ADEQ

ARKANSAS
Department of Environmental Quality

NPDES PERMIT FILE
NPDES # AR0022039
AFIN # 18-00109
Permit PN
Correspondence
Technical Backup
5/14/08 VH Date Scanned

May 15, 2008

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7005 1160 0000 3832 5870)

Mr. John Rimmer
West Memphis Wastewater Treatment Facility
P.O. Box 1868
West Memphis, AR 72301

RE: Discharge Permit Number AR0022039, AFIN 18-00109

Dear Mr. Rimmer:

Enclosed is the public notice, Fact Sheet, and a copy of the draft permit which the Arkansas Department of Environmental Quality (ADEQ) has prepared under the authority of the National Pollutant Discharge Elimination System 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 Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 8, Part 2.1.6, the enclosed public notice will be published by ADEQ in a newspaper of general circulation 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 payment to the following address 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, no further action will be taken on the issuance of your discharge permit.

Arkansas Department of Environmental Quality
Discharge Permits Section-Water Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501-682-0622 Fax: 501-682-0910

Comments must be received at ADEQ prior to the close of the public comment period as shown in the enclosed public notice. The public comment period will begin on the date of publication and will end no sooner than 30 days from that date. 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,

Steven L. Drown

Steven L. Drown
Chief, Water Division

SD:lr

Enclosure

PUBLIC NOTICE OF DRAFT DISCHARGE PERMIT
AND 208 Plan
PERMIT NUMBER AR0022039, AFIN 18-00109

May 15, 2008

This is to give notice that the Permits Branch of the Water Division of the Arkansas Department of Environmental Quality (ADEQ), 5301 Northshore Drive, North Little Rock, Arkansas 72118-5317 at telephone number (501) 682-0622, proposes a draft renewal of the permit for which an application was received on 10/9/2007 for the following applicant under the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act.

Applicant: West Memphis Wastewater Treatment Facility, 502 Rushing Road, West Memphis, AR 72301. Location: take Exit 4 from I-40, go south 1.5 miles on Martin Luther King Blvd. to Rushing Road, turn; Latitude: 35° 07' 27.16"; Longitude: 90° 10' 44.46" in Crittenden County, Arkansas.

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. Updates to the 208 Plan have been proposed to add DO to the existing water quality limitations, to add the 7Q10 of the receiving stream, to change the design flow of the facility, and to correct the name of the facility:

Year-round BOD5/TSS/DO = 30/30/2 mg/l
Design flow (Q): 6.3 MGD
Background Flow of the receiving stream (7Q10): 119,000 cfs

The discharge from this existing facility is made into the Mississippi River in Segment 6C of the Mississippi River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 8010100 and reach #003 is a Water of the State classified for primary contact recreation; raw water source for public, industrial, and agricultural water supplies; propagation of desirable species of fish and other aquatic life; and other compatible uses. The outfall is located at the following coordinates: Latitude: 35° 07' 13" Longitude: 90° 10' 25". The receiving stream is not listed on the 303(d) list. Sludge is dewatered via a filter press and hauled off site to an approved landfill.

Under North American Industry Classification System (NAICS) code of 221320, the applicant's activities are the operation of a sewage treatment plant

ADEQ's contact person for submitting written comments, requesting information regarding the draft permit, or obtaining copy of the permit and the Statement of Basis or Fact Sheet is Loretta Reiber, P.E., at the above address and telephone number. For those with Internet access, a copy of the proposed draft permit may be found on the ADEQ's website at: http://www.adeq.state.ar.us/water/branch_npdes/pn_permits/pnpermits.asp.

The last day of the comment period is 30 days after the above date. The permit will become effective approximately two weeks after the close of the comment period unless comments are received and/or a public hearing is requested prior to the close of the comment period requiring a delay of the effective date. Comments and public hearing procedures may be found at 40 CFR Parts 124.10 through 124.12 and APCEC Regulation No. 8. 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. After the public comment period, and public hearing, if one is held, ADEQ will issue a final permitting decision. A Public Hearing will be held when ADEQ finds a significant degree of public interest. ADEQ will notify the applicant and each person who has submitted written comments or requested notice of the final permitting decision. Any interested person who has submitted comments may appeal a final decision by ADEQ in accordance with the APCEC Regulation No. 8 (Administrative Procedures).

DRAFT

Fact Sheet

for renewal of draft discharge Permit Number AR0022039 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:

West Memphis Wastewater Treatment Facility
P.O. Box 1868
West Memphis, AR 72301

The facility address is:

West Memphis Wastewater Treatment Facility
502 Rushing Road
West Memphis, AR 72301

3. PREPARED BY.

The permit was prepared by:

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

4. DATE PREPARED.

The permit was prepared on 03/03/2008.

5. PREVIOUS PERMIT ACTIVITY.

Effective Date: 06/01/2003
Modification Date: N/A
Expiration Date: 5/31/2008

The permit application was received on 10/9/2007 and was deemed administratively complete on 10/16/2007. 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).

6. 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 description of the facility location has been modified.
2. The facility coordinates have been corrected.
3. The outfall coordinates have been updated to reflect the extension of the effluent pipe.
4. The sampling location has been clarified.
5. Parts II, III, and IV have been modified.
6. The design flow has been changed to 6.3 MGD based upon design calculations submitted by the permittee. The increase in the design flow has resulted in increases of the mass limitations.
7. A minimum required DO level has been added to the permit.
8. A significant digit has been added to all of the limits for BOD5 and TSS.
9. The pH limits have been changed to 6.0 - 9.0 s.u. to ensure the required accuracy in reporting.
10. The interim limits and schedule of compliance for FCB have been removed.
11. The required class of the licensed operator has been specified as Class IV in Part II of the permit.
12. Oil and Grease limitations have been added to the permit. A schedule of compliance and interim monitoring and reporting requirements have been added to the permit for this parameter.
13. The 7Q10 of the receiving stream has been corrected.
14. The facility name has been corrected.

7. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfall is located at the following coordinates based on (put source here) using (datum set):

Latitude: 35° 07' 13" Longitude: 90° 10' 25"

The receiving waters named:

Mississippi River in Segment 6C of the Mississippi River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 8010100 and reach # 003 is a Water of the State classified for primary contact recreation, raw water source for public, industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

8. 303(d) LIST AND ENDANGERED SPECIES CONSIDERATIONS.

a. **303(d) List:**

The receiving stream is not listed on the 303(d) list. Therefore no permit action is needed.

b. **Endangered Species**:

No comments on the application were received from the U.S. Fish and Wildlife Service (USF&WS). The draft permit and Fact Sheet will be sent to the USF&WS for their review.

9. OUTFALL AND TREATMENT PROCESS DESCRIPTION.

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

a. Design Flow: 6.3 MGD

b. Type of Treatment: equalization basin, bar screen, oxidation ditches, clarifier, UV disinfection, and sludge belt presses

c. Discharge Description: treated municipal wastewater

10. ACTIVITY.

Under the Standard Industrial Classification (SIC) code of 4952 or the North American Industry Classification System (NAICS) code of 221320, the applicant's activities are the operation of a sewage treatment plant.

11. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

INDUSTRIAL USERS

This facility receives industrial process wastewater. Based on the applicant's effluent compliance history and the type of industrial contributions, standard Pretreatment Program implementation conditions are deemed appropriate at this time.

12. SEWAGE SLUDGE PRACTICES.

Sludge is dewatered via a filter press and hauled off site to an approved landfill.

13. PERMIT CONDITIONS.

The Arkansas Department of Environmental Quality has made a determination 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 (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et. seq.).

a. **Interim Effluent Limitations**

Outfall 001- treated municipal wastewater

i. **Conventional and/or Toxic Pollutants**

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow (MGD)	N/A	Report	Report	once/day	totalizing meter
Biochemical Oxygen Demand (BOD5)	1576.3	30.0	45.0	three/week	6-hr composite
Total Suspended Solids (TSS)	1576.3	30.0	45.0	three/week	6-hr composite
Dissolved Oxygen	N/A	2.0 (Monthly Avg. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
(Apr-Sept)	N/A	200	400	three/week	grab
(Oct-Mar)	N/A	1000	2000	three/week	grab
Oil and Grease (O & G)	Report	Report	Report	three/week	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	grab
Acute Biomonitoring	N/A	Report		once/quarter	24-hr composite

ii. **Solids, Foam, and Free Oil:** 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 due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

b. **Final Effluent Limitations**

Outfall 001- treated municipal wastewater

i. **Conventional and/or Toxic Pollutants**

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow (MGD)	N/A	Report	Report	once/day	totalizing meter
Biochemical Oxygen Demand (BOD5)	1576.3	30.0	45.0	three/week	6-hr composite
Total Suspended Solids (TSS)	1576.3	30.0	45.0	three/week	6-hr composite
Dissolved Oxygen	N/A	2.0 (Monthly Avg. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
(Apr-Sept)	N/A	200	400	three/week	grab
(Oct-Mar)	N/A	1000	2000	three/week	grab
Oil and Grease (O & G)	525.4	10.0	15.0	three/week	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	grab
Acute Biomonitoring	N/A	Report		once/quarter	24-hr composite

ii. **Solids, Foam, and Free Oil:** 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 due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

14. BASIS FOR PERMIT CONDITIONS.

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 (48 FR 1413, April 1, 1983).

