year during the month of August. The decreased IWC is not backsliding since the decrease would result in water quality standards being obtained and the revision is consistent with the Department's anti-degradation policy. If the toxicity tests of the effluent from Outfall 001 indicate chronic toxicity, then toxicity tests may be required to be conducted during the months of February, May, August and November.

Because this is a major facility treating both municipal and industrial wastewater, the Department completed a reasonable potential analysis (RPA) of the discharge based on the application data, DMR data, and background data from station FM-1A. The RPA indicates whether pollutants in treated effluent have potential to contribute to excursions of Alabama's in-stream water quality standards. Based on the analytical data submitted by the Permittee, it appears reasonable potential may exist to cause an in-stream water quality criteria exceedance for mercury. As a result, the Department is imposing monthly average and daily maximum discharge limitations for Total Recoverable Mercury of 0.014 µg/L and 2.66 µg/L, respectively, to be sampled quarterly. Based on the DMR data submitted by the Permittee for the previous five years, it appears no reasonable potential exists for Bis (2-Ethylhexyl) Phthalate, which was in the previous permit. Therefore, the limit for Bis (2-Ethylhexyl) Phthalate was removed. The removal of the Bis (2-Ethylhexyl) Phthalate limitation is not backsliding since water quality standards are being attained and the revision is consistent with the Department's anti-degradation policy. The RPA also indicated a reasonable potential for arsenic. However, all arsenic application sample results were below detect and the reasonable potential appears to be due to the background Arsenic levels. Arsenic is not expected to contribute to an excursion of Alabama's instream Water Quality Criteria.

The monitoring frequency for DO, pH, TSS, NH_3-N, TKN, TRC, E. coli and CBOD is five times per week. The monitoring frequency for TP is five times per week during the March through October nutrient summer season and once per month during the November through February winter season. The monitoring frequency for $N0_2$+$N0_3$-N is once per month. The monitoring frequency for mercury is once per quarter. TSS % removal and CBOD % removal are to be calculated once per month. Flow is to be continuously monitored daily.

Storm water runoff monitoring is being imposed by this permit based on 40 CFR Part 122. The designated outfalls for storm water runoff monitoring are 002S, 003S, and 006S. The removal of the TRC and monthly average flow monitoring requirements is not backsliding since they were inadvertently included in the previous Permit and the revision is consistent with the Department's anti-degradation policy. Storm water runoff is to be monitored annually.

The segment of Fivemile Creek that includes the discharge is a Tier I stream and is not included on the most recent 303(d). The limits imposed in this Permit are consistent with the Locust Fork and Village Creek Nutrient TMDL.

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

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	**Five Mile Creek WRF**	
NPDES Permit Number:	**AL0026913**	
Receiving Stream:	**Fivemile Creek**	
Facility Design Flow (Q_w):	**30.000 MGD**	
Receiving Stream $7Q_{10}$:	**6.880 cfs**	
Receiving Stream $1Q_{10}$:	**5.160 cfs**	
Winter Headwater Flow (WHF):	**11.33 cfs**	
Summer Temperature for CCC:	**28 deg. Celsius**	
Winter Temperature for CCC:	**18 deg. Celsius**	
Headwater Background NH_3-N Level:	**1.75 mg/l**	
Receiving Stream pH:	**7.0 s.u.**	
Headwater Background FC Level (summer):	**N./A.**	**(Only applicable for facilities with diffusers.)**
(winter)	**N./A.**	

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

$$\text{Stream Dilution Ration (SDR)} = \frac{Qw}{7Q10 + Qw} = \textbf{87.09\%}$$

AMMONIA TOXICITY LIMITATIONS

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

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

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

= **87.09%** **Effluent-Dominated, CCC Applies**

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

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

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

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

= 2.6 mg/l NH3-N at 7Q10

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

= 5.5 mg/l NH3-N at Winter Flow

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

	DO-based NH3-N limit	Toxicity-based NH3-N limit
Summer	**2.00 mg/l NH3-N**	**2.60 mg/l NH3-N**
Winter	**2.50 mg/l NH3-N**	**5.50 mg/l NH3-N**

Summer: The DO based limit of 2.00 mg/l NH3-N applies.
Winter: The DO based limit of 2.50 mg/l NH3-N applies.

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

The following factors trigger toxicity testing requirements:

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

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

Chronic toxicity testing is required

Instream Waste Concentration (IWC) = $\frac{Qw}{7Q10 + Qw}$ = **87.09%** Note: This number will be rounded up for toxicity testing purposes.

DISINFECTION REQUIREMENTS

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

See the attached Disinfection Guidance for applicable stream standards.

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

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

MAXIMUM ALLOWABLE CHLORINATION LIMITS

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

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

Maximum allowable TRC in effluent:	0.013 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	0.022 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: 5/13/2020

Facility Name: **Five Mile Creek WRF**

NPDES No.: **AL0026913**

8/13/2017

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

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	Enter Max Daily Discharge as reported by Applicant (C_d) Max	Enter Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Stream / Lake)
				µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*,****	YES	Metals	0	0	0.0	3.93	0	0	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	0	0	0.388
8	Lead**		Metals	0	0	9.57	0.638	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0.21	0.2	0.302
10	Nickel**		Metals	0	0	0	0	0	0	0.505
11	Selenium		Metals	0	0	4.48	3.2	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	1.15	0.077	0	0	-
14	Zinc**		Metals	0	0	0	0	25	21	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	160000	150000	-
17	Hardness (As CaCO3)		Metals	0	0	158285	199000	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**ChloroForm***	YES	VOC	0	0	0	0	0	0	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4.4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobromo-Methane***	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichloroethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dinitro-2-methylphenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	7.49	2.5	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzidine***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptachlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Prepylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

30	Enter Q_d = wastewater discharge flow from facility (MGD)
46.41687	Q_s = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
6.88	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
5.16	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
84.7	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
11.33	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter for Lead	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_s +Qd2+Q_s	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
158	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

June 16, 2020

Facility Name: Five Mile Creek WRF

NPDES No.: AL0026913

Freshwater F&W classification.						Freshwater Acute (µg/l) Q_s =1Q10					Freshwater Chronic (µg/l) Q_s = 7Q10					Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant (C_{max})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{avg})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.29E+02	8.57E+01	No
2	Arsenic	YES	YES	0	0	[illegible]	656.748	131.350	No	0	0	[illegible]	299.475	59.895	No	3.03E-01	-8.32E+00	-1.26E+00	Yes
3	Berylium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	[illegible]	14.789	2.958	No	0	0	[illegible]	1.644	0.329	No	-	-	-	-
5	Chromium/ Chromium III			0	0	[illegible]	4384.849	876.970	No	0	0	[illegible]	589.400	117.880	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	[illegible]	17.779	3.556	No	0	0	[illegible]	12.830	2.526	No	-	-	-	-
7	Copper			0	0	[illegible]	59.223	11.845	No	0	0	[illegible]	39.179	7.836	No	-	-	-	-
8	Lead			0	0	[illegible]	569.994	113.999	No	0	0	[illegible]	22.901	4.580	No	-	-	-	-
9	Mercury	YES		0	0.21	[illegible]	2.667	0.533	No	0	0.2	0.012	0.014	0.003	Yes	4.24E-02	4.87E-02	9.74E-03	Yes
10	Nickel			0	0	[illegible]	1517.107	303.421	No	0	0	[illegible]	174.123	34.825	No	9.93E+02	1.14E+03	2.28E+02	No
11	Selenium			0	0	[illegible]	21.725	4.345	No	0	0	[illegible]	5.267	1.053	No	[illegible]	2.79E+03	5.58E+02	No
12	Silver			0	0	[illegible]	7.850	1.570	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.03E-01	6.05E-02	No
14	Zinc			0	25	[illegible]	581.356	116.271	No	0	21	[illegible]	605.658	121.132	No	1.49E+04	1.71E+04	3.42E+03	No
15	Cyanide			0	0	[illegible]	24.446	4.889	No	0	0	[illegible]	5.971	1.194	No	[illegible]	1.07E+04	2.14E+03	No
16	Total Phenolic Compounds			0	160000	-	-	-	-	0	150000	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.07E-01	8.14E-02	No
20	Aldrin		YES	0	0	[illegible]	3.333	0.667	No	0	0	-	-	-	-	[illegible]	8.30E-05	1.66E-05	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.37E+01	8.74E+00	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.22E+02	4.45E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.70E+00	5.41E-01	No
24	Chlordane		YES	0	0	[illegible]	2.667	0.533	No	0	0	[illegible]	0.005	0.001	No	[illegible]	1.34E-03	2.67E-04	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.04E+03	2.08E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.09E+01	4.18E+00	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.88E+02	5.76E+01	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.12E-04	1.02E-04	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.82E-04	7.23E-05	No
32	4,4' - DDT		YES	0	0	1.100	1.222	0.244	No	0	0	0.001	0.001	0.000	No	[illegible]	3.82E-04	7.23E-05	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.83E+01	5.67E+00	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.04E+01	1.21E+01	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.78E+03	1.36E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.18E+04	2.35E+03	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	9.75E+00	1.95E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.41E+01	2.82E+00	No
40	Dieldrin		YES	0	0	[illegible]	0.267	0.053	No	0	0	[illegible]	0.084	0.013	No	[illegible]	8.82E-05	1.76E-05	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.43E+03	2.86E+02	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.00E+03	2.00E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	9.78E+02	1.95E+02	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.59E+00	1.32E+00	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.42E+00	1.08E+00	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.00E+04	2.00E+03	No
48	Toxaphene		YES	0	0	[illegible]	0.611	0.102	No	0	0	[illegible]	0.000	0.000	No	[illegible]	4.57E-04	9.15E-05	No
49	Tributyltin (TBT)		YES	0	0	[illegible]	0.611	0.102	No	0	0	[illegible]	0.053	0.017	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.57E+01	5.14E+00	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.93E+01	9.87E+00	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.02E+00	8.05E-01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.00E+02	2.00E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.97E+02	3.95E+01	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.71E+02	1.14E+02	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.57E+03	7.14E+02	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.67E+02	9.35E+01	No
61	Dioxin (2,3,7,6-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	7.53E-08	1.51E-08	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	[illegible]	9.693	1.939	No	0	0	[illegible]	7.685	1.537	No	[illegible]	4.99E+00	9.99E-01	No
65	Phenol			0	7.49	-	-	-	-	0	2.5	-	-	-	-	[illegible]	5.74E+05	1.15E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.99E+00	7.99E-01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.64E+02	1.33E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.68E+04	5.36E+03	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.33E-04	2.88E-05	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.01E-02	6.02E-03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.01E-02	6.02E-03	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.22E-02	2.45E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.22E-02	2.45E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.68E-01	1.74E-01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.34E+04	8.68E+03	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.82E+00	7.24E-01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.29E+03	2.59E+02	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.06E+03	2.12E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.01E-02	6.02E-03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.01E+03	6.02E+02	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.01E-02	6.02E-03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.67E+02	1.73E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.48E+02	1.29E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.29E+02	2.58E+01	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.69E-02	9.39E-03	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.94E+04	5.87E+03	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	7.44E+05	1.49E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.60E+00	1.12E+00	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.34E-01	2.69E-02	No
97	Endosulfan (alpha)		YES	0	0	[illegible]	0.244	0.049	No	0	0	[illegible]	0.084	0.013	No	[illegible]	1.46E+02	2.93E+01	No
98	Endosulfan (beta)		YES	0	0	[illegible]	0.244	0.049	No	0	0	[illegible]	0.084	0.013	No	[illegible]	1.46E+02	2.93E+01	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.46E+02	2.93E+01	No
100	Endrin		YES	0	0	[illegible]	0.086	0.019	No	0	0	[illegible]	0.041	0.005	No	[illegible]	9.86E-02	1.99E-02	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.98E-01	9.98E-02	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	9.32E+01	1.86E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.57E+03	7.14E+02	No
104	Heptachlor		YES	0	0	[illegible]	0.576	0.116	No	0	0	[illegible]	0.004	0.001	No	[illegible]	1.31E-04	2.62E-05	No
105	Heptachlor Epoxide		YES	0	0	[illegible]	0.576	0.116	No	0	0	[illegible]	0.004	0.001	No	[illegible]	6.47E-05	1.29E-05	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.74E-04	9.46E-05	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.04E+01	6.08E+00	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.05E-03	1.61E-03	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.82E-02	5.63E-03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	[illegible]	1.056	0.211	No	0	0	-	-	-	-	[illegible]	3.04E+00	6.08E-01	No
111	Hexachlorocyclo-Pentadiene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	7.41E+02	1.46E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.20E+00	4.40E-01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.01E-02	6.02E-03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.44E+02	1.29E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.64E+02	9.27E+01	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.33E-01	1.67E-01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.97E+00	9.94E-01	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	9.89E+00	1.98E+00	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	[illegible]	0.016	0.003	No	[illegible]	1.06E-04	2.11E-05	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	[illegible]	0.016	0.003	No	[illegible]	1.06E-04	2.11E-05	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	[illegible]	0.016	0.003	No	[illegible]	1.06E-04	2.11E-05	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	[illegible]	0.016	0.003	No	[illegible]	1.06E-04	2.11E-05	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	[illegible]	0.016	0.003	No	[illegible]	1.06E-04	2.11E-05	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	[illegible]	0.016	0.003	No	[illegible]	1.06E-04	2.11E-05	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	[illegible]	0.016	0.003	No	[illegible]	1.06E-04	2.11E-05	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.88E+03	5.36E+02	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.70E+01	9.40E+00	No

Five Mile Creek WRF
AL0026913
Bis (2-Ethylhexyl) Phthalate
**B-Below Detection Limit/No Detect*

Monitor Period	Monthly Average (ug/L)
November-2014	*b
December-2014	*B
January-2015	*B
February-2015	*B
March-2015	*B
April-2015	*B
May-2015	*B
June-2015	*B
July-2015	*B
August-2015	*B
September-2015	*B
October-2015	*B
November-2015	*B
December-2015	*B
January-2016	*B
February-2016	*B
March-2016	*B
April-2016	*B
May-2016	*B
June-2016	*B
July-2016	*B
August-2016	*B
September-2016	*B
October-2016	*B
November-2016	*B
December-2016	*B
January-2017	*B
February-2017	*B
March-2017	*B
April-2017	*B
May-2017	*B
June-2017	*B
July-2017	*B
August-2017	*B
September-2017	*B
October-2017	*B
November-2017	*B
December-2017	*B
January-2018	*B
February-2018	*B
March-2018	*B
April-2018	*B
May-2018	*B
June-2018	*B
July-2018	*B
August-2018	*B
September-2018	*B
October-2018	*B
November-2018	*B
December-2018	*B
January-2019	*B
February-2019	*B
March-2019	*B
April-2019	*B
May-2019	*B
June-2019	*B
July-2019	*B
August-2019	*B
September-2019	*B
October-2019	*B
November-2019	*B
December-2019	*B
January-2020	*B
February-2020	*B
March-2020	*B
April-2020	*B

Mercury expanded effluent data

Date	Result (ug/L)
5/30/2018	0.00021
5/31/2018	0.0002
6/1/2018	0.0002

Maximum	0.00021
Average	0.00020

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3627

From:	Dustin Stokes	In Branch/Section	Municipal		
Date Submitted	5/13/2019	Date Required	6/12/2019	FUND Code	605
Date Permit application received by NPDES program	5/2/2019				
Receiving Waterbody	Fivemile Creek				
Previous Stream Name					
Facility Name	Five Mile Creek WRF	(Name of Discharger-WQ will use to file)			
		Previous Discharger Name			
River Basin	Black Warrior	Outfall Latitude	33.594230	(decimal degrees)	
*County	Jefferson	Outfall Longitude	-86.867644	(decimal degrees)	
Permit Number	AL0026913	Permit Type	Permit Reissuance		
		Permit Status	Active		
		Type of Discharger	MUNICIPAL		

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

If yes, impacting dischargers names.	Impacting dischargers permit numbers.
ABC Coke	AL0003417
ERP Compliant Coke (formerly Walter Coke Inc.)	AL0003247
Prudes Creek WWTP	AL0056120
Forestdale MHP	AL0027642
Sharon Heights MHP	AL0057827
Brookside Village WWTP	AL0062251

Existing Discharge Design Flow	30	MGD
Proposed Discharge Design Flow	30	MGD

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

Comments included ☑ Yes ☐ No

Information Verified By: JBS

Year File Was Created: 1984

Response ID Number: 1708

Lat/Long Method: GPS

12 Digit HUC Code	031601110406		
Use Classification	F&W		
Site Visit Completed?	☑ Yes ☐ No	Date of Site Visit	8/1/2019
Waterbody Impaired?	☑ Yes ☐ No	Date of WLA Response	8/23/2019
Antidegradation	☐ Yes ☑ No	Approved TMDL?	☑ Yes ☐ No
Waterbody Tier Level	Tier I		
Use Support Category	4B	Approval Date of TMDL	1/22/2018

Waste Load Allocation Information

Modeled Reach Length	35.48	Miles	Date of Allocation	8/15/2019	
Name of Model Used	SWQM		Allocation Type	2 Seasons	
Model Completed by	JBS		Type of Model Used	Calibrated	
Allocation Developed by	Water Quality Branch				

Waste Load Allocation Summary

Annual Effluent Limits		
	Qw	MGD
CBOD5		
NH3-N		
TKN		
D.O.		

Conventional Parameters						Other Parameters					
Qw	30	MGD	Qw	30	MGD	Qw	30	MGD	Qw		MGD
Season	Summer		Season	Winter		Season	Growing		Season		
From	May		From	Dec		From	Mar		From		
Through	Nov		Through	Apr		Through	Oct		Through		
CBOD5	6	mg/L	CBOD5	7	mg/L	TP	0.25	mg/L	TP		
NH3-N	2	mg/L	NH3-N	2.5	mg/L	TN			TN		
TKN	4	mg/L	TKN	5	mg/L	TSS			TSS		
D.O.	6	mg/L	D.O.	6	mg/L						

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

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	11.789	mg/l	31.042	mg/l
NH3-N	0.6267	mg/l	1.7522	mg/l
Temperature	28	°C	18	°C
pH	7	su	7	su

Hydrology at Discharge Location

Drainage Area Qualifier				Method Used to Calculate
Estimated	Drainage Area	52	sq mi	
	Stream 7Q10	6.88	cfs	ADEM Estimate w/USGS Gage Data
	Stream 1Q10	5.16	cfs	75%of 7Q10
	Stream 7Q2	11.33	cfs	ADEM Estimate w/USGS Gage Data
	Annual Average	84.7	cfs	ADEM Estimate w/USGS Gage Data

Comments and/or Notations Five Mile Creek WRF is included in the 2018 Locust Fork and Village Creek TMDL (nutrients). Five Mile Creek WRF is assigned a total phosphorous concentration limit of 0.25 mg/L during the growing season (March-October).

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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

August 15, 2019

MEMORANDUM

TO: Dustin Stokes, Municipal Branch

FROM: Jonathan Straiton, Water Quality Branch

RE: Waste Load Allocation for Five Mile Creek WRF for permit reissuance

An updated seasonal model was completed for the Five Mile Creek Water Reclamation Facility on August 15, 2019 for the purpose of permit reissuance. The facility has a permitted discharge flow rate of 30 MGD year-round which flows directly into Fivemile Creek.

The model predicts that the following effluent limits will maintain the required dissolved oxygen concentration of 5.0 mg/L.

Parameter	Summer Limits	Winter Limits
$CBOD_5$	6 mg/L	7 mg/L
NH_3-N	2 mg/L	2.5 mg/L
Minimum D.O.	6 mg/L	6 mg/L

Fivemile Creek (Jefferson County, AL) is classified as Fish and Wildlife and is considered to be a Tier I water.

The $7Q_{10}$ and $7Q_2$ flow rates at the outfall were found to be 6.88 cfs and 11.33 cfs, respectively. For the model, an ultimate to five-day CBOD ratio of 3.0 was used for Five Mile Creek WRF. Ammonia-nitrogen limits are water-quality based.

JBS: jbs

Facility:	Five Mile Creek WRF
Permit:	*#AL0026913*
Receiving Waterbody:	Fivemile Creek
County:	Jefferson
Date Completed:	August 15, 2019
Performed by:	Jonathan Straiton, *Water Quality*

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

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

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

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

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: S F AL0026913 T/A C D

RECEIVED MAY 02 2019 IND/MUN BRANCH

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" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	X (16)	(17)	X (18)	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)	(19)	X (20)	(21)
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	(22)	X (23)	(24)	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)	(25)	X (26)	(27)
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	(28)	X (29)	(30)	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)	(31)	X (32)	(33)
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)	(34)	X (35)	(36)	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)	(37)	X (38)	(39)
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	(40)	X (41)	(42)	J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)	(43)	X (44)	(45)

III. NAME OF FACILITY

1 SKIP: Five Mile Creek Water Reclamation Facility

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Denard, David, Director, JeffCo ESD	(205) 325-5979

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 Suite A300, 716 Richard Arrington Jr. Blvd N.

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Birmingham	AL	35203

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 3410 Happy Hollow Lane

B. COUNTY NAME: Jefferson

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 Fultondale	AL	35068	

CONTINUED FROM THE FRONT

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

A. FIRST	B. SECOND
4952 (specify) Sewerage Systems	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: Jefferson County Commission, Environmental Services Department

B. Is the name listed in Item VIII-A also the owner? ☐ YES ☑ NO

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

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

M (specify)

D. PHONE *(area code & no.)*: (205) 325-5979

E. STREET OR P.O. BOX: Suite A300 716 Richard Arrington Jr. Blvd N.

F. CITY OR TOWN: Birmingham

G. STATE: AL

H. ZIP CODE: 35203

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*	
9 N AL0026913	9 P	
B. UIC *(Underground Injection of Fluids)*	**E. OTHER *(specify)***	*(specify)*
9 U N NA	9 NA	
C. RCRA *(Hazardous Wastes)*	**E. OTHER *(specify)***	*(specify)*
9 R NA	9 NA	

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)*

Publicly owned water reclamation 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.

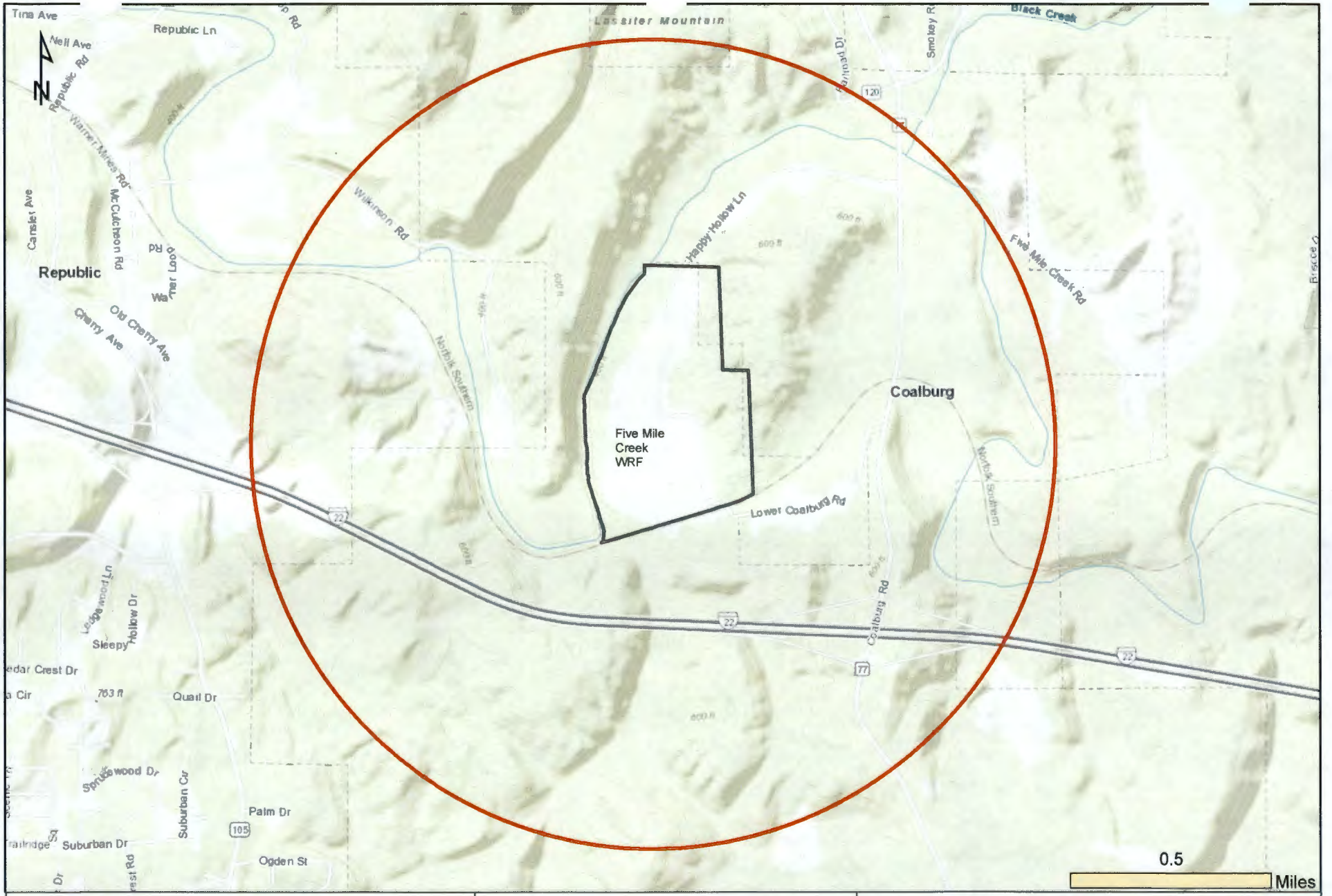
A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
David Denard, Director, Jefferson County Environmental Services Dept.		5/2/19

COMMENTS FOR OFFICIAL USE ONLY

C

FORM 1
ATTACHMENT

ATTACHMENT 1 – FORM 1, SECTION XI 1-MILE RADIUS FIVE MILE CREEK WRF



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

Form 1, XI
ATTACHMENT 1
1- MILE RADIUS FIVE MILE CREEK WRF

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

FORM 2A NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.

B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.

C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to provide the information.

E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to submit results of toxicity testing.

F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:

1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
   b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
   c. Is designated as an SIU by the control authority.

G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

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: Five Mile Creek Water Reclamation Facility

Mailing Address: 716 Richard Arrington Jr. Blvd. N.-Suite A-300

Contact person: David Denard

Title: Director, Environmental Services Department

Telephone number: (205) 325-5979

Facility Address (not P.O. Box): 3410 Happy Hollow Lane Fultondale, Alabama 35068

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

Applicant name: Jefferson County Commission

Mailing Address: 716 Richard Arrington Jr. Blvd. N.-Suite A-300

Contact person: David Denard

Title: Director, Environmental Services Department

Telephone number: (205) 325-5979

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	AL0026913	PSD	NA
UIC	NA	Other	NA
RCRA	NA	Other	NA

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
Birmingham / Center Point		Separate / Separate	Jefferson County
Gardendale / Fultondale		Separate / Separate	Jefferson County
Tarrant / Unincorporated		Separate / Separate	Jefferson County
Total population served	70,000 PE Estimate		

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 30.000 mgd

	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate	15.438	16.406	17.964	mgd
c. Maximum daily flow rate	47.290	45.530	53.520	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	0.00 %

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	0
iii. Combined sewer overflow points	0
iv. Constructed emergency overflows (prior to the headworks)	0
v. Other NA	0

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) _____ 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

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).

