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

APR 18 2019

David Denard, Director
Jefferson County Commission
716 Richard Arrington Jr. Blvd., North
Suite A-300
Birmingham, AL 35203

RE: Draft Permit
NPDES Permit No. AL0056120
Prudes 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., NORTH SUITE A-300 BIRMINGHAM, ALABAMA 35203	
FACILITY LOCATION:	PRUDES CREEK WRF 500 WATER TRAIL GRAYSVILLE, ALABAMA JEFFERSON COUNTY	(0.9 MGD)
PERMIT NUMBER:	AL0056120	
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

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfall 0011 Discharge Limits - Effluent from WWTP

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	*****	*****	*****	*****	5.5 mg/l	*****	*****	E	GRAB	C	S
Oxygen, Dissolved (DO) 00300 1 0 0	*****	*****	*****	*****	5.0 mg/l	*****	*****	E	GRAB	C	W
pH 00400 1 0 0	*****	*****	*****	*****	6.0 S.U.	9.0 S.U.	*****	E	GRAB	C	*****
Solids, Total Suspended 00530 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	C	*****
Solids, Total Suspended 00530 1 0 0	225 lbs/day	337 lbs/day	30.0 mg/l	45.0 mg/l	*****	*****	*****	E	COMP24	C	*****
Nitrogen, Ammonia Total (As N) 00610 1 0 0	18.7 lbs/day	28.1 lbs/day	2.5 mg/l	3.75 mg/l	*****	*****	*****	E	COMP24	C	S
Nitrogen, Ammonia Total (As N) 00610 1 0 0	75.0 lbs/day	112 lbs/day	10.0 mg/l	15.0 mg/l	*****	*****	*****	E	COMP24	C	W
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	37.5 lbs/day	56.2 lbs/day	5.0 mg/l	7.5 mg/l	*****	*****	*****	E	COMP24	C	S
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	150 lbs/day	225 lbs/day	20.0 mg/l	30.0 mg/l	*****	*****	*****	E	COMP24	C	W
Nitrite Plus Nitrate Total 1 Det. (As N) 00630 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	S

* 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 - I day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (April – October)
W = Winter (November – March)
ECS = E. coli Summer (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.

2. Outfall 0011 Discharge Limits - Effluent from WWTP (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
Phosphorus, Total (As P) 00665 1 0 0	REPORT lbs/day	REPORT lbs/day	2.0 mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	C	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
Flow, In Conduit or Thru Treatment Plant 50050 1 0 0	REPORT MGD	*****	*****	*****	*****	REPORT MGD	*****	E	CONTIN	A	*****
Chlorine, Total Residual See note (5) 50060 1 0 0	*****	*****	0.25 mg/l	*****	*****	0.43 mg/l	*****	E	GRAB	C	*****
E. Coli 51040 1 0 0	*****	*****	126 col/100mL	*****	*****	298 col/100mL	*****	E	GRAB	C	ECS
E. Coli 51040 1 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	C	ECW
BOD, Carbonaceous 05 Day, 20C 80082 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	C	*****
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	60.0 lbs/day	90.0 lbs/day	8.0 mg/l	12.0 mg/l	*****	*****	*****	E	COMP24	C	S
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	187 lbs/day	281 lbs/day	25.0 mg/l	37.5 mg/l	*****	*****	*****	E	COMP24	C	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 (April – October)
W = Winter (November – March)
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.

3. Use of the "Emergency Overflow" line in the flow schematic attached to this permit is subject to: 1) the bypass provisions of 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 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Certified and Registered Mail shall be addressed to:

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

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

2. Noncompliance Notifications and Reports

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

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

(2) Potentially threatens human health or welfare;

(3) Threatens fish or aquatic life;

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

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

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

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

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

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

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

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

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

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

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

d. Immediate notification

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

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

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

(1) The cause of the discharge;

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

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

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

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

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

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

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

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

4. Duty to Provide Information

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

E. SCHEDULE OF COMPLIANCE

1. Compliance with discharge limits

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

   COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. Schedule

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

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

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

2. Best Management Practices (BMP)

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

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

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

3. Certified Operator

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

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

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

2. Right of Entry and Inspection

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

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

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

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

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

C. BYPASS AND UPSET

1. Bypass

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

   b. A bypass is not prohibited if:

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

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

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

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

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

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

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

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

2. Upset

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

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

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

(i) An upset occurred;

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

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

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

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

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

1. Duty to Comply

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

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

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

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

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

2. Removed Substances

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

3. Loss or Failure of Treatment Facilities

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

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

4. Compliance With Statutes and Rules

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

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

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

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

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

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

2. Change in Discharge

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

3. Transfer of Permit

   This permit may not be transferred or the name of the Permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new Permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the Permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the Permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

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

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

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

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

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

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

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

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

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

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

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

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

(8) To agree with a granted variance under 30l(c), 30l(g), 30l(h), 30l(k), or 3l6(a) of the FWPCA or for fundamentally different factors;

(9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;

(10) When required by the reopener conditions in this permit;

(11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);

(12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;

(13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or

(14) When requested by the Permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Termination

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

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

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

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

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

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

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

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

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

6. Suspension

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

7. Stay

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

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

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

G. NOTICE TO DIRECTOR OF INDUSTRIAL USERS

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

H. PROHIBITIONS

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

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

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

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

2. False Statements

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

3. Permit Enforcement

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

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

      (1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;

      (2) An action for damages;

      (3) An action for injunctive relief; or

      (4) An action for penalties.

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

      (1) Initiate enforcement action based upon the permit which has been continued;

      (2) Issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

      (3) Reissue the new permit with appropriate conditions; or

      (4) Take other actions authorized by these rules and AWPCA.

4. Relief from Liability

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

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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

C. PROPERTY AND OTHER RIGHTS

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

D. AVAILABILITY OF REPORTS

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

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.

2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.

3. Construction has begun when the owner or operator has:

   a. Begun, or caused to begin as part of a continuous on-site construction program:

      (1) Any placement, assembly, or installation of facilities or equipment; or

      (2) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which are necessary for the placement, assembly, or installation of new source facilities or equipment; or

   b. Entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

4. Final plans and specifications for a waste treatment facility at a new source or new discharger, or a modification to an existing waste treatment facility must be submitted to and examined by the Department prior to initiating construction of such treatment facility by the Permittee.

5. Upon completion of construction of waste treatment facilities and prior to operation of such facilities, the Permittee shall submit to the Department a certification from a registered professional engineer, licensed to practice in the State of Alabama, that the treatment facilities have been built according to plans and specifications submitted to and examined by the Department.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the Permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.

2. Compliance with permit terms and conditions notwithstanding, if the Permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the Permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.

3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification, and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

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

H. DEFINITIONS

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

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

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.
4. AWPCA – means the Alabama Water Pollution Control Act.
5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.
6. Bypass – means the intentional diversion of waste streams from any portion of a treatment facility.
7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
8. Daily discharge – means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
9. Daily maximum – means the highest value of any individual sample result obtained during a day.
10. Daily minimum – means the lowest value of any individual sample result obtained during a day.
11. Day – means any consecutive 24-hour period.
12. Department – means the Alabama Department of Environmental Management.
13. Director – means the Director of the Department.
14. Discharge – means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(9).
15. Discharge Monitoring Report (DMR) – means the form approved by the Director to accomplish reporting requirements of an NPDES permit.
16. DO – means dissolved oxygen.
17. 8HC – means 8-hour composite sample, including any of the following:
    a. The mixing of at least 8 equal volume samples collected at 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 TESTING REOPENER

Upon notification under Part II.G. of any newly introduced toxic industrial wastewaters, the Director may reopen the permit to include effluent toxicity limitations and testing requirements.

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. 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.

NPDES PERMIT RATIONALE

NPDES Permit No:	**AL0056120**	Date: March 14, 2019
Permit Applicant:	Jefferson County Commission 716 Richard Arrington Jr. Blvd., North Suite A-300 Birmingham, Alabama 35203	
Location:	Prudes Creek WRF 500 Water Trail Graysville, Alabama 35073	
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, NH3-N, TKN, CBOD, CBOD % Removal, TSS % Removal 5% TRC TSS, TSS % Removal, CBOD % Removal pH, E. coli, TP
Design Flow in Million Gallons per Day:	0.9 MGD	
Major:	No	
Description of Discharge:	Outfall Number 0011; Effluent discharge 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 (NH3-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 February 15, 2019. The monthly average limits for CBOD summer (April-October) and winter (November-March) are 8.0 mg/L and 25.0 mg/L, respectively. The monthly average limits for NH3-N summer (April-October) and winter (November-March) are 2.5 mg/L and 10.0 mg/L, respectively. The monthly average limits for TKN summer (April-October) and winter (November-March) are 5.0 mg/L and 20.0 mg/L, respectively. The daily minimum limits for DO summer (April-October) and winter (November-March) are 5.5 mg/L and 5.0 mg/L, respectively.

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 0.9 MGD. The TMDL set a Total Phosphorus (TP) limit for this Class 2 facility (design capacity greater than or equal to 0.1 MGD and less than 1.0 MGD), which is to be applied as a monthly average limit of 2.0 mg/L during the summer nutrient months (March-October). Discharge

Monitoring Report (DMR) data indicates that the facility is already consistently complying with the TP limit; therefore, a schedule of compliance is not being included in the Permit.

This permit imposes monitoring during the summer growing season (April-October) for the nutrient-related parameter of 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 to 9.0 S.U, respectively, were developed to be supportive of the water-use classification of the receiving stream. The Total Residual Chlorine (TRC) limits of 0.25 mg/L (monthly average) and 0.43 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 limitations 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. 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 to 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 minor facility (design capacity less than 1 MGD) treating only domestic wastewater with no industrial wastewater contributions, no potential toxicity concerns are anticipated and thus there is no need to impose chronic or acute bioassay testing under this permit.

The monitoring frequency for DO, pH, TSS, NH3-N, TKN, TRC, E. coli and CBOD is thrice per week. The monitoring frequency for TP is thrice per week during the March through October summer nutrient season and once per month during the November through February winter nutrient season. The monitoring frequency for N02+N03-N is once per month during the April through October summer growing season. TSS % removal and CBOD % removal are to be calculated once per month. Flow is to be continuously monitored daily.

Fivemile Creek is a Tier 1 stream and is listed on the most recent 303(d) list for pathogens (E. coli). The pathogen limits imposed in the permit are consistent with Alabama's water quality standards and this discharge should not cause additional pathogen impairment in Fivemile Creek. 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.

Prepared by: Dustin Stokes

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	**Prudes Creek WRF**	
NPDES Permit Number:	**AL0056120**	
Receiving Stream:	**Fivemile Creek**	
Facility Design Flow (Q_w):	**0.900 MGD**	
Receiving Stream $7Q_{10}$:	**30.30 cfs**	7Q10 includes from from upstream discharger(s).
Receiving Stream $1Q_{10}$:	**22.73 cfs**	1Q10 includes from from upstream discharger(s).
Winter Headwater Flow (WHF):	**38.19 cfs**	7Q2 includes from from upstream discharger(s).
Summer Temperature for CCC:	**28 deg. Celsius**	
Winter Temperature for CCC:	**18 deg. Celsius**	
Headwater Background NH_3-N Level:	**1.49 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.

$$\text{Stream Dilution Ration (SDR)} = \frac{Qw}{7Q10 + Qw} = \textbf{4.39\%}$$

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.

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

= **4.39%** **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**

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

= **24.0 mg/l NH3-N at 7Q10**

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

= **93.4 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	**2.50 mg/l NH3-N**	**24.00 mg/l NH3-N**
Winter	**10.00 mg/l NH3-N**	**93.40 mg/l NH3-N**

Summer: The DO based limit of 2.50 mg/l NH3-N applies.
Winter: The DO based limit of 10.00 mg/l NH3-N applies.

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

The following factors trigger toxicity testing requirements:

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

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

This is a minor facility (Qw < 1.0 MGD) with no SID permits. No toxicity testing is required.

Instream Waste Concentration (IWC) = $\frac{Qw}{7Q10 + Qw}$ = **4.39%** 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:	0.250 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	0.432 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: 4/12/2019

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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February 15, 2019

MEMORANDUM

TO: Dustin Stokes, Industrial/Municipal Branch

FROM: Jonathan Straiton, Water Quality Branch

RE: Waste Load Allocation for Prudes Creek WWTP for permit reissuance

An updated seasonal desktop model was completed for the Prudes Creek WWTP on February 15, 2019 for the purpose of permit reissuance. The previous model on file was completed by Chris Goodman in 2008. The facility has a discharge flow rate of 0.9 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
$CBOD_5$	8 mg/L	25 mg/L
NH_3-N	2.5 mg/L	10 mg/L
Minimum D.O.	5.5 mg/L	5 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 12.2 cfs and 20.09 cfs, respectively. For the model, an ultimate to five-day CBOD ratio of 1.5 was used for Prudes Creek WWTP. Ammonia-nitrogen limits are water-quality based.