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

Following regulations promulgated at 40 CFR Part 122.44 (1)(2)(ii), 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:

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
BOD5	30.0	45.0	30	45	30	45	30.0	45.0
TSS	30.0	45.0	30	45	30	45	30.0	45.0
Dissolved Oxygen	2.0 (Monthly Avg. Min.)		N/A		N/A		2.0 (Monthly Avg. Min.)	
FCB (col/100 ml)								
(Apr-Sept)	200	400	N/A	N/A	200	400	200	400
(Oct-Mar)	1000	2000	N/A	N/A	1000	2000	1000	2000
O & G	10.0	15.0	N/A	N/A	N/A	N/A	10.0	15.0
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6-9 s.u.		6.0-9.0 s.u.	

Parameter	Water Quality or Technology	Justification
BOD5	Water Quality	MultiSMP Model dated 02/26/2008
TSS	Technology	MultiSMP Model dated 02/26/2008
DO	Water Quality	Section 2.505 of Regulation No. 2
Fecal Coliform Bacteria	Water Quality	Section 2.507 of Regulation No. 2
O & G	Water Quality	Section 2.510 of Regulation No. 2
pH	Water Quality	Section 2.504 of Regulation No. 2

Oil and Grease limitations have been added to the permit based upon test results reported in the permit renewal application (average of 27 mg/l). The limitations have been included to

ensure compliance with the numerical standards contained in Section 2.510 of APCEC Regulation No. 2.

A minimum required DO level has been added to the permit in order to ensure compliance with the requirements of Section 2.505 of APCEC Regulation No. 2.

a. **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 40 CFR 122.44 (l)(2)(i).

The draft permit maintains the requirements of the previous permit with the exception of revised mass limitations identified for BOD5 and TSS. This revision is allowed in accordance with the regulations because the information (i.e., the new design flow) would have justified the proposed limits had it been available in an earlier permit renewal. (40 CFR 122.44(l)(2))

b. **Limits Calculations**

i. Mass limits:

The calculation of the loadings (lbs per day) uses a design flow of 6.3 MGD and the following equation: lbs/day = Concentration (mg/l) X Flow (MGD) X 8.34

ii. Daily Maximum Limits:

Daily Maximum limits = Monthly average limits X 1.5

c. **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 add DO to the existing water quality limitations, to add the 7Q10 of the receiving stream, to revise the design flow, and to correct the name of the facility.

Year-Round: BOD5/TSS/DO = 30/30/2 mg/l
Design Flow (Q): 6.3 MGD
Background Flow of the Receiving Stream (7Q10): 119,000 cfs

d. **Toxics Pollutants**

i. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act(CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited...". To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations by Toxic Pollutants"(49 FR 9016-9019,3/9/84). In support of the national policy, Region 6 adopted the "Policy for post Third Round Permitting" and the "Post Third Round Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to insure 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 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.

ii. Implementation

The State of Arkansas is currently implementing EPA's Post Third-Round Policy in conformance with the EPA Regional strategy. The 5-year discharge permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, or where there are no applicable technology-based limits, additional water quality-based effluent limitations and/or conditions are included in the discharge permits. State narrative and numerical water quality standards from Regulation No. 2 are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

iii. Priority Pollutant Scan (PPS)

In accordance with the regional policy ADEQ has reviewed and evaluated the effluent in evaluating the potential toxicity of each analyzed pollutant:

(a) The results were evaluated and compared to EPA's Minimum Quantification Levels (MQLs) to determine the potential presence of a respective toxic pollutant. Those pollutants which are greater than or equal to the MQLs are determined to be reasonably present in the effluent and an evaluation of their potential toxicity is necessary.

(b) Those pollutants with one datum shown as "non-detect" (ND), providing the level of detection is equal to or lower than MQL are determined to be not potentially present in the effluent and eliminated from further evaluation.

(c) Those pollutants with a detectable value even if below the MQL are determined to be reasonably present in the effluent and an evaluation of their potential toxicity is necessary.

(d) For those pollutants with multiple data values and all values are determined to be non-detect, therefore no further evaluation is necessary. However, where data set includes some detectable concentrations and some values as ND, one-half of the detection level is used for those values below the level of detection to calculate the geometric mean of the data set.

The concentration of each pollutant after mixing with the receiving stream was compared to the applicable water quality standards as established in the Arkansas Water Quality Standards, Reg. No. 2 and with the aquatic toxicity, human health, and drinking water criteria obtained from the "Quality Criteria for Water, 1986 (Gold Book)". The following expression was used to calculate the pollutant instream waste concentration(IWC):

$$IWC = ((C_e \times Q_e) + (C_b \times Q_b))/(Q_e + Q_b)$$

where:

IWC = instream concentration of pollutant after mixing with receiving stream (μg/l)
C_e = pollutant concentration in effluent (μg/l)
Q_e = effluent flow of facility (cfs)
C_b = background concentration of pollutant in receiving stream (μg/l)
Q_b = background flow of receiving stream (cfs)

The following values were used in the IWC calculations:

C_e = varies with pollutant. A single value from the Priority Pollutant Screen (PPS) submitted by the permittee as part of the discharge permit application or the geometric mean of a group of data points(less than 20 data points) is multiplied by a factor of 2.13. This factor is based on EPA's Region VI procedure (See attachment IV of Continuing Planning Process(CPP)) to extrapolate limited data sets to better evaluate the potential toxicity for higher effluent concentrations to exceed water quality standards. This procedure employs a statistical approach which yields an estimate of a selected upper percentile value (the 95th percentile) of an effluent data set which would be expected to exceed 95% of effluent concentrations in a discharge. If 20 or more data points during the last two years are available, do not multiply by 2.13, but instead use the maximum reported values.

Q_e = 6.3 MGD = 9.7335 cfs

C_b = 0 µg/l

Q_b = (See below):

I. Aquatic Toxicity

Chronic Toxicity: Flow = 29,750 cfs, for comparison with chronic aquatic toxicity. This flow is 25 percent of the 7-day, 10-year low-flow (7Q10) for the receiving stream. The 7Q10 of 119,000 cfs is based on "Identification and Classification of Perennial Stream of Arkansas", Arkansas Geological Commission Map.

Acute Toxicity: Flow = 7140 cfs, for comparison with acute aquatic toxicity. This flow is 6 percent of the 7Q10 for the receiving stream.

II. Bioaccumulation

Flow = 542,040 cfs, for comparison with bioaccumulation criteria. This flow is the long term average of the receiving stream and is being continued from the previous permit.

III. Drinking Water

Flow = 119,000 cfs, for comparison with drinking water criteria. This flow is the 7Q10 for the receiving stream.

The following values were used to determine limits for the pollutants:

Hardness = 158.30 mg/l, continued from the previous permit.

TSS = 8 mg/l, based on Attachment V of the CPP.

pH = 7.9 s.u., continued from the previous permit.

iv. Water Quality Standards for Metals and Cyanide

Standards for Chromium (VI), Mercury, Selenium, and Cyanide are expressed as a function of the pollutant's water-effect ratio (WER), while standards for cadmium, chromium (III), copper, lead, nickel, silver, and zinc are expressed as a function of the pollutant's water-effect ratio, and as a function of hardness.

The Water-effect ratio (WER) is assigned a value of 1.0 unless scientifically defensible study clearly demonstrates that a value less than 1.0 is necessary or a value

greater than 1.0 is sufficient to fully protect the designated uses of the receiving stream from the toxic effects of the pollutant.

The WER approach compares bioavailability and toxicity of a specific pollutant in receiving water and in laboratory test water. It involves running toxicity tests for at least two species, measuring LC50 for the pollutant using the local receiving water collected from the site where the criterion is being implemented, and laboratory toxicity testing water made comparable to the site water in terms of chemical hardness. The ratio between site water and lab water LC50 is used to adjust the national acute and chronic criteria to site specific values.

v. Conversion of Dissolved Metals Criteria for Aquatic Life to Total Recoverable Metal

Metals criteria established in APCEC Regulation No. 2, Section 2.508 for aquatic life protection are based on dissolved metals concentrations and hardness values. However, Federal Regulations cited at 40 CFR Part 122.45(c) require that effluent limitations for metals in discharge permits be expressed as total recoverable based on Attachment V of CPP. Therefore a dissolved to the total recoverable metal conversion must be implemented. This involves determining a linear partition coefficient for the metal of concern and using this coefficient to determine the fraction of metal dissolved, so that the dissolved metal ambient criteria may be translated to a total effluent limit. The formula for converting dissolved metals to total recoverable metals for streams and lakes are provided in Attachment V of CPP and Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR Part 131.36.

vi. Comparison of the submitted information with the water quality standards and criteria

The following pollutants were determined to be present in the effluent for each pollutant as reported by the permittee.

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Copper, Total Recoverable	76.7	10
Lead, Total Recoverable	5.01	5
Zinc, Total Recoverable	146.0	20
Phenols, Total Recoverable	45.0	5
Chloroform	1.13	1
Ethylbenzene	5.51	1

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Toluene	9.06	5
Phenol	29.9	5
Bis(2-ethylhexyl) phthalate	38.0	10
1,2 Diphenylhydrazine	6.84	5

However, ADEQ has determined from the information submitted by the permittee that no water quality standards or Gold Book criteria are exceeded. Therefore no permit action is necessary to maintain these standards or criteria (See Attachment 1.)