N/A

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

Transporter name: N/A

Mailing Address: _____

_____

Contact person: N/A

Title: _____

Telephone number: _____

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

Name: N/A

Mailing Address: _____

_____

Contact person: N/A

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):

NA

Annual daily volume disposed of by this method: N/A

Is disposal through this method _____ continuous or _____ intermittent?

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
Fultondale (City or town, if applicable) — 35068 (Zip Code)
Jefferson (County) — Alabama (State)
N33^ 35' 39.2" (Latitude) — W86^ 52'3.4" (Longitude)

c. Distance from shore (if applicable) _____ ft.

d. Depth below surface (if applicable) _____ ft.

e. Average daily flow rate 17.96 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 Fivemile Creek

b. Name of watershed (if known) Black Warrior

United States Soil Conservation Service 14-digit watershed code (if known): 03160111130176

c. Name of State Management/River Basin (if known): Black Warrior

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 03160111

d. Critical low flow of receiving stream (if applicable):
acute 8.01 cfs chronic _____ cfs

e. Total hardness of receiving stream at critical low flow (if applicable): 210.00 mg/l of $CaCO_3$

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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

A.11. Description of Treatment.

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

_____ Primary ✓ Secondary

✓ Advanced ✓ Other. Describe: Sand Filtration of the Effluent

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

Design BOD_5 removal or Design $CBOD_5$ removal	85.00	%
Design SS removal	85.00	%
Design P removal	0.00	%
Design N removal	90.00	%
Other _____	_____	%

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

Ultraviolet Irradiation

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: 0011 Calendar Year 2018

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.70	s.u.			
pH (Maximum)	7.80	s.u.			
Flow Rate	45.53	MGD	16.40	MGD	
Temperature (Winter)					
Temperature (Summer)					

* 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	BOD-5							
DEMAND (Report one)	CBOD-5	9.80	ppm	1.87	ppm	261.00	5210-B	1
FECAL COLIFORM		517.20	mpn	6.83	mpn	261.00	9222-D	1
TOTAL SUSPENDED SOLIDS (TSS)		15.04	ppm	0.94	ppm	261.00	2540-D	1

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

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 ≥ 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.

2,420,000.00 gpd

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

JCESD has developed a hydraulic model with the objective of providing flow characterization, basin and data prioritization, and to evaluate and implement programs to eliminate sanitary sewer overflows.

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: David Lee

Mailing Address: 499 Pineywood Rd. Gardendale, AL 35071

Telephone Number: (205) 541-7728

Responsibilities of Contractor: Daily Operations, Sample Collection, and Monitor Citect

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.

Outfall #0011 TMDL Requirements. Phosphorus Control Chemical Addition

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

✓ Yes ___ No

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

TMDL Requirements. Phosphorus Control Chemical Addition

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 MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	3 / 1 / 2021	___/___/____
– End construction	3 / 1 / 2027	___/___/____
– Begin discharge	3 / 1 / 2027	___/___/____
– Attain operational level	___/___/____	___/___/____

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

Describe briefly: Project is in the planning stages.

B.6. EFFLUENT TESTING DATA (GREATER THAN O.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 / 2018

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	1.10	ppm	0.05	ppm	261.00	4500-NH3 D	0.05
CHLORINE (TOTAL RESIDUAL, TRC)						Not required	
DISSOLVED OXYGEN	6.00	ppm	7.64	ppm	261.00	4500-O G	0.05
TOTAL KJELDAHL NITROGEN (TKN)	2.40	ppm	0.78	ppm	261.00	4500-ORG B	0.05
NITRATE PLUS NITRITE NITROGEN	14.00	ppm	8.53	ppm	261.00	4500-NO3, NO2	0.07
OIL and GREASE						Not required	
PHOSPHORUS (Total)	2.80	ppm	1.38	ppm	261.00	4500-P F	0.05
TOTAL DISSOLVED SOLIDS (TDS)						Not required	
OTHER							

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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

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)

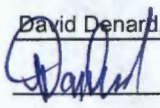
✓ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

____ 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: David Denard, Director Jefferson County Environmental Services

Signature: 

Telephone number: (205) 325-5979

Date signed: 5/2/19

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:
Five Mile Creek WRF (AL0026913)

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

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: 0011 (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		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	14
ARSENIC	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	20
BERYLLIUM	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	14
CADMIUM	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	7
CHROMIUM	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	11
COPPER	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	10
LEAD	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	19
MERCURY	0.00021	ppm	0.04572	lbs/day	0.00020	ppm	0.04342	lbs/day	3	1631E	0.00020
NICKEL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	15
SELENIUM	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	10
SILVER	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	13
THALLIUM	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	200.7	24
ZINC	25	ppb	7.1	lbs/day	21	ppb	5.0	lbs/day	3	200.7	9
CYANIDE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	4500-CN	15
TOTAL PHENOLIC COMPOUNDS	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	9065	50
HARDNESS (AS $CaCO_3$)	160	ppm	N/A	lbs/day	150	ppm	N/A	lbs/day	3	2340C	13
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

Form Approved 1/14/99
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Outfall number: 0011 (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		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	20
ACRYLONITRILE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	20
BENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
BROMOFORM	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
CARBON TETRACHLORIDE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
CLOROBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
CHLORODIBROMO-METHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
CHLOROETHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
2-CHLORO-ETHYLVINYL ETHER	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	5.0
CHLOROFORM	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
DICHLOROBROMO-METHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
1,1-DICHLOROETHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
1,2-DICHLOROETHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
TRANS-1,2-DICHLORO-ETHYLENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
1,1-DICHLOROETHYLENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
1,2-DICHLOROPROPANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
1,3-DICHLORO-PROPYLENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
ETHYLBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
METHYL BROMIDE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
METHYL CHLORIDE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
METHYLENE CHLORIDE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	10.0
1,1,2,2-TETRACHLORO-ETHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
TETRACHLORO-ETHYLENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	10
TOLUENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	5.0

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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

Outfall number: 0011 (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	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
1,1,2-TRICHLOROETHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
TRICHLORETHYLENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
VINYL CHLORIDE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	624	1.0
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	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
2-CHLOROPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
2,4-DICHLOROPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
2,4-DIMETHYLPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
4,6-DINITRO-O-CRESOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	10.2
2,4-DINITROPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
2-NITROPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
4-NITROPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	10.2
PENTACHLOROPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
PHENOL	7.49	ppb	0.609	lbs/day	2.50	ppb	0.212	lbs/day	3	625	5.1
2,4,6-TRICHLOROPHENOL	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
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	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
ACENAPHTHYLENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
ANTHRACENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
BENZIDINE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
BENZO(A)ANTHRACENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
BENZO(A)PYRENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04

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Outfall number: 0011 (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	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
BENZO(GHI)PERYLENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
BENZO(K)FLUORANTHENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
BIS (2-CHLOROETHOXY) METHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
BIS (2-CHLOROETHYL)-ETHER	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
BIS (2-CHLOROISO-PROPYL) ETHER	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
BIS (2-ETHYLHEXYL) PHTHALATE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	10.2
4-BROMOPHENYL PHENYL ETHER	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
BUTYL BENZYL PHTHALATE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
2-CHLORONAPHTHALENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
4-CHLORPHENYL PHENYL ETHER	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
CHRYSENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
DI-N-BUTYL PHTHALATE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
DI-N-OCTYL PHTHALATE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
DIBENZO(A,H) ANTHRACENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
1,2-DICHLOROBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
1,3-DICHLOROBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
1,4-DICHLOROBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
3,3-DICHLOROBENZIDINE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
DIETHYL PHTHALATE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
DIMETHYL PHTHALATE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
2,4-DINITROTOLUENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
2,6-DINITROTOLUENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1
1,2-DIPHENYLHYDRAZINE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.1

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

Form Approved 1/14/99
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Outfall number: 0011 (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	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
FLUORENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
HEXACHLOROBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10
HEXACHLOROBUTADIENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10
HEXACHLOROCYCLO-PENTADIENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10
HEXACHLOROETHANE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10
INDENO(1,2,3-CD)PYRENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
ISOPHORONE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10
NAPHTHALENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
NITROBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625.00	5.10
N-NITROSODI-N-PROPYLAMINE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10
N-NITROSODI- METHYLAMINE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10
N-NITROSODI-PHENYLAMINE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	10.2
PHENANTHRENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
PYRENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	2.04
1,2,4-TRICHLOROBENZENE	0	ppb	0	lbs/day	0	ppb	0	lbs/day	3	625	5.10

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:
Five Mile Creek WRF (AL0026913)

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SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. 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.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

✓ chronic ____ acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

	Test number:_____	Test number:_____	Test number:_____
a. Test information.			
Test species & test method number			
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			
b. Give toxicity test methods followed.			
Manual title			
Edition number and year of publication			
Page number(s)			
c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.			
24-Hour composite			
Grab			
d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)			
Before disinfection			
After disinfection			
After dechlorination			

	Test number:_____	Test number:_____	Test number:_____
e. Describe the point in the treatment process at which the sample was collected.			
Sample was collected:			
f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.			
Chronic toxicity			
Acute toxicity			
g. Provide the type of test performed.			
Static			
Static-renewal			
Flow-through			
h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.			
Laboratory water			
Receiving water			
i. Type of dilution water. It salt water, specify "natural" or type of artificial sea salts or brine used.			
Fresh water			
Salt water			
j. Give the percentage effluent used for all concentrations in the test series.			
k. Parameters measured during the test. (State whether parameter meets test method specifications)			
pH			
Salinity			
Temperature			
Ammonia			
Dissolved oxygen			
l. Test Results.			
Acute:			
Percent survival in 100% effluent	%	%	%
LC_{50}			
95% C.I.	%	%	%
Control percent survival	%	%	%
Other (describe)			

Chronic:			
NOEC	%	%	%
IC_{25}	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance.			
Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____Yes ✓ No If yes, describe: _____

E.4. Summary of Submitted Biomonitoring Test Information. If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: _____ (MM/DD/YYYY)

Summary of results: (see instructions)

Reports submitted in accordance with permit requirements for the reporting periods of August 2014-2018. Five Mile Creek WRF 0011 has passed each toxicity test.

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

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. 6.00

b. Number of CIUs. 5.00

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: Please view attached Form 2A Part F for each SIU and CIU information for this section.

Mailing Address: _____

_____

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

_____

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.

_____ 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?

_____

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).

EPA Hazardous Waste Number	Amount	Units

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

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. 6.00

b. Number of CIUs. 5.00

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: Cascades Sonoco

Mailing Address: 170 Cleage Drive
Birmingham, Alabama 35217

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

Wastewater generated from the production of coated and laminated packaging

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): various packaging products

Raw material(s): wash water

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.

545.00 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?

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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).

EPA Hazardous Waste Number	Amount	Units

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).

Jet-Pep #430- 4301 Vanderbilt Road, Birmingham, Alabama 35217
ADEM Directed Groundwater Remediation, Facility I.D. #12740-073-002501
UST Incident #UST06-04-09

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).

Benzene- 0.018 ppm, Toluene-0.001 ppm, Ethylbenzene- 0.006 ppm, Xylenes- 0.003 ppm, MTBE- 0.012 ppm, Napthalene- 0.004 ppm

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):

Soil and groundwater treatment system

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

____Continuous ✓ Intermittent If intermittent, describe discharge schedule.

0.18 gpm or 259 gpd

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

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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. 6.00

b. Number of CIUs. 5.00

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: Cowin Equipment Company

Mailing Address: 2300 Pinson Valley Parkway
Birmingham, Alabama 35217

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

Heavy Equipment Washing

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): cleaning agents

Raw material(s): Cleaning agents, oil & grease

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.

300.00 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?

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).

EPA Hazardous Waste Number	Amount	Units

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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. 6.00

b. Number of CIUs. 5.00

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: Cummins Mid-South

Mailing Address: BC 625 P. O. Box 291989
Nashville, Tennessee 37229

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

Heavy Equipment Washing

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): cleaning agents

Raw material(s): Cleaning agents, oil & grease

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.

300.00 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?

_____

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).

EPA Hazardous Waste Number	Amount	Units

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

Form Approved 1/14/99
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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. 6.00

b. Number of CIUs. 5.00

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: Kamtek Inc.

Mailing Address: 1595 Sterilite Drive
Birmingham, Alabama 35215

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

wastewaters from aluminum casting and 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): Metal parts for automobile manufactoring

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.

28,000.00 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?

40 CFR 464: Subpart A , 40 CFR 433: Subpart A

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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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).

EPA Hazardous Waste Number	Amount	Units

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

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. 6.00

b. Number of CIUs. 5.00

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: Kent Corporation

Mailing Address: P. O. Box 170399
Birmingham, Alabama 35217

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

Washing , phosphatizing, painting of cut,, bent, formed and welded fabricated metal parts

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): Metal store: shelving and fixtures

Raw material(s): ferrous metal washing and phosphatizing solutions, powder paint or paint bath materials

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.

10,000.00 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?

40 CFR 433- Metal Finishing: Subpart A

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).

EPA Hazardous Waste Number	Amount	Units

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

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. 6.00

b. Number of CIUs. 5.00

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: L. B. Foster

Mailing Address: P. O. Box 310487
Birmingham, Alabama 35231

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

Acid washing of pipe as preparation step to fusion bond coating

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): Phosphoric acid solution, caustics

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.

9,000.00 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?

_____

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).

EPA Hazardous Waste Number	Amount	Units

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

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. 6.00

b. Number of CIUs. 5.00

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: Max Coating

Mailing Address: 3653 Industrial Parkway
Birmingham, Alabama 35217

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

Phosphitizing and washing components prior to coating with powder paint

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): Powder painted components from various sources

Raw material(s): Cleaners and powder paint

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.

5,000.00 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?

40 CFR 433- Metal Finishing: Subpart A

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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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.

Possibly contributed to high levels of Zinc in the sludge. High Zinc values have been reported on their discharge monitoring reports and in samples collected by Jefferson County.

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).

EPA Hazardous Waste Number	Amount	Units

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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. 6.00

b. Number of CIUs. 5.00

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: Maclean Dixie, LLC

Mailing Address: P. O. Box 170040
Birmingham, Alabama 35217

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

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): Zinc plated electrical utility components

Raw material(s): ferrous metal components, washing and plating solutions

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.

_____ 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?

40 CFR 433- Metal Finishing: Subpart A

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).

EPA Hazardous Waste Number	Amount	Units

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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. 6.00

b. Number of CIUs. 5.00

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: Nutec

Mailing Address: P. O. Box 1170746
Birmingham, Alabama 35217

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

Rack and barrel plating, coating, dipping, zinc electroplating, mecganical galvanizing

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): Zinc and chromated metal parts

Raw material(s): Parts from different sources, cleaners, acids and plating solutions

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.

3,000.00 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?

40 CFR 433- Metal Finishing: Subpart A

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.

Possibly contributed to high levels of Zinc in the sludge. High Zinc values have been reported on their discharge monitoring reports and in samples collected by Jefferson County.

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).

EPA Hazardous Waste Number	Amount	Units

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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. 6.00

b. Number of CIUs. 5.00

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: Thompson Tractor

Mailing Address: 2401 Pinson Valley Highway
Birmingham, Alabama 35217

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

Equipment Washing

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): various equipment

Raw material(s): Cleaning agents; phosphates

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?

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).

EPA Hazardous Waste Number	Amount	Units

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF (AL0026913)

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. 6.00

b. Number of CIUs. 5.00

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: Ventura Foods

Mailing Address: 3900 Vanderbilt Road
Birmingham, Alabama 35217

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

Margarine and vegetable spread production, cleaning/washdown

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): Vegetable oil, margarine, liquid butter alt, butter blend

Raw material(s): Vegetable oils, dyes, salt, dairy, and flavorings

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.

200,000.00 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?

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.

Intermittent problems created at the WRF by fats, oils and greases (FOG) release when pretreatment fails and improper adjustments of pH resulting in excessive grease collecting at the plant and deterioration of sewer lines.

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).

EPA Hazardous Waste Number	Amount	Units

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

SUPPLEMENTAL APPLICATION INFORMATION

PART G. COMBINED SEWER SYSTEMS

If the treatment works has a combined sewer system, complete Part G.

G.1. System Map. Provide a map indicating the following: (may be included with Basic Application Information)

a. All CSO discharge points.

b. Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).

c. Waters that support threatened and endangered species potentially affected by CSOs.

G.2. System Diagram. Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

a. Locations of major sewer trunk lines, both combined and separate sanitary.

b. Locations of points where separate sanitary sewers feed into the combined sewer system.

c. Locations of in-line and off-line storage structures.

d. Locations of flow-regulating devices.

e. Locations of pump stations.

CSO OUTFALLS:

Complete questions G.3 through G.6 once for each CSO discharge point.

G.3. Description of Outfall.

a. Outfall number N/A

b. Location

(City or town, if applicable) (Zip Code)

(County) (State)

(Latitude) (Longitude)

c. Distance from shore (if applicable) _____ ft.

d. Depth below surface (if applicable) _____ ft.

e. Which of the following were monitored during the last year for this CSO?

____Rainfall ____CSO pollutant concentrations ____CSO frequency

____CSO flow volume ____Receiving water quality

f. How many storm events were monitored during the last year? _____

G.4. CSO Events.

a. Give the number of CSO events in the last year.

_____ events (___ actual or ___ approx.)

b. Give the average duration per CSO event.

_____ hours (____ actual or ____ approx.)

c. Give the average volume per CSO event.

_____ million gallons (_____ actual or _____ approx.)

d. Give the minimum rainfall that caused a CSO event in the last year.

_____ inches of rainfall

G.5. Description of Receiving Waters.

a. Name of receiving water: _____

b. Name of watershed/river/stream system: _____

United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin: _____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

G.6. CSO Operations.

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

_____

_____

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

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

FORM 2A
ATTACHMENTS

ATTACHMENT 1 – SECTION B.2 1-MILE RADIUS FIVE MILE CREEK WRF

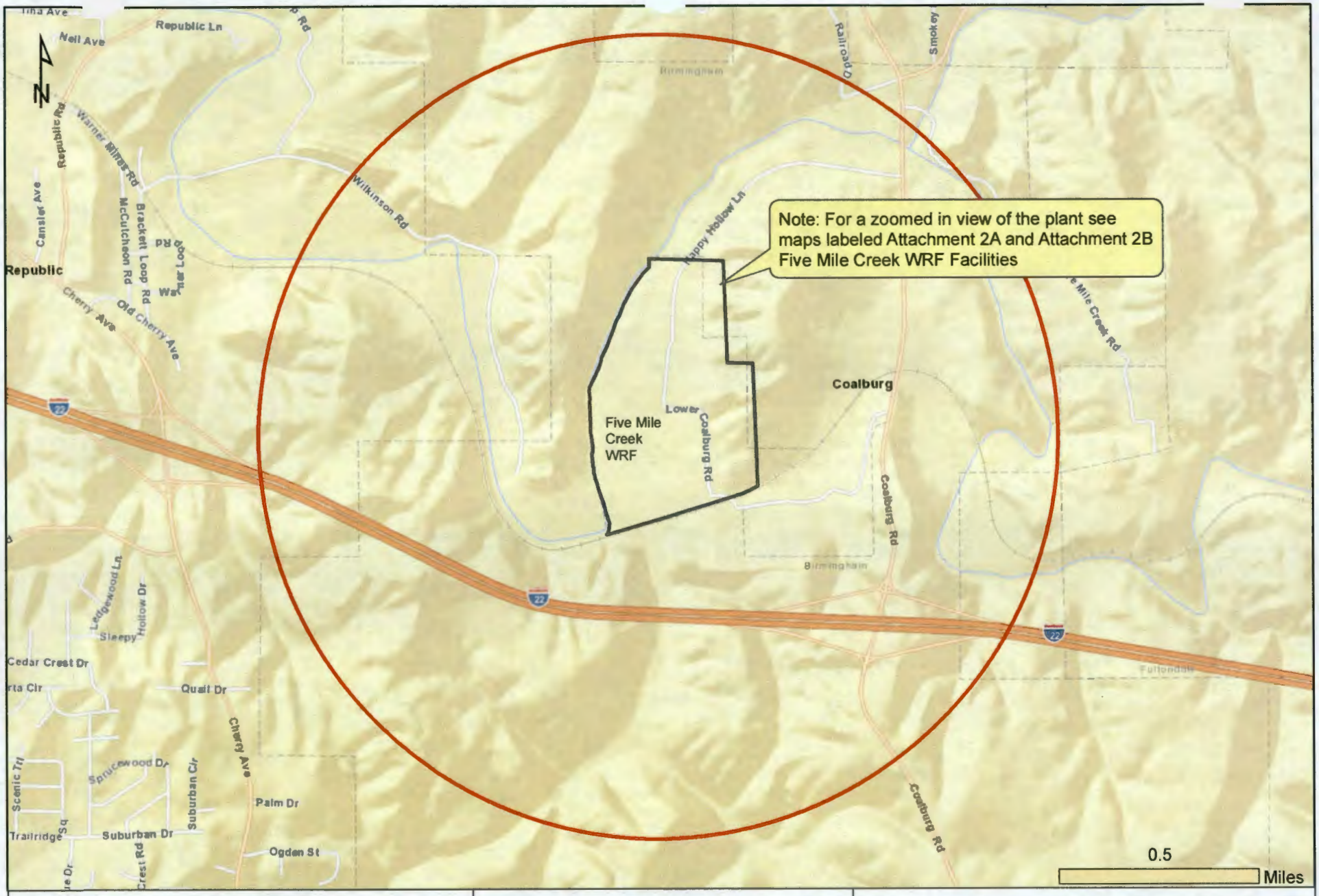
ATTACHMENT 2A AND 2B – SECTION B.2.a FIVE MILE CREEK WRF FACILITIES

ATTACHMENT 3 – SECTION B.2.b FIVE MILE CREEK WRF CONVEYANCE STRUCTURES

ATTACHMENT 4 – SECTION B.2.d FIVE MILE CREEK WRF VICINITY WATER RESOURCES

ATTACHMENT 5 – SECTION B.2.e FIVE MILE CREEK WRF BIOSOLIDS DISPOSAL SITES

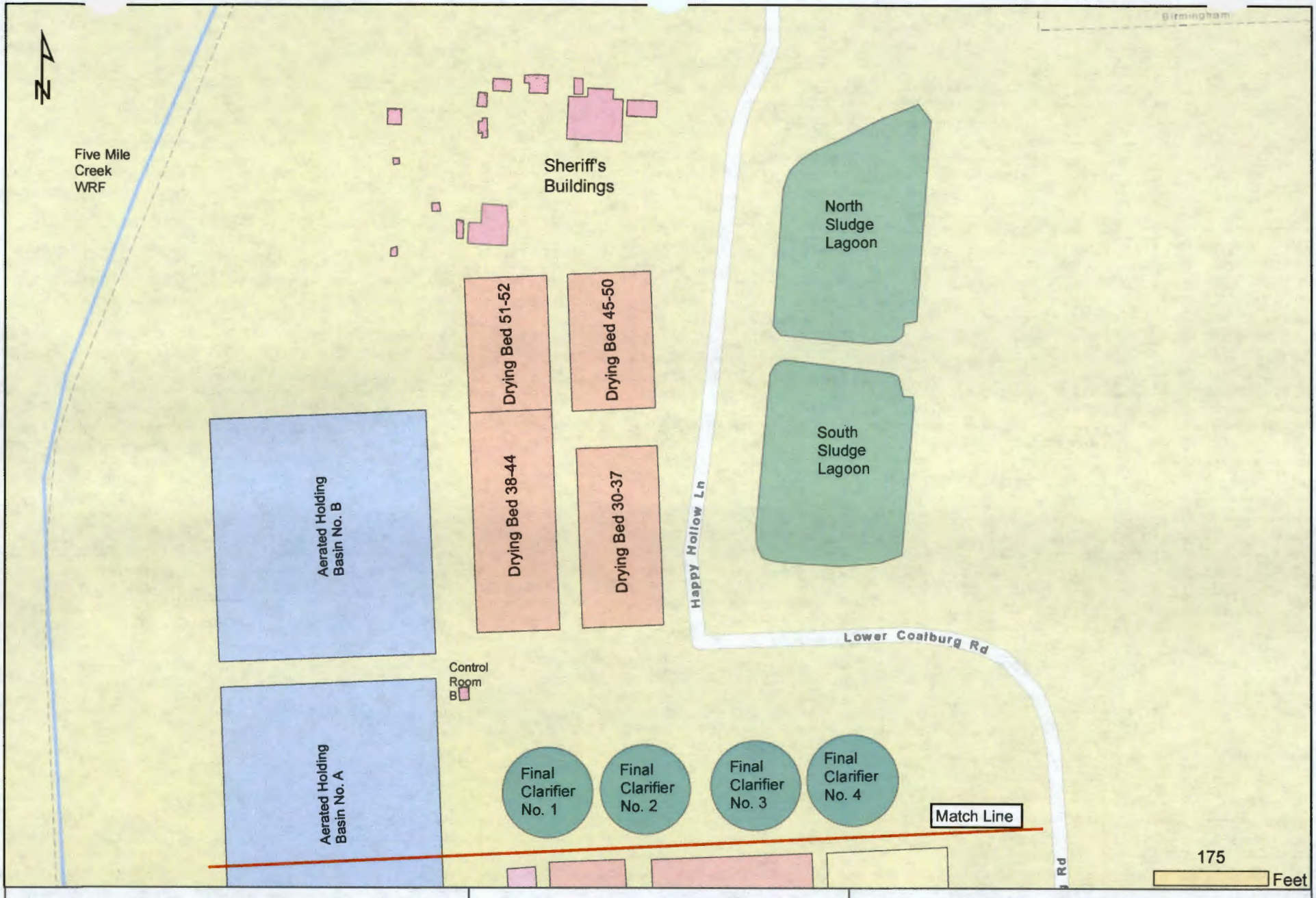
ATTACHMENT 6 – SECTION B.3 PROCESS FLOW AND WATER BALANCE



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

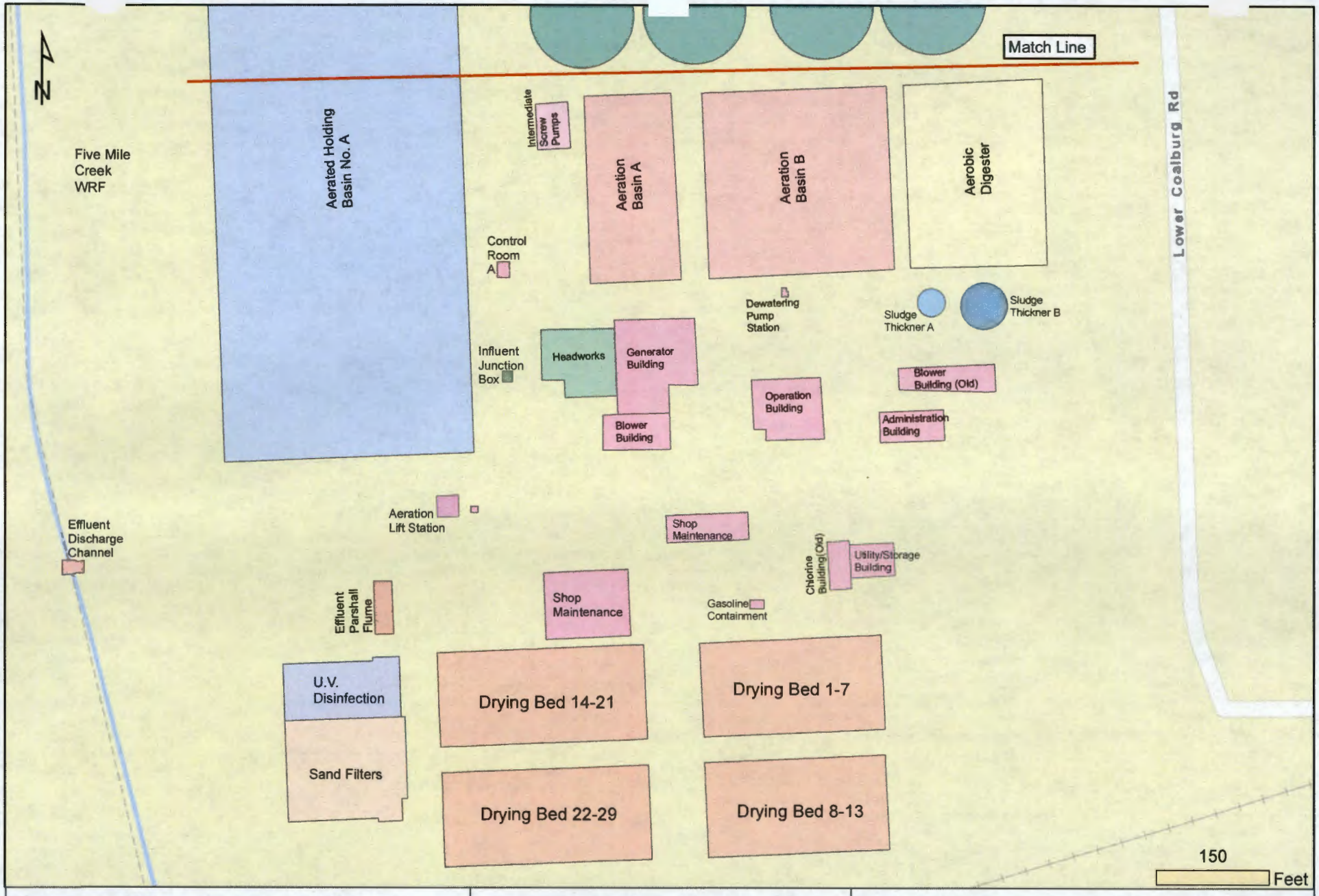
Form 2A, B.2a
ATTACHMENT 1
1-MILE RADIUS FIVE MILE CREEK WRF