JBS: jbs

Facility:	Prudes Creek WWTP
Permit:	*#AL0056120*
Receiving Waterbody:	Fivemile Creek
County:	Jefferson
Date Completed:	February 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)

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3523

From: Dustin Stokes | In Branch/Section: Municipal

Date Submitted: 12/4/2018 | Date Required: 1/3/2019 | FUND Code: 605

Receiving Waterbody: Fivemile Creek | Date Permit application received by NPDES program: 11/30/2018

Previous Stream:

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

Previous Discharger Name:

River Basin: Black Warrior | Outfall Latitude: 33.641555 (decimal degrees)

*County: Jefferson | Outfall Longitude: -86.952295 (decimal degrees)

Permit Number: AL0056120 | Permit: Permit Reissuance

Permit: 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 ERP Compliant Coke, LLC (formerly Walter Coke Inc.) Fivemile WWTP Forestdale MHP Sharon MHP	AL0003417 AL0003247 AL0026913 AL0027642 AL0057827

Existing Discharge Design Flow: 0.9 MGD

Proposed Discharge Design Flow: 0.9 MGD

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

Comments included: ☑ ☐

Information Verified By: JBS | Year File Was Created: 1998

Response ID Number: 1673

Lat/Long Method: GPS

12 Digit HUC Code: 031601110407

Use Classification: F&W

Site Visit Completed? ☑ Yes ☐ No | Date of Site Visit: 1/17/2019

Waterbody Impaired? ☑ ☐ | Date of WLA Response: 2/22/2019

Antidegradation ☐ Yes ☑ No | Approved TMDL? ☑ ☐

Waterbody Tier Level: Tier I

Use Support Category: 4B | Approval Date of TMDL: 1/22/2018

Waste Load Allocation Information

Modeled Reach: 35.48 Miles | Date of Allocation: 2/15/2019

Name of Model: SWQM | Allocation Type: 2 Seasons

Model Completed: JBS | Type of Model Used: Calibrated

Allocation Developed: Water Quality Branch

Waste Load Allocation Summary

Annual Effluent Limits	Conventional Parameters		Other Parameters	
	Qw 0.9 MGD	Qw 0.9 MGD	Qw 0.9 MGD	Qw MGD
	Season Summer	Season Winter	Season Growing	Season
Qw MGD	From May	From Dec	From Mar	From
	Through Nov	Through Apr	Through Oct	Through
CBOD5	CBOD5 8	CBOD5 25 g/L	TP 2 mg/L	TP
NH3-N	NH3-N 2.5 mg/L	NH3-N 10 mg/L	TN	TN
TKN	TKN 5 mg/L	TKN 20	TSS	TSS
D.O.	D.O. 5.5	D.O. 5 mg/L		

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

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	10.32	mg/l	16.99	mg/l
NH3-N	0.6732	mg/l	1.4865	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	92.2	sq mi	
	Stream	12.2	cfs	ADEM Estimate w/USGS Gage Data
	Stream 1Q10	9.15	cfs	ADEM Estimate w/USGS Gage Data
	Str	20.09	cfs	ADEM Estimate w/USGS Gage Data
	Annual Average	150.18	cfs	ADEM Estimate w/USGS Gage Data

Comments and/or Notations: Inputs from a calibrated spreadsheet water quality model previously developed by the Department were used for this model. The Locust Fork/Village Creek Nutrients TMDL establishes a total phosphorus (TP) limit of 2 mg/L during March-October for this facility.

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.)

RECEIVED
NOV 30 2018
IND. MUN BRANCH

I. EPA I.D. NUMBER

S		TVA	C
F	AL0056120		D

1 2 13 14 15

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
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	X		
	15	17	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)		X	
	19	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)	X		
	22	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)		X	
	25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X	
	28	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)		X	
	31	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)		X	
	34	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)		X	
	37	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)		X	
	40	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)		X	
	43	44	45

III. NAME OF FACILITY

C 1 SKIP: PRUDES CREEK WATER RECLAMATION FACILITY

15 16 – 29 30 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2 LYNN JONES, PLANT MANAGER	(205) 791-3062
15 16 45	46 48 49 51 52 55

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 Richard Arrington Jr. Blvd. N.

15 16 45

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 Birmingham	AL	35023
15 16 40	41 42	47 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 500 Water Trail

15 16 45

B. COUNTY NAME

JEFFERSON

46 70

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
C 6 Graysville	AL	35703	073
15 16 40	41 42	47 51	52 54

CONTINUED FROM THE FRONT

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

A. FIRST	B. SECOND
4952 (specify) Municipal Wastewater Treatment	(specify)

C. THIRD	D. FOURTH
(specify)	(specify)

VIII OPERATOR INFORMATION

A. NAME: Jefferson County Commission

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) COUNTY

D. PHONE *(area code & no.)*: (205) 325-5122

E. STREET OR P.O. BOX: 716 RICHARD ARRINGTON JR BVLD N

F. CITY OR TOWN: BIRMINGHAM

G. STATE: AL

H. ZIP CODE: 35023

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 AL0056120	9 P

B. UIC *(Underground Injection of Fluids)*	E. OTHER *(specify)*
9 U	9 (specify)

C. RCRA *(Hazardous Wastes)*	E. OTHER *(specify)*
9 R	9 (specify)

XI. MAP

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

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

MUNCIPAL WASTEWATER TREATMENT

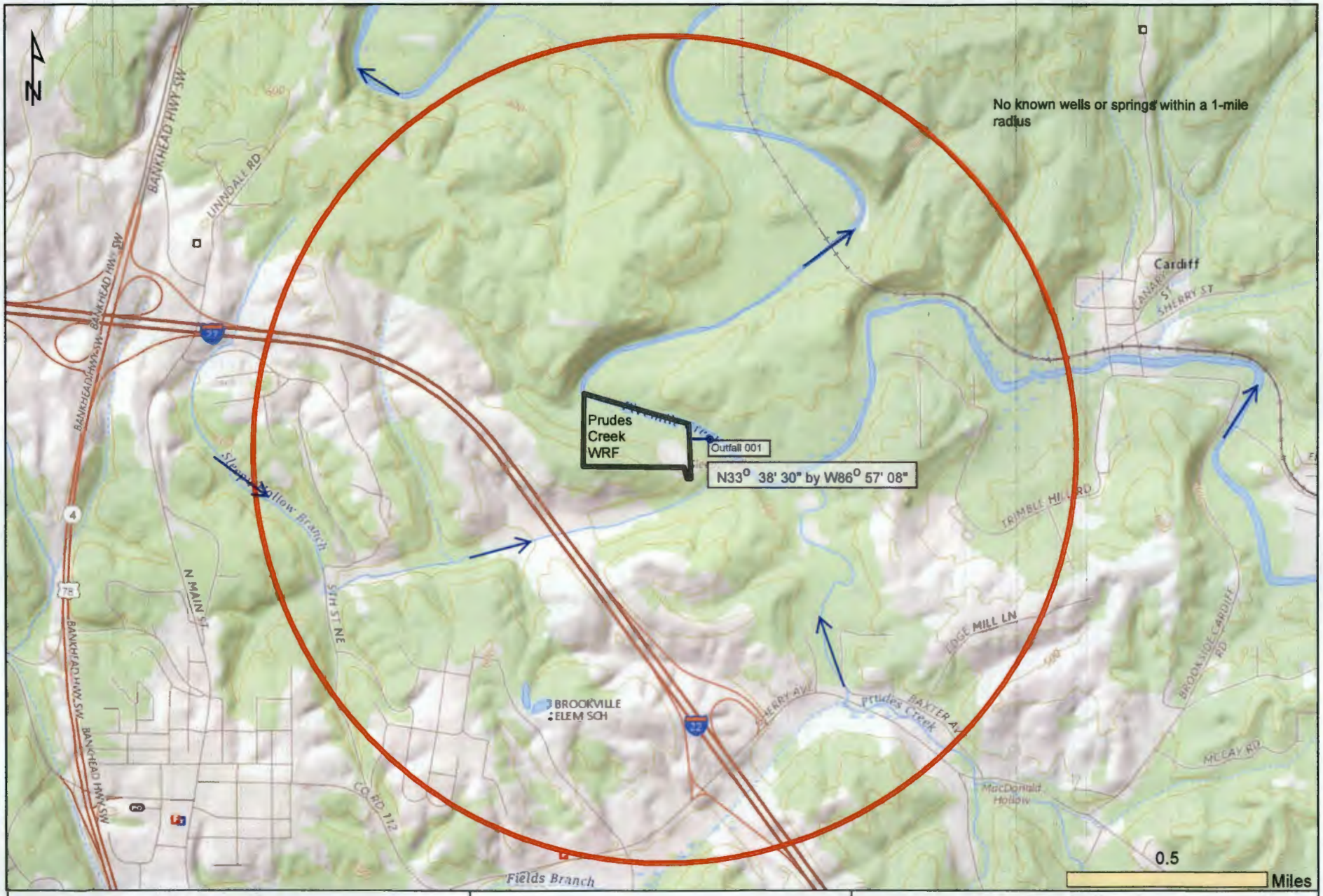
XIII. CERTIFICATION *(see instructions)*

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	Denard	4/11/19

COMMENTS FOR OFFICIAL USE ONLY

C



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

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

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

FACILITY NAME AND PERMIT NUMBER:

Prudes Creek Water Reclamation Facility (WRF) (AL0056120)

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

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	Prudes Creek Water Reclamation Facility
Mailing Address	716 Richard Arrington Jr. Blvd. N. Suite A-300 Birmingham, AL 35203
Contact Person	David Denard, P.E.
Title	Director, Environmental Services Department
Telephone Number	(205) 325-5979
Facility Address (not P.O. Box)	500 Water Trail Graysville, AL 35073

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 Birmingham, AL 35203
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	AL0056120	PSD	N/A
UIC	N/A	Other	N/A
RCRA	N/A	Other	N/A

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
Graysville		Separate	Jefferson County
Adamsville		Separate	Jefferson County
Unincorporated		Separate	Jefferson County
Total population served	3,700 estimated population equivalent		

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

☐ Yes ☒ No

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

☐ Yes ☒ No

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

a. Design flow rate 0.90 mgd

	Two Years Ago	Last Year	This Year
b. Annual average daily flow rate	0.45 MGD (9/1/15-8/31/16)	0.46 MGD (9/1/16-8/31/17)	0.43 MGD (9/1/17-8/31/18)
Maximum daily flow rate	4.07 MG (3/4/16)	3.95 MG (4/6/17)	2.62 MG (12/21/17)

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 %

☐ Combined storm and sanitary sewer N/A %

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 _____ 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: N/A

Annual average daily volume discharge to surface impoundment(s) N/A 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: N/A

Number of acres: N/A

Annual average daily volume applied to site: N/A 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).

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

Transporter Name _____

Mailing Address _____

_____

Contact Person _____

Title _____

Telephone Number _____

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

Name _____

Mailing Address _____

_____

Contact Person _____

Title _____

Telephone Number _____

If known, provide the NPDES permit number of the treatment works that receives this discharge _____

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

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8. 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):

N/A

Annual daily volume disposed 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: Graysville (City or town, if applicable) 35073 (Zip Code)
Jefferson (County) Alabama (State)
N33° 38' 29.8" (Latitude) W 86° 57' 08.1" (Longitude)

c. Distance from shore (if applicable): N/A ft.

d. Depth below surface (if applicable): N/A ft.

e. Average daily flow rate: 0.43 MGD (9/1/17-8/31/18)

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: N/A

Average duration of each discharge: N/A

Average flow per discharge: N/A mgd

Months in which discharge occurs: N/A

g. Is outfall equipped with a diffuser? ☐ Yes ☒ No

A.10. Description of Receiving Waters.

a. Name of receiving water: Five Mile 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 N/A cfs chronic N/A cfs

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

A.11. Description of Treatment

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

☐ Primary ☒ Secondary

☒ Advanced ☐ Other. Describe: _____

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

Design BOD5 removal or Design CBOD5 removal	95 CBOD5	%
Design SS removal	92	%
Design P removal	0	%
Design N removal	97 NH_3-N	%
Other _____	N/A	%

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, 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. 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 2017

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.2	s.u.			
pH (Maximum)	8.5	s.u.			
Flow Rate	3.9	MGD	0.47	MGD	Continuous
Temperature (Winter)	N/A	N/A	Not required by permit		
Temperature (Summer)	N/A	N/A	Not required by permit		

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

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	PQL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS								
BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD5	N/A	CBOD5 required by permit					
	CBOD5	5.0	ppm	0.69	ppm	156	5210-B	1.0
FECAL COLIFORM (E. coli by permit)		391	mpn/100mL	5.4	mpn/100mL	156	9223-B	1
TOTAL SUSPENDED SOLIDS (TSS)		8.0	ppm	0.55	ppm	156	2540-D	1.0

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

FACILITY NAME AND PERMIT NUMBER:

Prudes Creek WRF (AL0056120)

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

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.

Based on a 36 month analysis of the median daily flows from October of 2015 through 2018, the median flow rate to the Prudes Creek WRF was 0.44 MGD. The dry weather base flow was estimated by averaging the flow rates from the days with less than 0.02 inches of rain. Wet days (days with greater than 0.02 inches of rain and the following two days (to allow for system drainage) were excluded. Base flow was estimated to be 0.35 MGD. Days with flows exceeding the dry weather base flow were used to calculate the average estimated infiltration and inflow (I/I). The average I/I for wet days was estimated to be 0.25 MGD (144.8 MGD for 566 wet days), which is approximately 59% of the average daily flow. Averaged over the three year period, the estimated daily I/I was calculated at 0.13 MGD (144.8 MGD [total wet weather I/I]/1096 total days).

