



**Alabama Department of Environmental Management**  
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**MAR 23 2020**

Don Sims, General Manager  
West Morgan East Lawrence Water and Sewer Authority  
2547 Kirby Bridge Road  
Decatur, AL 35609

RE: Draft Permit  
NPDES Permit No. AL0077020  
Robert M. Hames WTP  
Lawrence County, Alabama

Dear Mr. Sims:

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. The E2 Program allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. The Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes> or you may obtain a hard copy by submitting a written request or by emailing [e2admin@adem.alabama.gov](mailto:e2admin@adem.alabama.gov).

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

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

Sincerely,

A handwritten signature in black ink that reads "Nicholas Lowe".

Nicholas Lowe  
Municipal Section  
Water Division

/mfc  
Enclosure

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





# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: WEST MORGAN EAST LAWRENCE WATER AND SEWER AUTHORITY  
2547 KIRBY BRIDGE ROAD  
DECATUR, ALABAMA 35609

FACILITY LOCATION: ROBERT M. HAMES WTP  
6505 COUNTY ROAD 400  
HILLSBORO, ALABAMA  
LAWRENCE COUNTY

PERMIT NUMBER: AL0077020

RECEIVING WATERS: TENNESSEE RIVER (WHEELER LAKE)

*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**

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Alabama Department of Environmental Management

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

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## PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

### A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfall 0011 Discharge Limits – Wastewater from Drinking Water Plant (Filters and Granular Activated Carbon)

During the period beginning on the effective date of this permit and lasting until the completion of the Reverse Osmosis Drinking Water Plant with Granular Activated Carbon as indicated in the permit application, 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
pH 00400 1 0 0	*****	*****	*****	*****	6.0 S.U.	9.0 S.U.	*****	E	See Part IV.A.2	G	*****
Solids, Total Suspended 00530 1 0 0	*****	*****	30.0 mg/l	*****	*****	45.0 mg/l	*****	E	See Part IV.A.2	G See Note 9	*****
Phosphorus, Total (As P) (5) 00665 1 0 0	*****	*****	REPORT mg/l	*****	*****	REPORT mg/l	*****	E	See Part IV.A.2	G See Note 9	*****
Iron Total Recoverable (6) (8) 00980 1 0 0	*****	*****	6.0 mg/l	*****	*****	*****	*****	E	See Part IV.A.2	G	*****
Aluminum, Total Recoverable (7) (8) 01104 1 0 0	*****	*****	REPORT mg/l	*****	*****	REPORT mg/l	*****	E	See Part IV.A.2	G See Note 9	*****
Flow, In Conduit or Thru Treatment Plant 50050 1 0 0	REPORT MGD	*****	*****	*****	*****	REPORT MGD	*****	E	CALCTD	A See Note 9	*****
Chlorine, Total Residual 50060 1 0 0	*****	*****	*****	*****	*****	1.0 mg/l	*****	E	See Part IV.A.2	G	*****

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

\*\* Monitoring Requirements

(1) Sample Location

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

(2) Sample Type:

- CONTIN - Continuous
- INSTAN - Instantaneous
- COMP-8 - 8-Hour Composite
- COMP24 - 24-Hour Composite
- GRAB – Grab
- CALCTD - Calculated

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

- A - 7 days per week
- B - 5 days per week
- C - 3 days per week
- D - 2 days per week
- E - 1 day per week
- F - 2 days per month
- G - 1 day per month
- H - 1 day per quarter
- J - Annual
- Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:

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

- (5) Monitoring for Total Phosphorus is applicable if phosphate-based corrosion inhibitors are utilized at the plant. If monitoring is not applicable during the monitoring period, enter \*9 or “NODI=9” (if hard copy) on the monthly DMR.
- (6) The limit for Total Recoverable Iron is applicable if iron-based coagulants are utilized at the plant. If monitoring is not applicable during the monitoring period, enter “NODI=9” (if hard copy) on the monthly DMR.
- (7) Monitoring for Total Recoverable Aluminum is applicable if aluminum-based coagulants are utilized at the plant. If monitoring is not applicable during the monitoring period, enter \*9 or “NODI=9” (if hard copy) on the monthly DMR.
- (8) For the purpose of demonstration with this parameter, “Total” and “Total Recoverable” may be considered equivalent.
- (9) If only one sampling event occurs during a month, the sample result shall be reported on the monthly DMR as both the monthly average and the daily maximum.

2. Outfall 0012 Discharge Limits – Wastewater from Reverse Osmosis Drinking Water Plant with Granular Activated Carbon as indicated in permit application

During the period after completion of the Reverse Osmosis Drinking Water Plant with Granular Activated Carbon as indicated in the permit application, and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 0012, which is described more fully in the Permittee’s application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
pH 00400 1 0 0	****	****	****	****	6.0 S.U.	9.0 S.U.	****	E	See Part IV.A.2	G	****
Solids, Total Suspended 00530 1 0 0	****	****	30.0 mg/l	****	****	45.0 mg/l	****	E	See Part IV.A.2	G See Note 9	****
Phosphorus, Total (As P) 00665 1 0 0	7.69 lbs/day	****	REPORT mg/l	****	****	REPORT mg/l	****	E	See Part IV.A.2	G See Note 9	S
Phosphorus, Total (As P) (5) 00665 1 0 0	****	****	REPORT mg/l	****	****	REPORT mg/l	****	E	See Part IV.A.2	G See Note 9	W
Carbon, Tot Organic (TOC) 00680 1 0 0	REPORT lbs/day	****	REPORT mg/l	****	****	REPORT mg/l	****	E	See Part IV.A.2	G See Note 9	****
Chloride (As Cl) 00940 1 0 0	****	****	230 mg/l	****	****	860 mg/l	****	E	See Part IV.A.2	G See Note 9	****
Iron Total Recoverable (6) (8) 00980 1 0 0	****	****	6.0 mg/l	****	****	****	****	E	See Part IV.A.2	G	****
Aluminum, Total Recoverable (7) (8) 01104 1 0 0	****	****	REPORT mg/l	****	****	REPORT mg/l	****	E	See Part IV.A.2	G See Note 9	****
Flow, In Conduit or Thru Treatment Plant 50050 1 0 0	REPORT MGD	****	****	****	****	REPORT MGD	****	E	CALCTD	A See Note 9	****
Chlorine, Total Residual 50060 1 0 0	****	****	****	****	****	1.0 mg/l	****	E	See Part IV.A.2	G	****
Solids, Total Dissolved 70295 1 0 0	REPORT lbs/day	****	REPORT mg/l	****	****	REPORT mg/l	****	E	See Part IV.A.2	G See Note 9	****

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

\*\* Monitoring Requirements

(1) Sample Location

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

(2) Sample Type:

- CONTIN - Continuous
- INSTAN - Instantaneous
- COMP-8 - 8-Hour Composite
- COMP24 - 24-Hour Composite
- GRAB – Grab
- CALCTD - Calculated

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

- A - 7 days per week
- B - 5 days per week
- C - 3 days per week
- D - 2 days per week
- E - 1 day per week
- F - 2 days per month
- G - 1 day per month
- H - 1 day per quarter
- J - Annual
- Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:

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

- (5) Monitoring for Total Phosphorus is applicable if phosphate-based corrosion inhibitors are utilized at the plant. If monitoring is not applicable during the monitoring period, enter \*9 or “NODI=9” (if hard copy) on the monthly DMR.
- (6) The limit for Total Recoverable Iron is applicable if iron-based coagulants are utilized at the plant. If monitoring is not applicable during the monitoring period, enter “NODI=9” (if hard copy) on the monthly DMR.
- (7) Monitoring for Total Recoverable Aluminum is applicable if aluminum-based coagulants are utilized at the plant. If monitoring is not applicable during the monitoring period, enter \*9 or “NODI=9” (if hard copy) on the monthly DMR.
- (8) For the purpose of demonstration with this parameter, “Total” and “Total Recoverable” may be considered equivalent.
- (9) If only one sampling event occurs during a month, the sample result shall be reported on the monthly DMR as both the monthly average and the daily maximum.

## 3. Outfall 001Q Discharge Limits - Quarterly Monitoring

This is an administrative outfall designation. Outfall 001Q is the same physical outfall as Outfalls 0011 and 0012. Discharge from this outfall shall be limited and monitored by the Permittee as specified below.

Parameter	Discharge Limitations* (5) (6)							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
Perfluorooctanoic Acid 51521 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorobutanoic Acid 51522 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorooctanesulfonamide 51525 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorooctane Sulfonate 51526 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluoropentanoic Acid 51623 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorohexanoic Acid 51624 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluoroheptanoic Acid 51625 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorononanoic Acid 51626 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorodecanoic Acid 51627 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluoroundecanoic Acid 51628 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorododecanoic Acid 51629 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorotridecanoic Acid 51630 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorotetradecanoic Acid 51631 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorobutane Sulfonate 51632 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorohexane Sulfonate 51633 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****
Perfluorodecane Sulfonate 51635 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT ug/l	REPORT ug/l	*****	*****	*****	E	GRAB	H	*****

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

\*\* Monitoring Requirements

## (1) Sample Location

I – Influent

E – Effluent

X – End Chlorine Contact Chamber

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

RS - Receiving Stream

US – Upstream

DS – Downstream

MW – Monitoring Well

SW – Storm Water

## (2) Sample Type:

CONTIN - Continuous

INSTAN - Instantaneous

COMP-8 - 8-Hour Composite

COMP24 - 24-Hour Composite

GRAB – Grab

CALCTD - Calculated

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

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

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

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

D - 2 days per week J - Annual

E - 1 day per week Q - For Effluent Toxicity

Testing, see Provision IV.B.

## (4) Seasonal Limits:

S = Summer (April – October)

W = Winter (November – March)

ECS = E. coli Summer (May – October)

ECW = E. coli Winter (November – April)

(5) The Permittee shall use EPA approved methods with the lowest detection levels or an equivalent method that has been approved by the Department.

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

**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 a 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, re-issuance, 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) 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 28<sup>th</sup> 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 re-issuance, 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 Permittee shall report illicit or anomalous discharge events on Form 421, available on the Department's website (<http://www.adem.state.al.us/DeptForms/Form421.pdf>), in accordance with Part I.C.2.a. This form is available on the ADEM web page or upon request from the Permittee.

**D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS**

## 1. Anticipated Noncompliance

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

## 2. Termination of Discharge

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

## 3. Updating Information

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.

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

## 4. Duty to Provide Information

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

**E. SCHEDULE OF COMPLIANCE**

## 1. Compliance with discharge limits

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

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

## 2. Schedule

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

**PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES****A. OPERATIONAL AND MANAGEMENT REQUIREMENTS**

## 1. Facilities Operation and Maintenance

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

## 2. Best Management Practices

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

## 3. Certified Operator

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

**B. OTHER RESPONSIBILITIES**

## 1. Duty to Mitigate Adverse Impacts

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

## 2. Right of Entry and Inspection

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

**C. BYPASS AND UPSET**

## 1. Bypass

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:
  - (1) It does not cause any discharge limitation specified in Provision I.A. of this permit to be exceeded;

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

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

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

#### 5. Termination

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

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

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

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

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

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

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

#### **H. PROHIBITIONS**

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

1. Pollutants which create a fire or explosion hazard in the treatment works;
2. Pollutants which will cause corrosive structural damage to the treatment works, or dischargers with a pH lower than 5.0 s.u., unless the works are specifically designed to accommodate such discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction of flow in sewers, or other interference with the treatment works;

4. Pollutants, including oxygen demanding pollutants, released in a discharge of such volume or strength as to cause interference in the treatment works;
5. Heat in amounts which will inhibit biological activity in the treatment plant resulting in interference or in such quantities that the temperature of the treatment plant influent exceeds 40°C (104° F) unless the treatment plant is designed to accommodate such heat;
6. Pollutants in amounts which exceed any applicable pretreatment standard under Section 307 of FWPCA or any approved revisions thereof.