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

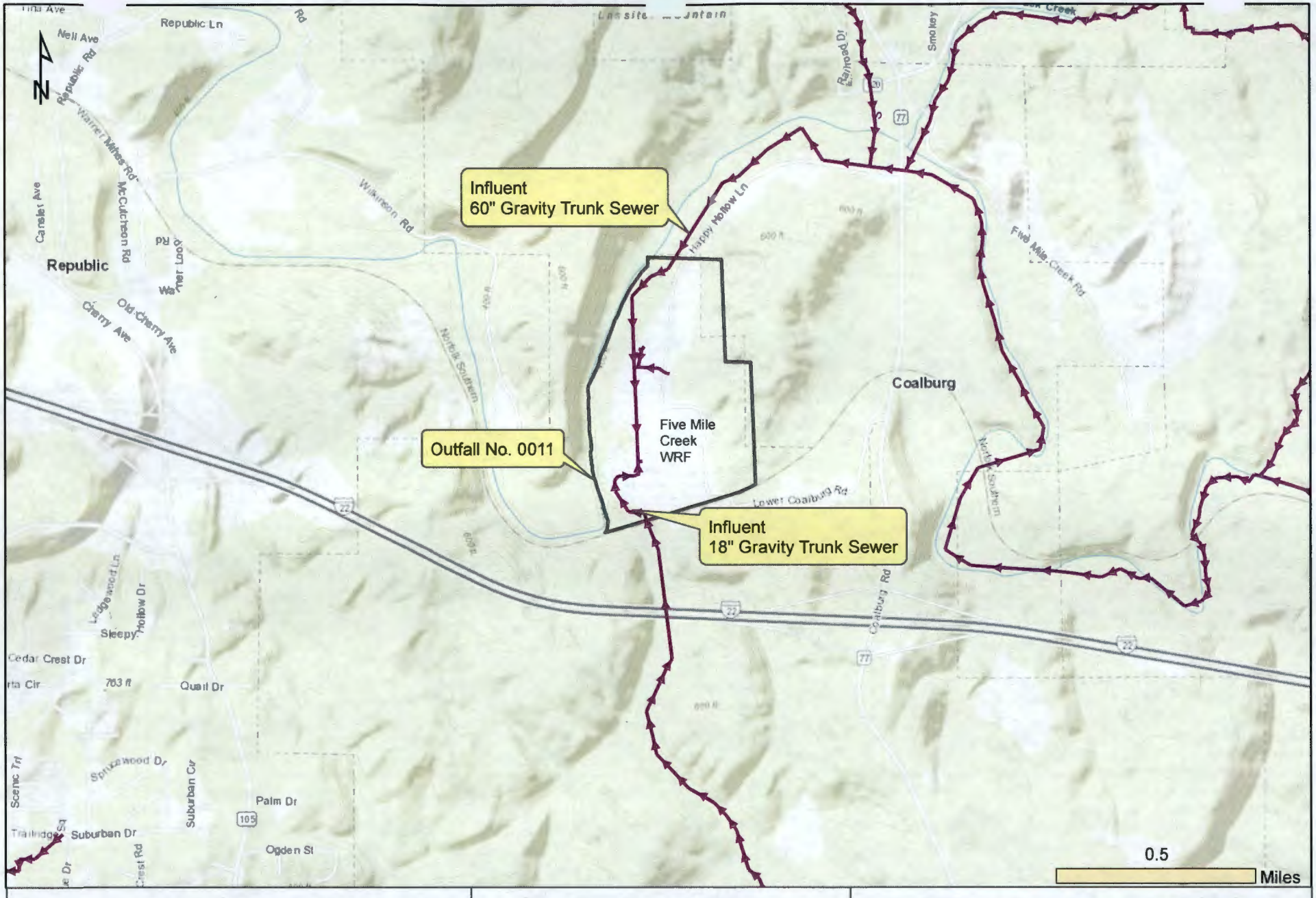
Form 2A, B.2a
ATTACHMENT 2A
FIVE MILE CREEK WRF FACILITIES



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

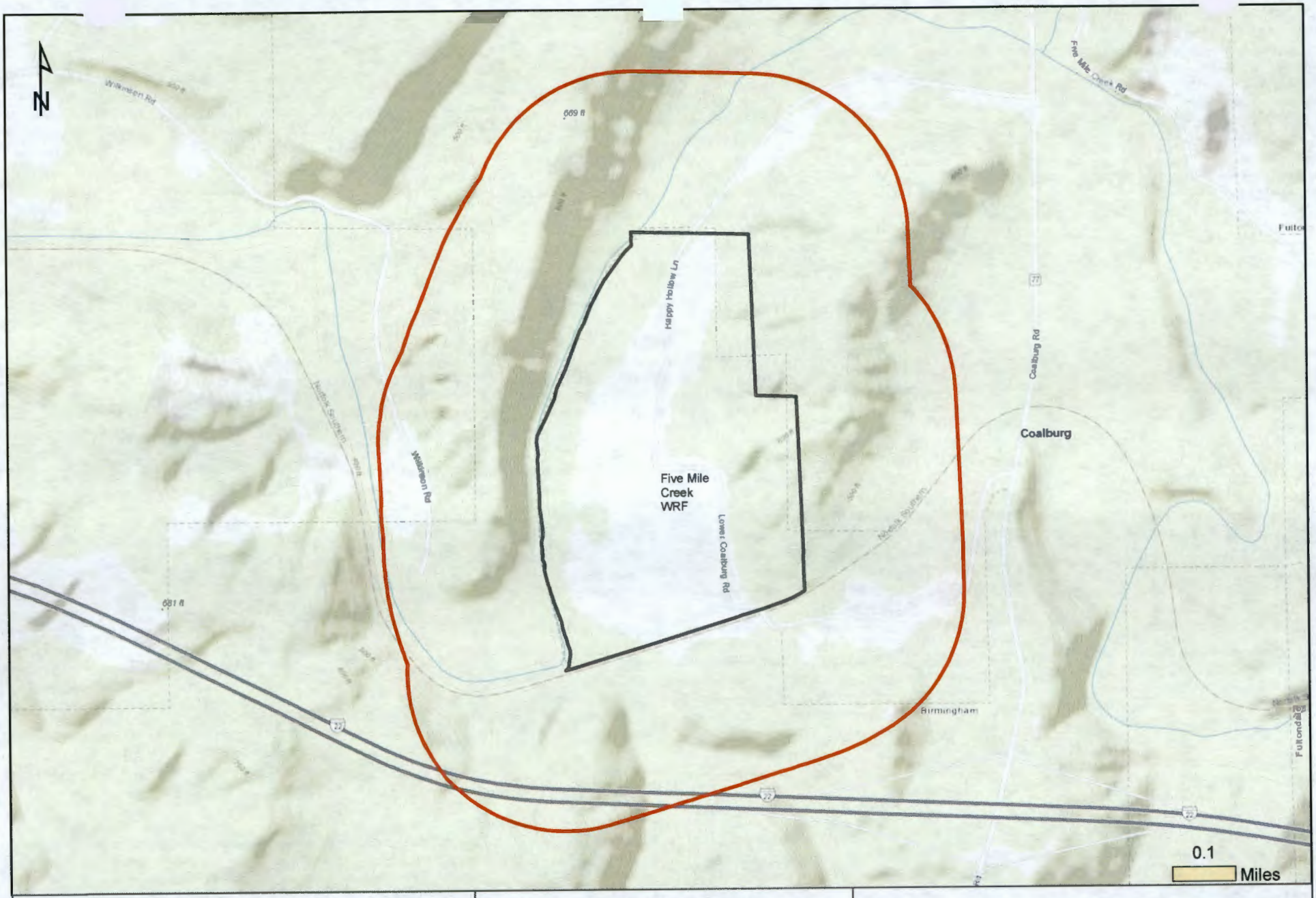
Form 2A, B.2a
ATTACHMENT 2B
FIVE MILE CREEK WRF FACILITIES



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

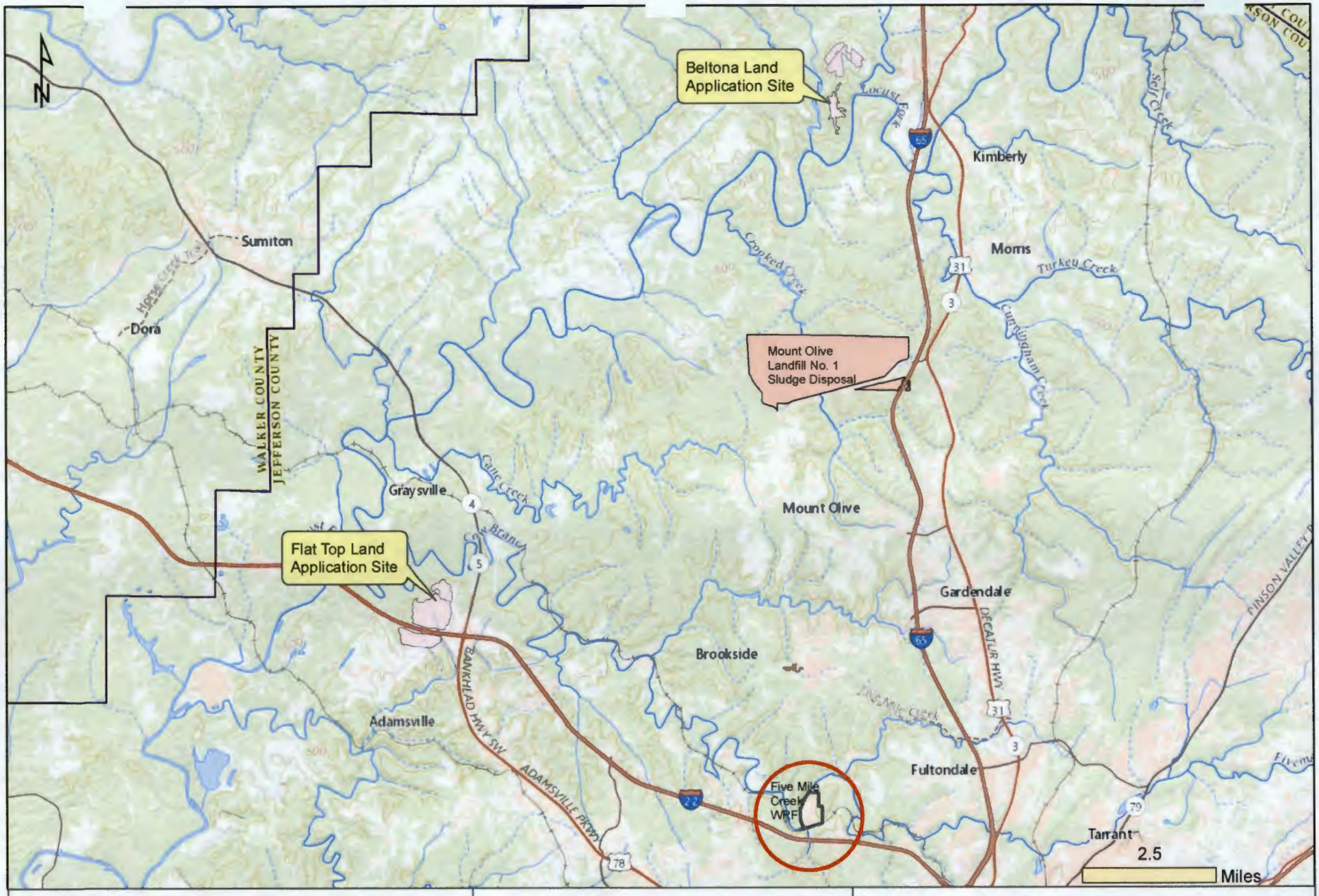
Form 2A, B.2.b
ATTACHMENT 3
FIVE MILE CREEK WRF
CONVEYANCE STRUCTURES



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

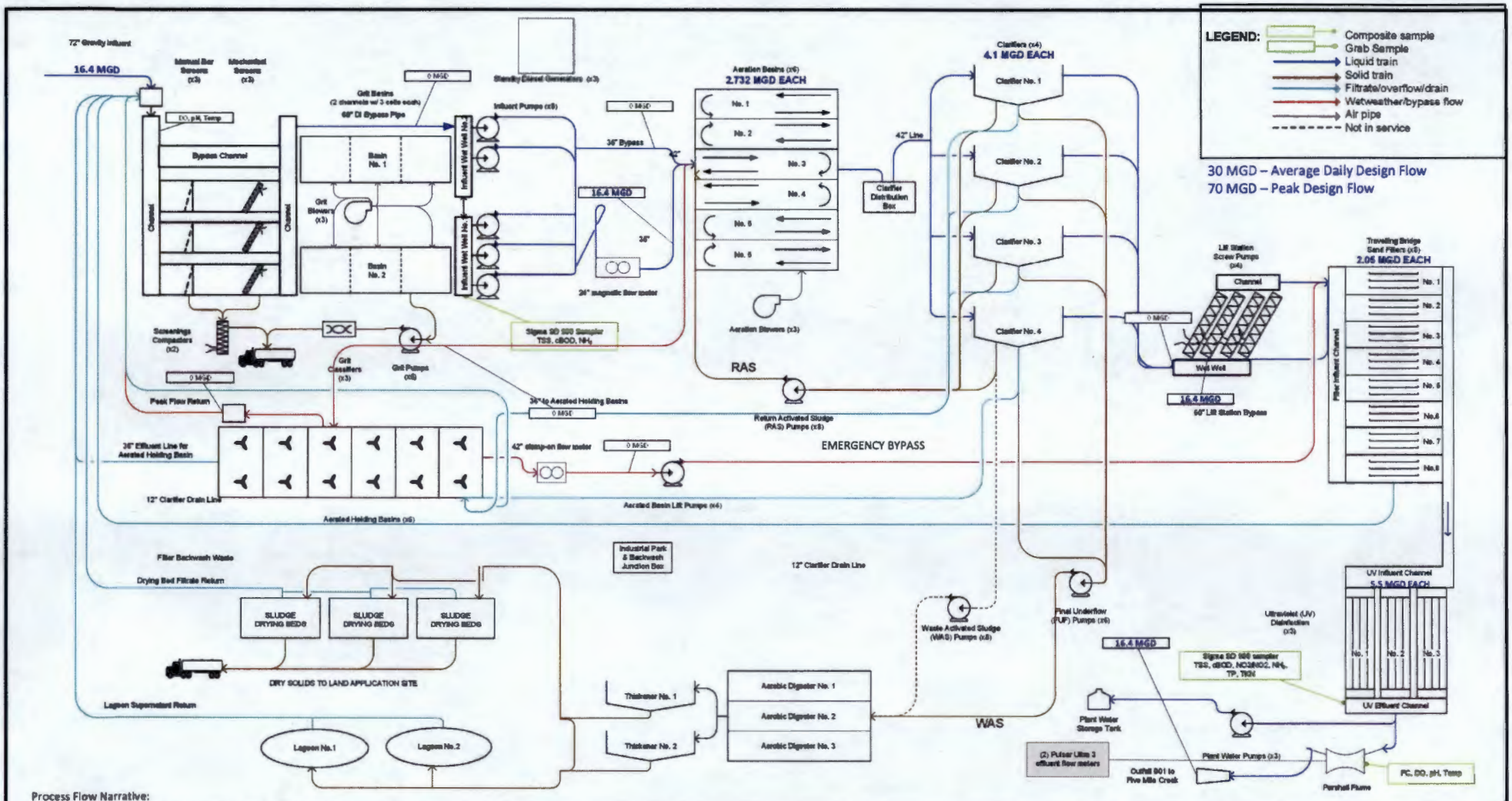
Form 2A, B.2.d
ATTACHMENT 4
FIVE MILE CREEK WRF
VICINITY WATER RESOURCES
(1/4 MILE RADIUS)



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

Form 2A, B.2.e
ATTACHMENT 5
FIVE MILE CREEK WRF BIOSOLIDS
DISPOSAL SITES



Process Flow Narrative:

The 2018 calendar year annual average daily flow of 16.41 MGD enters the Five Mile Creek WWTP via a 72" gravity sewer. The plant has a design average daily flow rate of 30 MGD and a peak design rate of 70 MGD. The influent flow receives screening through fine screens and follows with grit removal. The flow is then pumped and equally split into six aeration basins with capacities of 5 MGD average daily flow each.The flow then receives final clarification before advanced treatment through traveling bridge sand filters. The flow receives disinfection from ultra-violet light prior to discharge through Outfall 0011 into Fivemile Creek.

JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES DEPARTMENT
716 Richard Arrington Jr. Blvd, N, Suite A300
Birmingham, AL 35203

FIVE MILE CREEK
WATER RECLAMATION FACILITY
AL0026913
NPDES Permit Application

Form 2A, B.3
ATTACHMENT 6
PROCESS FLOW AND WATER BALANCE

LRS, Inc.

Laboratory Resources & Solutions, Inc.
P.O. Box 1260
205 6th Avenue
Ashville, AL 35953
(205) 594-1445
www.lab-resource.com

Analytical Data Report

Client: **Jefferson County Commission**
716 Richard Arrington Jr. Blvd. North
Birmingham, Al 35203

Attention: Ms. Celeste Brown

Project ID: **Jefferson County WWTP's – Mercury** (May 30 – June 01, 2018)

Laboratory Report Number: **18-156-0236**

Date: June 13, 2018

Primary Data Review by:

Courtney Snow

Courtnay Snow
Project Manager
Laboratory Resources & Solutions, Inc.
csnow@lab-resource.com

* Unless otherwise noted, all analysis on this report performed at Waypoint Analytical, Inc. 2790 Whitten Road Memphis, TN 38133. NELAC #460181

*Alabama #40750 Louisiana #04015 VA NELAP #460181 Texas #T104704180-11-6
Arkansas #88-0650 Mississippi California #02904 NC #415 Oklahoma #9311 Virginia #00106
Kentucky #90047 Tennessee #TN02027 EPA #TN00012 Kentucky UST # 41

* Local support services for this project are provided by Laboratory Resources & Solutions, Inc. (LRS). All questions regarding this report should be directed to LRS, Inc. at (205) 594-1445.

Waypoint ANALYTICAL

2790 Whitten Road, Memphis, TN 38133
Main 901.213.2400 ° Fax 901.213.2440
www.waypointanalytical.com

6/7/2018

Jefferson County Commission
Ms. Celeste Brown
716 Richard Arrington Jr. Blvd N
Birmingham, AL, 35203

Ref: Analytical Testing
Lab Report Number: 18-156-0236
Client Project Description: Analytical Testing

Dear Ms. Celeste Brown:
Waypoint Analytical, Inc. received sample(s) on 6/5/2018 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Andy Parrish
Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

Waypoint ANALYTICAL

2790 Whitten Road, Memphis, TN 38133
Main 901.213.2400 ° Fax 901.213.2440
www.waypointanalytical.com

Client: Jefferson County Commission
Project: Analytical Testing
Lab Report Number: 18-156-0236
Date: 6/7/2018

CASE NARRATIVE

Mercury Method EPA-245.1
Sample 94957
Analyte: Mercury
QC Batch No: L384918
The matrix spike (MS) and/or the matrix spike duplicate (MSD) was out of the acceptable recovery range. Due to the analyte concentration being less than 25 times the method quantitation limit (MQL) a post digestion spike was performed and the recovery was within the method limits. No matrix interference is suspected.

Waypoint ANALYTICAL

2790 Whitten Road, Memphis, TN 38133
Main 901.213.2400 ° Fax 901.213.2440
www.waypointanalytical.com

14165
Jefferson County Commission
Ms. Celeste Brown
716 Richard Arrington Jr. Blvd N
Birmingham , AL 35203

Project Information : Analytical Testing

Report Date : 06/07/2018
Received : 6/5/2018

Andy Parrish
Project Manager

Report Number : **18-156-0236**

REPORT OF ANALYSIS

Lab No : **94802**
Sample ID : **Field Blank**

Matrix: **Aqueous**
Sampled: **5/30/2018 6:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Mercury	**0.00020**	mg/L	0.00020	1	06/06/18 11:21	KKM	EPA-245.1

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

Waypoint ANALYTICAL

2790 Whitten Road, Memphis, TN 38133
Main 901.213.2400 ° Fax 901.213.2440
www.waypointanalytical.com

14165
Jefferson County Commission
Ms. Celeste Brown
716 Richard Arrington Jr. Blvd N
Birmingham , AL 35203

Project Information : Analytical Testing

Report Date : 06/07/2018
Received : 6/5/2018

Andy Parrish
Project Manager

Report Number : **18-156-0236**

REPORT OF ANALYSIS

Lab No : **94803**
Sample ID : **Five Mile 0011 WWTP**

Matrix: **Aqueous**
Sampled: **5/30/2018 8:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Mercury	**0.00021**	mg/L	0.00020	1	06/06/18 11:23	KKM	EPA-245.1

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Project Information : Analytical Testing

Report Date : 06/07/2018
Received : 6/5/2018

Andy Parrish
Project Manager

Report Number : **18-156-0236**

REPORT OF ANALYSIS

Lab No : **94804**
Sample ID : **Field Blank**

Matrix: **Aqueous**
Sampled: **5/31/2018 6:05**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Mercury	<0.00020	mg/L	0.00020	1	06/06/18 11:25	KKM	EPA-245.1

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

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Project Information : Analytical Testing

Report Date : 06/07/2018
Received : 6/5/2018

Andy Parrish
Project Manager

Report Number : **18-156-0236**

REPORT OF ANALYSIS

Lab No : **94805**
Sample ID : **Five Mile 0011 WWTP**

Matrix: **Aqueous**
Sampled: **5/31/2018 8:11**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Mercury	**0.00020**	mg/L	0.00020	1	06/06/18 11:31	KKM	EPA-245.1

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

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14165
Jefferson County Commission
Ms. Celeste Brown
716 Richard Arrington Jr. Blvd N
Birmingham , AL 35203

Project Information : Analytical Testing

Report Date : 06/07/2018
Received : 6/5/2018

Andy Parrish
Project Manager

Report Number : **18-156-0236**

REPORT OF ANALYSIS

Lab No : **94806**
Sample ID : **Field Blank**

Matrix: **Aqueous**
Sampled: **6/1/2018 6:12**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Mercury	<0.00020	mg/L	0.00020	1	06/06/18 11:33	KKM	EPA-245.1

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

Waypoint ANALYTICAL

2790 Whitten Road, Memphis, TN 38133
Main 901.213.2400 ° Fax 901.213.2440
www.waypointanalytical.com

14165
Jefferson County Commission
Ms. Celeste Brown
716 Richard Arrington Jr. Blvd N
Birmingham , AL 35203

Project Information : Analytical Testing

Report Date : 06/07/2018
Received : 6/5/2018

Andy Parrish
Project Manager

Report Number : **18-156-0236**

REPORT OF ANALYSIS

Lab No : **94807**
Sample ID : **Five Mile 0011 WWTP**

Matrix: **Aqueous**
Sampled: **6/1/2018 7:48**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Mercury	**0.00020**	mg/L	0.00020	1	06/06/18 11:35	KKM	EPA-245.1

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

Waypoint ANALYTICAL

2790 Whitten Road, Memphis, TN 38133
Main 901.213.2400 ° Fax 901.213.2440
www.waypointanalytical.com

Cooler Receipt Form

Customer Number: **14165**
Customer Name: **Jefferson County Commission**
Report Number: **18-156-0236**

Shipping Method

● Fed Ex ○ US Postal ○ Lab ○ Other :
○ UPS ○ Client ○ Courier Thermometer ID: #21

Shipping container/cooler uncompromised?	● Yes	○ No	
Number of coolers received	1		
Custody seals intact on shipping container/cooler?	● Yes	○ No	○ Not Required
Custody seals intact on sample bottles?	○ Yes	○ No	● Not Required
Chain of Custody (COC) present?	● Yes	○ No	
COC agrees with sample label(s)?	● Yes	○ No	
COC properly completed	● Yes	○ No	
Samples in proper containers?	● Yes	○ No	
Sample containers intact?	● Yes	○ No	
Sufficient sample volume for indicated test(s)?	● Yes	○ No	
All samples received within holding time?	● Yes	○ No	
Cooler temperature in compliance?	● Yes	○ No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	● Yes	○ No	
Water - Sample containers properly preserved	● Yes	○ No	○ N/A
Water - VOA vials free of headspace	○ Yes	○ No	● N/A
Trip Blanks received with VOAs	○ Yes	○ No	● N/A
Soil VOA method 5035 – compliance criteria met	○ Yes	○ No	● N/A

☐ High concentration container (48 hr) ☐ Low concentration EnCore samplers (48 hr)
☐ High concentration pre-weighed (methanol -14 d) ☐ Low conc pre-weighed vials (Sod Bis -14 d)

Special precautions or instructions included? ○ Yes ● No

Comments:

Signature: Kristina A. McAdams Date & Time: 06/05/2018 09:58:27

Billing Information:

LRS, Inc.

