City of Marion

P.O. Box 717
14 Military Road
Marion, Arkansas 72364
Phone (870) 739-5410
Fax (870) 739-2102

May 25, 2012

Mr. Alan Anderson
Enforce Analyst
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little, Arkansas 72118

RE: CAO LIS NO. 12-035

Dear Mr. Anderson:

As per Consent Administrative Order (CA0) LIS NO. 12-035 for the City of Marion Waste Water Treatment Plant, enclosed is our comprehensive Corrective Action Plan (CAP). This CAP outlines the steps and milestone schedule the City will take to return the facility to compliance with the effluent discharge limits established in our NDPES NO. AR0021971.

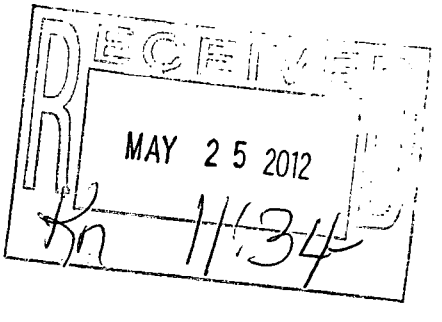
We look forward to working with you to bring our facility into compliance. If you have any questions, you should direct them to me at 870-739-3289 (mayormarionar@aol.com) or to Jerome Alford of Bond Engineering in Marion at 870-739-2228 (bondengineering@hotmail.com).

Sincerely,

Frank A. Fogleman

FAF: gph

Enclosure



CORRECTIVE ACTION PLAN

Prepared for:

Wastewater Treatment Plant
City of Marion
5054 HARDIN ROAD
MARION, ARKANSAS 72364
NPDES NO. AR0021971
AFIN #18-00110

May 2012

Prepared By:

13000 Cantrell Road
Little Rock, Arkansas 72206
Telephone (501) 975-8100 • Facsimile (501) 975-6789

In Cooperation With:

CITY OF MARION
BOND CONSULTING ENGINEERS, INC.

CORRECTIVE ACTION PLAN

May 2012

Prepared for:
WASTEWATER TREATMENT PLANT
CITY OF MARION
5054 HARDIN ROAD
MARION, ARKANSAS 72364
NPDES NO. AR0021971
AFIN #18-00110

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

PREPARED BY:

ROY "TRIP" GENTRY
SENIOR PROJECT ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
7996
KELLY DEL VANLANDINGHAM

REVIEWED BY:

KELLY VANLANDINGHAM, P.E, P.L.S.
SENIOR ENGINEER

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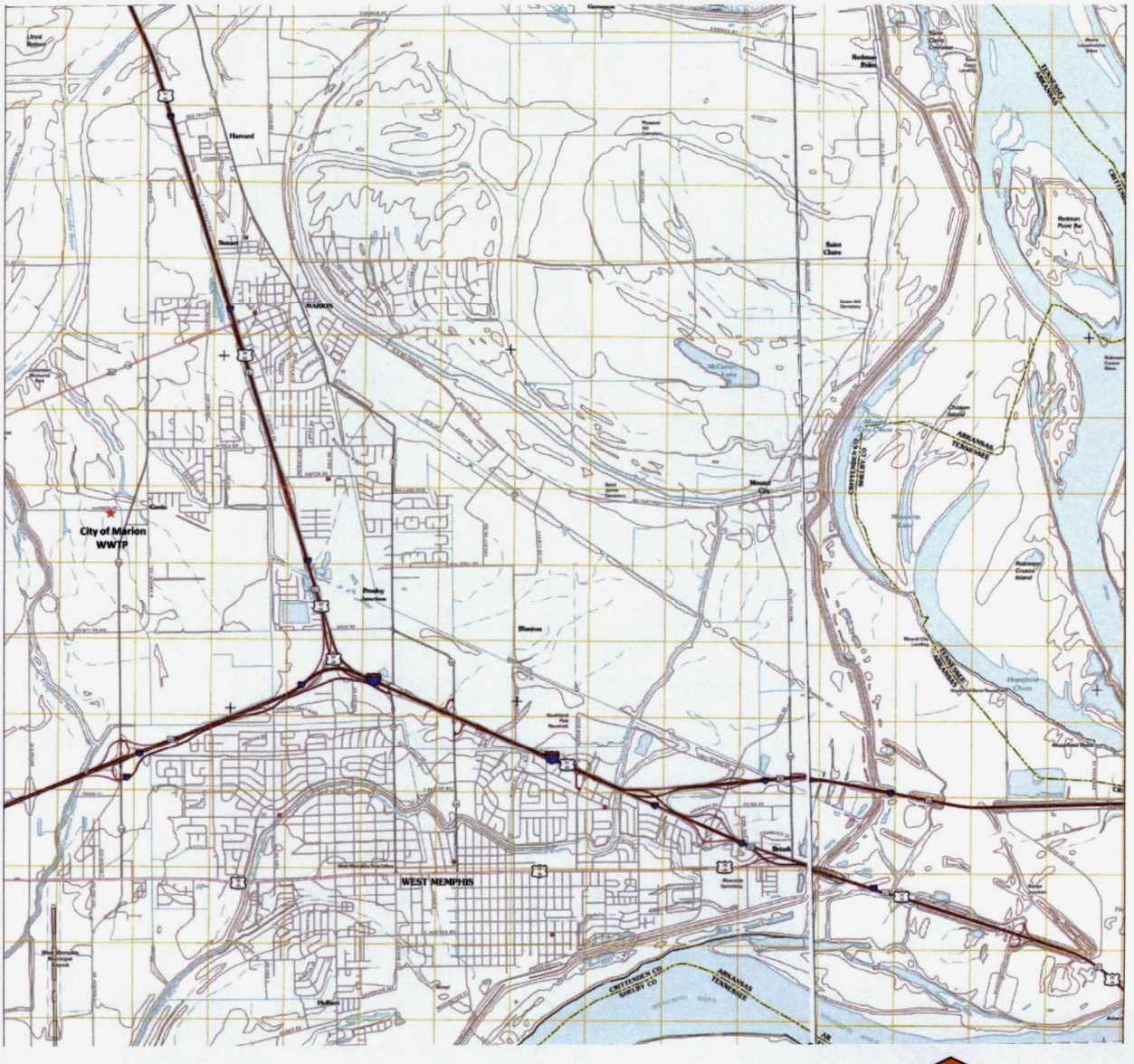
1.0 INTRODUCTION

The City of Marion (City) operates a wastewater treatment plant (facility) located at 5054 Hardin Road, in Crittenden County, Arkansas. The facility is located in Section 28, Township 7 north, Range 8 East, in Crittenden County (see Figure 1-1). The facility currently consists of three treatment cell lagoons, two of which are aerated (cell 1 and cell 3), rock reed filters, gas chlorinator disinfection, sulfur dioxide dechlorination, and diffuser. The facility design flow is 1.6 million gallons per day (MGD). Discharge from the facility is to Fifteen Mile Bayou to Black Fish Bayou, thence to the St. Francis River.

The City wastewater treatment facility is currently subject to the effluent discharge limits established in National Pollutant Discharge Elimination System (NPDES) Permit No. AR0021971. The effective date of the Permit is March 1, 2007. A Consent Administrative Order (CAO) LIS No. 12-035 was executed between the Arkansas Department of Environmental Quality (ADEQ) and the City on February 9, 2012 to address instances of exceeding permitted effluent limits for Total Suspended Solids (TSS), Ammonia Nitrogen, Total Residual Chlorine (TRC), and Fecal Coliform Bacteria as detailed in the Findings of Fact Item No. 4 and Exhibit 1. Item No. 1 of the Order and Agreement of CAO LIS No. 12-035 stipulates that within 60 calendar days of the effective date of the CAO (May 25, 2012), the City submit a comprehensive Corrective Action Plan with milestone schedule detailing the steps the City will undertake to eliminate the excursions of permitted effluent limits at the facility. A copy of CAO LIS No. 12-035 is included in Appendix A.

Figure 1-1 – Topographic General Location Map



7.5 Minute Topographic Map
West Memphis, Arkansas Quadrangle
Source: USGS

North

1.1 Background

The City of Marion Wastewater Treatment Plant was initially designed and built with the original three cell configuration in the late 1960's and early 1970's to serve an approximate population of 2,500. The facility added the rock reed filters

in the late 1980's. Aeration was added to one of the cells in the late 1990's and early 2000's. In the mid-2000's, Hino located a large automotive parts manufacturing facility in the City that necessitated increasing the permitted flow from 1 MGD to 1.6 MGD, placing the facility in the major municipal classification (>1.0 MGD). The Hino plant is currently in a reduced production mode with a reduced discharge to the City sewer system. The current City of Marion facility serves a population of roughly 13,500 plus. Of that, a significant portion in the unincorporated areas outside the city limits that are served by the facility and a smaller portion within the city limits are considered Low to Moderate Income (LMI).

During the mid to late 1990's, the facility experienced excursions of permit discharge limits for ammonia nitrogen. ADEQ and the City entered a CAO to address the issues surrounding these excursions. As a result, the City undertook efforts to investigate and implement design changes to the facility to meet the permitted discharge limits. Ultimately, aerators were installed in treatment cell 1 and treatment cell 3. The design change effectively reduced the ammonia nitrogen to below permitted levels.

The addition of the Hino manufacturing facility to the City of Marion in the mid-2000's necessitated further review of the wastewater treatment capabilities of the City. The City anticipated substantial increases in industrial base and population served. As a result, the City implemented a pretreatment ordinance for industrial dischargers to accommodate categorical industries such as the proposed Hino facility, implemented design changes at the wastewater treatment plant, and modified its wastewater discharge permit to accommodate the anticipated increases. The addition of a curtain and aerators in treatment cell 1 increased the design flow for the facility from 1.0 MGD to 1.6 MGD.

In 2009, the City commissioned a preliminary study to explore one option for additional wastewater treatment capacity on the east side of the City and to relocate the discharge of the existing facility from its current location into Fifteen Mile Bayou to discharge directly to the Mississippi River. Due to the projected costs of the proposed project detailed design and funding was not pursued.

In August 2011, the City submitted a renewal application for its NPDES discharge permit. During the permit review process, ADEQ determined that the facility had numerous instances where it exceeded permitted effluent discharge limits for ammonia nitrogen, TSS, TRC and FCB during the course of the permit term. As a result of the review of the Discharge Monitoring Reports (DMRs) documenting the excursions and Compliance Evaluation Inspections (CEIs) conducted during 2011, CAO LIS No. 12-035 was issued requiring the City to develop a comprehensive Corrective Action Plan with milestone schedule detailing the steps the City will undertake to eliminate the excursions of permitted effluent limits at the facility.

Throughout the history of the facility, modifications to the treatment system have been driven by increased service volume and reductions in permitted limits. The reductions in permitted limits resulted in periodic noncompliant discharges and action by ADEQ. However, prior to the final discharge limitations in the current Permit (as mirrored in the draft Permit), the facility was able to make modifications that for the most part returned the discharges to compliance with the limits. At this point, the City is in the process of a chemical dosing pilot test to determine if this technology will eliminate the noncompliant discharges.