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

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

#### **1. Tampering**

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

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

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

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

- a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.
- b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes.
  - (1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;
  - (2) An action for damages;
  - (3) An action for injunctive relief; or
  - (4) An action for penalties.
- c. If the Permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the Permittee has made a timely and complete application for re-issuance 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 re-issuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
  - (3) Reissue the new permit with appropriate conditions; or
  - (4) Take other actions authorized by these rules and AWPCA.

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

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

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

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

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

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

**D. AVAILABILITY OF REPORTS**

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

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

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

**F. COMPLIANCE WITH WATER QUALITY STANDARDS**

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

**G. GROUNDWATER**

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

**H. DEFINITIONS**

1. Average monthly discharge limitation – means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.
4. AWPCA – means the Alabama Water Pollution Control Act.
5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.
6. Bypass – means the intentional diversion of waste streams from any portion of a treatment facility.
7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
8. Daily discharge – means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
9. Daily maximum – means the highest value of any individual sample result obtained during a day.
10. Daily minimum – means the lowest value of any individual sample result obtained during a day.
11. Day – means any consecutive 24-hour period.
12. Department – means the Alabama Department of Environmental Management.
13. Director – means the Director of the Department.
14. Discharge – means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(9).
15. Discharge Monitoring Report (DMR) – means the form approved by the Director to accomplish reporting requirements of an NPDES permit.
16. DO – means dissolved oxygen.
17. 8HC – means 8-hour composite sample, including any of the following:
  - a. The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 1 hour over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
  - b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
18. EPA – means the United States Environmental Protection Agency.
19. FC – means the pollutant parameter fecal coliform.
20. Flow – means the total volume of discharge in a 24-hour period.
21. FWPCA – means the Federal Water Pollution Control Act.
22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.
24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.
25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category “Division D – Manufacturing” and such other classes of significant waste producers as, by regulation, the Director deems appropriate.
26. MGD – means million gallons per day.
27. Monthly Average – means the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.
28. New Discharger – means a person, owning or operating any building, structure, facility or installation:
  - a. From which there is or may be a discharge of pollutants;
  - b. From which the discharge of pollutants did not commence prior to August 13, 1979, and which is not a new source; and
  - c. Which has never received a final effective NPDES permit for dischargers at that site.
29. NH<sub>3</sub>-N – means the pollutant parameter ammonia, measured as nitrogen.
30. Notifiable sanitary sewer overflow – means an overflow, spill, release or diversion of wastewater from a sanitary sewer system that:
  - a. Reaches a surface water of the State; or
  - b. May imminently and substantially endanger human health based on potential for public exposure including but not limited to close proximity to public or private water supply wells or in areas where human contact would be likely to occur.
31. Permit application – means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
32. Point source – means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
33. Pollutant – includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
34. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a “POTW”.
35. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
36. Receiving Stream – means the “waters” receiving a “discharge” from a “point source”.
37. Severe property damage – means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
38. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work’s capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.
40. TON – means the pollutant parameter Total Organic Nitrogen.

41. TRC – means Total Residual Chlorine.
42. TSS – means the pollutant parameter Total Suspended Solids.
43. 24HC – means 24-hour composite sample, including any of the following:
  - a. The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
  - b. A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or
  - c. A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
44. Upset – means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
45. Waters – means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground, or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.
46. Week – means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

## **I. SEVERABILITY**

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



## PART IV ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

### A. WATER TREATMENT PLANT OTHER REQUIREMENTS

#### 1. Prohibitions

- a. Wastewater from water treatment plants shall not be discharged directly to the receiving stream, but shall be discharged to a wastewater settling basin or other method of treatment with appropriate solids separation and handling facilities.
- b. Water treatment flocculators, settlers, sedimentation basins and other water treatment tanks shall not be drained directly to the receiving stream, but shall be drained to a wastewater settling basin or other method of treatment. The Permittee shall also provide appropriate solids separation and handling facilities.

#### 2. Sampling and Analyses

- a. Wastewater samples pursuant to Part I.A. shall be collected at the outlet of the wastewater settling basin following either filter backwash or flocculator/sedimentation basin draining and/or cleaning.
- b. Wastewater composite samples shall consist of a mixture of four (4) equal volume grab samples collected at equal time intervals during discharge from the wastewater settling basin containing filter backwash wastewater or during drainage from the flocculator/sedimentation basin, with the maximum length of time between first and last samples not to exceed six (6) hours.
- c. Sufficient volume of wastewater samples shall be collected for all required sample preservation and analyses.
- d. Total Residual Chlorine requirements
  - (1) Wastewater samples for TRC analyses shall be a grab sample collected during the last of four time intervals as required by Part IV.A.2.b.
  - (2) TRC shall be determined within 15 minutes after collection of the sample.
- e. Grab samples for pH shall be collected as stated in Part IV. A.2.d.(1).
- f. Flow shall be reported as the amount backwashed, drained, or used for cleaning, as recorded by daily plant logs.

#### 3. Chlorine Test Methods

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), Standard Methods for the Examination of Water and Wastewater, 16<sup>th</sup> Edition. If chlorine is not detected using one of these methods, the Permittee shall report on the DMR form the analytical results for TRC as being measured at less than the detection level for the test method selected. The Permittee shall then be considered to be in compliance with the daily maximum concentration limit for TRC.

#### 4. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or waste removed in the course of treatment or control of wastewaters shall be disposed in a manner that complies with State and Federal regulations as outlined in applicable guidance entitled Management of Water Treatment Plant Residuals, EPA/625/R-95/008 (most current edition).

#### 5. Exceptions

For water treatment plants that have not yet installed wastewater settling basins or other treatment plant facilities, sampling procedures should be as follows until the wastewater settling basins or other treatment facilities are installed.

- a. Water treatment filter backwash samples shall be collected once per month from the filter backwash trough or pressure filter backwash drain.
  - (1) Wastewater composite samples shall consist of a mixture of equal volume grab samples collected once per minute for ten (10) minutes after the backwash pumps have been started, or, if backwash duration is less than ten (10) minutes, once per minute until the end of the backwash period.

(2) Grab samples for TRC analysis shall be collected during the tenth (10th) minute of the filter backwash, or, if backwash duration is less than ten (10) minutes, during the last minute of backwash, and determined within 15 minutes after collection.

- b. The water treatment flocculator, sedimentation basin, and other tank drains shall be sampled once per discharge event resulting from cleanout/washout operations and after the initial draining of flocculator, basins, or other tanks.

**B. PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)**

1. Reopener Clause

This Permit may be revoked and reissued or modified if new information becomes available. This information may include but is not limited to: new laws, regulations, policies, or additional technology requirements.

## NPDES PERMIT RATIONALE

NPDES Permit No: **AL0077020** Date: 7/26/2019

Permit Applicant: West Morgan East Lawrence Water and Sewer Authority  
2547 Kirby Bridge Road  
Decatur, Alabama 35609

Location: Robert M. Hames WTP  
6505 County Road 400  
Hillsboro, Alabama 35643

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

Basis for Limitations: Water Quality Model: N/A  
Reissuance with no modification: 0011 - pH, TSS, TRC, TRI  
Instream calculation at 7Q10: 0011 - 1%, 0012 - 1%  
Toxicity based: TRC  
Secondary Treatment Levels: N/A  
Other (described below): pH, TSS, TRI, CI (0012)

Design Flow in Million Gallons per Day:

Major: No

Description of Discharge: Outfall Number 001;  
Effluent discharge to Tennessee River (Wheeler Lake),  
which is classified as Public Water Supply, Swimming,  
and Fish & Wildlife.

Discussion: This is a revoke and reissuance of the Permit.

The West Morgan East Lawrence Water and Sewer Authority is planning to construct a Reverse Osmosis Drinking Water Plant, with Granular Activated Carbon (GAC) as indicated in the permit application, at the Robert M. Hames WTP. The discharges from both treatment facilities would utilize the same discharge location. Outfall designation 0011 will be utilized for the discharge of wastewater from the Drinking Water Plant (filters and GAC) until the completion of the Reverse Osmosis Drinking Water Plant with GAC as indicated in the permit application. Upon completion of the Reverse Osmosis Drinking Water Plant with GAC as indicated in the permit application, outfall designation 0012 will be utilized.

The segment of the Tennessee River (Wheeler Lake) containing the discharge is a Tier 1 stream and is listed on the most recent 303(d) list for nutrients. To ensure no increase in nutrient pollutant loading to the receiving stream from the reverse osmosis treatment facility, the current Total Phosphorus (TP) loading has been established from Discharge Monitoring Reports (DMR) data. For outfall 0012, the monthly average TP limit for the summer season (April-October) is 7.69 lbs/day. For outfall 0012,

monitoring is imposed for TP during the winter season 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. There are no TMDLs affecting this discharge.

The discharge is also downstream of a segment of the Tennessee River (Wheeler Lake) that is listed on the most recent 303(d) list for Per- and Polyfluoroalkyl Substances (PFAS). The permit includes quarterly monitoring for PFAS. At this time, there are no established numeric regulatory limits for PFAS in wastewater discharges. If the EPA establishes criteria for PFAS in wastewater, the permit will be reviewed to determine if modifications are necessary.

For both outfalls 0011 and 0012, the pH daily minimum and daily maximum limits of 6.0 and 9.0 S.U., respectively, were developed to be supportive of the water-use classification of the receiving stream and considering available dilution.

For both outfalls 0011 and 0012, the Total Residual Chlorine (TRC) limit of 1.0 (daily maximum) is based on EPA's recommended water quality values which considers the available dilution in the receiving stream and the maximum limitation based on Best Professional Judgement.

For outfall 0012, chloride (Cl) limits are included because it is an expected parameter in the concentrated brine effluent of a reverse osmosis treatment system. The Cl limits of 230 mg/L (monthly average) and 860 mg/L (daily maximum) are based on EPA's National Recommended Water Quality Criteria.

For both outfalls 0011 and 0012, the Permittee is required to monitor for Total Phosphorus (TP). Monitoring for Total Phosphorus is applicable if phosphate-based corrosion inhibitors are utilized at the plant. For outfall 0012, monitoring is required for Total Organic Carbon (TOC) and Total Dissolved Solids (TDS) since they are possible pollutants of concern.

Alabama has not adopted numeric aluminum water quality criteria, and the Department acknowledges that the EPA suggested numeric value appears to be hardness dependent. Alabama has not observed a toxicity concern with aluminum in state waters and therefore does not believe aluminum is a significant water quality concern at this time. In addition, the permit requires that wastewater from water treatment plants not be directly discharged to the receiving stream, but shall be discharged to a wastewater settling basin or other method of treatment. Using this best management practice should reduce aluminum discharges as aluminum adheres to sediment that should be removed in the settling basins or other treatment. A review of other Region 4 state water treatment plant NPDES permits also indicates that aluminum limitations are not included in the majority of the permits. Should the Department adopt a numeric aluminum water quality criteria in the future or become aware of a water quality issue, this determination will be re-evaluated. This permit will impose monthly average and daily maximum monitoring for Total Recoverable Aluminum for both outfalls 0011 and 0012. Monitoring for TRA is applicable if aluminum-based coagulants are utilized at the facility.