Mailing Address:
163 5th Street
Physical Address:
205 6th Avenue
Ashville, Alabama 35953
(205) 594-1445
wgaston@lab-resource.com

LRS Client Information:

Jefferson County Commission
716 Richard Arrington Jr. Blvd. N
Birmingham, AL 35203

"Report to" Contact:
Ms. Celeste Brown

Project Name:

City/State collected:

Collected by: Mark Shaw | Client Project #: | P.O. # 1801723

Collected by (signature):

Packed on Ice? N___ Y___

Project Turnaround (Begins on Lab Login Date)

RUSH? Please Notify LRS
_____ Same Day (200%)
_____ Next Day (100%)
_____ Two Day (50%)
_____ Three Day (25%)

Date Results Needed:

Analysis/Container/Preservative

Chain of Custody
Page 1 of 1

Laboratory Resources & Solutions, Inc. (LRS)
A Laboratory Service Provider

18-156-0236
14165
06-05-2018
09:57:59
Jefferson County Commission
Analytical Testing

Laboratory:
WP- Memphis, TN

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	Number of Containers	~~VOC's (see attached list)~~	~~Acid Extractable Compounds (see attached list)~~	~~Base-Neutral Compounds (see attached list)~~	~~Mercury 7470~~ 245.1	Sample Remarks
Field Blank		WW		5/30/18	615	~~4~~	X	X	X	X	
Five Mile 0011 WWTP	Comp	WW		5/30/18	815	~~4~~	X	X	X	X	
Field Blank		WW		5/31/18	605	~~4~~	X	X	X	X	
Five Mile 0011 WWTP	Comp	WW		5/31/18	811	~~4~~	X	X	X	X	
Field Blank		WW		6/1/18	612	~~4~~	X	X	X	X	
Five Mile 0011 WWTP	Comp	WW		6/1/18	748	~~4~~	X	X	X	X	

*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater SW-Surface Water DW-Drinking Water OT- Other (Describe)_____

pH_____ Temp_____

Project Remarks:

Rainfall in Inches _____ Flow_____ Other_____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: FedEx__ UPS__Other__		Condition (lab use only)	Custody Seals received on: Coolers / Containers
Relinquished by: (Signature)	Date: 6/1/18	Time: 1100	Received by: (Signature)	Temp: 0.6°C Tr1 WAT	Bottles Received:		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/5/18	Time: 0800	pH Checked:	NCF:

Client signature implies acceptance of LRS Terms and Conditions, which can be viewed online at www.lab-resource.com

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

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

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

RECEIVED
MAY 02 2019
IND / MUN BRANCH

PURPOSE OF THIS APPLICATION

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

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

SECTION A – GENERAL INFORMATION

1. Facility Name: Five Mile Creek Water Reclamation Facility

   a. Operator Name: Jefferson County Environmental Services Department

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

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

2. NPDES Permit Number: AL 0026913 (Not applicable if initial permit application)

3. Facility Physical Location: (**Attach a map with location marked; street, route no. or other specific identifier**)
   Street: 3410 Happy Hollow Road
   City: Fultondale County: Jefferson State: AL Zip: 35068
   Facility Location (Front Gate): Latitude: 33d 36' 18" Longitude: W 086d 51' 17"

4. Facility Mailing Address: Suite A300 716 Richard Arrington Jr Blvd N
   City: Birmingham County: Jefferson State: AL Zip: 35203

5. Responsible Official (as described on last page of this application):
   Name and Title: David Denard, Director
   Address: Suite A300 716 Richard Arrington Jr Blvd N
   City: Birmingham State: AL Zip: 35203
   Phone Number: 205-325-5979 Email Address: denardd@jccal.org

6. Designated Facility/DMR Contact:

Name and Title: same as No. 5 above

Phone Number: _____ Email Address: _____

7. Designated Emergency Contact:

Name and Title: N/A

Phone Number: _____ Email Address: _____

8. Please complete this section if the Applicant's business entity is a Proprietorship or Limited Liability Company (LLC) with a responsible official not listed in A.5.

Name and Title: N/A

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

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

Permit Type	Permit Number	Held By
Five Mile Creek WRF	AL0026913	JeffCo Commission
Cahaba River WRF	AL0023027	JeffCo Commission
Leeds WRF	AL0067067	JeffCo Commission
Prudes Creek WRF	AL0052610	JeffCo Commission
Trussville WRF	AL0022934	JeffCo Commission

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

Facility Name	Permit Number	Type of Action	Date of Action

6. Designated Facility/DMR Contact:

Name and Title: Same as No. 5 above

Phone Number: _____ Email Address: _____

7. Designated Emergency Contact:

Name and Title: N/A

Phone Number: _____ Email Address: _____

8. Please complete this section if the Applicant's business entity is a Proprietorship or Limited Liability Company (LLC) with a responsible official not listed in A.5.

Name and Title: N/A

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

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

Permit Type	Permit Number	Held By
Turkey Creek WRF	AL0022926	JeffCo Commission
Valley Creek WRF	AL0023655	JeffCo Commission
Village Creek WRF	AL0023647	JeffCo Commission
Warrior WRF	AL0050881	JeffCo Commission

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

Facility Name	Permit Number	Type of Action	Date of Action
View Attachment			

SECTION B – WASTEWATER DISCHARGE INFORMATION

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

Outfall No.	Highest Flow in Last 12 Months (MGD)	Highest Daily Flow (MGD)	Average Flow (MGD)
0011	53.52	53.52	14.46

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

3. Do you share an outfall with another facility? ☐ Yes ☒ No (If no, continue to B.4)
For each shared outfall, provide the following:

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

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

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

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

View flow diagram. Composite samplers are manufactured by HACH model 9000.

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.)

JCESD has plans to make improvements to eliminate sanitary sewer overflows.

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
Municipal Wastewater Biosolids	Covered drying beds
Diesel Fuel	Double wall storage tank inside concrete barrier
Gasoline	Double wall storage tank inside concrete barrier

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*
Municipal wastewater biosolids	3,342	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

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

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit?	
Maclean Dixie LLC	Metal finishing operations	Existing		■ Yes	☐ No
Kent Corporation	Washing , phosphatizing, painting of cut., bent, formed and welded fabricated metal parts	Existing	0.001-0.01	■ Yes	☐ No
L. B. Foster	Acid washing of pipe as preparation step to fusion bond coating	Existing	0.005-0.010	☐ Yes	■ No
Max Coating	Phosphitizing and washing components prior to coating with powder paint	Existing	0.005	■ Yes	☐ No

b. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance? ■ Yes ☐ No
If yes, please attach a copy of the ordinance.

SECTION E – COASTAL ZONE INFORMATION

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

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

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*
Municipal wastewater biosolids	3,342	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

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

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit?
Cascades Sonoco	Wastewater generated from the production of coated and laminated packaging	Existing	0.000545	☐ Yes ■ No
Cowin Equipment	Heavy Equipment Washing	Existing	0.0003	☐ Yes ■ No
Cummins MidSouth	Equipment Washing	Existing	0.0003	☐ Yes ■ No
Kamtek	Aluminum Casting and Metal Operations	Existing	.028000	■ Yes ☐ No

b. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance? ■ Yes ☐ No
If yes, please attach a copy of the ordinance.

SECTION E – COASTAL ZONE INFORMATION

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

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

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*
Municipal wastewater biosolids	3,342	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

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

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit?	
Nutec	Rack and Barrel Plating, Coating, Zinc Electroplating	Existing	0.002 - 0.003	■ Yes	☐ No
Thompson Tractor	Equipment Washing	Existing	0.0002 - 0.001	☐ Yes	■ No
Ventura Foods	Margarine, Butter and Vegetable Spread Production	Existing	0.075 - 0.3	■ Yes	☐ No
				☐ Yes	■ No

b. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance? ■ Yes ☐ No
If yes, please attach a copy of the ordinance.

SECTION E – COASTAL ZONE INFORMATION

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

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

SECTION F – ANTI-DEGRADATION EVALUATION

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

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

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

   If yes, do not complete this section.

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

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

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

   _____

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

   _____

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

   _____

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

   _____

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

   _____

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

   _____

SECTION G – EPA Application Forms

All Applicants must submit certain EPA permit application forms. More than one application form may be required from a POTW or other TWTDS depending on the number and types of discharges or outfalls. The EPA application forms are found on the Department's website at http://adem.alabama.gov/programs/water/waterforms.cnt. The EPA application forms must be submitted in duplicate as follows:

1. All applicants must submit Form 1.
2. Applicants for new or existing discharges of sanitary wastewater from Publicly-Owned Treatment Works (POTW) and Other Treatment Works Treating Domestic Sewage (TWTDS) must submit Form 2A.
3. Applicants for new or existing land application of sanitary wastewater must submit Form 2A and, if the land application site is not completely bermed to prevent runoff, applicants must also submit Form 2F.
4. Applicants for new and existing discharges of process wastewater from water treatment facilities (i.e. public water supply treatment plants) must submit Form 2C.
5. Applicants that generate sewage sludge, derive a material from sewage sludge, or dispose of sewage sludge must submit Part 2 of Form 2S.

SECTION H– ENGINEERING REPORT/BMP PLAN REQUIREMENTS

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

SECTION I– RECEIVING WATERS

Outfall No.	Receiving Water(s)	303(d) Segment?	Included in TMDL?*
0011	Fivemile Creek	☐ Yes ■ No	☐ Yes ■ No
N/A	Locust Fork TMDL (see attached schedule)	■ Yes ☐ No	■ Yes ☐ No
		☐ Yes ☐ No	☐ Yes ☐ No

*If a TMDL Compliance Schedule is requested, the following should be attached as supporting documentation:

(1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.);

(2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be submitted as available);

(3) Requested interim limitations, if applicable;

(4) Date of final compliance with the TMDL limitations; and,

(5) Any other additional information available to support requested compliance schedule.

SECTION J – APPLICATION CERTIFICATION

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

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

Signature of Responsible Official: _____ Date Signed: 5/2/19

Name and Title: David Denard, Director, Jefferson County Department of Environmental Services

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

Mailing Address: 716 Richard Arrington Jr Blvd N, Suite A300

City: Birmingham State: AL Zip: 35203

Phone Number: 205-325-5979 Email Address: denardd@jccal.org

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

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

(a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;

(b) In the case of a partnership, by a general partner;

(c) In the case of a sole proprietorship, by the proprietor; or

(d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.

FORM 188
ATTACHMENTS

ATTACHMENT 1 – SECTION A.3 LOCATION

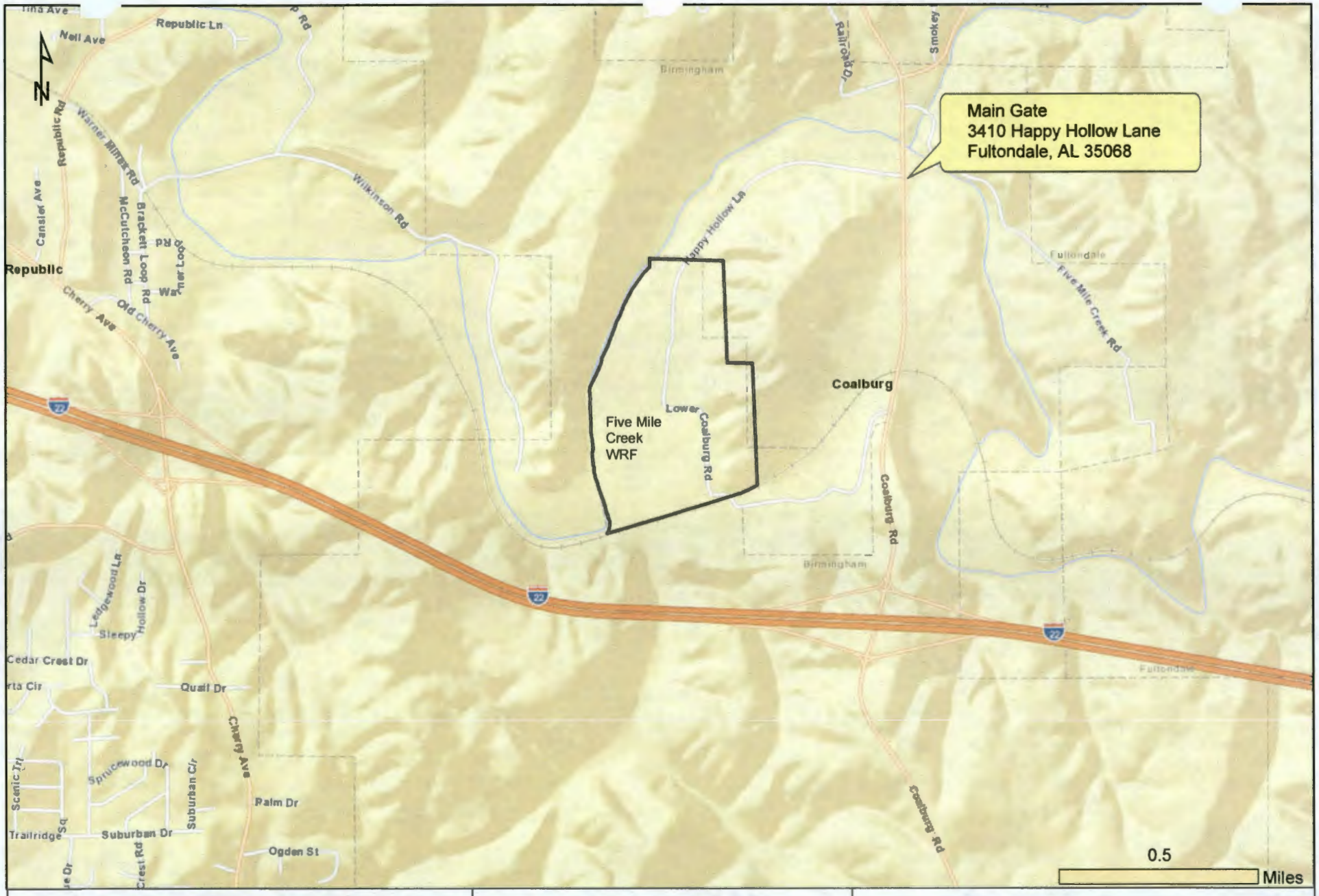
ATTACHMENT 2 – SECTION B.2 AUTOMATIC SAMPLING EQUIPMENT

ATTACHMENT 3 – 1-MILE RADIUS FIVE MILE CREEK WRF

ATTACHMENT 3A AND 3B – FIVE MILE CREEK WRF FACILITIES

ATTACHMENT 4 – LOCUST FORK AND VILLAGE CREEK NUTRIENT TMDL COMPLIANCE REPORT AND IMPLEMENTATION SCHEDULE

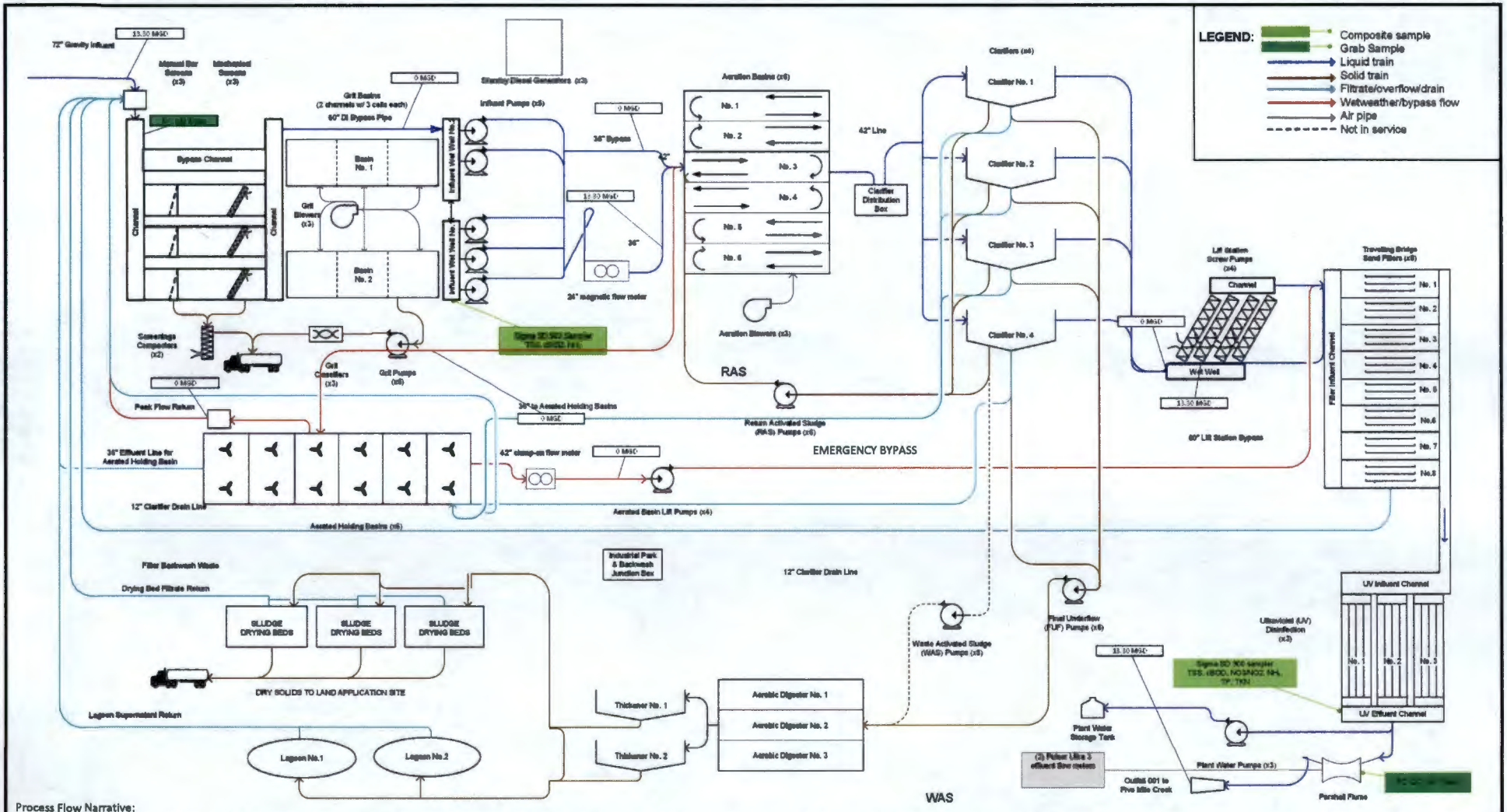
ATTACHMENT 5 – JEFFERSON COUNTY SEWER USE ADMINISTRATIVE ORDINANCE



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

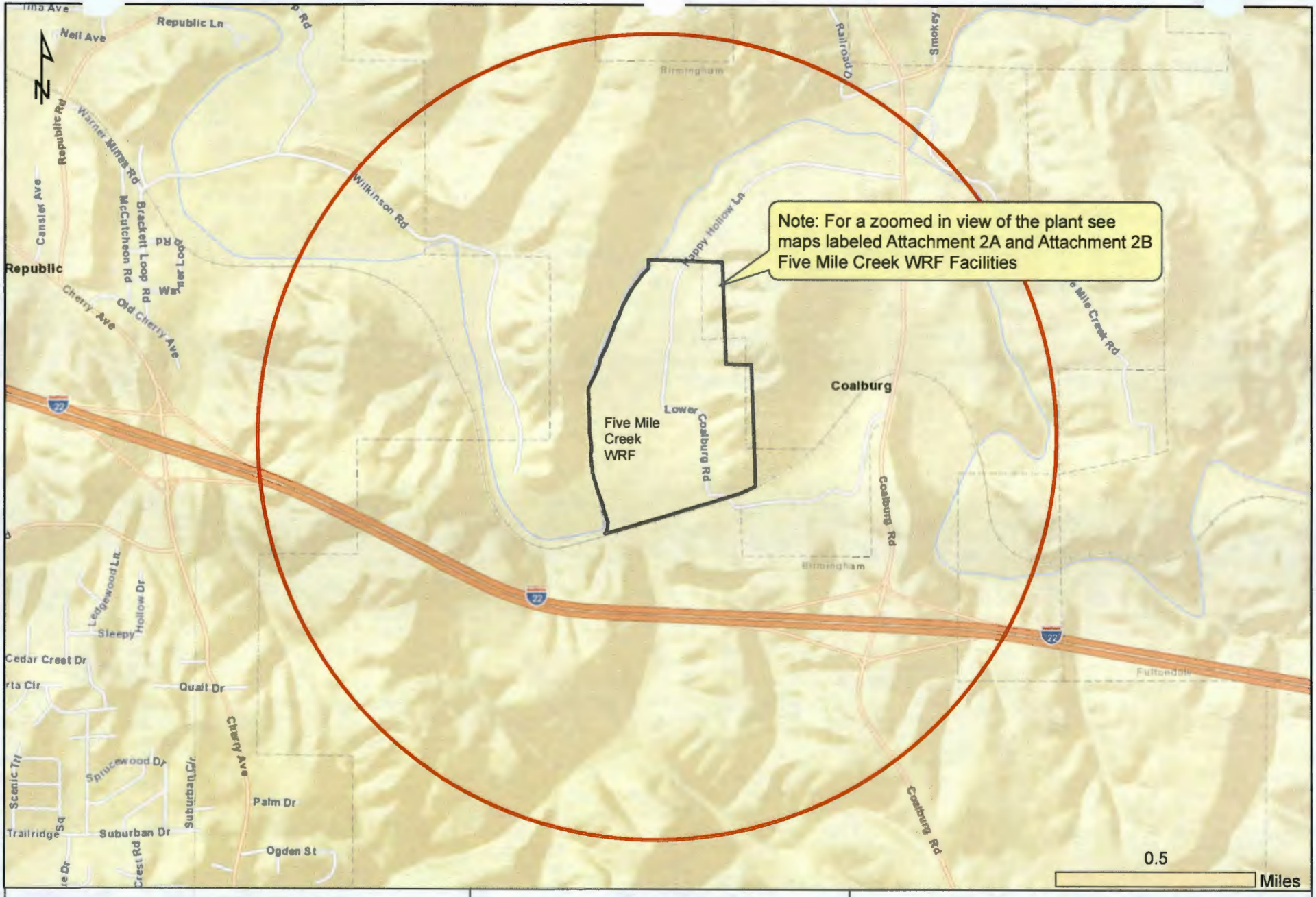
Form 188, Section A.3
ATTACHMENT 1
LOCATION



Process Flow Narrative:

The 2018 calendar year annual average daily flow of 16.41 MGD enters the Five Mile Creek WWTP via a 72" gravity sewer. The plant has a design average daily flow rate of 30 MGD and a peak design rate of 70 MGD. The influent flow receives screening through fine screens and follows with grit removal. The flow is then pumped and equally split into six aeration basins with capacities of 5 MGD average daily flow each.The flow then receives final clarification before advanced treatment through traveling bridge sand filters. The flow receives disinfection from ultra-violet light prior to discharge through Outfall 0011 into Fivemile Creek.

JEFFERSON COUNTY, ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT 716 Richard Arrington Jr. Blvd, N, Suite A300 Birmingham, AL 35203	FIVE MILE CREEK WATER RECLAMATION FACILITY AL0026913 NPDES Permit Application	Form 188, B.2 ATTACHMENT 2 AUTOMATIC SAMPLING EQUIPMENT



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

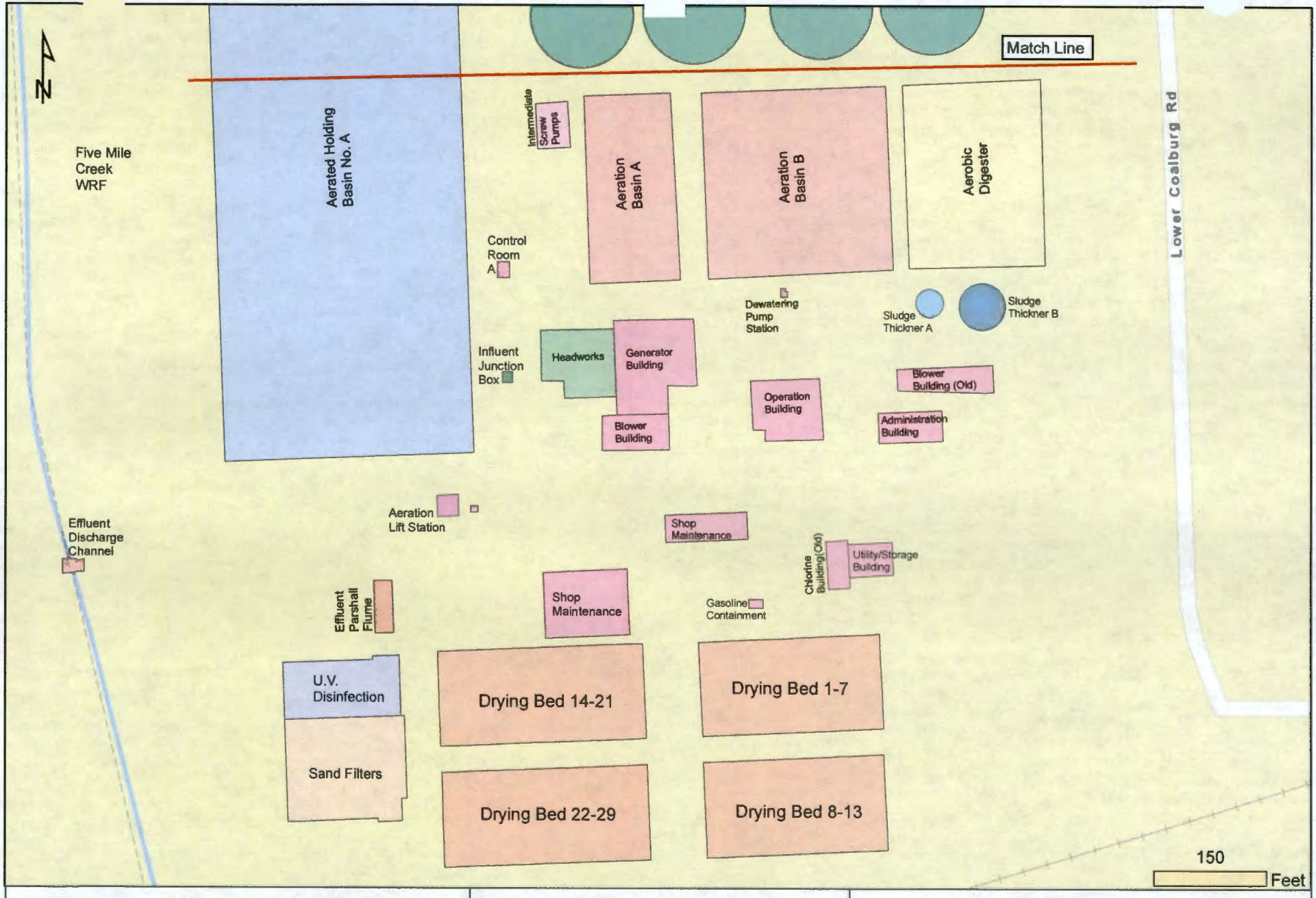
Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

Form 188, Section C
ATTACHMENT 3
1-MILE RADIUS FIVE MILE CREEK WRF

JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

Form 188, Section 3
ATTACHMENT 3A
FIVE MILE CREEK WRF FACILITIES



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

Form 188, Section C
ATTACHMENT 3B
FIVE MILE CREEK WRF FACILITIES

ATTACHMENT 4

LOCUST FORK AND VILLAGE CREEK NUTRIENT TMDL
COMPLIANCE REPORT AND IMPLEMENTATION SCHEDULE

OCTOBER 26, 2018

JEFFERSON COUNTY COMMISSION

JAMES A. "JIMMIE" STEPHENS – PRESIDENT
GEORGE F. BOWMAN
SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE
DAVID CARRINGTON
T. JOE KNIGHT

TONY PETELOS –
CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Office of

DAVID A. DENARD
Director of Environmental Services
Suite A-300
716 Richard Arrington, Jr. Blvd. N.
Birmingham, Alabama 35203
Telephone (205) 325-5806
Fax (205) 325-5981

October 26, 2018

Daphne Lutz, Chief
Industrial/Municipal Branch
Water Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery AL 36130-1463

Email delivery: dlutz@adem.state.al.us

RE: Locust Fork and Village Creek Nutrient TMDL
Compliance Report and Implementation Schedule
Five Mile Creek WWTP – NPDES Permit No. AL0026913
Prudes Creek WWTP – NPDES Permit No. AL0056120
Turkey Creek WWTP – NPDES Permit No. AL0022926
Village Creek WWTP – NPDES Permit No. AL0023647
Warrior WWTP – NPDES Permit No. AL0050881

Dear Ms. Lutz,

Please find following Jefferson County's response to your August 24, 2018 letters requesting reports on Jefferson County's current status of Total Phosphorus (TP) removal and compliance with the TP limit specified in the Locust Fork and Village Creek Nutrient Total Maximum Daily Load (TMDL). The following includes general responses that collectively address all facilities referenced above and detailed sections that are unique to each plant.

