

Permit Number: AR0001601
AFIN: 35-00017

**AUTHORIZATION TO DISCHARGE WASTEWATER UNDER
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND
THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT**

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. § 1251 et seq.),

American Kraft Paper Industries LLC

is authorized to discharge process wastewater and stormwater from a facility located as follows:
1701 Jefferson Parkway, White Hall, AR 71602, in Jefferson County.

Facility Coordinates: Latitude: 34° 15' 51" N; Longitude: 92° 01' 26" W

Discharge is to receiving waters named:

Arkansas River in Segment 3C of the Arkansas River Basin.

The outfall is located at the following coordinates:

Outfall 001:	Latitude: 34° 15' 47" N;	Longitude: 92° 00' 51" W
Outfall 002:	Latitude: 34° 16' 02" N;	Longitude: 92° 00' 39" W
Outfall SUM:	Latitude: 34° 16' 34" N;	Longitude: 91° 59' 38" W

Discharge shall be in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit. Per Part III.D.10, the permittee must re-apply 180 days prior to the expiration date below for permit coverage to continue beyond the expiration date.

Effective Date:	January 1, 2023
Minor Modification Date:	February 1, 2025
Expiration Date:	December 31, 2027



Digitally signed by Stacie R. Wassell
DN: cn=Stacie R. Wassell, o=Division of Environmental
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Stacie R. Wassell
Associate Director, Office of Water Quality
Arkansas Department of Energy and Environment
Division of Environmental Quality

January 9, 2025

Issue Date

PART I
PERMIT REQUIREMENTS

SECTION A.1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated wastewater consisting of process wastewater, sanitary wastewater, landfill leachate, equipment and vehicle wash water, and stormwater runoff¹

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions.

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow	N/A	N/A	Report, MGD	Report, MGD	once/day	totalizing meter
Biochemical Oxygen Demand (CBOD ₅)	2850.0	5700.8	N/A	N/A	three/week ²	composite
Total Suspended Solids (TSS)	6108.0	12216.0	N/A	N/A	three/week ²	composite
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/day	grab

¹ See Part II.8 (Stormwater Drainage Basins).

² When both Outfall 001 and 002 are discharging, the permittee shall take samples from both outfalls on the same day. See Part II.6.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the final treatment unit, prior to commingling with the discharge from Outfall 002.

SECTION A.2 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 002 – discharge of emergency overflow from stabilization ponds consisting of treated process wastewater, sanitary wastewater, landfill leachate, equipment and vehicle wash water, and stormwater runoff^{1,2}

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 002. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions.

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow						
INTERIM⁴	N/A	N/A	Report, MGD	Report, MGD	once/day	instantaneous
FINAL⁵	N/A	N/A	Report, MGD	Report, MGD	once/day	totalizing meter
Biochemical Oxygen Demand (BOD ₅)	Report	Report	Report	Report	three/week ³	composite
Total Suspended Solids (TSS)	Report	Report	Report	Report	three/week ³	composite
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/day	grab

1. See Part II.8 (Stormwater Drainage Basins).

2. Outfall 002 is only to be used for essential maintenance to maintain a safe freeboard level, see Part II.7 for details.

3. When both Outfall 001 and 002 are discharging, the permittee shall take samples from both outfalls on the same day. See Part II.6.

4. Interim flow monitoring requirements are effective beginning on the effective date of the permit and lasting until one year after the effective date of the permit.

5. Final flow monitoring requirements are effective beginning one year after the effective date of the permit and lasting until the date of expiration.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the stabilization ponds, prior to commingling with the discharge from Outfall 001.

The permittee shall submit a pond level management report to DEQ no later than January 31st of each year. See Part II.7 of the permit for details.

SECTION A.3 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL SUM – Discharge to the Arkansas River consisting of the combined discharge from Outfalls 001 and 002.

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall SUM. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions.

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow	N/A	N/A	Report, MGD	Report, MGD	once/day	calculated ¹
Biochemical Oxygen Demand (BOD ₅)	2850.0	5700.8	N/A	N/A	three/week	calculated ¹
Total Suspended Solids (TSS)	6108.0	12216.0	N/A	N/A	three/week	calculated ¹
Chronic WET Testing ²						
<u><i>Pimephales promelas</i> (Chronic)</u> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C Pass/Fail Retest 1 (7-day NOEC) 22418 Pass/Fail Retest 2 (7-day NOEC) 22419 Pass/Fail Retest 3 (7-day NOEC) 51444	N/A		<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report % Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report (Pass=0/Fail=1)		once/quarter once/quarter once/quarter once/quarter once/quarter once/month ³ once/month ³ once/month ³	composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴
<u><i>Ceriodaphnia dubia</i> (Chronic)</u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail Reproduction (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B Pass/Fail Retest 1 (7-day NOEC) 22415 Pass/Fail Retest 2 (7-day NOEC) 22416 Pass/Fail Retest 3 (7-day NOEC) 51443			<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report % Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report (Pass=0/Fail=1)		once/quarter once/quarter once/quarter once/quarter once/quarter once/month ³ once/month ³ once/month ³	composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴ composite ⁴

- The flow, BOD₅, and TSS amounts shall be calculated by adding the results of the tests for these parameters at Outfall 001 to the results at Outfall 002. See Part II.6.
- See Part II.9 (WET Testing Requirements).
- CONDITIONAL REPORTING: Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters (reported on a quarterly DMR). This condition applies to *P. promelas* and *C. dubia*.
- WET samples shall be flow-weighted composites of samples taken at Outfall 001 and Outfall 002. WET samples shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. WET samples at each outfall shall be taken after the final treatment unit, prior to commingling with the discharge from the other outfall. See Part II.9.C.iv for detailed sampling requirements for WET testing.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

SECTION B. PERMIT COMPLIANCE SCHEDULE

Compliance with the Final Monitoring Requirements for Flow is required one year after the effective date of the permit. A report must be submitted no later than 30 days following the final compliance date and include a certification that the final monitoring requirements are being met.

The report must be submitted to the Division at the following address:

Enforcement Branch
Office of Water Quality
Division of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Information can also be submitted electronically via email at water-enforcement-report@adeq.state.ar.us.

PART II OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall hold a Basic Industrial license from the State of Arkansas in accordance with APC&EC Rule 3.
2. In accordance with 40 CFR §§ 122.62(a)(2) and 124.5, this permit may be reopened for modification or revocation and/or reissuance to require additional monitoring and/or effluent limitations when new information is received that actual or potential exceedance of State water quality criteria and/or narrative criteria are determined to be the result of the permittee's discharge(s) to a relevant water body or a Total Maximum Daily Load (TMDL) is established or revised for the water body that was not available at the time of the permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

3. Other Specified Monitoring Requirements

The permittee may use alternative appropriate monitoring methods and analytical instruments other than as specified in Part I Section A of the permit without a major permit modification under the following conditions:

- The monitoring and analytical instruments are consistent with accepted scientific practices.
- The requests shall be submitted in writing to the Permits Branch of the Office of Water Quality of the DEQ for use of the alternate method or instrument.
- The method and/or instrument is in compliance with 40 CFR § 136 or approved in accordance with 40 CFR § 136.5.
- All associated devices are installed, calibrated, and maintained to ensure the accuracy of the measurements and are consistent with the accepted capability of that type of device. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Assurance/Quality Control (QA/QC) program.

Upon written approval of the alternative monitoring method and/or analytical instruments, these methods or instruments must be consistently utilized throughout the monitoring period. DEQ must be notified in writing and the permittee must receive written approval from DEQ if the permittee decides to return to the original permit monitoring requirements.

4. Best Management Practices (BMPs), as defined in Part IV.7, must be implemented for the facility to prevent or reduce the pollution of waters of the State from stormwater runoff, spills or leaks, and/or waste disposal. The permittee must amend the BMPs whenever there is a change in the facility or a change in the operation of the facility.
5. Monitoring Frequency Reduction

With the exception of whole effluent toxicity testing (WET) requirements, the permittee may request a one-time monitoring frequency reduction for pollutants listed in Part I, Section A, *Effluent Limitations and Monitoring Requirements*. Any request for a monitoring frequency

reduction must be submitted in writing to DEQ, and signed by the Responsible Official, in accordance with Part III.D.11.A of the permit.

The following requirements must be met before a review of the monitoring frequency reduction request will be performed:

- A. Compliance with the permit limits for at least the last two (2) years for the pollutants for which a request has been made for a monitoring frequency reduction;
- B. No operational or design changes have been made to the facility for at least the last two (2) years (or during period of review, if greater than two (2) years), and are not anticipated for the remaining term of this permit.