For both outfalls 0011 and 0012, the Total Suspended Solids (TSS) limit of 30.0 mg/L (monthly average) is based on Best Professional Judgment (BPJ) and achievable Water Treatment Plant wastewater levels.

For both outfalls 0011 and 0012, the Total Recoverable Iron (TRI) limit is based on EPA's recommended water quality criteria and the maximum limitation based on Best Professional Judgement. The monthly average TRI limit is 6.0 mg/L. The limit for TRI is applicable if iron-based coagulants are utilized at the facility.

The frequency of monitoring for most parameters is monthly. Flow is to be calculated daily.

No toxicity testing is required because the facility is a water treatment plant and because toxicity issues are not expected from the discharge.

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

Prepared by: Nicholas Lowe

Robert M. Hames WTP

AL0077020

Existing Filter Backwash Utilizing Granular Activated Carbon (Outfall 0011)

Tennessee River (Wheeler Lake)

$Q_{s,c}$  = Streamflow(7Q10) = 6,620 cfs = 4,278 MGD

$Q_{s,a}$  = Streamflow(1Q10) = 4970 cfs = 3,211 MGD

Total Residual Chlorine (TRC)

$$TRC_{Acute} = \frac{(Q_{s,a} + Q_w) \times 0.019}{Q_w}$$

$$TRC_{Chronic} = \frac{(Q_{s,c} + Q_w) \times 0.011}{Q_w}$$

$Q_w$  = Long term average flow rate from discharge = 0.2513 MGD

$$TRC_{Acute} = \frac{(Q_{s,a} + Q_w) \times 0.019}{Q_w} = \frac{(3211 + 0.2513) \times 0.019}{0.2513} = 242 \text{ mg/L}$$

$$TRC_{Chronic} = \frac{(Q_{s,c} + Q_w) \times 0.011}{Q_w} = \frac{(4278 + 0.2513) \times 0.011}{0.2513} = 187 \text{ mg/L}$$

Permit Limit will be the most stringent of acute, chronic, or technology based (1.0 mg/L) values.

$TRC = 1.0 \text{ mg/L}$
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Total Recoverable Iron (TRI)

$$TRI \text{ Limit} = \frac{(Q_{s,c} + Q_w) \times 1.0}{Q_w}$$

$$TRI \text{ Limit} = \frac{(Q_{s,c} + Q_w) \times 1.0}{Q_w} = \frac{(4278 + 0.2513) \times 1.0}{0.2513} = 17,024 \text{ mg/L}$$

Permit Limits will be the most stringent of water quality based (above) or technology based (6.0 mg/L) values.

$TRI \text{ Limit} = 6.0 \text{ mg/L}$
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Robert M. Hames WTP

AL0077020

Proposed Reverse Osmosis Utilizing Granular Activated Carbon (Outfall 0012)

Tennessee River (Wheeler Lake)

$Q_{s,c}$  = Streamflow(7Q10) = 6,620 cfs = 4,278 MGD

$Q_{s,a}$  = Streamflow(1Q10) = 4970 cfs = 3,211 MGD

Total Residual Chlorine (TRC)

$$TRC_{Acute} = \frac{(Q_{s,a} + Q_w) \times 0.019}{Q_w} \qquad TRC_{Chronic} = \frac{(Q_{s,c} + Q_w) \times 0.011}{Q_w}$$

$Q_w$  = Long term average flow rate from discharge = 2.68 MGD

$$TRC_{Acute} = \frac{(Q_{s,a} + Q_w) \times 0.019}{Q_w} = \frac{(3211 + 2.68) \times 0.019}{2.68} = 22.7 \text{ mg/L}$$

$$TRC_{Chronic} = \frac{(Q_{s,c} + Q_w) \times 0.011}{Q_w} = \frac{(4278 + 2.68) \times 0.011}{2.68} = 17.5 \text{ mg/L}$$

Permit Limit will be the most stringent of acute, chronic, or technology based (1.0 mg/L) values.

$TRC = 1.0 \text{ mg/L}$
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Total Recoverable Iron (TRI)

$$TRI \text{ Limit} = \frac{(Q_{s,a} + Q_w) \times 1.0}{Q_w}$$

$$TRI \text{ Limit} = \frac{(Q_{s,a} + Q_w) \times 1.0}{Q_w} = \frac{(4278 + 2.68) \times 1.0}{2.68} = 1,597 \text{ mg/L}$$

Permit Limits will be the most stringent of water quality based (above) or technology based (6.0 mg/L) values.

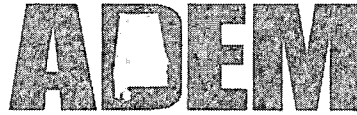
$TRI \text{ Limit} = 6.0 \text{ mg/L}$
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Monitoring period	Monthly Average Flow (MGD)	TP (mg/L)	Calculated Load (lb/day)
12/31/2015	0.2833	0.03	0.07
1/31/2016	0.3026	0.02	0.05
2/29/2016	0.3012	0.04	0.10
3/31/2016	0.2821	0	0.00
4/30/2016	0.2778	0.01	0.02
5/31/2016	0.2779	0.01	0.02
6/30/2016	0.1962	1.3	2.13
7/31/2016	0.2658	0.3	0.67
8/31/2016	0.2502	1	2.09
9/30/2016	0.2854	9.9	23.56
10/31/2016	0.2571	7.1	15.22
11/30/2016	0.2466	4	8.23
12/31/2016	0.2542	8	16.96
1/31/2017	0.2448	0.4	0.82
2/28/2017	0.2279	3.3	6.27
3/31/2017	0.2197	0.2	0.37
4/30/2017	0.2354	0.2	0.39
5/31/2017	0.2549	2.1	4.46
6/30/2017	0.2663	2.9	6.44
7/31/2017	0.2669	1.3	2.89
8/31/2017	0.2615	0.25	0.55
9/30/2017	0.2477	9.21	19.03
10/31/2017	0.2526	0.35	0.74
11/30/2017	0.2626	0.03	0.07
12/31/2017	0.2811	0.02	0.05
1/31/2018	0.2964	0.19	0.47
2/28/2018	0.276	0.05	0.12
3/31/2018	0.2651	0.06	0.13
4/30/2018	0.2702	0.12	0.27
5/31/2018	0.2498	0.19	0.40
6/30/2018	0.2664	0	0.00
7/31/2018	0.2669	0	0.00
8/31/2018	0.2615	0.12	0.26
9/30/2018	0.2477	0.03	0.06
10/31/2018	0.2526	0.04	0.08
11/30/2018	0.2288	0.18	0.34
12/31/2018	0.2239	0.07	0.13
1/31/2019	0.2309	0.06	0.12
2/28/2019	0.2519	0.16	0.34
3/31/2019	0.2254	0.08	0.15
4/30/2019	0.2354	0.01	0.02
5/31/2019	0.2443	0.05	0.10
6/30/2019	0.2404	0.06	0.12
7/31/2019	0.2526	0.02	0.04

90th Percentile	7.69
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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

**MEMORANDUM**

**July 10, 2015**

Prepared For: Stephanie Ammons - Municipal Section  
Prepared By: Ross Caton, ADEM Water Quality Branch  
Subject: AL0077020 Robert M. Hames WTP Flow Estimates, Tier, and Use Classification Request

As per your request, at the location of the facility's outfall (34°45'18", -87°13'38") the Tennessee River is Tier I and its use classification is Public Water Supply/Swimming/Fish & Wildlife (PWS/S/F&W). The 7Q10, 7Q2, 1Q10, and annual average were calculated based on dam release data provided by the Tennessee Valley Authority (TVA). The period of record used was between 1980-2015 because the latest dam/flow alteration (Tellico Dam) in the Tennessee River system became operational in November of 1979. The following are the flow estimates for the Tennessee River at the Robert M. Hames WTP outfall:

	Flow (cfs)
7Q10	6620
7Q2	11020
1Q10	4970
Annual Avg	44240

REC/rec

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

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



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

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

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM <b>1</b> GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY <b>GENERAL INFORMATION</b> Consolidated Permits Program <i>(Read the "General Instructions" before filling in.)</i>	I. EPA I.D. NUMBER AL0077020												
LABEL ITEMS		<div style="border: 2px solid black; padding: 5px; display: inline-block;"> <b>RECEIVED</b>  <b>MAR 18 2019</b>  <b>IND / MUN BRANCH</b> </div> <p>PLEASE PLACE LABEL IN THIS SPACE</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%; text-align: center;">S</td> <td style="width:85%;"></td> <td style="width:5%; text-align: center;">T/A</td> <td style="width:5%; text-align: center;">C</td> </tr> <tr> <td style="text-align: center;">F</td> <td>AL0077020</td> <td></td> <td style="text-align: center;">D</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">13</td> <td style="text-align: center;">14 15</td> </tr> </table>	S		T/A	C	F	AL0077020		D	1	2	13	14 15
S			T/A	C											
F	AL0077020			D											
1	2		13	14 15											
I. EPA I.D. NUMBER			<p><b>GENERAL INSTRUCTIONS</b> 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.</p>												
III. FACILITY NAME															
V. FACILITY MAILING ADDRESS															
VI. FACILITY LOCATION															

**II. POLLUTANT CHARACTERISTICS**

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

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

III. NAME OF FACILITY

c	1	SKIP	Robert M. Hames WTP
15	16 - 29	30	59

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)		B. PHONE (area code & no.)	
c	2	Sims, Don, General Manager	(256) 355-3746
15	16	45	46 48 49 51 52 55

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX			
c	3	2547 Kirby Bridge Road	
15	16	45	
B. CITY OR TOWN		C. STATE	D. ZIP CODE
c	4	Decatur	AL 35609
15	16	40 41 42	47 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER			
c	5	6505 County Road 400	
15	16	45	
B. COUNTY NAME			
c	6	Lawrence	
46	47	70	
C. CITY OR TOWN		D. STATE	E. ZIP CODE
c	6	Hillsboro	AL 35643
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				
C										C				
7										7				
15	16	17	18	19	20	21	22	23	24	15	16	17	18	19
C. THIRD										D. FOURTH				
C										C				
7										7				
15	16	17	18	19	20	21	22	23	24	15	16	17	18	19

VIII. OPERATOR INFORMATION																	
A. NAME												B. Is the name listed in Item VIII-A also the owner?					
C	8 West Morgan East Lawrence Water & Sewer Authority												<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	55	56	57

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)												D. PHONE (area code & no.)		
F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)												A (256) 355-3746		
M (specify)												55 56 57		

E. STREET OR P.O. BOX															
2547 Kirby Bridge Road															
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	55

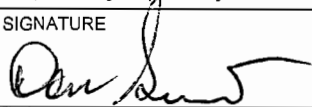
F. CITY OR TOWN										G. STATE	H. ZIP CODE	IX. INDIAN LAND				
B Decatur										AL	35609	Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
15	16	17	18	19	20	21	22	23	24	40	41	42	43	44	45	52

X. EXISTING ENVIRONMENTAL PERMITS															
A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)					
C	T	I	AL0077020							C	T	I	N/A		
9	N									9	P				
15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)					
C	T	I	N/A							C	T	I	N/A		
9	U									9					
15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20
C. RCRA (Hazardous Wastes)										E. OTHER (specify)					
C	T	I	N/A							C	T	I	N/A		
9	R									9					
15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20

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)  
 The Robert M. Hames Water Treatment Plant treats and distributes water to areas of West Morhan and East Lawrences Counties that are within the distribution area.