1.2 Permit Requirements

The wastewater treatment facility operates under NPDES Permit No AR00211971 for discharge of treated municipal wastewater. The existing permit was issued

in the late 1980's. Aeration was added to one of the cells in the late 1990's and early 2000's. In the mid-2000's, Hino located a large automotive parts manufacturing facility in the City that necessitated increasing the permitted flow from 1 MGD to 1.6 MGD, placing the facility in the major municipal classification (>1.0 MGD). The Hino plant is currently in a reduced production mode with a reduced discharge to the City sewer system. The current City of Marion facility serves a population of roughly 13,500 plus. Of that, a significant portion in the unincorporated areas outside the city limits that are served by the facility and a smaller portion within the city limits are considered Low to Moderate Income (LMI).

During the mid to late 1990's, the facility experienced excursions of permit discharge limits for ammonia nitrogen. ADEQ and the City entered a CAO to address the issues surrounding these excursions. As a result, the City undertook efforts to investigate and implement design changes to the facility to meet the permitted discharge limits. Ultimately, aerators were installed in treatment cell 1 and treatment cell 3. The design change effectively reduced the ammonia nitrogen to below permitted levels.

The addition of the Hino manufacturing facility to the City of Marion in the mid-2000's necessitated further review of the wastewater treatment capabilities of the City. The City anticipated substantial increases in industrial base and population served. As a result, the City implemented a pretreatment ordinance for industrial dischargers to accommodate categorical industries such as the proposed Hino facility, implemented design changes at the wastewater treatment plant, and modified its wastewater discharge permit to accommodate the anticipated increases. The addition of a curtain and aerators in treatment cell 1 increased the design flow for the facility from 1.0 MGD to 1.6 MGD.

January 31, 2007, and became effective on March 1, 2007. A copy of the current permit is included as Appendix B. A draft renewal permit for the facility was issued on May 15, 2012 with an effective date of March 1, 2012. A copy of the draft permit is included as Appendix C.

The current permit established discharge limits in Part 1A and a compliance schedule in Part 1B for, among other characteristics ammonia nitrogen, TSS, TRC and FCB. Likewise, the draft permit establishes effluent discharge limits and a compliance schedule for the same characteristics in Parts 1A and 1B. The following tables present a summary of the permit limits and compliance requirements for the facility.

Table 1.1 Permit Condition Summary

Effluent Characteristics	Current Permit						Draft Permit		
	Interim Discharge Limitations			Final Discharge Limitations			Final Discharge Limitations		
	Mass (lbs/day)	Concentration (mg/l)		Mass (lbs/day)	Concentration (mg/l)		Mass (lbs/day)	Concentration (mg/l)	
	Monthly Avg.	Monthly Avg.	7 Day Avg.	Monthly Avg.	Monthly Avg.	7 Day Avg.	Monthly Avg.	Monthly Avg.	7 Day Avg.
Total Suspended Solids	267	20	30	267	20	30	267	20	30
Ammonia Nitrogen (NH3-N)									
(Apr-Oct)	32	5	7.5	32	2.4	5.9	32	2.4	5.9
(Nov-Mar)	134	10	15	90	6.7	12	90	6.7	12
Fecal Coliform		colonies/100ml			colonies/100ml			colonies/100ml	
(Apr-Oct)	N/A	200	400	N/A	200	400	N/A	200	400
(Nov-Mar)	N/A	1000	2000	N/A	1000	2000	N/A	1000	2000
Total Residual Chlorine	N/A	mg/l (inst. max)		N/A	<0.1 mg/l (inst. max)		N/A	<0.1 mg/l (inst. max)	

Table 1.2 Permit Compliance Schedule Summary

Current Permit		Draft Permit	
Ammonia - Nitrogen and Total Residual Chlorine		**All Effluent Limitations**	
Action	**Compliance Date**	**Action**	**Compliance Date**
Submit Progress Report	March 1, 2008		
Submit Progress Report	March 1, 2009	Report on sludge thickness in 3 cells	30 days after effective date
Achieve Compliance with Final Limits	March 1, 2010	Achieve Compliance with Final Limits	Upon effective date

2.0 FEASIBILITY STUDY

The City of Marion Wastewater Treatment Plant was initially designed and built with the original three cell configuration in the late 1960's and early 1970's to serve an approximate population of 2,500. Over the life of the facility, expansions and modifications have been made to accommodate an expanding customer base and to address historic issues with excursions of ADEQ permitted effluent discharge limits. The facility currently consists of three treatment cell lagoons, two of which are aerated (cell 1 and cell 3), rock reed filters, gas chlorinator disinfection, sulfur dioxide dechlorination, and diffuser. The facility design flow is 1.6 million gallons per day (MGD). As described below, one of the tasks of the feasibility study will be to determine, based on good engineering practice, the average daily flow.

As a result of the permit renewal process, ADEQ and the City of Marion executed CAO LIS No. 12-035 to address the historical problems with the facility discharge. Through this Corrective Action Plan, the City is proposing to undertake a Comprehensive Engineering Feasibility Study to determine the exact nature of the issues at the facility and present a fixed schedule to come into compliance with the conditions of NPDES Permit No. AR0021971.

2.1 Outline for Comprehensive Engineering Feasibility Study

The feasibility study will be designed to assess and present a detailed engineering analysis of the various alternative approaches to bring the facility into compliance, select the preferred alternative, identification of potential funding mechanisms to implement the preferred approach and to present a timeline for implementation of the solution. The Comprehensive Engineering Feasibility Study (CEFS) will be submitted to ADEQ as a major milestone in the development and implementation of a

solution to the issues associated with the effluent discharge excursions and other issues at the City of Marion wastewater treatment plant. The contents of the CEFS will include:

1. Summary

   This will include a description and operational history of the facility.

2. Existing Conditions

   The feasibility study will present a detailed description of the influent wastewater stream, process flow, all process equipment, age, and design versus actual capacity of the facility.

   a. Quantity of Flow

      The study will determine flow estimates from residential, commercial and industrial sources as opposed to a summarized total of the flow.

   b. Type and Quality of Flow

      The feasibility study will describe the type and quality of the flow being discharged to the facility with a detailed description of the characterization of the waste stream.

3. Future Conditions

   Anticipated future needs of the facility will be presented with projected growth in flow, flow types and any projected changes in the character of the waste.

4. Summary of Regulatory Actions

   The feasibility study will summarize the permit requirements, notices of violations, the CAO and CAP, as well as actions taken to date and any remaining permit issues.

   a. Identification of Permit Issues

- Ammonia Nitrogen (NH3-N)
- Total Suspended Solids
- Total Residual Chlorine
- Fecal Coliform Bacteria
- Operational, maintenance and other issues.

5. Alternative Approaches To Meeting Permit Limits

   The City of Marion has undertaken several attempts to modify the design, operation and maintenance of the facility to correct the issues associated with continuing excursions of permitted effluent discharge limits. The feasibility study will present a discussion of the technological and other alternative approaches available to meeting current and future permitted discharge limits. These may or may not include:

   a. Pump effluent to Mississippi River
   b. Install Dissolved Air Floatation (DAF) unit
   c. Install Moving Bed Biofilm Reactor
   d. Install Intermittent Sand Filter
   e. Replace treatment cells
   f. Chemical Injection/Dosing
   g. Other

6. Projected Costs for Alternatives

   A detailed cost benefit analysis for each of the alternative approaches will be presented that will include design, construction, operation and maintenance costs, and estimated debt service.

7. Projected Schedule for Design and Implementation of Alternatives

8. Identification of Possible Funding Sources

9. Conclusions and Recommendations

This evaluation will provide engineering conclusions and recommendations regarding the alternative approaches listed in the preceding sections. The study will present a reasoned and deliberate evaluation of the alternatives, arriving at conclusions which will provide the City of Marion as well as the ADEQ with a clear direction on which alternative is the most feasible approach for the City to come into compliance with their discharge permit.

3.0 PRELIMINARY DESIGN

Once an alternative is chosen and if required by the type of project, the selected alternative will require a preliminary engineering design and cost estimate which will be prepared by the City. The preliminary engineering design will be refined to the point that the total project cost can be estimated. This phase will include the typical phases of an engineering project:

- Conceptual planning - layouts, etc.
- Data acquisition - surveys, waste data, etc.
- Preliminary drawings
- Preliminary cost estimate
- NPDES Permit modification application preparation

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4.0 FUNDING

Upon completion of the preliminary design, the City of Marion will commence a search for various funding mechanisms for the proposed alternative. These funding sources may be in the form of loans, grants, or revenues streams and may come from federal, state, local or private sources. Ultimately, funding may be from one or more of a combination of different sources. Once identified, the City will submit formal application for funding as it is available. Possible funding sources may include, but are not limited to:

- Various bond issue options;
- Federal Emergency Management Agency grants;
- US Department of Agriculture funding;
- US EPA grants and/or loans (Clean Water State Revolving Fund Program, Hardship Grants Programs for Rural Communities, etc.);
- The Arkansas Natural Resources Commission Wastewater Advisory Committee; and
- City funds and tax revenue (user rates, connection/tapping fees, impact fees, private developer contributions, etc.). Due to the high number of LMI population served, the potential for increased taxes and/or user rate increases from this population is limited.

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5.0 ENGINEERING DESIGN & PERMITTING

Upon completion of the CEFS and the preliminary engineering design, and a search for funding has commenced, engineering design can begin on the selected alternatives, if required. Engineering design permitting will be prepared in phases which best fits the type of project to be designed. If construction is not required, and engineering design is not needed, the City will proceed directly to implementation of the corrective action selected.

5.1 Property Acquisition, Right-of-Way, Easements

Once designs reach a certain level of completeness the City may commence preparation of any right-of-way, easement, or property acquisition.

5.2 Various Mid-Level Designs

The City may, at its discretion, require the engineer to submit mid-level designs at various stages of completion to insure that the work is progressing on schedule and the desires and needs of the City are being adequately addressed.

5.3 Final Design

In the final stages of design, the City will require the engineer to provide a full set of detailed construction drawings, specifications, bid documents, and cost estimates for review by City staff. Upon completion of review, the City will send comments and revisions to the engineer and allow a reasonable amount of time for revisions to be made.

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6.0 IMPLEMENTATION

Once funding has been obtained and engineering design is complete (if required), the City will proceed with implementation of the corrective actions proposed by the feasibility study. Implementation of the corrective actions may require a construction phase. If this is the case, then the City will advertise in a widely distributed newspaper for obtaining bids from qualified construction firms. Following an advertisement period, the bids will be opened in public and the contract awarded. A notice to proceed will be issued to the contractor, weather permitting. The City will inspect the construction activities through completion.

Regular progress meetings will also be held. Once substantially complete, a final inspection will be performed by the City and a punch list will be provided to the contractor. Once all punch items are satisfactorily complete, the project will be deemed complete and operations can commence.

During startup of operations, the City will train its staff for any changes to the system and also bring the changes online in the manner and sequence required.

