ADEQ

A R K A N S A S
Department of Environmental Quality

JUN 29 2016

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (91 7199 9991 7030 4937 1673)

Chris Graves, VP Operations Raw Poultry IF
Tyson Poultry, Inc.
2200 Don Tyson Parkway
Springdale, AR 72762

RE: Discharge Permit Number AR0039268, AFIN 36-00013

Dear Mr. Graves:

Enclosed are the public notice, a copy of the draft permit, and Statement of Basis which the Arkansas Department of Environmental Quality (ADEQ) has prepared and mailed to you on the above date under the authority of the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act. A copy of the final permit will be mailed to you when the Department has made a final permitting decision.

In accordance with Reg. 8.207, the enclosed public notice will be or has been published by ADEQ in a newspaper of general circulation of your facility for one (1) day only. An invoice for the cost of publishing the public notice and proof of publication will be sent to you by the advertising newspaper. The permittee must send proof of publication and proof of payment to the address at the bottom of this letter as soon as possible but no later than 30 days from the above date. Until this Department receives proof of publication of the public notice and payment of all permit fees, no further action will be taken on the issuance of your discharge permit.

For a list of changes, please see Section 5 of the enclosed Statement of Basis. Comments must be received at ADEQ prior to the close of the public comment period as described in the enclosed public notice. Once a final permit is issued by the Director and becomes effective, the permittee must comply with all terms and conditions of the permit, or be subject to enforcement actions for any instances of noncompliance during the duration of the permit, usually five (5) years. Consequently, it is imperative that you, as the applicant, thoroughly review the enclosed documentation for accuracy, applicability, and your ability to comply with all conditions therein.

Should you have any questions concerning any part of the draft permit, please contact Loretta Reiber, P.E. at (501) 682-0612.

Sincerely,

Caleb J. Osborne
Associate Director, Office of Water Quality

CJO:lr

Enclosure

cc: Josh Nelson, Complex Manager – Tyson Poultry, Inc. – Clarksville

PUBLIC NOTICE OF DRAFT DISCHARGE PERMIT
AND 208 PLAN
PERMIT NUMBER AR0039268, AFIN 36-00013

This is to give notice that the Arkansas Department of Environmental Quality (ADEQ), Office of Water Quality, 5301 Northshore Drive, North Little Rock, Arkansas 72118-5317 at telephone number (501) 682-0623, proposes a draft renewal of the permit number AR0039268 for which an application was received on July 29, 2015, with all additional information received by September 28, 2015, for the following applicant under the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act.

Applicant: Tyson Poultry, Inc. - Clarksville, 1231 South Crawford St., Clarksville, AR 72830. Location: approximately 1.5 miles northeast of the Spadra Feed Mill; Latitude: 35° 26' 41.83" N; Longitude: 93° 29' 14.12" W in Johnson County, Arkansas. The discharge of treated industrial wastewater is into unnamed tributary of Hogskin Creek (a/k/a Spadra Creek), thence to Hogskin Creek, thence to the Arkansas River in Segment 3H of the Arkansas River Basin.

The 208 Plan, developed by the ADEQ 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. The 208 Plan has been revised to correct the name of the receiving stream from Blue Creek to "an unnamed tributary of Hogskin Creek (a/k/a Spadra Creek)." This change has also been incorporated into the draft discharge permit.

ADEQ's contact person for submitting written comments on the draft permit or the proposed changes to the 208 Plan, requesting information regarding the draft permit or the 208 Plan, or obtaining a copy of the permit and the Statement of Basis is Loretta Reiber, P.E., at the above address and telephone number or by email at Water-Draft-Permit-Comment@adeq.state.ar.us. For those with Internet access, a copy of the proposed draft permit as well as the publication date may be found on the ADEQ's website at:
http://www.adeq.state.ar.us/water/branch_permits/individual_permits/pn_permits/pnpermits.asp.

The comment period for the draft permit and the 208 Plan shall end at 4:30 P.M. (Central Time) on the 30th day after the publication date. If the last day of the comment period is a Saturday, Sunday, or legal holiday, the public comment period shall expire on the next day that is not a Saturday, Sunday, or legal holiday. For information regarding the actual publication date along with the actual date and time the comment period will end, please contact Loretta Reiber, P.E. at the above address and telephone number or by email at Water-Draft-Permit-Comment@adeq.state.ar.us. Public notice, comments, and hearings will be conducted in accordance with Regulation 6.104(A)(5) [40 CFR Parts 124.10 through 124.12 by reference] and Regulation 8.207 through 8.210 (Administrative Procedures). All persons, including the permittee, who wish to comment on ADEQ's draft permitting decision must submit written comments to ADEQ, along with their name and mailing address. A Public Hearing will be held when ADEQ finds a significant degree of public interest. After the public comment period, ADEQ will issue a final permitting decision. ADEQ will notify the applicant and each person who has submitted written comments or request notice of the final permitting decision. Any interested person who has submitted comments may appeal a final decision by ADEQ in accordance with the APC&EC Regulation No. 8.603.

DRAFT

Statement of Basis

This Statement of Basis is for information and justification of the permit limits only. Please note that it is not enforceable. This draft permitting decision is for renewal of the discharge Permit Number AR0039268 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 36-00013 to discharge to Waters of the State.

1. **PERMITTING AUTHORITY.**

The issuing office is:

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

2. **APPLICANT.**

The applicant's mailing address is:

Tyson Poultry, Inc. – Clarksville
P.O. Box 469
Clarksville, AR 72830

The facility address is:

Tyson Poultry, Inc. – Clarksville
1231 South Crawford St.
Clarksville, AR 72830

3. **PREPARED BY.**

The permit was prepared by:

Loretta Reiber, P.E.
Staff Engineer
NPDES Discharge Permits Section
Office of Water Quality
(501) 682-0612
E-mail: reiber@adeq.state.ar.us

Bryan Leamons, P.E.
Engineer Supervisor
Permits Branch
Office of Water Quality
(501) 682-0643
E-mail: leamons@adeq.state.ar.us

4. **PERMIT ACTIVITY.**

Previous Permit Effective Date:	March 1, 2011
Previous Permit Expiration Date:	February 29, 2016

The permittee submitted a permit renewal application on July 29, 2015, with all additional information submitted by September 28, 2015. It is proposed that the current discharge permit be reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

The permittee submitted two requests with the renewal applications. These requests and the Department's responses are as follows:

Request 1: The permittee requested a reduction in the monitoring frequency for each of the parameters listed in the permit based on EPA's interim guidance for performance based reduction of NPDES permit monitoring frequencies.