15. BIOMONITORING.

Section 101(a)(3) of the Clean Water Act states that ".....it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." In addition, 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. Arkansas has established a narrative criteria which states "toxic materials shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with the normal propagation, growth and survival of aquatic biota."

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

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

TOXICITY TESTS	**FREQUENCY**
Acute Biomonitoring	Once/quarter

Requirements for measurement frequency are based on appendix D of CPP.

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

The calculations for dilution used for the acute biomonitoring are as follows:

Critical Dilution (CD) = (Qd / (Qd + Qb)) X 100

Qd = Design Flow = 6.3 MGD = 9.7335 cfs
7Q10 = 119,000 cfs
Qb = Background flow= 0.1 X (0.25)X 7Q10 = 2975 cfs
CD = ((9.7335) / (9.7335 + 2975)) X 100 = 0.33%

Based on the engineering judgment of the permit writer, the critical dilution will be set at 1.0%. Attachment I of Appendix D of the Continuing Planning Process does not address critical dilutions below 1.0%. Also, the new critical dilution will allow for a wider range of dilutions to be tested and will therefore generate better data.

Toxicity tests shall be performed in accordance with protocols described in "Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms", EPA/600/4-90/027. 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 **0.45%, 0.56%, 0.75%, 1.0%, and 1.33%** (See **Attachment I** of CPP). The low-flow effluent concentration (critical dilution) is defined as **1.0%** effluent. The requirement for acute biomonitoring tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species 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 biomonitoring 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/600/4-90/027 and shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

This permit may be reopened to require further biomonitoring studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if biomonitoring 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 ADEQ 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).

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Administrative Records

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

BIOMONITORING FREQUENCY RECOMMENDATION AND RATIONALE FOR ADDITIONAL REQUIREMENTS

Permit Number: **AR0022039**
Facility Name: **West Memphis Wastewater Treatment Facility**
Previous Critical Dilution: **0.3%** Proposed Critical Dilution: **1.0%**
Date of Review: **11/28/07** Name of Reviewer: **Barnett**

Number of tests performed during previous 4 years by species:
***Pimephales promelas* (Fathead minnow): 18**
***Daphnia pulex* (water flea): 18**

Failed test dates during previous 4 years by species:

	Lethal
***Pimephales promelas* (Fathead minnow):**	None
***Daphnia pulex* (water flea):**	Lethal None

Previous TRE activities: None

Frequency recommendation by species:
***Pimephales promelas* (Fathead minnow): four/year**
***Daphnia pulex* (water flea): four/year**

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

Rationale: According to the EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies: "All major dischargers, and those minor dischargers specifically identified by EPA or the State permitting authority (based on available information on a case-by case basis) as posing a significant unaddressed toxic risk, will be required to perform Whole Effluent Toxicity testing at a frequency of once per quarter for the vertebrate and invertebrate tests species for the first year of a new or reissued permit."

16. SAMPLE TYPE AND FREQUENCY.

Requirements for sample type and sampling frequency have been based on the current discharge permit.

The Department recognizes that when a facility has a design flow in excess of 5 MGD, more frequent monitoring and 24-hour composite samples are typically required. However, this facility has no exceedamces of the concentration limits for BOD5 and TSS during the term of the current permit. Violations of mass limits were not considered in determining the sampling frequency or sample type due to the change in the design flow. Therefore no changes will be made to the sampling frequency or sample type.

The sampling frequency for Oil and Grease is based on the frequencies for other parameters in the permit. The sample type is based on 40 CFR 122.21(g)(7)(i) which requires grab samples be taken for Oil and Grease.

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
BOD5	three/week	6-hr composite	three/week	6-hr composite
TSS	three/week	6-hr composite	three/week	6-hr composite
Dissolved Oxygen	N/A	N/A	three/week	grab
FCB	three/week	grab	three/week	grab
(Apr-Sept)	three/week	grab	three/week	grab
(Oct-Mar)	three/week	grab	three/week	grab
O & G	N/A	N/A	three/week	grab
pH	three/week	grab	three/week	grab

17. STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS.

Stormwater runoff from this facility is covered under ARR00C405 (stormwater general permit for runoff associated with industrial activity). The facility does have activities which are exposed to stormwater runoff and are required to have permit coverage.

18. PERMIT COMPLIANCE.

Compliance with final effluent limitations is required by the following schedule:

Compliance is required on the effective date of the permit for all final limits with the exception of Oil and Grease.

1. Compliance with the interim monitoring and reporting requirements for Oil and Grease is required on the effective date of the permit.

   Compliance with the final limits for Oil and Grease is required no later than three years from the effective date of the permit. The permittee shall submit reports every six months detailing the progress being made towards achieving compliance with the final Oil and Grease limits. These reports are required only during the time which the interim monitoring and reporting requirements are in effect.

2. During the month of April, the permittee shall submit an updated pretreatment program status report to the ADEQ containing information listed in Part II, Item #8.d.(1).

19. 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.

20. SOURCES.

The following sources were used to draft the permit:

a. Application No. AR0022039 received 10/9/2007.
b. Arkansas Water Quality Management Plan (WQMP).
c. APCEC Regulation No. 2.
d. APCEC Regulation No. 6.
e. 40 CFR Parts 122, 125, 133 and 403.
f. Discharge permit file AR0022039.
g. Discharge Monitoring Reports (DMRs).
h. "Arkansas Water Quality Inventory Report 2004 (305B)", ADEQ.
i. Memo from Mo Shafii to Engineers dated March 28, 2005
j. "Identification and Classification of Perennial Streams of Arkansas", Arkansas Geological Commission.
k. Continuing Planning Process (CPP).
l. Technical Support Document For Water Quality-based Toxic Control.
m. Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR Part 131.36.
n. Inspection Report dated 05/15/2007.

o. Site Visit on 12/11/2007.
p. Letter from Paul Holloway to Loretta Reiber, P.E. recceived on 02/20/2008.

21. 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 to the District Engineer, Corps of Engineers, and to the Regional Director of the U.S. Fish and Wildlife Service on a case-by-case basis, and the EPA and Arkansas Department of Health prior to the publication of that notice.

22. POINT OF CONTACT.

For additional information, contact:

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

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1						CALCULATIONS OF ARKANSAS WATER QUALITY-BASED EFFLUENT LIMITATIONS										
2								For an Arkansas River/Stream								
3								(Reserved)								
4	STEP 1:	INPUT TWO LETTER CODE FOR ECOREGION (Use Code at Right)						DL								
5		Basin Name						Mississippi River								
6											Codes & TSS for Ecoregions and Large Rivers					
7	FACILITY															
8										Ouachita Mts. Eco (OM) =		2.0 mg/l	Arkansas (Ft. Smith to Dardanelle Dar			12.0 mg/l
9	Permittee							West Memphis		Ozark Highlands Eco (OH) =		2.5 mg/l	Arkansas (Dardanelle Dam to Terry L&			10.5 mg/l
10	NPDES Permit No.							AR0022039		Boston Mts. Eco (BM) =		1.3 mg/l	Arkansas (Terry L&D to L&D No. 5)			8.3 mg/l
11	Outfall No.(s)							1.00		Ark River Valley Eco (AV) =		3.0 mg/l	Arkansas (L&D No. 5 to Mouth)			9.0 mg/l
12	Plant Effluent Flow (MGD)							6.30		Gulf Coastal Eco (GC) =		5.5 mg/l	White (Above Beaver Lake)			2.5 mg/l
13	Plant Effluent Flow (cfs)							9.73		Delta Ecoregion (DL) =		8.0 mg/l	White (Below Bull Shoals to Black Riv			3.3 mg/l
14													White (From Black River to Mouth)			18.5 mg/l
15	RECEIVING STREAM												St. Francis River			18.0 mg/l
16													Ouachita (Above Caddo River)			2.0 mg/l
17	Is this a large river? (see list at right)(enter "1" if yes, "0" if no; make entry as a number)							1					Ouachita (Below Caddo River)			5.5 mg/l
18	Name of Receiving Stream:							Mississippi River					Red River			33.0 mg/l
19	Waterbody Segment Code No.							6C								
20	Is this a lake or reservoir? (enter '1' if yes, ' 0 ' = no; make entry as a number)							0			Total Hardness for:					
21	Is seasonal critical flow applicable (1=yes. 0=no); see Reg 2 page 1-3 for details.							0			Arkansas River = 125 mg/l			Red River = 211 mg/l		
22	(Reserved)	DO NOT INPUT DATA INTO CELL H22, H23 & H24....LEAVE BLAN						?			Ouachita River = 28 mg/l			St. Francis River = 103 mg/l		
23	(Reserved)							?			White River = 116 mg/l					
24		(Reserved)		(Reserved)				?								
25				(Reserved)				25.00			Gulf Coastal = 31 mg/l			Ouachita Mount = 31 mg/l		
26				(Reserved)				100.00			Ozark Highlands = 148 mg/l			Ark River Valley = 25 mg/l		
27				(Reserved)				200.00			Boston Mount = 25 mg/l			Delta = 81 mg/l		
28																
29	Ecoregion TSS (mg/l) (For Large River, See List to Right)							8.00			Large Rivers					
30	Ecoregion Hardness (mg/l)							158.30			Mississippi River, Arkansas River, Red River					
31	Enter 7Q10 (cfs)					(Reserved)		119000.00	(Reserved		White (Below confluence with Black River)					
32	Long Term Ave / Harmonic Mean Flow (cfs)							542040.00	(Reserved	(Reserved)	Ouachita (Below confluence with Little Miss. River)					
33	Using Diffusers (Yes/No)							no								
34	pH (Avg)							7.90			For industrial and federal facility, use the highest monthly average flow					
35	Percent (%) of 7Q10 for Chronic Criteria							0.25			for the past 24 months. For POTWs, use the design flow.					
36	Percent (%) of 7Q10 for Acute Criteria							0.06								
37	Water Effect Ration (WER)							1.00			#VALUE! => No violation or Not Applicable					
38	EPA Statistical Factor for Data (enter 2.13 for <20; enter 1 for >20)							2.13								
39	Ave Monthly Limit LTA Multiplier (Ref: page 103 TSD for WQ-Based Toxics Control)							1.55			For intermittent stream, enter effluent Hardness					
40	Max Daily Limit LTA Multiplier (Ref: " " " ")							3.11			Enter "0" for intermittent stream and lake.					