Briefly explain any steps underway or planned to minimize inflow and infiltration: *In 2013, ESD had developed a capital improvement program to adequately fund collection system renewal. There has been vast improvement in removing blockages, and collection system monitoring. Currently, ESD is implementing construction throughout the county to address I/I. Flow sensors have recently been deployed in the Prudes Creek collection system to identify inflow sources.*

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.) *See Attachment 1 – Prudes Creek WRF, 1-Mile Radius Prudes Creek WRF*

a. The area surrounding the treatment plant, including all unit processes. *See Attachment 2 – Prudes Creek WRF Facilities*

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. *See Attachment 3 – Prudes Creek WRF Conveyance Structures*

c. Each well where wastewater from the treatment plant is injected underground. *N/A*

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant. *See Attachment 4 – Prudes Creek WRF Vicinity Water Resources (1/4 Mile Radius)*

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed. *See Attachment 2 – Prudes Creek Facilities (see area labeled Drying Beds); Attachment 5 – Prudes Creek WRF Biosolids Disposal Sites*

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 the hazardous waste enters the treatment works and where it is treated, stored, and/or disposed. *N/A*

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. *See Attachment 6 – Prudes Creek WRF Process Flow Schematic and Attachment 7 – Prudes Creek WRF Water Balance.*

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: N/A

Mailing Address: _____

_____

Telephone Number: _____

Responsibilities of Contractor: _____

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

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

Addition of chemical feed system for phosphorus removal; scheduled capital maintenance projects

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).

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	Proposed Schedule MM/DD/YYYY	Actual Completion MM/DD/YYYY
- Begin Construction		/ /
- End Construction		/ /
- Begin Discharge	/ /	/ /
- Attain Operational Level	/ /	/ /

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

Describe briefly:

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

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide effluent testing for the following listed parameters and those 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, 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. At a minimum effluent testing data must be based on at least three pollutant scans, preferably represent several seasons, and must be no more than four and on-half years old.

Outfall Number: 0011, Calendar Year 2017

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	PQL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS							
AMMONIA (as N)	1.3	ppm	0.05	ppm	156	4500-NH3 G	0.05
CHLORINE (TOTAL RESIDUAL, TRC)	N/A	ppm	N/A	ppm	N/A	4500-Cl-G	N/A
DISSOLVED OXYGEN	7.0 (Min)	ppm	8.3	ppm	156	4500-O G	0.05
TOTAL KJELDAHL NITROGEN (TKN)	3.0	ppm	0.40	ppm	156	4500-Norg B	0.05
NITRATE PLUS NITRITE NITROGEN	12	ppm	9.2	ppm	7	4500-NO3-F	0.07
OIL and GREASE	N/A		N/A		Not required by permit		
PHOSPHORUS (Total)	1.1	ppm	0.79	ppm	7	365.3	0.03
TOTAL DISSOLVED SOLIDS (TDS)	N/A		N/A		Not required by permit		
OTHER							

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

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide effluent testing for the following listed parameters and those 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, preferably represent several seasons, and must be no more than four and on-half years old.

Outfall Number: N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	PQL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
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:

Prudes Creek WRF (AL0056120)

Form Approved 1/14/99
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ASIC 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) N/A

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, P.E., Director Jefferson County Environmental Services

Signature:

Telephone number: 205-325-5979

Date signed: 11/29/18

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

SEND COMPLETED FORMS TO:

FACILITY NAME AND PERMIT NUMBER:

Prudes Creek WRF (AL0056120)

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SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA N/A

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 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: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	PQL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS CaCO3)											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											

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Outfall number: _____ (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											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CHLOROBENZENE											
CHLOROBIDBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLOROPROPANE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											

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Outfall number: _____ (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											
1,1,2-TRICHLOROETHANE											
TRICHLOROETHYLENE											
VINYL CHLORIDE											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTA CHLOROPHENOL											
PHENOL											
2,4,6-TRICHLORO PHENOL											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											
BASE-NEUTRAL COMPOUNDS											
ACENAPHTHENE											
ACENAPHTYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A) ANTHRACENE											
BENZO(A)PYRENE											

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Outfall number: _____ (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											
BENZO(GHI)PERYLENE											
BENZO(K)FLUORANTHENE											
BIS (2-CHLORO ETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORO NAPHTHALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE											
1,2-DICHLORO BENZENE											
1,3-DICHLORO BENZENE											
1,4-DICHLORO BENZENE											
3,3-DICHLORO BENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYLHYDRAZINE											

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Outfall number: (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											
FLUORENE											
HEXACHLORO BENZENE											
HEXACHLOROBUT ADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXA CHLOROETHANE											
INDENO(1,2,3-CD) PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI-METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer											

FACILITY NAME AND PERMIT NUMBER:

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SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA N/A

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 * (See E.4 for summary of submitted toxicity reports)

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			

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	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. If 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)?			

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) Reports submitted in accordance with permit requirements for the

Summary of results: (see instructions

_____

_____

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

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SUPPLEMENTAL APPLICATION INFORMATION N/A

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 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. _____

b. Number of CIUs. _____

SIGNIFICANT INDUSTRIAL USER INFORMATION::

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

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

Name: _____

Mailing Address: _____

_____

F.4. Industrial Processes. Describe all 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 discharge into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (_____ continuous or _____ intermittent) During production shifts

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 Discharge 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

F.13 **Waste Origin.** Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is excepted 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 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.

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: _____

Mailing Address: _____

_____

F.4. Industrial Processes. Describe all 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.

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

_____ gpd (_____ continuous or _____ intermittent) During production hours

f. 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 Discharge 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.

_____

_____

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: _____

Mailing Address: _____

_____

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

Production/Bottling of soft drinks and water

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.

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

_____ gpd (_____ continuous or _____ intermittent)

h. 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 Discharge 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.

_____

_____

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SUPPLEMENTAL APPLICATION INFORMATION

PART G. COMBINED SEWER SYSTEMS N/A

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. Location 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 _____

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 State 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.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT APPLICATION

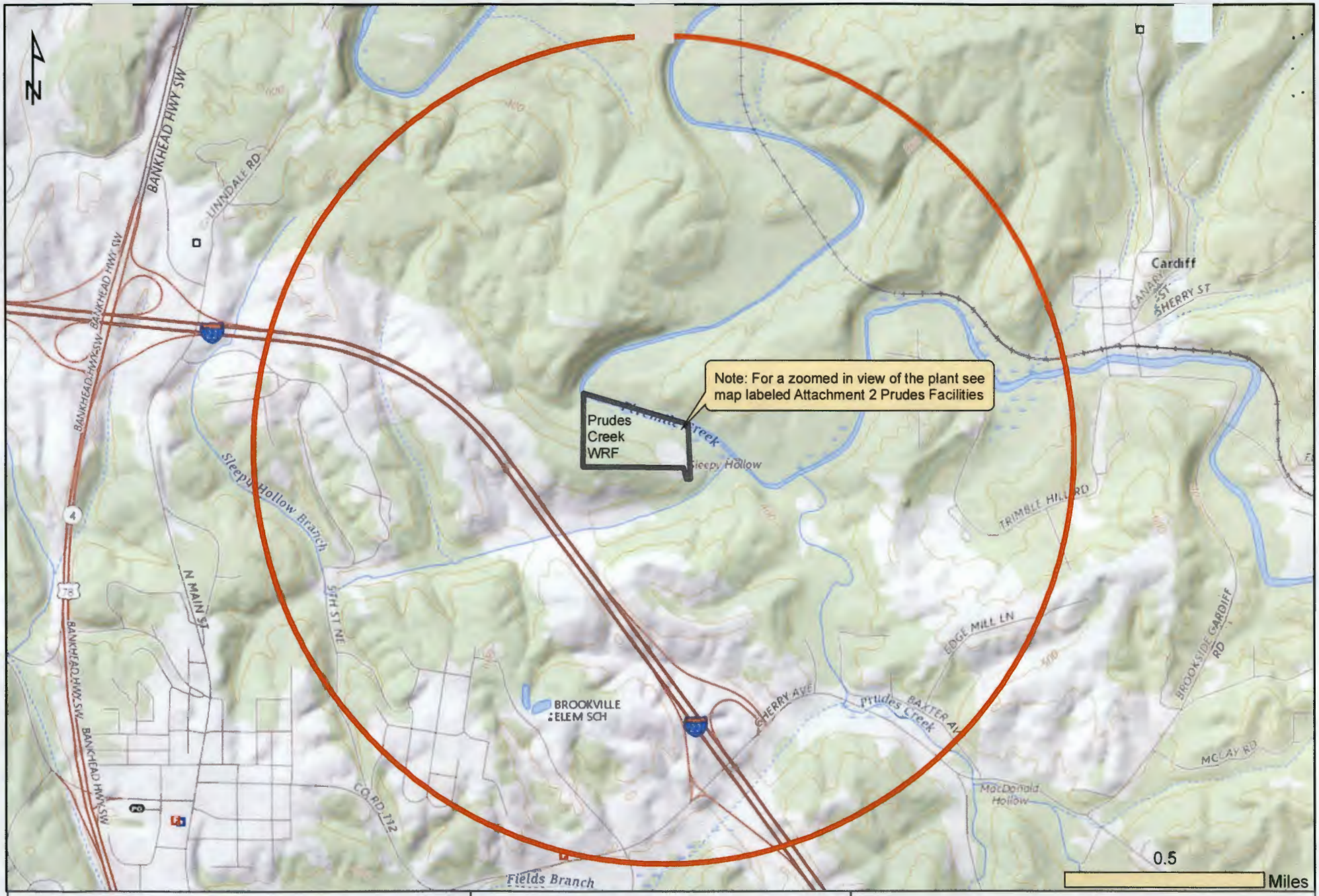
FORM 2A

PRUDES CREEK WATER RECLAMATION FACILITY
AL0056120

JEFFERSON COUNTY, ALABAMA

ATTACHMENTS

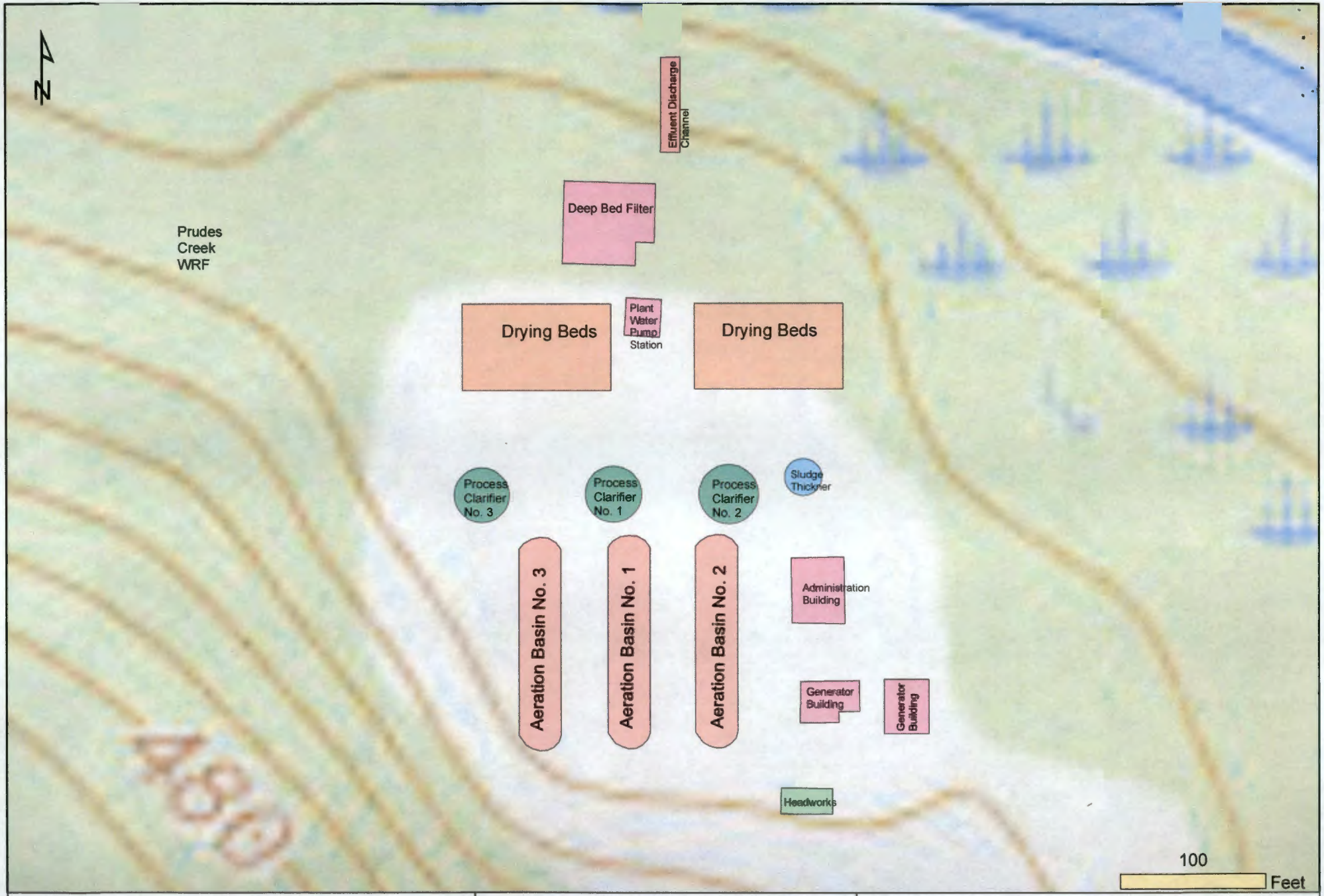
1. 1-MILE RADIUS PRUDES CREEK WRF
2. PRUDES CREEK WRF FACILITIES
3. PRUDES CREEK WRF CONVEYANCE STRUCTURES
4. PRUDES CREEK WRF VICINITY WATER RESOURCES (1/4 MILE RADIUS)
5. PRUDES CREEK WRF BIOSOLIDS DISPOSAL SITES
6. PRUDES CREEK WRF PROCESS FLOW SCHEMATIC
7. PRUDES CREEK WRF WATER BALANCE