Response: Monitoring frequencies were reduced with the renewal permit which became effective on October 1, 2005. The Department typically does not reduce monitoring frequencies in a renewal permit when they were reduced in the previous permit. In the 2005 renewal, CBOD5, O & G, FCB, DO, and pH were reduced from once per week to once every two weeks. Therefore, the Department a reduction in monitoring frequency for those parameters will not be granted at this time.

Changes were not made at that time to the TSS or NH3-N limits. Total Nitrogen and BOD5 were included in the permit for the first time during the 2005 renewal. The Department evaluated the data submitted during the term of the previous permit to determine if a reduction in monitoring frequencies for those parameters is warranted.

The interim monitoring frequency reduction does not allow for reductions in monitoring frequency if there has been a recent exceedance of the permit limit. An exceedance of the TSS limit was reported to have occurred in the monitoring period ending January 31, 2015. Therefore, a reduction in the TSS monitoring frequency will not be granted.

40 CFR 122.44(i)(2) states that monitoring frequencies for parameters limited in permits may not be less than once per year. Therefore, a reduction in the BOD5 monitoring frequency cannot be granted.

Based on the average reported values for NH3-N as a percentage of the permit limits, the frequencies may be reduced from once per week to once per month. Total Nitrogen monitoring frequency is already at once per month. The average reported test results as a percentage of the permit limits is 48.5%. At a frequency of once per month, this percentage must be 49% or less. The standard deviation of the Total Nitrogen data is 32.46 (approximately 20% of the limit). Due to the average results as a percentage of the limit being less than 1% under the requirement to reduce monitoring frequency and the large standard deviation, the Total Nitrogen monitoring frequency will not be reduced at this time.

A copy of the calculations may be found using the following link:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0039268_Monitoring%20Frequency%20Reduction%20Calculations_20150924.pdf

Request 2: The permittee requested that the WET testing requirements be removed from the permit based on the performance indicators of previous tests performed. There is no toxicity at this time nor has there been any associated with this discharge.

Response: WET testing and WET limit requirements will not be removed from the permit.

Reg. 2.409 Toxic Substances states " Discharges shall not be allowed into any waterbody which, after consideration of the zone of initial dilution, the mixing zone and critical flow conditions, will cause toxicity to human, animal, plant or aquatic biota or interfere with normal propagation, growth, and survival of aquatic biota."

According to the State of Arkansas Continuing Planning Process (CPP) Appendix D.V C. states *"Permits issued to dischargers with a potential for causing ambient toxicity will require that the permittee perform periodic toxicity screening using whole effluent biomonitoring techniques."*

The last five years of WET test data were reviewed. The data shows failures in March 2011, September 2011, and October 2011. Based on these failures, the facility shows reasonable potential to cause toxicity and *C. dubia* sub-lethal WET limits are required. (See Item #12 of this Statement of Basis for additional information.)

DOCUMENT ABBREVIATIONS

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

BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practice
BOD_5 - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
$CBOD_5$ - 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
NO_3 + NO_2-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Reg. 2 - APC&EC Regulation No. 2
Reg. 6 - APC&EC Regulation No. 6
Reg. 8 - APC&EC Regulation No. 8
Reg. 9 - APC&EC Regulation No. 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:

Compliance and Enforcement History for this facility can be reviewed by using the following web link:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0039268_Compliance%20Review_20150817.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. The outfall coordinates have been corrected to match the application.
2. The receiving stream description has been corrected. It is important to note that the actual receiving stream has not changed. The receiving stream description is now based on ArcGIS. See Item # 6 of this Statement of Basis for additional information.
3. The highest monthly average flow was updated based on DMR data. As a result of the increased flow, the mass limits for CBOD5, TSS, NH3-N (April – October), and O & G increased slightly. See Item #11.F of this Statement of Basis for additional information.
4. The concentration and mass limits for TN decreased due to a 22% decrease in the average flow from the rendering plant. See Item #11.F of this Statement of Basis for additional information.
5. The BOD5 mass and concentrations limits, which are technology-based, have increased due to the increased raw product throughput at the rendering plant. See Item #11.F of this Statement of Basis for additional information.
6. The facility coordinates have been changed to the front gate.
7. The NH3-N monitoring frequency has been reduced to twice per month based on the test results submitted during the term of the previous permit. See Request 1 and the Department's response in Item #4 of this Statement of Basis for additional information.
8. The daily maximum NH3-N concentration for the months of November – March has been corrected to 9.0 mg/l. The new limit is 1.5 times the monthly average limit determined by the updated water quality model.
10. The NH3-N mass average monthly mass limit for the months of November – March have been corrected. It is now based on the concentration of 6 mg/l as determined through the updated water quality model.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfall is located at the following coordinates based on the permit application and confirmed with Google Earth using WGS84:

Latitude: 35° 26' 39.5"; Longitude: 93° 29' 10.5"

The receiving waters named:

unnamed tributary of Hogskin Creek (a/k/a Spadra Creek), thence to Hogskin Creek, thence to the Arkansas River in Segment 3H of the Arkansas River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 11110202 and reach #030 is a Water of the State classified for 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 waters are not on the 2008 303(d) list.

B. **Applicable Total Maximum Daily Load (TMDL) Reports**

There are no TMDLs which are applicable to this facility.

C. **Endangered Species**

No comments on the application were received from the USF&WS. The draft permit and Statement of Basis will be 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 Antidegradation Policy and all other applicable water quality standards found in APC&EC Regulation No. 2.

8. **OUTFALL, TREATMENT PROCESS DESCRIPTION, AND FACILITY CONSTRUCTION.**

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

A. Highest Monthly Average Flow: 1.656 MGD. See the Combined Waste Stream Formulas section of Item #11.F of this Statement of Basis for the average flows for each of the waste streams.

B. Type of Treatment: screening, equalization (EQ) basin which also serves as the dissolved air flotation (DAF) unit tank (optional), DAF unit (optional), anaerobic lagoon, oxidation ditch, clarification, chlorination, post aeration

The DAF unit and the EQ tank may serve as either a pretreatment segment of the treatment system or as a tertiary treatment segment. The pretreatment option is used if the loading to the anaerobic lagoon needs reduction or the lagoon needs to be taken out of service for maintenance or repairs. The tertiary treatment option is used to polish effluent

from the clarifier if the clarifier is not performing adequately or if the clarifier needs to be taken out of service for maintenance or repairs.