If the above conditions are met, a detailed review of the DMR data will be performed for the pollutants for which a monitoring frequency reduction has been requested. Compliance with the limits does not guarantee a monitoring frequency reduction will be granted. Data must show that the average concentrations of the pollutants in the discharge are less than 75% of the permit limits for a monitoring frequency reduction to be granted.

If a monitoring frequency reduction is granted, the frequency can be reduced by no more than half the rate of the corresponding frequency listed in Part I, Section A, *Effluent Limitations and Monitoring Frequencies*. For example, a monitoring frequency of 4 per month will not be reduced to less than 2 per month. Additionally, the frequency will be no less frequent than monthly.

- 6. When the permittee discharges from Outfall 002, the BOD₅ and TSS discharged from Outfall 002 combined with the BOD₅ and TSS discharged from Outfall 001 shall not exceed the BOD₅ and TSS limits at Outfall SUM (Part I.A.3). When Outfall 001 and 002 are both discharging, the permittee shall take samples from both outfalls on the same day at the frequency specified in Part I.A. The permittee must calculate and report the mass loading at Outfall SUM if there was a discharge from EITHER outfall during the monitoring period, even if there was no discharge through the other outfall.
- 7. Outfall 002 Management
 - A. The permittee may discharge effluent from Outfall 002 for essential maintenance in response to excessive rainfall events, to maintain a safe freeboard level in the diversion ponds, not to exceed 20 events during any 5-year period. In response to a rainfall event, when the freeboard levels in the pond are reduced to less than safe levels (2 feet), the permittee may implement rainfall maintenance procedures which include discharging through Outfall 002 until such time as the freeboard levels reach and are able to maintain a safe freeboard level of at least 2 feet. The permittee must provide notice of discharges from Outfall 002 as detailed in Part II.7.B below.
 - B. Notice

1. Anticipated discharge from Outfall 002. If the permittee knows in advance of the need for a discharge from Outfall 002, it shall submit prior notice, if possible at least ten days before the date of the discharge.
 2. Unanticipated discharge from Outfall 002. The permittee shall submit notice of an unanticipated discharge from Outfall 002 as required in Part III.D.6 (24-hour notice).
- C. At the end of each calendar year, the permittee shall prepare a report summarizing pond level management and discharges from Outfall 002 during that calendar year, except that the first such report shall only require information for the time period between the effective date of this permit and the end of the calendar year. The report shall at minimum include the following information:
- i. Weekly freeboard measurements from at least one of the diversion ponds.
 - ii. Number of discharge events through Outfall 002. A “discharge event” is defined as a period of continuous flow through Outfall 002 for the purposes of this condition.
 - iii. Number of days with a discharge through Outfall 002.
 - iv. Estimated total volume of water discharged through Outfall 002 during the calendar year.
- D. The reports required by Part II.7.C above shall be signed in accordance with Part III.D.11.B of the permit and include the certification in Part III.D.11.C of the permit.
- E. The reports required by Part II.7.C above shall be submitted to DEQ no later than January 31st each year. The reports can be sent electronically to water-permit-application@adeq.state.ar.us or mailed to:

Permits Branch
Office of Water Quality
Division of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

8. Stormwater Drainage Basins

Stormwater from the following areas is currently routed through Outfalls 001 and 002 in this permit:

- Secondary fiber/paper machine;
- Pulp mill;
- Woodyard;
- Caustic plant;
- Recovery/power plant;
- Maintenance shops/storeroom/roll grinding building;
- Contractor gate; and
- Wastewater treatment area

Any rerouting of the stormwater drainage basins in the list above or the addition of other stormwater drainage basins must be submitted to the Division along with an updated site drainage map for review prior to the changes taking place. Modification of this NPDES permit will only be required in the event that the runoff from the new stormwater drainage basin would require the implementation of different permit limits.

9. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC FRESHWATER)

A. SCOPE AND METHODOLOGY

- i. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	SUM
REPORTED ON DMR AS FINAL OUTFALL:	Outfall SUM
CRITICAL DILUTION (%):	3.9%
EFFLUENT DILUTION SERIES (%):	1.6%, 2.2%, 2.9%, 3.9%, 5.2%
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined in Paragraph C.iv.a
TEST SPECIES/METHODS:	40 C.F.R. § 136

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA-821-R-02-013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA-821-R-02-013, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- ii. The NOEC (No Observed Effect Concentration) is herein defined as the greatest effluent dilution at and below which toxicity (lethal or sub-lethal) that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.
- iii. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address

toxicity.

B. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. The purpose of retests is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.

If a frequency reduction, as specified in Item F, has been granted and any valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit. In addition:

i. Part I Testing Frequency Other Than Monthly

- a. The permittee shall conduct a total of three (3) retests for any species that demonstrates significant toxic effects at or below the critical dilution. The retests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item D of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
- b. **IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED** If any of the retests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item E of this section. The permittee shall notify DEQ in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests. A TRE required based on lethal effects should consider any sub-lethal effects as well.
- c. **IF SUB-LETHAL EFFECTS ONLY HAVE BEEN DEMONSTRATED** If any two of the three retests demonstrates significant sub-lethal effects at or below the critical dilution, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}) requirements as specified in Item E of this section. The permittee shall notify DEQ in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required for failure to perform the required retests.
- d. The provisions of Item B.i.a are suspended upon submittal of the TRE Action Plan.

C. REQUIRED TOXICITY TESTING CONDITIONS

i. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- a. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- b. The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- c. 60% of the surviving control females must produce three broods.
- d. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- e. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- f. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sub-lethal effects are exhibited for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- g. If a test passes, yet the percent coefficient of variation between replicates is greater than 40% in the control (0% effluent) and/or in the critical dilution for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test, the test is determined to be invalid. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.
- h. If a test fails, test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%.
- i. A Percent Minimum Significant Difference (PMSD) range of 13 - 47 for *Ceriodaphnia dubia* reproduction;
- j. A PMSD range of 12 - 30 for Fathead minnow growth.

ii. Statistical Interpretation

- a. For the *Ceriodaphnia dubia* survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical

dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.

- b. For the *Ceriodaphnia dubia* reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA/821/R-02-013 or the most recent update thereof.
- c. If the conditions of Test Acceptability are met in Item C.i above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item D below.

iii. Dilution Water

- a. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
 - (1) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (2) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- b. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item C.i), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - (1) a synthetic dilution water control which fulfills the test acceptance requirements of Item C.i was run concurrently with the receiving water control;
 - (2) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
 - (3) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item D below; and
 - (4) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these

parameters will not cause toxicity in the synthetic dilution water.

iv. Samples and Composites

- a. The permittee shall collect a minimum of three flow-weighted composite samples each from Outfall 001 and Outfall 002. The permittee shall combine the composite effluent samples as detailed in Item f below. Unless otherwise stated in this section, a composite sample for WET shall consist of a minimum of 12 subsamples gathered at equal time intervals during a 24-hour period.

If Outfall 002 discharges during at least 14 days of any monitoring period, at least one of the samples for that monitoring period must be taken while Outfall 002 is discharging. See Item e below if the flow from Outfall 002 ceases during testing.

If Outfall 002 discharges for fewer than 14 days of any monitoring period and there is no discharge through Outfall 002 during a 24-hour sampling period, the sampling requirement for Outfall 002 for that 24-hour sampling period is waived.

- b. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples, on use, are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.
- c. The permittee must collect all three flow-weighted composite samples within the monitoring period. Second and/or third composite samples shall not be collected into the next monitoring period; such tests will be determined to not meet either reporting period requirements. Monitoring period definitions are listed in Part IV.
- d. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to between 0 and 6 degrees Centigrade during collection, shipping, and/or storage.
- e. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period for the outfall(s) at which flow ceased. However, the permittee must have collected an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item D of this section.

- f. MULTIPLE OUTFALLS: The permittee shall combine the composite effluent samples in proportion to the average flow from Outfall 001 and 002 for the day the sample was collected (if there is no flow through Outfall 002 during a 24-hour sampling period, the Outfall 001 sample shall be considered the flow-weighted composite sample for that 24-hour sampling period). The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples and report the results under Outfall SUM.
- g. If chlorination is part of the treatment process, the permittee shall not allow the sample to be dechlorinated at the laboratory. At the time of sample collection the permittee shall measure the TRC of the effluent. The measured concentration of TRC for each sample shall be included in the lab report submitted by the permittee.