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

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

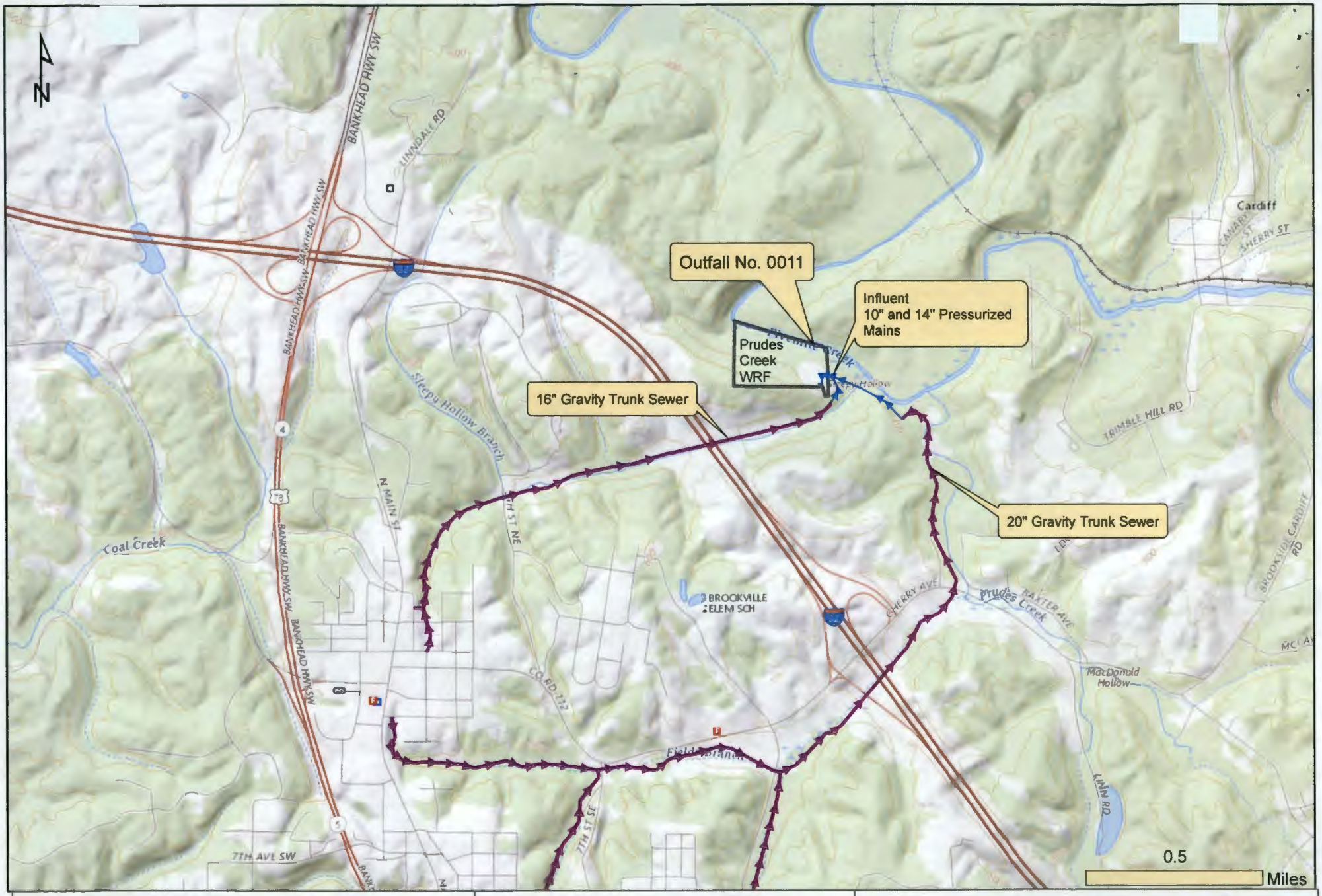
Form 2A, B.2
ATTACHMENT 1
1-MILE RADIUS PRUDES CREEK WRF



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

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

Form 2A, B.2.a
ATTACHMENT 2
PRUDES CREEK WRF FACILITIES



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

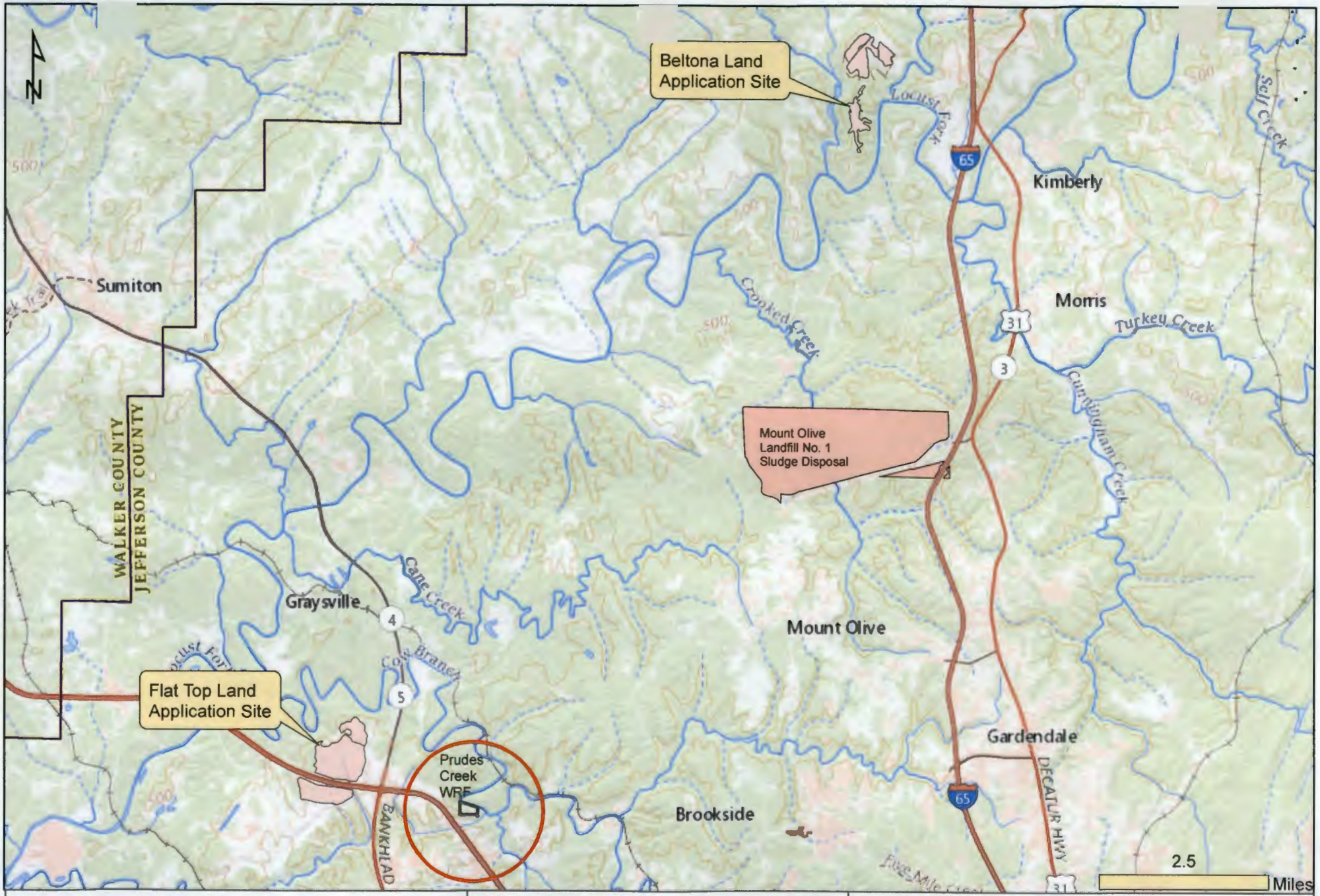
Prudes Creek
Water Reclamation Facility
NPDES Permit Application

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

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

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

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

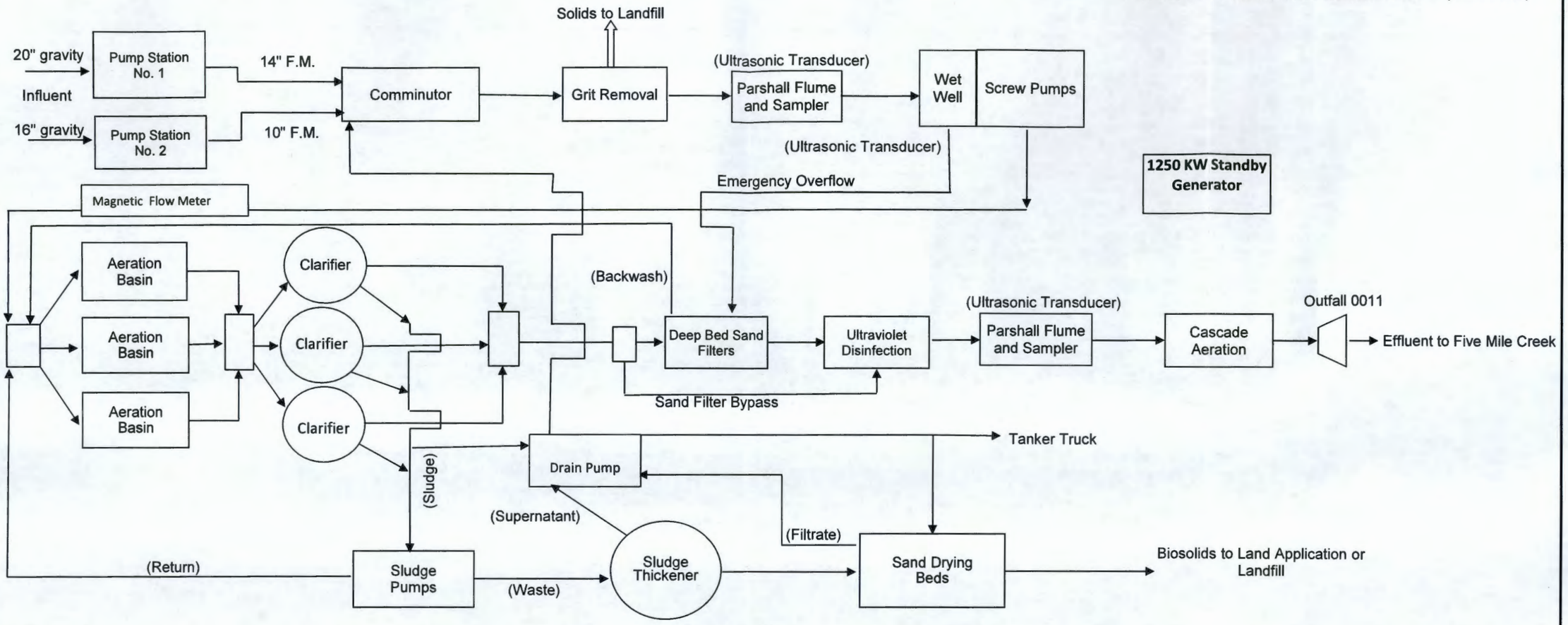


JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

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

PRUDES CREEK WATER RECLAMATION FACILITY (AL0056120)