The DAF unit and the EQ basin cannot act as pretreatment and tertiary treatment at the same time. All wastewater in these two units must be removed before the units can switch from pretreatment to tertiary treatment or vice versa.

C. Discharge Description: treated industrial wastewater.

The treated industrial wastewater consists of poultry processing wastewater, rendering wastewater, seep water from the Spadra Mill, evaporation water from the Natural Dam Hatchery, Stormwater, and Boiler blowdown.

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 70 is less than 80, this facility is classified as a Minor 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 Reg. 6.202.

9. **ACTIVITY.**

Under the Standard Industrial Classification (SIC) code of 2015 and 2077 or North American Industry Classification System (NAICS) code of 311615, the applicant's activities are the operation of poultry slaughtering, processing, and rendering facilities.

10. **SOLIDS PRACTICES.**

Sludge is stored in the lagoon until is land applied under separate permit. The separate permits belong to vendors. The permittee is responsible for ensuring that the vendors have the appropriate permits for land application prior to releasing the sludge.

11. **DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS**.

The Arkansas Department of Environmental Quality has determined to issue a draft permit for the discharge described in the application. Permit requirements are based on federal regulations (40 CFR Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 CFR Part 403 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 draft 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 Part 124.7.

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

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

Concentration

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
CBOD5	10	15	N/A	N/A	10	15	10	15
BOD5	N/A	N/A	30.1	54.7	25.2	45.1	29.2	52.9
TSS	N/A	N/A	37.5	65.6	15	22.5	15	22.5
NH3-N								
(April)	5.6	5.6	10	20	5.6	5.6	5.6	5.6
(May – October)	5	5.6	10	20	5	5.6	5	5.6
(November – March)	6	9	10	20	6	10.5	6	9
DO	5 (Inst. Min.)		N/A		5 (Inst. Min.)		5 (Inst. Min.)	
FCB (col/100ml)	1000	2000	400, Inst. Max.		400, Inst. Max.		400, Inst. Max.	
O&G	10.0	15.0	16.4	31	10.0	15.0	10.0	15.0
Total Nitrogen	N/A	N/A	104.6	149.4	105.8	151.4	101.2	144.6
pH	6.0-9.0 s.u.		N/A		6.0-9.0 s.u.		6.0-9.0 s.u.	

Mass (DO, FCB, and pH are not included in the following table as those limits cannot be expressed in terms of mass.)

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. lbs/day	Daily Max. lbs/day	Monthly Avg. lbs/day	Daily Max. lbs/day	Monthly Avg. lbs/day	Daily Max. lbs/day	Monthly Avg. lbs/day	Daily Max. lbs/day
CBOD5	138.11	207.17	N/A	N/A	132.6	198.9	138.11	207.17
BOD5	N/A	N/A	416.34	755.61	332.8	596.7	416.34	755.61
TSS	207.17*	310.75*	517.32	906.21	198.9	298.4	207.17	310.75
NH3-N								
(April)	77.34	77.34	138.19	276.38	74.3	74.3	77.34	77.34
(May – October)	69.06	77.34	138.19	276.38	66.3	74.3	69.06	77.34
(November – March)	82.87	124.30	138.19	276.38	92.8	139.2	82.87	124.30
O&G	138.11	207.17	226.77	427.86	132.6	198.9	138.11	207.17
Total Nitrogen	N/A	N/A	1444.15	2063.57	1397.8	1999.3	1444.15	2063.57

*Based on concentrations of 15 mg/l for a monthly average and 22.5 mg/l on a daily maximum. These limits were continued from the previous permit and are not based on the water quality model or the applicable ELGs.

A. **Justification for Limitations and Conditions of the Draft Permit**

Parameter	Water Quality or Technology	Justification
CBOD5	Water Quality	MultiSMP Model dated October 28, 2015, CWA § 402(o), and previous permit
BOD5	Technology	40 CFR Parts 432.102(a), 432.117, and 432.127, 40 CFR 122.44(l), and previous permit
TSS	Technology	40 CFR 122.44(l), and previous permit
NH3-N	Water Quality	Reg. 2.512, MultiSMP Model dated October 28, 2015, CWA § 402(o), and previous permit
DO	Water Quality	Reg. 2.505, MultiSMP Model dated October 28, 2015, CWA § 402(o), and previous permit
FCB	Technology	40 CFR Parts 432.102(a), 432.117, and 432.127, 40 CFR 122.44(l), and previous permit
O&G	Water Quality	Reg. 2.510, CWA § 402(o), and previous permit
TN	Technology	40 CFR Parts 432.103, 432.113, and 432.123, 40 CFR 122.44(l), and previous permit

Parameter	Water Quality or Technology	Justification
pH	Water Quality	Reg. 2.504, CWA § 402(o), and previous permit

The only concentration limits changing with the issuance of this permit are the NH3-N daily maximum limit for the months of November – March and the year-round TN limits. The NH3-N concentration limit has been corrected to be 1.5 times the monthly average limit of 6 mg/l which was determined by the updated water quality model. See Section C.2 below for additional information.

The TN concentration limits have decreased slightly due to the 22% decrease in the flow from the rendering plant waste stream. The TN mass limits have also decreased as a result of the decreased rendering plant flow. (Note: The TN ELG for rendering plants is a concentration limit expressed in terms of mg/l.)

The BOD5 mass and concentrations limits have increased due to the increased raw product throughput at the rendering plant. (Note: The BOD5 ELG for rendering plants is expressed in terms of lbs per 1,000 lbs raw product.)

The mass limits for CBOD5, TSS, NH3-N, and O & G have increased due to an increase in the flow from the wastewater treatment plant. The concentration limits for CBOD5, TSS, and O & G are not changing with this permit renewal. See Item #11.B and #11.F of this Statement of Basis for additional information.

B. **Anti-backsliding**

The draft 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 mass limits for CBOD5, TSS, NH3-N (April – October), and O & G increased slightly due to an increase in the highest monthly average flow from the wastewater treatment plant. This increase is based on new information which would have justified the new limits if available for the previous permit. Therefore, the anti-backsliding conditions of the CWA are not violated. See CWA §402(o)(2). Also, see Item #11.F of this Statement of Basis for additional information concerning the calculation of the new limits.

