



Alabama Department of Environmental Management  
adem.alabama.gov

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MARCH 28, 2024

MR ROBERT WILLIAMS  
SVP GEN PROJECTS & FLEET SERVICES  
TENNESSEE VALLEY AUTHORITY  
1101 MARKET STREET LP 5C-C  
CHATTANOOGA TENNESSEE 37402

**RE: DRAFT PERMIT  
NPDES PERMIT NUMBER AL0003891  
TVA ENVIRONMENTAL RESEARCH CENTER**

Dear Mr. Williams:

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.

Our records indicate that you have utilized the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs). The Department transitioned from the E2 Reporting System to the Alabama Environmental Permitting and Compliance System (AEPACS) for the submittal of DMRs on November 15, 2021. AEPACS is an electronic system that allows facilities to apply for and maintain permits as well as submit other required applications, registrations, and certifications. In addition, the system allows facilities to submit required compliance reports or other information to the Department. The Department has used the E2 User account information to set up a similar User Profile in AEPACS based on the following criteria:

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

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

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.

If you have questions regarding this permit or monitoring requirements, please contact Theo Pinson by e-mail at [tpinson@adem.alabama.gov](mailto:tpinson@adem.alabama.gov) or by phone at (334) 274-4202.

Sincerely,

Scott Ramsey, Chief  
Industrial/Municipal Branch  
Water Division

Enclosure: Draft Permit

pc via website: Montgomery Field Office  
EPA Region IV  
U.S. Fish & Wildlife Service  
AL Historical Commission  
Advisory Council on Historic Preservation  
Department of Conservation and Natural Resources





# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

**PERMITTEE:** TENNESSEE VALLEY AUTHORITY

**FACILITY LOCATION:** TVA ENVIRONMENTAL RESEARCH CENTER  
RESERVATION ROAD  
MUSCLE SHOALS, ALABAMA 35662  
COLBERT COUNTY

**PERMIT NUMBER:** AL0003891

**RECEIVING WATERS:** 001 - POND CREEK  
002 - POND CREEK

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

**ISSUANCE DATE:**

**EFFECTIVE DATE:**

**EXPIRATION DATE:**

**DRAFT**

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Alabama Department of Environmental Management

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

**A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS**

**DSN 0011: Stormwater runoff associated with operation of a service shop, stormwater discharges from elemental phosphorus and ash settling pond SWMU104, and stormwater runoff associated with a site used for environmental and energy research and development**

**DSN 0021: Stormwater runoff associated with operation of a service shop and stormwater runoff associated with a site used for environmental and energy research and development**

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee’s application. Such discharges shall be limited and monitored by the Permittee as specified below: 3/ 4/

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency <sup>2</sup>	Sample Type <sup>1</sup>	Seasonal
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Monthly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Monthly	Grab	All Months
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Monthly	Instantaneous	All Months

**THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.**

- 1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.
- 2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.
- 3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.
- 4/ Outfall DSN 001 has been deemed representative of discharges from Outfall DSN 002. Monitoring is required at Outfall DSN 001. Monitoring is not required at Outfall DSN 002.

**DSN 001S:** Stormwater runoff associated with operation of a service shop, stormwater discharges from elemental phosphorus and ash settling pond SWMU104, and stormwater runoff associated with a site used for environmental and energy research and development

**DSN 002S:** Stormwater runoff associated with operation of a service shop and stormwater runoff associated with a site used for environmental and energy research and development

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below: 3/ 4/

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency <sup>2</sup>	Sample Type <sup>1</sup>	Seasonal
Arsenic, Total Recoverable (00978) 5/ Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	ug/l	Semi-Annually	Grab	All Months
Cyanide, Free Available (51173) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	ug/l	Semi-Annually	Grab	All Months
Mercury Total Recoverable (71901) 5/ 6/ Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	ug/l	Semi-Annually	Grab	All Months

**THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.**

- 1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.
- 2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.
- 3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.
- 4/ Outfall DSN 001 has been deemed representative of discharges from Outfall DSN 002. Monitoring is required at Outfall DSN 001. Monitoring is not required at Outfall DSN 002.
- 5/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.
- 6/ EPA Method 245.7, 1631E, or alternative method specifically approved by the Department shall be used for the analysis of this parameter.

## B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

### 1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit.

### 2. Test Procedures

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

- a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance; however, should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.
- b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

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

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

- c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. 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.

### 3. 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.

### 4. Records Retention and Production

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 shall not be submitted unless requested.

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.

#### 5. 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. The permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

### C. DISCHARGE REPORTING REQUIREMENTS

#### 1. Reporting of Monitoring Requirements

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

**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.

**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 may be done anytime during the quarter, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the quarter, i.e., (March, June, September and December DMR's).

**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 submitted with the last DMR for the month of the semiannual period, i.e. (June and December DMR's).

**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 submitted with the December DMR.

- b. The permittee shall submit discharge monitoring reports (DMRs) on the forms provided by the Department and in accordance with the following schedule:

**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 (MONTH, YEAR)**. 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.

**REPORTS OF QUARTERLY TESTING** shall be submitted on a **quarterly** basis. 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.

**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.

**REPORTS OF ANNUAL TESTING** shall be submitted on an annual basis. The first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

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



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

If the Department's electronic system is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within 5 calendar days of the Department's electronic system resuming operation, the permittee shall enter the data into the Department's electronic system, unless an alternate timeframe is approved by the Department. A comment should be included on the electronic DMR submittal verifying the original submittal date (date of the fax, copy of the 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.

Permittees 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, 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  
Water Division  
Office of Water Services  
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  
Water Division  
Office of Water Services  
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  
Water Division  
Post Office Box 301463  
Montgomery, Alabama 36130-1463**

Certified and Registered Mail shall be addressed to:

**Alabama Department of Environmental Management  
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 Notification

- a. 24-Hour Noncompliance Reporting

The permittee shall report to the Director, within 24-hours of becoming aware of the noncompliance, any noncompliance which may endanger health or the environment. This shall include but is not limited to the following circumstances:

- (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) threatens human health or welfare, fish or aquatic life, or water quality standards;
- (3) 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);
- (4) contains a quantity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);
- (5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and
- (6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

The permittee shall orally report the occurrence and circumstances of such discharge to the Director within 24-hours after the permittee becomes aware of the occurrence of such discharge. In addition to the oral report, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c no later than five (5) days after becoming aware of the occurrence of such discharge.

- b. If for any reason, the permittee's discharge does not comply with any limitation of this permit, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c below, such report shall be submitted with the next Discharge Monitoring Report required to be submitted by Part I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.
- c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (<http://adem.alabama.gov/DeptForms/Form421.pdf>) and include the following information:
- (1) A description of the discharge and cause of noncompliance;

- (2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- (3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

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

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

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

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

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

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

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

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

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

##### **5. Cooling Water and Boiler Water Additives**

- a. The permittee shall notify the Director in writing not later than thirty (30) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in a cooling or boiler system, not identified in the application for this permit, from which discharge is allowed by this permit. Notification is not required for additives that do not contain a heavy metal(s) as an active ingredient and that pass through a wastewater treatment system prior to discharge nor is notification required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the permittee. Such notification shall include:
  - (1) name and general composition of biocide or chemical;
  - (2) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach;
  - (3) quantities to be used;
  - (4) frequencies of use;
  - (5) proposed discharge concentrations; and
  - (6) EPA registration number, if applicable.
- b. The use of a biocide or additive containing tributyl tin, tributyl tin oxide, zinc, chromium or related compounds in cooling or boiler system(s), from which a discharge regulated by this permit occurs, is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this permit or in the

application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

**6. Permit Issued Based on Estimated Characteristics**

- a. If this permit was issued based on estimates of the characteristics of a process discharge reported on an EPA NPDES Application Form 2D (EPA Form 3510-2D), the permittee shall complete and submit an EPA NPDES Application Form 2C (EPA Form 3510-2C) no later than two years after the date that discharge begins. Sampling required for completion of the Form 2C shall occur when a discharge(s) from the process(s) causing the new or increased discharge is occurring. If this permit was issued based on estimates concerning the composition of a stormwater discharge(s), the permittee shall perform the sampling required by EPA NPDES Application Form 2F (EPA Form 3510-2F) no later than one year after the industrial activity generating the stormwater discharge has been fully initiated.
- b. This permit shall be reopened if required to address any new information resulting from the completion and submittal of the Form 2C and or 2F.

**E. SCHEDULE OF COMPLIANCE**

1. 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. 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. Spill Prevention, Control, and Management**

The permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a water of the state or a publicly or privately owned treatment works. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and which shall prevent the contamination of groundwater and such containment system shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided.

### **B. OTHER RESPONSIBILITIES**

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

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

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

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

- a. 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;
- b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
- d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

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

#### **1. Bypass**

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:

- (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;
  - (2) It enters the same receiving stream as the permitted outfall; and
  - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
  - (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
  - (3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

## 2. Upset

- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
  - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
- b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

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

### 1. Duty to Comply

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

**2. Removed Substances**

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

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

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

**4. Compliance with Statutes and Rules**

- a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.
- b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

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

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

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

**2. Change in Discharge**

- a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement 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.
- b. The permittee shall notify the Director as soon as it is known or there is reason to believe:
  - (1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
    - (i) one hundred micrograms per liter;
    - (ii) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;
    - (iii) five times the maximum concentration value reported for that pollutant in the permit application; or
  - (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

- (i) five hundred micrograms per liter;
- (ii) one milligram per liter for antimony;
- (iii) ten times the maximum concentration value reported for that pollutant in the permit application.

### 3. Transfer of Permit

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

### 4. Permit Modification and Revocation

- a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:
  - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;
  - (2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or
  - (3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.
- b. This permit may be modified during its term for cause, including but not limited to, the following:
  - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;
  - (2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
  - (3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;
  - (4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;
  - (5) Errors in calculation of discharge limitations or typographical or clerical errors were made;
  - (6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
  - (7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;
  - (8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;
  - (9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;
  - (10) When required by the reopener conditions in this permit;
  - (11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);



- (12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;
- (13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or
- (14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

#### **5. Permit Termination**

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

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

#### **6. Permit Suspension**

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

#### **7. Request for Permit Action Does Not Stay Any Permit Requirement**

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. DISCHARGE OF WASTEWATER GENERATED BY OTHERS**

The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the permittee or not identified in the application for this permit or not identified specifically in the description of an outfall in this permit is not authorized by this permit.

## **PART III: OTHER PERMIT CONDITIONS**

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

#### **1. Tampering**

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

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

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

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

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

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

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

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

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

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

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, 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 is 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 the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

#### 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 wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).
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 5 equal volume samples collected at constant time intervals of not more than 2 hours 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, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.
28. New Discharger – means a person, owning or operating any building, structure, facility or installation:
  - a. from which there is or may be a discharge of pollutants;
  - b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and
  - c. which has never received a final effective NPDES permit for dischargers at that site.
29. NH<sub>3</sub>-N – means the pollutant parameter ammonia, measured as nitrogen.
30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
31. 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).
32. 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.
33. 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".
34. 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.
35. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".
36. 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.
37. 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.
38. Solvent – means any virgin, used or spent organic solvent(s) identified in the F-Listed wastes (F001 through F005) specified in 40 CFR 261.31 that is used for the purpose of solubilizing other materials.
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 12 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. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS****1. BMP Plan**

The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents, or minimizes the potential for, the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

**2. Plan Content**

The permittee shall prepare and implement a best management practices (BMP) plan, which shall:

- a. Establish specific objectives for the control of pollutants:
  - (1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
  - (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
- b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;
- c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;
- d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;
- e. Prevent or minimize stormwater contact with material stored on site;
- f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;
- g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;
- h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;
- i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;
- j. Provide for the disposal of all used oils, hydraulic fluids, firefighting foams, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;
- k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;
- l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;
- m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the

substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

- n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;
- o. Be reviewed by plant engineering staff and the plant manager; and
- p. Bear the signature of the plant manager.

### **3. Compliance Schedule**

The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.

### **4. Department Review**

- a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.
- b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.
- c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

### **5. Administrative Procedures**

- a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.
- b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.
- c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.
- d. **BMP Plan Modification.** The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.
- e. **BMP Plan Review.** The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.