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7.0 MILESTONE SCHEDULE

Item No. 1 of the Order and Agreement of CAO LIS No. 12-035 stipulates that within 60 calendar days of the effective date of the CAO (May 25, 2012), the City submit a comprehensive Corrective Action Plan with milestone schedule detailing the steps the City will undertake to eliminate the excursions of permitted effluent limits at the facility. The following Table 6.1 presents the proposed milestone schedule to bring the City of Marion wastewater treatment plant into compliance with permit limits and other requirements. The milestone schedule assumes that the remedy selected for implementation will require modification to the existing facility with the inherent requirements for the various property acquisition, engineering, construction and start-up phase included.

Table 6.1 Milestone Schedule

Draft NPDES Permit No. AR0021971 Issued	May 15, 2012
Final NPDES Permit No. AR0021971 Issued (assumed)	June 15, 2012
Submit Corrective Action Plan	May 25, 2012
ADEQ Approval of Corrective Action Plan (assumed)	June 15, 2012
Selection of Engineer - Comprehensive Engineering Feasibility Study (CEFS)	July 31, 2012
Submit CEFS	January 31, 2013
Preliminary Design	July 31, 2013
Funding Search Complete	December 31, 2013
Property/Right of Way Acquisition	December 31, 2015
Construction Plans Developed	July 1, 2016
Implementation of Process Modification (See 5.0) or Completion of Construction	July 1, 2017
Meet Effluent Permit Requirements	December 31, 2017

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APPENDIX A

Consent Administrative Order LIS Number 12-035

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ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF:

City of Marion
P.O. Box 717
Marion, Arkansas 72364

LIS No.12- 035
Permit No. AR0021971
AFIN 18-00110

CONSENT ADMINISTRATIVE ORDER

This Consent Administrative Order (hereinafter "Order") is issued pursuant to Ark. Code Ann. § 8-1-202(b)(2)(B), which authorizes the Director of the Arkansas Department of Environmental Quality (hereinafter "ADEQ" or "Department") to initiate and settle administrative enforcement actions to compel compliance with laws, orders, and regulations charged to the responsibility of the Department, including, but not limited to, 33 U.S.C § 1311, *et seq.*, Ark. Code Ann. § 8-4-101, *et seq.*, and all regulations issued thereunder. The Director may also propose the assessment of civil penalties as provided by Ark. Code Ann. § 8-4-103(c) and the Arkansas Pollution Control and Ecology Commission Regulation No. 7, Civil Penalties, and take all actions necessary to collect such penalties.

The issues herein having been settled by the agreement of the City of Marion ("hereinafter Permittee") and ADEQ, it is hereby agreed and stipulated that the following **FINDINGS OF FACT** and **ORDER AND AGREEMENT** be entered herein.

FINDINGS OF FACT

1. The Permittee operates a wastewater treatment facility (hereinafter "facility") located in Crittenden County, Arkansas. The facility is a point source for the discharge of pollutants to Waters of the State, and is regulated pursuant to the National Pollutant Discharge Elimination System (hereinafter "NPDES"). NPDES Permit Number AR0021971 (hereinafter "the Permit") was issued by authority of ADEQ to the Permittee.

2. Ark. Code Ann. § 8-4-217(a)(3) states that it shall be unlawful for any person to "[v]iolate any provisions ... of a permit issued under this chapter by the Arkansas Department of Environmental Quality."

3. Ark. Code Ann. § 8-4-103(c)(1)(A) and (B) provide that any person that violates any provision of a permit may be assessed a civil penalty not to exceed ten thousand dollars ($10,000) per violation and that each day of a continuing violation may be deemed a separate violation for purposes of penalty assessment.

4. A review of the Discharge Monitoring Reports submitted by the Permittee from June 30, 2008 to September 30, 2011 revealed that there has been seventy (70) violations of the effluent limitations found in Part I, Section A of the Permit. Of the total violations reported, ten (10) were violations of the effluent limitations for Total Suspended Solids, forty six (46) were violations of the effluent limitations for Ammonia Nitrogen, twelve (12) were violations of the effluent limitations for Total Residual Chlorine, and two (2) were violations for Fecal Coliform. A list of the effluent limitation violations has been included with this Order as Exhibit 1 and incorporated by reference.

5. Violations of Part I, Sections A of the Permit are therefore violations of Ark. Code Ann. § 8-4-217(a)(3).

6. Warning letters referencing the effluent violations reported on the Permittee's DMRs were sent to the Permittee on 02/14/11, 03/07/11, 04/01/11, 06/01/11, and 07/08/11.

7. A letter dated August 18, 2011 was sent by the Permittee to ADEQ. The letter detailed the steps taken by the Permittee in order to achieve compliance with the effluent limitations of the Permit.

ORDER AND AGREEMENT

Therefore, the parties do hereby stipulate and agree that:

1. Within sixty (60) calendar days of the effective date of this Order, the Permittee shall through a Professional Engineer licensed in the State of Arkansas, develop and submit to ADEQ a comprehensive Corrective Action Plan, with a milestone schedule. The plan shall detail the steps the Permittee shall take to eliminate the effluent limit violations cited in Paragraph 4 of the Findings of Fact. Upon approval by ADEQ, the submitted milestone schedule shall be incorporated into this Order by reference and shall be followed by the Permittee. Failure to comply with the schedule as approved by ADEQ shall subject the Permittee to the stipulated penalties contained in Paragraph 4 below.

2. All submittals required by this Order are subject to approval by ADEQ. In the event of any deficiency, the Permittee shall within thirty (30) calendar days of notification by ADEQ submit any additional information requested. Failure to adequately respond to the notice of deficiency within thirty (30) calendar days

constitutes a failure to meet a deadline and is subject to the stipulated penalties established in Paragraph 4 below. All written submittals required by this Order shall be signed and mailed to the attention of:

Water Division / Enforcement Branch
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

3. In compromise and full settlement of the civil penalties for violations specified in the Findings of Fact, the Permittee agrees to pay to ADEQ the total sum of Two Thousand Five Hundred Dollars ($2,500.00) as a voluntary civil penalty. Payment of the penalty shall be made within thirty (30) calendar days of the effective date of this Order, made payable to the Arkansas Department of Environmental Quality, and mailed to the attention of:

The Fiscal Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

4. Failure to meet any requirement or deadline of this Order constitutes a violation of said Order. If the Permittee should fail to meet any such requirements or deadlines, the Permittee consents and agrees to pay on demand to ADEQ stipulated penalties according to the following schedule:

a.	First day through tenth day:	$100.00 per day
b.	Eleventh day through the twentieth day:	$200.00 per day
c.	Twenty-first day through the thirtieth day:	$300.00 per day
d.	Each day beyond the thirtieth day:	$500.00 per day

These stipulated penalties for delay in performance shall be in addition to any other remedies or sanctions which may be available to ADEQ by reason of failure by the Permittee to comply with the requirements of this Order.

5. If any event, including but not limited to an act of nature, occurs which causes or may cause a delay in the achievement of compliance by the Permittee with the requirements or deadlines of this Order, the Permittee shall so notify ADEQ, in writing, as soon as reasonably possible after it is apparent that a delay will result, but in no case after the due dates specified in this Order. The notification shall describe in detail the anticipated length of the delay, the precise cause of the delay, the measures being taken and to be taken to minimize the delay, and the timetable by which those measures will be implemented.

6. ADEQ may grant an extension of any provision of this Order, provided that the Permittee requests such an extension in writing and provided that the delay or anticipated delay has or will be caused by circumstances beyond the control of and without the fault of the Permittee. The time for performance may be extended for a reasonable period but in no event longer than the period of delay resulting from such circumstances. The burden of proving that any delay is caused by circumstances beyond the control of and without the fault of the Permittee and the length of the delay attributable to such circumstances shall rest with the Permittee. Failure to notify the ADEQ promptly, as provided in Paragraph 5 of this Section, shall be grounds for a denial of an extension.

7. This Order is subject to public review and comment in accordance with Ark. Code Ann. § 8-4-103(d) and Arkansas Pollution Control and Ecology Commission Regulation

No. 8 and shall not be effective until thirty (30) calendar days after public notice is given. ADEQ retains the right to rescind this Order based upon the comments received within the thirty-day public comment period. Notwithstanding the public notice requirements, the corrective actions necessary to achieve compliance shall be taken immediately. The publication of this Order shall occur on or about the 10th or 25th day of the month following the date this Order is executed.

8. As provided by Arkansas Pollution Control and Ecology Commission Regulation No. 8, this matter is subject to being reopened upon Commission initiative or in the event a petition to set aside this Order is granted by the Commission.

9. Nothing in this Order shall be construed as a waiver by ADEQ of its enforcement authority over alleged violations not specifically addressed herein. Also, this Order does not exonerate the Permittee from any past, present, or future conduct which is not expressly addressed herein, nor does it relieve the Permittee of its responsibilities for obtaining any necessary permits.

10. This Order has been reviewed and approved by the City Council of the City of Marion in a duly convened meeting with a quorum present. It is the intention of the City Council to be bound by the terms appearing in the Order.

11. The City Council of the City of Marion has authorized the Mayor and City Clerk/Treasurer to sign this Order on the behalf of the City.

12. The City Council of the City of Marion has authorized the Mayor and City Clerk/Treasurer to expend funds for compliance activities required by this Order including but not limited to the payment of a civil penalty in the amount of Two Thousand Five Hundred Dollars ($2,500.00).

SO ORDERED THIS 9th DAY OF Feb., 2012.

TERESA MARKS, DIRECTOR

APPROVED AS TO FORM AND CONTENT:

City of Marion

BY: _____
Frank Fogleman, Mayor

DATE: 1-31-12

ATTEST:

BY: _____
David Rikard, Clerk/Treasurer

APPROVED AS TO FORM ONLY;

BY: _____
City Attorney

DMR Effluent Violations Since 6/30/08

AR0021971 - MARION, CITY OF / Major POTW - Effective: 3/1/07

DMR End Date	Disch Desig	Parameter Desc	Reported DMR Value	Permit Limit	Vio %	Vio Code	DMR Value Type Code	Parameter Code
07/31/2008	001-A	Solids, total suspended (MO AVG, mg/L)	22.6	20	13%	Numeric Vio	C2	00530-1-0
07/31/2008	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	40.4	32	26%	Numeric Vio	Q1	00610-1-0
03/31/2009	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	167	134	25%	Numeric Vio	Q1	00610-1-1
03/31/2009	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	11.4	10	14%	Numeric Vio	C2	00610-1-1
05/31/2009	001-A	Solids, total suspended (MO AVG, lb/d)	324	267	21%	Numeric Vio	Q1	00530-1-0
05/31/2009	001-A	Solids, total suspended (MO AVG, mg/L)	21.3	20	7%	Numeric Vio	C2	00530-1-0
05/31/2009	001-A	Solids, total suspended (7 DA AVG, mg/L)	36.3	30	21%	Numeric Vio	C3	00530-1-0
06/30/2009	001-A	Solids, total suspended (MO AVG, lb/d)	502	267	88%	Numeric Vio	Q1	00530-1-0
06/30/2009	001-A	Solids, total suspended (MO AVG, mg/L)	35.2	20	76%	Numeric Vio	C2	00530-1-0
06/30/2009	001-A	Solids, total suspended (7 DA AVG, mg/L)	49.3	30	64%	Numeric Vio	C3	00530-1-0
06/30/2009	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	34.8	32	9%	Numeric Vio	Q1	00610-1-0
08/31/2009	001-A	Solids, total suspended (MO AVG, lb/d)	380	267	42%	Numeric Vio	Q1	00530-1-0
08/31/2009	001-A	Solids, total suspended (MO AVG, mg/L)	30.8	20	54%	Numeric Vio	C2	00530-1-0
08/31/2009	001-A	Solids, total suspended (7 DA AVG, mg/L)	42	30	40%	Numeric Vio	C3	00530-1-0
08/31/2009	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	44	32	38%	Numeric Vio	Q1	00610-1-0
09/30/2009	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	47.4	32	48%	Numeric Vio	Q1	00610-1-0
01/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	164	134	22%	Numeric Vio	Q1	00610-1-1
01/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	10.5	10	5%	Numeric Vio	C2	00610-1-1
02/28/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	185	134	38%	Numeric Vio	Q1	00610-1-1
02/28/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	10.7	10	7%	Numeric Vio	C2	00610-1-1
03/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	231	90	157%	Numeric Vio	Q1	00610-1-1
03/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	10.9	6.7	63%	Numeric Vio	C2	00610-1-1
03/31/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.73	.1	630%	Numeric Vio	C3	50060-1-0
04/30/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	126	90	40%	Numeric Vio	Q1	00610-1-1
04/30/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	8.6	6.7	28%	Numeric Vio	C2	00610-1-1