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.

CBOD5, TSS, NH3-N and O & G

The calculation of the loadings (lbs per day) uses an average flow of 1.656 MGD and the following equation:

lbs/day = Concentration (mg/l) x Flow (MGD) x 8.34

BOD5 and TN

See Paragraph F of this section below.

2. Daily Maximum Limits:

The daily maximum limits for CBOD5, TSS, and NH3-N (November – March) are based on Section 5.4.2 of the Technical Support Document for Water Quality-Based Toxics Control.

Daily Maximum limits = Monthly average limits x 1.5

The daily maximum NH3-N limits for the months of April through October are based on the requirements of Reg. 2.512.

The daily maximum limit for O&G is based on Reg. 2.510. The daily maximum limits for Total Nitrogen and BOD5 are based on the requirements of 40 CFR Part 432, Subparts J, K, and L.

D. **Ammonia-Nitrogen (NH3-N)**

The water quality effluent limitations for Ammonia are based either on DO-based effluent limits, toxicity-based standards, or technology based effluent limits, whichever are more stringent. The toxicity-based effluent limitations are based on Reg. 2.512 and the CPP.

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0039268_Modeling%20Report_20151028.pdf

E. **208 Plan (Water Quality Management Plan)**

The 208 Plan, developed by the ADEQ 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. The 208 Plan has been revised to correct the name of the receiving stream from Blue Creek to "an unnamed tributary of Hogskin Creek (a/k/a Spadra Creek)."

F. **Applicable Effluent Limitations Guidelines**

Discharges from facilities of this type are covered by Federal effluent limitations guidelines promulgated under 40 CFR Part 432, Meat and Poultry Processing Point Source Category. The applicable subparts are K (Poultry First Processing Subcategory), L (Poultry Further Processing Subcategory), and J (Renderers Subcategory).

The rendering plant effluent flow has decreased by 22% while the mass of material processed at the rendering plant has increased by 47%. (The flow has decreased by 22% even though the production has increased due to changes in operations, water conservation, and equipment.) Additionally, flow from the poultry processing operations increased by 8%. Total effluent flow from the wastewater treatment plant increased by 4.2%. Although only the changes at the rendering plant were significant enough to warrant recalculation of the permit limits, all permit limits were recalculated since the parameters included in 40 CFR Part 432, Subpart J are also in Subparts K and L which are applicable to this facility.

The following streams are present in the effluent from this facility. The streams must be classified as regulated, unregulated, or dilution streams prior to calculation of the permit limits. Therefore, the justification for each stream classification is also given.

1. Poultry Processing wastewater = regulated stream based on 40 CFR 401.11(q), 432.110, and 432.120.
2. Rendering wastewater = regulated stream based on 40 CFR 401.11(q) and 432.100.
3. Spadra Mill = unregulated stream. This stream consists mainly of stormwater runoff which has come into contact with the pollutants which are regulated under the ELG.
4. Natural Dam Hatchery = unregulated stream. This stream consists mainly of stormwater runoff which has come into contact with the pollutants which are regulated under the ELG.
5. Stormwater = unregulated stream. This stream consists stormwater runoff which has come into contact with the pollutants which are regulated under the ELG.

6. Boiler blowdown = dilution stream. Water used in boilers does not typically contain significant amounts of any of the parameters regulated under 40 CFR Part 432, Subpart J, K, and L. The Technical Development Document, Chapter 14 indicated that although they had received effluent data from "Episode Number 312", it was not used because it contained boiler blowdown wastewater and was therefore not representative of poultry process wastewater alone. Therefore, this stream must be classified as dilution since it is not a regulated stream nor has it come into contact with pollutants which are regulated under the ELG.

Poultry Processing Operations

The following concentration limits are applicable to this facility based on Subparts K and L.

Parameter	Monthly Avg. Limit, mg/l	Daily Max. Limit, mg/l	CFR Citation
BOD5	16	26	432.117, 432.127
FCB	400 col/100 ml, Inst. Max.		432.117, 432.127
O & G	8.0	14.0	432.117, 432.127
TSS	20	30	432.117, 432.127
NH3-N	4.0	8.0	432.113, 432.123
Total Nitrogen	103	147	432.113, 432.123

According to the permit application, the average discharge rate of treated poultry processing wastewater for Poultry First Processing and Poultry Further Processing is 1.49 MGD. The mass limits for these operations are as follows and were calculated using the formula in Item #11.C of this Statement of Basis:

Parameter	Monthly Avg. Limit, lbs/day	Daily Max. Limit, lbs/day[1]
BOD5	198.83	323.09
FCB	400 col/100 ml, Inst. Max.	
O & G	99.41	173.97
TSS	248.53	372.80
NH3-N	49.71	99.41
Total Nitrogen	1279.94	1826.71

1. The mass limits are calculated using the concentrations contained in 40 CFR Part 432, Subparts K and L and a flow rate of 1.49 MGD.

Rendering Operations

The permittee reported that production at the rendering facility was 1,200,000 lbs/day (1,200 1,000 lbs/day) of material. The applicable ELGs for the rendering operations are as follows:

Parameter	Monthly Avg., lbs/1000 lbs	Daily Maximum, lbs/1000 lbs	CFR Citation
BOD5	0.17	0.34	432.102(a)
FCB	400 col/100 ml, Inst. Max.		432.102(a)
O & G	0.10	0.20	432.102(a)
TSS	0.21	0.42	432.102(a)
NH3-N	0.07	0.14	432.103
Total Nitrogen	134 mg/l	194 mg/l	432.103

According to the permit application, the average discharge rate of treated rendering wastewater is 0.105 MGD. The flow has decreased by 22% even though the production has increased by approximately 48% due to changes in operations, water conservation, and equipment. The mass limits for the rendering operations based on 40 CFR 432, Subpart J are as follows:

Parameter	Monthly Avg., lbs/day	Daily Max., lbs/day
BOD5	204	408
FCB	400 col/100 ml, Inst. Max.	
O & G	120	240
TSS	252	504
NH3-N	84	168
Total Nitrogen	117.34	169.89

Combined Waste Stream Formula

40 CFR 403.6(e) states that where process effluent is mixed prior to treatment with wastewaters other than those generated by the regulated process, fixed alternative discharge limits may be derived by the Control Authority. These alternative limits shall be applied to the mixed effluent. When deriving alternative categorical limits, the Control Authority shall calculate both an alternative daily maximum value using the daily maximum value(s) and an alternative consecutive sampling day average value using the monthly average value(s).