Following the February 14, 2017 Locust Fork Draft TMDL meeting in Oneonta and prior to the publishing of the draft TMDL in May 2017 and final approval by EPA on January 22, 2018, Jefferson County's Environmental Services Department (ESD) anticipated the need to determine the potential impacts of the TP discharge limits on its treatment facilities and began the necessary technical and financial planning and assessments. ESD performed TP sampling and analyses to better understand how the facilities can effectively and economically reduce TP discharges. ESD also directed qualified engineering design firms with in-depth knowledge of the facilities to provide conceptual-level treatment alternatives and budgetary construction and operating cost estimates to meet potential effluent TP limits. Concurrently, Jefferson County initiated a review of its financial capability, ratepayer financial burden, and the impact of the projected Capital Improvement Program (CIP), including the Locust Fork TMDL, on sewer rates. Jefferson County has also formed a working group consisting of major permittees in the watershed to collaboratively address TP reduction efforts, water quality assessments and provide affirmative direction on adaptive management to meet the water quality goals of the

TMDL. The following sections further detail these efforts and provide ESD's proposed implementation plan.

Technical Assessments

In March 2017, ESD directed Hazen and Sawyer, PC (Hazen) to investigate risk and technology-based tiers for TP removal and develop conceptual-level treatment alternatives for the Village Creek Water Reclamation Facility (WRF) and planning-level construction and operating cost estimates to meet tiered effluent TP limits. The results of this effort are contained in a May 18, 2017, Technical Memorandum entitled *Village Creek WWTP Future Total Phosphorus Removal Evaluation*. The future treatment alternatives include a combination of chemical addition with metal salt to remove phosphorus from the facility's effluent through precipitation and the implementation of enhanced biological phosphorus removal (EBPR) to assist in minimizing chemical costs and achieving stable nutrient removal performance. A long-term plan for the installation of a new deep-bed sand filtration facility is also discussed in the Technical Memorandum.

In July 2017, ESD directed CH2MHill, now Jacobs, to develop a similar preliminary cost analysis for facility improvements to meet the proposed concentration-based limits as presented in the draft TMDL for the Five Mile Creek, Warrior, Prudes Creek, and Turkey Creek WRFs. Specifically, the effort included the development of a biological model to estimate existing capacity and identify improvements at each WRF. The capacity and improvements were based on the existing design flow and most recent (2016/2017) average flow and loads data. For each WRF, a conceptual-level construction cost estimate was developed based on the modeling results and an approach primarily focused on direct chemical addition and other facility improvements using the CH2MHill Parametric Cost Estimating Tool. The results of this effort are contained in Technical Memoranda entitled *Locust Fork TMDL Response Support* (dated August 15, 2017), *Locust Fork Basin TMDL Impact on Existing WWTP's – NPV Analysis* (dated September 8, 2017), and *Locust Fork TMDL Implementation Plan* (dated September 18, 2018).

Financial Assessment

In December 2017, Jefferson County contracted with Galardi Rothstein Group, LLC (GRG) to develop an updated Financial Planning Model and Financial Capability Assessment. GRG assisted in Jefferson County's Bankruptcy Plan of Adjustment and has intimate knowledge of sewer system finances. GRG has since completed the compilation of financial information and conducted preliminary calculations prescribed in EPA's guidance document[1] for the conduct of Financial Capability Assessments. This September 28, 2018 GRG memorandum is included as Appendix A. Under the guidance methodology that was developed for Combined Sewer Overflow (CSO) control program implementations, Jefferson County will face a **"High Burden"** based on Jefferson County's current debt structure and projected 10-year Capital Program cost estimates. Capital spending estimates for system renewal, sanitary sewer overflow (SSO) abatement, TMDL compliance and other needed improvements range from a baseline of roughly $550 million to $850 million over the next ten years.

EPA guidance and negotiation practices offer general implementation schedule boundaries for adjustments to program schedules established to reflect "normal engineering and construction

[1] United States Environmental Protection Agency, "Combined Sewer Overflows: Guidance for Financial Capability Assessment and Schedule Development," EPA 832-B-97-004, February 1997. Although originally developed for combined sewer overflow programs, and in the absence of a separate document addressing separate sewer systems, the guidance document has been extensively used to inform and develop regulatory-driven wastewater infrastructure spending.

practices." These boundaries are based on differing levels of economic burden and, in essence, reflect the notion of enabling schedule relief in response to "widespread social and economic impact" as articulated in EPA's "Economic Guidance for Water Quality Standards" (April 1995).[2] The EPA Guidance methodology has offered an initial indication that Jefferson County will require an extended implementation period to mitigate impacts to the system's lowest quintile income ratepayers, who already face claims on household income exceeding three percent. Jefferson County must be able to balance the public health and water quality needs of the system driven by SSO reductions, maintenance of its exisiting collection and treatment assets to ensure reliable operations, and existing nutrient reduction efforts in addition to the nutrient reductions driven by the Locust Fork and Village Creek TMDL.

Watershed Management

Since the draft TMDL was released in 2017, ESD has engaged other affected major point-source permittees in the Locust Fork watershed to develop a Locust Fork Nutrient TMDL Stakeholder Group (Stakeholder Group). This group includes ESD, Boaz Water & Sewer Board, and Tyson Farms. This watershed approach to TMDL implementation has been a clear and emerging theme from the EPA and has demonstrated success in other regions. The collaborative effort allows the permittees to better engage and coordinate activities to reduce TP in the Locust Fork and Village watersheds by sharing experience, technical resources and staff; share lessons learned from a variety of municipal and industrial environments; provide more intimate knowledge of TP sources and water quality issues across the entire (and very large) watershed; and allows ADEM to more effectively manage implementation and achieve consistency across all permittees. There will be some economic and technical issues unique to each permittee that will be reflected in our individual implementation approaches, but the partnership will provide consistency and allow ADEM to develop solutions that balance the needs of individual permittees while meeting overall water quality objectives.

ESD and the Stakeholder Group met with ADEM in October and December 2017, and again in June and October 2018, and the Stakeholder Group will continue to work collaboratively going forward. A watershed management approach and the Stakeholder Group will play a key role in assessing the watershed, evaluating the effects of TP reduction, and adequately guiding the adaptive management process.

Watershed Assessment

Extensive water quality monitoring will be needed to adequately assess the impact of TP reductions in the watershed and effectively implement adaptive management. The Stakeholder Group is well positioned with resources and knowledge of the watershed to provide water quality data that can be used by both the stakeholders and ADEM. The Stakeholder Group developed, with ADEM input and review, the Locust Fork Watershed Monitoring Plan Overview (Monitoring Plan) and included as Appendix B. The Monitoring Plan will supplement ADEM's ongoing monitoring program in the Locust Fork watershed by filling data gaps and extending spatial and temporal coverage. The data could also be used in water quality models and future evaluations conducted by ADEM or third parties.

[2] The Guidance states that communities in the "low" burden category would "generally" be expected to implement CSO controls based on a normal engineering and construction schedule. For those in the "medium" burden category, implementation schedules of "up to" 10 years may be appropriate. In the "high" burden category, schedules of up to 15 or even 20 years may be negotiated (p. 46).

As part of the Monitoring Plan, the Stakeholder Group has developed the Locust Fork Watershed Monitoring Quality Assurance Project Plan (QAPP). The purpose of the QAPP is to describe the methods and procedures used by the participating organizations and staff to ensure the quality, accuracy, precision, and completeness of the data collected and analyzed and to describe the data quality objectives for the final use of the data. The organization collecting the samples and laboratory conducting the analyses are responsible for implementing quality assurance and quality control (QA/QC) procedures for their field sampling and laboratory analytical activities according to established Standard Operating Procedures (SOPs) and project-specific protocols. Information and procedures outlined in the QAPP replicate and are consistent with ADEM's procedures and monitoring plans used for water quality data collection so that the stakeholders and ADEM can use a much larger and more diverse dataset to better inform TMDL compliance and adaptive management.

Adaptive Management

Adaptive implementation or management has been recommended by the EPA as an approach for achieving environmental goals in a wide range of environmental restoration programs. The adaptive management approach is being used to successfully implement TMDLs in many regions of the country and has proven to be an effective and cost-efficient method of restoring water quality.

Jefferson County believes it is critical to provide some definition to adaptive management beyond acknowledging its use in the TMDL and subsequent NPDES permits. To that end, Appendix C provides an overview of the adaptive management approach that the Stakeholder Group intends to use moving forward, and we solicit and welcome ADEM's comments that could be incorporated into later revisions. As noted, this approach will inform the pace and degree of phosphorus reduction which will be completed following the first phase, using the adaptive management approach. Hence, the reductions and schedules that are shown in this letter may be modified if the adaptive management process identifies that further reductions are not necessary to meet the water quality targets for the Locust Fork embayment.

Jefferson County ESD, in partnership with the Stakeholder Group, will use the adaptive management approach to implement phosphorus treatment at water reclamation facilities in distinct phases of phosphorus removal. During each phase, surface water monitoring in the watershed, conducted using ADEM protocols in accordance with the previously referenced QAPP and Monitoring Plan, will document improvement in water quality resulting from reduced phosphorus concentrations in the effluent of water reclamation facilities. Information obtained from the monitoring program will inform decisions regarding phosphorus removal in the subsequent phase. The approach will ensure that cost effective phosphorus treatment at Jefferson County's wastewater reclamation facilities is resulting in water quality improvement toward achieving the TMDL water quality target. The approach will also serve to verify TMDL assumptions and/or provide the necessary data to strengthen the technical approach underpinning the TMDL.

All water quality data collected during this effort will be made available to ADEM and regular status reports will be prepared describing ongoing phosphorus removal activities. Near the end of each treatment phase, face-to-face meetings will be scheduled with ADEM to discuss the lessons learned during the phase and include any changes in proposed treatment that might be appropriate during the subsequent phase. Regular communication will ensure there are no surprises and will apprise ADEM of any unforeseen delays or technical issues as they occur. ESD expects to initiate the watershed monitoring plan in March 2019, ahead of major

wastewater treatment improvements at its Five Mile Creek and Village Creek WRFs. The first season of data (March through October) will document current watershed baseline water quality conditions and provide an additional benchmark for measuring water quality improvement during future monitoring seasons.

Proposed Implementation Schedule

The technical assessments, financial assessments, and "high burden" rate and affordability concerns, considered in the context of comprehensive water quality assessments and effective adaptive management, have been used to inform and develop Jefferson County's implementation plan presented below. The following present the compliance approach and schedule for the Village Creek, Five Mile Creek, Prudes Creek, Turkey Creek and Warrior WRFs. Additional detail is also provided in the technical assessments referenced earlier. Note that while the effluent limits used below are expressed as concentrations, ESD believes that non-concentration-based limits could still be protective of and achieve water quality objectives and may request alternative limits expressed as mass limits or limits based on actual treatment plant flow instead of the design flow of the WRF. Additionally, growing season TP limits are proposed for the initial phases of compliance for the Class I facilities. This strategy allows ESD to more effectively optimize chemical dosing and startup new facilities before the monthly limits in the subsequent phase and will provide all stakeholders a means to evaluate the effectiveness of seasonal averages by evaluating the response of the watershed.

Village Creek WRF

Status of Ongoing Phosphorus Removal Improvements

In 2010, ESD contracted with Hazen to develop a capital improvement plan at the Village Creek WRF to enhance the general reliability of plant operations, maintain consistent plant performance, and reduce operations and maintenance related costs. While not all of the improvements directly addressed TP removal, many of the major elements regarding peak flow management, solids removal and biological treatment are critical for effective TP removal and achieving compliance with potential limits. The improvement plan is underway and is divided into the following construction projects:

- Construction Project (CP)1 – Phase 1 – Immediate Needs Reliability Improvements: This initial construction project included upgrades aimed at restoring the wet weather treatment capacity at Plant 0011 Outfall (001). Improvements included rehabilitation of the Plant 001 influent screens, Plant 001 final settling tanks, plant control system, and other miscellaneous improvements. This work improved suspended solids capture which is necessary for effective TP removal.

- CP2 – Phase 2 – Reliability Improvements: This project is under construction and includes the decommissioning of Plant 001 Stage 1 secondary treatment and upgrades to the preliminary and primary treatment facilities. Once completed, all dry weather influent wastewater flow to the WRF will be sent to Plant 001 for preliminary and primary treatment prior to being distributed between the Plant 001 Stage 2 aeration basins and Plant 0021 Outfall (002) secondary treatment facilities. In addition, a new dedicated receiving/handling facility is being constructed to feed FOG (fats, oils, and grease) directly into the anaerobic digesters. This improvement will eliminate FOG from the Plant 002 liquids train and improve wet weather treatment capabilities of the final clarifiers and

tertiary filters. The project also includes various upgrades to the sludge mixing/heating systems and digester gas handling systems for the anaerobic digesters. This work improves suspended solids removal by redirecting FOG, a difficult to treat waste, from the liquid treatment train and prepares the solids treatment system for increased loading resulting from future chemical treatment systems.

Planned Plant Improvements for Staged Implementation of Phosphorus Removal

Hazen's evaluation recommended new metal salt feed systems to precipitate phosphorus within the activated sludge combined with implementation of EBPR at both Plant 001 and Plant 002 to more effectively remove TP. In addition, Hazen investigated a long-term plan for the installation of a new deep-bed sand filtration facility to meet a future effluent TP limit of 0.25 mg/L. Estimates of capital construction costs and yearly operational costs were also developed to identify the most cost-effective solution(s) for future TP removal.

Based on the evaluation of potential alternatives, ESD proposes to implement the following staged improvements at the Village Creek WRF to achieve the TP effluent concentrations and associated loadings recommended in the TMDL:

- CP3 – Chemical Phosphorus Removal Systems: This construction project includes new metal salt (aluminum sulfate or polyaluminum chloride (PACl)) storage and feed facilities to reduce TP concentrations in the effluent of both Plant 001 and Plant 002. Construction of these facilities will reduce the combined/averaged Plant 001 and Plant 002 plant effluent (Outfall 003C) TP concentration to below 1.0 mg/L. Because the 002 plant is equipped with deep-bed sand filtration and Plant 001 has no tertiary treatment process and less effectively designed rectangular clarification, the TP treatment performance of Plant 001 is expected to be less than that of Plant 002. Plant 001 is not expected to achieve the low TP effluent performance of the Turkey Creek WRF without filters because 001 lacks the advantages of extended aeration and low surface overflow rates in the final clarifiers. Due to the limitations noted at Plant 001 and close proximity of the two discharges, practical and effective TP reduction will be achieved by a single 003 TP limit rather than two separate limits. Table 1 summarizes the estimated yearly operating costs for chemical addition and additional sludge management for chemical phosphorous removal for Outfall 003C.

Table 1 – Summary of Operational Costs for Chemical Phosphorus Removal

Effluent TP Limit, mg/L	Chemical Addition Cost, per year	Additional Sludge Removal Cost, per year	Total P Removal Operational Cost, per year
1.0	$190,000	$27,000	$217,000

Completion of this project will allow Village Creek WRF to begin chemically reducing effluent TP concentrations while the proposed improvements under CP4 are being designed and under construction.

- CP4 – Phase 3 – Reliability and Biological Improvements: This stage of the WRF upgrades builds upon the implementation of chemical phosphorus removal and includes the creation of upstream anaerobic selector zones in the existing Plant 001 Stage 2 and Plant 002 aeration basins to reduce chemical addition requirements by operating in EBPR mode. The implementation of EBPR will help reduce the costs of chemical addition and sludge management when compared to TP removal solely through the

addition of metal salt to the activated sludge. The scope of CP4 includes rehabilitation of the existing Plant 002 tertiary filters. Construction of these performance improvements will allow for an outfall 003C effluent TP of approximately 0.5 mg/L with reduced chemical addition costs and more stable plant performance.

Table 2 summarizes the estimated yearly operating costs of chemical addition while operating in EBPR mode, additional sludge management, and mixing within the newly-installed anaerobic zones for an effluent limit of 0.5 mg/L that is expected to yield an average discharge below 0.4 mg/L.

Table 2 – Summary of Operational Costs for EBPR + Chemical Phosphorus Removal

Effluent TP Limit, mg/L	Chemical Addition Cost, per year	Additional Sludge Removal Cost, per year	Anaerobic Zone Mixing Cost, per year	Total P Removal Operational Cost, per year
0.5	$370,000	$52,000	$30,000	$452,000

- CP5 – Plant 001 Deep-Bed Filters: The final improvement to address effluent TP concentrations consists of the construction of a new deep-bed sand filtration facility and intermediate pump station at Plant 001. Completion of this project will allow ESD to further reduce effluent TP concentrations and reliably achieve an outfall 003C effluent meeting the final TP limit of 0.25 mg/L.

  Table 3 summarizes the estimated yearly operating costs of chemical addition while operating in EBPR mode, additional sludge management, and deep-bed sand filtration installed at Plant 001 for an effluent limit of 0.25 mg/L that is expected to yield an average discharge below 0.2 mg/L. The final cost and scope of improvements are highly dependent on the performance achieved in the earlier phases and the structure of the NPDES permit.

Table 3 – Summary of Operational Costs for EBPR + Chemical Phosphorus Removal + Filtration at Plant 001

Effluent TP Limit, mg/L	Chemical Addition Cost, per year	Additional Sludge Removal Cost, per year	Anaerobic Zone Mixing Cost, per year	Total P Removal Operational Cost, per year
0.25	$630,000	$74,000	$30,000	$734,000

Recommended Schedule and Costs for Implementation

The preliminary schedules for each stage of the Village Creek WRF improvements are summarized as follows. All indicated time periods are for each specific activity listed and are not cumulative. Figure 1 illustrates the overall stages of the improvements and the basic timetable for implementing additional TP removal capability at the facility, and Table 4 summarizes the capital investment for each phased project. Jefferson County has invested **$42,949,000** in recent improvements and the total combined capital investment at the Village Creek WRF is estimated at **$124,365,000**.

Figure 1 – Village Creek Facility Improvement and Phosphorus Removal Implementation

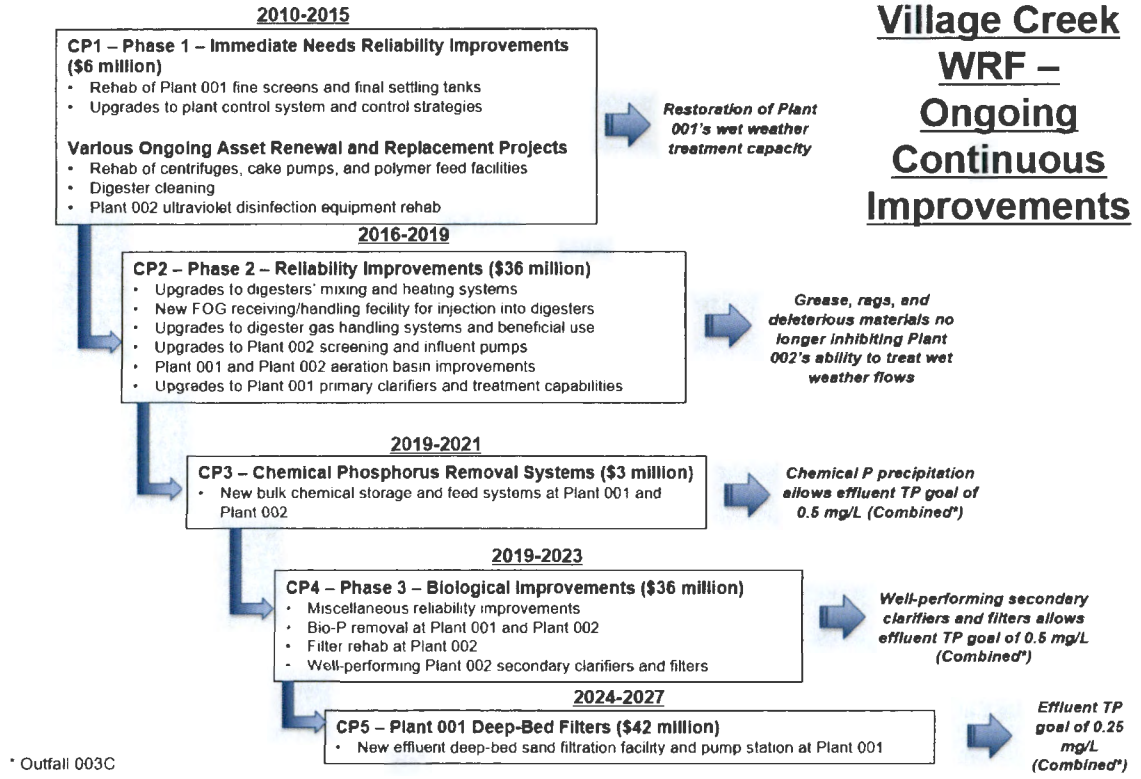


Table 4 – Summary of Engineering and Construction Costs at the Village Creek WRF

CP1	CP2	CP3	CP4	CP5
$6,301,000	$36,648,000	$3,416,000	$36,000,000	$42,000,000

ESD currently plans to proceed with construction improvements in accordance with the following schedule:

- CP3 – Chemical Phosphorus Removal Systems:
  - Anticipated Start of Design: November 2018
  - Design Documents Completed: 6 months
  - Bidding/Award/Notice to Proceed (NTP): 6 months
  - Construction: 7 months
  - TOTAL: 19 months
  - Anticipated Construction Completion Date: June 2020
  - System Startup and Testing: 3 months
  - **Phase I (1.0 mg/L) TP Compliance: March 1, 2021**

- CP4 – Phase 3 – Reliability and Biological Improvements:
  - Anticipated Start of Design: February 2019
  - Design Documents Completed: 12 months
  - Bidding/Award/NTP: 6 months
  - Construction: Assumed 24 months
  - TOTAL: 42 months
  - Anticipated Completion Date: May 2022

- System Startup and Testing: 3 months
- **Phase II (0.5 mg/L) TP Compliance: March 1, 2023**

- CP5 – Plant 001 Deep-Bed Filters:
  - Anticipated Start of Design: January 2024
  - Design Documents Completed: 12 months
  - Bidding/Award/NTP: 6 months
  - Construction: Assumed 18 months
  - TOTAL: 36 months
  - Anticipated Completion Date: January 2027
  - System Startup and Testing: 3 months
  - **Phase III (0.25 mg/L) TP Compliance: March 1, 2027**

This phased implementation of TP removal will allow ESD to begin reducing effluent TP concentrations (constructed under CP3) while planning for CP4 and CP5. CP4 will build off the installed chemical phosphorus removal system installed under CP3 and will allow ESD to reduce chemical addition costs and achieve stable nutrient removal performance. Completion of CP5 will install a new deep-bed sand filtration facility at Plant 001 and enable Village Creek WRF to achieve the final effluent TP limit of 0.25 mg/L. As previously noted, an NPDES permit that reflects the combined nature of the Outfall 001 and Outfall 002 discharges at Village Creek and is expressed solely as combined nutrient limit for Outfall 003C and an initial growing season versus monthly TP limit will be critical in achieving nutrient reduction in the most economical and practical manner.

Five Mile Creek WRF

The Five Mile Creek WRF is a single-stage activated sludge facility with effluent filtration. The plant is currently permitted for 30 mgd on a monthly average basis with a peak design flow of 56 mgd. The plant also has 45 million gallons (MG) of wet weather storage. Sludge handling consists of aerobic digestion, gravity thickening and sludge drying beds. The biosolids are then land applied at two County-leased reclamation sites.

The facilities required to meet the final (Phase 3) effluent phosphorous limit consist of a new chemical feed system and piping to convey the chemicals to the application point within the clarifier distribution box. A secondary feed location at the influent filters will also be provided to allow for additional phosphorous polishing. The chemical feed system would be contained in a covered building and include chemical storage tanks, chemical feed pumps, and associated appurtenances.

Recommended Schedule and Costs for Implementation

Table 5 – Five Mile Creek WRF Implementation Schedule with Interim Limits

Implementation Phase	Effluent Total Phosphorus, mg/L	Implementation Schedule
1 – Construction of chemical storage building and chemical feed system, solids handling design, pilot testing.	0.5 – Growing Season (March – October) Average	March 1, 2021
2 – Implementation of chemical feed system and instrumentation.	0.5 - Monthly Average during March - October	March 1, 2022
3 – Complete final treatment modifications	0.25 - Monthly Average during March - October	March 1, 2027

The estimated construction and engineering cost to complete the treatment upgrades and achieve compliance with the final total phosphorus effluent concentration (Phase 3) is $1,070,000. Operating costs are estimated at roughly $25,000 annually for treatment to 0.25 mg/L. An initial growing season versus monthly TP limit will also be critical in achieving nutrient reduction in the most economical and practical manner.

Prudes Creek WRF

The Prudes Creek WRF is a single stage activated sludge facility with effluent filtration. The plant is currently permitted for 0.9 mgd on a monthly average basis with a peak design flow of 3.5 mgd. Sludge handling consists of gravity thickening and sludge drying beds. The biosolids are then land applied at two County-leased reclamation sites.

The facilities required to meet the effluent phosphorous limit consist of a new chemical feed system and piping to convey the chemicals to the application point within the clarifier distribution box. An additional feed point would be provided at the influent of the existing filters. The chemical feed system would be contained in a covered building and include chemical storage tanks, chemical feed pumps, and associated appurtenances.