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
41																
42	**STEP 2:**	INPUT AMBIENT AND EFFLUENT DATA														
43		CALCULATE IN-STREAM WASTE CONCENTRATIONS														
44																
45	DATA INPUT			For less than 20 data enter geometric mean concentration as micro-gram per liter (ug/l or ppb); enter 2.13 in cell H38.												
46				For 20 or more set data enter highest concentration as micro-gram per liter (ug/l or ppb); enter 1 in cell H38.												
47																
48				Effluent value reported as "< detection level" (DL) but the DL is greater than MQL, the 1/2 DL is used.												
49				Effluent value reported as "< detection level" (DL) and the DL is smaller than MQL, "0" is used.												
50				If a firm value is reported, even less than MQL, the reported value is used.												
51																
52				The following formulae is used to calculate the Instream Waste Concentration (IWC)												
53				(Please refer to CPP for detail)												
54				IWC = [(F*Qa*Cb) + (Qe*2.13*Ce)] / (F*Qa + Qe)												
55				Where:												
56				IWC = Instream Waste Concentration												
57				F = Fraction of stream allowed for mixing												
58				Ce = Reported concentration in effluent												
59				Cb = Ambient stream concentration upstream of discharge												
60				Qe = Plant effluent flow												
61				Qb = Critical low flow of stream at discharge point expressed as the 7Q10 or harmonic mean flow for human health criteria												
62				Upstream Flow (Qb)= (% of 7Q10) X 7Q10 for Chronic and Acute												
63																
64	The following formulae convert metals reported in total form to dissolved form if criteria are in dissolved form															
65																
66	Kp = Kpo * (TSS**a)					Kp = Linear partition coefficient; Kpo and a can be found in table below										
67	C/Ct = 1/ (1 + Kp*TSS* 10^-6)					TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)										
68	Total Metal Criteria (Ct) = Cr / (C/Ct)					C/Ct = Fraction of metal dissolved; and Cr = Dissolved criteria value										
69																
70				***Stream Linear Partition Coefficient (Insert "Dissolved" Conc in Column B to conve**							**Lake Linear Partition Coefficient**					
71	Total Metals	Dissolved Value in Stream		Kpo	alpha (a)	Kp	C/Ct	Total Value			Kpo	alpha (a)	Kp	C/Ct	Total Value	
72																
73	Arsenic			480000	-0.73	105192.687	0.543023333	0.00			480000.00	-0.73	105192.69	0.5430233	0	
74	Cadmium			4000000	-1.13	381564.802	0.246760137	0.00			3520000.00	-0.92	519636.77	0.1939076	0	
75	Chromium(3)			3360000	-0.93	485809.037	0.204646612	0.00			2170000.00	-0.27	1237728.63	0.0917277	0	
76	Copper			1040000	-0.74	223227.013	0.358961238	0.00			2850000.00	-0.9	438595.20	0.2217904	0	
77	Lead			2800000	-0.8	530500.798	0.190693894	0.00			2040000.00	-0.53	677629.77	0.1557381	0	
78	Mercury			2900000	-1.14	270941.426	0.315703262	0.00			1970000.00	-1.17	172922.28	0.4195725	0	
79	Nickel			490000	-0.57	149773.434	0.454920253	0.00			2210000.00	-0.76	455034.04	0.2155046	0	
80	Zinc			1250000	-0.7	291572.81	0.300067592	0.00			3340000.00	-0.68	812166.88	0.1333807	0	
81	Silver			2400000	-1.03	281856.825	0.307233386	0.00			2400000.00	-1.03	281856.82	0.3072334	0	
82		*Note: Use this section to convert lab concentrations shown as "dissolved" to "total"*														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
83											Dissolved	Total				
84	**The following formulas are used to calculate water quality criteria based on Regulation No. 2 (Act 472 of Ark 1949)**										WQC (ug/l)	WQC(ug/l)				
85	Cadmium			Acute			WER X CF1 X e(1.128[ln(hardness)]-3.828)				6.09		CF1 = 1.136672 - [0.041838*ln(hardness)]			
86				Chronic			WER X CF2 X e(0.7852[ln(hardness)]-3.490)				1.45		CF2 = 1.101672 - [0.041838*ln(hardness)]			
87																
88	Chromium Tri			Acute			WER X 0.316 X e(0.819[ln(hardness)]+3.688				799.36					
89				Chronic			WER X 0.86 X e(0.819[ln(hardness)]+1.561				259.30					
90																
91	Chromium Hex			Acute			WER X 0.982 X 16				15.71					
92				Chronic			WER X 11 X 0.962				10.58					
93																
94	Copper			Acute			WER X 0.96 X e(0.9422[ln(hardness)]-1.464)				26.23					
95				Chronic			WER X 0.96 X e(0.8545[ln(hardness)]-1.465)				16.81					
96																
97	Lead			Acute			WER X e(1.273[ln(hardness)]-1.460)*CF3				106.08		CF3 = 1.46203 - [0.145712*ln(hardness)]			
98				Chronic			WER X e(1.273[ln(hardness)]-4.705)*CF3				4.13					
99																
100	Mercury			Acute			WER X 0.85 X 2.4				2.04					
101				Chronic			WER X 0.012				0.01					
102																
103	Nickel			Acute			WER X 0.998 X e(0.8460[ln(hardness)]+3.3612)				2087.57					
104				Chronic			WER X 0.997 X e(0.8460[ln(hardness)]+1.1645)				231.84					
105																
106	Zinc			Acute			WER X 0.978 X e(0.8473[ln(hardness)]+0.8604)				168.90					
107				Chronic			WER X 0.986 X e(0.8473[ln(hardness)]+0.7614)				154.23					
108																
109	Silver			Acute			WER X 0.85 X e(1.72[ln(hardness)]-6.52)				7.60					
110																
111	Cyanide			Acute			WER X 22.36				22.36					
112				Chronic			WER X 5.2				5.20					
113																
114	Arsenic			Acute			WER X 360				360.00					
115				Chronic			WER X 190				190.00					
116																
117	Beryllium			Acute			WER X 130				130.00					
118				Chronic			WER X 5.3				5.30					
119																
120	Selenium			Acute			WER X 20				20.00					
121				Chronic			WER X 5				5.00					
122																
123	The following formulas are applicable to the Jet Stream Model for lakes for calculating the Dilution Factor (DF):															
124			DF = ((2.8 * D * 3.1416^0.5) / X)		where DF is % of effluent at distance X, D is the diameter of the outfall pipe											
125				and X is aquatic life criteria--25 feet for ZID; 100 feet for mixing zone; human health criteria 200 feet for mixing zone.												
126			DF =	#VALUE!	Acute	#VALUE!	Chronic	#VALUE!	Bioacc.							
127																
128	The following formulas are used to calculate the instream waste concentration (IWC) for each pollutant:															
129																
130	Streams, Rivers & Lake		IWC = [(Frac X Critical Flow X Cb) + (2.13 X Ce X Qd)] / [Frac X Critical Flow + Qd] where the critical flow is the 7Q10 except for lakes with the Jet Stream Model.													
131			IWC = (DF X Ce) + Cb for lakes with Jet Stream Model.													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
132																
133	POLLUTANTS				MQL	Background Conc. Cb	Effluent Conc. Ce	Domestic Supply IWC	Acute Aquatic IWC	Chronic Aquatic IWC	Bioacc. IWC	Domestic Criteria	Arkansas Acute Aquatic	Arkansas Chronic Aquatic	Arkansas Bioacc.	
134					ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
138	METALS AND CYANIDE															
139	1. Antimony Total				60	0	0	0.00	0.00	0.00	0.00	########	9000.00	1600.00	4300	
140	2. Arsenic Total				0.5	0	0	0.00	0.00	0.00	0.00	50	662.95	349.89	1.4	
141	3. Beryllium Total				0.5	0	0	0.00	0.00	0.00	0.00	########	130.00	5.30	0.076	
142	4. Cadmium Total				1	0	0	0.00	0.00	0.00	0.00	10	24.68	5.87	#########	
143	6. Chromium (Tri)				10	0	0	0.00	0.00	0.00	0.00	50	3906.03	1267.08	#########	
144	7. Chromium (hex)				10	0	0	0.00	0.00	0.00	0.00	50	15.71	10.58	#########	
145	8. Copper Total				0.5	0	76.7	0.01	0.22	0.05	0.00	########	73.07	46.82	#########	
146	9. Lead Total				0.5	0	5.01	0.00	0.01	0.00	0.00	50	556.31	21.68	#########	
147	10. Mercury Total				0.005	0	0	0.00	0.00	0.00	0.00	2	6.46	0.012	0.15	
148	12. Nickel Total				0.5	0	0	0.00	0.00	0.00	0.00	########	4588.88	509.63	4600	
149	13. Selenium Total				5	0	0	0.00	0.00	0.00	0.00	10	20.00	5.00	#########	
150	14. Silver Total				0.5	0	0	0.00	0.00	0.00	0.00	50	24.74	#########	#########	
151	15. Thallium Total				0.5	0	0	0.00	0.00	0.00	0.00	########	1400.00	#########	6.3	
152	16. Zinc Total				20	0	146	0.03	0.42	0.10	0.01	########	562.87	513.98	#########	
153	129. Phenols, Total				5	0	45	0.01	0.13	0.03	0.00	########	9999999.00	#########	#########	
154	17. Cyanide Total				10	0	0	0.00	0.00	0.00	0.00	########	22.36	5.2	220000	
157	DIOXIN															
158	18. 2-3-7-8-TCDD				0.00001	0	0	0.00	0.00	0.00	0.00	########	0.01	1.00E+07	1.00E-06	
160	VOLATILE COMPOUNDS															
161	19. Acrolein				50	0	0	0.00	0.00	0.00	0.00	########	68	21	780	
162	20. Acrylonitrile				20	0	0	0.00	0.00	0.00	0.00	########	7550	2600	6.6	
163	21. Benzene				10	0	0	0.00	0.00	0.00	0.00	5	5300	9999999	710	
164	22. Bromoform				10	0	0	0.00	0.00	0.00	0.00	########	9999999	#########	3600	
165	23. Carbon Tetrach				2	0	0	0.00	0.00	0.00	0.00	5	35200	#########	44	
166	24. Chlorobenzene				10	0	0	0.00	0.00	0.00	0.00	########	250	50	2.10E+04	
167	25. Chlorodibromomethane				10	0	0	0.00	0.00	0.00	0.00	########	9999999	#########	340	
168	26. Chloroethane				50	0	0	0.00	0.00	0.00	0.00	########	9999999	#########	1.00E+07	
169	27. 2-Chloroethylvinyl ether				10	0	0	0.00	0.00	0.00	0.00	########	9999999	#########	1.00E+07	