Calculating the alternative mass limit for a pollutant in the combined waste stream by using the following formula found at 40 CFR 403.6(e)(1)(ii):

$$M_T = \left(\sum_{i=1}^{N} M_i \right) \left(\frac{F_T - F_D}{\sum_{i=1}^{N} F_i} \right)$$

where:

M_T = the alternative mass limit for a pollutant in the combined waste stream.
M_i = the categorical standard mass limit for a pollutant in the regulated stream i (the categorical mass limit multiplied by the appropriate measure of production for the rendering operations and the mass limits for the poultry processing operations which were calculated using the ELG concentration limit and waste stream flow)
F_T = Total Average Flow, 1.656 MGD
F_D = Dilution Flow, i.e., stream nos. 3, 4, 5, and 6 listed below = 0.061 MGD
F_i = the flow of stream i to the extent that it is regulated for such pollutant

Pollutant	F_i, MGD	Monthly Avg. M_i, lbs/day	Daily Max. M_i, lbs/day
BOD5	1.595	402.83	731.09
O & G	1.595	219.41	413.97
TSS	1.595	500.53	876.80
NH3-N	1.595	133.71	267.41
TN	1.595	1397.28	1996.60

Waste Streams and Average Flows

1. Poultry Processing wastewater = 1.49 MGD (regulated Stream, 7 day basis)
2. Rendering wastewater = 0.105 MGD (regulated Stream, 7 day basis)
3. Spadra Mill = 0.0021 MGD (unregulated stream, 7 day basis)
4. Natural Dam Hatchery = 0.0014 MGD (unregulated stream, 7 day basis)
5. Stormwater = 0.05 MGD per event (unregulated stream)
6. Boiler blowdown = 0.0075 MGD (dilution stream)

Per records dated July 2, 2010, of a phone conversation during the last permit renewal, the Spadra Mill wastewater is seep water while the Natural Dam Hatchery water is evaporation water. Therefore, both of these streams are considered to be dilution streams.

Pollutant	Monthly Avg. M_T, lbs/day	Daily Max. M_T, lbs/day
BOD5	416.34	755.61
O & G	226.77	427.86
TSS	517.32	906.21

Pollutant	Monthly Avg. M_T, lbs/day	Daily Max. M_T, lbs/day
NH3-N	138.19	276.38
TN	1444.15	2063.57

The equivalent concentration limits were calculated by rearranging the formula in Item #11.C.1 of this Statement of Basis.

Pollutant	Monthly Avg. mg/l	Daily Max. mg/l
BOD5	30.1	54.7
O & G	16.4	31
TSS	37.5	65.6
NH3-N	10	20
TN	104.6	149.4

A copy of the equivalent mass and concentration limits may be found using the following link:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0039268_Updated%20Combined%20Waste%20Stream%20Formula%20Calculations_20160518.pdf

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....." To ensure that the CWA's prohibitions for toxics are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants (49 FR 9016-9019, 3/9/84)." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. In addition, ADEQ is required under 40 CFR Part 122.44(d)(1), adopted by reference in Regulation 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act.

The Regional policy and strategy are designed to ensure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State Water Quality Standard (WQS) resulting in non-conformance with the provisions of 40 CFR Part 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

Whole effluent toxicity (WET) testing has been established for assessing and protecting against impacts upon water quality and designated uses caused by the aggregate toxic effect of the discharge of pollutants. The stipulated test species, which are appropriate to measure whole effluent toxicity, are consistent with the requirements of the State Water Quality Standards. The WET testing frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

Implementation

Arkansas has established a narrative water quality standard under the authority of Section 303 of the CWA 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 testing conducted by the permittee has shown potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body, at the appropriate instream critical dilution. Pursuant to 40 CFR 122.44(d)(1)(v), ADEQ has determined from the permittee's self reporting that the discharge from this facility does have the reasonable potential to cause, or contribute to an instream excursion above the narrative standard within the applicable State Water Quality Standards, in violation of Section 101(a)(3) of the Clean Water Act. Therefore, the draft permit must establish both monthly average and 7-day minimum effluent limitations for *C. dubia* sub-lethality following Regulations promulgated by 40 CFR 122.44(d)(1)(v). These effluent limitations for *C. dubia* sub-lethality (7-day NOEC) are applied at Outfall 001 beginning on the effective date of the permit. The daily average *C. dubia* sub-lethality (7-day NOEC) and 7-day minimum sub-lethality (7-day NOEC) value shall not be less than 80% effluent for Outfall 001.

WET testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The WET testing procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS	**FREQUENCY**
Chronic WET	Once/quarter

Requirements for measurement frequency are based on the CPP.

Since 7Q10 is less than 100 cfs (ft^3/sec) and dilution ratio is less than 100:1, chronic WET testing requirements will be included in the permit.

Since the 7Q10 of the receiving stream is 0 cfs, the critical dilution is 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 32%, 42%, 56%, 80%, and 100% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 100% 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 CFR Part 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 Department shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in APC&EC Regulation No. 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:	AR0039268	AFIN:	36-00013	Outfall Number:	001
Date of Review:	8/20/2015	Reviewer:	M. Barnett		
Facility Name:	Tyson - Clarksville				
Previous Dilution series:	32, 42, 56, 80, 100	Proposed Dilution Series:	32, 42, 56, 80, 100		
Previous Critical Dilution:	100	Proposed Critical Dilution:	100		
Previous TRE activities:	None				

Frequency recommendation by species

Pimephales promelas (Fathead minnow):	once per quarter
Ceriodaphnia dubia (water flea):	once per quarter

TEST DATA SUMMARY

	Vertebrate (*Pimephales promelas*)		Invertebrate (*Ceriodaphnia dubia*)	
TEST DATE	Lethal	Sub-Lethal	Lethal	Sub-Lethal
	NOEC	NOEC	NOEC	NOEC
9/30/2010	100	100	100	100
12/31/2010	100	100	100	100
3/31/2011	100	100	**75**	**56**
4/30/2011			100	100
5/30/2011			100	100
6/30/2011	100	100	100	100
9/30/2011	100	100	100	**32**
10/31/2011			100	**80***
11/30/2011			100	100
12/31/2011			100	100
3/31/2012	100	100	100	100
6/30/2012	100	100	100	100
9/30/2012	100	100	100	100
12/31/2012	100	100	100	100
3/31/2013	100	100	100	100
4/30/2013			100	100
5/30/2013			100	100
6/30/2013	100	100	100	100
9/30/2013	100	100	100	100
12/31/2013	100	100	100	100
3/31/2014	100	100	100	100
6/30/2014	100	100	100	100
9/30/2014	100	100	100	100
12/31/2014	100	100	100	100
3/31/2015	100	100	100	100
6/30/2015	100	100	100	100

* Critical dilution failure only, not a violation of the sub-lethal limit.