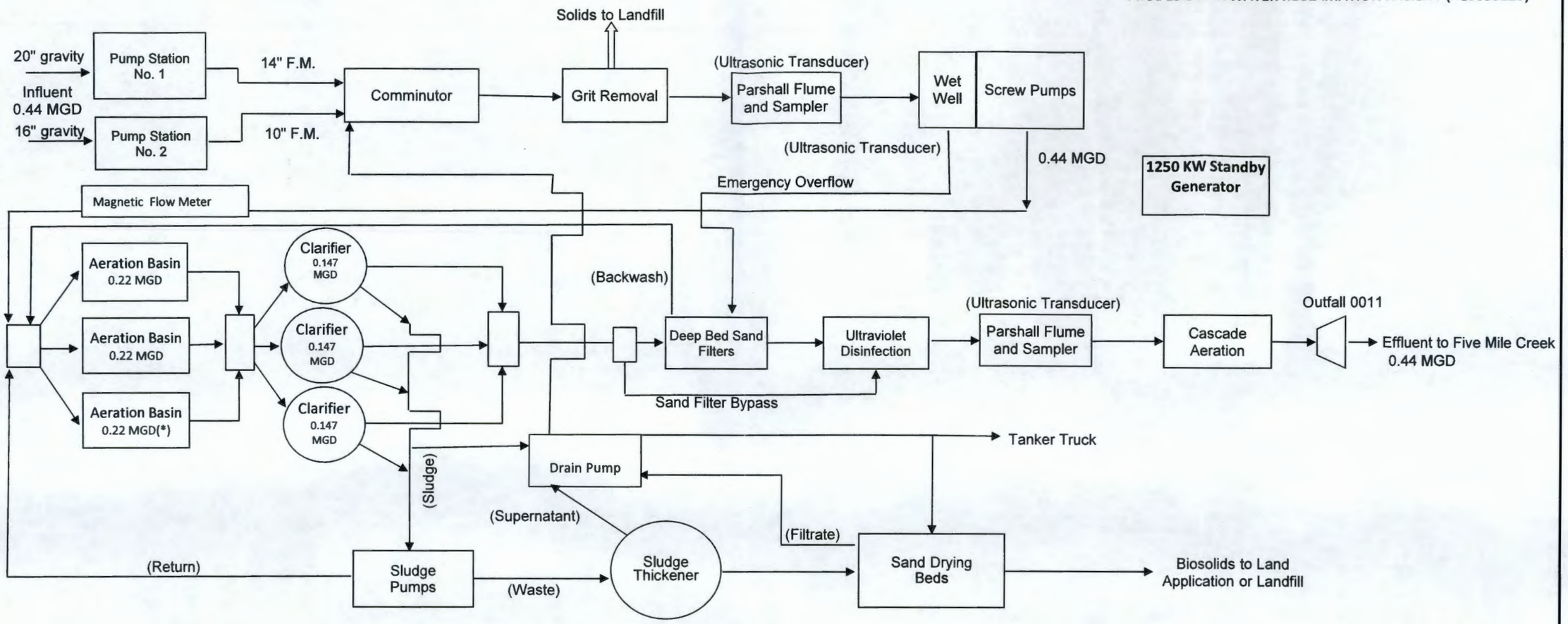


Process Flow Narrative:

Wastewater flow enters the Prudes Creek WRF from two pump stations within the facility. Pump Station No. 1 receives flow via a 20" gravity sewer and Pump Station No. 2 receives flow from a 16" gravity sewer. The influent flow is pumped to the headworks where it receives preliminary treatment through an in-channel grinder. The flow travels through the grit tank and large solids are removed by the grit classifier. The flow is then lifted by the influent screw pumps and split between three aeration basins, two of which are normally in service, for biological treatment. The flow then receives final clarification through three final clarifiers. Advanced treatment is achieved through deep bed sand filters and disinfection from ultraviolet irradiation. Post treatment aeration is applied through a cascade aerator prior to discharge to Five Mile Creek.

The Emergency Overflow line shown above can allow routing of flow around biological treatment systems. Use of this piping is not a part of the operational plan for the plant.

PRUDES CREEK WATER RECLAMATION FACILITY (AL0056120)



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(*) Generally, one basin remains out of service. The out of service basin is rotated to facilitate maintenance.

The Emergency Overflow line shown above can allow routing of flow around biological treatment systems. Use of this piping is not a part of the operational plan for the plant.

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

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

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

PURPOSE OF THIS APPLICATION

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

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

SECTION A – GENERAL INFORMATION

1 Facility Name: Prudes 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 0056120 (Not applicable if initial permit application)

3. Facility Physical Location (**Attach a map with location marked; street, route no. or other specific identifier**)
Street: 500 Water Trail
City: Graysville County: Jefferson State: AL Zip: 35073
Facility Location (Front Gate): Latitude: N 33d 38' 27.9" Longitude: W 86d 87' 04.2"

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

5. Responsible Official (as described on last page of this application)
Name and Title: David Denard
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

6. Designated Facility/DMR Contact:

Name and Title: David Denard

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

7. Designated Emergency Contact:

Name and Title: Lynn Jones

Phone Number: 205-965-4575 Email Address: jonesly@jcal.org

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
Cahaba River WWTP	AL 0023027	Jefferson County Commission
Five Mile Creek WWTP	AL0026913	Jefferson County Commission
Leeds WWTP	AL0067067	Jefferson County Commission
Trussville WWTP	AL0022934	Jefferson County Commission
Village Creek WWTP	AL0023647	Jefferson County 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
N/A			

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	2.62	5.04	0.44

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

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

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

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

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

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

See Attachment 2 - Prudes Creek Process Flow Schematic. Samples are 24-hr composite samples using Hack Model Sigma SD900.

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.)

Pilot Study for chemical addition for total phosphorus (TP) reductions to meet the Locust Fork Nutrient TMDL requirements. Will reduce TP to less than 2.0 mg/L. Collection system rehabilitation to reduce I/I during wet weather.

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	Drying beds
Diesel Fuel	Double wall steel storage tank

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	576.5 (dry solids)	Land application (LA) - No LA in last 12 months
Municipal Wastewater Biosolids	576.5 (dry solids)	Landfill

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

SECTION D – INDUSTRIAL INDIRECT DISCHARGE CONTRIBUTORS

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

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit?
N/A				☐ Yes ☐ No
				☐ Yes ☐ No
				☐ Yes ☐ No
				☐ Yes ☐ No

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

SECTION E – COASTAL ZONE INFORMATION

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

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

SECTION F – ANTI-DEGRADATION EVALUATION

It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity, if subject to antidegradation requirements. In accordance with 40 CFR 131.12 and Section 335-6-10-.04 of the Alabama Department of Environmental Management Administrative Code, the following information must be provided, if applicable. If further information is required to make this demonstration, attach additional sheets to the application.

1. Is this a new or increased discharge that began after April 3, 1991? Yes [☐] No [☑].
   If "yes", complete question 2 below. If "no", do not complete this section.

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

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

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

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

   B. Explain if and to what degree the discharger will be increasing employment as a result of the proposed discharge, either at its existing facility or as the result of the start-up of a related new facility or industry.

   C. Explain if and to what degree the discharge will prevent employment reductions?

   D. Describe any additional state or local taxes that the prospective discharger will be paying.

   E. Describe any public service the discharger will be providing to the community.

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

SECTION G – EPA Application Forms

All Applicants must submit certain EPA permit application forms. More than one application form may be required from a municipal facility depending on the number and types of discharges or outfalls. The EPA application forms are found on the Department's website at http://www.adem.state.al.us/ and are also listed in Attachment 4.

SECTION H– ENGINEERING REPORT/BMP PLAN REQUIREMENTS

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

SECTION I– RECEIVING WATERS

Receiving Water(s)	303(d) Segment? (Y / N)	Included in TMDL?* (Y / N)
Five Mile Creek	N	N
Locust Fork (See Attachment 3)	Y	Y

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

SECTION J – APPLICATION CERTIFICATION

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

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE.I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

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

SIGNATURE OF RESPONSIBLE OFFICIAL: _____ DATE SIGNED: 11/29/18

(TYPE OR PRINT)

NAME OF RESPONSIBLE OFFICIAL: David Denard, P.E.

OFFICIAL TITLE OF RESPONSIBLE OFFICIAL: Director, Jefferson County Environmental Services Department

MAILING ADDRESS: 716 Richard Arrington Jr Blvd N , Suite A300, Birmingham, AL 35203

AREA CODE & PHONE NUMBER: 205 325 5979

SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS

Responsible official is defined as follows:

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

Attachment 1 to Supplementary Form
ADEM Form 311

Alternatives Analysis

Applicant/Project: N/A _____

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

Alternative	Viable	Non-Viable	Comment
1 Land Application			
2 Pretreatment/Discharge to POTW			
3 Relocation of Discharge			
4 Reuse/Recycle			
5 Process/Treatment Alternatives			
6 On-site/Sub-surface Disposal			
(other project-specific alternatives considered by the applicant; attach additional sheets if necessary)			
7			
8			
9			

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

Signature: _____
(Professional Engineer)

Date: _____

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

ADEM Form 311 3/02

Attachment 2 to Supplementary Form

Calculation of Total Annualized Project Costs for Public-Sector Projects

A. Capital Costs

Capital Cost of Project $_____

Other One-Time Costs of Project (Please List, if any):

_____ $_____

_____ $_____

_____ $_____

Total Capital Costs (Sum column) $_____ (1)

Portion of Capital Costs to be Paid for with Grant Monies $_____ (2)

Capital Costs to be Financed [Calculate: (1) – (2)] $_____ (3)

Type of Financing (e.g., G.O. bond, revenue bond, bank loan) _____

Interest Rate for Financing (expressed as decimal) _____ (i)

Time Period of Financing (in years) _____ (n)

Annualization Factor = $\frac{i}{(1+i)^n - 1} + i$ _____ (4)

Annualized Capital Cost [Calculate: (3) x (4)] _____ (5)

B. Operating and Maintenance Costs

Annual Costs of Operation and Maintenance (including but not limited to: monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement.) (Please list below.)

_____ $_____

_____ $_____

_____ $_____

_____ $_____

Total Annual O & M Costs (Sum column) $_____ (6)

C. Total Annual Cost of Pollution Control Project

Total Annual Cost of Pollution Control Project [(5) + (6)] $ (7)

ADEM Form 312 3/02

Attachment 3 to Supplementary Form
ADEM Form 313

Calculation of Total Annualized Project Costs
for Private-Sector Projects

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

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

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

ADEM Form 313 3/02

Attachment 4 to Supplementary Form

NPDES PROGRAM
PERMIT APPLICATION FORMS
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

TYPE DISCHARGE	ADEM FORMS	EPA FORMS
New or existing once through non-contact cooling water and/or cooling tower blowdown, and/or sanitary wastewater (non-process wastewater only). Note: POTWs and privately owned domestic treatment works should use Form 2A.	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2E
Existing discharges of process wastewater	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2C
New discharges of process wastewater	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2D
New or existing discharges composed entirely of stormwater meeting the EPA definition of stormwater associated with industrial activity	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2F
New or existing discharges composed of stormwater meeting the EPA definition of stormwater associated with industrial activity, and any other non-stormwater discharges.	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2F and, as appropriate, Forms 2E, 2E, 2C, and/or 2D
New or existing Publicly-Owned Treatment Works (POTWs) and Privately-Owned Treatment Works composed of sanitary wastewater	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2A
New or existing land application of process wastewater. Form 2F is required for stormwater runoff from the land application site, if the site is not completely bermed to prevent runoff.	Supplemental Information Form 187 – (Industrial)	Forms 1, 2F, and 2C or 2D, as appropriate
New or existing land application of sanitary wastewater. Form 2F is required for stormwater runoff from the land application site, if the site is not completely bermed to prevent runoff.	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1, 2A, and 2F

Testing requirements: Test procedures for all analyses shall conform to 40 CFR Part 136 or an alternate method specifically approved by the Department. If more than one method of analysis is approved, then the method having the lowest detection level *shall be used.*

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT APPLICATION

FORM 188

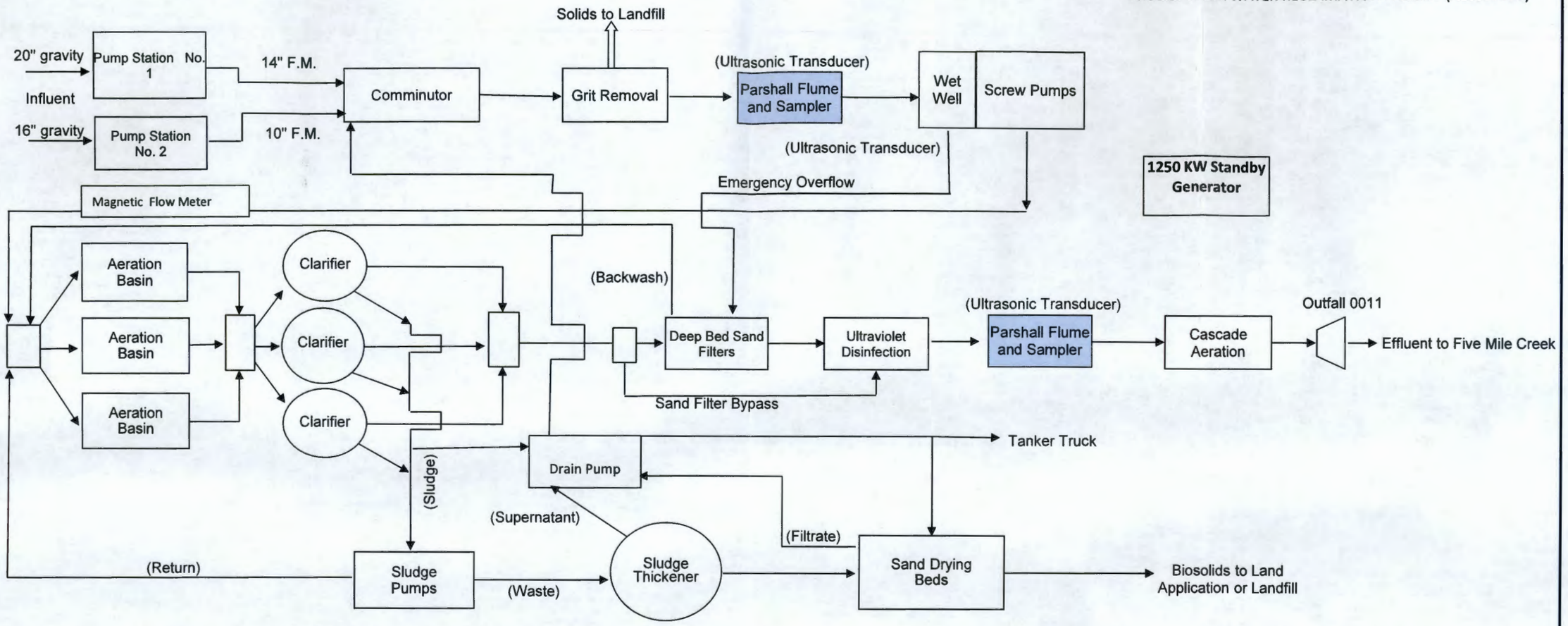
PRUDES CREEK WATER RECLAMATION FACILITY
AL0056120