Recommended Schedule and Costs for Implementation

Table 6 – Prudes Creek WRF Implementation Schedule

Implementation Phase	Effluent Total Phosphorus, mg/L	Implementation Schedule
1 – Construction of chemical storage building, chemical feed system and instrumentation, pilot testing, final treatment modifications.	2.0 - Monthly Average during March - October	March 1, 2021

The estimated construction and engineering cost to complete the treatment upgrades and achieve compliance with the final total phosphorus effluent concentration (Phase 1) is $450,000. Operating costs are estimated at roughly $1,700 annually for treatment to 2.0 mg/L.

Turkey Creek WRF

The Turkey Creek WRF is a single stage activated sludge facility. The plant is currently permitted for 5 mgd on a monthly average basis with a peak design flow of 10 mgd. An additional 15 mgd of flow can be clarified and stored in a peak flow side stream for re-introduction into the main process train after the peak event subsides. Sludge handling consists of gravity thickening and sludge drying beds. The biosolids are then land applied at two County-leased reclamation sites.

The facilities required to meet the proposed effluent phosphorous limit consist of a modified/updated chemical feed system with pumps and piping to convey the chemicals to the application point within the clarifier distribution box. Model results indicate that filters will also be required to achieve an effluent phosphorus limit of 0.25 mg/L.

Table 7 – Turkey Creek WRF Implementation Schedule with Interim Limits

Implementation Phase	Effluent Total Phosphorus, mg/L	Implementation Schedule
1 – Increase PACl dose	0.5 – Growing Season (March – October) Average	March 1, 2019
2 – Install new pumps, chemical storage and containment	0.5 – Monthly Average during March - October	March 1, 2021
3 – Construction of final effluent filters, final treatment modifications.	0.25 - Monthly Average during March - October	March 1, 2027

The estimated construction and engineering cost to complete the treatment upgrades and achieve compliance with the final total phosphorus effluent concentration (Phase 3) is $15,420,000. Operating costs are estimated at roughly $75,000 annually for treatment to 0.25 mg/L. An initial growing season versus monthly TP limit will also be critical in achieving nutrient reduction in the most economical and practical manner.

Warrior WRF

The Warrior WRF is a single stage activated sludge facility with effluent filtration. The plant is currently permitted for 0.1 mgd on a monthly average basis with a peak design flow of 0.5 mgd. Sludge handling consists of aerobic digestion and sludge drying beds. The biosolids are then land applied at two County-leased reclamation sites.

The facilities required to meet the effluent phosphorous limit consist of a new chemical feed system and piping to convey the chemicals to the application point within the clarifier distribution box. A secondary feed location at the influent of the filters would also be provided. The chemical feed system would be contained in a covered building and include chemical storage tanks, chemical feed pumps, and associated appurtenances.

Table 7 – Warrior WRF Implementation Schedule

Implementation Phase	Effluent Total Phosphorus, mg/L	Implementation Schedule
1 – Construction of chemical storage building, chemical feed system, piping, pumps, storage and instrumentation, pilot testing, final treatment modifications.	2.0 - Monthly Average during March - October	March 1, 2021

The estimated construction and engineering cost to complete the treatment upgrades and achieve compliance with the final total phosphorus effluent concentration (Phase 1) is $410,000. Operating costs are estimated at roughly $2,500 annually for treatment to 2.0 mg/L.

Summary of Schedule and Costs for Implementation for All WRFs

The following presents a summary of the proposed schedule and costs to implement the proposed limit in the TMDL. The total cost to achieve the final proposed TP limit of 0.25 mg/L is estimated at $99.2M in capital costs and increased operating costs through 2027 of $3.4M, with increased annual operating costs of $0.8M every year after 2027.

Facility	Phase	Date	Average Effluent TP, mg/L	Construction / Engineering Cost	Increased Annual Operating Cost
Village Creek	1	2021	1.0[1]	$3,416,000	$217,000
	2	2023	0.5[2]	$36,000,000	$452,000
	3	2027	0.25[2]	$42,000,000	$734,000
Five Mile Creek	1	2021	0.5[1]	$1,070,000	$5,000
	2	2023	0.5[2]	*	$11,000
	3	2027	0.25[2]	*	$25,000
Turkey Creek	1	2019	0.5[1]	$0	$0
	2	2021	0.5[2]	$402,500	$32,000
	3	2027	0.25[2]	$15,420,000	$74,350
Prudes Creek	1	2021	2.0[2]	$450,000	$1,685
Warrior	1	2021	2.0[2]	$410,000	$2,500

1 – Average effluent TP limit expressed as Growing Season Average Concentration (March – October)
2 – Average effluent TP limit expressed as Monthly Average Concentration during March - October
* Cost included in Phase 1

Conclusion

The Jefferson County Commission is committed to compliance with the TMDL. On September 13, 2018, the Jefferson County Commission approved and adopted the Capital Improvement Plan for FY2019 which includes funding for the design of Phase 1 and 2 chemical treatment systems at each of the affected facilities. The contract for design, bidding, and construction management services for Village Creek WRF Phase 1 was approved by the Jefferson County Commission on October 25, 2018. The construction of the improvements is expected to be funded in the FY2020 budget.

With required improvements for meeting nutrient reduction goals pending at multiple ESD treatment facilities, there are significant cost implications for the ratepayers. This phased approach coupled with the requested permit limit structures allows ESD to construct the required infrastructure while distributing capital construction costs over several years, reducing the associated rate impact to ratepayers with an already high cost burden. Additionally, this phased schedule is consistent with the adaptive management strategy outlined in the final TMDL (Adaptive Management, Section 10.3), which recognizes that if water quality and biological monitoring determine that the improvements achieve the water quality goals before reaching the final recommended effluent concentration limits, then the TMDL may be adjusted. This adaptive management approach is both scientifically sound and financially prudent for our ratepayers.

The recommended schedule recognizes the adaptive management approach discussed in the TMDL document. In support of these TMDL commitments, Jefferson County's current improvement schedule proposes to achieve a 56% TP reduction at the Class I facilities compared to the 2007-2016 DMR data within five years of the adoption of the TMDL. When the Class I facilities achieve treatment below our recommended 0.5 mg/L Phase 2 limit, the actual

TP loading is projected to be far below the modeled final 0.25 mg/L limit at design flow conditions (below 200 lb./day). Jefferson County and our engineering and biological experts expect measurable water quality improvement in the watershed in response to the proposed Phase 1 and Phase 2 improvements. These improvements will be quantified through the combined efforts of ADEM and the Stakeholder Group. The recommended schedule allows opportunity to measure chlorophyll-*a* response with each phase of implementation, and the potential to collect data during "worst-case-scenario" low stream flow and high temperature conditions following improvements from the point source loads. The recommended schedule allows data collection within the watershed concurrent with the TP reductions. This will better refine the relationship between point-source nutrient loading and biological response, including chlorophyll-*a* levels in the waterbodies, and refine the technological approach to achieve compliance with the TP limit no later than ten years of the adoption of the TMDL if the initial phases of work do not achieve the goals of the TMDL. Furthermore, Jefferson County's recommended schedule and monitoring plan will assist ADEM in evaluating modeling assumptions in the load applications and reductions for nonpoint sources, natural background levels, and assumed margins of safety that could conceptually lead to adjustments of waste load allocations for Jefferson County and other point sources.

Jefferson County requests that ADEM issue a phased compliance schedule for each facility that may include from one to three phases that will collectively incorporate the adaptive management process to achieve the water quality goals established by the nutrient TMDLs for Locust Fork and Village Creek. Based on the previously referenced engineering analyses and in view of financial, operational, and other considerations, Jefferson County proposes the schedules in this letter for ADEM's consideration. These schedules consider the time necessary to develop and execute the capital projects required to comply with the TMDL while considering Jefferson County's procurement requirements, ability to finance the infrastructure upgrades, and the ability of Jefferson County's ratepayers to afford the increased rates necessary to support these additional costs. The schedules support cost-effective control measures planned as expeditiously as practicable in the context of Jefferson County's financial position.

Jefferson County and ADEM share the same goal to protect the health of Alabamians and the natural environment in the most efficient, cost-effective manner possible, and the recommended path forward achieves this goal.

Respectfully submitted,

David Denard, P.E.
Director, Environmental Services Department

Cc: Daniel White, Deputy Director ESD
Margaret Tanner, Deputy Director ESD
Cal Markert, Deputy County Manager
Thomas DeLawrence, Balch & Bingham LLP

Attachments:

Appendix A: Financial Planning Model and Financial Capability Assessment
Appendix B: A Collaborative Adaptive Management Approach for Reducing Total Phosphorus in the Locust Fork Watershed
Appendix C: Locust Fork Watershed Monitoring Quality Assurance Project Plan (QAPP)

ATTACHMENT 5

JEFFERSON COUNTY SEWER USE ADMINISTRATIVE ORDINANCE

EFFECTIVE NOVEMBER 1, 2013

JEFFERSON COUNTY
SEWER USE CHARGE ORDINANCE
ADOPTED NOVEMBER 6, 2012
AMENDED AND RESTATED BY RESOLUTION DATED SEPTEMBER 23, 2013
EFFECTIVE NOVEMBER 1, 2013

This document is provided as a convenience to the public. The official ordinance and amendments thereto are contained in the office of the Minute Clerk of Jefferson County in Minute Book 164, pages 38 to 81. In the event of a discrepancy between any words or figures contained in this document and those contained in the official minutes of the Jefferson County Commission, the words and figures reflected in the official minutes shall govern.

JEFFERSON COUNTY
SEWER USE CHARGE ORDINANCE

Table of Contents

ARTICLE I. GENERAL PROVISIONS

A. Purpose and Policy

This ordinance establishes sewer charges for those whose sewerage is disposed of or treated by the wastewater collection and treatment system for Jefferson County, Alabama. This ordinance contains the Commission's reasonable and nondiscriminatory rules and regulations fixing rates and charges for sewer service, providing for the payment, collection, and enforcement thereof, and the protection of its property. These rules and regulations accomplish the equitable distribution of costs of the System.

This ordinance shall apply to all System Users in Jefferson County and to persons outside the County who are, by contract or agreement with the County, Users of the System. Except as otherwise provided herein, the Environmental Services Department shall administer, interpret, implement, and enforce the provisions of this ordinance. Where not specifically provided herein, the provisions of this ordinance shall be enforced and interpreted consistent with the "Jefferson County Sewer Use Administrative Ordinance."

B. Definitions

Unless the context specifically indicates otherwise, the meaning of terms used in this Ordinance shall be as follows:

1. "ADEM" shall mean the Alabama Department of Environmental Management or its duly authorized deputy, agent, or representative.

2. "All contributors" denotes any Person or Owner contributing wastewater to the System.

3. "BOD_5" (denoting five day biochemical oxygen demand), shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at 20 degrees C, expressed in milligrams per liter by weight. BOD shall be determined by standard methods as hereinafter defined.

4. "Billed Volumetric Units" shall mean the total metered volume of water after application of the Return Factor (see Article II.A)

5. "COD" shall mean chemical oxygen demand as determined by standard test methods.

6. "Condensate" shall mean liquid water resulting from the change of water vapor to liquid by the use of traditional air conditioner units or water heaters.

7. "Constituents" shall mean the combination of particles, chemicals or conditions existing in the wastewater.

8. "Consumption" shall mean the amount of water used, as measured by a water meter using a given unit of measure.

9. "Cooling Water" shall mean the water discharged from commercial air conditioning, cooling or refrigeration sources such as chillers and cooling towers.

10. "Cu. Ft." denotes cubic feet.

11. "County" shall mean the Jefferson County Commission or its employees, duly authorized agents or representatives.

12. "Director" shall mean the Director of the Environmental Services Department or his designee.

13. "Environmental Services Department" or "ESD" shall mean the County department that has direct responsibility for the maintenance, management and operations of the Sewer System.

14. "FOG" shall mean fats, oils, and grease.

15. "Grease Control Device" shall mean any grease interceptor, grease trap or other approved mechanism, device or process, which attaches to, or is applied to, wastewater plumbing fixtures and lines, the purpose of which is to trap, collect or treat FOG prior to the balance of the liquid waste being discharged into the System.

16. "Grease Interceptor" shall mean an indoor device located in a food service facility or under a sink designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the System by gravity.

17. "Grease Permit" or "Food Service Facility Grease Control Program Permit (FSFGCPP)" shall mean the license/authorization to discharge wastewater/liquid waste into the System granted to the Owner of a Food Service Facility or his/her authorized agent.

18. "Grease Trap" shall mean an outdoor device located underground and outside of a food service facility designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the System by gravity.

19. "Health Department" shall mean the State Board of Health as constituted in accordance with Ala. Code § 22-2-1 *et seq.*, and includes the Committee of Public Health or State Health Officer when acting as the Board. The Health Department is not affiliated with the Jefferson County Commission.

20. "Impact Fee" shall mean the charge assessed to any sewer user prior to connection with, or access to, the System.

21. "Industrial User" shall mean any industry discharging liquid waste into the System either with or without pretreatment.

22. "Industrial Wastewater" shall mean any wastewater discharge with pollutant loadings in excess of the values described in Article IV.D.1.

23. "Industrial Wastewater Surcharge" shall mean the additional service charge assessed to Users whose wastewater characteristics exceed those of normal wastewater as defined in this ordinance.

24. "l" denotes liter.

25. "Lounge" shall mean any establishment which serves alcoholic beverages for on-premises consumption.

26. "Metered Water" shall mean the quantity of all sources of water, including water from wells, consumed by the sewer User (see Article II).

27. "mg/l" denotes milligrams per liter and shall mean ratio by weight.

28. "Non-Residential User" or "Other User" shall mean a premise or person who is not considered a Residential User and includes multi-family residential (with master meter(s), i.e. apartment complex, mobile home complex, etc.), commercial and industrial premises that discharge wastewater of Standard Strength into the System.

29. "Non-Resident User" shall mean a User whose property is located outside the corporate limits of Jefferson County.

30. "Person" or "Owner" shall mean any natural person, individual, firm, company, joint stock company, association, society, corporation, group, partnership, co-partnership, trust, estate, governmental or legal entity, or their assigned representatives, agents or assigns.

31. "Private Meter" shall mean a secondary water meter installed by the user downstream of the primary domestic water meter to measure non-sewered (outdoor) water use.

32. "Public Water System" shall mean a system for the provision to the public of piped water for human consumption.

33. "Residential User" or "Domestic User" shall mean a premise or person who discharges into the System wastewater that is of a volume and strength typical for residences, and who lives in a single-family structure, such as an individual house, duplex, townhouse, or condominium, or any other independently-owned single-family structure with an individual water meter for metering potable water. Multi-family residential units are not considered Residential Users.

34. "Restaurant" shall mean an establishment which serves food and/or beverages for consumption on the premises by use of reusable flatware/tableware, or glassware.

35. "Sanitary Sewer" shall mean a sewer which carries wastewater, and from which storm, surface, and ground waters are intended to be excluded.

36. "Sewer" or "main sewer" shall mean a pipe or conduit eight (8) inches in diameter or larger intended for carrying wastewater and generally located in public right-of-way or easement.

37. "Sewer Connection Permit" shall mean the license to proceed with work on a sewer service line, either as new construction or for the repair of an existing line.

38. "Sewer Service Line" shall mean any sanitary sewer line or conduit located outside the building structure which connects the building's plumbing from the outside building wall to the main sewer. The sewer service line is usually four (4) inches in diameter, sometimes six (6) inches in diameter, and in special cases eight (8) inches in diameter or larger. The County does not maintain the sewer service line from the outside building wall to the main sewer.

39. "Sewer System" or "System" shall mean a publicly-owned treatment works (POTW) (as defined by Section 212 of the Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, codified at 33 U.S.C. § 1292) owned by the County. The term shall mean any wastewater treatment facility, any sanitary sewer that conveys wastewater to such treatment facility and any wastewater pumping facility.

40. "Shall" is mandatory; "may" is permissive.

41. "Standard Methods" shall mean those sampling and analysis procedures established by and in accordance with EPA pursuant to Section 304(g) of the Act and contained in 40 CFR, Part 136, as amended, or the "Standard Methods for the Examination of Water and Sewer" as prepared, approved, and published jointly by the American Public Health Association, the American Water Works Association, and the Water Environment Federation. In cases where procedures vary, the EPA's methodologies shall supersede.

42. "Standard Strength" shall describe wastewaters of any origin having a pollutant content less than the wastewater pollutant characteristics defined in Article IV, Section D.1 of this ordinance and having no prohibited qualities of sanitary sewer system admission.

43. "Suspended Solids" shall mean solids that either float on the surface, or are in suspension in water, wastewater, or liquid as defined by standard methods.

44. "Total Phosphorous" or "TP" shall mean total phosphorous as determined by standard methods.

45. "TSS" shall mean total suspended solids as determined by standard methods.

46. "Total Solids" shall mean total weight expressed in mg/l of all solids: dissolved, undissolved, organic, or inorganic.

47. "User" shall mean the occupant and/or the owner(s) of property from which wastewater is discharged into the System and any individual or entity, including municipalities, who contributes, causes, or permits the contribution of wastewater into the System.

48. "Wastewater" shall mean any solids, liquids, gas, or radiological substance originating from residences, business buildings, institutions, and industrial establishments together with any ground water, surface water, and storm water that may be present, whether treated or untreated, which is contributed into or permitted to enter the System.

Terms for which definitions are not specifically provided herein or in the "Jefferson County Sewer Use Administrative Ordinance" shall be interpreted as defined in the Glossary of the current edition of "Design of Municipal Wastewater Treatment Plants, Volume 3" (MOP 8) published by the WEF and the American Society of Civil Engineers.

ARTICLE II. BILLING UNITS

A. Volume Determination

The Environmental Services Department shall, at its own discretion, determine the factor and percentage of metered or non-metered water discharged to the System for the purposes of billing consistent with the following:

In making a quantity determination for System Users, the quantity of wastewater discharged by the User to the System shall be the same as the quantity of water delivered to the User by the Public Water System. In limited circumstances, should well water be used for the User's supply of water, the well shall be metered and quantities made known to the County on a monthly basis.

1. Residential Users

Billed Volumetric Units for Residential Users, except participants in the private meter program or as otherwise determined, shall be the metered quantity multiplied by a Return Factor as an allowance for metered water not returned to sewer. The Factor shall be as follows:

Residential Return Factor 0.85

Multi-family residences, apartments, condominiums, lofts and other residential users without unique, contiguous, deeded, unimproved land for that residential unit shall not be eligible for the Residential Return Factor.

2. Non-Residential Users

Billed Volumetric Units for Non-Residential Users and participants in the private meter program shall be the metered quantity multiplied by a Return Factor of 1.00, *provided, however*, a custom return factor may be established at the discretion of ESD for future, continuous use where sufficient evidence exists.

It shall be the obligation of Non-Residential Users who evaporate or otherwise dispose of water delivered by the Public Water System to alternate disposal systems to install such meters or other devices deemed necessary by the County to determine the estimated quantity discharged to the System. The County will consider establishing a constant ratio, factor, or percentage to be applied to the metered water quantity delivered by the Public Water System in order to determine the quantity of wastewater discharged by the User. It shall be the responsibility of the User to provide adequate written documentation which justifies the factor to the satisfaction of the County. The value of this factor will be reviewed for accuracy by ESD biannually, or whenever deemed necessary by the County in its sole discretion.

B. Impact Fee Units

1. Fixtures

Impact fee units shall be billed per defined unit times the rate provided in this ordinance as follows:

Fixture Type	No. Units
Bathtub	1
Shower	1
Water Closet/toilet	1
Lavatory	1
Sink	1
Urinal	1
Bidet	1
Sink	1
Dishwasher	1
Washing Machine	1
Garbage disposal units or pre-wiring for same	1
Stub outs for plumbing fixtures	1
Floor drain	0.25
Trench drain (per 18" of length)	0.25
Bradley wash sink (per 18" of sink perimeter)	1
Body wash/massage	1
Drinking fountain	0.25
Condensate drain	0.25
Sump pump or ejector	1
Dumpster Drain	1
Commercial kitchen sink	1
Commercial dishwasher	1
Commercial ice machine	1
Photographic developing machine	1
Autoclave	1
Restaurant/Bar Seat (booths are calculated per 18" length)	1
Other (any other connection to the System as determined by the County as a full or partial unit)	

2. Food Service Establishments

The impact fee for full service restaurants and lounges shall be assessed at a rate of one (1) plumbing fixture per seat. The impact fee for all other food-serving establishments shall be determined on the basis of projected volume of flow to the sewer as provided for in Article II.B.4.

3. Alternate Waste Disposal (Septic) System Conversion

A fixture credit shall be applied for each existing fixture up to a maximum of sixteen (16) fixtures (or equivalent fixtures) in the event of a conversion from an existing septic or

alternate waste disposal system. If the conversion is performed without a permit then the fixture credits shall not apply.

4. Non-Residential

The impact fee for any connection to the System which will result in a non-domestic discharge of wastewater by virtue of the volume, rate of flow, or the level of pollutant concentrations will be determined by the County on a case-by-case basis. The County will base its determination upon all factors which may substantially affect System hydraulic and treatment capacity.

The determination shall be based on the annual volume contributed by a domestic household, which is defined as having twelve (12) plumbing fixtures, and the flow from which is equivalent to 125 hundred cubic feet per year. Therefore, an equivalent fixture, in terms of flow, shall be equal to 10.42 hundred cubic feet per year.

The impact connection fee for non-domestic users shall be as follows:

1) The impact fee shall be determined based on the applicant's estimates of flow at the time of application to secure an impact permit.
2) The County shall apply the applicant's estimates to the following formula to determine the number of equivalent plumbing fixtures and the impact fee to be charged as a result thereof.

$$\text{Number of Equivalent Plumbing Fixtures} = \frac{\text{annual volume of water to sewer (cu. ft.)}}{1{,}042}$$

$$\text{Non-Residential Impact Fee} = \text{Number of Equivalent Plumbing Fixtures} \times \text{the rate established by Article IV.E.1}$$

3) A determination of actual wastewater volume discharged to the System shall be made using actual metered water consumption during the first year of the applicant's use. If it is determined by actual measurement that the volume discharged to the System is substantially different from the estimates given by the applicant, an adjustment will be made either by refund or additional charge to the applicant. The adjustment shall be made on the highest six (6) month volume discharged to the System. Metering shall be installed at the User's expense if required by the County for determination of actual wastewater volume discharged.

ARTICLE III. ADJUSTMENTS AND CREDITS

A. Sewer User Adjustments

Users are eligible to receive a leak adjustment credit based on their volumetric (consumption) sewer charge within the prior twelve (12) month period. Any leak of domestic water that does not discharge to a sanitary drainage system at the premise may be eligible for credit. However, such leak shall be documented to have arisen from a defect in the permanent plumbing system and subsequently have been repaired. A "Jefferson County ESD Request for Leak Adjustment Form" must be completed in its entirety and returned to the Sewer Permitting and Inspections Office, located at 716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, AL 35203, along with a dated and descriptive plumbing repair invoice, a work order from a Public Water System, or a receipt in cases where the Owner completes his own repairs.

The County does not provide "courtesy" adjustments. No adjustment will be given based solely on the fact that a User has an unusually high water and sewer bill, and water adjustments or credits given by a Public Water System shall not form the sole basis nor create an obligation to the County to grant a similar adjustment for sewer charges. Sewer charges may be adjusted only if the User supplies sufficient written documentation.

Swimming pools which have been verified on site, measured for volume, and are deemed to be a permanent structure by a Sewer Service Inspector, are eligible for a once-per-year adjustment. The User must be able to demonstrate that the water drained from the pool was not discharged to the System. The adjustment shall be allowed only in cases where there is a substantial pool filling. Adjustments shall not be made prior to the User being billed for the water volume.

B. Adjustment Limitations

Any request for an adjustment of sewer charges shall be limited to one (1) year from the billing date of the original charge, and shall be submitted to the Sewer Permitting and Inspection Office (716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, AL).

C. Credit for Existing Fixtures

If an existing structure is to be demolished, altered, remodeled or expanded, an applicant will be allowed credit for the plumbing fixtures in the existing structure. Credit will be given only for those plumbing fixtures in the existing structure which are connected to the System and shall only be applied to a new or remodeled structure at the same location. To receive credit for existing fixtures, applicants must arrange an inspection by County personnel to verify the fixture count before removing the old fixtures. Credit will not be given unless the fixtures have been inspected by ESD prior to removal or evidence of a prior paid impact permit is presented. Except as provided herein, credit for existing connections and fixtures cannot be transferred to another location.

In circumstances such as natural disasters or other uncontrollable circumstances where credit for existing fixtures cannot be accurately determined, the County shall determine the credits available based on available information consistent with this Ordinance. The burden of proof for establishing any claimed credit as provided herein shall be on the applicant.

D. Exemptions

The governing bodies of all municipalities under the terms of their respective unification agreements shall be exempt from payment of all impact fees for facilities which will be used directly by those governing bodies for carrying out their governmental functions. The impact fee exemption does not apply to park boards, recreation boards, school systems, or any other boards or alliances which are autonomous, or are not a direct function of, or owned by, the municipal governing body. However, this fee exemption does not remove the requirement that any applicable permits must be obtained prior to securing a building permit.

E. Refund of Impact Fees

Upon proper application by the permittee, the County will refund Impact Fees for fixtures which have not been installed. If no building permit was issued, the permittee must return all copies of the original impact permit in order to receive a refund. If a building permit was issued, the permittee must return the applicant's copy of the impact permit along with the original issued receipt to the Sewer Permitting and Inspection Office within two (2) years of issuance. The administrative fee shall be deducted from the total amount of the refund.

F. Private Meters

A User of the System may elect to install a private meter on a water service line that is connected to fixtures, equipment, or systems that do not discharge wastewater to the System. Users with installed private meters shall not be eligible for the Residential Return Factor adjustment. Private meter requirements and credit procedures are as follows:

1) A private meter must be permanently installed on the water service line or water distribution system downstream of the primary domestic water service meter. Water metered by the private meter must not directly or indirectly enter the System. Portable meters that attach onto the end of a hose or faucet are not eligible.
2) The private meter shall be registered by an ESD Sewer Service Inspector. The initial meter reading shall start from the reading that is registered at the time of inspection. It is the responsibility of the User to inform the County of the presence of a private meter by calling 205-325-5801 to request a registration/inspection of the private meter. Retroactive usage credit prior to registration shall not be allowed.

3) The private meter owner or an authorized party must be present at the time the private meter is registered by the County and must acknowledge its limitations of use.
4) All private meter readings must be submitted to the Environmental Services Sewer Permitting and Inspection Office at 716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, AL 35203.
5) Meter readings should be submitted every 6 months, but not more frequently than every 6 months. Credit shall not be granted for any use prior to the twelve-month period from the date of submission for credit.
6) Private meter forms must be filled out in their entirety in order to be processed.
7) A private meter processing fee as provided for in Article IV.B shall be charged for each private water meter credit administered.

Any active participant of the private meter program who wishes to terminate their current enrollment status must request such action in writing to ESD and shall not be allowed re-enrollment for a twelve month period from the date of request.

The County reserves the right to require, at any time, the private meter to be inspected or re-registered by a Sewer Service Inspector.

It shall be the responsibility of the User to determine whether a private meter is enrolled in the credit program.