Failures noted in BOLD

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	**Vertebrate Sub-lethal**	**Invertebrate Lethal**	**Invertebrate Sub-Lethal**
Min NOEC Observed	100	100	75	32
TU at Min Observed	1.00	1.00	1.33	3.13
Count	19	19	26	26
Failure Count	0	0	1	3
Mean	1.000	1.000	1.013	1.122
Std. Dev.	0.000	0.000	0.065	0.439
CV	0	0	0.1	0.4
RPMF	0	0	1.1	1.2
Reasonable Potential	0.000	0.000	1.467	3.750
100/Critical dilution	1.000	1.000	1.000	1.000
Does Reasonable Potential Exist	No	No	Yes	Yes

PERMIT ACTION
P. promelas lethal - monitoring
P. promelas sub-lethal - monitoirng
C. dubia lethal - monitoring
C. dubia sub-lethal - Limit 80%

Additional requirements (including WET Limits) rationale/comments concerning permitting:

C. dubia lethality
During the past five years there has been only one *C. dubia* lethal WET test failure below the critical dilution. At this time, there is insufficient evidence to support the inclusion of lethal limits. Additional data is needed to confirm the necessity of limits; therefore they are not required at this time.

The inclusion of requirements for retests for failures will provide sufficient documentation concerning the necessity for a TRE, and the potential for inclusion of WET limits if appropriate.

C. dubia sub-lethality
C. dubia sub-lethal limit is appropriate

NOTE:
As required in the previous permit, when the failure of the sub-lethal WET Limit is reported , the facility must test monthly for that species until three (3) consecutive monthly passing tests are reported.

13. **STORMWATER REQUIREMENTS**

The federal regulations at 40 CFR 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. The poultry processing facility has coverage under ARR00A054. The Spadra Mill has coverage under ARR00B550. The rendering plant (a/k/a the protein plant) has coverage under ARR00A053.

14. **SAMPLE TYPE AND FREQUENCY.**

Requirements for sample type and sampling frequency have been based on the current discharge permit. The monitoring frequency for NH3-N has been reduced to twice per month based on the data submitted during the term of the previous permit. See Request 1 in Item #4 of this Statement of Basis for additional information.

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
CBOD5	twice/month*	composite	twice/month*	composite
BOD5	once/year	composite	once/year	composite
TSS	once/week	composite	once/week	composite
NH3-N				
(April)	once/week	composite	twice/month*	composite
(May – October)	once/week	composite	twice/month*	composite
(November – March)	once/week	composite	twice/month*	composite
DO	twice/month*	grab	twice/month*	grab
FCB	twice/month*	grab	twice/month*	grab
O&G	twice/month*	grab	twice/month*	grab
TN	once/month	grab	once/month	grab
pH	twice/month*	grab	twice/month*	grab

*twice/month = once every two weeks

15. **PERMIT COMPLIANCE.**

A Schedule of Compliance has not been included in this permit.

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. AR0039268 received July 29, 2015, with all additional information received by September 28, 2015.
B. Arkansas Water Quality Management Plan (WQMP).
C. APC&EC Regulation No. 2.
D. APC&EC Regulation No. 3.

E. APC&EC Regulation No. 6 which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Reg. 6.104.
F. 40 CFR Parts 122 and 125.
G. 40 CFR Part 432, Subparts J, K, and L.
H. Discharge permit file AR0039268.
I. Discharge Monitoring Reports (DMRs).
J. "2008 Integrated Water Quality Monitoring and Assessment Report", ADEQ.
K. “2008 List of Impaired Waterbodies (303(d) List)”, ADEQ, February 2008.
L. "Identification and Classification of Perennial Streams of Arkansas", Arkansas Geological Commission.
M. Continuing Planning Process (CPP).
N. Technical Support Document For Water Quality-based Toxic Control.
O. Inspection Report dated February 6, 2014.
P. Compliance Review Memo from Sandra Farmer to Loretta Reiber, P.E. dated August 17, 2015.
Q. MultiSMP Model dated October 28, 2015.
R. Telephone conversation on October 6, 2015, to discuss changes to the permit.
S. USGS StreamStats.
T. E-mail concerning receiving stream from Selena Medrano to Loretta Reiber, P.E. dated August 18, 2015.
U. Letter from EPA Region VI dated March 3, 2016, declining full review of draft permit.

18. **PUBLIC NOTICE.**

The public notice describes the procedures for the formulation of final determinations and shall provide for a public comment period of 30 days. During this period, any interested persons may submit written comments on the permit and may request a public hearing to clarify issues involved in the permitting decision. A request for a public hearing shall be in writing and shall state the nature of the issue(s) proposed to be raised in the hearing.

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

19. **POINT OF CONTACT.**

For additional information, contact:
Loretta Reiber, P.E.
Permits Branch, Office of Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317
Telephone: (501) 682-0612

DRAFT

Permit Number: AR0039268
AFIN: 36-00013

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.),

Tyson Poultry, Inc. – Clarksville

is authorized to discharge treated industrial wastewater from a facility located as follows: 1231 South Crawford St., Clarksville, AR 72830, approximately 1.5 miles northeast of the Spadra Feed Mill in Johnson County, Arkansas. The applicant's mailing address is: P.O. Box 469, Clarksville, AR 72830.

Latitude: 35° 26' 41.83"; Longitude: 93° 29' 14.12"

to receiving waters named:

unnamed tributary of Hogskin Creek (a/k/a Spadra Creek), thence to Hogskin Creek, thence to the Arkansas River in Segment 3H of the Arkansas River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 26' 39.5"; Longitude: 93° 29' 10.5"

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:
Expiration Date:

_____ _____

Caleb J. Osborne
Associate Director, Office of Water Quality
Arkansas Department of Environmental Quality

Issue Date

PART I
PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated industrial wastewater.