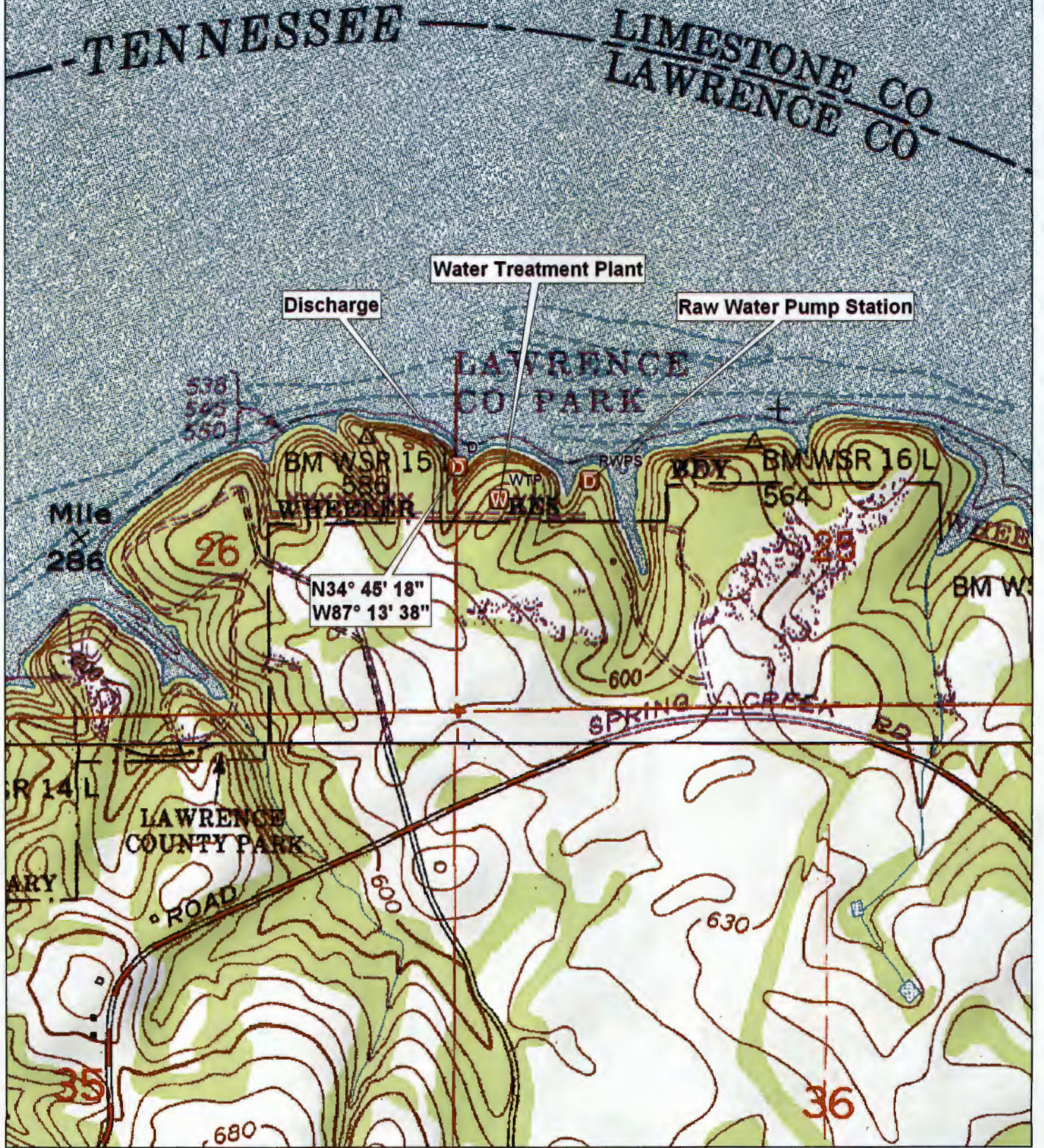
XIII. CERTIFICATION (see instructions)  
 I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained 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				
Don Sims General Manager															3/18/19				

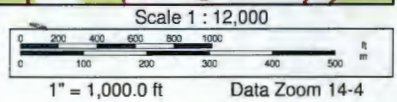
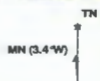
COMMENTS FOR OFFICIAL USE ONLY															
C															
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	55



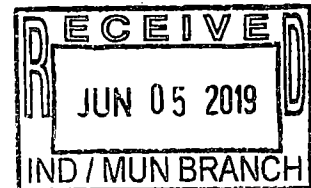
# West Morgan - East Lawrence WTP



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 www.delorme.com







ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
NPDES INDIVIDUAL PERMIT APPLICATION

SUPPLEMENTARY INFORMATION FOR PUBLICLY-OWNED TREATMENT WORKS (POTW), OTHER TREATMENT WORKS TREATING DOMESTIC SEWAGE (TWTDS), AND PUBLIC WATER SUPPLY TREATMENT PLANTS

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

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

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.

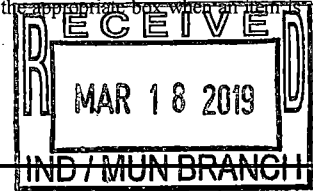
SECTION A - GENERAL INFORMATION

1. Facility Name: Robert M. Hames WTP
a. Operator Name: West Morgan East Lawrence Water & Sewer Authority
b. Is the operator identified in A.1.a, the owner of the facility? [X] Yes [ ] No
c. Name of Permittee\* if different than Operator:
2. NPDES Permit Number: AL 0077020
3. Facility Physical Location: (Attach a map with location marked; street, route no. or other specific identifier)
Street: 6505 County Road 400
City: Hillsboro County: Lawrence State: Alabama Zip: 45643
Facility Location (Front Gate): Latitude: 34.4516 Longitude: 87.1347
4. Facility Mailing Address: 2547 Kirby Bridge Road
City: Decatur County: Lawrence State: Alabama Zip: 35643
5. Responsible Official (as described on last page of this application):
Name and Title: Don Sims, General Manager
Address: 2547 Kirby Bridge Road
City: Decatur State: Alabama Zip: 35609
Phone Number: 2565-355-3746 Email Address: wmelsims@hiwaay.net

**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**

- |   |  |
|---|--|
| <input type="checkbox"/> Initial Permit Application for New Facility* | <input type="checkbox"/> Initial Permit Application for Existing Facility* |
| <input checked="" type="checkbox"/> Modification of Existing Permit   | <input type="checkbox"/> Reissuance of Existing Permit                     |
| <input type="checkbox"/> Revocation & Reissuance of Existing Permit   |  |
- \* An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.

**SECTION A – GENERAL INFORMATION**

- Facility Name: Robert M. Hames WTP  
 a. Operator Name: West Morgan East Lawrence Water & Sewer Authority  
 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: \_\_\_\_\_  
 \*Permittee will be responsible for compliance with the conditions of the permit .
- NPDES Permit Number: AL 0077020 (Not applicable if initial permit application)
- Facility Physical Location: (Attach a map with location marked; street, route no. or other specific identifier)  
 Street: 6505 County Road 400  
 City: Hillsboro County: Lawrence State: Alabama Zip: 45643  
 Facility Location (Front Gate): Latitude: 34.4516 Longitude: 87.1347
- Facility Mailing Address: 2547 Kirby Bridge Road  
 City: Decatur County: Lawrence State: Alabama Zip: 35643
- Responsible Official (as described on last page of this application):  
 Name and Title: Don Sims, General Manager  
 Address: 2547 Kirby Bridge Road  
 City: Decatur State: Alabama Zip: 35609  
 Phone Number: 2565-355-3746 Email Address: wmelsims@hiwaay.net

6. Designated Facility/DMR Contact:

Name and Title: Don Sims, General Manager

Phone Number: 256-355-3746

Email Address: wmelsims@hiwaay.net

7. Designated Emergency Contact:

Name and Title: Jeaniece Slater, Assistant General Manager

Phone Number: 256-612-1750

Email Address: wmelwtp@hiwaay.net

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:

<u>Permit Type</u>	<u>Permit Number</u>	<u>Held By</u>
NPDES Permit	AL0077020	West Morgan East Lawrence Water & Sewer Authority

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):

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

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*
Thickened sludge from water system filter backwash	5480 lbs/day	Dewatered sludge transported to landfill for disposal

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



---

**SECTION F – ANTI-DEGRADATION EVALUATION**

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

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

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

If yes, do not complete this section.

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

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

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

see attached

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

see attached

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

see attached

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

see attached

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

see attached

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

see attached

---

**SECTION G – EPA Application Forms**

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

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

**SECTION H- ENGINEERING REPORT/BMP PLAN REQUIREMENTS**

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

**SECTION I- RECEIVING WATERS**

Outfall No.	Receiving Water(s)	303(d) Segment?		Included in TMDL?*	
DSN0011	Tennessee River	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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

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

**SECTION J - APPLICATION CERTIFICATION**

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

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

Signature of Responsible Official: Don Sims Date Signed: 3/18/19

Name and Title: Don Sims, General Manager

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

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

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

Phone Number: \_\_\_\_\_ Email Address: \_\_\_\_\_


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

- (1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:
  - (a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;
  - (b) In the case of a partnership, by a general partner;
  - (c) In the case of a sole proprietorship, by the proprietor; or
  - (d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
AL0077020

Form Approved.  
OMB No. 2040-0086.  
Approval expires 3-31-98.

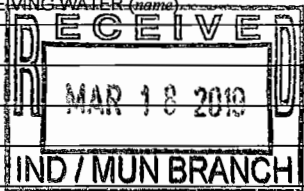
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**FORM 2C NPDES**  **U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER**  
**EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS**  
*Consolidated Permits Program*

**I. OUTFALL LOCATION**

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
0011	34.00	45.00	16.00	87.00	13.00	47.00	Tennessee River



**II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES**

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1
DSN001 1	Flocculation & Settling	0.37 MGD	Clarification, settling	
			Sludge Thickening	I-G
	Membrane Filtration	0.57 MGD	Decant will go through	I-U
	Backwash, Flush, EFM & CIP		sand filtration prior to discharge	5-L
		Solids will be landfilled	5-Q	
			4-A	
DSN001 1	Reverse Osmosis	1.77 MGD	Granular Activated Carbon	2-A
			adsorption, followed	4-A
			by surface water	
			discharge	
		Two way waste streams	4-A	
		above will be blended prior		
		to discharge		

OFFICIAL USE ONLY (effluent guidelines sub-categories)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?  
 YES (complete the following table)  NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				C. DURATION (in days)
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		B. TOTAL VOLUME (specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?  
 YES (complete Item III-B)  NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?  
 YES (complete Item III-C)  NO (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.  
 YES (complete the following table)  NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.  
 MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
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CONTINUED FROM PAGE 2

**V. INTAKE AND EFFLUENT CHARACTERISTICS**

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.  
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
None			

**VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS**

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

YES (list all such pollutants below )

NO (go to Item VI-B)

Empty space for listing pollutants and sources.