## ADEM PERMIT RATIONALE

PREPARED DATE: January 18, 2024

PREPARED BY: Theo Pinson

Permittee Name: Tennessee Valley Authority  
Facility Name: TVA Environmental Research Center  
Permit Number: AL0003891

PERMIT IS A REISSUANCE DUE TO EXPIRATION

### DISCHARGE SERIAL NUMBERS (DSN) & DESCRIPTIONS:

- 001 Stormwater runoff associated with operation of a service shop, stormwater discharges from elemental phosphorus and ash settling pond SWMU104, and stormwater runoff associated with a site used for environmental and energy research and development
- 002 Stormwater runoff associated with operation of a service shop and stormwater runoff associated with a site used for environmental and energy research and development

**INDUSTRIAL CATEGORY:** Non-Categorical

**MAJOR:** No

### STREAM INFORMATION:

Receiving Stream:	Pond Creek
Classification:	Agricultural & Industrial
River Basin:	Tennessee
7Q10:	0 cfs
7Q2:	0 cfs
1Q10:	0 cfs
Annual Average Flow:	47.2 cfs
303(d) List:	Yes
Impairment:	Organic Enrichment (CBOD, NBOD) and Metals (Arsenic, Cyanide, Mercury)
TMDL:	No

### DISCUSSION:

The site was established in the 1930s and has had various uses over time. Originally, the site was dedicated to the research and development of new types of fertilizers and fertilizer processes. Activities at the facility then transitioned to environmental research, development, and technology. The facility was comprised of numerous buildings, laboratories, greenhouses, pilot scale treatment, and constructed wetland research areas. The majority of the research and development programs are no longer conducted at the facility, and TVA has recently sold some of the property that was originally part of the site. The site includes disposal areas that are regulated under the Department's Land Division. Currently, onsite operations include a service shop with activities including modification/fabrication (machine shop), electrical breaker repair, pipe fabrication, plasma cutting, welding, sandblasting, painting, coating, calibrating and certifying equipment, laydown yard storage, and grounds maintenance. There are no process wastewaters discharged from these operations. This permit only authorizes the discharge of stormwater to a water of the state.

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

EPA has not promulgated specific guidelines for the discharges covered under the proposed permit. Proposed permit limits are based on Best Professional Judgment. The proposed frequencies are based on a review of site specific conditions and an evaluation of similar facilities.

**DSN 0011: Stormwater runoff associated with operation of a service shop, stormwater discharges from elemental phosphorus and ash settling pond SWMU104, and stormwater runoff associated with a site used for environmental and energy research and development**

**\*DSN 0021: Stormwater runoff associated with operation of a service shop and stormwater runoff associated with a site used for environmental and energy research and development**

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	**Basis
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	303(d)
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Monthly	Grab	All Months	WQBEL
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Monthly	Instantaneous	All Months	BPJ

\*Outfall DSN 001 has been deemed representative of discharges from Outfall DSN 002. Monitoring is required at Outfall DSN 001. Monitoring is not required at Outfall DSN 002.

**DSN 001S: Stormwater runoff associated with operation of a service shop, stormwater discharges from elemental phosphorus and ash settling pond SWMU104, and stormwater runoff associated with a site used for environmental and energy research and development**

**\*DSN 002S: Stormwater runoff associated with operation of a service shop and stormwater runoff associated with a site used for environmental and energy research and development**

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	**Basis
Arsenic, Total Recoverable (00978) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	ug/l	Semi-Annually	Grab	All Months	303(d)
Cyanide, Free Available (51173) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	ug/l	Semi-Annually	Grab	All Months	303(d)
Mercury Total Recoverable (71901) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	ug/l	Semi-Annually	Grab	All Months	303(d)

\*Outfall DSN 001 has been deemed representative of discharges from Outfall DSN 002. Monitoring is required at Outfall DSN 001. Monitoring is not required at Outfall DSN 002.

\*\*Basis for Permit Limitation

- BPJ – Best Professional Judgment
- WQBEL – Water Quality Based Effluent Limits
- 303(d) – 303(d) List of Impaired Waters

### **Discussion**

The majority of the stormwater from the site property discharges to a central ditch that discharges through Outfall DSN 001. The central ditch culminates with an overflow spillway that makes the ditch operate like a treatment pond with discharges potentially expected to continue well after culmination of a precipitation event. The Permittee has proposed the addition of Outfall DSN 002 to cover stormwater discharges from areas to be used as an equipment laydown yard. The Permittee indicated that Outfall 002 is not expected to receive very much flow making it difficult to obtain stormwater samples. The Department has determined that Outfall 001 serves as a representative outfall for stormwater discharges associated with industrial activity on the basis that Outfall 001 drains the majority of areas where industrial activity has occurred both past and present at the site. Monitoring is required at Outfall DSN 001 and associated monitoring points 0011 and 001S. Monitoring is not required at Outfall DSN 002.

Previously, elemental phosphorus was manufactured on site with production ceasing in the 1970s. Elemental phosphorus and ash settling pond SWMU104 was constructed to contain potential spills from the elemental phosphorus production facility and to settle out phosphorus containing solids entrained in the phosphorus plant effluent. All of the process and stormwater sewers from the elemental phosphorus production facility were routed into this pond. TVA deposited fly ash and bottom ash from an onsite steam plant into the pond from approximately 1983 to 1990. No additional wastes have been added to the pond since the early 1990s. Discharges from SWMU104 are precipitation driven and are discharged to the central ditch which discharges through outfall DSN001. This permit does not authorize any discharges from dewatering activities of the elemental phosphorus and ash settling pond SWMU104.

Best Management Practices (BMPs) are believed to be the most effective way to control the contamination of stormwater from areas of industrial activities. This facility is required to maintain a BMP plan. The requirements of the BMP plan call for minimization of stormwater contact with waste materials, products and by-products, and for prevention of spills or loss of fluids from equipment maintenance activities. The effectiveness of the BMPs will be measured through the monitoring of the pollutants of concern.

### **Best Professional Judgment (BPJ)**

The parameters of concern for this facility are based on the parameters of concern listed in the permit application and from the current permit. These parameters are consistent with similar facilities in the state and have been proven to be reflective of the operations at this facility.

#### **Oil & Grease**

The daily maximum limit for Oil and Grease should prevent the occurrence of a visible sheen in the stream and has been shown to be achievable through the use of proper BMPs.

#### **BOD, TSS,**

Monitoring is proposed to evaluate the effectiveness of the BMP plan and evaluate the impact of discharges from the site on the receiving stream. The sample type for BOD has been proposed to change from composite to grab to be consistent with the other parameters. Based on the mixing provided by the central ditch prior to reaching the outfall, a grab sample type is expected to provide a representative measure of BOD discharges.

#### **Phosphorus**

Monitoring is proposed based on the previous use of settling pond SWMU104 and previous phosphorus production activities.

### **Water Quality Based Effluent Limits (WQBEL)**

Based on the sizable drainage area of Outfall 001 and the pond like nature of the central ditch, discharges may be expected to occur well after precipitation events have ceased. The Department has evaluated water quality based effluent limitations for the discharges from Outfall 001. The Department completed a reasonable potential analysis (RPA) of the discharge based on data provided in the permit application, historical Discharge Monitoring Report (DMR) data, and available instream water quality data. The RPA did not indicate any parameters that present a reasonable potential to exceed instream water quality criteria.

**pH**

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(7) – Specific Water Quality for Agricultural and Industrial Water Supply classified streams states: “Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units.”

**303(d) List of Impaired Waters/Total Maximum Daily Load (TMDL)**

Pond Creek is listed on the 303(d) List of Impaired Waters for Metals (Mercury, Arsenic, Cyanide) and Organic Enrichment (CBOD, NBOD). Based on the listing and potential for the parameters to be present in the discharge, monitoring is proposed for Mercury, Arsenic, and Cyanide. Monitoring for BOD has been proposed based on the organic enrichment impairment.

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$							Enter Max Daily	Enter Avg Daily	Partition Coefficient (Stream / Lake)	
ID	Pollutant	Carcinogen Yes*	Type	Background from upstream source (C <sub>d</sub> ) Daily Max	Background from upstream source (C <sub>d</sub> ) Monthly Ave	Background Instream (C <sub>s</sub> ) Daily Max	Background Instream (C <sub>s</sub> ) Monthly Ave	Discharge as reported by Applicant (C <sub>d</sub> ) Max		Discharge as reported by Applicant (C <sub>d</sub> ) Ave
1	Antimony		Metals	0	0	0	0	0	0	-
2	Arsenic**	YES	Metals	0	0	0	0	1.18	1.18	0.574
3	Beryllium		Metals	0	0	0	0	0	0	0.236
4	Cadmium**		Metals	0	0	0	0	0	0	0.210
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0	-
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	-
7	Copper**		Metals	0	0	0	0	0	0	0.388
8	Lead**		Metals	0	0	0	0	0	0	0.208
9	Mercury**		Metals	0	0	0	0	0.014	0.00616	0.302
10	Nickel**		Metals	0	0	0	0	0	0	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	0	0	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	0	-
20	Aldrin	YES	VOC	0	0	0	0	0	0	-
21	Benzene*	YES	VOC	0	0	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	0	-
24	Chlordane	YES	VOC	0	0	0	0	0	0	-
25	Chlorobenzene		VOC	0	0	0	0	0	0	-
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	Chloroform*	YES	VOC	0	0	0	0	0	0	-
30	4,4'-DDD	YES	VOC	0	0	0	0	0	0	-
31	4,4'-DDE	YES	VOC	0	0	0	0	0	0	-
32	4,4'-DDT	YES	VOC	0	0	0	0	0	0	-
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	0	-
34	1,1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	0	0	-
36	Trans-1,2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	1,1-Dichloroethylenes*	YES	VOC	0	0	0	0	0	0	-
38	1,2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1,3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	Dielsin	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	Methylene Chloride*	YES	VOC	0	0	0	0	0	0	-
45	1,1,1,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	0	-
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	Toxaphene	YES	VOC	0	0	0	0	0	0	-
49	Tributyltin (TBT)	YES	VOC	0	0	0	0	0	0	-
50	1,1,1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	0	-
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	0	-
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	0	-
54	p-Chloro-m-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4,6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2,4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	4,6-Dinitro-2-methylphenol		Acids	0	0	0	0	0	0	-
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benidine		Bases	0	0	0	0	0	0	-
71	Benzo(A)Anthracene*	YES	Bases	0	0	0	0	0	0	-
72	Benzo(A)Pyrene*	YES	Bases	0	0	0	0	0	0	-
73	3,4-Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(G,H)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroisopropyl) Ether		Bases	0	0	0	0	0	0	-
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	Chrysene*	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	Dibenz(A,H)Anthracene*	YES	Bases	0	0	0	0	0	0	-
88	1,2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1,3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1,4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	3,3-Dichlorobenzidine*	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	2,4-Dinitrotoluene*	YES	Bases	0	0	0	0	0	0	-
95	2,6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	Endosulfan (alpha)	YES	Bases	0	0	0	0	0	0	-
98	Endosulfan (beta)	YES	Bases	0	0	0	0	0	0	-
99	Endosulfan sulfate	YES	Bases	0	0	0	0	0	0	-
100	Endrin	YES	Bases	0	0	0	0	0	0	-
101	Endrin Aldehyde	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptachlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	0	-
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	0	-
108	Hexachlorocyclohexan (alpha)	YES	Bases	0	0	0	0	0	0	-
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	0	0	-
110	Hexachlorocyclohexan (gamma)	YES	Bases	0	0	0	0	0	0	-
111	Hexachlorodipentadiene		Bases	0	0	0	0	0	0	-
112	Hexachlorobenzene		Bases	0	0	0	0	0	0	-
113	Endosulfan (1, 2, 3-CX)Pyrene*	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	N-Nitrosodi-N-Propylamine*	YES	Bases	0	0	0	0	0	0	-
118	N-Nitrosodi-N-Methylamine*	YES	Bases	0	0	0	0	0	0	-
119	N-Nitrosodi-N-Phenylamine*	YES	Bases	0	0	0	0	0	0	-
120	PCB-1016	YES	Bases	0	0	0	0	0	0	-
121	PCB-1221	YES	Bases	0	0	0	0	0	0	-
122	PCB-1232	YES	Bases	0	0	0	0	0	0	-
123	PCB-1242	YES	Bases	0	0	0	0	0	0	-
124	PCB-1248	YES	Bases	0	0	0	0	0	0	-
125	PCB-1254	YES	Bases	0	0	0	0	0	0	-
126	PCB-1260	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1,2,4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.05	Enter Q <sub>d</sub> = wastewater discharge flow from facility (MGD)
0.07736145	Q <sub>d</sub> = wastewater discharge flow (cfs) (this value is calculated from the MGD)
1.35	Enter flow from upstream discharge Q <sub>d2</sub> = background stream flow in MGD above point of discharge
2.08875915	Q <sub>d2</sub> = background stream flow from upstream source (cfs)
0	Enter TQ10, Q <sub>s</sub> = background stream flow in cfs above point of discharge
0	Enter or estimated, 1Q10, Q <sub>s</sub> = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of TQ10)
47.2	Enter Mean Annual Flow, Q <sub>s</sub> = background stream flow in cfs above point of discharge
0	Enter TQ2, Q <sub>s</sub> = background stream flow in cfs above point of discharge (For LWF class streams)
0	Enter C <sub>s</sub> = background in-stream pollutant concentration in µg/l (assuming this is zero "U" unless there is data)
Q <sub>d</sub> + Q <sub>d2</sub> + Q <sub>s</sub>	Q <sub>r</sub> = resultant in-stream flow, after discharge
100	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