JEFFERSON COUNTY, ALABAMA

ATTACHMENTS

1. TREATMENT UNITS WITH SIZES
2. PROCESS FLOW SCHEMATIC METERING AND SAMPLING EQUIPMENT LOCATION
3. ADEM LOCUST FORK TMDL SCHEDULE RESPONSE FINAL 10-26-18

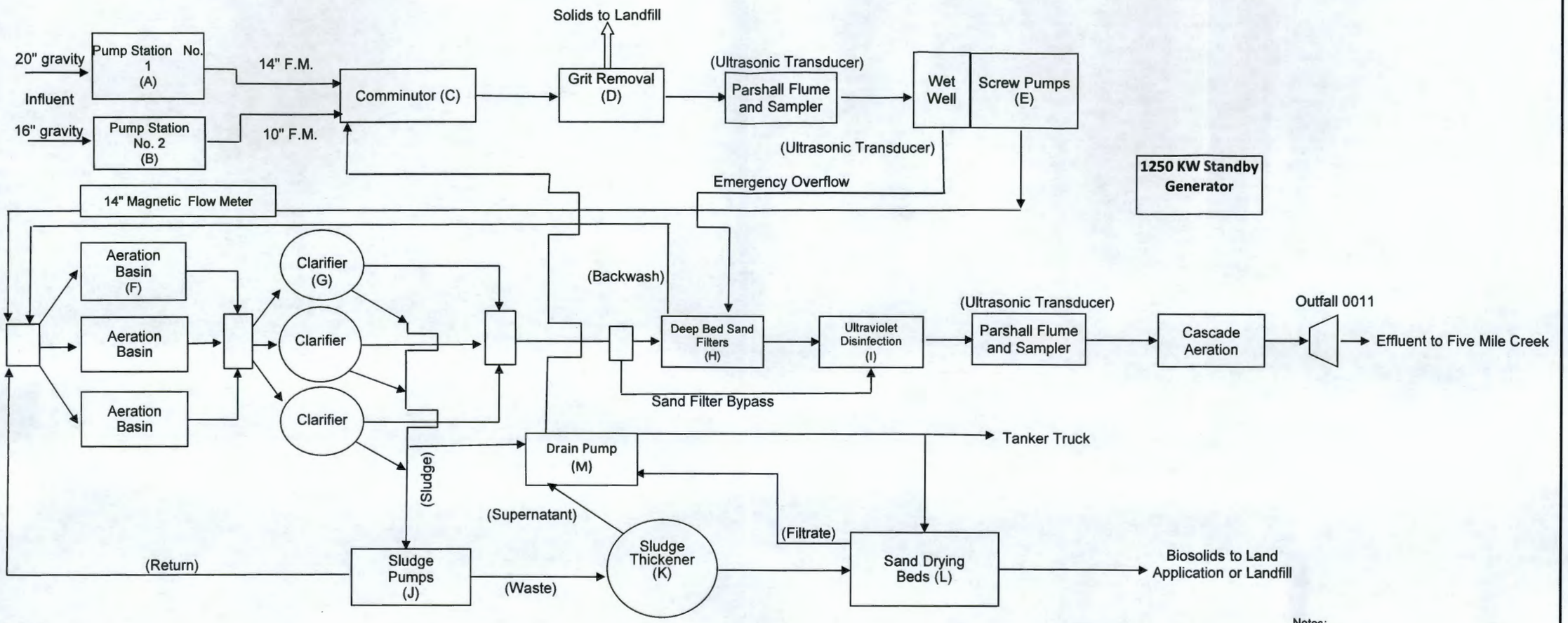
PRUDES CREEK WATER RECLAMATION FACILITY (AL0056120)



Process Flow Narrative:
Wastewater flow enters the Prudes Creek WRF from two pump stations within the facility. Pump Station No. 1 receives flow via a 20" gravity sewer and Pump Station No. 2 receives flow from a 16" gravity sewer. The influent flow is pumped to the headworks where it receives preliminary treatment through an in-channel grinder. The flow travels through the grit tank and large solids are removed by the grit classifier. The flow is then lifted by the influent screw pumps and split between three aeration basins for biological treatment. The flow then receives final clarification through three final clarifiers. Advanced treatment is achieved through deep bed sand filters and disinfection from ultraviolet irradiation. Post treatment aeration is applied through a cascade aerator prior to discharge to Five Mile Creek.

The Emergency Overflow line shown above can allow routing of flow around biological treatment systems. Use of this piping is not a part of the operational plan for the plant.

PRUDES CREEK WATER RECLAMATION FACILITY (AL0056120)



Legend Key

(A)	Two 1,000 GPM (each) influent pumps	(H)	Three 0.5 MGD (each) deep bed filters
(B)	Two 800 GPM (each) influent pumps	(I)	Three 1.0 MGD (each) UV modules
(C)	One 5 HP in-channel single drum grinder	(J)	Three 590 GPM (each) RAS/WAS pumps
(D)	Grit removal - Grit Cyclone	(K)	One 20' diameter gravity thickener
(E)	Two 1,041 GPM (each) tube mounted screw pumps	(L)	Ten 16,700 gal (each) sludge drying beds
(F)	Three 0.31 MG (each) aeration basin	(M)	One 4 HP drain pump
(G)	Three 35' diameter 13'-11" SWD clarifiers	*	Ultrasonic transducers are Pulsar Ultra3 and automatic composite samplers are Hach Sigma SD900

Notes:
' / " : foot / inches
gal: gallon
GPM: gallon per minute
HP: Horsepower
KW: kilowatt
MG: million gallons
MGD: million gallons per day
RAS: return activated sludge
UV: ultraviolet
WAS: waste activated sludge

JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES DEPARTMENT
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL 35023

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

Form 188, B.3
ATTACHMENT 1
TREATMENT UNITS WITH SIZES

NPDES FORM 188 – ATTACHMENT 3

SUPLEMENTAL INFORMATION
SECTION 1 – RECEIVING WATERS

ADEM LOCUST FORK TMDL SCHEDULE RESPONSE FINAL 10-26-18

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

FACILITY NAME AND PERMIT NUMBER:
Prudes Creek WRF - AL0052610

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).

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

PART 2: PERMIT APPLICATION INFORMATION

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

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

APPLICATION OVERVIEW — SEWAGE SLUDGE USE OR DISPOSAL INFORMATION

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

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

   Section A must be completed by all applicants

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

   Section B must be completed by applicants who either:

   1) Generate sewage sludge, or

   2) Derive a material from sewage sludge.

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

   Section C must be completed by applicants who either:

   1) Apply sewage to the land, or

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

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

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

4. **SECTION D: SURFACE DISPOSAL**

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

5. **SECTION E: INCINERATION**

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

FACILITY NAME AND PERMIT NUMBER:
Prudes Creek WRF - AL0052610

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: Prudes Creek Water Reclamation Facility

b. Mailing Address: 716 Richard Arrington Jr. Blvd. N., Suite A-300
Birmingham, AL 35203

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): 500 Water Trail
Graysville, AL 35073

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

f. Facility design flow rate: 0.90 mgd

g. Total population served: 3,700.00

h. Indicate the type of facility:

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

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

a. Applicant name: Jefferson County Commission

b. Mailing Address: 716 Richard Arrington Jr. Blvd. N., Suite A-300
Birmingham, AL 35203

c. Contact person: David Denard, P.E.

Title: Director, Jefferson County Environmental Services Department

Telephone number: (205) 325-5979

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): AL0056210

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
Waste Profile # 161666	Waste Certification
Certification #:	Bio-Solids - Expiration Date
SW-073119-0082	of Certificate: 7/31/2019

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:
Prudes Creek WRF - AL0052610

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

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	0.09	TCLP 6010	0.025
CADMIUM	0.00	6010	4
CHROMIUM	42.00	6010	4
COPPER	183.00	6010	5
LEAD	22.00	6010	11
MERCURY	2.90	7471A	0.08
MOLYBDENUM	0.00	6010	5
NICKEL	24.00	6010	4
SELENIUM	0.00	6010	11
ZINC	1,133.00	6010	6

. **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: 11/29/18

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: 95.45 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 landfilling or land application. Dried sludge is tested for Escherichia coli to verify pathogen reduction and soil incorporated (if land applying) 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:
Prudes Creek WRF - AL0052610

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

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:
If land applied after drying, sludge from Prudes Creek WRF is comingled with other sludges produced by Jefferson County and soil incorporated within 6 hours of transport to one of two 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: _____ dry metric tons

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

_____Yes _____No

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

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

a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: 0.00 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: 95.45 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: Mount Olive Landfill: Jefferson County Landfill No.1

b. Contact person: Sam Dillender

Title: General Manager Santek Waste Services

Telephone number: (205) 631-1313

Contact is _____ Landfill owner ✓ Landfill operator

c. Mailing address: 101 Barber Blvd / P.O Box 538
Gardendale, AL 35071

d. Location of municipal solid waste landfill:

Street or Route #: 101 Barber Blvd

County: Jefferson

City or Town: Gardendale State: AL Zip: 35071

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

95.45 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
37-43	Subtitle D Lined Facility

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, Alabama 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. 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: 33.806013 Longitude: -86.848580

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, Alabama 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

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) 551-7810

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: _____

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.