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 and calculations.

Effluent Characteristics	**Discharge Limitations**				**Monitoring Requirements**	
	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
Carbonaceous Biochemical Oxygen Demand (CBOD5)	138.11	207.17	10	15	twice/month[2]	composite
Biochemical Oxygen Demand (BOD5)	416.34	755.61	30.1	54.7	once/year	composite
Total Suspended Solids (TSS)	207.17	310.75	15	22.5	once/week	composite
Ammonia Nitrogen (NH3-N)						
(April)	77.34	77.34	5.6	5.6	twice/month[2]	composite
(May – October)	69.06	77.34	5.0	5.6	twice/month[2]	composite
(November – March)	82.87	124.30	6.0	9.0	twice/month[2]	composite
Dissolved Oxygen (DO)	N/A	N/A	5.0 (Inst. Min.)		twice/month[2]	grab
Fecal Coliform Bacteria (FCB)			(colonies/100ml)			
	N/A	N/A	400 (Inst. Max.)		twice/month[2]	grab
Oil and Grease (O&G)	138.11	207.17	10	15	twice/month[2]	grab
Total Nitrogen (TN)	1444.15	2063.57	104.6	149.4	once/month	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	twice/month[2]	grab
Chronic WET Testing[1]						
C. dubia sub-lethal WET limit			Not < 80%		once/quarter	24-hr composite
Pimephales promelas (Chronic)[1]			7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail Growth (7-day NOEC)TGP6C			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP6C			Report %		once/quarter	24-hr composite
Coefficient of Variation (Growth) TQP6C			Report %		once/quarter	24-hr composite
Growth (7-day NOEC) TPP6C			Report %		once/quarter	24-hr composite
Ceriodaphnia dubia (Chronic)[1]			7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail production (7-day NOEC)TGP3B			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP3B			Report %		once/quarter	24-hr composite
Coefficient of Variation (Reproduction) TQP3B			Report %		once/quarter	24-hr composite
Reproduction (7-day NOEC) TPP3B			Report %		once/quarter	24-hr composite

[1] See Condition No. 6 of Part II (WET testing requirements).
[2] Twice/month = once every two weeks.
[3] The treated industrial wastewater consists of poultry processing wastewater, rendering wastewater, seep water from the Spadra Mill, evaporation water from the Natural Dam Hatchery, stormwater, and boiler blowdown.

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. 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 and prior to entering the receiving stream. Flow may be taken after the disinfection unit and prior to the cascade aeration unit.

SECTION B. PERMIT COMPLIANCE SCHEDULE

None.

PART II
OTHER CONDITIONS

1. Any discharge other than from the permitted Outfall is not authorized under this permit and shall be reported to ADEQ as a noncompliance event within 24 hours of occurrence.

2. The operator of this wastewater treatment facility shall hold an Advanced Industrial license from the State of Arkansas in accordance with APC&EC Regulation No. 3.

3. In accordance with 40 CFR Parts 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.

4. 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 Section of the Office of Water Quality of the ADEQ for use of the alternate method or instrument.
   - The method and/or instrument is in compliance with 40 CFR Part 136 or approved in accordance with 40 CFR Part 136.5.
   - All associated devices are installed, calibrated, and maintained to insure 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 Control/Quality Assurance 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. ADEQ must be notified in writing and the permittee must receive written approval from ADEQ if the permittee decides to return to the original permit monitoring requirements.

5. Best Management Practices (BMPs), as defined in Part IV.6, 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.

6. WHOLE EFFLUENT TOXICITY LIMITS (7-DAY CHRONIC NOEC FRESHWATER)

1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL:	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	32%, 42%, 56%, 80%, 100%
LETHAL LIMIT:	none
SUB-LETHAL LIMIT:	80% (*C. dubia* only)
SCHEDULE OF COMPLIANCE:	SUB-LETHAL - NO
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 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.

b. 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.

c. The conditions of this item are effective beginning with the effective date of the WET limit. When the testing frequency stated above is less than monthly and the effluent fails *C. dubia* sub-lethal endpoint at or below the required limit specified in Item 1.a., the permittee shall be considered in violation of this permit limit and the frequency for the affected species will increase to monthly until such time compliance with the No Observed Effect Concentration (NOEC) effluent limitation is demonstrated for a period of three consecutive months, at which time the permittee may return to the testing frequency stated in PART I of this permit. During the period the permittee is out of compliance, test results shall be reported on the DMR for that reporting period. The purpose of additional tests (also referred to as 'retests' or confirmation tests) 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.

d. If under a TRE, the permittee may conduct quarterly testing as a minimum monitoring requirement for the organism(s) under investigation for the duration of the TRE. Upon completion of the TRE, monitoring will revert back to the conditions specified in Item 1.c.

e. This permit may be reopened to require chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

This condition applies to *P. promelas* (lethal and sub-lethal) and *C. dubia* (lethal).

The requirements of this subsection apply to those parameters without WET Limits, only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. The purpose of additional tests (also referred to as 'retests' or confirmation tests) 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 7, has been granted and any subsequent 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:

a. Part I Testing Frequency Other Than Monthly

i. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant toxic effects at or below the critical dilution. The additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.

ii. IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section. The permittee shall notify ADEQ 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.

iii. IF SUB-LETHAL EFFECTS ONLY HAVE BEEN DEMONSTRATED If any two of the three additional tests demonstrates significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}) requirements as specified in Item 5 of this section. The permittee shall notify ADEQ 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 be also be required for failure to perform the required retests.

iv. The provisions of Item 2.a.i. are suspended upon submittal of the TRE Action Plan.

b. Part I Testing Frequency of Monthly

The permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant toxic effects at or below the critical dilution. A TRE may also be required due to a demonstration of intermittent lethal and/or sub-lethal effects at or below the critical dilution, or for failure to perform the required retests.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. 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:

i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.

ii. The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.

iii. 60% of the surviving control females must produce three broods.

iv. 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.

v. 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 of the Fathead minnow test.

vi. 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 in the Fathead minnow test.

vii. 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.

viii. 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%.

ix. A Percent Minimum Significant Difference (PMSD) range of 13 - 47 for Ceriodaphnia dubia reproduction;

x. A PMSD range of 12 - 30 for Fathead minnow growth.

b. Statistical Interpretation

i. 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.

ii. 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.

iii. If the conditions of Test Acceptability are met in Item 3.a 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 4 below.

c. Dilution Water

i. 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 where the receiving stream is classified as intermittent or where the receiving stream has no flow due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), 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:

(A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4.a below; and

(D) 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.

d. Samples and Composites

i. The permittee shall collect a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above. 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.

ii. The permittee must collect all three flow-weighted composite samples within the monitoring period. 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 are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.

iii. 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.

iv. 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. 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 4 of this section

v. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in Item 1.a above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.

vi. 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.