\*\* Using Partition Coefficients

January 22, 2024

Freshwater AM classification										Human Health Consumption Fish only (µg/l)					
ID	Pollutant	RP7	Carcinogen yes	Background from upstream source (C <sub>up</sub> ) Daily Max	Max Daily Discharge as reported by Applicant (C <sub>app</sub> )	Freshwater Acute (µg/l) C <sub>a</sub> = 7Q10 for AM >24 hrs travel time to higher class			Background from upstream source (C <sub>up</sub> ) Monthly Ave	Avg Daily Discharge as reported by Applicant (C <sub>app</sub> )	Carcinogen C <sub>a</sub> = Annual Average Non-Carcinogen C <sub>a</sub> = 7Q10				
						Water Quality Criteria (C <sub>w</sub> )	Draft Permit Limit (C <sub>pl</sub> )	20% of Draft Permit Limit			RP7	Water Quality Criteria (C <sub>w</sub> )	Draft Permit Limit (C <sub>pl</sub> )	20% of Draft Permit Limit	RP7
1	Antimony			0	0				0	0	3.73E+02	1.05E+04	2.09E+03	No	
2	Arsenic		YES	0	1.18	562.334	16565.368	3317.073171	No	0	1.18	0.3030	193.3708	38.6741	No
3	Beryllium			0	0	8.533	238.917	47.78338154	No	0	0	-	-	-	-
4	Cadmium			0	0	2713.159	75988.463	15193.68264	No	0	0	-	-	-	-
5	Chromium/ Chromium III			0	0	18.000	448.000	86.8	No	0	0	-	-	-	-
6	Chromium/ Chromium VI			0	0	34.837	899.833	193.968583	No	0	0	-	-	-	-
7	Copper			0	0	313.502	8778.052	1755.610373	No	0	0	-	-	-	-
8	Lead			0	0.014	2.400	67.200	13.44	No	0	0.00818	0.0424	1.1879	0.2378	No
9	Nickel			0	0	927.200	25981.588	5192.317572	No	0	0	9.93E+02	2.78E+04	5.56E+03	No
11	Selenium			0	0	20.000	560.000	112	No	0	0	2.43E+03	6.81E+04	1.36E+04	No
12	Silver			0	0	3.217	90.089	18.01384086	No	0	0	-	-	-	-
13	Thallium			0	0							2.74E-01	7.89E+00	1.53E+00	No
14	Zinc			0	0	355.002	9942.584	1988.518797	No	0	0	14883.82	417021.28	83404.28	No
15	Cyanide			0	0	22.000	616.000	123.2	No	0	0	9.33E+03	2.81E+05	5.23E+04	No
16	Total Phenolic Compound			0	0							-	-	-	-
17	Hardness (As CaCO3)			0	0							-	-	-	-
18	Acrolein			0	0							5.43E+00	1.52E+02	3.04E+01	No
19	Acrylonitrile		YES	0	0							1.44E-01	9.19E+01	1.64E+01	No
20	Aldrin		YES	0	0	3.000	84.000	16.8	No	0	0	2.84E-05	1.88E-02	3.79E-03	No
21	Benzene		YES	0	0							1.95E+01	9.87E+03	1.97E+03	No
22	Bromoforn		YES	0	0							7.88E+01	5.03E+04	1.01E+04	No
23	Carbon Tetrachloride		YES	0	0							9.57E-01	8.11E+02	1.22E+02	No
24	Chlordane		YES	0	0	2.400	67.200	13.44	No	0	0	4.73E-04	3.02E-01	6.03E-02	No
25	Chlorobenzene			0	0							9.08E+02	2.54E+04	5.07E+03	No
26	Chlorodibromo-Methane		YES	0	0							7.41E+00	4.73E+03	9.45E+02	No
27	Chloroethane			0	0							-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0							-	-	-	-
29	Chloroform		YES	0	0							1.02E+02	6.51E+04	1.30E+04	No
30	4,4'- DDD			0	0							1.91E-04	1.18E+02	2.31E+02	No
31	4,4'- DDE		YES	0	0							1.28E-04	8.17E-02	1.63E-02	No
32	4,4'- DDT		YES	0	0	1.100	30.800	6.18	No	0	0	1.28E-04	8.17E-02	1.63E-02	No
33	Dichlorobromo-Methane		YES	0	0							1.00E+01	6.40E+03	1.28E+03	No
34	1,1-Dichloroethane			0	0							2.14E+01	1.36E+04	2.73E+03	No
35	1,2-Dichloroethane		YES	0	0							5.91E+03	1.85E+05	3.31E+04	No
36	Trans-1,2-Dichloro-Ethylene			0	0							4.17E+03	2.88E+05	5.32E+05	No
37	1,1-Dichloroethylene		YES	0	0							8.48E+00	2.39E+02	4.78E+01	No
38	1,2-Dichloropropane			0	0							1.23E+01	3.44E+02	6.88E+01	No
39	1,3-Dichloro-Propylene			0	0							3.12E-05	1.99E-02	3.98E-03	No
40	Dieldrin		YES	0	0	0.240	6.720	1.344	No	0	0	1.24E+03	3.48E+04	6.97E+03	No
41	Ethylbenzene			0	0							8.71E+02	2.44E+04	4.88E+03	No
42	Methyl Bromide			0	0							-	-	-	-
43	Methyl Chloride			0	0							-	-	-	-
44	Methylene Chloride		YES	0	0							3.48E+02	2.21E+05	4.41E+04	No
45	1,1,2,2-Tetrachloro-Ethane		YES	0	0							2.33E+00	1.49E+03	2.98E+02	No
46	Tetrachloro-Ethylene		YES	0	0							1.92E+00	1.22E+03	2.45E+02	No
47	Toluene			0	0							6.72E+03	2.44E+05	4.88E+04	No
48	Tompson		YES	0	0	0.730	20.440	4.088	No	0	0	1.82E-04	1.03E-01	2.07E-02	No
49	Tributyltin (TBT)		YES	0	0	0.480	12.880	2.576	No	0	0	-	-	-	-
50	1,1,1-Trichloroethane			0	0							9.10E+00	5.80E+03	1.16E+03	No
51	1,1,2-Trichloroethane		YES	0	0							1.75E+01	1.11E+04	2.23E+03	No
52	Trichlorethylene		YES	0	0							1.42E+00	9.08E+02	1.82E+02	No
53	Vinyl Chloride		YES	0	0							-	-	-	-
54	p-Chloro-M-Cresol			0	0							-	-	-	-
55	2-Chlorophenol			0	0							8.71E+01	2.44E+03	4.88E+02	No
56	2,4-Dichlorophenol			0	0							1.72E+02	4.82E+03	9.63E+02	No
57	2,4-Dimethylphenol			0	0							4.88E+02	1.39E+04	2.79E+03	No
58	4,6-Dinitro-O-Cresol			0	0							-	-	-	-
59	2,4-Dinitrophenol			0	0							3.11E+03	8.71E+04	1.74E+04	No
60	4,6-Dinitro-2-methylphenol		YES	0	0							1.68E+02	1.06E+05	2.11E+04	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0							2.67E-06	1.70E-05	3.40E-06	No
62	2-Nitrophenol			0	0							-	-	-	-
63	4-Nitrophenol			0	0							-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	244.293	48.85059691	No	0	0	1.77E+00	1.13E+03	2.28E+02	No
65	Phenol			0	0							5.00E+05	1.40E+07	2.82E+08	No
66	2,4,6-Trichlorophenol		YES	0	0							1.41E+00	9.02E+02	1.80E+02	No
67	Acenaphthene			0	0							5.78E-02	1.62E+04	3.24E+03	No
68	Acenaphthylene			0	0							-	-	-	-
69	Anthracene			0	0							2.33E+04	6.53E+05	1.31E+05	No
70	Benidine			0	0							1.16E-04	3.25E-03	6.49E-04	No
71	Benzo(A)Anthracene		YES	0	0							1.07E-02	6.80E+00	1.36E+00	No
72	Benzo(A)Pyrene		YES	0	0							1.07E-02	6.80E+00	1.36E+00	No
73	Benzo(b)Fluoranthene			0	0							1.07E-02	2.98E-01	5.97E-02	No
74	Benzo(g)H]Pyrene			0	0							-	-	-	-
75	Benzo(k)Fluoranthene			0	0							1.07E-02	2.98E-01	5.97E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0							-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0							3.07E-01	1.98E+02	3.92E+01	No
78	Bis (2-Chloroisopropyl) Ether			0	0							3.78E+04	1.08E+05	2.12E+05	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0							1.28E+00	8.16E+02	1.64E+02	No
80	4-Bromophenyl Phenyl Ether			0	0							-	-	-	-
81	Butyl Benzyl Phthalate			0	0							1.13E+03	3.16E+04	6.31E+03	No
82	2-Chloronaphthalene			0	0							9.24E+02	2.59E+04	5.17E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0							-	-	-	-
84	Chrysene		YES	0	0							1.07E-02	6.80E+00	1.36E+00	No
85	Di-N-Butyl Phthalate			0	0							2.82E+03	7.34E+04	1.47E+04	No
86	Di-N-Octyl Phthalate			0	0							-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0							1.07E-02	6.80E+00	1.36E+00	No
88	1,2-Dichlorobenzene			0	0							7.55E+02	2.12E+04	4.23E+03	No
89	1,3-Dichlorobenzene			0	0							5.62E+02	1.57E+04	3.19E+03	No
90	1,4-Dichlorobenzene			0	0							1.12E+02	3.15E+03	6.30E+02	No
91	3,3-Dichlorobenzidine		YES	0	0							1.85E-02	1.08E+01	2.12E+00	No
92	Dimethyl Phthalate			0	0							2.56E+04	7.19E+05	1.43E+05	No
93	Dimethyl Phthalate			0	0							6.48E+05	1.81E+07	3.63E+06	No
94	2,4-Dinitrotoluene		YES	0	0							1.98E+00	1.29E+03	2.53E+02	No
95	2,6-Dinitrotoluene			0	0							-	-	-	-
96	1,2-Diphenylhydrazine			0	0							1.17E-01	3.28E+00	6.59E-01	No
97	Endosulfan (alpha)		YES	0	0	0.22	6.180	1.232	No	0	0	5.19E+01	3.31E+04	6.62E+03	No
98	Endosulfan (beta)		YES	0	0	0.22	6.180	1.232	No	0	0	5.19E+01	3.31E+04	6.62E+03	No
99	Endosulfan sulfate		YES	0	0							5.19E+01	3.31E+04	6.62E+03	No
100	Endrin		YES	0	0	0.088	2.408	0.4818	No	0	0	3.53E-02	2.25E+01	4.50E+00	No
101	Endrin Aldryhde		YES	0	0							1.76E+00	1.13E+03	2.28E+02	No
102	Fluoranthene			0	0							8.12E+01	2.27E+03	4.54E+02	No
103	Fluorene			0	0							3.11E+03	8.71E+04	1.74E+04	No
104	Heptachlor		YES	0	0	0.52	14.560	2.912	No	0	0	4.83E-05	2.99E-02	5.91E-03	No
105	Heptachlor Epoxide		YES	0	0	0.52	14.560	2.912	No	0	0	2.29E-05	1.46E-02	2.92E-03	No
106	Hexachlorobenzene		YES	0	0							1.68E-04	1.07E-01	2.14E-02	No



1101 Market Street, BR 2C, Chattanooga, Tennessee 37402

**Sent Via Electronic Transmittal**

January 16, 2024

Mr. Theo Pinson (tpinson@adem.alabama.gov)  
Industrial Section  
Industrial/Municipal Branch  
Water Division  
Alabama Department of Environmental Management  
Post Office Box 301463  
Montgomery, Alabama 36130-1463

Dear Mr. Pinson:

TENNESSEE VALLEY AUTHORITY (TVA) – ENVIRONMENTAL RESEARCH CENTER (ERC)  
– NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO.  
AL0003891 – NEW STORMWATER OUTFALL

TVA has identified the need for a new stormwater outfall at the Muscle Shoals ERC. The total drainage area of this outfall would be 26 acres consisting of laydown yards and grass fields. Stormwater runoff is collected in a roadside ditch before discharging into Pond Creek. This outfall receives small amounts of stormwater making it difficult to obtain a sample; however, we are requesting it to be added to the NPDES permit (AL0003891) since there is not a de minimis exemption for stormwater. Because this outfall receives little flow, TVA feels it is impractical to obtain stormwater samples; therefore, TVA requests that current Outfall 001 be considered the representative sample. The new outfall, DSN002, will be managed under the site BMP plan. Values provided in the EPA Form 2F Tables are from the Outfall 001 sample.

If you have questions or need any additional information concerning this request, please contact Craig Phillips at (865) 599-6183 or by e-mail at clphillips@tva.gov.