DMR Effluent Violations Since 6/30/08

AR0021971 - MARION, CITY OF / Major POTW - Effective: 3/1/07

DMR End Date	Disch-Desig	Parameter Desc	Reported DMR Value	Permit Limit	Vio %	Vio Code	DMR Value Type Code	Parameter Code
04/30/2010	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	12.3	12	3%	Numeric Vio	C3	00610-1-1
04/30/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.78	.1	680%	Numeric Vio	C3	50060-1-0
05/31/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.72	.1	620%	Numeric Vio	C3	50060-1-0
06/30/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	35.5	32	11%	Numeric Vio	Q1	00610-1-0
06/30/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	4.47	2.4	86%	Numeric Vio	C2	00610-1-0
06/30/2010	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	7.3	5.9	24%	Numeric Vio	C3	00610-1-0
06/30/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.98	.1	880%	Numeric Vio	C3	50060-1-0
07/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	55.6	32	74%	Numeric Vio	Q1	00610-1-0
07/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	4.34	2.4	81%	Numeric Vio	C2	00610-1-0
07/31/2010	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	6.99	5.9	18%	Numeric Vio	C3	00610-1-0
07/31/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	1	.1	900%	Numeric Vio	C3	50060-1-0
08/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	52.7	32	65%	Numeric Vio	Q1	00610-1-0
08/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	5.53	2.4	130%	Numeric Vio	C2	00610-1-0
08/31/2010	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	6.99	5.9	18%	Numeric Vio	C3	00610-1-0
08/31/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	1	.1	900%	Numeric Vio	C3	50060-1-0
09/30/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	2.68	2.4	12%	Numeric Vio	C2	00610-1-0
09/30/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.9	.1	800%	Numeric Vio	C3	50060-1-0
10/31/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.92	.1	820%	Numeric Vio	C3	50060-1-0
11/30/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.92	.1	820%	Numeric Vio	C3	50060-1-0
12/31/2010	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	6.8	6.7	1%	Numeric Vio	C2	00610-1-1
12/31/2010	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	12.3	12	3%	Numeric Vio	C3	00610-1-1
12/31/2010	001-A	Chlorine, total residual (INST MAX, mg/L)	0.92	.1	820%	Numeric Vio	C3	50060-1-0
01/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	259	90	188%	Numeric Vio	Q1	00610-1-1
01/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	21	6.7	213%	Numeric Vio	C2	00610-1-1
01/31/2011	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	32	12	167%	Numeric Vio	C3	00610-1-1
01/31/2011	001-A	Chlorine, total residual (INST MAX, mg/L)	0.92	.1	820%	Numeric Vio	C3	50060-1-0

DMR Effluent Violations Since 6/30/08

AR0021971 - MARION, CITY OF / Major POTW - Effective: 3/1/07

DMR End Date	Disch Desig	Parameter Desc	Reported DMR Value	Permit Limit	Vio %	Vio Code	DMR Value Type Code	Parameter Code
02/28/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	342	90	280%	Numeric Vio	Q1	00610-1-1
02/28/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	28.3	6.7	322%	Numeric Vio	C2	00610-1-1
02/28/2011	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	31	12	158%	Numeric Vio	C3	00610-1-1
02/28/2011	001-A	Chlorine, total residual (INST MAX, mg/L)	0.98	.1	880%	Numeric Vio	C3	50060-1-0
03/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	288	90	220%	Numeric Vio	Q1	00610-1-1
03/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	22.8	6.7	240%	Numeric Vio	C2	00610-1-1
03/31/2011	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	29.7	12	148%	Numeric Vio	C3	00610-1-1
04/30/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	228	90	153%	Numeric Vio	Q1	00610-1-1
04/30/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	16.6	6.7	148%	Numeric Vio	C2	00610-1-1
04/30/2011	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	17.8	12	48%	Numeric Vio	C3	00610-1-1
05/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, lb/d)	60	32	88%	Numeric Vio	Q1	00610-1-0
05/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	3.99	2.4	66%	Numeric Vio	C2	00610-1-0
05/31/2011	001-A	Nitrogen, ammonia total (as N) (7 DA AVG, mg/L)	6.8	5.9	15%	Numeric Vio	C3	00610-1-0
06/30/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	2.76	2.4	15%	Numeric Vio	C2	00610-1-0
07/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	3.9	2.4	63%	Numeric Vio	C2	00610-1-0
08/31/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	3.7	2.4	54%	Numeric Vio	C2	00610-1-0
08/31/2011	001-A	Coliform, fecal general (30DA GEO, #/100mL)	1693	200	747%	Numeric Vio	C2	74055-1-0
08/31/2011	001-A	Coliform, fecal general (7 DA GEO, #/100mL)	4810	400	1,103%	Numeric Vio	C3	74055-1-0
09/30/2011	001-A	Nitrogen, ammonia total (as N) (MO AVG, mg/L)	3.3	2.4	38%	Numeric Vio	C2	00610-1-0

APPENDIX B
NPDES Permit Number AR0021971

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Permit number: AR0021971

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.),

City of Marion
P.O. Box 717
Marion, AR 72364

is authorized to discharge from a facility located as follows: west of Highway 118 just south of Union Pacific Railroad, in Section 28, Township 7 North, Range 8 East, in Crittenden County, Arkansas.

Latitude: 35° 11' 25"; Longitude: 90° 13' 42"

to receiving waters named:

Fifteen Mile Bayou, thence to Black Fish Bayou, thence to the St. Francis River in Segment 5A of the St. Francis River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 11' 30"; Longitude: 90° 14' 12"

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

The response to comments is attached.

Issue Date: January 31, 2007

Effective Date: March 1, 2007

Expiration Date: February 29, 2012

Martin Maner, P.E.
Chief, Water Division
Arkansas Department of Environmental Quality

PART I
PERMIT REQUIREMENTS

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

During the period beginning on effective date and lasting three years after effective date, the permittee is authorized to discharge from outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

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	daily	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	200	15	22.5	three/week	6-hr Composite
Total Suspended Solids (TSS)	267	20	30	three/week	6-hr Composite
Ammonia Nitrogen (NH3-N)					
(May -October)	32	5	7.5	three/week	6-hr Composite
(November - April)	134	10	15	three/week	6-hr Composite
Dissolved Oxygen[2]					
(May-Oct)	N/A	4.0, (Monthly Avg. Min.)		three/week	grab
(Nov-Apr)	N/A	6.0, (Monthly Avg. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(Apr-Sept)	N/A	200	400	three/week	grab
(Oct-Mar)	N/A	1000	2000	three/week	grab
Total Residual Chlorine (TRC)[3]	N/A	Report mg/l (Inst. Max.)		three/week	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	grab
Chronic Biomonitoring[4]	N/A	N/A	N/A	once/quarter	24-hr composite
Pimephales promelas (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail Growth (7-day NOEC)TGP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP6C		Report %		once/quarter	24-hr composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	24-hr composite
Ceriodaphnia dubia (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail production (7-day NOEC)TGP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP3B		Report %		once/quarter	24-hr composite
Reproduction (7-day NOEC) TPP3B		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. 11 of Part III (TRC Condition).
4 See Condition No. 9 of Part III (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 at the discharge from the final treatment unit.

PART I
PERMIT REQUIREMENTS

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

During the period beginning three years after effective date and lasting until 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:

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	daily	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	200	15	22.5	three/week	6-hr Composite
Total Suspended Solids (TSS)	267	20	30	three/week	6-hr Composite
Ammonia Nitrogen (NH3-N)					
(April -October)	32	2.4	5.9	three/week	6-hr Composite
(November - March)	90	6.7	12	three/week	6-hr Composite
Dissolved Oxygen[2]					
(May-Oct)	N/A	4.0, (Monthly Avg. Min.)		three/week	grab
(Nov-Apr)	N/A	6.0, (Monthly Avg. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(Apr-Sept)	N/A	200	400	three/week	grab
(Oct-Mar)	N/A	1000	2000	three/week	grab
Total Residual Chlorine (TRC)[3]	N/A	<0.1 mg/l (Inst. Max.)		three/week	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	grab
Chronic Biomonitoring[4]	N/A	N/A	N/A	once/quarter	24-hr composite
Pimephales promelas (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail Growth (7-day NOEC)TGP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP6C		Report %		once/quarter	24-hr composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	24-hr composite
Ceriodaphnia dubia (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail production (7-day NOEC)TGP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP3B		Report %		once/quarter	24-hr composite
Reproduction (7-day NOEC) TPP3B		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. 11 of Part III (TRC Condition).
4 See Condition No. 9 of Part III (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 at the discharge from the final treatment unit.

SECTION B. SCHEDULE OF COMPLIANCE

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

The permittee shall monitor and report NH3-N and TRC for an interim period of three years following the effective date. Following the three year interim period the specified limits for NH3-N and TRC will become effective. The permittee has the option to undertake any study deemed necessary to meet the final limitations during the interim period. Any additional treatment must be approved and construction approval granted prior to final installation.

The permittee shall comply with the following schedule of compliance:

NH3-N and TRC	
Action	Compliance Date
Submit Progress Report	1 year after effective date of permit
Submit Progress Report	2 years after effective date of permit
Achieve compliance with final limits	3 years after effective date of permit

PART II
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; or for denial of a permit renewal application. **Any values reported in the required Discharge Monitoring Report, 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 ten thousand dollars ($10,000) 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 causes 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 Condition II 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 II.A.3., if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Regulation No. 2, as amended, (regulation establishing water quality standards for surface waters of the State of Arkansas) 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, prohibitions established under Regulation No. 2 (Arkansas Water Quality Standards), 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 II.B.4.a.), and "Upsets" (Part II.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 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 Part 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 Part 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 II.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 II.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 II.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 II.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 II.D.6.: and
   (4) The permittee complied with any remedial measures required by Part II.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 wastewaters 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 II.d.11 and all other reports required by Part II.D. (Reporting Requirements), shall be submitted to the Director at the following address:

NPDES Enforcement Section
Water Division
Arkansas Department of Environmental Quality
8001 National Drive
P.O. Box 8913
Little Rock, AR 72219-8913

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:

For Industrial Dischargers

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b).
b. The alternation or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR Part 122.42 (a)(1).