170	28. Chloroform				10	0	1.13	0.00	0.00	0.00	0.00	########	28900	1240	4700	
171	29. Dichlorobromomethane				10	0	0	0.00	0.00	0.00	0.00	########	9999999	#########	220	
172	30. 1-1-Dichloroethane				10	0	0	0.00	0.00	0.00	0.00	7	9999999.00	#########	#########	
173	31. 1-2-Dichloroethane				10	0	0	0.00	0.00	0.00	0.00	5	11800	20000	990	
174	32. 1-1-Dichlorethylene				10	0	0	0.00	0.00	0.00	0.00	########	11600	#########	32	
175	33. 1,2 Dichloropropane				10	0	0	0.00	0.00	0.00	0.00	########	23000	5700	#########	
176	34. 1,3 Dichloropropylene				10	0	0	0.00	0.00	0.00	0.00	########	6060	244	1700	
177	35. Ethylbenzene				10	0	5.51	0.00	0.02	0.00	0.00	########	32000	#########	29000	
178	37. Methyl Chloride				50	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
179	36. Methyl bromide				50	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	4000	
180	38. Methylene chloride				20	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	16000	
181	39. 1-1-2-2-Tetrachloroethane				10	0	0	0.00	0.00	0.00	0.00	########	9320	2400	110	
182	40. Tetrachloroethylene				10	0	0	0.00	0.00	0.00	0.00	########	5280	840	88.5	
183	41. Toluene				10	0	9.06	0.00	0.03	0.01	0.00	########	17500	#########	2.00E+05	
184	42. 1,2-trans-dichloroethylene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
185	44. 1-1-2-Trichloroethane				10	0	0	0.00	0.00	0.00	0.00	########	18000	9400	420	
186	43. 1-1-1-Trichloroethane				10	0	0	0.00	0.00	0.00	0.00	200	18000	#########	#########	
187	45. Trichloroethylene				10	0	0	0.00	0.00	0.00	0.00	5	45000	21900	810	
188	46. Vinyl Chloride				10	0	0	0.00	0.00	0.00	0.00	2	9999999.00	#########	5250	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
190	ACID COMPOUNDS												9999999.00	#########	#########	
191	47. 2-Chlorophenol				10	0	0	0.00	0.00	0.00	0.00	########	4380	#########	#########	
192	48. 2-4-Dichlorphenol				10	0	0	0.00	0.00	0.00	0.00	########	2020	365	#########	
193	49. 2-4 Dimethylphenol				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
194	50. 4,6-Dinitro-o-Cresol				50	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	765	
195	51. 2,4-Dinitrophenol				50	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	14000	
196	52.-53. Nitrophenols				20	0	0	0.00	0.00	0.00	0.00	########	230	150	#########	
197	54. 4 Chloro-3-methylphenol				10	0	0	0.00	0.00	0.00	0.00	########	30	#########	#########	
198	55. Pentachlorophenol				5	0	0	0.00	0.00	0.00	0.00	########	22.41	14.15	82	
199	56. Phenol				10	0	29.9	0.01	0.09	0.02	0.00	########	10200	2560	4600000	
200	57. 2-4-6-Trichlorophenol				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	65	
202						Ambient Background Conc.	Effluent Conc.	Domestic Supply	Acute Aquatic	Chronic Aquatic	Human Health	Domestic Criteria	Acute Aquatic Criteria	Chronic Aquatic Criteria	Human Health Criteria	
203	BASE/NEUTRAL COMPOUNDS					Cb	Ce	IWC	IWC	IWC	IWC	ug/l	ug/l	ug/l	ug/l	
204	58. Acenaphthene				10	0	0	0.00	0.00	0.00	0.00	########	1700	520	#########	
205	59. Acenapthylene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
206	60. Anthracene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	110000	
207	61. Benzidine				50	0	0	0.00	0.00	0.00	0.00	########	2500	#########	5.40E-03	
208	62. Benzo(a) anthracene				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.31	
209	63. Benzo(a) pyrene				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.31	
210	64. 3,4-benzoflouranthene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.31	
211	65. Benzo(g,h,i)perylene				20	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
212	66. Benzo(k) fluoranthene				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.31	
213	67. Bis(2-chloroethoxy)methane				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
214	68. Bis(2-chloroethly) Ether				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	14	
215	69. Bis(2-Chloroisopropyl) eth				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	1.70E+05	
216	70. Bis(2-ethylhexyl)phthalate				10	0	38	0.01	0.11	0.03	0.00	########	9999999.00	#########	59	
217	71. 4-Bromophenyl phenyl ether				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
218	72. Butylbenzy phthalate				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
219	73. 2-chloronapthalene				10	0	0	0.00	0.00	0.00	0.00	########	1600	#########	#########	
220	74. 4-chlorophenyl phenyl ether				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
221	75. Chrysene				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.31	
222	76. Dibenzo(a,h)anthracene				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.31	
223	77-79. Dichlorobenzene(1,2-1,3-1,4)				10	0	0	0.00	0.00	0.00	0.00	########	1120	763	2600	
224	80. 3,3' Dichlorobenzidine				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.77	
225	81. Diethyl Phthalate				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	1.20E+05	
226	82. Dimethyl phthalate				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	2.90E+06	
227	83. Di-n-Butyl phthalate				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	1.20E+04	
228	84. 2-4-Dinitrotoluene				10	0	0	0.00	0.00	0.00	0.00	########	330	230	91	
229	85. 2-6-Dinitrotoluene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
230	86. Di-n-octyl phthalate				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
231	87. 1,2-diphenylhydrazine				20	0	6.84	0.00	0.02	0.00	0.00	########	270	#########	5.4	
232	88. Fluoranthene				10	0	0	0.00	0.00	0.00	0.00	########	3980	#########	370	
233	89. Fluorene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	14000	
234	90. Hexachlorobenzene				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.0077	
235	91. Hexachlorobutadiene				10	0	0	0.00	0.00	0.00	0.00	########	90	9.3	500	
236	92. Hexachlorocyclopentadiene				10	0	0	0.00	0.00	0.00	0.00	########	7	5.2	1.74E+04	
237	93. Hexachloroethane				20	0	0	0.00	0.00	0.00	0.00	########	980	540	89	
238	Hexachlorocyclohexane					0	0	0.00	0.00	0.00	0.00	########	2	0.08	#########	
239	94. Indeno(1,2,3-cd)pyrene				5	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	0.31	
240	95. Isophorone				10	0	0	0.00	0.00	0.00	0.00	########	117000	#########	6000	
241	96. Naphthalene				10	0	0	0.00	0.00	0.00	0.00	########	2300	620	#########	
242	97. Nitrobenzene				10	0	0	0.00	0.00	0.00	0.00	########	27000	#########	1900	
243	98. N-nitrosodimethylamine				50	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	81	
244	99. N-nitrosodi-n-propylamine				20	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
245	100. N-nitrosodiphenylamine				20	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	160	
246	101. Phenanthrene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
247	103. 1,2,4-trichlorobenzene				10	0	0	0.00	0.00	0.00	0.00	########	9999999.00	#########	#########	
248																
249	PESTICIDES															
250	104. Aldrin				0.01	0	0	0.00	0.00	0.00	0.00	########	3.00	#########	0.0014	
251	105. Alpha-BHC				0.05	0	0	0.00	0.00	0.00	0.00	########	2.00	0.08	0.0373	
252	106. Beta-BHC				0.05	0	0	0.00	0.00	0.00	0.00	########	2.00	0.08	0.46	
253	107. Gamma-BHC				0.05	0	0	0.00	0.00	0.00	0.00	########	2.00	0.08	0.63	
254	108. Delta-BHC				0.05	0	0	0.00	0.00	0.00	0.00	########	2.00	0.08	#########	
255	109. Chlordane				0.2	0	0	0.00	0.00	0.00	0.00	########	2.40	0.0043	0.005	
256	110. 4,4'-DDT				0.02	0	0	0.00	0.00	0.00	0.00	########	1.10	0.001	0.0059	
257	111. 4,4'-DDE				0.1	0	0	0.00	0.00	0.00	0.00	########	1.10	0.001	0.0059	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
258	112. 4,4'-DDD				0.1	0	0	0.00	0.00	0.00	0.00	########	1.10	0.001	0.0084	
259	113. Dieldrin				0.02	0	0	0.00	0.00	0.00	0.00	########	2.50	0.0019	0.0012	
260	114. Alpha-endosulfan				0.01	0	0	0.00	0.00	0.00	0.00	########	0.22	0.056	2	
261	115. Beta-endosulfan				0.02	0	0	0.00	0.00	0.00	0.00	########	0.22	0.056	2	
262	116. Endosulfan sulfate				0.1	0	0	0.00	0.00	0.00	0.00	########	0.22	0.056	2	
263	117. Endrin				0.02	0	0	0.00	0.00	0.00	0.00	0.2	0.18	0.0023	0.81	
264	118. Endrin aldehyde				0.1	0	0	0.00	0.00	0.00	0.00	########	0.18	0.0023	0.81	
265	119. Heptachlor				0.01	0	0	0.00	0.00	0.00	0.00	########	0.52	0.0038	0.0021	
266	120. Heptachlor epoxide				0.01	0	0	0.00	0.00	0.00	0.00	########	0.52	0.0038	0.0011	
267	121. PCB-1242				0.2	0	0	0.00	0.00	0.00	0.00	########	9999999.00	0.014	0.0004	
268	122. PCB-1254				0.2	0	0	0.00	0.00	0.00	0.00	########	9999999.00	0.014	0.0004	
269	123. PCB-1221				0.2	0	0	0.00	0.00	0.00	0.00	########	9999999.00	0.014	0.0004	
270	124. PCB-1232				0.2	0	0	0.00	0.00	0.00	0.00	########	9999999.00	0.014	0.0004	
271	125. PCB-1248				0.2	0	0	0.00	0.00	0.00	0.00	########	9999999.00	0.014	0.0004	
272	126. PCB-1260				0.2	0	0	0.00	0.00	0.00	0.00	########	9999999.00	0.014	0.0004	
273	127. PCB-1016				0.2	0	0	0.00	0.00	0.00	0.00	########	9999999.00	0.014	0.0004	
274	128. Toxaphene				0.3	0	0	0.00	0.00	0.00	0.00	5	0.73	0.0002	0.00045	
275	130. Chlorpyrifos				0.07	0	0	0.00	0.00	0.00	0.00	########	0.08	0.041	#########	
276																
277																
278																