_____

_____

_____

_____

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT APPLICATION

FORM 2S

PRUDES CREEK WATER RECLAMATION FACILITY
AL0056120

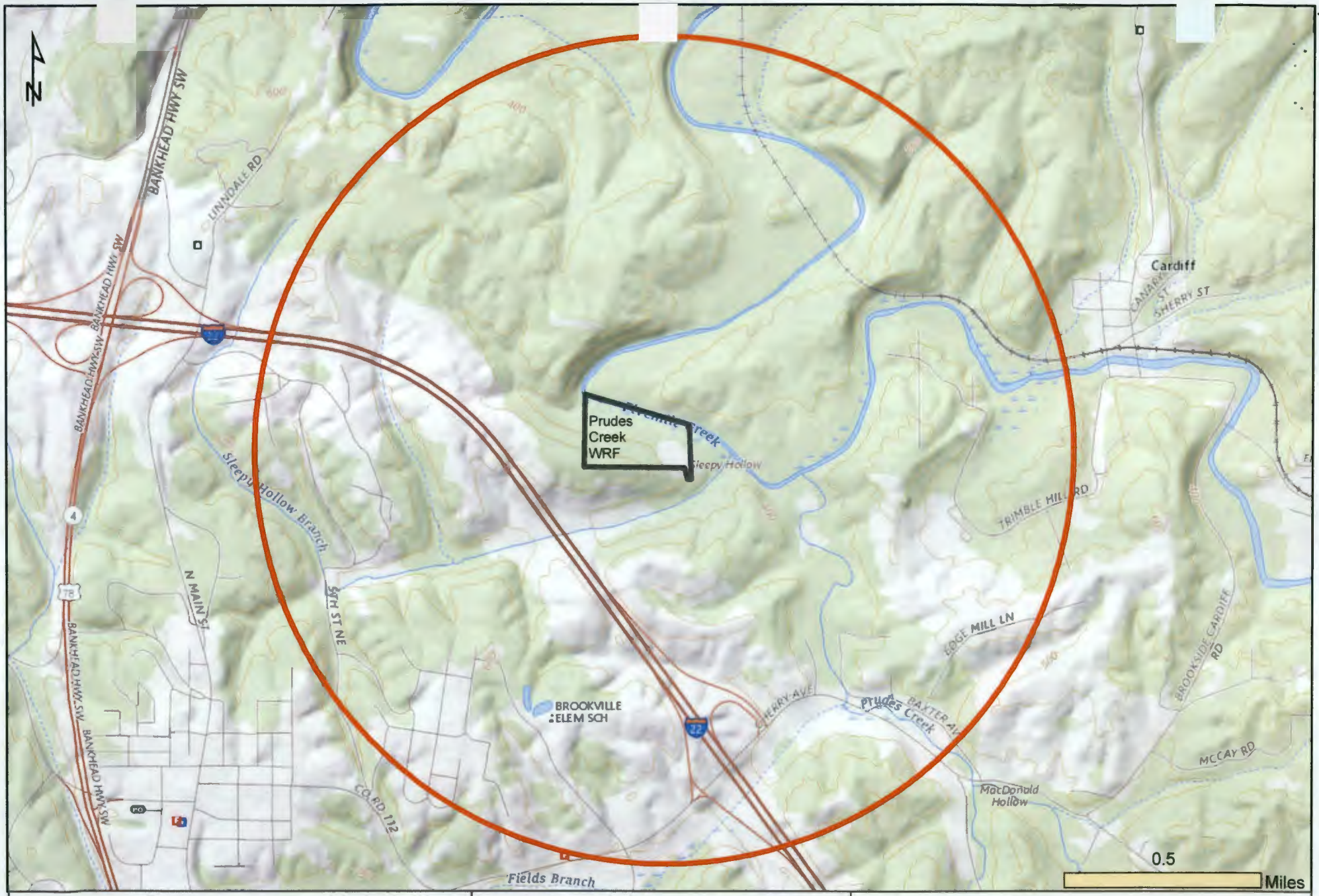
JEFFERSON COUNTY, ALABAMA

ATTACHMENTS

1. 1-MILE RADIUS PRUDES CREEK WRF
2. PRUDES CREEK WRF BIOSOLIDS DISPOSAL SITES

2A. PRUDES CREEK WRF FACILITIES

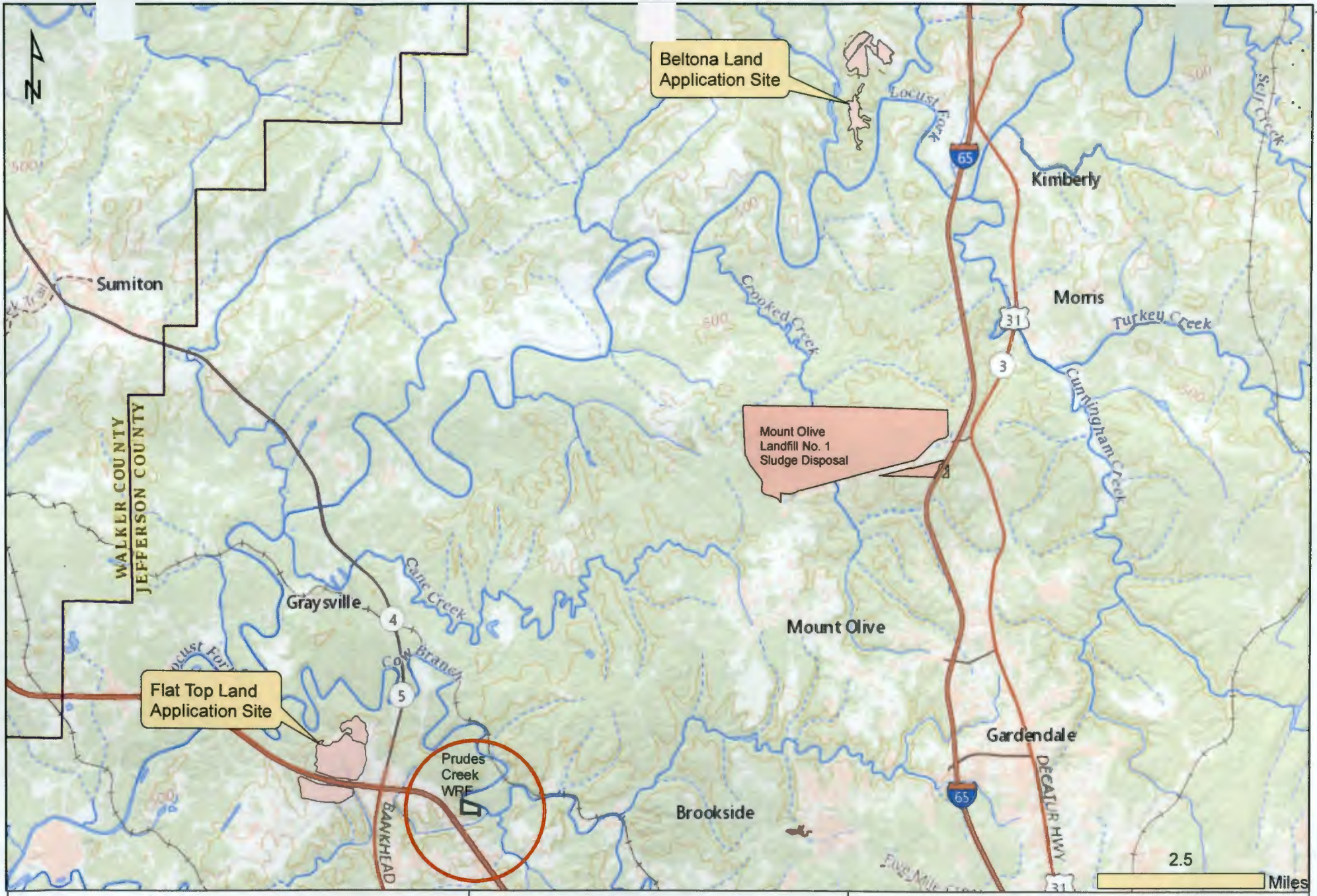
3. PRUDES CREEK WRF VICINITY WATER RESOURCES (1/4 MILE RADIUS)
4. PRUDES CREEK WRF SLUDGE MANAGEMENT
5. 2017 BIOSOLIDS LAND APPLIED OR LANDFILLED AND 2018 BIOSOLIDS LAND APPLIED OR LANDFILLED



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

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

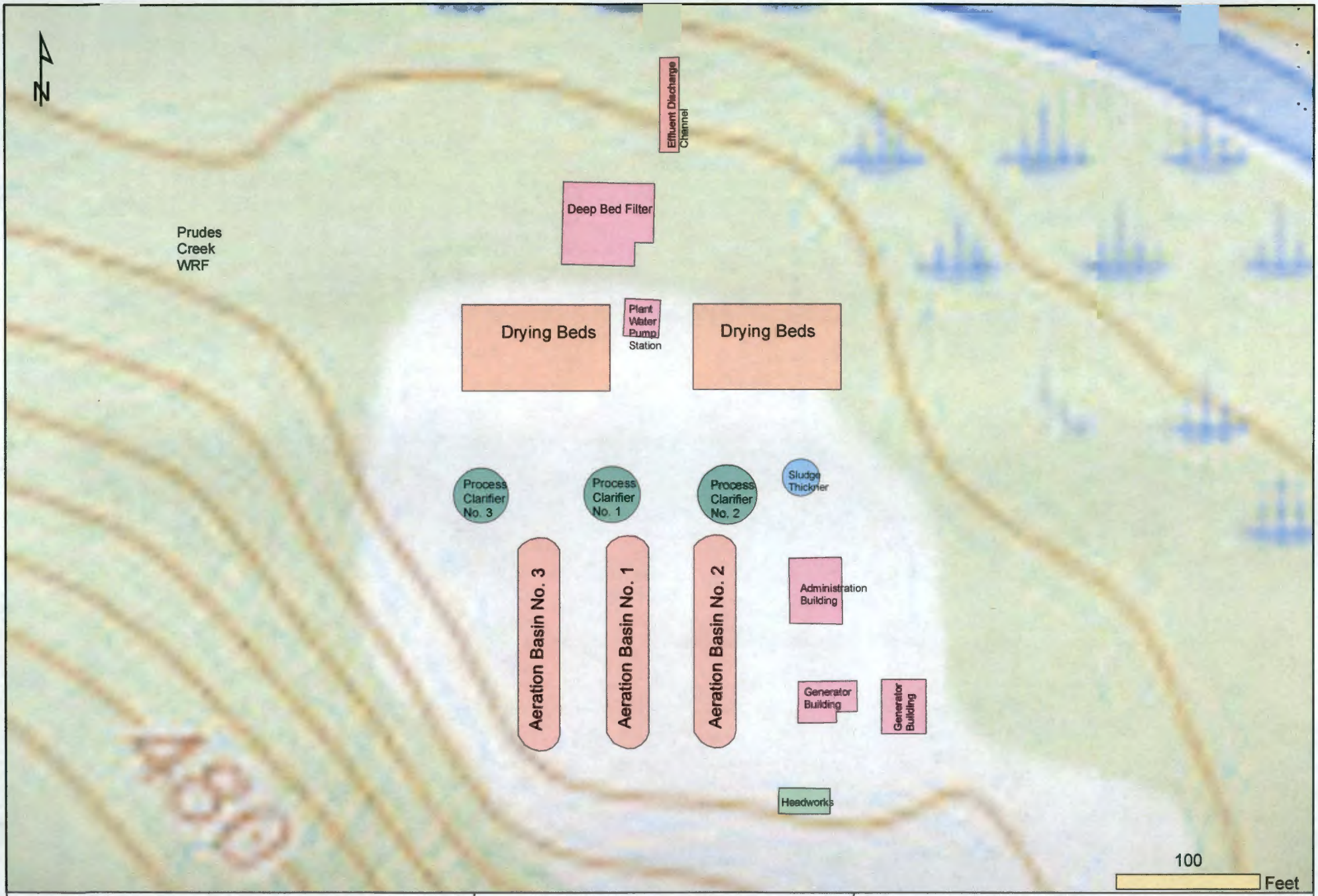
Form 2S, A.5
ATTACHMENT 1
1-MILE RADIUS PRUDES CREEK WRF



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

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

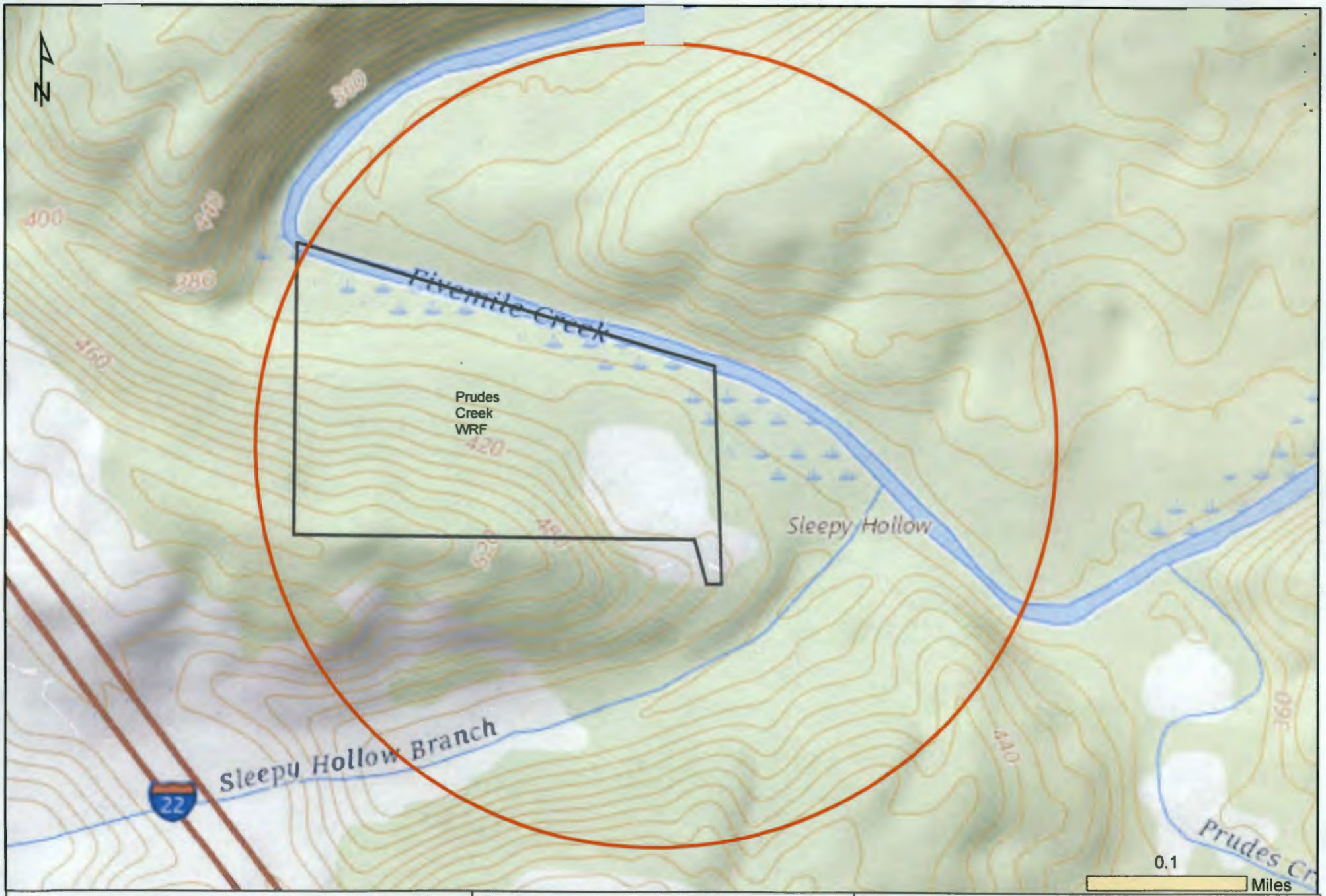
Form 2S, A.5.a
ATTACHMENT 2
PRUDES CREEK WRF BIOSOLIDS
DISPOSAL SITES