For POTW Dischargers:

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 II.C.5. (Reporting). **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 ADEQ Enforcement Section of Water Division.
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 ADEQ Enforcement Section of Water Division.

7. **Other Noncompliance**

The permittee shall report all instances of noncompliance not reported under Part II.D.4,5 and 6, at the time monitoring reports are submitted. The reports shall contain the information listed at Part II.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, in a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(1).
b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2).

9. **Duty to Provide Information**

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

10. **Duty to reapply**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated in 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 Regulation 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 II.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 III
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class II by the State of Arkansas in accordance with Act 211 of 1971, Act 1103 of 1991, Act 556 of 1993, and 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) 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 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 1 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 NPDES 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 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 following pollutants may not be introduced into the treatment facility:

1. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

2. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;

4. Any pollutant, including oxygen demanding pollutants (e.g., BOD),

released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;

5. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 deg. C (104 deg. F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;

6. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

8. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

B. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

C. The permittee shall provide adequate notice to the Department of the following:

1. any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 or 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.

3. Any 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 (7-DAY CHRONIC NOEC FRESHWATER)**

1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL:	001
CRITICAL DILUTION:	88%
EFFLUENT DILUTION SERIES (%):	28-37-50-66-88
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA/600/4-91/002 or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA/600/4-91/002, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Effect Concentration) is 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. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

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 sub-lethal or 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 persistent significant sub-lethal effects or 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.

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 Ceriodaphnia dubia).

b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. above. In addition the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the 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. SUB-LETHAL FAILURES - If a statistically significant sub-lethal effect is demonstrated at or below the critical dilution during any quarterly test, the permittee shall conduct two retests. The retests shall be conducted monthly during the next two consecutive months.

If during the first four quarters, statistically significant sub-lethal effects are exhibited, quarterly testing will be required for that species until the effluent passes both the lethal and sub-lethal tests endpoints for the affected species, for four consecutive quarters. After passing four consecutive quarters for the affected species the permittee may request a reduction in testing frequency. Monthly retesting is not required if the permittee is performing a TRE.

d. 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.

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

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (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 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

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.

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).

10. The facility may be eligible for a monitoring frequency reduction for CBOD5, TSS, NH3-N, DO, FCB, TRC, or pH after two years of monitoring if no permit violations for the parameters for which a reduction is requested have occurred. The facility may request a sampling frequency reduction in a permit modification application. Please note that the reduction, if approved, would not be effective until the permit is modified.

11. If TRC test results are less than Detection Level Achieved (DL), a value of zero (0) may be used for the Discharge Monitoring Report (DMR) calculations and reporting requirements. Total residual chlorine (TRC) in the effluent composite sample shall be measured and reported both at the time of sample termination and at the time of toxicity test initiation. The permittee shall ensure that the effluent composite used in toxicity testing is representative of normal facility residual chlorine discharge concentration.

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 regulation No. 2, as amended, (regulation establishing water quality standards for surface waters of the State of Arkansas.)
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; daily average discharge

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

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 is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/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 publicly-owned treatment works.
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 a publicly-owned treatment works. 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 publicly-owned treatment works.
18. **"7-day average"** discharge limitation, other than for fecal coliform bacteria, is the highest allowable arithmetic means of the values for all effluent samples collected during the calendar week. The 7-day average for fecal coliform bacteria is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/100 ml. The DMR 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, 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 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 or preventive maintenance, or careless of improper operations.
26. **"For Fecal Coliform Bacteria"**, 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 monthly average minimum, 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 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 Discharge Monitoring report 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.

Final Fact Sheet

for renewal of NPDES Permit Number AR0021971 to discharge to Waters of the State

1. **PERMITTING AUTHORITY.**

The issuing office is:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. **APPLICANT.**

The applicant is:

City of Marion
P.O. Box 717
Marion, AR 72364

3. **PREPARED BY.**

The permit was prepared by:

Shane Byrum
NPDES Branch, Water Division

4. **DATE PREPARED.**

The permit was prepared on 01/09/2007.

5. **PREVIOUS PERMIT ACTIVITY.**

Effective Date:	07/01/2001
Modification Date:	N/A
Expiration Date:	06/30/2006

The permittee submitted a permit renewal application on 01/04/2006, along with additional information received on 04/18/2006. The NPDES permit is being reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfall is located at the following coordinates:

Latitude: 35° 11' 30" Longitude: 90° 14' 12"

The receiving waters are named:

Fifteen Mile Bayou, thence to Black Fish Bayou, thence to the St. Francis River in Segment 5A of the St. Francis River Basin. The receiving stream 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.

a. **303(d)List and Endangered Species Considerations**

i. **303(d) List**

The receiving stream (Fifteen Mile Bayou) is listed on the 303(d) list for siltation in category 5b. The cause is listed as agriculture. A review of the TSS concentrations from this facility's effluent indicates that this facility is not contributing to the impairment. Additionally, Fifteen Mile Bayou is listed under category 5b, which is for waters not attaining standards, but will be de-listed with the adoption of current Regulation No. 2 revision. Therefore no permit action is needed.

ii. **Endangered Species**:

ADEQ has concluded that issuance of this NPDES permit will have no effect on any endangered or candidate species or the critical habitat. A Complete copy of application has been sent to USF&WS for review. No comments were received from the U.S. Fish and Wildlife Service (USF&WS). Therefore no permit action is needed. The draft permit and Fact Sheet were sent to the USF&WS for their review.

7. OUTFALL AND TREATMENT PROCESS DESCRIPTION.

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

a. Design Flow: 1.6 MGD

b. Type of Treatment: 3-cell lagoon with aeration in cell 1 and cell 3, followed by rock reed filters and chlorine disinfection

c. Discharge Description: treated municipal wastewater

A quantitative and qualitative description of the discharge described in the NPDES Permit Application Forms are available for review.

8. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

Currently, it does not appear the permittee receives process wastewater from any significant industry as defined by 40 CFR Part 403.3(t). Standard boilerplate Pretreatment Prohibitions (40 CFR Part 403.5[b]) and reporting requirements are deemed appropriate at this time.

9. SEWAGE SLUDGE PRACTICES.

Sludge generated at this facility remains in the lagoons until removal is needed.

10. PERMIT CONDITIONS.

The Arkansas Department of Environmental Quality has made a determination to issue a permit for the discharge described in the application. Permit requirements are based on NPDES 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	daily	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	200	15	22.5	three/week	6-hr Composite
Total Suspended Solids (TSS)	267	20	30	three/week	6-hr Composite
Ammonia Nitrogen (NH3-N)					
(May -October)	32	5	7.5	three/week	6-hr Composite
(November - April)	134	10	15	three/week	6-hr Composite
Dissolved Oxygen					
(May-Oct)	N/A	4.0 (Monthly Avg. Min.)		three/week	Grab
(Nov-Apr)	N/A	6.0 (Monthly Avg. Min.)		three/week	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(Apr-Sept)	N/A	200	400	three/week	Grab
(Oct-Mar)	N/A	1000	2000	three/week	Grab
Total Residual Chlorine (TRC)	N/A	Report mg/l (Inst. Max.)		three/week	Grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	Grab
Chronic Biomonitoring	N/A	See Section 14 below		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	daily	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	200	15	22.5	three/week	6-hr Composite
Total Suspended Solids (TSS)	267	20	30	three/week	6-hr Composite
Ammonia Nitrogen (NH3-N)					
(April -October)	32	2.4	5.9	three/week	6-hr Composite
(November - March)	90	6.7	12	three/week	6-hr Composite
Dissolved Oxygen					
(May-Oct)	N/A	4.0 (Monthly Avg. Min.)		three/week	Grab
(Nov-Apr)	N/A	6.0 (Monthly Avg. Min.)		three/week	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(Apr-Sept)	N/A	200	400	three/week	Grab
(Oct-Mar)	N/A	1000	2000	three/week	Grab
Total Residual Chlorine (TRC)	N/A	<0.1 mg/l (Inst. Max.)		three/week	Grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	Grab
Chronic Biomonitoring	N/A	See Section 14 below		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).

11. BASIS FOR PERMIT CONDITIONS.

The following is an explanation of the derivation of the conditions of the permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the tentative 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 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.

The permit must at least comply with 40 CFR Part 133 (Secondary Treatment Regulation) when applicable.

1. State Water Quality Numerical Standards Based Limitations

Final effluent limits basis is a desk top model performed by staff on 04/21/2006. These limitations are included in the updated Arkansas Water Quality Management Plan (WQMP). The calculation of the loadings (lbs per day) uses a design flow of 1.6 MGD and the following equation (See below). Fecal Coliform Bacteria and pH limitations are based on Chapter 5, Sections 2.507 and 2.504 of Regulation No. 2 as amended, respectively.

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

Ammonia-Nitrogen (NH3-N)

The water quality effluent limitations for Ammonia are based on either DO-based effluent limits or on toxicity-based standards, whichever are more stringent.

The toxicity-based effluent limitations are based on Chapter 5, Section 2.512 of Regulation No. 2 and memo dated March 28, 2005. The following formula has been used to calculate toxicity based Ammonia limits:

$Cd = (IWC(Qd + Qb) - CbQb)/Qd,$

Where:

Cd = effluent limit concentration (mg/l)
IWC = Ammonia toxicity standard for Ecoregion
Qd = design flow = 1.6 MGD = 2.48 cfs
The 7Q10 of 0.5 cfs is based on USGS data.

D. **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 updated to include the monthly average toxicity-based NH3-N limits of 2.4 mg/l (April-October) and 6.7 mg/l (November-March).

E. **Priority Pollutant Scan (PPS)**

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

The concentration of each pollutant after mixing with the receiving stream was compared to the applicable water quality standards as established in the Arkansas Water Quality Standards (AWQS), Regulation No. 2 (Reg. 2.508) and criteria obtained from the "Quality Criteria for Water, 1986 (Gold Book)".

Under Federal Regulation 40 CFR Part 122.44(d), as adopted by Regulation No. 6, if a discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard, the permit must contain an effluent limitation for that pollutant. Effluent limitations for the toxicants listed below have been derived in a manner consistent with the Technical Support Document (TSD) for Water Quality-based Toxics Control (EPA, March 1991), the CPP, and 40 CFR Part 122.45(c).

The following items were used in calculations:

Parameter	Value	Source
Flow = Q	1.6 MGD = 2.47 cfs	Application
7Q10	0.5 cfs	U.S.G.S.
TSS	8 mg/l	CPP, delta ecoregion
Hardness as CaCo3	81 mg/l	CPP, delta ecoregion
pH	7.5 s.u.	ADEQ station FRA0028

B. **Anti-backsliding**

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

The draft permit maintains the requirements of the previous permit.