D. REPORTING

- i. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.7 of this permit. The permittee shall submit full reports. For any test or retest which fails, is considered invalid, or which is terminated early for any reason, the full report must be submitted for agency review.
- ii. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit. The full reports for all valid tests, invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for Agency review.
- iii. The permittee shall submit the results of each valid toxicity test and retest on the subsequent DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Only results of valid tests are to be reported on the DMR.
 - a. *Pimephales promelas* (Fathead minnow)
 - (1) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a “1”; otherwise, enter a “0” for Parameter No. TLP6C
 - (2) Report the NOEC value for survival, Parameter No. TOP6C
 - (3) Report the NOEC value for growth, Parameter No. TPP6C
 - (4) If the NOEC for growth is less than the critical dilution, enter a “1”; otherwise, enter a “0” for Parameter No. TGP6C
 - (5) Report the highest (critical dilution or control) Coefficient of Variation for growth, Parameter No. TQP6C

- (6) If conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution):
- (A) Consecutive Monthly Retest 1: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a "1"; otherwise, enter a "0" under Parameter No. 22418 (reported on quarterly DMR);
 - (B) Consecutive Monthly Retest 2: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a "1"; otherwise, enter a "0" under Parameter No. 22419 (reported on quarterly DMR);
 - (C) Consecutive Monthly Retest 3: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a "1"; otherwise, enter a "0" under Parameter No. 51444 (reported on quarterly DMR);
 - (D) If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test;
 - (E) If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under Parameter Nos. 22418, 22419, 51444 (reported on quarterly DMR)

b. *Ceriodaphnia dubia*

- (1) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP3B
- (2) Report the NOEC value for survival, Parameter No. TOP3B
- (3) Report the NOEC value for reproduction, Parameter No. TPP3B
- (4) If the NOEC for reproduction is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3B
- (5) Report the higher (critical dilution or control) Coefficient of Variation for reproduction, Parameter No. TQP3B
- (6) If conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution):
 - (A) Consecutive Monthly Retest 1: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a "1"; otherwise, enter a "0" under Parameter No. 22415 (reported on quarterly DMR);
 - (B) Consecutive Monthly Retest 2: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a "1"; otherwise, enter a "0" under Parameter No. 22416 (reported on quarterly DMR);

- (C) Consecutive Monthly Retest 3: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a “1”; otherwise, enter a “0” under Parameter No. 51443 (reported on quarterly DMR);
- (D) If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test;
- (E) If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under Parameter Nos. 22415, 22416, and 51443 (reported on quarterly DMR)

iv. DMR parameters

Report the following parameters on the DMR:

- (a) Scheduled DMR: TLP6C, TOP6C, TPP6C, TGP6C, TQP6C, 22418, 22419, 51444, TLP3B, TOP3B, TPP3B, TGP3B, TQP3B, 22415, 22416, and 51443.

E. TOXICITY REDUCTION EVALUATIONS (TREs)

TREs for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TREs as follows: a sub-lethal TRE (TRE_{SL}) is triggered based on three sub-lethal test failures while a lethal effects TRE (TRE_L) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRE_{SL} where there are no effects at effluent dilutions of 75% or lower.

- i. Within ninety (90) days of confirming toxicity, as outlined above, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent’s toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and includes the following:
 - a. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures, the permittee shall perform multiple characterizations and follow the procedures specified in the documents “Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures” (EPA-600/6-91/003) and “Toxicity Identification Evaluation:

Characterization of Chronically Toxic Effluents, Phase I” (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents “Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/080) and “Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

- b. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;
 - c. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise, the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;
 - d. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
 - e. Project Organization (e.g., project staff, project manager, consulting services, etc.).
- ii. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.
 - iii. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
 - a. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

- b. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
 - c. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant toxicity at the critical dilution.
- iv. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming toxicity in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant toxicity at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.
 - v. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

F. MONITORING FREQUENCY REDUCTION

- i. The permittee may apply for a testing frequency reduction upon the successful completion of the first twelve (12) consecutive quarters (in accordance with Item A.i.) of the current permit term of testing for one or both test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than once per six months for the more sensitive test species (usually the *Ceriodaphnia dubia*).
- ii. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in Item C.i. above. In addition, the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects, and the maximum coefficient of variation for the controls. Upon review and acceptance of this information, the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.
- iii. SUB-LETHAL OR SURVIVAL FAILURES - If any test fails the lethal or sub-lethal endpoint at any time during the life of this permit, three consecutive monthly retests are required and the monitoring frequency for the affected test species may be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

- iv. Any monitoring frequency reduction granted applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

PART III STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; and/or for denial of a permit renewal application. **Any values reported in the required Discharge Monitoring Report (DMR) which are in excess of an effluent limitation specified in Part I shall constitute evidence of violation of such effluent limitation and of this permit.**

2. Penalties for Violations of Permit Conditions

The Arkansas Water and Air Pollution Control Act provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than twenty-five thousand dollars (\$25,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

3. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:

- A. Violation of any terms or conditions of this permit.
- B. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.
- C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- D. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
- E. Failure of the permittee to comply with the provisions of APC&EC Rule 9 (Permit fees) as required by Part III.A.11 herein.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4. **Toxic Pollutants**

Notwithstanding Part III.A.3, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standards or prohibition and the permittee so notified.

The permittee shall comply with effluent standards, narrative criteria, or prohibitions established under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. **Civil and Criminal Liability**

Except as provided in permit conditions for “Bypass of Treatment Facilities” (Part III.B.4), and “Upset” (Part III.B.5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statutes or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

6. **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 to under Section 311 of the Clean Water Act.

7. **State Laws**

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 established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

8. **Property Rights**

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

9. **Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions 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.

10. **Applicable Federal, State or Local Requirements**

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal requirements such as endangered species, state or local statute, ordinance or regulation.

11. **Permit Fees**

The permittee shall comply with all applicable permit fee requirements (i.e., including annual permit fees following the initial permit fee that will be invoiced every year the permit is active) for wastewater discharge permits as described in APC&EC Rule 9 (Rule for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR §§ 122.64 and 124.5(d), as adopted in APC&EC Rule 6 and the provisions of APC&EC Rule 8.

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. **Proper Operation and Maintenance**

- A. 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 this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- B. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

2. **Need to Halt or Reduce not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control

production or discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. **Duty to Mitigate**

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment or the water receiving the discharge.

4. **Bypass of Treatment Facilities**

“Bypass” means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 CFR § 122.41(m)(1)(i).

A. Bypass not exceeding limitation

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.B and 4.C.

B. Notice

1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
2. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part III.D.6 (24-hour notice).

C. Prohibition of bypass

1. Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were 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 the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (c) The permittee submitted notices as required by Part III.B.4.B.
2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part III.B.4.C(1).

5. Upset Conditions

- A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part III.B.5.B of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- B. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
1. An upset occurred and that the permittee can identify the specific cause(s) of the upset.
 2. The permitted facility was at the time being properly operated.
 3. The permittee submitted notice of the upset as required by Part III.D.6.
 4. The permittee complied with any remedial measures required by Part III.B.3.
- C. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

- A. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State. The Permittee must comply with all applicable state and Federal regulations governing the disposal of sludge, including but not limited to 40 CFR § 503, 40 CFR § 257, and 40 CFR § 258.
- B. Any changes to the permittee's disposal practices described in the Fact Sheet, as derived from the permit application, will require at least 180 days prior notice to the Director to allow time for additional permitting. Please note that the 180 day notification requirement may be waived if additional permitting is not required for the change.

7. Power Failure

The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators, or retention of inadequately treated effluent.

SECTION C – MONITORING AND RECORDS**1. Representative Sampling**

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified,

before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharge shall be monitored.

2. **Flow Measurement**

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than +/- 10% from true discharge rates throughout the range of expected discharge volumes and shall be installed at the monitoring point of the discharge.

Calculated Flow Measurement

For calculated flow measurements that are performed in accordance with either the permit requirements or a Division approved method (i.e., as allowed in the *Other Specified Monitoring Requirements* condition under Part II), the +/- 10% accuracy requirement described above is waived. This waiver is only applicable when the method used for calculation of the flow has been reviewed and approved by the Division.

3. **Monitoring Procedures**

Monitoring must be conducted according to test procedures approved under 40 CFR § 136, unless other test procedures have been specified in this permit. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals frequent enough to ensure accuracy of measurements and shall ensure that both calibration and maintenance activities will be conducted. An adequate analytical quality control program, including the analysis of sufficient standards, spikes, and duplicate samples to ensure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory. At a minimum, spikes and duplicate samples are to be analyzed on 10% of the samples.

4. **Penalties for Tampering**

The Arkansas Water and Air Pollution Control Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than ten thousand dollars (\$10,000) or by both such fine and imprisonment.

5. **Reporting of Monitoring Results**

40 CFR § 127.11(a)(1) and 40 CFR § 127.16(a) require that monitoring reports must be reported on a Discharge Monitoring Reports (DMR) and filed electronically. Signatory

Authorities must initially request access for a NetDMR account. Once a NetDMR account is established, access to electronic filing should use the following link <https://cdx.epa.gov>. Permittees who are unable to file electronically may request a waiver from the Director in accordance with 40 CFR § 127.15. Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR dated and submitted no later than the 25th day of the month, following the completed reporting period beginning on the effective date of the permit.