**VII. BIOLOGICAL TOXICITY TESTING DATA**

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

YES (identify the test(s) and describe their purposes below)

NO (go to Section VIII)

**VIII. CONTRACT ANALYSIS INFORMATION**

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

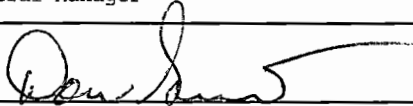
YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)

**IX. 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 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.

<p>A. NAME &amp; OFFICIAL TITLE (type or print)</p> <p>Don Sims, General Manager</p>	<p>B. PHONE NO. (area code &amp; no.)</p> <p>(256) 355-0149</p>
<p>C. SIGNATURE</p> 	<p>D. DATE SIGNED</p> <p>3/18/19</p>

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
AL0077020

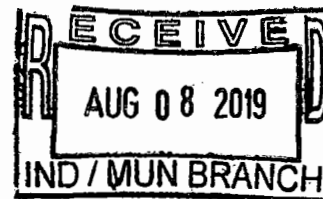
V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)	OUTFALL NO. 0011
--	---------------------

PART A --You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	0.95	1.426					1	mg/l	lbs			
b. Chemical Oxygen Demand (COD)	< 1.0	<2.377					1	mg/l	lbs			
c. Total Organic Carbon (TOC)	2.9	6.893					1	mg/l	lbs			
d. Total Suspended Solids (TSS)	17.5	42.03	17.5	42.03	12.21	26.63	12	mg/l	lbs			
e. Ammonia (as N)	0.013	0.020					1	mg/l	lbs			
f. Flow	VALUE 0.3170		VALUE 0.2760		VALUE 0.2513		365	MGD		VALUE		
g. Temperature (winter)	VALUE 19.0 C		VALUE 17.0 C		VALUE				°C	VALUE		
h. Temperature (summer)	VALUE 27.0 C		VALUE 24.0 C		VALUE				°C	VALUE		
i. pH	MINIMUM 7.0	MAXIMUM 7.9	MINIMUM 7.4	MAXIMUM 7.7			365	STANDARD UNITS				

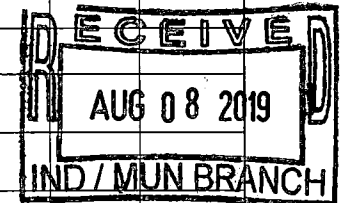
PART B -- Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	< 0.50	< 1.19					1	mg/l	lbs			
b. Chlorine, Total Residual	X		0.25	0.519	0.11	0.242	0.07	0.142	365	mg/l	lbs			
c. Color	X		54						1	ADMI				
d. Fecal Coliform		X	< 2						1	CFU100ml				
e. Fluoride (16984-48-8)		X	< 0.25	< 0.59					1	mg/l	lbs			
f. Nitrate-Nitrite (as N)	X		2.83	6.727					1	mg/l	lbs			



ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		0.54	1.284					1	mg/l	lbs			
h. Oil and Grease		X	< 1.4	<2.102					1	mg/l	lbs			
i. Phosphorus (as P), Total (7723-14-0)	X		0.19	0.466	0.19	0.466	0.08	0.186	13	mg/l	lbs			
j. Radioactivity														
(1) Alpha, Total	X		0.540+1.71						1	pCi/L				
(2) Beta, Total	X		-0.121+2.5						1	pCi/L				
(3) Radium, Total	X		0.188+0.20						1	pCi/L				
(4) Radium 226, Total	X		1.49+0.812						1	pCi/L				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		40.6	96.5					1	mg/l	lbs			
l. Sulfide (as S)	X		0.01	0.024					1	mg/l	lbs			
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	< 2.0	< 3.0					1	mg/l	lbs			
n. Surfactants		X	< 0.05	< 0.119					1	mg/l	lbs			
o. Aluminum, Total (7429-90-5)	X		3.91	9.587	3.91	9.587	2.56	5.650	13	mg/l	lbs			
p. Barium, Total (7440-39-3)	X		0.0211	0.05					1	mg/l	lbs			
q. Boron, Total (7440-42-8)		X	< 0.050	< 0.119					1	mg/l	lbs			
r. Cobalt, Total (7440-48-4)		X	< 0.0005	< 0.001					1	mg/l	lbs			
s. Iron, Total (7439-89-6)	X		0.288	0.680	0.288	0.680	0.138	0.302	13	mg/l	lbs			
t. Magnesium, Total (7439-95-4)	X		3.08	7.321					1	mg/l	lbs			
u. Molybdenum, Total (7439-98-7)		X	< 0.050	< 0.119					1	mg/l	lbs			
v. Manganese, Total (7439-96-5)	X		0.018	0.043					1	mg/l	lbs			
w. Tin, Total (7440-31-5)		X	< 0.050	< 0.119					1	mg/l	lbs			
x. Titanium, Total (7440-32-6)	X		0.0031	0.007					1	mg/l	lbs			



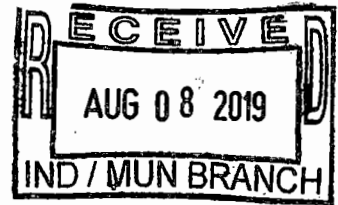


EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
AL0077020	0011

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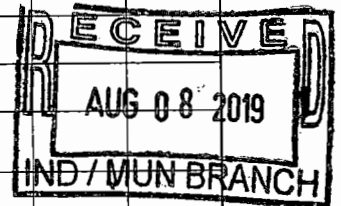
**PART C -** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)			X	< 0.0005	<0.001					1	mg/l	lbs			
2M. Arsenic, Total (7440-38-2)			X	< 0.0005	<0.001					1	mg/l	lbs			
3M. Beryllium, Total (7440-41-7)			X	< 0.0005	<0.001					1	mg/l	lbs			
4M. Cadmium, Total (7440-43-9)			X	< 0.0005	<0.001					1	mg/l	lbs			
5M. Chromium, Total (7440-47-3)			X	< 0.0005	<0.001					1	mg/l	lbs			
6M. Copper, Total (7440-50-8)		X		0.0015	0.004					1	mg/l	lbs			
7M. Lead, Total (7439-92-1)			X	< 0.0005	<0.001					1	mg/l	lbs			
8M. Mercury, Total (7439-97-6)		X		1.67	1.14					1	ng/l	mg			
9M. Nickel, Total (7440-02-0)		X		0.0005	0.001					1	mg/l	lbs			
10M. Selenium, Total (7782-49-2)			X	< 0.0005	<0.001					1	mg/l	lbs			
11M. Silver, Total (7440-22-4)			X	< 0.0005	<0.001					1	mg/l	lbs			
12M. Thallium, Total (7440-28-0)			X	< 0.0010	<0.002					1	mg/l	lbs			
13M. Zinc, Total (7440-66-6)			X	< 0.0010	<0.002					1	mg/l	lbs			
14M. Cyanide, Total (57-12-5)			X	< 0.010	< 0.01					1	mg/l	lbs			
15M. Phenols, Total			X	< 0.10	< 0.15					1	mg/l	lbs			
<b>DIOXIN</b>															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS Not Detected											



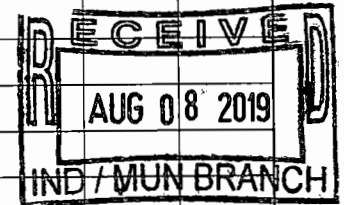
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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION.	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X	< 0.100	<0.238					1	mg/l	lbs			
2V. Acrylonitrile (107-13-1)			X	< 0.100	<0.238					1	mg/l	lbs			
3V. Benzene (71-43-2)			X	< 0.005	<0.012					1	mg/l	lbs			
4V. Bis (Chloro- methyl) Ether (542-88-1)			X	< 0.100	<0.238					1	mg/l	lbs			
5V. Bromoform (75-25-2)			X	< 0.005	<0.012					1	mg/l	lbs			
6V. Carbon Tetrachloride (56-23-5)			X	< 0.005	<0.012					1	mg/l	lbs			
7V. Chlorobenzene (108-90-7)			X	< 0.005	<0.012					1	mg/l	lbs			
8V. Chlorodi- bromomethane (124-48-1)			X	< 0.005	<0.012					1	mg/l	lbs			
9V. Chloroethane (75-00-3)			X	< 0.010	<0.024					1	mg/l	lbs			
10V. 2-Chloro- ethylvinyl Ether (110-75-8)			X	< 0.010	<0.024					1	mg/l	lbs			
11V. Chloroform (67-66-3)			X	< 0.005	<0.012					1	mg/l	lbs			
12V. Dichloro- bromomethane (75-27-4)			X	< 0.005	<0.012					1	mg/l	lbs			
13V. Dichloro- difluoromethane (75-71-8)			X	< 0.010	<0.024					1	mg/l	lbs			
14V. 1,1-Dichloro- ethane (75-34-3)			X	< 0.005	<0.012					1	mg/l	lbs			
15V. 1,2-Dichloro- ethane (107-06-2)			X	< 0.005	<0.012					1	mg/l	lbs			
16V. 1,1-Dichloro- ethylene (75-35-4)			X	< 0.005	<0.012					1	mg/l	lbs			
17V. 1,2-Dichloro- propane (78-87-5)			X	< 0.005	<0.012					1	mg/l	lbs			
18V. 1,3-Dichloro- propylene (542-75-6)			X	< 0.010	<0.024					1	mg/l	lbs			
19V. Ethylbenzene (100-41-4)			X	< 0.005	<0.012					1	mg/l	lbs			
20V. Methyl Bromide (74-83-9)			X	< 0.010	<0.024					1	mg/l	lbs			
21V. Methyl Chloride (74-87-3)			X	< 0.005	<0.012					1	mg/l	lbs			



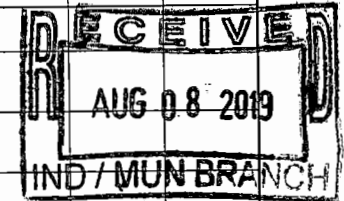
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	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)			X	< 0.005	<0.012					1	mg/l	lbs			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	< 0.005	<0.012					1	mg/l	lbs			
24V. Tetrachloroethylene (127-18-4)			X	< 0.005	<0.012					1	mg/l	lbs			
25V. Toluene (108-88-3)			X	< 0.005	<0.012					1	mg/l	lbs			
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	< 0.005	<0.012					1	mg/l	lbs			
27V. 1,1,1-Trichloroethane (71-55-6)			X	< 0.005	<0.012					1	mg/l	lbs			
28V. 1,1,2-Trichloroethane (79-00-5)			X	< 0.005	<0.012					1	mg/l	lbs			
29V Trichloroethylene (79-01-6)			X	< 0.005	<0.012					1	mg/l	lbs			
30V. Trichlorofluoromethane (75-69-4)			X	< 0.010	<0.024					1	mg/l	lbs			
31V. Vinyl Chloride (75-01-4)			X	< 0.002	<0.005					1	mg/l	lbs			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	< 0.010	<0.024					1	mg/l	lbs			
2A. 2,4-Dichlorophenol (120-83-2)			X	< 0.010	<0.024					1	mg/l	lbs			
3A. 2,4-Dimethylphenol (105-67-9)			X	< 0.010	<0.024					1	mg/l	lbs			
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	< 0.050	<0.119					1	mg/l	lbs			
5A. 2,4-Dinitrophenol (51-28-5)			X	< 0.050	<0.119					1	mg/l	lbs			
6A. 2-Nitrophenol (88-75-5)			X	< 0.010	<0.024					1	mg/l	lbs			
7A. 4-Nitrophenol (100-02-7)			X	< 0.050	<0.119					1	mg/l	lbs			
8A. P-Chloro-M-Cresol (59-50-7)			X	< 0.010	<0.024					1	mg/l	lbs			
9A. Pentachlorophenol (87-86-5)			X	< 0.025	<0.059					1	mg/l	lbs			
10A. Phenol (108-95-2)			X	< 0.010	<0.024					1	mg/l	lbs			
11A. 2,4,6-Trichlorophenol (88-05-2)			X	< 0.010	<0.024					1	mg/l	lbs			