Sincerely,

A handwritten signature in cursive script that reads 'Paul Pearman'.

Paul Pearman  
Senior Manager  
Water Permits, Compliance, and Monitoring



# NPDES Individual Permit Mod/Reissue (Form 187) - Supplementary Information for Industrial Facilities

version 2.7

(Submission #: HPR-94SV-S2W5B, version 1)

Digitally signed by:  
AEPACS  
Date: 2023.05.30 10:35:02 -05:00  
Reason: Submission Data  
Location: State of Alabama

## Details

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Submission ID HPR-94SV-S2W5B

## Form Input

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### General Instructions

This form should be used to submit the following permit requests for permitted Industrial Individual NPDES facilities

- Permit Transfers
- Permittee/Facility Name Changes
- Minor Modifications, for example:
  - > Frequency of monitoring or reporting modifications
  - > Changes to interim compliance dates in a schedule of compliance, not including the final compliance date.
  - > Removal of a point source outfall, provided the discharge is terminated and does not result in discharge of pollutants from other outfalls, except in accordance with permit limits.
- Major Modifications, (Any modifications not covered by minor modifications, whether Effluent Limit changes occur or not)
- Reissuances
- Reissuance of a permit due to approaching expiration
- Revocation and Reissuance of permit prior to its scheduled expiration

Applicable Base Fees:

- Permit Transfers and/or Permittee/Facility Name Changes
  - > \$800
- Minor Modifications (see examples above)
  - > \$3,940 (Major Sources)
  - > \$3,120 (Minor Sources)
- Major Modifications
  - > \$17,990 (Major Sources)
  - > \$5,615 (Minor Sources)
- Reissuances
  - > \$17,990 (Major Sources)
  - > \$5,615 (Minor Sources)

[For assistance, please click here to determine the permit staff responsible for the site or call \(334\) 271-7943](#)

### Processing Information

#### **Purpose of Application**

Reissuance of Permit Due to Approaching Expiration

**Please indicate if the Permittee is applying for a permit transfer and/or name change in addition to permit modification or reissuance:**

None

#### **Action Type**

Reissuance

If applicable, briefly describe any planned changes at the facility that are included in this reissuance application:  
NONE PROVIDED

## General Information

SID Permit Number (if your facility currently holds an SID permit, please provide that number below):  
NONE PROVIDED

NPDES or General Permit Numbers (if applicable, please list all permit numbers):  
AL0003891

Is this facility/site only applying for permit coverage for discharges from stormwater?  
No

Is a new stormwater outfall being added?  
No

## Permit Information

Permit Number  
AL0003891

Current Permittee Name  
Tennessee Valley Authority

### Permittee

**Permittee Name**  
*Tennessee Valley Authority*

**Mailing Address**  
1101 Market Street BR 4D-C  
Chattanooga, TN 37402

❶ Per ADEM Admin. Code r. 335-6-6-.09 (1), a Responsible Official is defined as CEO, President, any position at a level of Vice President or higher, Owner, Partner, Managing Member (LLC), or ranking elected official. Please provide the contact information for the person meeting this definition.

Do NOT enter information for a person that is/will be a Duly Authorized Representative (DAR) (i.e. a person that has been delegated signatory permissions by a Responsible Official). A person that is a Duly Authorized Representative is NOT considered a RESPONSIBLE OFFICIAL.

### Responsible Official

**Prefix**  
*Mr.*

**First Name**    **Last Name**  
*Robert*        *Williams*

**Title**  
*SVP, Gen Projects & Fleet Services*

**Organization Name**  
*TVA*

**Phone Type**    **Number**        **Extension**  
*Business*        *423-751-8195*

**Email**  
*rbwilliams1@tva.gov*

**Mailing Address**  
1101 Market Street LP 5C-C  
Chattanooga, TN 37402

Does the Responsible Official intend to delegate signatory authority for DMRs or other compliance reports to an individual as a duly authorized representative (DAR) for this site?

No

**Existing Permit Contacts**

Affiliation Type	Contact Information	Remove?
Notification Recipient, Responsible Official	Jacinda B. Woodward, TVA	Remove
DMR Contact, Environmental Contact	Michael Gean, TVA	Remove
Permittee	Tennessee Valley Authority	Keep

**Facility/Site Information**

**Facility/Site Name**

Environmental Research Center

**Organization/Ownership Type**

Federal

**Facility/Site Address or Location Description**

Reservation Road

Muscle Shoals, AL 35662

**Facility/Site County**

Colbert

**Detailed Directions to the Facility/Site**

NONE PROVIDED

**Facility Map**

[ERC Location Map.pdf - 05/12/2023 03:00 PM](#)

**Comment**

NONE PROVIDED

**Please refer to the link below for Lat/Long map instruction help:**

[Map Instruction Help](#)

**Facility/Site Front Gate Latitude and Longitude**

34.77330000000000,-87.65150000000000

Reservation Road, Muscle Shoals, AL

**SIC Code(s) [Please enter Primary SIC Code first followed by any additional applicable SIC Codes]**

2873-Nitrogenous Fertilizers

**NAICS Code(s) [Please enter Primary NAICS Code first followed by any additional applicable NAICS Codes]**

541715-Research and Development in the Physical Engineering and Life Sciences (except Nanotechnology and Biotechnology)

## Facility/Site Contact

**Prefix**

Mr.

**First Name      Last Name**

Michael              Gear

**Title**

*Environmental Scientist*

**Organization Name**

TVA

**Phone Type      Number              Extension**

Business              2563862684

**Email**

magean@tva.gov

**Address**

1101 Market Street EB 3G

Chattanooga, TN 37402

## DMR Contact(s) (1 of 1)

### DMR Contact

**Prefix**

Mr.

**First Name      Last Name**

Dustin              Durham

**Title**

*Environmental Scientist*

**Phone Type      Number              Extension**

Business              662-224-0865

**Email**

drdurham@tva.gov

**Address**

MAG

1A-AHM

Ashland, MS 38603

## Enforcement History

Has the applicant been issued any Notices of Violation, Orders (Consent or Administrative/Unilateral), or Judicial Actions (Complaint, Settlement Agreement, Consent Decree, or Court Order) concerning water pollution or other permit violations within the State of Alabama in the past five years?

No

## Business Activity

A facility with processes inclusive in the business areas shown below may be covered by Environmental Protection Agency's (EPA) categorical effluent guideline standards. These facilities are termed **categorical users**. If unsure, please call the Industrial Section at (334) 271-7943 to discuss or use the link below to contact the Permit Engineer for the county the facility is/will be located in.

[Industrial Section Assignment Map](#)

If your facility conducts or will be conducting any of the processes listed below (regardless of whether they generate wastewater, waste sludge, or hazardous wastes), please check the category of business activity:

Other: Environmental Research and Development

Give a brief description of all operations at this facility including primary products or services:

Site previously used for Environmental and Energy Research and Development. Also used by Environmental consultants.

## Water Supply

Water Sources (check all that apply):

Municipal Water Utility

Please specify the City of the Municipal Water Utility:

Sheffield

Name of Utility	Million Gallons per Day (MGD)
Sheffield Municipal	NA

## Cooling Water Intake Structure Information

Does the provider of your source water operate a surface water intake?

No

Is the provider a public water system (defined as a system which provides water to the public for human consumption or which provides only treated water, not raw water)?

No

Is any water withdrawn from the source water used for cooling?

No

Using the average monthly measurements over any 12-month period, approximately what percentage of water withdrawn is used exclusively for cooling purposes?

0

Does the cooling water consist of treated effluent that would otherwise be discharged?

No

Is the cooling water used in a once-through cooling system?

No

Is the cooling water used in a closed cycle cooling system?

No

When was the intake installed?

NA

What is the maximum intake volume (maximum pumping capacity in gallons per day)?

0

What is the average intake volume (average intake pump rate in gallons per day average in any 30-day period)?

0

What is the actual intake flow (AIF) as defined in 40 CFR §125.92(a) (MGD)?

0

How is the intake operated?

Continuously

What is the mesh size of the screen on your intake (in inches)?

0

**What is the intake screen flow-through area (in square feet)?**

0

**What is the through-screen design intake flow velocity (in ft/sec)?**

0

**What is the through-screen actual velocity (in ft/sec)?**

0

**What is the mechanism for cleaning the screen (e.g., does it rotate for cleaning)?**

NA

**Do you have any additional fish detraction technology on your intake?**

No

**Have there been any studies to determine the impact of the intake on aquatic organisms?**

No

**Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.**

[ERC Location Map.pdf - 05/12/2023 03:16 PM](#)

**Comment**

NONE PROVIDED

## **Outfalls (1 of 1)**

001

**Please click below if this discharge no longer exists or is no longer required:**

NONE PROVIDED

**Outfall Identifier**

001

**Receiving Water**

Pond Creek

**Does the discharge enter the named receiving water via an unnamed tributary?**

NONE PROVIDED

**Indicate if either of the following characteristics apply to this discharge:**

Process Water commingled with Stormwater

**Estimated Average Daily Flow (MGD)**

0.33

**Monitoring/Sampling Point Location**

34.768955161585886,-87.6423697605133

## **Process Flow Schematic with Wastewater Treatment(s), If Applicable**

For an example of a process flow diagram, please use the link below.

[Figure 1: Example of Process Flow Schematic](#)

**Process Flow Schematic**

[ERC Form 2C Updated Flow Schematic 2023.pdf - 05/23/2023 12:19 PM](#)

**Comment**

NONE PROVIDED

## **Anti-Degradation Evaluation**

Is this a new or increased discharge that began after April 3, 1991?

No

**Additional Information**

Do you share an outfall with another facility?

No

Indicate if automatic sampling equipment or continuous wastewater flow metering equipment is being operated at this facility:

Current	Yes/No
Continuous Wastewater Flow Metering Equipment	N/A
Automatic Sampling Equipment	N/A

Indicate if installation automatic sampling equipment or continuous wastewater flow metering equipment planned at this facility:

Planned	Yes/No
Continuous Wastewater Flow Metering Equipment	N/A
Automatic Sampling Equipment	N/A

Please attach the process schematic with sampling equipment locations.

[ERC Form 2C Updated Flow Schematic 2023.pdf - 05/23/2023 12:27 PM](#)

Comment

NONE PROVIDED

Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics (Consider production processes as well as air or water pollution treatment processes that may affect the discharge.)?

No

Do you use biocides, corrosion inhibitors, or chemical additives in your cooling or blowdown water?

No

Biocide/Corrosion Inhibitor Summary Sheet

NONE PROVIDED

Comment

NONE PROVIDED

**Treatment**

Is any form of wastewater treatment (see list below) practiced at this facility?

Yes

Treatment devices or processes used or proposed for treating wastewater or sludge (check as many as appropriate).

Sump

Sedimentation

Is any form of wastewater treatment (or changes to an existing wastewater treatment) planned for this facility within the next three years?

No

**Facility Operational Characteristics**

Indicate whether the facility discharge is:

Continuous through the year

Comments:

NONE PROVIDED

## Non-Discharged Wastes

**Are any waste liquids or sludges generated and not disposed of in the sanitary sewer system?**

No

**Does any outside firm remove any of the above checked wastes?**

No

## EPA Application Forms

All Applicants must submit certain EPA permit application forms. More than one application form may be required.

Form 1 - General Information Form required for all applications

Form 2C - Should be submitted for facilities with existing discharge(s) of process wastewater.

Form 2D - Should be submitted for facilities that have not yet commenced discharge(s) of process wastewater.

Form 2E - Should be submitted for facilities who discharge non-process wastewater, such as non-contact cooling water or boiler blowdown.

Form 2F - Should be submitted for all discharges of storm water associated with an industrial activity.  
The EPA application forms are found on the Department's website here.