C. **Limits Calculations**

1. Mass limits:

   In accordance with 40 CFR 122.45(f)(1), all pollutants limited in permits shall have limitations expressed in terms of mass if feasible. 40 CFR 122.45(f)(2) allows for pollutants which are limited in terms of mass to also be limited in terms of other units of measurement.

   The calculation of the loadings (lbs per day) uses a design flow of 1.6 MGD and the following equation:

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

2. 7-Day Average Limits:

   The 7-Day Average limits for CBOD5 and TSS are based on Section 5.4.2 of the Technical Support Document for Water Quality-Based Toxics Control using the following equation.

   7-Day Average limits = Monthly average limits X 1.5

   The 7-Day Average NH3-N limits are based on the requirements of Reg. 2.512.

   The 7-Day Average limits for FCB are based on Reg. 2.507.

3. Ammonia-Nitrogen (NH3-N):

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

reduced by the treatment process so that the discharge of the treated wastewater does not cause a violation of dissolved oxygen standards, nor cause toxic conditions in the receiving stream. The numerical value of the NH3-N limits is based on effluent values derived from the oxygen-based desktop stream modeling performed on 4/21/2006 or the values necessary to meet the toxicity-based standards in Reg. 2.512, whichever are more stringent.

4 DO limits are continued from the previous permit and are included to ensure the discharge of treated wastewater contains sufficient dissolved oxygen to not cause an oxygen sag below the minimum dissolved oxygen standards in the receiving stream. The numerical value of the instantaneous minimum dissolved oxygen limits is based on desktop stream modeling performed on 4/21/2006.

5 FCB limits are continued from the previous permit and are included for the purpose of maintaining the primary and secondary contact recreation designated use in the receiving stream. Domestic wastewater can contain elevated levels of FCB which require reduction prior to discharging to the receiving water. The FCB limits included in the permit serve the purpose of ensuring the disinfection process at the treatment facility is properly operated. The numerical value of the limits is based on the criteria in Reg. 2.507.

6 TRC limit is continued from the previous permit and is included because TRC is toxic to aquatic organisms in the receiving water at concentrations higher than 0.011 mg/l. To ensure that TRC is not discharged at toxic levels and the dechlorination process is properly operated, the permit includes a TRC limit equal to a non-detect level which is currently established as less than 0.1 mg/l.

7 In order to establish a data base of point source loading of nutrients to water of the state from all major municipal facilities, the permit includes monitoring for Total Phosphorus and Nitrate + Nitrite Nitrogen in accordance with the Continuing Planning Process.

8 pH limits are included in the permit to ensure compliance with the pH water quality standards in Reg. 2.504 and the secondary treatment regulations in 40 CFR Part 133.103(c).

9 Chronic Whole Effluent Toxicity reporting requirements are continued from the previous permit and are included in accordance with the CPP which states that all major facilities are subject to WET testing. WET testing is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics.

A. **Justification for Limitations and Conditions of the draft permit:**

Parameter	Water Quality or Technology	Justification
CBOD5[1]	Water Quality	MultiSMP Model dated 4/21/2006
TSS[2]	Technology	CPP, Previous Permit and 40 CFR 122.44(l)
NH3-N[3]	Water Quality	Reg. 2.512 for all April-October limits. MultiSMP Model dated 4/21/2006 for Nov-March 7-day avg limit.
DO[4]	Water Quality	Reg. 2.505 and MultiSMP Model dated 4/21/2006.
Fecal Coliform Bacteria[5]	Water Quality	Reg. 2.507
TRC[6]	Technology	CPP
Total Phosphorus[7]	Technology	CPP
Nitrate + Nitrite Nitrogen[7]	Technology	CPP
pH[8]	Technology	Reg. 2.504 and 40 CFR 133.102(c)
Chronic WET testing[9]	Water Quality	CPP

1 CBOD5 limits are continued from the previous permit and are included because domestic wastewater contains oxygen consuming organic material which consume dissolved oxygen in the receiving stream. The purpose of the CBOD5 limit is to ensure that the organic strength of the wastewater is sufficiently reduced by the treatment process so that the discharge of the treated wastewater does not cause a violation of dissolved oxygen standards in the receiving stream. The numerical value of the permit limit is based on desktop stream modeling performed on 4/21/2006.

2 TSS limits are continued from the previous permit and are included because domestic wastewater contains suspended solids that can cause turbidity in the receiving water if discharged without any reduction. TSS can also impact the benthic environment after settling in the receiving stream. TSS limits are included to ensure that the treatment system is properly reducing the TSS values in the wastewater to acceptable values. The numerical value of the TSS limit was assigned based on the value of the CBOD5 limit and the CPP, which states that TSS limits assigned in the permit are typically 1-3 times the CBOD5 limits.

3 NH3-N limits are continued from the previous permit and are included because domestic wastewater contains levels of ammonia that can cause toxicity if discharged to the receiving stream without any reduction. Ammonia will also exert an unacceptable oxygen demand on the receiving water if discharged without any reduction. The purpose of the NH3-N limits is to ensure that the ammonia levels in the wastewater is sufficiently

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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
CBOD5	15	22.5	25	40	15	22.5	15	22.5
TSS	N/A	N/A	20	30	20	30	20	30
NH3-N								
(April-October)	2.4	5.9	N/A	N/A	2.4	5.9	2.4	5.9
(Nov-March)	6.7	12	N/A	N/A	6.7	12	6.7	12
DO								
(May-Oct)	4.0 (Inst. Min.)		N/A		4.0 (Monthly Avg Min.)		4.0 (Inst. Min.)*	
(Nov-Apr)	6.0 (Inst. Min.)		N/A		6.0 (Monthly Avg Min.)		6.0 (Inst. 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
TRC (Inst. Max)	N/A		< 0.1 mg/l		<0.1 mg/l		<0.1 mg/l	
TP	N/A	N/A	Report	Report	N/A	N/A	Report	Report
$NO_3 + NO_2$ - N	N/A	N/A	Report	Report	N/A	N/A	Report	Report
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	
Chronic WET Testing	Report		N/A		Report		Report	

* The DO requirements for this permit have changed from monthly average minimum to instantaneous minimum. As required in Reg. 2.505, dissolved oxygen standards must be met in streams at all times. Therefore, the permittee is not allowed to average DO readings throughout the month to demonstrate compliance with an instantaneous standard.

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.		
Ammonia Nitrogen (NH3-N)					
(April - October)	32	2.4	5.9	three/week	composite
(November - March)	90	6.7	12	three/week	composite
Dissolved Oxygen (DO)					
(May-Oct)	N/A	4.0 (Inst. Min.)		once/week	grab
(Nov-Apr)	N/A	6.0 (Inst. Min.)		once/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
Total Residual Chlorine (TRC)	N/A	<0.1 mg/l (Inst. Max.)		three/week	grab
Total Phosphorus (TP)	Report	Report	Report	once/quarter	grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	Report	Report	Report	once/quarter	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/week	grab
Chronic WET Testing	N/A	Report		once/quarter	composite

2. **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).

13. 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.

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

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

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10. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

This facility receives industrial process wastewater from one significant industry as defined by 40 CFR Part 403.3(v). Standard boilerplate Pretreatment Prohibitions (40 CFR Part 403.5[b]) and reporting requirements are deemed appropriate at this time.

11. SEWAGE SLUDGE PRACTICES.

Sludge generated at this facility remains in the lagoons. On 10/11/2011 and again on 1/24/2012, the permit writer requested that sludge levels be determined in four locations in each lagoon and report these levels to the Department. To date, the sludge report has not been received. Therefore, a condition was added to the permit requiring the measurement and reporting of the sludge levels in each lagoon within 30 days of the effective date of the permit. After receiving the sludge level report, the Department will review the report and determine if sludge removal is required.

12. 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 (Ark. Code Ann. 8-4-101 et. seq.).

A. Effluent Limitations

Outfall 001 - treated municipal wastewater

1. 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	N/A	Report, MGD	Report, MGD (Daily Max.)	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	200	15	22.5	two/week	composite
Total Suspended Solids (TSS)	267	20	30	three/week	composite

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B. **Endangered Species:**

ADEQ has concluded that issuance of this discharge permit will have no effect on any endangered or candidate species or the critical habitat. A complete copy of application has been sent to USF&WS for review. No comments were received from the U.S. Fish and Wildlife Service (USF&WS). Therefore no permit action is needed. The draft permit and Fact Sheet will be sent to the USF&WS for their review.

C. **Anti-Degradation:**

The limitations and requirements set forth in this permit for discharge into waters of the State are consistent with the Antidegradation Policy and all other applicable water quality standards found in APC&EC Regulation No. 2.

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

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

A. Design Flow: 1.6 MGD

B. Type of Treatment: 3-cell lagoon with aeration in cell 1 and cell 3, followed by rock-reed filters, chlorine disinfection, and sulfur dioxide dechlorination.

C. Discharge Description: treated municipal wastewater

D. Facility Status: This facility is classified as a major municipal since the design flow of the facility listed above is greater than 1.0 MGD.

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

9. **ACTIVITY.**

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

5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT.

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

1. Sample frequency for CBOD5 was reduced from three/week to two/week based on historical compliance with the effluent limit.
2. Sample frequency for DO and pH was reduced from three/week to once/week based on historical compliance with the effluent limit.
3. Monitoring and reporting requirements were added for Total Phosphorus and Nitrate + Nitrite Nitrogen in order to gather point source loading data from this facility.
4. Dissolved oxygen limits are now expressed as an instantaneous minimum instead of a monthly average minimum since dissolved oxygen standards must be met at all times, not on an average basis.
5. Outfall coordinates were revised to more accurate values.
6. Requirement to measure and report sludge levels in each lagoon within 30 days of effective date of the permit was added to Parts IB and II.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfall is located at the following coordinates based on Acme Mapper 2.0 using WGS84 map datum:

Latitude: 35° 11' 25" Longitude: 90° 14' 15"

The receiving waters named:

Fifteen Mile Bayou to Black Fish Bayou, thence to the St. Francis River in Segment 5A of the St. Francis River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 8020203 and reach #006 is a Water of the State classified for primary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

7. 303(d) LIST, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS.

A. 303(d) List:

The receiving stream is not listed on the 2008 303(d) list. Therefore no permit action is needed.

TMDL - total maximum daily load
TP - total phosphorus
TRC - total residual chlorine
TSS - total suspended solids
UAA - use attainability analysis
USF&WS - United States Fish and Wildlife Service
WET - Whole effluent toxicity
WQMP - water quality management plan
WQS - Water Quality standards
WWTP - wastewater treatment plant

DMR Review:

The Discharge Monitoring Reports (DMR's) for the last two years were reviewed during the permit renewal process. There were 40 violations for NH3-N occurring from August 2009 to July 2011, 12 violations for TRC occurring from March 2010 to February 2011, and 2 violations for FCB occurring in August 2011.

Legal Order Review:

A consent administrative order (CAO LIS 12-035) for the effluent limit violations has been signed by the Director on 2/9/2012 and public noticed on 2/25/2012. This CAO is scheduled to become effective on 3/25/2012 and requires the city, through the services of a professional engineer, develop and submit a comprehensive corrective action plan with milestone schedule to eliminate the violations of effluent limitations set forth in the NPDES permit.