ARTICLE IV. FEES, CHARGES, AND PENALTIES

A. Sewer Use Charges

All Users of the System, or their designated agents, shall pay a sewer use charge to the County. Sewer use charges shall include (1) fixed monthly charges and (2) volumetric charges in accordance with the following schedules. Sewer use charges for unmetered water will be determined by the County in its sole discretion.

1. Residential

A block volume charge shall be levied on Billed Volumetric Units in accordance with the below schedule. Whole units shall be used to determine under which Block the charge arises.

	Per 100 Cubic Feet		
	Block 1	Block 2	Block 3
Volume	0-3	4-6	7+
Rate per unit	$6.10	$9.48	$10.83

	Per 1000 Gallons		
	Block 1	Block 2	Block 3
Volume	0-2.243	2.244-4.487	4.488+
Rate per unit	$8.16	$12.67	$14.48

2. Non-residential

A block volume charge shall be levied on Billed Volumetric Units in accordance with the below schedule.

	Per 100 Cubic Feet
Volume	0+
Rate per unit	$10.66

	Per 1000 Gallons
Volume	0+
Rate per unit	$14.25

3. Monthly Base Charge

In addition to the volumetric charges in A.1 and A.2, a monthly base charge for each installed meter (except Private Meters) shall be levied as follows:

Meter Size (in. dia.)	Charge
5/8"	$20.33
3/4"	22.37
1"	28.45
1.5"	36.59
2"	58.95
3"	223.56
4"	284.55
6"	426.81
8"	589.40
10"	751.99

4. Billing Frequency

Bills are rendered monthly or quarterly at the discretion of the County.

B. Private Meter/Pool Processing Fee

A processing fee in the amount of $16.26 shall be imposed for the processing of each application for private meter or pool credit.

C. Non-Resident Users

All Non-Resident Users shall pay a sewer User charge to the County equal to the User charges described in Sections A.1 through A.3 of this Article multiplied by the following Non-Resident User Factor.

Non-Resident User Factor = 1.06

The monthly base charges set forth in Section A.3 of this Article shall also be multiplied by the Non-Resident User Factor. All other fees or charges described within this Ordinance shall be assessed to Non-Resident Users in accordance with the schedules set forth herein or as may be established by Jefferson County.

At the discretion of the County and at such times when County ad-valorem tax or any other System-related tax is modified or adopted, the Non-Resident User Factor may be changed or modified by the County.

D. Industrial Waste Surcharges

1. Industrial User Surcharges

An industrial waste surcharge shall be levied against any Industrial User of the System whose wastewater characteristics exceed the following standard strength:

Constituent	Strength	Rate per pound
BOD	300 mg/l	$1.1225
COD	750 mg/l	$0.5612
TSS	300 mg/l	$0.3705
FOG	50 mg/l	$0.2323
TP	4 mg/l	$4.4239

If an industrial wastewater discharge contains excessive loading for both BOD and COD, the imposed surcharge will be based on one of the two parameters as determined by the County in its sole discretion.

At the discretion of the County and at such times when data has been compiled and established, additional or modified industrial waste surcharge parameters, concentrations, or rates may be imposed.

Pounds shall be computed by multiplying the factor 0.00624 (the conversion factor used to determine the weight in pounds of one milligram per liter (mg/l) for a liquid volume in hundreds of cubic feet) times the volume of the wastewater (in hundreds of cubic feet) times the parts per million (ppm) of wastewater characteristics as described in the Table above.

2. Sampling and Analysis

Sampling and analysis charges shall be calculated and assessed as follows:

(1) Round trip mileage shall be charged per mile at the currently published Internal Revenue Service Standard Mileage Rate.
(2) Crew cost: $47.39 per hour (charged in ¼ hour segments at sampling site, each segment = $11.85).
(3) Laboratory analytical cost: Billed by wastewater characteristic, as defined in the laboratory fee schedule, which may be obtained from the Industrial Pretreatment Office at 205-238-3833.
(4) Technical and administrative fees including data collection, calculations, entry, report dispersal and billing per sampling cycle: Flat rate of $67.75.

3. Miscellaneous Fees

Cost incurred by the County for sampling, analysis and monitoring of industrial wastewater not otherwise provided for in this Ordinance shall be charged to the monitored industry on an actual cost basis.

4. Hauled Wastewater

Charges for discharging all hauled wastewater into an approved System facility, as measured at the receiving facility, shall be as follows:

Waste type	Rate per 1000 gallons
Septage and domestic wastewater	$81.30
Grease trap waste	$101.62
Other	*

*Charges for other non-standard discharges shall be calculated by the County based on estimated increased operating costs if, at the County's discretion, the particular waste stream constituents are higher concentrations than typical domestic septage or grease trap waste. Leachate, unless otherwise determined, shall be considered septage.

E. Sewer Impact Fees

1. Fixture Rate

An impact fee shall be levied upon each new connection to the System regardless of county jurisdiction as follows:

Fixture	Impact Fee
Single fixture unit	$304.85
Equivalent fixture unit	$304.85
Stubouts for plumbing fixtures	*
Other fixtures	**

* Impact fee for stubouts will be the cumulative fee for the fixtures to be served by the stubout.

** Impact fee to be determined by the County on a case by case basis in accordance with Article II.B.4 and at a rate of $304.85 per plumbing fixture.

Failure to make payment for any plumbing fixture prior to installation shall result in a doubling of the payment if said payment is not submitted within thirty (30) days of notification. However, failure to mail any notice, or failure to receive any notice, shall in no way affect the obligation of the applicant to pay the fees and any penalty.

2. Alternate Waste Disposal System Conversion

Any home, mobile home or commercial building served by a septic tank, package plant, or other means of waste disposal which was constructed and approved for use subject to the standards of the Jefferson County Department of Health may connect to the System, provided there is no prohibition in the regulations of the County, State or Federal Government and upon payment of a one hundred dollar ($135.49) fee for such connection.

3. Impact Fees Refund

An administrative fee for refund of impact fees will be assessed as follows:

No. Fixtures	Fee
1 - 10	$27.10
11 - 50	$40.65
51	$67.75

F. Sewer Connection Fees

The sewer connection fees as listed include all required inspections and will be assessed for each single user connection in accordance with the following schedule:

Permit type	Prior to installation	After installation
Connection	$67.75	$745.23
Repair	$67.75	$745.23
Tap[1]	$203.25	
Disconnection	$33.88	

[1]County provides saddle, labor, and materials for tap to existing sewer mains.

If the County Sewer Service Inspector is required to visit the connection site for more than two (2) inspections due to faulty material, poor workmanship etc., the third inspection and each inspection thereafter shall be charged at $135.49 per inspection. After hour, weekend, and holiday inspections must be pre-approved by the ESD and shall be charged at a rate of $150.00 per hour, with a 2 hour minimum. The rate is "per inspector" as deemed necessary by the County.

G. Grease Trap Fees

Grease trap and interceptor fees shall be assessed in accordance with the following schedule:

Annual Inspection Fee

Number	Fee
1-5	$406.49
6-10	$677.47
11+	*

*Units in excess of 10 shall be assessed $677.47 plus $271.00 for each additional 5 units in excess of 10

Other Fees

Type	Fee
Non-compliance	$541.99
Re-inspection	$541.99
Exemption	$406.49

Installation, modifications, repairs or replacement of grease control devices shall be inspected by the ESD inspectors. Any work completed without prior notice shall be subject to a non-compliance fee.

H. Billing Fees

Billing fees shall be assessed in accordance with the following schedule:

Type	Fee
Lien Recording	$21.68
Lien Satisfaction	$21.68
Return Check	$40.65
Pay Off Amount (per sheet)	$5.43

ARTICLE V. GENERAL PROVISIONS

A. Validity

All resolutions, ordinances, parts of resolutions, or parts of ordinances in conflict herewith are hereby repealed.

B. Severability

The provisions of this Ordinance are severable. If any provision, section, paragraph, sentence or part thereof, or the application thereof to any individual or entity, shall be held unconstitutional or invalid, such decision shall not affect or impair the remainder of this Ordinance, it being the Commission's legislative intent to ordain and enact each provision, section, paragraph, sentence and part thereof separately and independently of each other.

C. Penalties

The County shall be allowed to recover reasonable attorney's fees, interest, penalties, collection fees, court costs, court reporter's fees and any other expenses of litigation or collections from any person or entity in violation or non-payment of the provisions of this this Ordinance.

ARTICLE VI. ORDINANCE IN FORCE

A. Date Effective

This ordinance shall be in full force and effect on the date of passage, with such rates and charges being assessed as soon as is practicable.

B. Date Adopted

Passed and adopted by the Jefferson County Commission on the 6th day of November, 2012. Amended and restated by resolution on the 23rd day of September, 2013.

by W.D. Carrington, President – Jefferson County Commission

Attest:

Diane Townes
Minute Clerk of the Jefferson County Commission
Approved as to correctness:

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*) IN0026913

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM **2F** NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
0011-WRF Effluent	33.00	35.00	39.30	86.00	52.00	3.60	Fivemile Creek
002S	33.00	35.00	34.50	86.00	51.00	57.30	Fivemile Creek
003S	33.00	35.00	34.90	86.00	51.00	58.20	Fivemile Creek
006S	33.00	35.00	53.00	86.00	51.00	59.00	Fivemile Creek

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
Locast Fork TMDL Project	0011	Plant effluent	Phosphorus reductions for TMDL targets		

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
002S 003S 006S	6.99 Acres 2.49 Acres 12.22 Acres	29.15 Acres 3.31 Acres 18.58 Acres			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Diesel fuel and gasoline are stored in double wall steel tanks that sit inside individual cement block enclosures. Pramitol is used for weed control around fences, lagoons and holding ponds 2 times per year. Diazon fire ant bait is used as needed on ant hills.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
002S 003S 006S	Installation of drop inlet pollution prevention barriers for oil/grease, other hydrocarbons, and sediments. Products used are Ultratech and Drainguard. Socks are replaced per manufacturer instructions (or at a minimum annually). Debris buildup and expended socks and inserts are disposed of in a municipal solid waste landfill.	1X, 4-A

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
David Denard, Director, JEFFCO ESD		5/15/19

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

N/A

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*
AL0026913

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☐ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☑ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed

X. Certification

I certify under penalty of law thet 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.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
David Denard, Director, JeffCo, ESD	(205) 325-5979
C. Signature	D. Date Signed
	5/2/13

EPA ID Number (*copy from Item 1 of Form 1*)
AL0026913

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	32 mg/L	N/A	32 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)
Biological Oxygen Demand (BOD5)	4.7 mg/L	N/A	4.7 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)
Chemical Oxygen Demand (COD)	Not required	by permit.				
Total Suspended Solids (TSS)	31	N/A	31 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)
Total Nitrogen	Not required	by permit.				
Total Phosphorus	0.46 mg/L	N/A	0.46 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)
pH	Minimum 6.84	Maximum	Minimum 6.84	Maximum	1.00	N/A (Outfall 002S 9/13/18)

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TKN	0.90 mg/L	N/A	0.90 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)
NH3-N	0.06 mg/L	N/A	0.06 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)
NO2+NO3 (as N)	0.17 mg/L	N/A	0.17 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)
E. coli	3972.6 mpn	N/A	3972.6 mpn	N/A	1.00	N/A (Outfall 002S 9/13/18)
Total coliform	>2419.6 mpn	N/A	>2419.6 mpn	N/A	1.00	N/A (Outfall 002S 9/13/18)
Chlorine, TR	0.21 mg/L	N/A	0.21 mg/L	N/A	1.00	N/A (Outfall 002S 9/13/18)

Continued from the Front

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						Outfall 002S

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*

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

EPA ID Number (*copy from Item 1 of Form 1*)
AL0026913

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	29 mg/L	N/A	29 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)
Biological Oxygen Demand (BOD5)	2.3 mg/L	N/A	2.3 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)
Chemical Oxygen Demand (COD)	Not required	by permit.				
Total Suspended Solids (TSS)	2.8 mg/L	N/A	2.8 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)
Total Nitrogen	Not required	by permit.				
Total Phosphorus	0.20 mg/L	N/A	0.20 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)
pH	Minimum 6.54	Maximum	Minimum 6.54	Maximum	1.00	N/A (Outfall 003S 9/13/18)

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TKN	0.27 mg/L	N/A	0.27 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)
NH3-N	<0.05 mg/L	N/A	<0.05 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)
NO2+NO3 (as N)	<0.04 mg/L	N/A	<0.04 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)
E. coli	248.1 mpn	N/A	248.1 mpn	N/A	1.00	N/A (Outfall 003S 9/13/18)
Total coliform	>2419.6 mpn	N/A	>2419.6 mpn	N/A	1.00	N/A (Outfall 003S 9/13/18)
Chlorine, TR	0.02 mg/L	N/A	0.02 mg/L	N/A	1.00	N/A (Outfall 003S 9/13/18)

Continued from the Front

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						Outfall 003S

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*

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

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	31 mg/L	N/A	31 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)
Biological Oxygen Demand (BOD5)	7.9 mg/L	N/A	7.9 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)
Chemical Oxygen Demand (COD)	Not required	by permit.				
Total Suspended Solids (TSS)	21	N/A	21 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)
Total Nitrogen	Not required	by permit.				
Total Phosphorus	1.5 mg/L	N/A	1.5 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)
pH	Minimum 6.45	Maximum	Minimum 6.45	Maximum	1.00	N/A (Outfall 006S 9/13/18)

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TKN	1.9 mg/L	N/A	1.9 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)
NH3-N	0.07 mg/L	N/A	0.07 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)
NO2+NO3 (as N)	1.0 mg/L	N/A	1.0 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)
E. coli	4839.2 mpn	N/A	4839.2 mpn	N/A	1.00	N/A (Outfall 006S 9/13/18)
Total coliform	>2419.6 mpn	N/A	>2419.6 mpn	N/A	1.00	N/A (Outfall 006S 9/13/18)
Chlorine, TR	0.28 mg/L	N/A	0.28 mg/L	N/A	1.00	N/A (Outfall 006S 9/13/18)

Continued from the Front

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						Outfall 006S

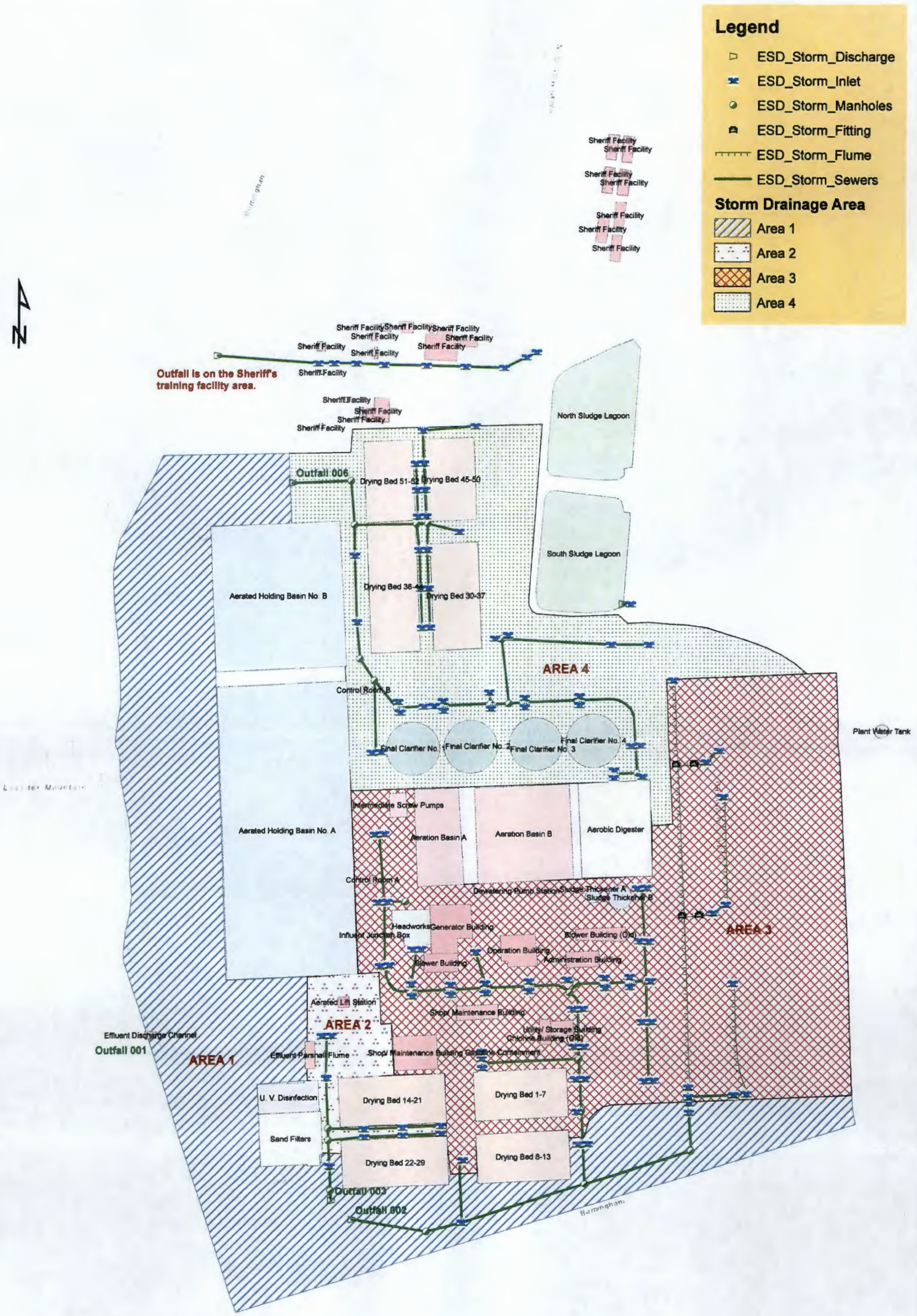
Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*

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

FORM 2F
ATTACHMENT

ATTACHMENT 1 – FORM 2F, SECTION III FIVE MILE CREEK WRF SITE DRAINAGE MAP



JEFFERSON COUNTY, ALABAMA ENVIRONMENTAL SERVICES 716 Richard Arrington Jr. Blvd N, Suite A300 Birmingham, AL. 35203	Five Mile Creek Water Reclamation Facility NPDES Permit Application	Form 2F, Section III ATTACHMENT 1 FIVE MILE CREEK SITE DRAINAGE MAP

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF AL0026913

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

FORM 2S NPDES

NPDES FORM 2S APPLICATION OVERVIEW

PRELIMINARY INFORMATION

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

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

1. Facilities with a currently effective NPDES permit.

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

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

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF AL0026913

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

A. GENERAL INFORMATION

All applicants must complete this section.

A.1. Facility Information.

a. Facility name: Five Mile Creek Water Reclamation Facility

b. Mailing Address: 716 Richard Arrington Jr. Blvd. N. Suite A-300

c. Contact person: David Denard, P.E.

Title: Director, Jefferson County Environmental Services Department

Telephone number: (205) 325-5979

d. Facility Address (not P.O. Box): 3410 Happy Hollow Lane Fultondale, AL 35068

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

f. Facility design flow rate: 30.00 mgd

g. Total population served: 70,000.00

h. Indicate the type of facility:

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

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

a. Applicant name: Jefferson County Commission

b. Mailing Address: Same as above

c. Contact person:

Title:

Telephone number:

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

✓ owner ✓ operator

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

____ facility ✓ applicant

A.3. Permit Information.

a. Facility's NPDES permit number (if applicable): AL0026913

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

Permit Number	Type of Permit

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

_____Yes ✓ No If yes, describe: _____

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

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

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

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

A.7. Contractor Information.

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

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

a. Name _____

b. Mailing Address _____

_____

c. Telephone Number _____

d. Responsibilities of contractor _____

_____

FACILITY NAME AND PERMIT NUMBER:
Five Mile Creek WRF AL0026913

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A.8. Pollution Concentrations: Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants for which limits in sewage sludge have been established in 40 CFR Part 503 for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
ARSENIC	0.00	6010D	11
CADMIUM	0.00	6010D	4
CHROMIUM	94.17	6010D	4
COPPER	358.33	6010D	5
LEAD	24.17	6010D	11
MERCURY	1.38	7471A	0.02
MOLYBDENUM	6.87	6010D	5
NICKEL	44.17	6010D	4
SELENIUM	0.00	6010D	11
ZINC	3,466.67	6010D	6

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

_____ Part 1 Limited Background Information packet

Part 2 Permit Application Information packet:

✓ Section A (General Information)
✓ Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)
✓ Section C (Land Application of Bulk Sewage Sludge)
____ Section D (Surface Disposal)
____ Section E (Incineration)

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

Name and official title: David Denard, P. E., Director, Jefferson County Environmental Services Department

Signature: _____ Date signed: 5/2/19

Telephone number: (205) 325-5979

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

SEND COMPLETED FORMS TO:

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

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

B.1. Amount Generated On Site.

Total dry metric tons per 365-day period generated at your facility: 609.90 dry metric tons

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

a. Facility name: N/A

b. Mailing Address: _____

c. Contact person: _____

Title: _____

Telephone number: _____

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

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

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

_____

_____

B.3. Treatment Provided At Your Facility.

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

_____ Class A ✓ Class B _____ Neither or unknown

b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge:
Drying beds followed by land application. Dried sludge is tested for Escherichia coli to verify pathogen reduction and soil incorporated within 6 hours of transport for vector reduction.

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

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

FACILITY NAME AND PERMIT NUMBER:

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

d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge:
None

e. Describe, on this form or another sheet of paper, any other sewage sludge treatment or blending activities not identified in (a) - (d) above:
When land applied after drying, sludge from the Five Mile WRF is co-mingled with other Jefferson County WRF sludges and land incorporated within 6 hours of delivery to one of two land application sites.

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

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

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

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

_____Yes _____No

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

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

a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: N/A dry metric tons

b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

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

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

a. Receiving facility name N/A

b. Mailing address _____

c. Contact person _____

Title _____

Telephone number _____

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

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

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

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

_____ Class A _____ Class B _____ Neither or unknown

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

_____

_____

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

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

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

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

_____

_____

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

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

_____

_____

h. If you answered yes to (e), (f), or (g), attach a copy of any information you provide the receiving facility to comply with the "notice and necessary information" requirement of 40 CFR 503.12(g).

i. Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? _____ Yes _____ No

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

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

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

B.7. Land Application of Bulk Sewage Sludge.

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites: 609.90 dry metric tons

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

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

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

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

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

_____

_____

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

B.8. Surface Disposal.

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

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

_____ Yes _____ No

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

c. Site name or number N/A

d. Contact person _____

Title _____

Telephone number _____

Contact is _____ Site owner _____ Site operator

e. Mailing address _____

_____

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

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

B.9. Incineration.

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

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

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

c. Incinerator name or number: N/A

d. Contact person: _____

Title: _____

Telephone number: _____

Contact is: _____ Incinerator owner _____ Incinerator operator

B.9. Incineration. (con't)

e. Mailing address: _____

_____

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

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

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

a. Name of landfill N/A

b. Contact person _____

Title _____

Telephone number _____

Contact is _____ Landfill owner _____ Landfill operator

c. Mailing address _____

_____

d. Location of municipal solid waste landfill:

Street or Route # _____

County _____

City or Town _____ State _____ Zip _____

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

_____ dry metric tons

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

Permit Number	Type of Permit
_____	_____
_____	_____
_____	_____

g. Submit, with this application, information to determine whether the sewage sludge meets applicable requirements for disposal of sewage sludge in a municipal solid waste landfill (e.g., results of paint filter liquids test and TCLP test)

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

_____ Yes _____ No

C. LAND APPLICATION OF BULK SEWAGE SLUDGE

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

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

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

C.1. Identification of Land Application Site.

a. Site name or number: Jefferson County Flat Top Land Application Site

b. Site location (Complete 1 and 2).

1. Street or Route #: 4808 Hwy 78 W

   County: Jefferson

   City or Town: Adamsville State: AL Zip: 35073

2. Latitude: 33.655125 Longitude: -86.973832

   Method of latitude/longitude determination

   _____ USGS map _____ Field survey ✓ Other

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

C.2. Owner Information.

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

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

   Name: WARRIOR MET COAL LAND, LLC / Contact Roger Crabb

   Telephone number: (205) 554-6179

   Mailing Address: 16243 Highway 216 Brookwood, AL 35444

C.3. Applier Information.

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

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

   Name: _____

   Telephone number: _____

   Mailing Address: _____

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

_____ Agricultural land _____ Forest _____ Public contact site
✓ Reclamation site _____ Other. Describe: _____

FACILITY NAME AND PERMIT NUMBER:
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C. LAND APPLICATION OF BULK SEWAGE SLUDGE

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

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

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

C.1. Identification of Land Application Site.

a. Site name or number: Jefferson County Beltona Land Application Site

b. Site location (Complete 1 and 2).

1. Street or Route #: 400 Beltona Rd

County: Jefferson

City or Town: Warrior State: AL Zip: 35180

2. Latitude: 33.806029 Longitude: -86.84849

Method of latitude/longitude determination

_____ USGS map _____ Field survey ✓ Other

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

C.2. Owner Information.

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

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

Name: WARRIOR MET COAL LAND, LLC / Contact Roger Crabb

Telephone number: (205) 554-6179

Mailing Address: 16243 Highway 216 Brookwood, AL 35444

C.3. Applier Information.

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

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

Name: _____

Telephone number: _____

Mailing Address: _____

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

✓ Agricultural land _____ Forest _____ Public contact site
_____ Reclamation site _____ Other. Describe: _____

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

a. What type of crop or other vegetation is grown on this site?
No crops (Flat Top LA) / Hay-Bermuda Grass and Rye Grass (Beltona LA)

b. What is the nitrogen requirement for this crop or vegetation?
N/A / 350 lbs N per acre (Beltona LA)

C.6. Vector Attraction Reduction.

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

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

a. Indicate which vector attraction reduction option is met:

_____ Option 9 (Injection below land surface)
✓ Option 10 (Incorporation into soil within 6 hours)

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

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

C.7. Cumulative Loadings and Remaining Allotments.

a. Have you contacted the permitting authority in the State where the bulk sewage sludge subject to CPLRs will be applied, to ascertain whether bulk sewage sludge subject to CPLRs has been applied to this site on or since July 20, 1993? ✓ Yes _____ No

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

If yes, provide the following information:

Permitting authority	US EPA Region 7 (per instructions from J. Bruno verified with land owner)
Contact Person	Jodi Bruno
Telephone number	(913) 513-7810

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

If no, skip C.7.c.

c. Provide the following information for every facility other than yours that is sending, or has sent, bulk sewage sludge to CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Facility name N/A

Mailing Address _____

_____

Contact person _____

Title _____

Telephone number _____

D. SURFACE DISPOSAL

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

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

D.1. Information on Active Sewage Sludge Units.

a. Unit name or number: N/A

b. Unit location (Complete 1 and 2).

1. Street or Route # _____

County _____

City or Town _____ State _____ Zip _____

2. Latitude_____ Longitude_____

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

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

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

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

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

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

_____

_____

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

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

_____

_____

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

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

If yes, provide the actual distance in meters: _____

Provide the following information:

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

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

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

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

_____ Yes _____ No

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

a. Facility name N/A

b. Mailing Address _____

_____

c. Contact person _____

Title _____

Telephone number _____

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

_____ Class A _____ Class B _____ None or unknown

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

_____

_____

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

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

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

_____

_____

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

_____

_____

D.3. Vector Attraction Reduction

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

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

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

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

_____

_____

D.4. Ground-Water Monitoring.