### **EPA Form 1**

form\_1\_SIGNED.pdf - 05/23/2023 12:19 PM

**Comment**

NONE PROVIDED

### **Additional EPA Forms (EPA Form 2C, 2D, 2E and/or 2F)**

EPA\_2C\_SIGNED.pdf - 05/23/2023 12:22 PM

**Comment**

NONE PROVIDED

### **Other attachments (as needed)**

ERC\_Drainage20171117.pdf - 05/23/2023 12:23 PM

**Comment**

NONE PROVIDED

## Additional Attachments

**Please attach any additional information as needed.**

NONE PROVIDED

**Comment**

NONE PROVIDED

## Application Preparer



**Application Preparer**

**Prefix**

*Mr.*

**First Name      Last Name**

Craig              *Phillips*

**Title**

*Water Permitting Specialist*

**Organization Name**

*TVA*

**Phone Type    Number            Extension**

Mobile            865-599-6183

**Email**

*clphillips@tva.gov*

**Address**

400 West Summit Hill DR

Knoxville, TN 37902

# Agreements and Signature(s)

## SUBMISSION AGREEMENTS

- I am the owner of the account used to perform the electronic submission and signature.
- I have the authority to submit the data on behalf of the facility I am representing.
- I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

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

*"I further certify under penalty of law that all analyses reported as less than detectable in this application or attachments thereto were performed using the EPA approved test method having the lowest detection limit for the substance tested."*


### **NOTE: 335-6-5-.14 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.**

*The application shall be signed by a responsible official, a request for variance from categorical pretreatment standards, and a category determination request shall be signed by a responsible official, as indicated below*

- *In the case of a corporation, by a principal executive officer of at least the level of vice president;*
- *In the case of a partnership, by a general partner;*
- *In the case of a sole proprietorship, by the proprietor; or*
- *In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official*

**Signed** Robert Williams on 05/30/2023 at 10:28 AM  
**By**

EPA Identification Number AL3640090004	NPDES Permit Number AL0003891	Facility Name Environmental Research Center	Form Approved 03/05/19 OMB No. 2040-0004
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Form 1 NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater	
		<b>GENERAL INFORMATION</b>	

**SECTION 1. ACTIVITIES REQUIRING AN NPDES PERMIT (40 CFR 122.21(f) and (f)(1))**

Activities Requiring an NPDES Permit	1.1	<b>Applicants Not Required to Submit Form 1</b>	
	1.1.1	Is the facility a new or existing <b>publicly owned treatment works</b> ? If yes, STOP. Do NOT complete Form 1. Complete Form 2A. <input checked="" type="checkbox"/> No	1.1.2 Is the facility a new or existing <b>treatment works treating domestic sewage</b> ? If yes, STOP. Do NOT complete Form 1. Complete Form 2S. <input checked="" type="checkbox"/> No
	1.2	<b>Applicants Required to Submit Form 1</b>	
	1.2.1	Is the facility a <b>concentrated animal feeding operation or a concentrated aquatic animal production facility</b> ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2B. <input checked="" type="checkbox"/> No	1.2.2 Is the facility an <b>existing</b> manufacturing, commercial, mining, or silvicultural <b>facility that is currently discharging process wastewater</b> ? <input checked="" type="checkbox"/> Yes → Complete Form 1 and Form 2C. <input type="checkbox"/> No
	1.2.3	Is the facility a <b>new</b> manufacturing, commercial, mining, or silvicultural <b>facility that has not yet commenced to discharge</b> ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2D. <input checked="" type="checkbox"/> No	1.2.4 Is the facility a <b>new or existing</b> manufacturing, commercial, mining, or silvicultural <b>facility that discharges only nonprocess wastewater</b> ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2E. <input checked="" type="checkbox"/> No
	1.2.5	Is the facility a <b>new or existing facility</b> whose discharge is composed entirely of <b>stormwater associated with industrial activity</b> or whose discharge is composed of <b>both stormwater and non-stormwater</b> ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2F unless exempted by 40 CFR 122.26(b)(14)(x) or (b)(15). <input checked="" type="checkbox"/> No	

**SECTION 2. NAME, MAILING ADDRESS, AND LOCATION (40 CFR 122.21(f)(2))**

Name, Mailing Address, and Location	2.1	<b>Facility Name</b> TVA Environmental Research Center (ERC)		
	2.2	<b>EPA Identification Number</b> AL3640090004		
	2.3	<b>Facility Contact</b>		
		Name (first and last) Robert Williams	Title Senior VP, Gen Projects & Fleet Services	Phone number (423) 751-8195
	2.4	Email address rbwilliams1@tva.gov		
		<b>Facility Mailing Address</b>		
Street or P.O. box 1101 Market Street LP 5C-C		City or town Chattanooga	State TN	ZIP code 37402

EPA Identification Number AL3640090004	NPDES Permit Number AL0003891	Facility Name Environmental Research Center
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Name, Mailing Address, and Location Continued	2.5	<b>Facility Location</b>		
		Street, route number, or other specific identifier Reservation Road		
		County name Colbert	County code (if known)	
		City or town Muscle Shoals	State AL	ZIP code 35662-1010

**SECTION 3. SIC AND NAICS CODES (40 CFR 122.21(f)(3))**

SIC and NAICS Codes	3.1	<b>SIC Code(s)</b>	<b>Description (optional)</b>
	3.2	<b>NAICS Code(s)</b>	<b>Description (optional)</b>

**SECTION 4. OPERATOR INFORMATION (40 CFR 122.21(f)(4))**

Operator Information	4.1	<b>Name of Operator</b>	
		Tennessee Valley Authority	
	4.2	Is the name you listed in Item 4.1 also the owner? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	4.3	<b>Operator Status</b> <input checked="" type="checkbox"/> Public—federal <input type="checkbox"/> Public—state <input type="checkbox"/> Other public (specify) _____ <input type="checkbox"/> Private <input type="checkbox"/> Other (specify) _____	
	4.4	<b>Phone Number of Operator</b> (423) 751-8195	

Operator Information Continued	4.5	<b>Operator Address</b>		
		Street or P.O. Box 1101 Market Street LP 5C-C		
		City or town Chattanooga	State TN	ZIP code 37402
		Email address of operator rbwilliams1@tva.gov		

**SECTION 5. INDIAN LAND (40 CFR 122.21(f)(5))**

Indian Land	5.1	Is the facility located on Indian Land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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**SECTION 6. EXISTING ENVIRONMENTAL PERMITS (40 CFR 122.21(f)(6))**

Existing Environmental Permits	6.1	<b>Existing Environmental Permits</b> (check all that apply and print or type the corresponding permit number for each)		
	<input checked="" type="checkbox"/>	NPDES (discharges to surface water) AL0003891	<input type="checkbox"/>	RCRA (hazardous wastes)
	<input type="checkbox"/>	PSD (air emissions)	<input type="checkbox"/>	Nonattainment program (CAA)
	<input type="checkbox"/>	Ocean dumping (MPRSA)	<input type="checkbox"/>	Dredge or fill (CWA Section 404)
			<input type="checkbox"/>	UIC (underground injection of fluids)
			<input type="checkbox"/>	NESHAPs (CAA)
			<input checked="" type="checkbox"/>	Other (specify see attached list)

**SECTION 7. MAP (40 CFR 122.21(f)(7))**

Map	7.1	Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.)
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> CAFO—Not Applicable (See requirements in Form 2B.)

**SECTION 8. NATURE OF BUSINESS (40 CFR 122.21(f)(8))**

Nature of Business	8.1	Describe the nature of your business. Environmental and energy research and development and environmental consultants.

**SECTION 9. COOLING WATER INTAKE STRUCTURES (40 CFR 122.21(f)(9))**

Cooling Water Intake Structures	9.1	Does your facility use cooling water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 10.1.
	9.2	Identify the source of cooling water. (Note that facilities that use a cooling water intake structure as described at 40 CFR 125, Subparts I and J may have additional application requirements at 40 CFR 122.21(r). Consult with your NPDES permitting authority to determine what specific information needs to be submitted and when.)

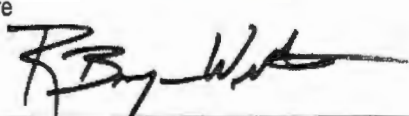
**SECTION 10. VARIANCE REQUESTS (40 CFR 122.21(f)(10))**

Variance Requests	10.1	Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(m)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)		
	<input type="checkbox"/>	Fundamentally different factors (CWA Section 301(n))	<input type="checkbox"/>	Water quality related effluent limitations (CWA Section 302(b)(2))
	<input type="checkbox"/>	Non-conventional pollutants (CWA Section 301(c) and (g))	<input type="checkbox"/>	Thermal discharges (CWA Section 316(a))
	<input checked="" type="checkbox"/>	Not applicable		

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**SECTION 11. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))**

Checklist and Certification Statement	11.1	In Column 1 below, mark the sections of Form 1 that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.	
		<b>Column 1</b>	<b>Column 2</b>
	<input checked="" type="checkbox"/>	Section 1: Activities Requiring an NPDES Permit	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 2: Name, Mailing Address, and Location	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/>	Section 3: SIC Codes	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 4: Operator Information	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 5: Indian Land	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 6: Existing Environmental Permits	<input checked="" type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 7: Map	<input checked="" type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ additional attachments
	<input checked="" type="checkbox"/>	Section 8: Nature of Business	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/>	Section 9: Cooling Water Intake Structures	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/>	Section 10: Variance Requests	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 11: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments
11.2	<b>Certification Statement</b>		
	<i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>		
	Name (print or type first and last name) Robert Bryan Williams	Official title Senior VP, Gen Projects & Fleet Services	
	Signature 	Date signed 05/22/2023	

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Form 2C NPDES		<b>U.S. Environmental Protection Agency</b> <b>Application for NPDES Permit to Discharge Wastewater</b> <b>EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS</b>
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**SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))**

Outfall Location	1.1	Provide information on each of the facility's outfalls in the table below.			
		Outfall Number	Receiving Water Name	Latitude	Longitude
		001	Pond Creek	34° 46' 06" N	87° 38' 28" W
				° ' "	° ' "

**SECTION 2. LINE DRAWING (40 CFR 122.21(g)(2))**

Line Drawing	2.1	Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C-1 at end of instructions for example.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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**SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(g)(3))**

Average Flows and Treatment	3.1	For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.		
		<b>**Outfall Number**</b> 001		
		<b>Operations Contributing to Flow</b>		
		Operation	Average Flow	
		Discharge from the central ditch:	0.43 mgd	
		(a) groundwater via boiler house sump	0.100 mgd	
		(b) uncontaminated stormwater runoff	0.3 mgd	
		(c) stormwater runoff from SMU unit 104	0.03 mgd	
		<b>Treatment Units</b>		
		Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
	Discharge to surface water	4-A		

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Average Flows and Treatment Continued	3.1 cont.	<b>**Outfall Number**</b> _____			
		<b>Operations Contributing to Flow</b>			
		<b>Operation</b>	<b>Average Flow</b>		
			mgd		
			mgd		
			mgd		
			mgd		
		<b>Treatment Units</b>			
		<b>Description</b> (include size, flow rate through each treatment unit, retention time, etc.)	<b>Code from Table 2C-1</b>	<b>Final Disposal of Solid or Liquid Wastes Other Than by Discharge</b>	
		<b>**Outfall Number**</b> _____			
<b>Operations Contributing to Flow</b>					
<b>Operation</b>	<b>Average Flow</b>				
	mgd				
	mgd				
	mgd				
	mgd				
<b>Treatment Units</b>					
<b>Description</b> (include size, flow rate through each treatment unit, retention time, etc.)	<b>Code from Table 2C-1</b>	<b>Final Disposal of Solid or Liquid Wastes Other Than by Discharge</b>			
System Users	3.2	Are you applying for an NPDES permit to operate a privately owned treatment works? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 4.			
	3.3	Have you attached a list that identifies each user of the treatment works? <input type="checkbox"/> Yes <input type="checkbox"/> No			



**SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(g)(4))**

<b>Intermittent Flows</b>	4.1	Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 5.						
	4.2	Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.						
		<b>Outfall Number</b>	<b>Operation (list)</b>	<b>Frequency</b>		<b>Flow Rate</b>		<b>Duration</b>
				<b>Average Days/Week</b>	<b>Average Months/Year</b>	<b>Long-Term Average</b>	<b>Maximum Daily</b>	
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days

**SECTION 5. PRODUCTION (40 CFR 122.21(g)(5))**

<b>Applicable ELGs</b>	5.1	Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 6.			
	5.2	Provide the following information on applicable ELGs.			
		<b>ELG Category</b>	<b>ELG Subcategory</b>	<b>Regulatory Citation</b>	
<b>Production-Based Limitations</b>	5.3	Are any of the applicable ELGs expressed in terms of production (or other measure of operation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 6.			
	5.4	Provide an actual measure of daily production expressed in terms and units of applicable ELGs.			
		<b>Outfall Number</b>	<b>Operation, Product, or Material</b>	<b>Quantity per Day</b>	<b>Unit of Measure</b>

EPA Identification Number AL3640090004	NPDES Permit Number AL0003891	Facility Name Environmental Research Center
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**SECTION 6. IMPROVEMENTS (40 CFR 122.21(g)(6))**

Upgrades and Improvements	6.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?			
		<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No → SKIP to Item 6.3.	
	6.2	Briefly identify each applicable project in the table below.			
		<b>Brief Identification and Description of Project</b>	<b>Affected Outfalls (list outfall number)</b>	<b>Source(s) of Discharge</b>	<b>Final Compliance Dates</b>
				<b>Required</b>	<b>Projected</b>
	6.3	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (optional item)			
		<input type="checkbox"/> Yes		<input type="checkbox"/> No	
		<input checked="" type="checkbox"/> Not applicable			

**SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(g)(7))**

Effluent and Intake Characteristics	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.				
	<b>Table A. Conventional and Non-Conventional Pollutants</b>				
	7.1	Are you requesting a waiver from your NPDES permitting authority for one or more of the Table A pollutants for any of your outfalls?			
		<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No → SKIP to Item 7.3.	
	7.2	If yes, indicate the applicable outfalls below. Attach waiver request and other required information to the application.			
		Outfall Number _____	Outfall Number _____	Outfall Number _____	
	7.3	Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?			
		<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No; a waiver has been requested from my NPDES permitting authority for all pollutants at all outfalls.	
	<b>Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants</b>				
	7.4	Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)			
	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No → SKIP to Item 7.8.		
7.5	Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?				
	<input type="checkbox"/> Yes		<input type="checkbox"/> No		
7.6	List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.				
	<b>Primary Industry Category</b>	<b>Required GC/MS Fraction(s)</b> (Check applicable boxes.)			
		<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/Neutral	<input type="checkbox"/> Pesticide
		<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/Neutral	<input type="checkbox"/> Pesticide
		<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/Neutral	<input type="checkbox"/> Pesticide

<b>Effluent and Intake Characteristics Continued</b>	7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? <input type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? <input checked="" type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? <input checked="" type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? <input type="checkbox"/> Yes → Note that you qualify at the top of Table B, then SKIP to Item 7.12. <span style="float: right;"><input checked="" type="checkbox"/> No</span>	
	7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? <input checked="" type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	<b>Table C. Certain Conventional and Non-Conventional Pollutants</b>		
	7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed on Table C for all outfalls? <input checked="" type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	7.13	Have you completed Table C by providing (1) quantitative data for those pollutants that are limited either directly or indirectly in an ELG and/or (2) quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? <input checked="" type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	<b>Table D. Certain Hazardous Substances and Asbestos</b>		
	7.14	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? <input checked="" type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	7.15	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) by providing quantitative data, if available? <input checked="" type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
	<b>Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)</b>		
	7.16	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? <input type="checkbox"/> Yes → Complete Table E. <span style="float: right;"><input checked="" type="checkbox"/> No → SKIP to Section 8.</span>	
	7.17	Have you completed Table E by reporting <i>qualitative</i> data for TCDD? <input type="checkbox"/> Yes <span style="float: right;"><input type="checkbox"/> No</span>	
<b>SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(g)(9))</b>			
<b>Used or Manufactured Toxics</b>	8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? <input type="checkbox"/> Yes <span style="float: right;"><input checked="" type="checkbox"/> No → SKIP to Section 9.</span>	
	8.2	List the pollutants below.	
	1.	4.	7.
	2.	5.	8.
	3.	6.	9.

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**SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(g)(11))**

<b>Biological Toxicity Tests</b>	9.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) on a receiving water in relation to your discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 10.			
	9.2	Identify the tests and their purposes below.			
		<b>Test(s)</b>	<b>Purpose of Test(s)</b>	<b>Submitted to NPDES Permitting Authority?</b>	<b>Date Submitted</b>
				<input type="checkbox"/> Yes <input type="checkbox"/> No	
				<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No			

**SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(g)(12))**

<b>Contract Analyses</b>	10.1	Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 11.			
	10.2	Provide information for each contract laboratory or consulting firm below.			
			<b>Laboratory Number 1</b>	<b>Laboratory Number 2</b>	<b>Laboratory Number 3</b>
		Name of laboratory/firm	Pace Analytical National		
		Laboratory address	12065 Lebanon RD Mount Juliet, TN 37122		
		Phone number	(615) 758-5858		
Pollutant(s) analyzed	All pollutants except field parameters.				

**SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(g)(13))**

<b>Additional Information</b>	11.1	Has the NPDES permitting authority requested additional information? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 12.	
	11.2	List the information requested and attach it to this application.	
		1.	4.
		2.	5.
	3.	6.	

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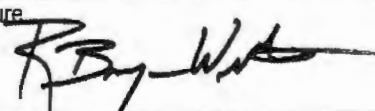
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**SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))**

Checklist and Certification Statement

12.1	In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.	
	Column 1	Column 2
	<input checked="" type="checkbox"/> Section 1: Outfall Location	<input checked="" type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 2: Line Drawing	<input checked="" type="checkbox"/> w/ line drawing <input type="checkbox"/> w/ additional attachments
	<input checked="" type="checkbox"/> Section 3: Average Flows and Treatment	<input type="checkbox"/> w/ attachments <input type="checkbox"/> w/ list of each user of privately owned treatment works
	<input checked="" type="checkbox"/> Section 4: Intermittent Flows	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 5: Production	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 6: Improvements	<input type="checkbox"/> w/ attachments <input type="checkbox"/> w/ optional additional sheets describing any additional pollution control plans
	<input checked="" type="checkbox"/> Section 7: Effluent and Intake Characteristics	<input type="checkbox"/> w/ request for a waiver and supporting information <input type="checkbox"/> w/ explanation for identical outfalls
		<input type="checkbox"/> w/ small business exemption request <input type="checkbox"/> w/ other attachments
		<input checked="" type="checkbox"/> w/ Table A <input checked="" type="checkbox"/> w/ Table B
		<input checked="" type="checkbox"/> w/ Table C <input checked="" type="checkbox"/> w/ Table D
	<input checked="" type="checkbox"/> Section 8: Used or Manufactured Toxics	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 9: Biological Toxicity Tests	<input type="checkbox"/> w/ attachments
<input checked="" type="checkbox"/> Section 10: Contract Analyses	<input type="checkbox"/> w/ attachments	
<input checked="" type="checkbox"/> Section 11: Additional Information	<input type="checkbox"/> w/ attachments	
<input checked="" type="checkbox"/> Section 12: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments	

12.2	<b>Certification Statement</b>	
	<i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
	Name (print or type first and last name)	Official title
Robert Bryan Williams	Senior VP, Gen Projects & Fleet Services	
Signature	Date signed	
	05/22/2023	

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**TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))<sup>1</sup>**

Pollutant	Waiver Requested (if applicable)	Units (specify)	Effluent				Intake (Optional)		
			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses	
<input type="checkbox"/> Check here if you have applied to your NPDES permitting authority for a waiver for <i>all</i> of the pollutants listed on this table for the noted outfall.									
1. Biochemical oxygen demand (BOD <sub>5</sub> )	<input type="checkbox"/>	Concentration	mg/l	14.3	NA	NA	1		
		Mass							
2. Chemical oxygen demand (COD)	<input type="checkbox"/>	Concentration	mg/L	<20.0	NA	NA	1		
		Mass							
3. Total organic carbon (TOC)	<input type="checkbox"/>	Concentration	mg/L	2.97	NA	NA	1		
		Mass							
4. Total suspended solids (TSS)	<input type="checkbox"/>	Concentration	mg/L	4.10	NA	NA	1		
		Mass							
5. Ammonia (as N)	<input type="checkbox"/>	Concentration	mg/L	<0.250	NA	NA	1		
		Mass							
6. Flow	<input type="checkbox"/>	Rate	MGD	0.05	NA	NA	1		
7. Temperature	<input type="checkbox"/>	winter	°C	°C	14.6	NA	NA	1	
		summer	°C	°C	NA	NA	NA	NA	
8. pH	<input type="checkbox"/>	minimum	Standard units	s.u.	6.96	NA	NA	1	
		maximum	Standard units	s.u.	6.98	NA	NA	1	

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
<input type="checkbox"/>	Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.											
<b>Section 1. Toxic Metals, Cyanide, and Total Phenols</b>												
1.1	Antimony, total (7440-36-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.005	NA	NA	1		
					Mass							
1.2	Arsenic, total (7440-38-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.00116	NA	NA	1		
					Mass							
1.3	Beryllium, total (7440-41-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
1.4	Cadmium, total (7440-43-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
1.5	Chromium, total (7440-47-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.02	NA	NA	1		
					Mass							
1.6	Copper, total (7440-50-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
1.7	Lead, total (7439-92-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.002	NA	NA	1		
					Mass							
1.8	Mercury, total (7439-97-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	ng/L	2.25	NA	NA	4		
					Mass							
1.9	Nickel, total (7440-02-0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.002	NA	NA	1		
					Mass							
1.10	Selenium, total (7782-49-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.002	NA	NA	1		
					Mass							
1.11	Silver, total (7440-22-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
1.12	Thallium, total (7440-28-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
1.13	Zinc, total (7440-66-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.02	NA	NA	1		
					Mass							
1.14	Cyanide, total (57-12-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.005	NA	NA	4		
					Mass							
1.15	Phenols, total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.04	NA	NA	4		
					Mass							

**Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)**

2.1	Acrolein (107-02-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.005	NA	NA	1		
					Mass							
2.2	Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.01	NA	NA	1		
					Mass							
2.3	Benzene (71-43-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
2.4	Bromoform (75-25-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
2.5	Carbon tetrachloride (56-23-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
2.6	Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
2.7	Chlorodibromomethane (124-48-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001	NA	NA	1		
					Mass							
2.8	Chloroethane (75-00-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.005	NA	NA	1		
					Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)		
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
2.9	2-chloroethylvinyl ether (110-75-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.05				1		1
					Mass								
2.10	Chloroform (67-66-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.005				1		1
					Mass								
2.11	Dichlorobromomethane (75-27-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								
2.12	1,1-dichloroethane (75-34-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								
2.13	1,2-dichloroethane (107-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								
2.14	1,1-dichloroethylene (75-35-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								
2.15	1,2-dichloropropane (78-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								
2.16	1,3-dichloropropylene (542-75-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								
2.17	Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								
2.18	Methyl bromide (74-83-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.005				1		1
					Mass								
2.19	Methyl chloride (74-87-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.0025				1		1
					Mass								
2.20	Methylene chloride (75-09-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.005				1		1
					Mass								
2.21	1,1,2,2-tetrachloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1		1
					Mass								

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.22	Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1	
					Mass							
2.23	Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1	
					Mass							
2.24	1,2-trans-dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1	
					Mass							
2.25	1,1,1-trichloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1	
					Mass							
2.26	1,1,2-trichloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1	
					Mass							
2.27	Trichloroethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1	
					Mass							
2.28	Vinyl chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.001				1	
					Mass							
<b>Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)</b>												
3.1	2-chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.2	2,4-dichlorophenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.3	2,4-dimethylphenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.4	4,6-dinitro-o-cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.5	2,4-dinitrophenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
3.6	2-nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.7	4-nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.8	p-chloro-m-cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.9	Pentachlorophenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.10	Phenol (108-95-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
3.11	2,4,6-trichlorophenol (88-05-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
<b>Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)</b>												
4.1	Acenaphthene (83-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.2	Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.3	Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.4	Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.5	Benzo (a) anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.6	Benzo (a) pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
4.7	3,4-benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.8	Benzo (ghi) perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.9	Benzo (k) fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.10	Bis (2-chloroethoxy) methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.11	Bis (2-chloroethyl) ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.12	Bis (2-chloroisopropyl) ether (102-80-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.13	Bis (2-ethylhexyl) phthalate (117-81-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.14	4-bromophenyl phenyl ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.15	Butyl benzyl phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.16	2-chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.17	4-chlorophenyl phenyl ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.18	Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.19	Dibenzo (a,h) anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
4.20	1,2-dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.21	1,3-dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.22	1,4-dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.23	3,3-dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.24	Diethyl phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.25	Dimethyl phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.26	Di-n-butyl phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.27	2,4-dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.28	2,6-dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.29	Di-n-octyl phthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.30	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.31	Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.32	Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
4.33	Hexachlorobenzene (118-74-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.34	Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.35	Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.36	Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.37	Indeno (1,2,3-cd) pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.38	Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.39	Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.40	Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.41	N-nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.42	N-nitrosodi-n-propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.43	N-nitrosodiphenylamine (86-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.44	Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.45	Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							



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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
4.46	1,2,4-trichlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
<b>Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)</b>												
5.1	Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.2	α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.3	β-BHC (319-85-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.4	γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.5	δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.6	Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.7	4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.8	4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.9	4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.10	Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.11	α-endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
5.12	β-endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.13	Endosulfan sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.14	Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.15	Endrin aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.16	Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.17	Heptachlor epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.18	PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.19	PCB-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.20	PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.21	PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.22	PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.23	PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.24	PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

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**TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))<sup>1</sup>**

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
5.25	Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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**TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))<sup>1</sup>**

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (Optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
<input type="checkbox"/> Check here if you believe all pollutants on Table C to be <b>present</b> in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for <i>each</i> pollutant.									
<input type="checkbox"/> Check here if you believe all pollutants on Table C to be <b>absent</b> in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for <i>each</i> pollutant.									
1. Bromide (24959-67-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<1.00			1	
			Mass						
2. Chlorine, total residual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.03			1	
			Mass						
3. Color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	PCU	20			1	
			Mass						
4. Fecal coliform	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						
5. Fluoride (16984-48-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	0.150			1	
			Mass						
6. Nitrate-nitrite	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.100			1	
			Mass						
7. Nitrogen, total organic (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.924			1	
			Mass						
8. Oil and grease	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<5.26			4	
			Mass						
9. Phosphorus (as P), total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.100			1	
			Mass						
10. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	40.3			1	
			Mass						
11. Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	0.0500			1	
			Mass						