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

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

Form 2.S, A.5.a
ATTACHMENT 2A
PRUDES CREEK WRF FACILITIES

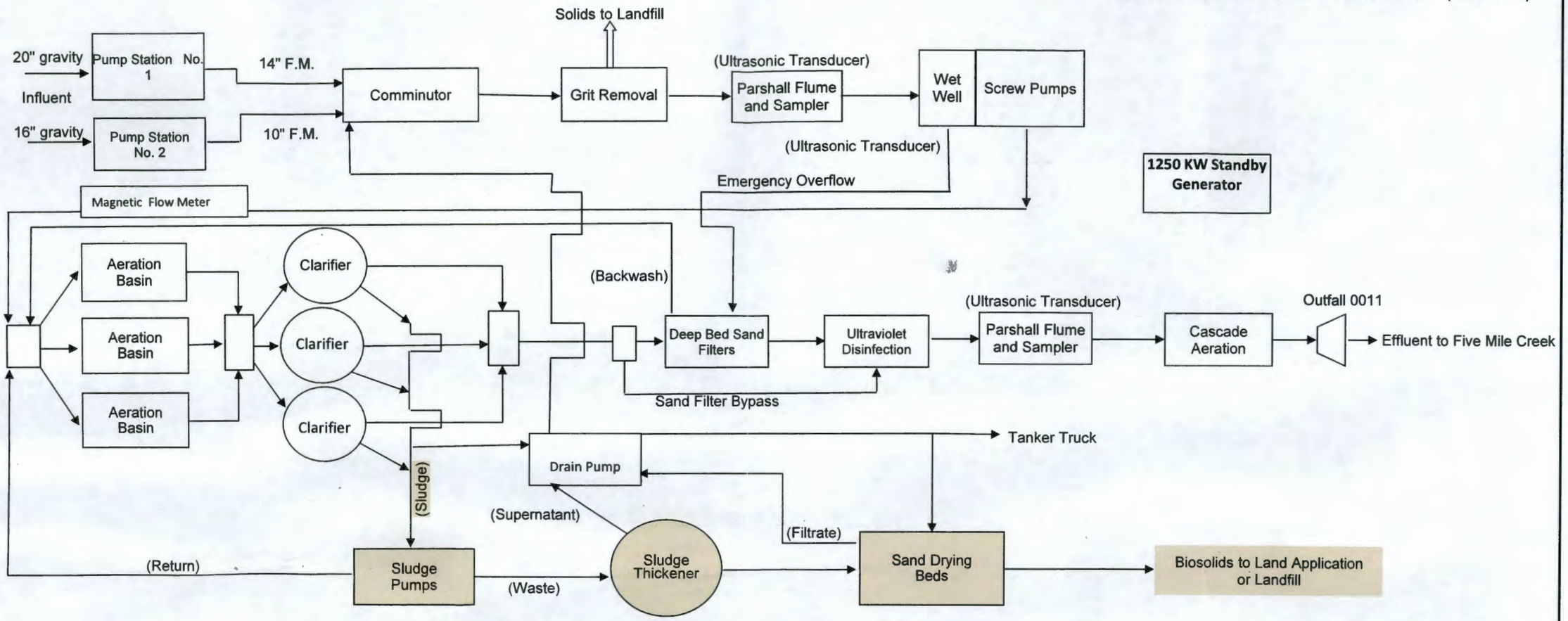


JEFFERSON COUNTY, ALABAMA
ENVIRONMENTAL SERVICES
716 Richard Arrington Jr. Blvd N, Suite A300
Birmingham, AL. 35203

Prudes Creek
Water Reclamation Facility
NPDES Permit Application

Form 2S, A.5.b
ATTACHMENT 3
PRUDES CREEK WRF
VICINITY WATER RESOURCES
(1/4 MILE RADIUS)

PRUDES CREEK WATER RECLAMATION FACILITY (AL0056120)



SLUDGE MANAGEMENT NARRATIVE:

Sludge produced at the Five Mile WRF is pumped to a sludge thickener. Supernatant is returned to the headworks of the facility. Once the thickener becomes filled, sludge is drained to the drying beds. Sludge will dry on the drying beds for several months and is then tested for metals included in 40 CFR Part 503, *Escherichia coli* (*E. coli*) to verify pathogen reduction, and moisture content. Once tested, sludge is removed from the drying beds and either land applied (if ceiling limits are met per 40 CFR Part 503) or disposed in a permitted landfill. If land applied, sludges are comingled with other sludges produced at Jefferson County Environmental Services Department (ESD) facilities and incorporated into the soil within 6 hours of transport at one of the two ESD operated Land Application Sites. Only one method of disposal is used for each batch of sludge to be disposed. Note: Since June 2017, sludges from Prudes Creek WRF have been landfilled. ESD plans to resume land application of sludges in 2019 per the procedures listed above.

The Emergency Overflow line shown above can allow routing of flow around biological treatment systems. Use of this piping is not a part of the operational plan for the plant.

FORM 2S, SECTION B.10.G
ATTACHMENT 5 - 2017 BIOSOLIDS LAND APPLIED OR LANDFILLED
JEFFERSON COUNTY ENVIRONMENTAL SERVICES DEPARTMENT
Prudes Creek WRF

	As mg/Kg	Cd mg/Kg	Cr mg/Kg	Cu mg/Kg	Pb mg/Kg	Hg mg/Kg	Mo mg/Kg	Ni mg/Kg	Se mg/Kg	Zn mg/Kg	TKN	Ammonia	Nitrate + Nitrite	Total Nitrogen	Percent Moisture	Fecal Coliform *** Geometric Mean				
LIMITS*	41	39	*Not*	1500	300	17	#	420	100	2800	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	CFU / g #######				
LIMITS**	75	85	*Required*	4300	840	57	75	420	100	7500										
DATE			*as of 2016*																	
																	JAN		pounds	Tons	Date Disposed
																	FEB	Q1		0	
3/21/2017	68	0	25	140	23	4.7	0	15	0	680	39,000	11	170	39,170	56%	1,400	MAR			0	
																	APR			0	
																	MAY	Q2		0	
6/13/2017	110	0	36	210	36	6.6	0	20	0	1,100	30,000	1,500	22	30,022	9%	0	JUN			0.00	
																	JUL			0	
8/15/2017	0.07	TCLP															AUG	Q3	104,560	52.3	9/6-7/2017
																	SEP			0	
																	OCT			0	
																	NOV	Q4		0	
12/13/2017	110	0	41	230	27	3.0	0	23	0	1200	44,000	1,500	17	44,017	26%	10	DEC			0	
																			172820	63.9	4/3-10/2018
	TCLP/ axial	axial	axial	radial	radial		radial	axial	axial	radial											
PQL	20	7.1	6.5	9	21	0.24	10	7	21	10	18	7.5	7.5								

* High Quality Pollutant Concentration Limits
** Ceiling Concentration Limits
*** Class B Biosolids Pathogen Requirements, Alternative Number 1.
# As a result of the Feb. 25, 1994, Amendment to the rule, the limits for Mo were deleted from the Part 503 rule pending EPA reconsideration. EPA/832/R-93/003
α Axial method, HPQC Limit 41, CC Limit 75.

REVIEWED BY:

JEFFERSON COUNTY BARTON LAB

AL0056120

Prudes	As mg/Kg	Cd mg/Kg	Cr mg/Kg	Cu mg/Kg	Pb mg/Kg	Hg mg/Kg	Mo mg/Kg	Ni mg/Kg	Se mg/Kg	Zn mg/Kg	TKN mg/Kg	NH_3 mg/Kg	$O_3^{-1} + NO_2$ mg/Kg	TN mg/Kg	% Moisture	Fecal Coliform Geometric Mean	
								Max									
Sample #1	110	0	41	230	36	7	0	23	0	1,200	44,000	1,500	170	44,017	56%	1,400	SAMPLE PERIOD 1/1/2017-12/31/2017
								Average									
Sample #1	72	0	34	193	29	5	0	19	0	993	37,667	1,004	70	37,736	30%	470	

FORM 2S, SECTION B.10.G
ATTACHMENT 5 - 2018 BIOSOLIDS LAND APPLIED OR LANDFILLED
JEFFERSON COUNTY ENVIRONMENTAL SERVICES DEPARTMENT
Prudes Creek WRF

	As mg/Kg	Cd mg/Kg	Cr mg/Kg	Cu mg/Kg	Pb mg/Kg	Hg mg/Kg	Mo mg/Kg	Ni mg/Kg	Se mg/Kg	Zn mg/Kg	TKN	Ammonia	Nitrate + Nitrite	Total Nitrogen	Percent Moisture	Fecal Coliform *** Geometric Mean					
LIMITS*	41	39	*Not*	1500	300	17	#	420	100	2800	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	CFU / g					
LIMITS**	75	85	*Required*	4300	840	57	75	420	100	7500						2,000,000					
DATE			*as of 2016*																		
1/4/2018	0.139																		pounds landfille	Dry Tons	Date Landfillec
																			172,820	86.4	4/3-10/2018
																	FEB	Q1	pounds	#VALUE!	Date Disposed
																	MAR			0	
																	APR			0	
																	MAY	Q2		0	
6/18/2018	70	0	41	180	18	3.0	0	26	0	1,200	25,000	3,600	0	25,000	33%	51,000	JUN		21,820	10.91	9/6,26/2018
																	JUL			0	
																	AUG	Q3			
9/26/2018	59	0	43	140	20	2.6	0	24	0	1,000	5,500	670	0	5,500	41%	36,000	SEP		20,720	6.9	10/30/2018
9/26/2018	0.053																OCT			0	
																	NOV	Q4		0	
																	DEC			0	
	TCLP/ axial	axial	axial	radial	radial		radial	axial	axial	radial											
PQL	11	4	4	5	11	0.02	5	4	11	6	10	6.3	8.1								

* High Quality Pollutant Concentration Limits
** Ceiling Concentration Limits
*** Class B Biosolids Pathogen Requirements, Alternative Number 1.
# As a result of the Feb. 25, 1994, Amendment to the rule, the limits for Mo were deleted from the Part 503 rule pending EPA reconsideration. EPA/832/R-93/003
α Axial method, HPQC Limit 41, CC Limit 75.

REVIEWED BY:

_____

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

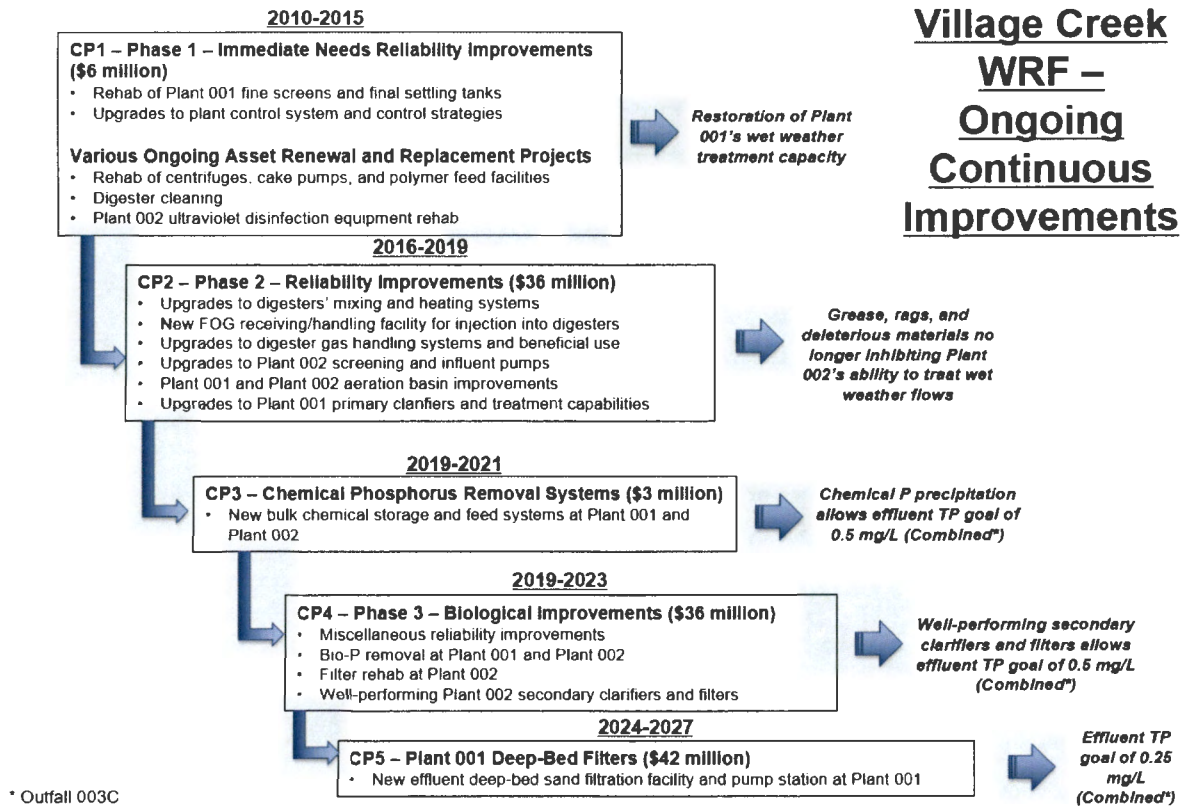


Table 4 – Summary of Engineering and Construction Costs at the Village Creek WRF

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

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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)