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

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

_____

_____

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

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

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

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

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

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

E. INCINERATION

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

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

E.1. Incinerator Information.

a. Incinerator name or number: N/A

b. Incinerator location (Complete 1 and 2).

1. Street or Route # _____

County _____

City or Town _____ State _____ Zip _____

2. Latitude_____ Longitude_____

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

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

E.3. Beryllium NESHAP.

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

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

b. If the answer to (a) is yes, **submit with this application** a complete report of the latest beryllium emission rate testing and documentation of ongoing incinerator operating parameters indicating that the NESHAP emission rate limit for beryllium has been and will continue to be met.

E.4. Mercury NESHAP.

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

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

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

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

A complete report of stack testing and documentation of ongoing incinerator operating parameters indicating that the incinerator has met, and will continue to meet, the mercury NESHAP emission rate limit.

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

c. If sewage sludge sampling is used to demonstrate compliance, submit a complete report of sewage sludge sampling and documentation of ongoing incinerator operating parameters indicating that the incinerator has met, and will continue to meet the mercury NESHAP emission rate limit.

E.5. Dispersion Factor.

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

b. Name and type of dispersion model: _____

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

E.6. Control Efficiency.

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

Arsenic: _____ Chromium: _____ Nickel: _____

Cadmium: _____ Lead: _____

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

E.7. Risk Specific Concentration for Chromium.

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

b. Which basis was used to determine the RSC?

____Table 2 in 40 CFR 503.43

____Equation 6 in 40 CFR 503,43 (site-specific determination)

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

____Fluidized bed with wet scrubber

____Fluidized bed with wet scrubber and wet electrostatic precipitator

____Other types with wet scrubber

____Other types with wet scrubber and wet electrostatic precipitator

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

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

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

E.8. Incinerator Parameters

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

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

b. Incinerator type: _____

c. Incinerator stack height, in meters: _____

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

E.9. Performance Test Operating Parameters

a. Maximum Performance Test Combustion Temperature: _____

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

indicate whether value submitted is:

_____ Average use _____ Maximum design

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

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

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

a. Total hydrocarbons or carbon monoxide: _____

b. Percent oxygen: _____

c. Moisture content: _____

d. Combustion temperature: _____

e. Other: _____

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

_____

_____

_____

_____

Additional Information, if provided, will appear on the following pages.

FORM 2S
ATTACHMENTS

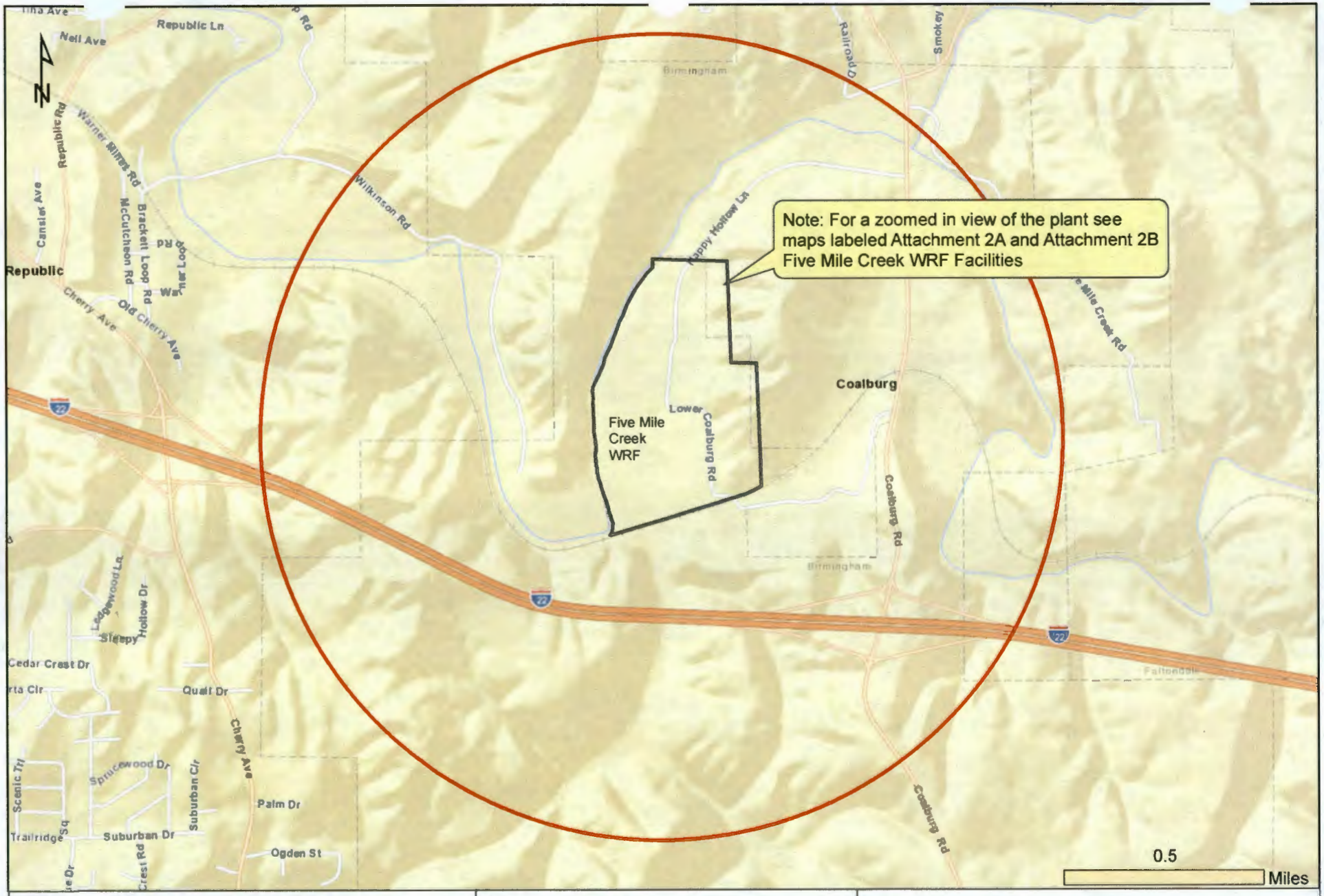
ATTACHMENT 1 – SECTION A.5 1-MILE RADIUS FIVE MILE CREEK WRF

ATTACHMENT 1A AND 1B – SECTION A.5.A FIVE MILE CREEK WRF FACILITIES

ATTACHMENT 2 – SECTION A.5.A FIVE MILE CREEK WRF BIOSOLIDS DISPOSAL SITES

ATTACHMENT 3 – 1 SECTION A.5.B FIVE MILE CREEK WRF VICINITY WATER RESOURCES

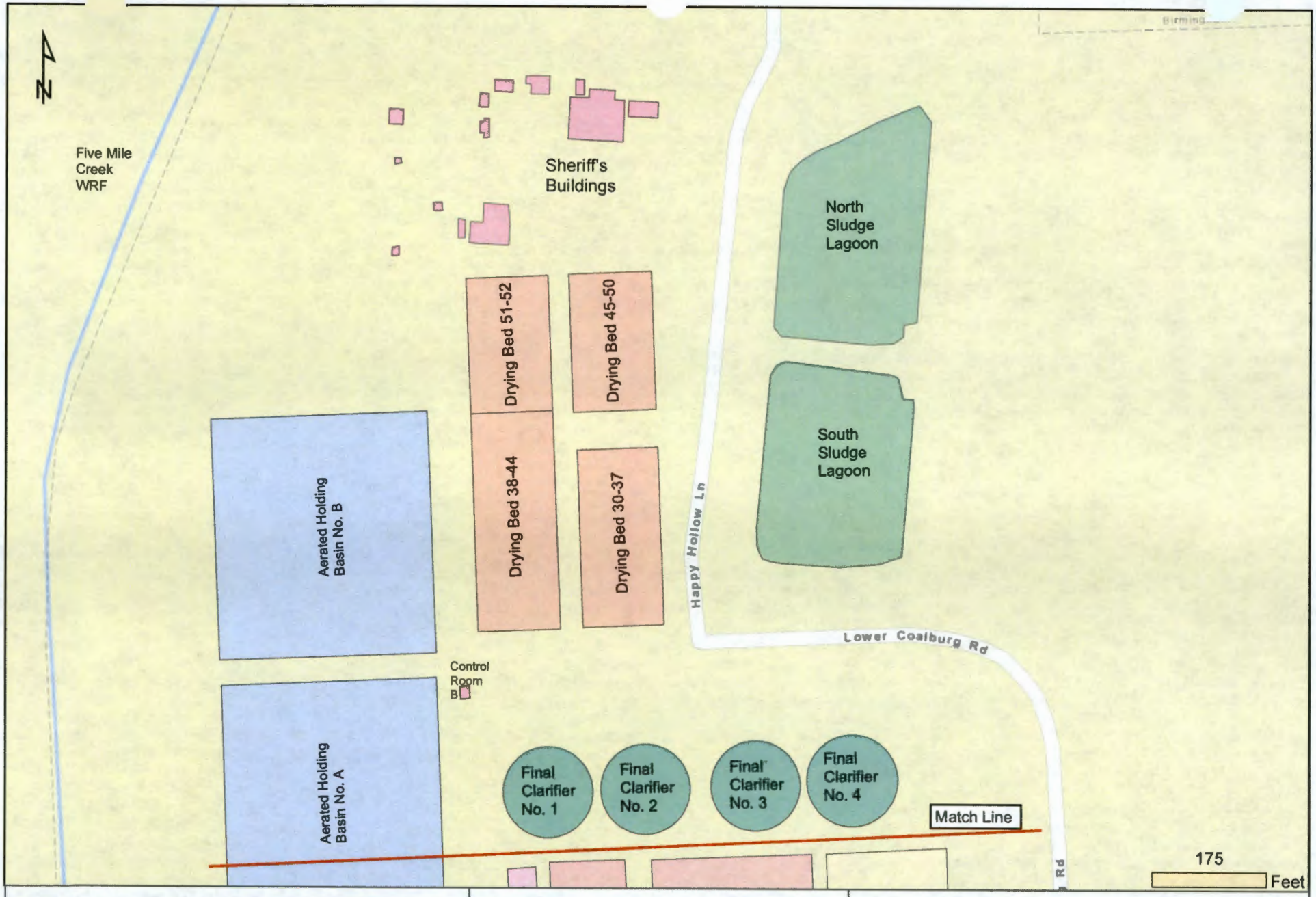
ATTACHMENT 4 – SEWAGE SLUDGE PROCESS



JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

Form 2S, A.5
ATTACHMENT 1
1-MILE RADIUS FIVE MILE CREEK WRF



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ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
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Five Mile Creek
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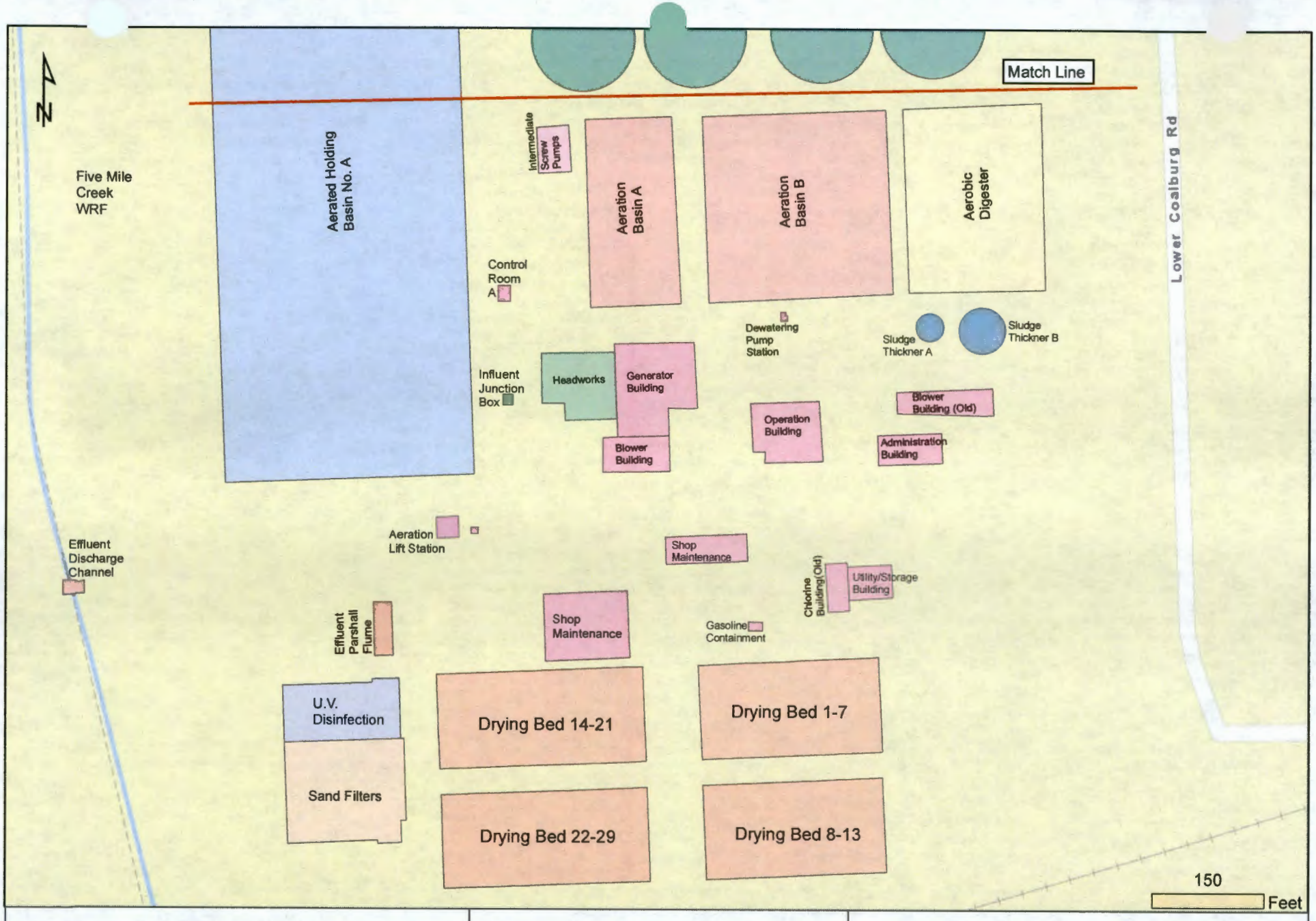
NPDES Permit Application

Form 2.S, A.5.a
ATTACHMENT 1A
FIVE MILE CREEK WRF FACILITIES



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716 Richard Arrington Jr. Blvd N, Suite A300
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Five Mile Creek
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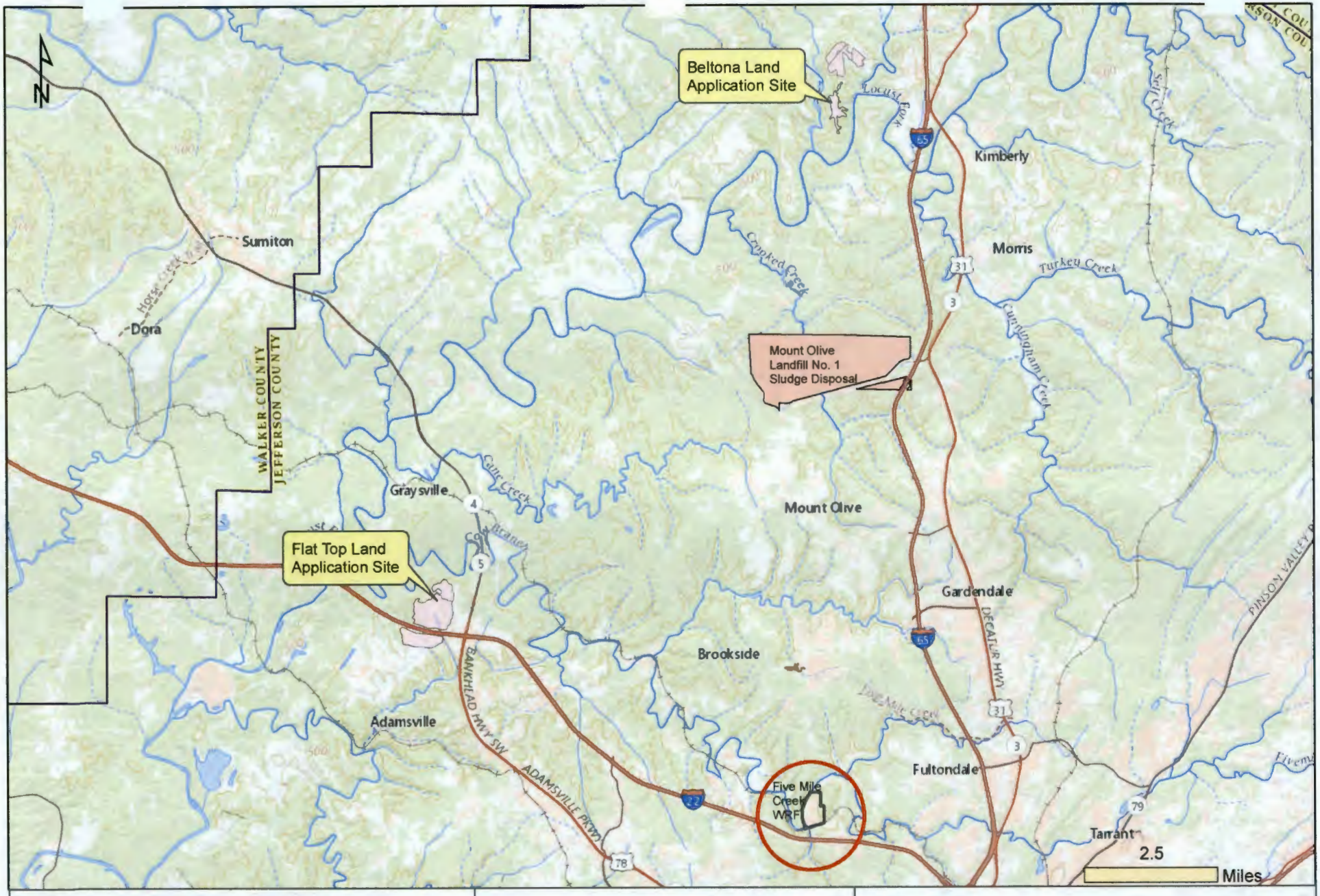
NPDES Permit Application

Form 2S, A.5.a
ATTACHMENT 1B
FIVE MILE CREEK WRF FACILITIES



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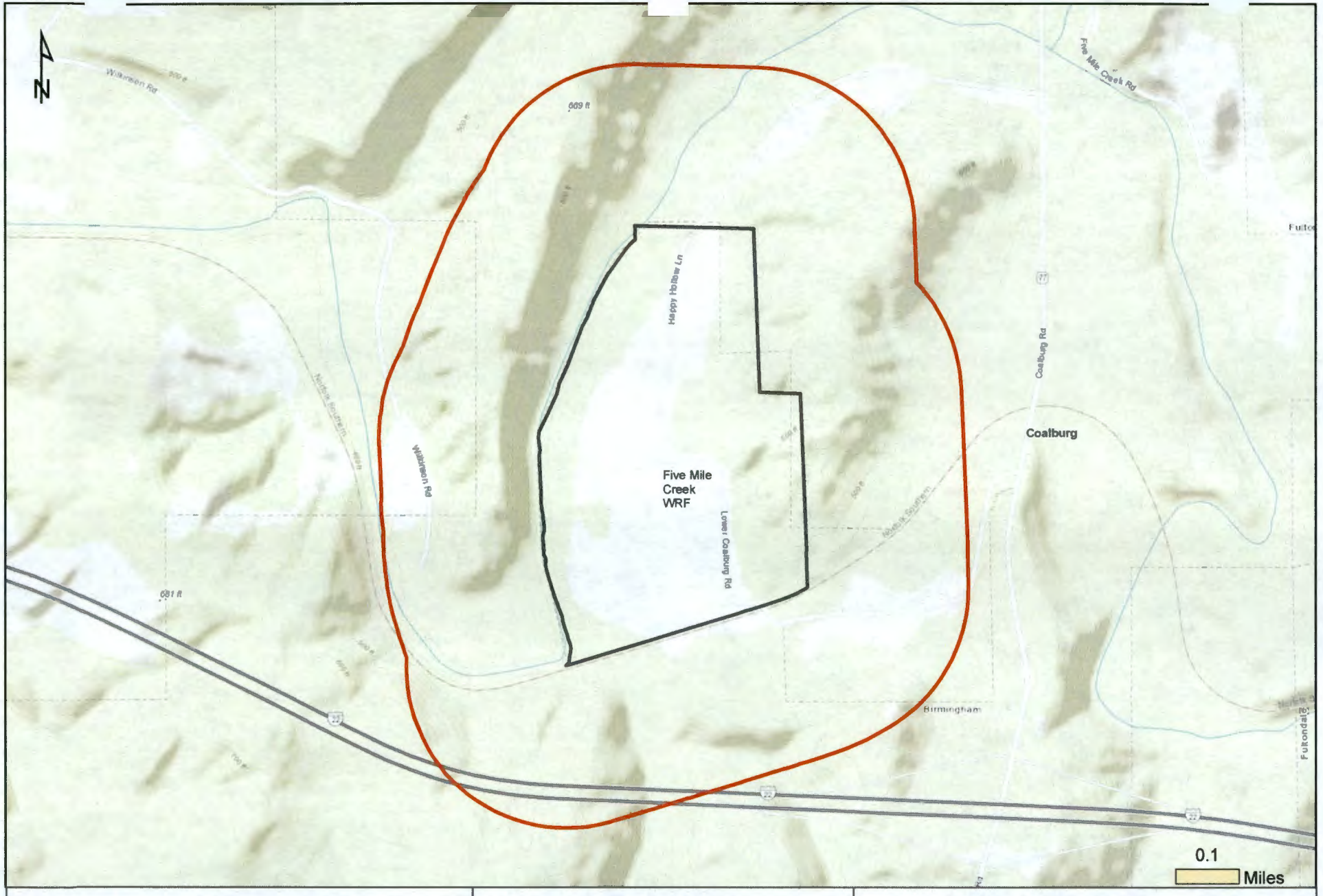
Five Mile Creek
Water Reclamation Facility
NPDES Permit Application

Form 2S, A.5.a
ATTACHMENT 2
FIVE MILE CREEK WRF BIOSOLIDS
DISPOSAL SITES



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Five Mile Creek
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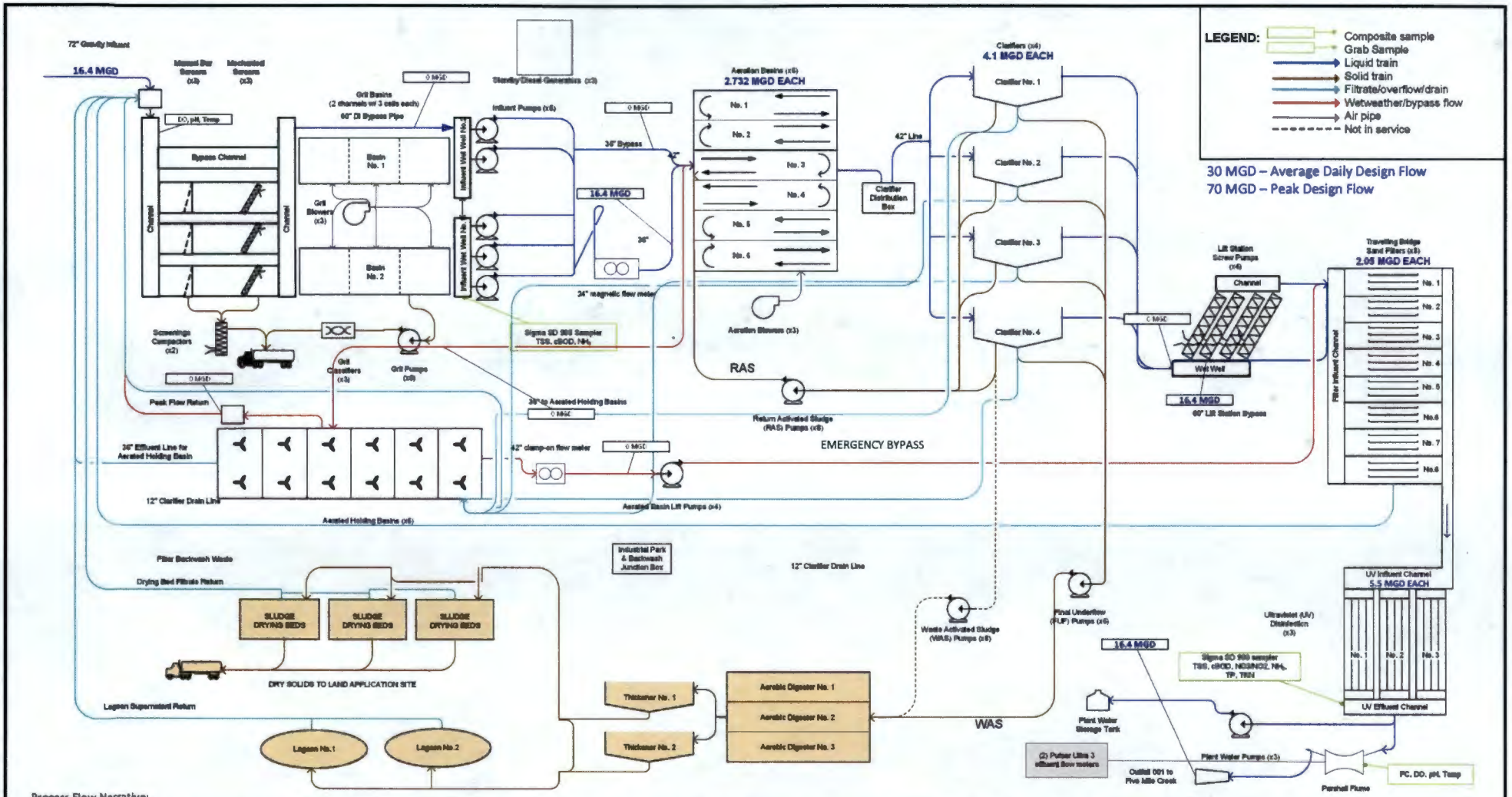
NPDES Permit Application

Form 2S, A.5.B
ATTACHMENT 3
FIVE MILE CREEK WRF
VICINITY WATER RESOURCES
(1/4 MILE RADIUS)



Process Flow Narrative:

The 2018 calendar year annual average daily flow of 16.41 MGD enters the Five Mile Creek WWTP via a 72" gravity sewer. The plant has a design average daily flow rate of 30 MGD and a peak design rate of 70 MGD. The influent flow receives screening through fine screens and follows with grit removal. The flow is then pumped and equally split into six aeration basins with capacities of 5 MGD average daily flow each.The flow then receives final clarification before advanced treatment through traveling bridge sand filters. The flow receives disinfection from ultra-violet light prior to discharge through Outfall 0011 into Fivemile Creek.

JEFFERSON COUNTY, ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT 716 Richard Arrington Jr. Blvd, N, Suite A300 Birmingham, AL 35203	FIVE MILE CREEK WATER RECLAMATION FACILITY AL0026913 NPDES Permit Application	Form 2S, A.6 ATTACHMENT 4 SEWAGE SLUDGE HANDLING PROCESS