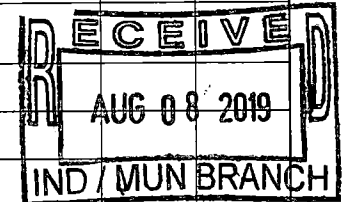
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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	< 0.010	<0.024					1	mg/l	lbs			
2B. Acenaphthylene (208-96-8)			X	< 0.010	<0.024					1	mg/l	lbs			
3B. Anthracene (120-12-7)			X	< 0.010	<0.024					1	mg/l	lbs			
4B. Benzidine (92-87-5)			X	< 0.050	<0.119					1	mg/l	lbs			
5B. Benzo (a) Anthracene (56-55-3)			X	< 0.010	<0.024					1	mg/l	lbs			
6B. Benzo (a) Pyrene (50-32-8)			X	< 0.010	<0.024					1	mg/l	lbs			
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	< 0.010	<0.024					1	mg/l	lbs			
8B. Benzo (ghi) Perylene (191-24-2)			X	< 0.010	<0.024					1	mg/l	lbs			
9B. Benzo (k) Fluoranthene (207-08-9)			X	< 0.010	<0.024					1	mg/l	lbs			
10B. Bis (2-Chloro-ethoxy) Methane (111-91-1)			X	< 0.010	<0.024					1	mg/l	lbs			
11B. Bis (2-Chloro-ethyl) Ether (111-44-4)			X	< 0.010	<0.024					1	mg/l	lbs			
12B. Bis (2-Chloroisopropyl) Ether (102-80-1)			X	< 0.010	<0.024					1	mg/l	lbs			
13B. Bis (2-Ethyl-hexyl) Phthalate (117-81-7)			X	< 0.010	<0.024					1	mg/l	lbs			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	< 0.010	<0.024					1	mg/l	lbs			
15B. Butyl Benzyl Phthalate (85-68-7)			X	< 0.010	<0.024					1	mg/l	lbs			
16B. 2-Chloro-naphthalene (91-58-7)			X	< 0.010	<0.024					1	mg/l	lbs			
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	< 0.010	<0.024					1	mg/l	lbs			
18B. Chrysene (218-01-9)			X	< 0.010	<0.024					1	mg/l	lbs			
19B. Dibenzo (a,h) Anthracene (53-70-3)			X	< 0.010	<0.024					1	mg/l	lbs			
20B. 1,2-Dichloro-benzene (95-50-1)			X	< 0.005	<0.012					1	mg/l	lbs			
21B. 1,3-Di-chloro-benzene (541-73-1)			X	< 0.005	<0.012					1	mg/l	lbs			



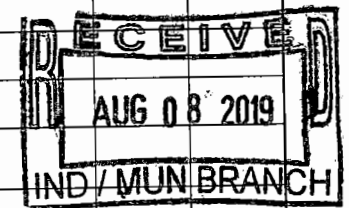
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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)			X	< 0.005	< 0.012					1	mg/l	lbs			
23B. 3,3-Dichlorobenzidine (91-94-1)			X	< 0.020	< 0.048					1	mg/l	lbs			
24B. Diethyl Phthalate (84-66-2)			X	< 0.010	< 0.024					1	mg/l	lbs			
25B. Dimethyl Phthalate (131-11-3)			X	< 0.010	< 0.024					1	mg/l	lbs			
26B. Di-N-Butyl Phthalate (84-74-2)			X	< 0.010	< 0.024					1	mg/l	lbs			
27B. 2,4-Dinitrotoluene (121-14-2)			X	< 0.010	< 0.024					1	mg/l	lbs			
28B. 2,6-Dinitrotoluene (606-20-2)			X	< 0.010	< 0.024					1	mg/l	lbs			
29B. Di-N-Octyl Phthalate (117-84-0)			X	< 0.010	< 0.024					1	mg/l	lbs			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X	< 0.050	< 0.119					1	mg/l	lbs			
31B. Fluoranthene (206-44-0)			X	< 0.010	< 0.024					1	mg/l	lbs			
32B. Fluorene (86-73-7)			X	< 0.010	< 0.024					1	mg/l	lbs			
33B. Hexachlorobenzene (118-74-1)			X	< 0.010	< 0.024					1	mg/l	lbs			
34B. Hexachlorobutadiene (87-68-3)			X	< 0.010	< 0.024					1	mg/l	lbs			
35B. Hexachlorocyclopentadiene (77-47-4)			X	< 0.010	< 0.024					1	mg/l	lbs			
36B Hexachloroethane (67-72-1)			X	< 0.010	< 0.024					1	mg/l	lbs			
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X	< 0.010	< 0.024					1	mg/l	lbs			
38B. Isophorone (78-59-1)			X	< 0.010	< 0.024					1	mg/l	lbs			
39B. Naphthalene (91-20-3)			X	< 0.010	< 0.024					1	mg/l	lbs			
40B. Nitrobenzene (98-95-3)			X	< 0.010	< 0.024					1	mg/l	lbs			
41B. N-Nitrosodimethylamine (62-75-9)			X	< 0.010	< 0.024					1	mg/l	lbs			
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	< 0.010	< 0.024					1	mg/l	lbs			



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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitrosodiphenylamine (86-30-6)			X	<0.010	<0.024					1	mg/l	lbs			
44B. Phenanthrene (85-01-8)			X	< 0.025	<0.059					1	mg/l	lbs			
45B. Pyrene (129-00-0)			X	< 0.010	<0.024					1	mg/l	lbs			
46B. 1,2,4-Trichlorobenzene (120-82-1)			X	< 0.010	<0.024					1	mg/l	lbs			
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	< 0.0001	<0.001					1	mg/l	lbs			
2P. α-BHC (319-84-6)			X	< 0.0001	<0.001					1	mg/l	lbs			
3P. β-BHC (319-85-7)			X	< 0.0001	<0.001					1	mg/l	lbs			
4P. γ-BHC (58-89-9)			X	< 0.0001	<0.001					1	mg/l	lbs			
5P. δ-BHC (319-86-8)			X	< 0.0001	<0.001					1	mg/l	lbs			
6P. Chlordane (57-74-9)			X	< 0.0005	<0.001					1	mg/l	lbs			
7P. 4,4'-DDT (50-29-3)			X	< 0.0001	<0.001					1	mg/l	lbs			
8P. 4,4'-DDE (72-55-9)			X	< 0.0001	<0.001					1	mg/l	lbs			
9P. 4,4'-DDD (72-54-8)			X	< 0.0001	<0.001					1	mg/l	lbs			
10P. Dieldrin (60-57-1)			X	< 0.0001	<0.001					1	mg/l	lbs			
11P. α-Endosulfan (115-29-7)			X	< 0.0001	<0.001					1	mg/l	lbs			
12P. β-Endosulfan (115-29-7)			X	< 0.0001	<0.001					1	mg/l	lbs			
13P. Endosulfan Sulfate (1031-07-8)			X	< 0.0001	<0.001					1	mg/l	lbs			
14P. Endrin (72-20-8)			X	< 0.0001	<0.001					1	mg/l	lbs			
15P. Endrin Aldehyde (7421-93-4)			X	< 0.0001	<0.001					1	mg/l	lbs			
16P. Heptachlor (76-44-8)			X	< 0.0001	<0.001					1	mg/l	lbs			



EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
AL0077020	0011

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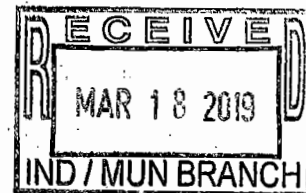
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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X	< 0.0001	<0.001					1	mg/l	lbs			
18P. PCB-1242 (53469-21-9)			X	< 0.0010	<0.002					1	mg/l	lbs			
19P. PCB-1254 (11097-69-1)			X	< 0.0010	<0.002					1	mg/l	lbs			
20P. PCB-1221 (11104-28-2)			X	< 0.0020	<0.005					1	mg/l	lbs			
21P. PCB-1232 (11141-16-5)			X	< 0.0010	<0.002					1	mg/l	lbs			
22P. PCB-1248 (12672-29-6)			X	< 0.0010	<0.002					1	mg/l	lbs			
23P. PCB-1260 (11096-82-5)			X	< 0.0010	<0.002					1	mg/l	lbs			
24P. PCB-1016 (12674-11-2)			X	< 0.0010	<0.002					1	mg/l	lbs			
25P. Toxaphene (8001-35-2)			X	< 0.0020	<0.005					1	mg/l	lbs			



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WATER AND SEWER AUTHORITY  
ROBERT M. HAMES WATER TREATMENT PLANT  
REVERSE OSMOSIS TREATMENT PROCESS  
ANTI-DEGRADATION REPORT**



**WEST MORGAN – EAST LAWRENCE WATER AND SEWER AUTHORITY  
ROBERT M. HAMES WATER TREATMENT PLANT  
REVERSE OSMOSIS TREATMENT PROCESS  
ANTI-DEGRADATION REPORT**



In accordance with 40 CFR 131.12 and the Alabama Department of Environmental Management Administrative Code, Section 336-6-10-.04 for anti-degradation, the following report for the Robert M. Hames Water Treatment Plant is hereby submitted with Permit Application Form 188 to ADEM for comment and approval.

**ALTERNATIVES ANALYSIS FOR ROBERT M. HAMES WATER TREATMENT PLANT**

**1.0 INTRODUCTION**

The West Morgan East Lawrence Water and Sewer Authority (“the Authority”) is planning to construct a Reverse Osmosis water treatment process at its Robert M. Hames Water Treatment Plant (“the Hames WTP”), which will require modification of the current NPDES Discharge Permit Number AL0077020 to include the Reverse Osmosis Waste Stream. The plant is currently owned, operated and maintained by the Authority. The approximate location of the existing plant and discharge point are indicated on the attached USGS Quadrangle map. (See Exhibit 1).

The purpose for constructing the Reverse Osmosis water treatment process is to remove perfluorinated compounds from the drinking water utilizing the best available technology and the most economical solution. These man-made chemicals have been discharged into the Tennessee River upstream of the Hames Water Treatment Plant intake, and must be removed to comply with the current EPA Health Advisory. Several alternatives to the Reverse Osmosis water treatment process were considered, but were eliminated due to widespread PFAS contamination of the Tennessee River, prohibitive capital and/or operational costs, regulatory considerations, water quality considerations of adjacent water producing systems, and treatment process effectiveness on not only PFOA and PFOS but also on other PFASs detected in the Authority’s source water. Ultimately, pilot testing revealed that Reverse Osmosis would be the most cost effective and best available technology for removal of PFAS from the Authority’s water supply. The constructed facility will provide the highest quality drinking water possible with current technology to persons in Lawrence, Morgan, Colbert, Cullman, and Winston Counties in north Alabama.