6. **Additional Monitoring by the Permittee**

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR § 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated on the DMR.

7. **Retention of Records**

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 this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

8. **Record Contents**

Records and monitoring information shall include:

- A. The date, exact place, time and methods of sampling or measurements, and preservatives used, if any.
- B. The individual(s) who performed the sampling or measurements.
- C. The date(s) and time analyses were performed.
- D. The individual(s) who performed the analyses.
- E. The analytical techniques or methods used.
- F. The measurements and results of such analyses.

9. **Inspection and Entry**

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

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- D. Sample, inspect, or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The Permittee shall give notice to the Director as soon as possible but no later than 180 days prior to any planned physical alterations or additions to the permitted facility [40 CFR § 122.41(l)]. Notice is required only when:

- A. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR § 122.29(b).
- B. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject to effluent limitations in the permit, or to the notification requirements under 40 CFR § 122.42(b).

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

The permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. Monitoring Reports

Monitoring results shall be reported at the intervals and in the form specified in Part III.C.5. **Discharge Monitoring Reports must be submitted even when no discharge occurs during the reporting period.**

5. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

6. **Twenty-four Hour Report**

Please be aware that the notifications can be sent by email to water-enforcement-report@adeq.state.ar.us or at 501-682-0624 for immediate reporting:

A. The permittee shall report any noncompliance which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances to the Enforcement Branch of the Office of Water Quality of DEQ. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:

1. A description of the noncompliance and its cause.
2. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue.
3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

B. The following must be reported within 24 hours:

1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
2. Any upset which exceeds any effluent limitation in the permit.
3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit.

C. The Director may waive the written report on a case-by-case basis if the notification has been received within 24 hours to the Enforcement Branch of the Office of Water Quality of the DEQ.

7. **Other Noncompliance**

The permittee shall report all instances of noncompliance not reported under Parts III.D.4, 5, and 6, at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.6.

8. **Changes in Discharge of Toxic Substances for Industrial Dischargers including Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers**

The Director shall be notified as soon as the permittee knows or has reason to believe:

A. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant including those listed in 40 CFR § 401.15 which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 CFR § 122.42(a)(1).

- B. 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 including those listed in 40 CFR § 401.15 which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 CFR § 122.42(a)(2).

9. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. Information shall be submitted in the form, manner and time frame requested by the Director.

10. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be implemented through procedures outlined by APC&EC Rule 6.

11. Signatory Requirements

All applications, reports, or information submitted to the Director shall be signed and certified as follows:

A. All **permit applications** shall be signed as follows:

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.
 - (b) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively.
 3. For a municipality, State, Federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency.
 - (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- B. All **reports** required by the permit and **other information** requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
1. The authorization is made in writing by a person described above.
 2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).
 3. The written authorization is submitted to the Director.
- C. Certification. Any person signing a document under this section shall make the following certification:
- “I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information 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.”

12. **Availability of Reports**

Except for data determined to be confidential under 40 CFR § 2 and APC&EC Rule 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Environmental Quality. As required by the Rules, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

13. **Penalties for Falsification of Reports**

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject to civil penalties specified in Part III.A.2 and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

14. **Other Information**

Where 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.

PART IV DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act and 40 CFR § 122.2 shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

1. **“7-Day Average”** also known as “average weekly,” 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. The 7-Day Average for Fecal Coliform Bacteria (FCB) or *E. coli* is the geometric mean of the “daily discharges” of all effluent samples collected during a calendar week in colonies per 100 ml.
2. **“Act”** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
3. **“Administrator”** means the Administrator of the U.S. Environmental Protection Agency.
4. **“APC&EC”** means the Arkansas Pollution Control and Ecology Commission.
5. **“Applicable effluent standards and limitations”** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
6. **“Applicable water quality standards”** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APC&EC) Rule 2, as amended.
7. **“Best Management Practices (BMPs)”** are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.
8. **“Bypass”** means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 CFR § 122.41(m)(1)(i).
9. **“Composite sample”** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.
10. **“CV”** means coefficient of variation.
11. **“Daily Discharge”** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
 - A. **Mass Calculations:** For pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total mass of pollutant discharged over the sampling day.
 - B. **Concentration Calculations:** For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day.

12. **“Daily Maximum”** discharge limitation means the highest allowable “daily discharge” during the calendar month.
13. **“Director”** means the Director of the Division of Environmental Quality.
14. **“Dissolved oxygen limit”** shall be defined as follows:
 - A. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month.
 - B. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
15. **“*E. coli*”** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For *E. coli*, report the Daily Maximum as the highest “daily discharge” during the calendar month and the Monthly Average as the geometric mean of all “daily discharges” within a calendar month, in colonies per 100 ml.
16. **“Division”** means the Division of Environmental Quality (DEQ).
17. **“Fecal Coliform Bacteria (FCB)”** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For FCB, report the Daily Maximum as the highest “daily discharge” during the calendar month and the Monthly Average as the geometric mean of all “daily discharges” within a calendar month, in colonies per 100 ml.
18. **“Grab sample”** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
19. **“Industrial User”** means a nondomestic discharger, as identified in 40 CFR § 403, introducing pollutants to a publicly owned treatment works (POTW).
20. **“Instantaneous flow measurement”** means the flow measured during the minimum time required for the flow-measuring device or method to produce a result in that instance. To the extent practical, instantaneous flow measurements coincide with the collection of any grab samples required for the same sampling period so that together the samples and flow are representative of the discharge during that sampling period.
21. **“Instantaneous Maximum”** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.
22. **“Instantaneous Minimum”** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
23. **“Monitoring and Reporting”**

When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25th of the month following the monitoring period end date.

 - A. **MONTHLY:**

is defined as a calendar month or any portion of a calendar month for monitoring requirement frequency of once/month or more frequently.
 - B. **BI-MONTHLY:**

is defined as two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently.

C. QUARTERLY:

1. is defined as a **fixed calendar quarter** or any part of the fixed calendar quarter for a non-seasonal effluent characteristic with a measurement frequency of once/quarter. Fixed calendar quarters are: January through March, April through June, July through September, and October through December.
2. is defined as a **fixed three month period** (or any part of the fixed three month period) of or dependent upon the seasons specified in the permit for a seasonal effluent characteristic with a monitoring requirement frequency of once/quarter that does not coincide with the fixed calendar quarter. Seasonal calendar quarters are: May through July, August through October, November through January, and February through April.

D. SEMI-ANNUAL:

is defined as the fixed time periods January through June, and July through December (or any portion thereof) for an effluent characteristic with a measurement frequency of once/6 months or twice/year.

E. ANNUAL or YEARLY:

is defined as a fixed calendar year or any portion of the fixed calendar year for an effluent characteristic or parameter with a measurement frequency of once/year. A calendar year is January through December, or any portion thereof.

24. **“Monthly Average”** 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. For Fecal Coliform Bacteria (FCB) or *E. coli*, report the Monthly Average as the geometric mean of all “daily discharges” within a calendar month.
25. **“National Pollutant Discharge Elimination System”** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.
26. **“NOEC”** means No Observed Effect Concentration.
27. **“PMSD”** means Percent Minimum Significant Difference.
28. **“POTW”** means Publicly Owned Treatment Works;
29. **“Reduction of CBOD₅/BOD₅ and TSS in mg/l Formula”**
$$[(\text{Influent} - \text{Effluent}) / \text{Influent}] \times 100$$
30. **“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 products.
31. **“Sewage sludge”** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW.
32. **“Treatment works”** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a

reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.

33. **Units of Measure:**

“**MGD**” shall mean million gallons per day.

“**mg/l**” shall mean milligrams per liter or parts per million (ppm).

“**µg/l**” shall mean micrograms per liter or parts per billion (ppb).

“**cfs**” shall mean cubic feet per second.

“**ppm**” shall mean parts per million.

“**s.u.**” shall mean standard units.

34. “**Upset**” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless or improper operations.

35. “**Visible sheen**” means the presence of a film or sheen upon or a discoloration of the surface of the discharge. A sheen can also be from a thin glistening layer of oil on the surface of the discharge.

36. “**Weekday**” means Monday – Friday.

Final Fact Sheet

This Fact Sheet is for information and justification of the permit requirements only. Please note that it is not enforceable. This permitting decision is for the renewal of discharge Permit Number AR0001601 with Arkansas Department of Energy and Environment – Division of Environmental Quality (DEQ) Arkansas Facility Identification Number (AFIN) 35-00017 to discharge to Waters of the State.