Site Visits/Inspections

A compliance inspection performed on 11/30/2011, 12/1/2011, and 12/2/2011 revealed the following violations:

1. Overflow of partially treated wastewater occurring over pond levee.
2. Inadequate freeboard in lagoons.
3. Excessive vegetative growth on lagoon levees.

A response letter was submitted dated 1/10/2012 containing the following corrective actions:

1. Stopped overflow with sandbags and stabilized levees with rip-rap.
2. Lowered pond levels by temporarily pumping to rock-reed filters using portable pump.
3. Bush hog the excessive levee vegetation as weather permits.

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The permittee submitted a permit renewal application on 8/18/2011. 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).

DOCUMENT ABBREVIATIONS

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

BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practices
BOD_5 - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
$CBOD_5$ - carbonaceous biochemical oxygen demand
CD - critical dilution
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH3-N - ammonia nitrogen
$NO_3 + NO_2$-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Reg. 2 - APCEC Regulation No. 2
Reg. 6 - APCEC Regulation No. 6
Reg. 8 - APCEC Regulation No. 8
Reg. 9 - APCEC Regulation No. 9
RP - reasonable potential
SIC - standard industrial classification
TDS - total dissolved solids

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Fact Sheet

This Fact Sheet is for information and justification of the permit limits only. Please note that it is not enforceable. This draft permitting decision is for renewal of the discharge Permit Number AR0021971 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 18-00110 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:

   City of Marion
   P.O. Box 717
   Marion, AR 72364

   The facility address is:

   City of Marion
   5054 Hardin Road
   Marion, AR 72364

3. **PREPARED BY.**

   The permit was prepared by:

   Shane Byrum
   Staff Engineer
   Discharge Permits Section, Water Division
   (501) 682-0618
   E-mail: byrum@adeq.state.ar.us

4. **PERMIT ACTIVITY.**

Previous Permit Effective Date:	3/1/2007
Previous Permit Expiration Date:	2/29/2012

PUBLIC NOTICE OF DRAFT DISCHARGE PERMIT
AND 208 Plan
PERMIT NUMBER AR0021971, AFIN 18-00110

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 8/18/2011 for the following applicant under the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act.

Applicant: City of Marion, 5054 Hardin Road, Marion, AR 72364. Location: west of Highway 118 just south of Union Pacific Railroad; Latitude: 35° 11' 25"; Longitude: 90° 13' 42" in Crittenden County, Arkansas. The discharge of treated municipal wastewater is into Fifteen Mile Bayou to Black Fish Bayou, thence to the St. Francis River in Segment 5A of the St. Francis River Basin.

The 208 Plan, developed by the ADEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan has been updated to include the monthly average toxicity-based NH3-N limits of 2.4 mg/l (April-October) and 6.7 mg/l (November-March) to the existing water quality limitations.

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

The last day of the comment period is 30 days after the publication date. If the last day of the comment period is a Saturday, Sunday or legal holiday, the public comment period shall expire on the next day that is not a Saturday, Sunday or legal holiday. For information regarding the actual publication date along with the actual date and time the comment period will end, please contact Shane Byrum at the above address and telephone number or by email at Water-Draft-Permit-Comment@adeq.state.ar.us. Public notice, comments, and hearings will be conducted in accordance with Regulation 6.104(A)(5) [40 CFR Parts 124.10 through 124.12 by reference] and Regulation 8.209 and 8.210 (Administrative Procedures). All persons, including the permittee, who wish to comment on ADEQ's draft permitting decision must submit written comments to ADEQ, along with their name and mailing address. A Public Hearing will be held when ADEQ finds a significant degree of public interest. After the public comment period, ADEQ will issue a final permitting decision. ADEQ will notify the applicant and each person who has submitted written comments or request notice of the final permitting decision. Any interested person who has submitted comments may appeal a final decision by ADEQ in accordance with the APCEC Regulation No. 8.603.

ADEQ

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

May 15, 2012

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (91 7199 9991 7030 4904 5420)

Honorable Frank Fogleman
Mayor, City of Marion
P.O. Box 717
Marion, AR 72364

RE: Discharge Permit Number AR0021971 – AFIN 18-00110

Dear Mayor Fogleman:

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

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

The following is a list of the major changes to the previously issued permit:

1. Sample frequency for CBOD5 was reduced from three/week to two/week.
2. Sample frequency for DO and pH was reduced from three/week to once/week.
3. Monitoring and reporting requirements were added for Total Phosphorus and Nitrate + Nitrite Nitrogen.
4. Dissolved oxygen limits are now expressed as an instantaneous minimum instead of a monthly average minimum.
5. Requirement to measure and report sludge levels in each lagoon within 30 days of effective date of the permit was added to Parts IB and II.

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

If you have any questions concerning any part of the draft permit, please contact Shane Byrum at (501) 682-0618.

Sincerely,

Steven L. Drown

Steven L. Drown
Chief, Water Division

SD:sb
Enclosure

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APPENDIX C

Draft NPDES Permit Number AR0021971

note that the reduction, if approved, would not be effective until the permit is modified. No changes to the permit are necessary at this time.

ISSUE #2

With the discharge into Fifteen Mile Bayou, the biomonitoring would provide little beneficial information.

RESPONSE #2

Department does not concur. Biomonitoring provides beneficial information on both lethal and sublethal effects of the effluent on the receiving stream. In addition, according to the Arkansas Continuing Planning Process, biomonitoring is required on all major municipalities. The City of Marion is now considered a major municipality since the design flow of the facility is greater than 1.0 MGD. No changes to the permit are necessary at this time.

RESPONSE TO COMMENTS
FINAL PERMITTING DECISION

Response to comments received on the subject draft permit in accordance with regulations promulgated at 40 CFR Part 124.17 are as follows:

Permit No.: AR0021971

Applicant: City of Marion

Prepared by: Shane Byrum

Public Notice Date: The draft permit was publicly noticed on December 8, 2006.

Date Prepared: January 22, 2007

The following comments have been received on the draft permit:

Letter from Jerome Alford, on behalf of the City of Marion to Shane Byrum dated 12/11/2006. Letter from Mayor Frank Fogleman to Shane Byrum dated 01/10/2007. (This letter was submitted after the comment period ended on January 8 and raised the same issues as previous comment letter from Jerome Alford.)

ISSUE #1

The monitoring frequency for CBOD5, TSS, NH3-N, DO, FCB, TRC, and pH was changed from three/month to three/week and the sample type for CBOD5, TSS, and NH3-N has changed to 6-hour composites. The requirement of sampling three times per week appears unnecessary because of the detention time provided in the treatment lagoons. The first lagoon cell has been curtained to provide an eight day detention time cell with surface aerators added in this cell. It would also appear that making these 3 samples per week 6 hour composites would be an unnecessary requirement because little change would be anticipated throughout a day, a week, or a month. We request a reduction in the sampling frequency and sample type.

RESPONSE #1

Department does not concur. The sample type and sample frequency are based on recommendations for municipal facilities which have a design flow in the range of 1 – 5 MGD. Neither the detention time nor the type of treatment system is the basis for the sample type and frequency imposed in the permit. The same table of recommended frequencies and sample types are applied to every municipality throughout the state.

The facility may be eligible for a monitoring frequency reduction after two years of monitoring if no permit violations for the parameters for which a reduction is requested have occurred. The facility may request a sampling frequency reduction in a permit modification application. Please

Attachment 4

BIOMONITORING FREQUENCY RECOMMENDATION AND RATIONALE FOR ADDITIONAL REQUIREMENTS

Permit Number: **AR0021971**
Facility Name: **City of Marion**
Date of Review: **4-20-06** Name of Reviewer: **Clem**
Previous Critical Dilution: **N/A** Proposed Critical Dilution: **88%**

Number of tests performed during previous 5 years by species:
***Pimephales promelas* (Fathead minnow) :** N/A
***Ceriodaphnia dubia* (water flea):** N/A

Failed test dates during previous 5 years by species:
***Pimephales promelas* (Fathead minnow) :** N/A
***Ceriodaphnia dubia* (water flea):** N/A

Previous TRE activities: None

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

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

Rationale: 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 as posing a significant unaddressed toxic risk, will be required to perform Whole Effluent Toxicity (WET) 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."

Attachment 3

TOTAL SUSPENDED SOLIDS(15th PERCENTILE) BY RECEIVING STREAM AND ECOREGION

For direct discharges to the Arkansas, Red, Ouachita, White, and St. Francis Rivers use the following mean values:

Receiving Stream	TSS (mg/l)
Arkansas River:	
Ft. Smith to Dardanelle Dam	12.0
Dardanelle Dam to Terry L&D	10.5
Terry L&D to L&D #5	8.3
L&D #5 to Mouth	9.0
Red River	33
Ouachita River:	
above Caddo River	2.0
below Caddo River	5.5
White River:	
above Beaver Lake	2.5
Bull Shoals to Black River	3.3
Black River to Mouth	18.5
St. Francis River	18

For all other discharges use the following ecoregion TSS:

Ecoregion	TSS (mg/l)
Ouachita	2
Gulf Coastal	5.5
Delta	8
Ozark Highlands	2.5
Boston Mountains	1.3
Arkansas River Valley	3

Attachment 2

Linear Partition Coefficients for Priority Metals in Streams and Lakes*

METAL	STREAMS		LAKES	
	Kpo	a	Kpo	a
Arsenic	0.48×10^6	-0.73	0.48×10^6	-0.73
Cadmium	4.00×10^6	-1.13	3.52×10^6	-0.92
Chromium**	3.36×10^6	-0.93	2.17×10^6	-0.27
Copper	1.04×10^6	-0.74	2.85×10^6	-0.9
Lead***	2.80×10^6	-0.8	2.04×10^6	-0.53
Mercury	2.90×10^6	-1.14	1.97×10^6	-1.17
Nickel	0.49×10^6	-0.57	2.21×10^6	-0.76
Silver****	2.40×10^6	-1.03	2.40×10^6	-1.03
Zinc	1.25×10^6	-0.7	3.34×10^6	-0.68

$Kp = Kpo \times TSS^a$

Kp = Linear Partition Coefficient
TSS = Total Suspended Solids (mg/l)-(See **Attachment 3**)
Kpo = found from table
a = found from table

$C/Ct = 1/(1+ (Kp \times TSS \times 10^{-6}))$ C/Ct = Fraction of Metal Dissolved

* Delos, C. G., W. L. Richardson, J. V. DePinto, R. B., Ambrose, P. W. Rogers, K. Rygwelski, J. P. St. John, W. J. Shaughnessey, T. A. Faha, W. N. Christie. Technical Guidance for Performing Waste Load Allocations, Book II: Streams and Rivers. Chapter 3:Toxic Substances, for the U. S. Environmental Protection Agency.(EPA-440/4-84-022).

** Linear partition coefficient shall not apply to the Chromium VI numerical criterion. The approved analytical method for Chromium VI measures only the dissolved form. Therefore permit limits for Chromium VI shall be expressed in the dissolved form. See 40 CFR Part 122.45(c)(3).

*** Reference page 18 of EPA memo dated March 3, 1992, from Margaret J. Stasikowski(WH-586) to Water management Division Directors, Region I-IX.