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
279																
280	STEP 3:	APPLICABLE WATER QUALITY-BASED LIMITS														
281																
282																
283																
284	POLLUTANTS		Permit Daily Maximum	Permit Monthly Average	Permit Daily Maximum	Permit Monthly Average		EPA Bioac Status								
285			ug/l	ug/l	lb/day	lb/day										
286	Alpha-BHC		N/A	N/A	N/A	N/A		N/A								
287	Beta-BHC		N/A	N/A	N/A	N/A		N/A								
288	Gamma-BHC		N/A	N/A	N/A	N/A		N/A								
289	Delta-BHC		N/A	N/A	N/A	N/A		N/A								
290	Pentachlorophenol		N/A	N/A	N/A	N/A		N/A								
291	Aldrin		N/A	N/A	N/A	N/A		N/A								
292	Chlordane		N/A	N/A	N/A	N/A		N/A								
293	4,4'-DDT		N/A	N/A	N/A	N/A		N/A								
294	4,4'-DDE		N/A	N/A	N/A	N/A		N/A								
295	4,4'-DDD		N/A	N/A	N/A	N/A		N/A								
296	Dieldrin		N/A	N/A	N/A	N/A		N/A								
297	Alpha-endosulfan		N/A	N/A	N/A	N/A		N/A								
298	Beta-endosulfan		N/A	N/A	N/A	N/A		N/A								
299	Endosulfan sulfate		N/A	N/A	N/A	N/A		N/A								
300	Endrin		N/A	N/A	N/A	N/A		N/A								
301	Endrin aldehyde		N/A	N/A	N/A	N/A		N/A								
302	Heptachlor		N/A	N/A	N/A	N/A		N/A								
303	Heptachlor epoxide		N/A	N/A	N/A	N/A		N/A								
304	Toxaphene		N/A	N/A	N/A	N/A		N/A								
305	Chlorpyrifos		N/A	N/A	N/A	N/A		N/A								
306	Cadmium Total		N/A	N/A	N/A	N/A		N/A								
307	Chromium (hex)		N/A	N/A	N/A	N/A		N/A								
308	Copper Total		N/A	N/A	N/A	N/A		N/A								
309	Lead Total		N/A	N/A	N/A	N/A		N/A								
310	Mercury Total		N/A	N/A	N/A	N/A		N/A								
311	Nickel Total		N/A	N/A	N/A	N/A		N/A								
312	Selenium Total		N/A	N/A	N/A	N/A		N/A								
313	Silver Total		N/A	N/A	N/A	N/A		N/A								
314	Zinc Total		N/A	N/A	N/A	N/A		N/A								
315	Chromium (Tri)		N/A	N/A	N/A	N/A		N/A								
316	Cyanide Total		N/A	N/A	N/A	N/A		N/A								
317	Beryllium Total		N/A	N/A	N/A	N/A		N/A								
318	PCB-1242		N/A	N/A	N/A	N/A		N/A								
319	PCB-1254		N/A	N/A	N/A	N/A		N/A								
320	PCB-1221		N/A	N/A	N/A	N/A		N/A								
321	PCB-1232		N/A	N/A	N/A	N/A		N/A								
322	PCB-1248		N/A	N/A	N/A	N/A		N/A								
323	PCB-1260		N/A	N/A	N/A	N/A		N/A								
324	PCB-1016		N/A	N/A	N/A	N/A		N/A								
325	2-3-7-8-TCDD		N/A	N/A	N/A	N/A		N/A								
326	Antimony							N/A								
327	Arsenic							N/A								
328	Thallium							N/A								
329	Acrolein							N/A								
330	Acrylonitrile							N/A								
331	Benzene							N/A								
332	Bromoform							N/A								
333	Carbon Tetrach							N/A								
334	Chlorodibromomethane							N/A								
335	Chloroform							N/A								
336	Dichlorobromomethane							N/A								