1. PERMITTING AUTHORITY

The issuing office is:

Division of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT

The facility address and applicant's mailing address is:

Twin Rivers Pine Bluff LLC
1701 Jefferson Parkway
White Hall, AR 71602

3. PREPARED BY

The permit was prepared by:

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4. PERMIT ACTIVITY

Previous Permit Effective Date:	August 1, 2016
Previous Permit Modification Date:	August 1, 2018
Previous Permit Expiration Date:	July 31, 2021

The permittee submitted a permit renewal application on January 15, 2021. The current discharge permit is being reissued for a 5-year term in accordance with regulations promulgated at 40 CFR § 122.46(a).

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

APC&EC - Arkansas Pollution Control and Ecology Commission
BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practice
BOD₅ - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
CBOD₅ - carbonaceous biochemical oxygen demand
CD - critical dilution
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH₃-N - ammonia nitrogen
NO₃ + NO₂-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Rule 2 - APC&EC Rule 2
Rule 6 - APC&EC Rule 6
Rule 8 - APC&EC Rule 8
Rule 9 - APC&EC Rule 9
RP - reasonable potential
SIC - standard industrial classification
TDS - total dissolved solids
TMDL - total maximum daily load
TP - total phosphorus
TRC - total residual chlorine
TSS - total suspended solids
UAA - use attainability analysis
USF&WS - United States Fish and Wildlife Service
USGS - United States Geological Survey
WET - whole effluent toxicity
WQMP - water quality management plan
WQS - Water Quality standards

WWTP - wastewater treatment plant

Compliance and Enforcement History:

The compliance and enforcement history for this facility can be reviewed by using the following web link:

https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0001601_FULL%20Compliance%20Review_20210427.pdf

5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT

The permittee is responsible for carefully reading the permit in detail and becoming familiar with all of the changes therein:

1. A requirement was added to Part II.7 of the permit for the permittee to submit an annual report regarding pond level management and discharges through Outfall 002. See Section 12.G of this Fact Sheet for additional details.
2. Part II.7.B was added to require notification of discharges from Outfall 002. See Section 12.G of this Fact Sheet for additional details.
3. The monitoring frequency for Flow at Outfall 002 was changed from two/week to once/day. See Section 14 of this Fact Sheet for additional details.
4. The monitoring frequency for BOD₅ and TSS at Outfalls 001, 002, and SUM were changed from two/week to three/week. See Section 14 of this Fact Sheet for additional details.
5. The monitoring frequency for pH at Outfalls 001 and 002 was changed from two/week to once/day. See Section 14 of this Fact Sheet for additional details.
6. The monitoring type for Flow at Outfall 002 was changed from instantaneous to totalizing meter. A 1 year schedule of compliance has been provided to meet the new monitoring type requirements. See Sections 14 and 15 of this Fact Sheet for additional details.
7. Acute WET testing requirements were removed from Outfall 001, and Chronic WET testing requirements were added for Outfall SUM. See Part II.9 of the permit and Sections 11.A and 12 of this Fact Sheet for additional details regarding WET testing.
8. The daily maximum limit for BOD₅ was revised. See Section 11.A of this Fact Sheet for details.
9. A new condition regarding monitoring frequency reduction was added as Part II.5 of the permit.
10. Part I.A.1 of the permit (limits table for Outfall 001) and Part II.9.D of the permit were updated to include monthly retest codes for WET testing. There was no change in the requirements for when monthly retests must be conducted, this change is only related to the reporting.
11. The sludge disposal condition (Part II.9 of the previous permit) was removed. Sludge disposal is addressed in Part III.B.6 of the permit.
12. Part III.C.5 of the permit now requires that DMRs be submitted electronically via NetDMR.

13. An email address and phone number for 24-hour reporting was added to Part III.D.6 of the permit.
14. Part III.D.8 of the permit (condition regarding changes in discharge of toxic substances) was updated.
15. The facility mailing address was removed from the cover page of the permit
16. The condition in Part II.1 of the previous permit regarding discharges other than the permitted outfall was removed. This condition was redundant with Part I of the permit, which only allows discharges from the permitted outfall, and Part III.D.6 of the permit, which requires 24-hour reporting of any noncompliance that may endanger human health or the environment.
17. The receiving stream segment was corrected to 3C.
18. Part II.6 of the permit was updated to clarify that mass loadings at Outfall SUM must be calculated if either outfall discharges during the monitoring period. See Section 14 of this Statement of Basis for additional details.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION

The outfalls are located at the following coordinates based on the previous permit, and confirmed with Google Earth using WGS84:

Outfall 001:	Latitude: 34° 15' 47" N;	Longitude: 92° 00' 51" W
Outfall 002:	Latitude: 34° 16' 02" N;	Longitude: 92° 00' 39" W
Outfall SUM:	Latitude: 34° 16' 34" N;	Longitude: 91° 59' 38" W

The receiving waters named:

Arkansas River in Segment 3C of the Arkansas River Basin. The receiving stream with Assessment Unit AR_11110207_001 is a Water of the State classified for primary and secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies; propagation of desirable species of fish and other aquatic life; and other compatible uses.

7. 303(d) LIST, TOTAL MAXIMUM DAILY LOADS, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS

A. 303(d) List

The receiving stream is not listed on the 2018 303(d) list.

B. Applicable Total Maximum Daily Load (TMDL) Reports

There are no applicable TMDLs for the receiving stream.

C. Endangered Species

No comments on the application were received from the USF&WS. The draft permit and Fact Sheet were sent to the USF&WS for their review.

D. Anti-Degradation

The limitations and requirements set forth in this permit for discharge into waters of the State are consistent with the Anti-degradation Policy and all other applicable water quality standards found in APC&EC Rule 2.

8. OUTFALL, TREATMENT PROCESS DESCRIPTION, AND FACILITY CONSTRUCTION

The following is a description of the facility described in the application:

A. Average Flow:

- i. Outfall 001: 5.02 MGD
- ii. Outfall 002: variable (historical range of “no discharge” to 2.34 MGD)
- iii. Outfall SUM: 5.43 MGD

The average flows for Outfalls 001 and SUM were calculated using the highest reported monthly average flow in the past two years (April 2019 through March 2021), excluding data from March of 2021. There was a period of anticipated noncompliance during this month that was not representative of normal operations, as detailed in the following document:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/EnforcementReports/AR0001601_Outfall%202%20Update_20210315.pdf

Outfall 002 is used only for emergency dewatering, with reported monthly average flows in the past two years (April 2019 through March 2021) ranging from no discharge to 2.34 MGD. As defined in Part IV, the Monthly Average calculation for DMR purposes excludes days of zero flow, therefore the actual average flow for any given month for Outfall 002 is likely less than the Monthly Average calculated for the DMR.

B. Type of Treatment:

- i. Outfall 001: bar screen, clarifier, and aeration pond. Hydrogen peroxide is added to the aeration pond if needed.
- ii. Outfall 002: bar screen, stabilization ponds, and pH neutralization. The pH neutralization will be used as needed.

C. Discharge Description: treated wastewater consisting of process wastewater, sanitary wastewater, landfill leachate, equipment and vehicle wash water, and stormwater runoff. See Part II.8 of the permit for additional information regarding stormwater runoff at this facility.

D. Facility Status: This facility was evaluated using the NPDES Permit Rating Worksheet (MRAT) to determine the correct permitting status. Since the facility’s MRAT score of 125 is greater than 80, this facility is classified as a major industrial.

E. Facility Construction: This permit does not authorize or approve the construction or modification of any part of the treatment system or facilities. Approval for such construction must be by permit issued under Rule 6.202.

9. ACTIVITY

Under the Standard Industrial Classification (SIC) code of 2621 or North American Industry Classification System (NAICS) code of 322121, the applicant's activities are the operation of a Kraft Paper Mill.

10. SOLIDS PRACTICES

Solids are pumped from the clarifier to one of two sludge holding ponds and are removed as necessary. The solids may be land applied on permitted fields next to the facility under the terms of state no-discharge Permit No. 5115-WR-7.

11. DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS

The Division of Environmental Quality has determined to issue a permit for the discharge described in the application. Permit requirements are based on federal regulations (40 CFR §§ 122, 124, and Subchapter N), and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.). All of the information contained in the application, including all of the submitted effluent testing data, was reviewed to determine the need for effluent limits and other permit requirements.

The following is an explanation of the derivation of the conditions of the permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the decisions as required under 40 CFR § 124.7.