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**TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))<sup>1</sup>**

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12.	Sulfite (as SO <sub>3</sub> ) (14265-45-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	2.56			1		
				Mass							
13.	Surfactants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.100			1		
				Mass							
14.	Aluminum, total (7429-90-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.267			1		
				Mass							
15.	Barium, total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.0547			1		
				Mass							
16.	Boron, total (7440-42-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.150			1		
				Mass							
17.	Cobalt, total (7440-48-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.002			1		
				Mass							
18.	Iron, total (7439-89-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.156			1		
				Mass							
19.	Magnesium, total (7439-95-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	3.19			1		
				Mass							
20.	Molybdenum, total (7439-98-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.005			1		
				Mass							
21.	Manganese, total (7439-96-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	<0.0306			1		
				Mass							
22.	Tin, total (7440-31-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration	mg/L	<0.004			1		
				Mass							
23.	Titanium, total (7440-32-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/L	0.0118			1		
				Mass							

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**TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))<sup>1</sup>**

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (Optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
<b>24. Radioactivity</b>									
Alpha, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						
Beta, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						
Radium, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						
Radium 226, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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**TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))<sup>1</sup>**

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
1.	Asbestos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2.	Acetaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
3.	Allyl alcohol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
4.	Allyl chloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.	Amyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.	Aniline	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
7.	Benzonitrile	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
8.	Benzyl chloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
9.	Butyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
10.	Butylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
11.	Captan	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
12.	Carbaryl	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
13.	Carbofuran	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
14.	Carbon disulfide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
15.	Chlorpyrifos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
16.	Coumaphos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
17.	Cresol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
18.	Crotonaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
19.	Cyclohexane	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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**TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))<sup>1</sup>**

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
20.	2,4-D (2,4-dichlorophenoxyacetic acid)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
21.	Diazinon	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
22.	Dicamba	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
23.	Dichlobenil	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
24.	Dichlone	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
25.	2,2-dichloropropionic acid	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
26.	Dichlorvos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
27.	Diethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
28.	Dimethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
29.	Dinitrobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
30.	Diquat	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
31.	Disulfoton	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
32.	Diuron	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
33.	Epichlorohydrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
34.	Ethion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
35.	Ethylene diamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
36.	Ethylene dibromide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
37.	Formaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
38.	Furfural	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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**TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))<sup>1</sup>**

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
39.	Guthion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
40.	Isoprene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
41.	Isopropanolamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
42.	Kelthane	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
43.	Kepone	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
44.	Malathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
45.	Mercaptodimethur	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
46.	Methoxychlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
47.	Methyl mercaptan	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
48.	Methyl methacrylate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
49.	Methyl parathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
50.	Mevinphos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
51.	Mexacarbate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
52.	Monoethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
53.	Monomethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
54.	Naled	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
55.	Naphthenic acid	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
56.	Nitrotoluene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
57.	Parathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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**TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))<sup>1</sup>**

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
58.	Phenolsulfonate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
59.	Phosgene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
60.	Propargite	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
61.	Propylene oxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
62.	Pyrethrins	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
63.	Quinoline	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
64.	Resorcinol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
65.	Strontium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
66.	Strychnine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
67.	Styrene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
68.	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
69.	TDE (tetrachlorodiphenyl ethane)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
70.	2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
71.	Trichlorofon	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
72.	Triethanolamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
73.	Triethylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
74.	Trimethylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
75.	Uranium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
76.	Vanadium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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**TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))<sup>1</sup>**

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
77.	Vinyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
78.	Xylene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
79.	Xylenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
80.	Zirconium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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**TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))**

Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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Form 2F NPDES		<b>U.S Environmental Protection Agency</b> <b>Application for NPDES Permit to Discharge Wastewater</b> <b>STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY</b>
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**SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))**

Outfall Location	1.1	Provide information on each of the facility's outfalls in the table below			
		<b>Outfall Number</b>	<b>Receiving Water Name</b>	<b>Latitude</b>	<b>Longitude</b>
		001	Pond Creek	34° 46' 6" N	87° 38' 28" W
		002	Pond Creek	34° 46' 23.36" N	87° 38' 10.83" W
				° ' " N	° ' " W
				° ' " N	° ' " W
				° ' " N	° ' " W
				° ' " "	° ' " "

**SECTION 2. IMPROVEMENTS (40 CFR 122.21(g)(6))**

Improvements	2.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 3.			
	2.2	Briefly identify each applicable project in the table below.			
		<b>Brief Identification and Description of Project</b>	<b>Affected Outfalls (list outfall numbers)</b>	<b>Source(s) of Discharge</b>	<b>Final Compliance Dates</b>
					<b>Required</b> <b>Projected</b>
	2.3	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (Optional Item) <input type="checkbox"/> Yes <input type="checkbox"/> No			



**SECTION 3. SITE DRAINAGE MAP (40 CFR 122.26(c)(1)(i)(A))**

<b>Site Drainage Map</b>	3.1	Have you attached a site drainage map containing all required information to this application? (See instructions for specific guidance.)
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**SECTION 4. POLLUTANT SOURCES (40 CFR 122.26(c)(1)(i)(B))**

<b>Pollutant Sources</b>	4.1	Provide information on the facility's pollutant sources in the table below.			
		<b>Outfall Number</b>	<b>Impervious Surface Area</b> (within a mile radius of the facility)	<b>Total Surface Area Drained</b> (within a mile radius of the facility)	
		001	341	<i>specify units</i> acres	9,312.5 <i>specify units</i> acres
		002	0.0	<i>specify units</i> acres	26.0 <i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
				<i>specify units</i>	<i>specify units</i>
	4.2	Provide a narrative description of the facility's significant material in the space below. (See instructions for content requirements.)			
		N/A			
	4.3	Provide the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff. (See instructions for specific guidance.)			
		<b>Stormwater Treatment</b>			
		<b>Outfall Number</b>	<b>Control Measures and Treatment</b>	<b>Codes from Exhibit 2F-1 (list)</b>	
		DSN 001	All flows discharge underneath a skimmer wall to a heavily vegetated ditch to Pond Creek.	4-A	
		DSN 002	All flows discharge to ditch to Pond Creek.	4-A	

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**SECTION 5. NON STORMWATER DISCHARGES (40 CFR 122.26(c)(1)(i)(C))**

Non-Stormwater Discharges	5.1	I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges. Moreover, I certify that the outfalls identified as having non-stormwater discharges are described in either an accompanying NPDES Form 2C, 2D, or 2E application.			
		Name (print or type first and last name)	Official title		
		Robert Bryan Williams	Senior VP, Gen Projects & Fleet Services		
		Signature	Date signed		
	5.2	Provide the testing information requested in the table below.			
		<b>Outfall Number</b>	<b>Description of Testing Method Used</b>	<b>Date(s) of Testing</b>	<b>Onsite Drainage Points Directly Observed During Test</b>
		001	Storm water sampling for permit renewal	10/20/2022	001
		002	None		NA

**SECTION 6. SIGNIFICANT LEAKS OR SPILLS (40 CFR 122.26(c)(1)(i)(D))**

Significant Leaks or Spills	6.1	Describe any significant leaks or spills of toxic or hazardous pollutants in the last three years. None

**SECTION 7. DISCHARGE INFORMATION (40 CFR 122.26(c)(1)(i)(E))**

Discharge Information	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.	
	7.1	Is this a new source or new discharge? <input type="checkbox"/> Yes → See instructions regarding submission of estimated data. <input checked="" type="checkbox"/> No → See instructions regarding submission of actual data.
	<b>Tables A, B, C, and D</b>	
7.2	Have you completed Table A for each outfall? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

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Discharge Information Continued

7.3	Is the facility subject to an effluent limitation guideline (ELG) or effluent limitations in an NPDES permit for its process wastewater? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.5.
7.4	Have you completed Table B by providing quantitative data for those pollutants that are (1) limited either directly or indirectly in an ELG and/or (2) subject to effluent limitations in an NPDES permit for the facility's process wastewater? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.5	Do you know or have reason to believe any pollutants in Exhibit 2F-2 are present in the discharge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 7.7.
7.6	Have you listed all pollutants in Exhibit 2F-2 that you know or have reason to believe are present in the discharge and provided quantitative data or an explanation for those pollutants in Table C? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.7	Do you qualify for a small business exemption under the criteria specified in the Instructions? <input type="checkbox"/> Yes → SKIP to Item 7.18. <input checked="" type="checkbox"/> No
7.8	Do you know or have reason to believe any pollutants in Exhibit 2F-3 are present in the discharge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 7.10.
7.9	Have you listed all pollutants in Exhibit 2F-3 that you know or have reason to believe are present in the discharge in Table C? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.10	Do you expect any of the pollutants in Exhibit 2F-3 to be discharged in concentrations of 10 ppb or greater? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.12.
7.11	Have you provided quantitative data in Table C for those pollutants in Exhibit 2F-3 that you expect to be discharged in concentrations of 10 ppb or greater? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.12	Do you expect acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol to be discharged in concentrations of 100 ppb or greater? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.14.
7.13	Have you provided quantitative data in Table C for the pollutants identified in Item 7.12 that you expect to be discharged in concentrations of 100 ppb or greater? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.14	Have you provided quantitative data or an explanation in Table C for pollutants you expect to be present in the discharge at concentrations less than 10 ppb (or less than 100 ppb for the pollutants identified in Item 7.12)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.15	Do you know or have reason to believe any pollutants in Exhibit 2F-4 are present in the discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.17.
7.16	Have you listed pollutants in Exhibit 2F-4 that you know or believe to be present in the discharge and provided an explanation in Table C? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.17	Have you provided information for the storm event(s) sampled in Table D? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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<b>Discharge Information Continued</b>	<b>Used or Manufactured Toxics</b>		
	7.18	Is any pollutant listed on Exhibits 2F-2 through 2F-4 a substance or a component of a substance used or manufactured as an intermediate or final product or byproduct?	
		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No → SKIP to Section 8.
	7.19	List the pollutants below, including TCDD if applicable.	
	1.	4.	7.
	2.	5.	8.
	3.	6.	9.

**SECTION 8. BIOLOGICAL TOXICITY TESTING DATA (40 CFR 122.21(g)(11))**

<b>Biological Toxicity Testing Data</b>	8.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last three years?		
		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No → SKIP to Section 9.	
	8.2	Identify the tests and their purposes below.		
		<b>Test(s)</b>	<b>Purpose of Test(s)</b>	<b>Submitted to NPDES Permitting Authority?</b>
				<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	

**SECTION 9. CONTRACT ANALYSIS INFORMATION (40 CFR 122.21(g)(12))**

<b>Contract Analysis Information</b>	9.1	Were any of the analyses reported in Section 7 (on Tables A through C) performed by a contract laboratory or consulting firm?		
		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Section 10.	
	9.2	Provide information for each contract laboratory or consulting firm below.		
			<b>Laboratory Number 1</b>	<b>Laboratory Number 2</b>
		<b>Name of laboratory/firm</b>	Pace Analytical National	
		<b>Laboratory address</b>	12065 Lebanon RD Mount Juliet, TN 37122	
	<b>Phone number</b>	(615) 758-5858		
	<b>Pollutant(s) analyzed</b>	All pollutants except field parameters.		

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**SECTION 10. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))**

Checklist and Certification Statement	10.1	In Column 1 below, mark the sections of Form 2F that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.	
		Column 1	Column 2
		<input checked="" type="checkbox"/> Section 1	<input type="checkbox"/> w/ attachments (e.g., responses for additional outfalls)
		<input checked="" type="checkbox"/> Section 2	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 3	<input checked="" type="checkbox"/> w/ site drainage map
		<input checked="" type="checkbox"/> Section 4	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 5	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 6	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 7	<input checked="" type="checkbox"/> Table A <input type="checkbox"/> w/ small business exemption request <input checked="" type="checkbox"/> Table B <input type="checkbox"/> w/ analytical results as an attachment <input checked="" type="checkbox"/> Table C <input checked="" type="checkbox"/> Table D
		<input checked="" type="checkbox"/> Section 8	<input type="checkbox"/> w/attachments
		<input checked="" type="checkbox"/> Section 9	<input type="checkbox"/> w/attachments (e.g., responses for additional contact laboratories or firms)
		<input checked="" type="checkbox"/> Section 10	<input type="checkbox"/>
	10.2	<b>Certification Statement</b> <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
		Name (print or type first and last name)	Official title
		Robert Bryan Williams	Senior VP, Gen Projects & Fleet Services
		Signature	Date signed

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**TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))<sup>1</sup>**

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

Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1. Oil and grease	<5.26 mg/L		NA		1	
2. Biochemical oxygen demand (BOD <sub>5</sub> )	NA	14.3 mg/L	NA	NA	1	
3. Chemical oxygen demand (COD)	NA	<20.0 mg/L	NA	NA	1	
4. Total suspended solids (TSS)	NA	4.10 mg/L	NA	NA	1	
5. Total phosphorus	NA	0.827 mg/L	NA	NA	1	
6. Total Kjeldahl nitrogen (TKN)	NA	0.648 mg/L	NA	NA	1	
7. Total nitrogen (as N)	NA	0.648 mg/L	NA	NA	1	
8. pH (minimum)	6.96		NA		1	
	pH (maximum)	6.98	NA		1	

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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**TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))<sup>1</sup>**

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge <i>(specify units)</i>		Average Daily Discharge <i>(specify units)</i>		Number of Storm Events Sampled	Source of Information <i>(new source/new dischargers only; use codes in instructions)</i>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Arsenic, Total	0.04 mg/L	NA	NA	NA		
Mercury, Total	2.17 ug/L	NA	NA	NA		
Total Residual Chlorine	0.03 mg/L	NA	NA	NA		

<sup>1</sup>Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).