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Permit Number: AR0022039

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 (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. § 1251 et seq.),

The applicant's mailing address is:

West Memphis Wastewater Treatment Facility
P.O. Box 1868
West Memphis, AR 72301

The facility address is:

West Memphis Wastewater Treatment Facility
502 Rushing Road
West Memphis, AR 72301

is authorized to discharge from a facility located as follows: take Exit 4 from I-40, go south 1.5 miles on Martin Luther King Blvd. to Rushing Road, turn, in Section 19, Township 6 North, Range 9 East in Crittenden County, Arkansas.

Latitude: 35° 07' 27.16"; Longitude: 90° 10' 44.46"

to receiving waters named:

Mississippi River in Segment 6C of the Mississippi River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 07' 13"; Longitude: 90° 10' 25"

Discharge shall be in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

Issue Date:

Effective Date:

Expiration Date:

_____

Steven L. Drown
Chief, Water Division
Arkansas Department of Environmental Quality

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PART I
PERMIT REQUIREMENTS

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

During the period beginning on the effective date and lasting three years, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below from a treatment system consisting of an equalization basin, a bar screen, oxidation ditches, clarifier, UV disinfection. and sludge belt presses with a design flow of 6.3 MGD.

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow[1]	N/A	Report	Report	once/day	totalizing meter
Biochemical Oxygen Demand (BOD5)	1576.3	30.0	45.0	three/week	6-hr composite
Total Suspended Solids (TSS)	1576.3	30.0	45.0	three/week	6-hr composite
Dissolved Oxygen[2]	N/A	2.0, (Monthly Avg. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(April – September)	N/A	200	400	three/week	grab
(October – March)	N/A	1000	2000	three/week	grab
Oil and Grease (O & G)	Report	Report	Report	three/week	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	grab
Acute Biomonitoring[3]	N/A	N/A	N/A	once/quarter	24-hr composite
Pimephales promelas (Acute)[3]		48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM6C**		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM6C**		Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM6C**		Report %		once/quarter	24-hr composite
Daphnia pulex (Acute)[3]		48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM3D**		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM3D**		Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM3D**		Report %		once/quarter	24-hr composite

1 Report monthly average and daily maximum as MGD.
2 See item #27(a) of Part IV (Dissolved Oxygen).
3 See Condition No. 9 of Part II (Biomonitoring Condition).

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 due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

Samples taken in compliance with the monitoring requirements specified above shall be taken following the UV disinfection unit and at the following monitoring coordinates: Latitude: 35° 07' 26"; Longitude: 90° 10' 49".

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PART I
PERMIT REQUIREMENTS

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

During the period beginning on the three years from 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 from a treatment system consisting of an equalization basin, a bar screen, oxidation ditches, clarifier, UV disinfection, and sludge belt presses with a design flow of 6.3 MGD.

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow[1]	N/A	Report	Report	once/day	totalizing meter
Biochemical Oxygen Demand (BOD5)	1576.3	30.0	45.0	three/week	6-hr composite
Total Suspended Solids (TSS)	1576.3	30.0	45.0	three/week	6-hr composite
Dissolved Oxygen[2]	N/A	2.0, (Monthly Avg. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(April – September)	N/A	200	400	three/week	grab
(October – March)	N/A	1000	2000	three/week	grab
Oil and Grease (O & G)	525.4	10.0	15.0	three/week	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	grab
Acute Biomonitoring[3]	N/A	N/A	N/A	once/quarter	24-hr composite
Pimephales promelas (Acute)[3]		48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM6C**		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM6C**		Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM6C**		Report %		once/quarter	24-hr composite
Daphnia pulex (Acute)[3]		48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM3D**		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM3D**		Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM3D**		Report %		once/quarter	24-hr composite

1 Report monthly average and daily maximum as MGD.
2 See item #27(a) of Part IV (Dissolved Oxygen).
3 See Condition No. 9 of Part II (Biomonitoring Condition).

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 due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

Samples taken in compliance with the monitoring requirements specified above shall be taken following the UV disinfection unit and at the following monitoring coordinates: Latitude: 35° 07' 26"; Longitude: 90° 10' 49".

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SECTION B. PERMIT COMPLIANCE

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Compliance is required on the effective date of the permit for all final limits with the exception of Oil and Grease.

1. Compliance with the interim monitoring and reporting requirements for Oil and Grease is required on the effective date of the permit.

   Compliance with the final limits for Oil and Grease is required no later than three years from the effective date of the permit. The permittee shall submit reports every six months detailing the progress being made towards achieving compliance with the final Oil and Grease limits. These reports are required only during the time which the interim monitoring and reporting requirements are in effect.

2. During the month of April, the permittee shall submit an updated pretreatment program status report to the ADEQ containing information listed in Part II, Item #8.d.(1).

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PART II
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class IV by the State of Arkansas in accordance with Act 211 of 1971, Act 1103 of 1991, Act 556 of 1993, and APCEC Regulation No. 3, as amended.

2. For publicly owned treatment works, the 30-day average percent removal for Biochemical Oxygen Demand (BOD5) or Carbonaceous Biochemical Oxygen Demand (CBOD5) and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR Part 133.102, as adopted by reference in APCEC Regulation No. 6.

3. Produced sludge shall be disposed of by land application only when meeting the following criteria:

   a. Sewage sludge from treatment works treating domestic sewage (TWTDS) must meet the applicable provisions of 40 CFR Part 503; and

   b. The sewage sludge has not been classified as a hazardous waste under state or federal regulations.

4. The permittee shall give at least 120 days prior notice to the Director of any change planned in the permittee's sludge disposal practice or land use applications, including types of crops grown (if applicable).

5. The permittee shall report all overflows with the Discharge Monitoring Report (DMR) submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of overflow; observed environmental impacts from the overflow; action taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). All overflows which endanger health or the environment shall be orally reported to this department (Enforcement Section of the Water Division), within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment, shall be provided within 5 days of the time the permittee becomes aware of the circumstance.

6. 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.

7. 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 Water Division 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 acceptable to the Director; and
- 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.

8. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

a. The permittee shall operate an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403) and the approved POTW pretreatment program submitted by the permittee. The pretreatment program was approved on 04/05/1986 and modified on 01/11/1996. The Sewer Use Ordinance and the Pretreatment Program have not been modified to come into compliance with the current 40 CFR 403 regulations. The permittee shall submit all necessary proposed modifications to ADEQ within twelve (12) months of the effective date of this permit. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

(1) Industrial user information shall be updated at a frequency adequate to ensure that all IUs are properly characterized at all times;

(2) The frequency and nature of industrial user compliance monitoring activities by the permittee shall be commensurate with the character, consistency and volume of

waste. The permittee must inspect and sample the effluent from each Significant Industrial User in accordance with 40 CFR 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;

(3) The permittee shall enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements;

(4) The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3 (v), this control shall be achieved through individual or general control mechanisms, in accordance with 40 CFR 403.8(f)(1)(iii). Both individual and general control mechanisms must be enforceable and contain, at a minimum, the following conditions:

(i) Statement of duration (in no case more than five years);
(ii) Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
(iii) Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
(iv) Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored (including the process for seeking a waiver for a pollutant neither present nor expected to be present in the Discharge in accordance with § 403.12(e)(2), or a specific waiver for a pollutant in the case of an individual control mechanism), sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards in 40 CFR 403, categorical Pretreatment Standards, local limits, and State and local law;
(v) Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines; and
(vi) Requirements to control slug discharges, if determined by the POTW to be necessary.

(5) The permittee shall evaluate, whether each Significant Industrial User needs a plan or other action to control slug discharges, in accordance with 40 CFR 403.8(f)(2)(vi);

(6) The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program; and

(7) The approved program shall not be modified by the permittee without the prior approval of ADEQ.

b. The permittee shall establish and enforce specific limits to implement the provisions of 40 CFR Parts 403.5(a) and (b), as required by 40 CFR Part 403.5(c). POTWs may develop Best Management Practices (BMPs) to implement paragraphs 40 CFR 403.5 (c)(1) and (c)(2). Such BMPs shall be considered local limits and Pretreatment Standards. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

The permittee shall submit, within sixty (60) days of the effective date of this permit, (1) a **WRITTEN CERTIFICATION** that a technical evaluation has demonstrated that the existing technically based local limits (TBLL) are based on current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination, **OR** (2) a **WRITTEN NOTIFICATION** that a technical evaluation revising the current TBLL and a draft sewer use ordinance which incorporates such revisions will be submitted within 12 months of the effective date of this permit.

All specific prohibitions or limits developed under this requirement are deemed to be conditions of this permit. The specific prohibitions set out in 40 CFR Part 403.5(b) shall be enforced by the permittee unless modified under this provision.

c. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table II at least once/year and the toxic pollutants in Table III at least 4 times/year (quarterly). If, based upon information available to the permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in Table V, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least 4 times/year (quarterly) on both the influent and the effluent.

The influent and effluent samples collected shall be composite samples consisting of at least 12 aliquots collected at approximately equal intervals over a representative 24 hour period and composited according to flow. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR 136. Where composite samples are inappropriate, due to sampling, holding time, or analytical constraints, at least 4 grab samples, taken at equal intervals over a representative 24 hour period, shall be taken.

d. The permittee shall prepare annually a list of Industrial Users which during the preceding twelve months were in significant noncompliance with applicable pretreatment requirements. For the purposes of this Part, significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part

403.8(f)(2)(viii) [rev. 10/14/05] or criteria established in the approved POTW pretreatment program. This list is to be published annually in the newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW during the month of April.

In addition, during the month of April, the permittee shall submit an updated pretreatment program status report to the ADEQ containing the following information:

(1) An updated list of all significant industrial users and identify which Industrial Users are Non-Significant Categorical Industrial Users (NSCIUs) or Middle Tier CIUs. The list must also identify:

i. Industrial Users subject to categorical Pretreatment Standards that are subject to reduced monitoring and reporting requirements under 40 CFR 403.12(e)(2) & (3),
ii. Industrial Users subject to the following categorical Pretreatment Standards [Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) (40 CFR Part 414), Petroleum Refining (40 CFR Part 419), and Pesticide Chemicals (40 CFR Part 455)] and for which the Control Authority has chosen to use the concentration-based standards rather than converting them to flow-based mass standards as allowed at 40 CFR 403.6(c)(6).
iii. Categorical Industrial Users subject to concentration-based standards for which the Control Authority has chosen to convert the concentration-based standards to equivalent mass limits, as allowed at 40 CFR 403.6(c)(5).
iv. General Control Mechanisms used for similar groups of SIUs along with the substantially similar types of operations and the types of wastes that are the same, for each separate General Control Mechanism, as allowed at 40 CFR 403.8(f)(1)(iii).
v. Best Management Practices or Pollution Prevention alternatives required by a categorical Pretreatment Standard or as a local limit requirement that are implemented and documentation to demonstrate compliance, as required at 40 CFR 403 (b), (e) and (h).