Technology-Based Versus Water Quality-Based Effluent Limitations and Conditions

Following regulations promulgated at 40 CFR § 122.44, the permit limits are based on either technology-based effluent limits pursuant to 40 CFR § 122.44(a) or on State water quality standards and requirements pursuant to 40 CFR § 122.44(d), whichever are more stringent as follows:

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Final Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
Outfall 001								
BOD ₅	2850*	N/A	2850.4	5700.8	2850	5656	2850.0	5700.8
TSS	N/A	N/A	6108.0	12216.0	6108	12216	6108.0	12216.0
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	
Acute WET Testing	N/A		N/A		Report		N/A	

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Final Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
Outfall 002								
BOD ₅	N/A	N/A	Report	Report	Report	Report	Report	Report
TSS	N/A	N/A	Report	Report	Report	Report	Report	Report
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	
Outfall SUM								
BOD ₅	2850*	N/A	2850.4	5700.8	2850	5656	2850.0	5700.8
TSS	N/A	N/A	6108.0	12216.0	6108	12216	6108.0	12216.0
Chronic WET Testing	N/A		Report		N/A		Report	

*Technology-based limit was used to create a calibrated model for the permittee, GTL Americas (AR0053066), Pine Bluff Arsenal (AR0001678), the City of Pine Bluff (AR0033316), and Evergreen Packaging (AR0001970).

A. Justification for Limitations and Conditions of the Final Permit

Parameter	Water Quality or Technology	Justification
OUTFALL 001		
BOD ₅ (monthly average)	Water Quality	Water Quality Model dated January 5, 2019 (and reviewed on July 27, 2021), CWA § 402(o), and previous permit
BOD ₅ (daily maximum)	Technology	40 CFR § 430.32, 40 CFR § 122.44(l), and previous permit
TSS	Technology	40 CFR § 430.32, 40 CFR § 122.44(l), and previous permit
pH	Water Quality	Rule 2.504, 40 CFR § 430.32, CWA § 402(o), and previous permit
OUTFALL 002		
BOD ₅	Technology	40 CFR § 430.32, 40 CFR § 122.44(l), and previous permit
TSS	Technology	40 CFR § 430.32, 40 CFR § 122.44(l), and previous permit
pH	Water Quality	Rule 2.504, 40 CFR § 430.32, CWA § 402(o), and previous permit
OUTFALL SUM		
BOD ₅ (monthly average)	Water Quality	Water Quality Model dated January 5, 2019 (and reviewed on July 27, 2021), CWA § 402(o), and previous permit
BOD ₅ (daily maximum)	Technology	40 CFR § 430.32, 40 CFR § 122.44(l), and previous permit
TSS	Technology	40 CFR § 430.32, 40 CFR § 122.44(l), and previous permit
Chronic WET Testing	Technology	CPP Appendix D (page D-27)

BOD₅

In accordance with updated OWQ rounding procedures, all mass limits are expressed to the nearest tenth of a pound per day. Because the water quality model used a loading of 2850 lb/day, the monthly average BOD₅ limit was set at 2850.0 mg/l.

The daily maximum BOD₅ limit is being revised to 5700.8 lb/d. The previous limit of 5656 lb/d was based on a water quality model dated April 8, 2002 that has been superseded by the water quality model dated January 6, 2019.

Fecal Coliform Bacteria (FCB) Monitoring Not Required

Although this facility treats sanitary wastewater, the sanitary wastewater comprises only about 0.2% of the total flow (about 10,000 gallons per day of the 4,450,000 gallons per day total, as estimated in Section G of DEQ Form 1 in the renewal application). Additionally, the permittee certified that FCB was believed absent in the effluent on EPA Form 2C of the renewal application. Therefore, FCB monitoring and reporting requirements have not been included in the permit.

Whole Effluent Toxicity (WET) Testing

WET testing requirements were removed from Outfall 001 and added to Outfall SUM. Additionally, the type of WET testing was revised from Acute to Chronic. See Part II.9 of the permit and Section 12 of this Fact Sheet for additional details regarding WET testing.

B. Anti-backsliding

The permit is consistent with the requirements to meet Anti-backsliding provisions of the Clean Water Act (CWA), Section 402(o) [40 CFR § 122.44(l)]. The final effluent limitations for reissuance permits must be as stringent as those in the previous permit, unless the less stringent limitations can be justified using exceptions listed in CWA 402(o)(2), CWA 303(d)(4), or 40 CFR § 122.44(l)(2)(i).

The permit meets or exceeds the requirements of the previous permit, with the exception of revised daily maximum limitations for BOD₅. This revision is based on new information from a revised water quality model and is allowed in accordance with CWA 402(o)(2)(B)(i).

The removal of the WET testing requirements for Outfall 001 is not considered backsliding because WET testing is now required at Outfall SUM instead, which includes both Outfall 001 and Outfall 002.

C. Limits Calculations

1. Mass Limits:

In accordance with 40 CFR § 122.45(f)(1), all pollutants limited in permits shall have

limitations expressed in terms of mass if feasible. 40 CFR § 122.45(f)(2) allows for pollutants which are limited in terms of mass to also be limited in terms of other units of measurement.

All mass limits are based on 40 CFR § 430.32. See Section 11.E of this Fact Sheet for additional details.

2. Daily Maximum Limits:

All daily maximum limits are based on 40 CFR § 430.32. See Section 11.E of this Fact Sheet for additional details.

D. 208 Plan (Water Quality Management Plan)

The 208 Plan, developed by the DEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary.

There are no changes to the 208 Plan occurring with this permit renewal.

E. Applicable Effluent Limitations Guidelines

Discharges from facilities of this type are covered by Federal effluent limitations guidelines promulgated under 40 CFR § 430 – The Pulp, Paper, and Paperboard Point Source Category, Subpart C – Unbleached Kraft Subcategory.

The previous permit based the technology-based limits on a production level of 509 tons per day. The production levels reported in the additional information received on May 11, 2021 were an average of 438 tons/day for the highest production month of the most recent year, and an average of 379 tons/day for the highest production year of the most recent 5 years. Because the highest production month of the most recent year was within 20% of the previously used production level to calculate technology-based limits, the technology-based limits were continued from the previous permit.

This facility is subject to the BPT limitations specified in 40 CFR § 430.32 for unbleached kraft facilities. These limits are summarized in the table below, using a production of 509 tons/day (1018×10^3 lb/day):

BPT Limits – 40 CFR 430.32 (unbleached kraft facilities)				
Pollutant	ELG (lb/10 ³ lb product)		Limit (lb/d)	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
BOD ₅	2.8	5.6	2850.4	5700.8
TSS	6.0	12.0	6108.0	12216.0
pH	6.0-9.0 s.u.		6.0-9.0 s.u.	

This facility neither 1) produces pulp and paper using the unbleached kraft-neutral sulfite semi-chemical (cross recovery) process, nor 2) produces pulp and paper using a combined unbleached kraft and semi-chemical process, wherein the spent semi-chemical cooking liquor is burned within the unbleached kraft chemical recovery system.

Landfill leachate

40 CFR § 445 contains ELGs for landfill leachate. However, 40 CFR § 445.1(e) states “This part does not apply to discharges of landfill wastewater from landfills operated in conjunction with other industrial or commercial operations when the landfill only receives wastes generated by the industrial or commercial operation directly associated with the landfill.” This facility receives leachate from the Noncommercial Class 3N Landfill that is only used for waste produced by this facility. Therefore, the landfill leachate ELGs are not applicable to this facility.

F. Priority Pollutant Scan (PPS)

DEQ has reviewed and evaluated the effluent in accordance with the potential toxicity of each analyzed pollutant using the procedures outlined in the Continuing Planning Process (CPP).

The concentration of each pollutant after mixing with the receiving stream was compared to the applicable water quality standards as established in the Arkansas Water Quality Standards (AWQS), Rule 2 (Rule 2.508) and criteria obtained from the “Quality Criteria for Water, 1986 (Gold Book).”

Under Federal Regulation 40 CFR § 122.44(d), as adopted by Rule 6, if a discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard, the permit must contain an effluent limitation for that pollutant. Effluent limitations for the toxicants listed below have been derived in a manner consistent with the Technical Support Document (TSD) for Water Quality-based Toxics Control (EPA, March 1991), the CPP, and 40 CFR § 122.45(c).