The Reverse Osmosis treatment facility will be owned, operated, and maintained by the West Morgan East Lawrence Water and Sewer Authority. It will be constructed to initially produce 10.33 million gallons per day of potable water and be expandable to a maximum production capacity of 16 million gallons per day. The Reverse Osmosis treatment process will generate a liquid waste stream in addition to the alum sludge waste stream generated through the normal water treatment plant processes. In the absence of water quality standards for PFAS compounds, the Authority intends to implement significant liquid waste stream treatment measures to minimize the discharge of PFAS back into the Tennessee River. This Anti-Degradation Report summarizes that waste stream treatment process and the anticipated costs.



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**2.0 REVERSE OSMOSIS WASTE STREAM COMPONENTS AND VOLUME**

The waste stream from the entire Hames Water Treatment Plant at full buildout (16 MGD) will be approximately 2.68 million gallons per day and will consist of the following components:

<b>Component</b>	<b>Approx. Volume (MGD)</b>
Settling Basin – Alum Sludge	0.37
Membrane Filters – Backwash Water + EFM/CIP Waste	0.57
Reverse Osmosis – Reject Water	1.77
[ Solids Disposal at Landfill ]	[ 0.035 ]
<b>TOTAL – ALL PROCESSES</b>	<b>2.68 MGD</b>

The treated waste stream will discharge back into the Tennessee River at the existing discharge location, which will remain. Exhibit 2 to this report shows the anticipated process flow diagram at full buildout.

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**3.0 WASTE STREAM DISPOSAL ALTERNATIVES ANALYSIS**

Multiple alternatives for treatment and disposal of the waste stream were considered, including but not necessarily limited to:

- Land Application
- Pretreatment and Discharge to a POTW
- Relocation of the Discharge Point
- Reuse / Recycle
- Process / Treatment Alternatives
- On Site Treatment / Subsurface Disposal
- On Site Treatment / Surface Water Disposal

A brief summary of each alternative along with cost estimates when appropriate is included below. It should be noted that these cost estimates are only for the waste stream treatment alternative being evaluated, and do not include the cost of the Reverse Osmosis water treatment process.

**3.01 Land Application**

Because the waste stream is known to contain PFAS compounds, land application creates an unacceptable liability to the Authority and an unnecessary risk to the environment. As such, this alternative is non-viable.

**3.02 Pretreatment and Discharge to a POTW**

The closest POTW to the Hames WTP is the Authority's Mallard Fox West WWTP, located approximately 20 miles away. The POTW has a permitted capacity of 990,000 gallons per day and would require significant upgrades in order to process the flow. The capital and annual operational costs are estimated as follows:

<b>CAPITAL COST ITEM</b>	<b>ESTIMATED COST</b>
Pumping Station	\$600,000
12" Force Main (20 miles @ \$30/LF)	\$3,168,000
2.68 MGD Mallard Fox West WWTP Expansion	\$13,400,000
ADEM, ALDOT, and Railroad Permitting plus Engineering	\$1,800,000
<b>ESTIMATED CAPITAL COST</b>	<b>\$18,968,000</b>
<b>ANNUAL OPERATIONAL COST ITEM</b>	<b>ESTIMATED COST</b>
Power Costs	\$98,000
Pump Station Maintenance	\$25,000
Wastewater Treatment Costs (\$4.55/1,000 gallons)	\$4,450,810
<b>ESTIMATED ANNUAL OPERATIONAL COST</b>	<b>\$4,573,810</b>
<i>* Note that these costs are only for the waste stream treatment process and do not include any costs associated with the Reverse Osmosis water treatment process.</i>	

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**3.03 Relocation of the Discharge Point**

The current discharge point is located on the Hames WTP site and discharges directly into the Tennessee River. Any relocation of the discharge point would simply be to a different point on the River, and would incur unnecessary capital costs for no benefit to the project or the environment. As such, this alternative is non-viable.

**3.04 Reuse/Recycle**

Consideration was given to installing a Reverse Osmosis waste stream treatment skid, which would allow the waste stream from the Reverse Osmosis process to be reduced by approximately 90% if the processed water could be returned to the head of the WTP. However, the Filter Backwash Rule strictly prohibits waste stream recycling as part of the water treatment process, therefore this alternative is non-viable.

**3.05 Process/Treatment Alternatives**

The proposed waste stream treatment alternative includes clarification, decanting, and carbon filtration. At this time, there are no other known viable waste stream treatment alternatives other than Reverse Osmosis, the use of which is eliminated by the Filter Backwash Rule. As such, this alternative is non-viable.

**3.06 On Site Treatment / Subsurface Disposal**

Because the waste stream is known to contain PFAS compounds, subsurface disposal creates an unacceptable liability to the Authority and an unnecessary risk to the environment. As such, this alternative is non-viable.

**3.07 On Site Treatment / Surface Water Discharge**

The following on site treatment process is currently proposed:

- The existing abandoned MIEX contactors will be converted to additional backwash clarification and sludge thickening facilities. The waste stream from the existing flocculators, the existing settling basins, and from the membrane filtration process will be clarified and thickened, then solids concentrated via a screw press or similar equipment. Solids will continue to be disposed of at an ADEM-specified landfill as they are currently.
- The decant from the clarifier and the filtrate from the screw press will be sent through the existing sludge drying beds, which will act as a polishing gravity sand filter. The total volume of this waste stream is estimated to be 0.9 MGD.
- The existing temporary GAC contactors will be relocated to near the existing sludge drying beds.
- The waste stream from the Reverse Osmosis treatment process will be processed through the GAC contactors with an EBCT in excess of 30 minutes. Manufacturer data shows that this will remove the current PFASs of concern to nondetectable levels as well as multiple other PFASs. The total volume of this waste stream is estimated to be 1.77 MGD.
- The two waste streams will be blended prior to discharge from the existing discharge point back into the Tennessee River. The total volume of all waste streams at the ultimate 16 MGD capacity of the Hames WTP is estimated to be 2.68 MGD.

The capital and annual operational costs are estimated as follows:

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<b>CAPITAL COST ITEM</b>	<b>ESTIMATED COST</b>
MIEX Contactors Demolition and Retrofit	\$1,000,000
Screw Press (or similar equipment)	\$550,000
Relocate Existing GAC Contactors	\$450,000
Sludge Drying Bed and Yard Piping Modifications	\$450,000
<b>ESTIMATED CAPITAL COST</b>	<b>\$2,450,000</b>
<b>ANNUAL OPERATIONAL COST ITEM</b>	<b>ESTIMATED COST</b>
Power Cost	\$98,000
Polymer Cost	\$48,000
Sludge Hauling – Est. 1,000 tons/yr @ \$25/ ton	\$25,000
Sludge Disposal - \$169/ton + 9.5% Security Tax	\$185,055
GAC Replacement	\$300,000
Sand Filter Media Replacement	\$20,000
Equipment Maintenance	\$25,000
Sampling and Testing	\$17,000
<b>ESTIMATED ANNUAL OPERATIONAL COST</b>	<b>\$718,055</b>
<i>* Note that these costs are only for the waste stream treatment process and do not include any costs associated with the Reverse Osmosis water treatment process.</i>	

WEST MORGAN EAST LAWRENCE  
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 ROBERT M. HAMES WATER TREATMENT PLANT  
 REVERSE OSMOSIS TREATMENT PROCESS  
 ANTI-DEGRADATION REPORT



3.1 ADEM Form 311

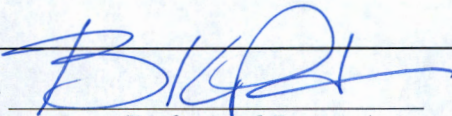
Attachment 1 to Supplementary Form ADEM Form 311

*Alternatives Analysis Applicant/Project: Hames WTP R-O Process*

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

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

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: MARCH 14, 2019

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

- NOTES:**
1. See Paragraphs 3.2 and 3.3 for Annualized Costs of selected alternatives.
  2. See Exhibit 3 for responses to the Social and Economic Importance questions.

**3.2 ADEM FORM 313 - ANNUALIZED PROJECT COST FOR PRETREATMENT OF REVERSE OSMOSIS WASTE STREAM AND DISCHARGE TO A POTW**

**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)	\$ 18,968,000 (1)
Interest rate for Financing (Expressed as a decimal)	.04 (i)
Time Period of Financing (Assume 10 years*)	10 years (n)
Annualization Factor = $\frac{i}{(1+i)^{10}-1} + i$ (2)	0.1233
Annualized Capital Cost [Calculate: (1) x (2)]	\$ 2,338,754 (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	\$ 4,573,810 (n)
<b>Total Annual Cost of Pollution Control Project [ (3) + (4) ]</b>	<b>\$ 6,912,564 (5)</b>

\* 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

**NOTE: THIS ANNUALIZED COST IS FOR THE TREATMENT OF THE WASTE STREAM ONLY. IT DOES NOT INCLUDE ANY COSTS ASSOCIATED WITH THE REVERSE OSMOSIS WATER TREATMENT PROCESS.**

**3.3 ADEM FORM 313 - ANNUALIZED PROJECT COST FOR ON SITE TREATMENT OF REVERSE OSMOSIS WASTE STREAM AND SURFACE WATER DISCHARGE TO THE TENNESSEE RIVER**

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

Capital Costs to be Financed (Supplied by applicant)	<u>\$ 2,450,000 (1)</u>
Interest rate for Financing (Expressed as a decimal)	<u>.04 (i)</u>
Time Period of Financing (Assume 10 years*)	<u>10 years (n)</u>
Annualization Factor = $\frac{i}{(1+i)^{10}-1} + i$ (2)	<u>0.1233</u>
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 302,085 (3)</u>
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 718,055 (n)</u>
	<u>\$ 1,020,140 (5)</u>
<b>Total Annual Cost of Pollution Control Project [ (3) + (4) ]</b>	

\* 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

**NOTE: THIS ANNUALIZED COST IS FOR THE TREATMENT OF THE WASTE STREAM ONLY. IT DOES NOT INCLUDE ANY COSTS ASSOCIATED WITH THE REVERSE OSMOSIS WATER TREATMENT PROCESS.**

**WEST MORGAN EAST LAWRENCE  
WATER AND SEWER AUTHORITY  
ROBERT M. HAMES WATER TREATMENT PLANT  
REVERSE OSMOSIS TREATMENT PROCESS  
ANTI-DEGRADATION REPORT**



**4.0 SUMMARY**

The Robert M. Hames Water Treatment Plant is located on County Road 400 in Lawrence County, Alabama, due north of the town of Hillsboro. The plant processes raw water from the Tennessee River that has been contaminated by the discharge of man-made PFAS compounds into the River. The West Morgan East Lawrence Water & Sewer Authority is planning to construct a Reverse Osmosis treatment process at the Hames WTP to remove these compounds from the drinking water.

Several alternatives to the Reverse Osmosis water treatment process were considered, but were eliminated due to widespread contamination of the Tennessee River, prohibitive capital and/or operational costs, regulatory considerations, water quality considerations, and treatment process effectiveness. Ultimately, pilot testing revealed that Reverse Osmosis would be the most cost effective and best available technology for removal of PFAS from the water supply.