For each industrial user listed the following information shall be included:

(i) Standard Industrial Classification (SIC) and NAICS code and categorical determination;

(ii) Control document status. Whether the user has an effective control document, and the date such document was last issued, reissued, or modified, (indicate which industrial users were added to the system (or newly identified) within the previous 12 months);

(iii) A summary of all monitoring activities performed within the previous 12 months. The following information shall be reported:

* total number of inspections performed;
* total number of sampling visits made;

(iv) Status of compliance with both effluent limitations and reporting requirements. Compliance status shall be defined as follows:

* Compliant (C) - no violations during the previous 12 month period;

* Non-compliant (NC) - one or more violations during the previous 12 months but does not meet the criteria for significantly noncompliant industrial users;

* Significant Noncompliance (SNC) - in accordance with requirements described in d. above; and

(v) For significantly noncompliant industrial users, indicate the nature of the violations, the type and number of actions taken (notice of violation, administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. If ANY industrial user was on a schedule to attain compliance with effluent limits, indicate the date the schedule was issued and the date compliance is to be attained;

(2) A list of all significant industrial users whose authorization to discharge was terminated or revoked during the preceding 12 month period and the reason for termination;

(3) A report on any interference, pass through, upset or POTW permit violations known or suspected to be caused by industrial contributors and actions taken by the permittee in response;

(4) The results of all influent and effluent analyses performed pursuant to paragraph (c) above;

(5) A copy of the newspaper publication of the significantly noncompliant industrial users giving the name of the newspaper and the date published;

(6) The information requested may be submitted in tabular form as per the example tables provided for your convenience (See Attachment A, B and C); and

(7) The monthly average water quality based effluent concentration necessary to meet the state water quality standards as developed in the approved technically based local limits.

e. The permittee shall provide adequate notice of the following:

(1) Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Adequate notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

9. WHOLE EFFLUENT TOXICITY TESTING (48-HOUR ACUTE 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
CRITICAL DILUTION (%):	1.0%
EFFLUENT DILUTION SERIES (%):	0.45%, 0.56%, 0.75%, 1.0%, 1.33%
COMPOSITE SAMPLE TYPE:	Defined at Part I
TEST SPECIES/METHODS:	40 CFR Part 136

Daphnia pulex acute static renewal 48-hour definitive toxicity test using EPA/600/4-90/027F, or the latest 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.

Pimephales promelas (fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA/600/4-90/027F, or the latest 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 defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute 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.

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

d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

2. PERSISTENT LETHALITY

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at or below the critical dilution. Significant lethal effects are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent).

a. Part I Testing Frequency Other Than Monthly

i. The permittee shall conduct a total of two (2) additional tests for any species that demonstrates significant lethal effects at or below the critical dilution. The two additional tests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two additional tests in lieu of routine toxicity testing. The 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 one or both of the two 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 be 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.

iii. If one or both of the two additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall henceforth increase the frequency of testing for this species to once per quarter for the life of the permit.

iv. The provisions of Item 2.a 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 lethal effects at or below the critical dilution. A TRE may be 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.

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. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.

ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: Daphnia pulex survival test; and fathead minnow survival test.

iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: Daphnia pulex survival test; and fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Daphnia pulex survival test and the fathead minnow survival test, the statistical analyses used to determine if there is a statistically 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/600/4-90/027F or the most recent update thereof.

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 90% 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 an 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 for;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
(B) toxicity tests conducted on effluent discharges where no receiving water is available 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., 48 hours);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 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 two flow-weighted composite samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect a second composite sample for use during the 24-hour renewal of each dilution concentration the for both tests. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 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 6 degrees Centigrade during collection, shipping, and/or storage.

iii. 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 an intermittent basis.

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 collect 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. 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.

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA/600/4-90/027F, 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 II.C.7 of this permit. The permittee shall submit full reports to the Department. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for review.

b. A valid test for each species must be reported on the DMR during each reporting period specified in Part I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. 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 ADEQ review.

c. The permittee shall report the following results of each valid toxicity test on DMR for that reporting period in accordance with Part II.D.4 of this permit. 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. TEM6C.

(B) Report the NOEC value for survival, Parameter No. TOM6C.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

ii. Daphnia pulex

(A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.

(B) Report the NOEC value for survival, Parameter No. TOM3D.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

5. MONITORING FREQUENCY REDUCTION

a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for one or both test species, with no lethal effects demonstrated at or below the critical dilution without a major modification. 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 *Daphnia pulex*).

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 Department will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the Permit Compliance System section to update the permit reporting requirements.

c. SURVIVAL FAILURES - If any test fails the survival endpoint at any time during the life of this permit, two 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.

6. TOXICITY REDUCTION EVALUATION (TRE)

a. Within ninety (90) days of confirming lethality in the retests, 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 TRE Action Plan shall lead to the successful elimination of effluent toxicity at the critical dilution and include 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) 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 (800)553-6847 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;

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 24 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;

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

iv. 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 lethality 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 lethality 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 lethality 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).

DRAFT

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; or
b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
c. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
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 APCEC Regulation No. 9 (Permit fees) as required by Part III.A.10. 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 APCEC 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 APCEC 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 on "Bypassing" (Part III.B.4.a.), and "Upsets" (Part III.B.5.b), 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 (Act 472 of 1949, as amended).

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. Permit Fees

The permittee shall comply with all applicable permit fee requirements for wastewater discharge permits as described in APCEC 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 APCEC Regulation No. 6 and the provisions of APCEC 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

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 II.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; and
(c) The permittee submitted notices as required by Part III.B.4.b.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part III.B.4.c.(1).

5. Upset Conditions

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

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. Written approval must be obtained from the ADEQ for land application only.

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 discharges 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.

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 (EPA No. 3320-1). Permittees are required to use preprinted DMR forms provided by ADEQ, unless specific written authorization to use other reporting forms is obtained from ADEQ. Monitoring results obtained during the previous calendar month shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month following the completed reporting period to begin on the effective date of the permit. Duplicate copies of DMR 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:

Permits Enforcement Branch
Water Division
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 individuals(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; and
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, and
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 and provide plans and specification to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:

Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that cause violation of the effluent limitations specified herein.

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; and
   (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 and
   (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 Water Division 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 Water Division of the ADEQ.

7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Parts II.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 permittee shall notify the Director as soon as he/she 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); or

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 APCEC 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:
(i) 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; or
(ii) 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; or

(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:
(i) The chief executive officer of the agency, or
(ii) 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); and
(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 APCEC 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 (Act 472 of 1949, as amended).

PART IV
DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act 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. **"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.
4. **"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 (APCEC) Regulation No. 2, as amended.
5. **"Bypass"** means the intentional diversion of waste streams from any portion of a treatment facility.
6. **"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. *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. *Concentration Calculations*: For pollutants with limitations expressed in other units of measurement, determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during that sampling day by using the following formula: where C= daily concentration, F=daily flow and n=number of daily samples

$$\frac{C_1F_1 + C_2F_2 + \cdots + C_nF_n}{F_1 + F_2 + \cdots + F_n}$$

7. **"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) report the monthly average (see 30-day average below).

8. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month. The 7-day average for Fecal Coliform Bacteria (FCB) is the geometric mean of the values of all effluent samples collected during the calendar week in colonies per 100 ml.
9. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
10. **"Director"** means the Administrator of the U.S. Environmental Protection Agency and/or the Director of the Arkansas Department of Environmental Quality.
11. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
12. **"Industrial User"** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
13. **"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.
14. **"POTW"** means a Publicly Owned Treatment Works.
15. **"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.
16. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.
17. **"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 storm water runoff that are discharged to or otherwise enter a POTW.
18. **"7-day average"** discharge limitation, other than for Fecal Coliform Bacteria (FCB), is the highest allowable arithmetic mean of the values for all effluent samples collected during the calendar week. The 7-day average for Fecal Coliform Bacteria (FCB) is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/100 ml. The Discharge Monitoring Report should report the highest 7-day average obtained during the calendar month. For reporting purposes, the 7-day average values should be reported as occurring in the month in which the Saturday of the calendar week falls in.
19. **"30-day average"**, other than for Fecal Coliform Bacteria (FCB), is the arithmetic mean of the daily values for all effluent samples collected during 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. The 30-day average for Fecal Coliform Bacteria (FCB) is the geometric mean of the values for all effluent samples collected during a calendar month. For Fecal Coliform Bacteria (FCB), report the monthly average as a 30-day geometric mean in colonies per 100 ml.

20. **"24-hour composite sample"** consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
21. **"12-hour composite sample"** consists of 12 effluent portions, collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
22. **"6-hour composite sample"** consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
23. **"3-hour composite sample"** consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
24. **"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.
25. **"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.
26. **"For Fecal Coliform Bacteria (FCB)"**, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
27. **"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.
28. **The term "MGD"** shall mean million gallons per day.
29. **The term "mg/l** "shall mean milligrams per liter or parts per million (ppm).
30. **The term "µg/l"** shall mean micrograms per liter or parts per billion (ppb).
31. **The term "cfs"** shall mean cubic feet per second.
32. **The term "ppm"** shall mean parts per million.
33. **The term "s.u."** shall mean standard units.

34. **The term "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.

35. **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.

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

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; or
(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.

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.

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.

36. **The term "Weekday"** means Monday – Friday.