The following items were used in calculations:

Parameter	Value	Source
Discharge Flow = Q	5.43 MGD = 8.41 cfs	Outfall SUM Average Flow
7Q10 Background Flow	819 cfs	USGS Station No. 07263450
Harmonic Mean Flow	11,000 cfs	USGS Station No. 07263500
TSS	9.0 mg/l	CPP
Hardness as CaCO ₃	125 mg/l	CPP

One sample was taken for all pollutants. For pollutants that were not detected, but the method used did not meet the required detection level, the detection level was used as the

concentration for the purposes of the PPS calculations. The following pollutants were reported above detection levels, or the method used did not meet the required detection level:

Pollutant ¹	Concentration Reported, µg/l	Achieved MQL, µg/l	Required MQL, µg/l
Arsenic, TR	5.5	5	0.5
Beryllium, TR	<3	3	0.5
Cadmium, TR	<3	3	0.5
Chromium (6 ⁺), D	14	10.0	10
Copper, TR	13	3	0.5
Lead, TR	2.6	2.6	0.5
Nickel, TR	<3	3	0.5
Selenium, TR	<50	50	5
Silver, TR	<3	3	0.5
Thallium, TR	<3	3	0.5
Zinc, TR	100	100	20
Phenols, TR	56	5.00	5

¹ “TR” designates Total Recoverable, “D” designates Dissolved

Background concentrations were calculated for the above pollutants based on the geometric mean of the most recent 5 years of monitoring data from DEQ Station ARK0049:

Pollutant ¹	Background Concentration, µg/l ²
Arsenic, TR	1.7
Beryllium, TR	ND
Cadmium, TR	ND
Chromium (6 ⁺), D	NM
Copper, TR	1.7
Lead, TR	0.51
Nickel, TR	1.2
Selenium, TR	ND
Silver, TR	ND
Thallium, TR	ND
Zinc, TR	4.5
Phenols, TR	NM

¹ “TR” designates Total Recoverable, “D” designates Dissolved

² “ND” designates Not Detected, “NM” designates not monitored at this station. For the purposes of the PPS calculations, ND and NM parameters were treated as “0” in accordance with the “Strategy for Addressing Background Contributions” in Appendix D of the CPP.

Instream Waste Concentrations (IWCs) were calculated in the manner described in Appendix D of the CPP and compared to the applicable Criteria. The following tables summarize the results of the analysis. The complete evaluation can be viewed on the Division's website at the following address:

https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0001601_PPS_20220406.pdf

1. Aquatic Toxicity Evaluation

a. Acute Criteria Evaluation

Pollutant ¹	Concentration Reported (C _e) µg/l	C _e × 2.13 ²	Instream Waste Concentration (IWC)	Criteria ³	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Cadmium, TR	3	6.4	0.93	19	No
Chromium (6 ⁺), D	14	30	4.4	16	No
Copper, TR	13	28	5.5	60	No
Lead, TR	2.6	5.5	1.2	440	No
Nickel, TR	3	6.4	2.0	3864	No
Selenium, TR	50	107	16	20	No
Silver, TR	3	6.4	0.93	16	No
Zinc, TR	100	213	35	472	No

¹ "TR" designates Total Recoverable, "D" designates Dissolved

² Statistical ratio used to estimate the 95th percentile using a single effluent concentration.

³ Criteria are from Rule 2.508.

b. Chronic Criteria Evaluation

Pollutant ¹	Concentration Reported (C _e) µg/l	C _e × 2.13 ²	Instream Waste Concentration (IWC)	Criteria ³	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Cadmium, TR	3	6.4	0.25	4.9	No
Chromium (6 ⁺), D	14	30	1.2	11	No
Copper, TR	13	28	2.7	39	No
Lead, TR	2.6	5.5	0.71	17	No
Nickel, TR	3	6.4	1.4	429	No
Selenium, TR	50	107	4.2	5.0	No
Zinc, TR	100	213	13	431	No

¹ "TR" designates Total Recoverable, "D" designates Dissolved

² Statistical ratio used to estimate the 95th percentile using a single effluent concentration.

³ Criteria are from Rule 2.508.

2. Human Health (Bioaccumulation) Evaluation

Pollutant ¹	Concentration Reported (C _e) µg/l	C _e × 2.13 ²	Instream Waste Concentration (IWC)	Criteria	Reasonable Potential (Yes/No)
Arsenic, TR	5.5	12	1.7	1.4 ³	No ⁵
Beryllium, TR	3	6.4	0.0049	4.0 ⁴	No
Thallium, TR	3	6.4	0.0049	4.7 ³	No
Phenols, TR	58	124	0.094	-	No

¹ “TR” designates Total Recoverable

² Statistical ratio used to estimate the 95th percentile using a single effluent concentration.

³ Adapted from “National Recommended Water Quality Criteria:– Human Health Criteria Table”, EPA. The respective WQC from the noted reference are Consumption of Organism Only values. The values from the reference are for a lifetime risk factor of 10⁻⁶. These values have been multiplied by 10 to correspond to human health criteria lifetime risk factor of 10⁻⁵ as stated in Rule 2.508

⁴ Criterion from Rule 2.508.

⁵ The receiving waters contained Total Recoverable Arsenic at an average of 1.7 µg/l, already in excess of the criterion. Based on the calculation for the IWC, $(12 \times 7.77 + 1.7 \times 11,000) / (7.77 + 11,000) = 1.7$, the discharger has an insignificant impact on the quality of the receiving waters as it pertains to human health.

DEQ has determined from the submitted information that the discharge does not pose the reasonable potential to cause or contribute to an exceedance above a listed Criteria.

G. Outfall 002 and Pond Level Management

As detailed in Part II.7.A of the permit, Outfall 002 may be used for essential maintenance in response to excessive rainfall events, to maintain a safe freeboard level in the diversion ponds, not to exceed 20 events during any 5-year period. The permittee must also provide notice of all discharges from Outfall 002 as specified in Part II.7.B.

During [March of 2021](#) and [June of 2021](#), the permittee reported inadequate freeboard in the diversion ponds, which required discharges from Outfall 002 and exceedances of permit limits at Outfall SUM in order to protect levee integrity. Additionally, the permittee has reported at least one discharge from Outfall 002 in 20 of the 24 months from April 2019 through March 2021. The facility submitted a [corrective action plan in September of 2018](#) that included an evaluation to minimize the number of discharges from Outfall 002.

To ensure that adequate freeboard is being maintained in the diversion ponds while minimizing discharges from Outfall 002, a requirement was added to Part II.7.C of the permit for the permittee to prepare an annual report regarding pond level management in the diversion ponds and discharges from Outfall 002. This report shall be submitted to DEQ each year as detailed in Part II.7.E of the permit.

12. WHOLE EFFLUENT TOXICITY

Section 101(a)(3) of the Clean Water Act states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." In addition, DEQ is required under 40 C.F.R. §122.44(d)(1), adopted by reference in Rule 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act. Arkansas has established a narrative criteria which states "toxic materials shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with the normal propagation, growth and survival of aquatic biota."

Whole effluent toxicity (WET) testing is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. It is the national policy of EPA to use bioassays as a measure of toxicity to allow evaluation of the effects of a discharge upon a receiving water (49 Federal Register 9016-9019, March 9, 1984). EPA Region 6 and the State of Arkansas are now implementing the Post Third Round Policy and Strategy established on September 9, 1992, and EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies, revised March 13, 2000.

Whole effluent toxicity testing of the effluent is thereby required as a condition of this permit to assess potential toxicity.

The permittee has reported at least one discharge from Outfall 002 in 20 of the 24 months from April 2019 through March 2021. Considering the frequency of discharges through Outfall 002, DEQ has determined that WET testing must be representative of the combined discharges from Outfall 001 and Outfall 002. Therefore, the WET testing requirements have been removed from Outfall 001 and added to Outfall SUM.

Additionally, the combined discharge of Outfall 001 and Outfall 002 has a dilution ratio of less than 100, so the type of WET testing has been changed from Acute to Chronic.

WET samples for Outfall SUM shall be flow-weighted composites of samples taken at Outfall 001 and Outfall 002. See Part 9.C.iv for detailed WET sampling requirements.

Part 9.C.iv.a of the permit requires that at least one of the WET samples be taken while Outfall 002 is discharging if there is a discharge through Outfall 002 for at least 14 days of the monitoring period.

The whole effluent toxicity testing procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS

Chronic WET

FREQUENCY

once/quarter

Requirements for measurement frequency are based on the CPP.

Since 7Q10 is greater than 100 cfs (ft³/sec), and the dilution ratio (DR) is less than 100:1, chronic WET testing requirements will be included in the permit.

The calculations for dilution used for chronic WET testing are as follows:

$$\text{Critical dilution (CD)} = (Q_d / (Q_d + Q_b)) \times 100$$

$$Q_d = \text{Average flow} = 5.43 \text{ MGD} = 8.41 \text{ cfs}$$

$$7Q10 = 819 \text{ cfs}$$

$$Q_b = \text{Background flow} = (0.25) \times 7Q10 = 204.8 \text{ cfs}$$

$$CD = (8.41) / (8.41 + 204.8) \times 100 = 3.9\%$$

$$DR = (7Q10 + Q_d) / Q_d = (819 + 8.41) / (8.41) = 98 < 100$$

Toxicity tests shall be performed in accordance with protocols described in “Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms”, EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are **1.6%, 2.2%, 2.9%, 3.9%, and 5.2%** (See the CPP). The low-flow effluent concentration (critical dilution) is defined as **3.9%** effluent. The requirement for chronic WET tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead minnow (*Pimephales promelas*) are representative of organisms indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 C.F.R. §122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen conductivity, and alkalinity shall be reported according to EPA-821-R-02-013, October 2002 and shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

This permit may be reopened to require further WET testing studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if WET testing data submitted to the Division shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 C.F.R. §122.62, as adopted by reference in APC&EC Rule 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

Administrative Records

The following information summarizes toxicity tests submitted by the permittee during the term of the current permit at Outfall 001.