As a result of adding the Reverse Osmosis process, the volume of waste from the Hames WTP will increase and, therefore, the NPDES discharge permit for the Hames WTP must be modified accordingly. This Anti-Degradation Report is required as part of that permit modification process, and explains in detail the alternatives that were considered for treatment of the new waste stream. Multiple alternatives for treatment and disposal of the waste stream were considered, including but not necessarily limited to:

- Land Application
- Pretreatment and Discharge to a POTW
- Relocation of the Discharge Point
- Reuse/Recycle
- Process / Treatment Alternatives
- On Site Treatment / Subsurface Disposal
- On Site Treatment / Surface Water Disposal

All of the alternatives except for on site treatment and surface water disposal of the processed waste stream water were determined to be non-viable for one or more of the following reasons:

- Unacceptable environmental liability to the Authority
- Unnecessary risk to the environment
- Unnecessary capital costs
- Prohibitive capital and/or operational costs
- Regulatory prohibition (the Filter Backwash Rule)

The on site treatment of the WTP waste stream will consist of clarification, sludge dewatering, gravity sand filtration, and granular activated carbon contactors to adsorb PFAS in the waste stream. The estimated capital cost to install this system is approximately \$2,825,000.

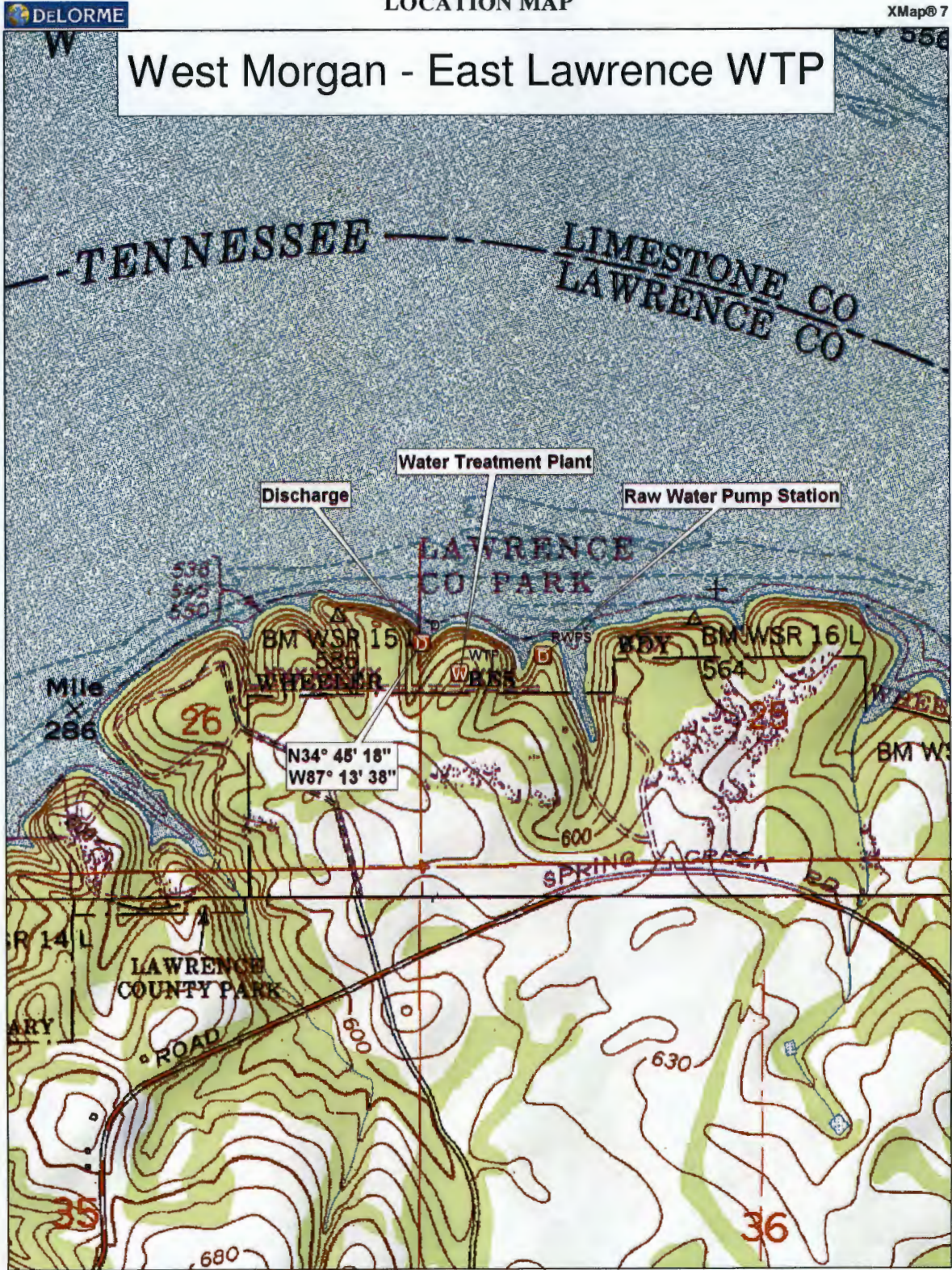
The Alabama Department of Environmental Management has notified the Authority that, "...in the absence of current water quality standards for PFAS the Department would expect that the permit would contain conditions for monitoring selected PFAS and implementation of feasible methods to minimize the discharge of PFAS." The waste stream treatment process described above is the most viable alternative to achieve this goal.



WEST MORGAN EAST LAWRENCE  
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 ROBERT M. HAMES WATER TREATMENT PLANT  
 REVERSE OSMOSIS TREATMENT PROCESS  
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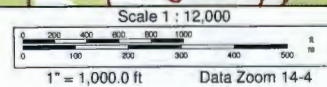
EXHIBIT 1  
 LOCATION MAP



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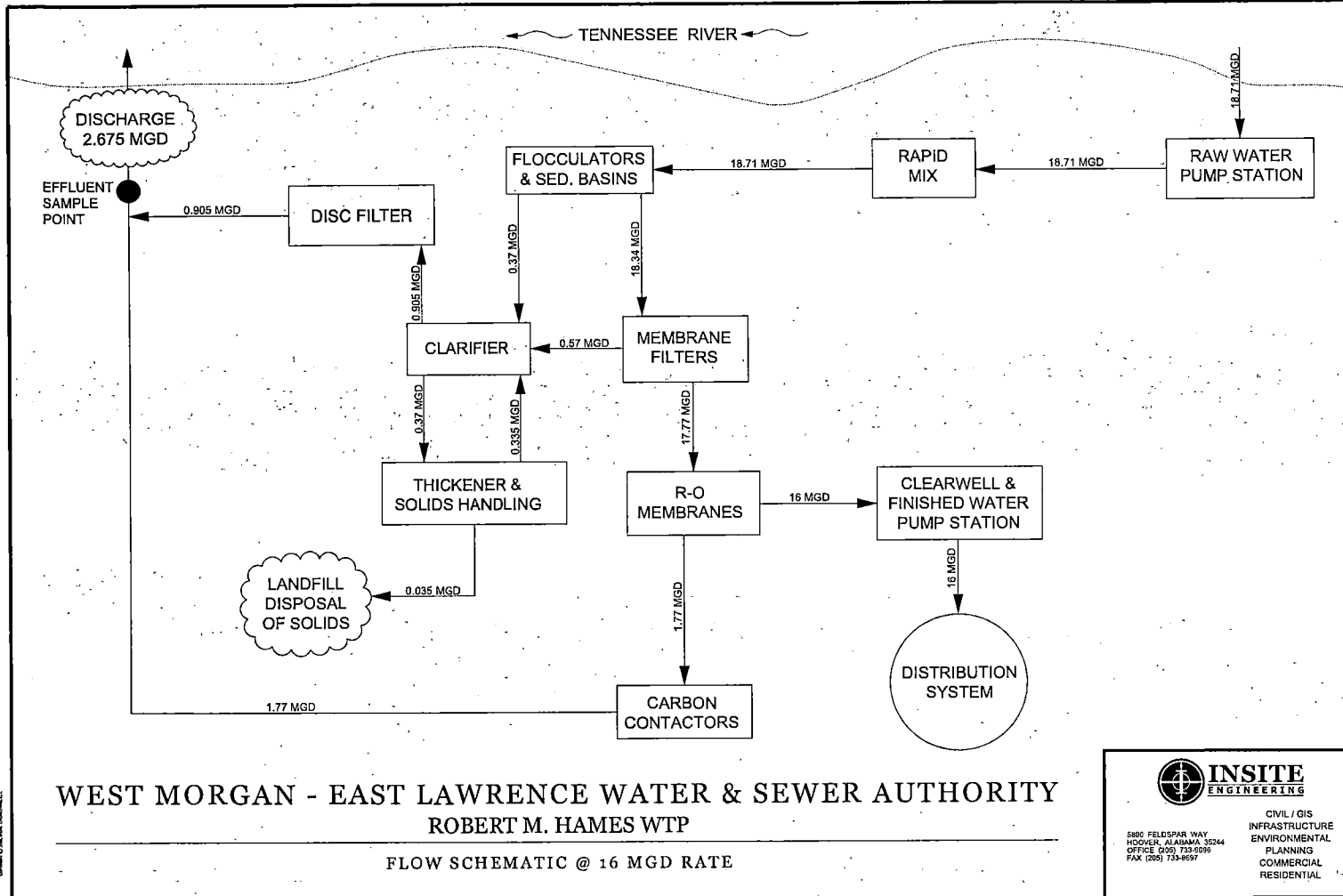
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EXHIBIT 2  
 PROCESS FLOW DIAGRAM





**EXHIBIT 3**  
**ANTI-DEGRADATION EVALUATION**  
**SOCIAL AND ECONOMIC IMPORTANCE DEMONSTRATION**

The following are responses to the social and economic importance questions included in Section F of ADEM Form 188, Item 2:

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

The discharger will be removing man-made chemical compounds from the potable water supply. These PFAS compounds have been discharged into the Tennessee River upstream of the Authority's drinking water intake and have been detected in the water supply at levels higher than recommended in EPA's Health Advisory. Additionally, the Reverse Osmosis process will remove additional PFAS compounds, including PFBS and GenX, which were not included in the Health Advisory, but for which EPA has recently published draft toxicity values, indicating that a Health Advisory may be issued in the future.

In the absence of water quality standards for PFAS, the discharger believes that it is moral and right to remove the PFAS compounds not only from the drinking water but also from the waste stream discharge to the maximum extent practical. To that end, the discharger plans to spend approximately \$2.825 million on clarification, sludge dewatering, gravity sand filtration, and granular activated carbon contactors to adsorb PFAS from the waste stream, resulting in reduced levels of these compounds in the Tennessee River.

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

At this time, it appears that the discharger will need to increase employment by two Grade 4 operators and one laborer. In addition, the discharger has already created the position of Compliance Officer and will be filling that position as a result of this project. A total of four full time positions will be created.

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

The discharger is avoiding a reduction of approximately 25 full time positions by selecting this alternative in lieu of other alternatives that were evaluated, such as merging with a nearby utility.

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

None. As a public utility, the discharger is tax exempt.

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

The discharger will be providing high quality potable water to over 100,000 residents of north Alabama.

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

The discharger will be restoring public confidence in the potable water supply that was damaged after the contamination of the Tennessee River was discovered. Individuals who are currently purchasing bottled water for cooking and consumption will be able to confidently return to the public water supply for these uses. The ultra-high quality of the drinking water to be produced may also spur economic activity and expansion in the industrial parks located on the discharger's water system.