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**TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))<sup>1</sup>**

List each pollutant shown in Exhibits 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Aluminum	NA	<0.100 mg/L	NA	NA	1	
Barium	NA	0.0215 mg/L	NA	NA	1	
Copper	NA	<0.001 mg/L	NA	NA	1	
Iron	NA	0.583 mg/L	NA	NA	1	
Magnesium	NA	3.88 mg/L	NA	NA	1	
Manganese	NA	0.342 mg/L	NA	NA	1	
Nickel	NA	<0.002 mg/L	NA	NA	1	
Zinc	NA	<0.0200 mg/L	NA	NA	1	
Ammonia (as N)	NA	<0.250 mg/L	NA	NA	1	
Kjeldahl Nitrogen	NA	0.648 mg/L	NA	NA	1	
Nitrate Nitrite	NA	<0.100 mg/L	NA	NA	1	
Phosphorus	NA	0.827 mg/L	NA	NA	1	
TOC	NA	2.97 mg/L	NA	NA	1	
Nitrogen	NA	0.648 mg/L	NA	NA	1	

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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**TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))**

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)

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

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**TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))<sup>1</sup>**

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

Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1. Oil and grease	<5.26 mg/L		NA		1	
2. Biochemical oxygen demand (BOD <sub>5</sub> )	NA	14.3 mg/L	NA	NA	1	
3. Chemical oxygen demand (COD)	NA	<20.0 mg/L	NA	NA	1	
4. Total suspended solids (TSS)	NA	4.10 mg/L	NA	NA	1	
5. Total phosphorus	NA	0.827 mg/L	NA	NA	1	
6. Total Kjeldahl nitrogen (TKN)	NA	0.648 mg/L	NA	NA	1	
7. Total nitrogen (as N)	NA	0.648 mg/L	NA	NA	1	
8. pH (minimum)	6.96		NA		1	
pH (maximum)	6.98		NA		1	

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number AL364009004	NPDES Permit Number AL003891	Facility Name Environmental Research Center	Outfall Number 002 * data used from 001*
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**TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))<sup>1</sup>**

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge <small>(specify units)</small>		Average Daily Discharge <small>(specify units)</small>		Number of Storm Events Sampled	Source of Information <small>(new source/new dischargers only; use codes in instructions)</small>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Arsenic, Total	0.04 mg/L	NA	NA	NA		
Mercury, Total	2.17 ug/L	NA	NA	NA		
Total Residual Chlorine	0.03 mg/L	NA	NA	NA		

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number AL364009004	NPDES Permit Number AL003891	Facility Name Environmental Research Center	Outfall Number 002 * data used from 001*
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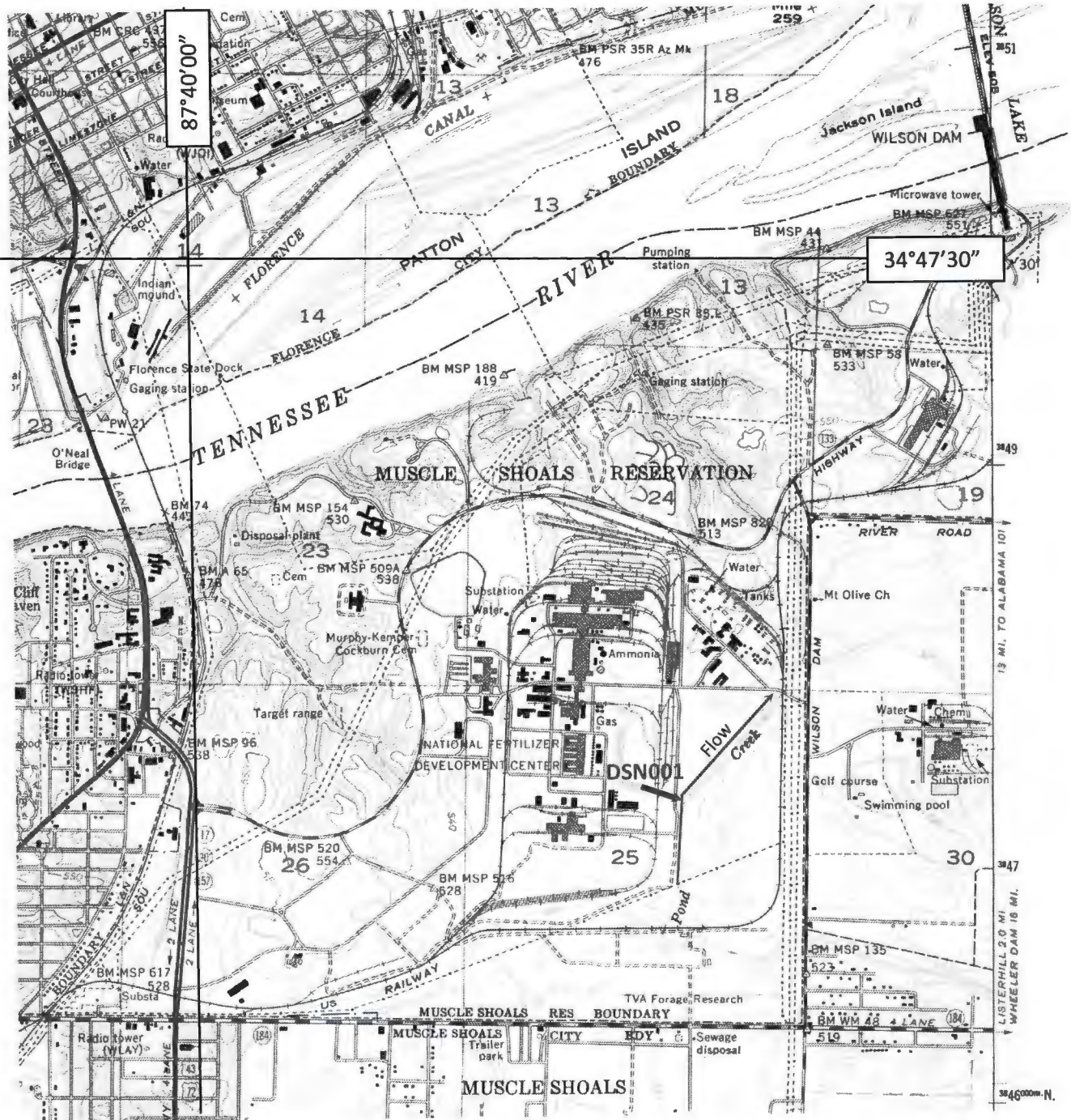
Form Approved 03/05/19  
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**TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (viii))<sup>1</sup>**

List each pollutant shown in Exhibits 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Aluminum	NA	<0.100 mg/L	NA	NA	1	
Barium	NA	0.0215 mg/L	NA	NA	1	
Copper	NA	<0.001 mg/L	NA	NA	1	
Iron	NA	0.583 mg/L	NA	NA	1	
Magnesium	NA	3.88 mg/L	NA	NA	1	
Manganese	NA	0.342 mg/L	NA	NA	1	
Nickel	NA	<0.002 mg/L	NA	NA	1	
Zinc	NA	<0.0200 mg/L	NA	NA	1	
Ammonia (as N)	NA	<0.250 mg/L	NA	NA	1	
Kjeldahl Nitrogen	NA	0.648 mg/L	NA	NA	1	
Nitrate Nitrite	NA	<0.100 mg/L	NA	NA	1	
Phosphorus	NA	0.827 mg/L	NA	NA	1	
TOC	NA	2.97 mg/L	NA	NA	1	
Nitrogen	NA	0.648 mg/L	NA	NA	1	

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).



North

0 1 Mile

TVA Environmental Research Center  
 NPDES Permit No. AL0003891  
 Muscle Shoals, Alabama  
 2023

Florence, Alabama Quadrangle

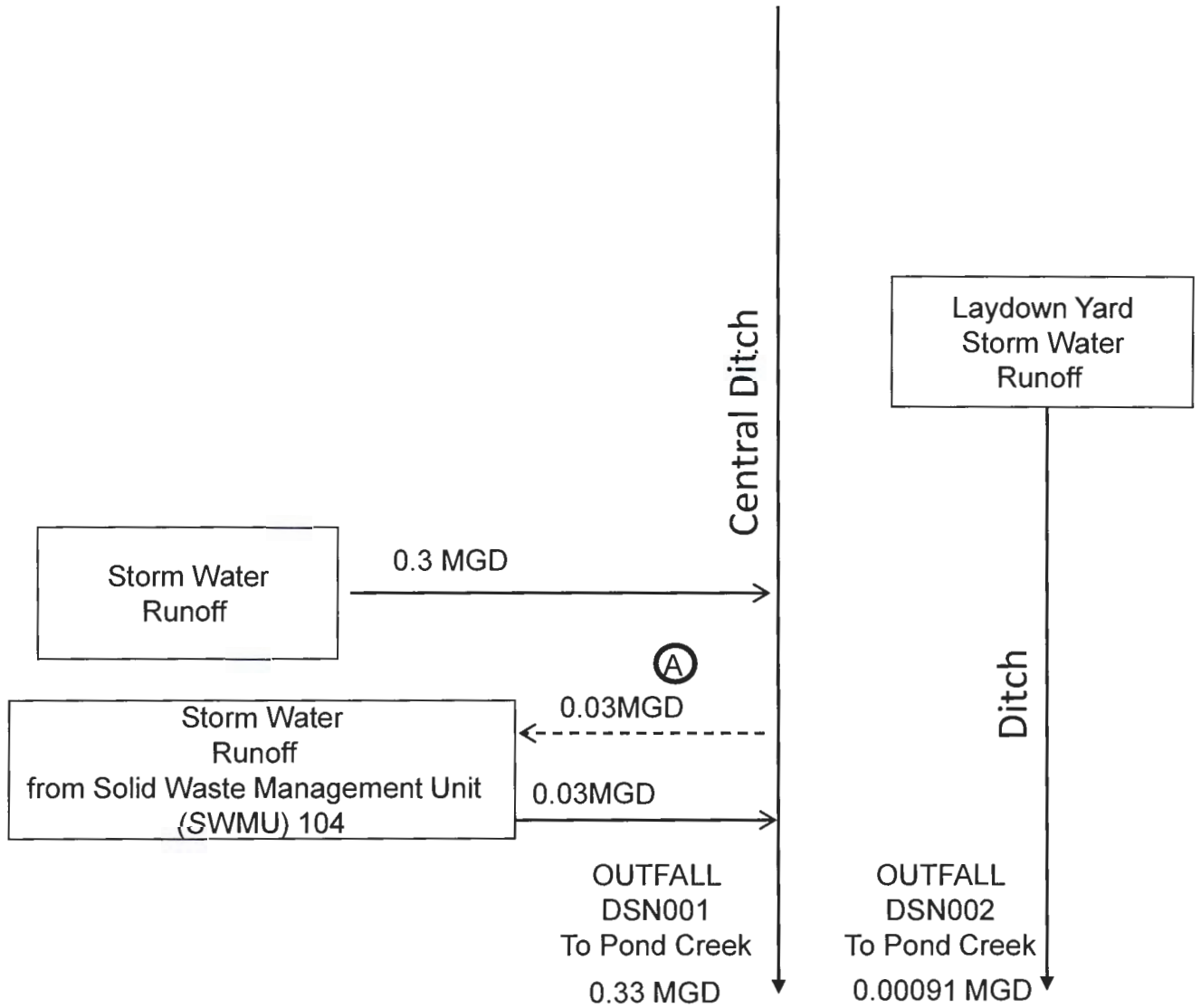


## MUSCLE SHOALS ENVIRONMENTAL RESEARCH CENTER

### Legend

- OUTFALL
-  DRAINAGE BOUNDARY
-  RESERVATION BOUNDARY





Ⓐ During periods of dry weather, water may be pumped from Central Ditch to SWMU 104.

TVA Environmental Research Center  
 NPDES Permit No. AL0003891  
 Wastewater Flow Schematic  
 2023