Permit Number:	AR0001601	AFIN:	35-00017	Outfall Number:	001
Date of Review:	5/11/2021	Reviewer:	T. Cochran		
Facility Name:	Twin Rivers Pine Bluff LLC				
Previous Dilution series:	11, 14, 19, 25, 33	Proposed Dilution Series:	12, 16, 21, 28, 37		
Previous Critical Dilution:	25	Proposed Critical Dilution:	28		
Previous TRE activities:	None				
Frequency recommendation by species					
<i>Pimephales promelas</i> (Fathead minnow):	quarterly				
<i>Daphnia pulex</i> (water flea):	quarterly				
TEST DATA SUMMARY					
TEST DATE	Vertebrate (<i>Pimephales promelas</i>)		Invertebrate (<i>Daphnia pulex</i>)		
	Lethal		Lethal		
	NOEC		NOEC		
3/31/2021	33		33		
12/31/2020	25		33		
9/30/2020	33		33		
6/30/2020	33		33		
3/31/2020	33		33		
12/31/2019	33		33		
9/30/2019	33		33		
6/30/2019	33		33		
12/31/2018			33		
6/30/2018	33		33		
9/30/2017	33		33		
6/30/2017	33		33		
3/31/2017	33		33		
12/31/2016	33		33		
Failures are noted in BOLD					
REASONABLE POTENTIAL CALCULATIONS					
	Vertebrate Lethal		Invertebrate Lethal		
Min NOEC Observed	25		33		
TU at Min Observed	4.00		3.03		
Count	13		14		
Failure Count	0		0		
Mean	3.105		3.030		
Std. Dev.	0.269		0.000		
CV	0.1		0		
RPMF	1.1		0		
Reasonable Potential	1.232		0.000		
100/Critical dilution	3.571		3.571		
Does Reasonable Potential Exist	No		No		
PERMIT ACTION					
<i>P. promelas</i> acute - monitoring					
<i>D. pulex</i> acute- monitoring					
Additional requirements (including WET Limits) rationale/comments concerning permitting:					

13. STORMWATER REQUIREMENTS

The federal regulations at 40 C.F.R. § 122.26(b)(14) require certain industrial sectors to have NPDES permit coverage for stormwater discharges from the facility. These requirements include the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to control the quality of stormwater discharges from the facility. Some stormwater discharges are covered under this permit, as detailed in Part II.8. This facility was also issued stormwater permit coverage for other discharges under NPDES Tracking number ARR00A499.

14. SAMPLE TYPE AND FREQUENCY

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 C.F.R. § 122.48(b)] and to ensure compliance with permit limitations [40 C.F.R. § 122.44(i)(1)].

Requirements for sample type and sampling frequency for flow (Outfall 001 and Outfall SUM only) and Chronic WET Testing have been based on the previous discharge permit.

The monitoring frequency for flow at Outfall 002 was increased to once/day to provide a better calculation of the flow at Outfall SUM. The monitoring type for flow at Outfall 002 was changed to totalizing meter to ensure that representative measurements of the daily flow are obtained. A 1 year schedule of compliance has been provided for installation of a totalizing meter.

This facility was previously granted a monitoring frequency reduction for BOD₅, TSS, and pH sampling from three/week to two/week based on the facility's compliance with permit limits. This monitoring frequency reduction for BOD₅ and TSS is being reverted because of significant non-compliance, including 16 violations for BOD₅ and 1 violation for TSS reported between November of 2019 and January of 2022.

A review of DMR data for pH from February of 2020 through January of 2022 shows a maximum monthly pH of up to 9 has been reported at Outfall 001 and Outfall 002. At Outfall 002, a maximum pH of greater than 8.9 was reported during 6 of the 24 months in this period, and a maximum pH of greater than 8.8 was reported during 10 of the 24 months during this period. Considering that pH neutralization (as needed) is part of the treatment system for Outfall 002, the monitoring frequency for pH has been revised to once/day to ensure that adequate pH neutralization is being used. The monitoring frequency for pH at Outfall 001 has also been revised to once/day because of the occasional high pH values reported at Outfall 001, and to be consistent with the requirements for Outfall 002.

Acute WET Testing was removed from Outfall 001 and Chronic WET testing was added at Outfall SUM. The monitoring frequency is based on Appendix D of the CPP (Page D-28) and the sample type is based on Attachment X of the CPP.

Part II.6 of the permit was updated to clarify that mass limits must be calculated and reported at Outfall SUM if there was a discharge from either outfall during the monitoring period,

even if there was no discharge through the other outfall. For example, if there was a discharge from Outfall 001 during a monitoring period, but no discharge from Outfall 002, the mass discharged from Outfall SUM must still be calculated using the Outfall 001 data (and thus the mass discharged from Outfall SUM would be equal to the mass discharged from Outfall 001). Based on a review of DMR data from 2017 through 2021, the permittee has previously been reporting mass results in this way.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Outfall 001				
Flow	once/day	totalizing meter	once/day	totalizing meter
BOD ₅	two/week	composite	three/week	composite
TSS	two/week	composite	three/week	composite
pH	two/week	grab	once/day	grab
Acute WET Testing	once/quarter	composite	N/A	N/A
Outfall 002				
Flow	two/week	instantaneous	once/day	totalizing meter ¹
BOD ₅	two/week	composite	three/week	composite
TSS	two/week	composite	three/week	composite
pH	two/week	grab	once/day	grab
Outfall SUM				
Flow	once/day	calculated	once/day	calculated
BOD ₅	two/week	calculated	three/week	calculated
TSS	two/week	calculated	three/week	calculated
Chronic WET Testing	N/A	N/A	once/quarter	composite

¹The requirement for totalizing flow measurements at Outfall 002 is applicable 1 year after the effective date of the permit. The permittee may take instantaneous flow measurements at Outfall 002 in the interim period.

15. PERMIT COMPLIANCE SCHEDULE

A 1 year schedule of compliance has been provided for installation of a totalizing meter at Outfall 002.

16. MONITORING AND REPORTING

The applicant is at all times required to monitor the discharge on a regular basis and report the results monthly. The monitoring results will be available to the public.

17. SOURCES

The following sources were used to draft the permit:

- A. Application No. AR0001601 received January 15, 2021.
- B. Arkansas Water Quality Management Plan (WQMP).
- C. APC&EC Rule 2.
- D. APC&EC Rule 3.
- E. APC&EC Rule 6, which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Rule 6.104.
- F. 40 C.F.R. §§ 122 and 125.
- G. 40 C.F.R. § 430.32
- H. Discharge permit file AR0001601.
- I. Discharge Monitoring Reports (DMRs).
- J. “2018 Integrated Water Quality Monitoring and Assessment Report,” DEQ.
- K. “2018 List of Impaired Waterbodies (303(d) List),” DEQ, May 2020.
- L. “Low-Flow Characteristics and Regionalization of Low-Flow Characteristics for Selected Streams in Arkansas,” U.S. Dept. of the Interior, U.S. Geological Survey, Scientific Investigations Report 2008-5065.
- M. Continuing Planning Process (CPP).
- N. Technical Support Document for Water Quality-based Toxic Control.
- O. [Corrective Action Plan dated September 14, 2018.](#)
- P. [Email regarding discharges from Outfall 002 dated March 15, 2021.](#)
- Q. [5-day follow up report dated June 15, 2021.](#)
- R. [Inspection Report dated November 30, 2017.](#)
- S. [Compliance Review Memo dated April 27, 2021.](#)
- T. [Planning Review Memo dated May 12, 2021.](#)
- U. [NPDES Permit Rating Spreadsheet \(MRAT\) dated April 27, 2021.](#)
- V. [PPS Spreadsheet dated April 5, 2022.](#)
- W. [Water Quality Model dated January 5, 2019 \(and reviewed on July 27, 2021\).](#)
- X. [Additional technical information received May 11, 2021.](#)

18. PUBLIC NOTICE

The public notice of the draft permit was published for public comment on September 4, 2022. The last day of the comment period was thirty (30) days after the publication date. No public comments were received on the draft permit.

A copy of the draft permit and public notice were sent via email to the Corps of Engineers, the Regional Director of the U.S. Fish and Wildlife Service, the Arkansas Department of Parks, Heritage, and Tourism, the EPA, and the Arkansas Department of Health.

19. PERMIT FEE

In accordance with Rule 9.403(A)(1), the annual fee for the permit is \$15,000.

20. POINT OF CONTACT

For additional information, contact:

Zachary Carroll, PhD, P.E.

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Division of Environmental Quality
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