4. REPORTING

a. 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 which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. The permittee shall report the Whole Effluent Toxicity values for the 30-Day Average Minimum and the 7-Day Minimum under Parameter No. 51710 on the DMR for that reporting period in accordance with PART III.D.4 of this permit.

If more than one valid test for a species was performed during the reporting period, the test NOECs will be averaged arithmetically and reported as the DAILY AVERAGE MINIMUM NOEC for that reporting period.

If more than one species is tested during the reporting period (in accordance with item 1.a.), the permittee shall report the lowest 30-Day Average Minimum NOEC and the lowest 7-Day Minimum NOEC for Whole Effluent Toxicity.

A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit. Only ONE set of WET test data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal effects results for each species during the reporting period. The full reports for all 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.

c. The permittee shall submit the results of the valid toxicity test on the DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. Pimephales promelas (Fathead minnow)

A. 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

B. Report the NOEC value for survival, Parameter No. TOP6C

C. Report the NOEC value for growth, Parameter No. TPP6C

D. If the NOEC for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6C

E. Report the highest (critical dilution or control) Coefficient of Variation for growth, Parameter No. TQP6C

ii. Ceriodaphnia dubia

A. If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP3B

B. Report the NOEC value for survival, Parameter No. TOP3B

C. Report the NOEC value for reproduction, Parameter No. TPP3B

D. If the NOEC for reproduction is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3B

E. Report the higher (critical dilution or control) Coefficient of Variation for reproduction, Parameter No. TQP3B

5. 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.

a. Within ninety (90) days of confirming persistent toxicity, 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:

i. 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

ii. 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;

iii. 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;

iv. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and

v. Project Organization (e.g., project staff, project manager, consulting services, etc.).

b. 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.

c. 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:

i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and

iii. 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.

d. 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.

e. 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).

6. TOXICITY RE-OPENER

   a. If the TRE has identified the source of toxicity and led to the successful elimination of effluent toxicity at the critical dilution, the WET final effluent limits may be replaced by monitoring and reporting only requirement thru a major permit modification. Otherwise, the permittee must comply with the final WET effluent limits.

   b. If the TRE has not led to the successful elimination of effluent toxicity at the critical dilution, but has identified a causal parameter, the WET final effluent limit may be replaced by monitoring and reporting only requirement thru a major permit modification, with the addition of a limit for the causal parameter.

      (Note: A modified permit must be effective prior to the effective date of the WET limits.)

7. MONITORING FREQUENCY REDUCTION

   This section does not apply to any species for which the permit establishes whole effluent toxicity (WET) limits. For the first five years after the effective date of a WET limit, the minimum monitoring frequency for the affected species is once per quarter or once per month (in accordance with Item 1.a.). **This section applies only to *P. promelas*.**

   a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters or first twelve consecutive months (in accordance with Item 1.a.) of testing for a 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 twice per year for the more sensitive test species (usually the Ceriodaphnia dubia).

   b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. 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.

   c. SUB-LETHAL OR SURVIVAL FAILURES - If any test fails the survival or sub-lethal endpoint at any time during the life of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased

to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

d. This monitoring frequency reduction 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.

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 Regulation No. 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 Regulation No. 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 Regulation No. 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 statues 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 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 Regulation No. 9 (Regulation 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 Parts 122.64 and 124.5(d), as adopted in APC&EC Regulation No. 6 and the provisions of APC&EC Regulation No. 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 insure 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 or preventive maintenance.
(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 Part 503, 40 CFR Part 257, and 40 CFR Part 258.

B. Any changes to the permittee's disposal practices described in Part II of the permit 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 insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure 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 Department approved method (i.e., as allowed under Part II.3), 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 Department.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 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 insure accuracy of measurements and shall insure 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 insure 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

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form provided by the Department or other form/method approved in writing by the Department (e.g., electronic submittal of DMR once approved). Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month or submitted electronically by 6:00 p.m. of the 25th, following the completed reporting period beginning on the effective date of the permit. When mailing the DMRs, duplicate copies of the forms signed and certified as required by Part III.D.11 and all other reports required by Part III.D, shall be submitted to the Director at the following address:

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

If permittee uses outside laboratory facilities for sampling and/or analysis, the name and address of the contract laboratory shall be included on the DMR.

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 Part 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

A. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. 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 shall be included as information which 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 to be reported within 24 hours to the Enforcement Section of the Office of Water Quality of the ADEQ.

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

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

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 which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 CFR Part 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 which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 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 governed by regulations promulgated in APC&EC Regulation No. 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 Part 2 and APC&EC Regulation No. 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Environmental Quality. As required by the Regulations, 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.).

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. **"Act"** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **"Administrator"** means the Administrator of the U.S. Environmental Protection Agency.
3. **"APC&EC"** means the Arkansas Pollution Control and Ecology Commission.
4. **"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.
5. **"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) Regulation No. 2, as amended.
6. **"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.
7. **"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).
8. **"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.
9. **"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.
10. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month.
11. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
12. **"Director"** means the Director of the Arkansas Department of Environmental Quality.

13. **"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.
14. **"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.
15. **"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.
16. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
17. **"Industrial User**" means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
18. **"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.
19. **"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.
20. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
21. **"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.
22. **"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.

23. **"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.
24. **"POTW"** means Publicly Owned Treatment Works; a treatment works (see Part IV.29 below) which is owned by a state or municipality.
25. **"Reduction of CBOD5/BOD5 and TSS in mg/l Formula**"
[(Influent – Effluent) / Influent] x 100
26. **"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.
27. **"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.
28. **"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.

29. **"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.
30. **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.
31. **"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 of improper operations.
32. **"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.
33. **"Weekday"** means Monday – Friday.