**** Texas Environmental Advisory Council, 1994

Linear Partition Coefficients

Metals	Streams Kpo	a
Arsenic	**********	-0 73
Cadmium	**********	-1.13
Chromium(3)	**********	-0 93
Copper	**********	-0.74
Lead	**********	-0 80
Mercury	**********	-1 14
Nickel	**********	-0.57
Zinc	**********	-0 70
Silver	**********	-1 03

Kp = Kpo X TSS^a

Kp = Linear Partition Coefficient
TSS = Total Suspended Solids (mg/l)
Kpo = found from above table
a = found from above lable

C/Ct = 1 /(1 + Kp X TSS X10^-6)

C / Ct = Fraction of Metal Dissolved

Metals	Streams Kp	C / Ct
Arsenic	105193	0.5430
Cadmium	381585	0.2468
Chromium (3)	485809	0.2046
Copper	223227	0.3590
Lead	530501	0 1907
Mercury	270941	0.3157
Nickel	149773	0.4549
Zinc	291573	0.3001
Silver	281857	0.3072

Total Metal = Dissolved Metal / (C/Ct)

AQUATIC LIFE CRITERIA (DISSOLVED ACUTE VALUES)

Pollutant	Dissolved(ug/l)	Formula
Cadmium	2.95	WER X Conversion Factor* X e[1.128ln(hardness)]-3.828
Chromium(III	461.76	WER X 0.316 X e[0.819ln(hardness)]+3.688
Chromium(V	15 71	WER X 0.982 X 16
Copper	13 95	WER X 0.96 X e[0.9422ln(hardness)]-1.464
Lead	51 30	WER X Conversion Factor** X e[1.273ln(hardness)]-1.460
Mercury	2.04	WER X 0 85 X 2.4
Nickel	1184.29	WER X 0.998 X e[0.8460ln(hardness)]+3.3612
Silver	2.4011	WER X 0 85 X e[1.72ln(hardness)]-6.52
Zinc	95.73	WER X 0.978 X e[0.8473ln(hardness)]+0.8604

* 1.136672 - [(ln hardness)(0.041838)]
** 1 46203 - [(ln hardness)(0 145712)]

AQUATIC LIFE CRITERIA (DISSOLVED CHRONIC VALUES)

Pollutant	Dissolved(ug/l)	Formula
Cadmium	0.88	WER X Conversion Factor* X e[0.7852ln(hardness)]-3.490
Chromium(III	149.79	WER X 0.86 X e[0.819ln(hardness)]+1 561
Chromium(V	10.58	WER X 10
Copper	9.48	WER X 0.96 X e[0 8545ln(hardness)]-1 465
Lead	2.00	WER X Conversion Factor** X e[1.273ln(hardness)]-4 705
Nickel	131 66	WER X 0 997 X e[0.8460ln(hardness)]+1.1645
Zinc	87 42	WER X 0 986 X e[0.8473ln(hardness)]+0.7614

* 1.101672 - [(ln hardness)(0.041838)]
** 1.46203 - [(ln hardness)(0.145712)]

	Reported Value (Cd) (ug/l)	Cd^2 13 (ug/l)	STATE Acute (ug/l)	IWC Acute (ug/l)	STATE Chronic (ug/l)	IWC Chronic (ug/l)	STATE Bioacc. (ug/l)	IWC Bioacc. (ug/l)	Violation of Acute	Chr	Bio
AWQ. Reg. No. 2											
Alpha-BHC	0.00	0.00	2.00	0.00	0.08	0.00	0.0373	0.00	NO	NO	NO
Beta-BHC	0.00	0.00	2.00	0.00	0.08	0.00			NO	NO	
Gamma-BHC	0.00	0.00	2.00	0.00	0.08	0.00			NO	NO	
Delta-BHC	0.00	0.00	2.00	0.00	0.08	0.00			NO	NO	
Pentachlorophenol	0.00	0.00	14.99	0.00	9.46	0.00			NO	NO	
Aldrin	0.00	0.00	3.00	0.00					NO		
Chlordane	0.00	0.00	2.40	0.00	0.0043	0.00	0.005	0.00	NO	NO	NO
4,4'-DDT	0.00	0.00	1.10	0.00	0.0010	0.00			NO	NO	
4,4'-DDE	0.00	0.00	1.10	0.00	0.0010	0.00			NO	NO	
4,4'-DDD	0.00	0.00	1.10	0.00	0.0010	0.00			NO	NO	
Dieldrin	0.00	0.00	2.50	0.00	0.0019	0.00	0.0012	0.00	NO	NO	NO
Alpha-endosulfan	0.00	0.00	0.22	0.00	0.0560	0.00			NO	NO	
Beta-endosulfan	0.00	0.00	0.22	0.00	0.0560	0.00			NO	NO	
Endosulfan sulfate	0.00	0.00	0.22	0.00	0.0560	0.00			NO	NO	
Endrin	0.00	0.00	0.18	0.00	0.0023	0.00			NO	NO	
Endrin aldehyde	0.00	0.00	0.18	0.00	0.0023	0.00			NO	NO	
Heptachlor	0.00	0.00	0.52	0.00	0.0038	0.00			NO	NO	
Heptachlor epoxide	0.00	0.00	0.52	0.00	0.0038	0.00			NO	NO	
Toxaphene	0.00	0.00	0.73	0.00	0.0002	0.00	0.0053	0.00	NO	NO	NO
Chlorpyrifos	0.00	0.00	0.083	0.00	0.0410	0.00			NO	NO	
Cadmium Total*	0.00	0.00	11.94	0.00	3.58	0.00			NO	NO	
Chromium (hex)	0.00	0.00	15.71	0.00	10.58	0.00			NO	NO	
Copper Total*	8.00	17.04	38.87	15.97	26.41	15.01			NO	NO	
Lead Total*	0.00	0.00	269.04	0.00	10.48	0.00			NO	NO	
Mercury Total*	0.00	0.00	6.46	0.00	0.0120	0.00			NO	NO	
Nickel Total*	0.00	0.00	2603.30	0.00	289.12	0.00			NO	NO	
Selenium Total	0.00	0.00	20.00	0.00	5.00	0.00			NO	NO	
Silver Total*	0.00	0.00	7.8153	0.00					NO		
Zinc Total*	0.00	0.00	319.04	0.00	291.33	0.00			NO	NO	
Chromium (Tri)*	0.50	1.07	2256.37	1.00	731.94	0.94			NO	NO	
Cyanide Total	0.00	0.00	22.36	0.00	5.20	0.00			NO	NO	
Beryllium Total	0.00	0.00					0.076	0.00			NO
PCB-1242	0.00	0.00			0.0140	0.00	4.00E-04	0.00		NO	NO
PCB-1254	0.00	0.00			0.0140	0.00	4.00E-04	0.00		NO	NO
PCB-1221	0.00	0.00			0.0140	0.00	4.00E-04	0.00		NO	NO
PCB-1232	0.00	0.00			0.0140	0.00	4.00E-04	0.00		NO	NO
PCB-1248	0.00	0.00			0.0140	0.00	4.00E-04	0.00		NO	NO
PCB-1260	0.00	0.00			0.0140	0.00	4.00E-04	0.00		NO	NO
PCB-1016	0.00	0.00			0.0140	0.00	4.00E-04	0.00		NO	NO
2-3-7-8-TCDD	0.00	0.00					1E-06	0.00			NO

* See Linear Partition Coefficient (Page 6)

	Reported Value (Cd) (ug/l)	Cd'2 13 (ug/l)	EPA Acute (ug/l)	STATE Acute (ug/l)	IWC Acute (ug/l)	EPA Chronic (ug/l)	STATE Chronic (ug/l)	IWC Chronic (ug/l)	EPA Bioacc. (ug/l)	STATE Bioacc (ug/l)	IWC Bioacc. (ug/l)	Violation of Acute	Chr	Bio
PESTICIDES														
104. Aldrin	0.00	0.00	3.00	3.00	0.00	**********	**********	0.00	0.00140	**********	0.00	NO	NO	NO
105. Alpha-BHC	0.00	0.00	**********	2.00	0.00	**********	0.08	0.00	1.300E-01	0.0373	0.00	NO	NO	NO
106. Beta-BHC	0.00	0.00	**********	2.00	0.00	**********	0.08	0.00	0.4600	**********	0.00	NO	NO	NO
107. Gamma-BHC	0.00	0.00	2.00	2.00	0.00	0.08	0.08	0.00	0.6300	**********	0.00	NO	NO	NO
108. Delta-BHC	0.00	0.00	**********	2.00	0.00	**********	0.08	0.00	**********	**********	0.00	NO	NO	NO
109. Chlordane	0.00	0.00	2.40	2.40	0.00	0.0043	0.0043	0.00	5.900E-03	0.0050	0.00	NO	NO	NO
110. 4,4'-DDT	0.00	0.00	1.10	1.10	0.00	0.0010	0.0010	0.00	0.0059	**********	0.00	NO	NO	NO
111. 4,4'-DDE	0.00	0.00	**********	1.10	0.00	**********	0.0010	0.00	0.0059	**********	0.00	NO	NO	NO
112. 4,4'-DDD	0.00	0.00	**********	1.10	0.00	**********	0.0010	0.00	0.0084	**********	0.00	NO	NO	NO
113. Dieldrin	0.00	0.00	2.50	2.50	0.00	0.0019	0.0019	0.00	1.400E-03	0.0012	0.00	NO	NO	NO
114. Alpha-endosulfan	0.00	0.00	0.22	0.22	0.00	0.0560	0.0560	0.00	2.00	**********	0.00	NO	NO	NO
115. Beta-endosulfan	0.00	0.00	0.22	0.22	0.00	0.0560	0.0560	0.00	2.00	**********	0.00	NO	NO	NO
116. Endosulfan sulfate	0.00	0.00	**********	0.22	0.00	**********	0.0560	0.00	2.00	**********	0.00	NO	NO	NO
117. Endrin	0.00	0.00	0.18	0.18	0.00	0.0023	0.0023	0.00	8.100E-01	**********	0.00	NO	NO	NO
118. Endrin aldehyde	0.00	0.00	**********	0.18	0.00	**********	0.0023	0.00	8.1000E-01	**********	0.00	NO	NO	NO
119. Heptachlor	0.00	0.00	0.52	0.52	0.00	0.0038	0.0038	0.00	0.0021	**********	0.00	NO	NO	NO
120. Heptachlor epoxide	0.00	0.00	0.52	0.52	0.00	0.0038	0.0038	0.00	0.0011	**********	0.00	NO	NO	NO
121. PCB-1242	0.00	0.00	**********	**********	0.00	0.0140	0.0140	0.00	4.500E-04	4.00E-04	0.00	NO	NO	NO
122. PCB-1254	0.00	0.00	**********	**********	0.00	0.0140	0.0140	0.00	4.500E-04	4.00E-04	0.00	NO	NO	NO
123. PCB-1221	0.00	0.00	**********	**********	0.00	0.0140	0.0140	0.00	4.500E-04	4.00E-04	0.00	NO	NO	NO
124. PCB-1232	0.00	0.00	**********	**********	0.00	0.0140	0.0140	0.00	4.500E-04	4.00E-04	0.00	NO	NO	NO
125. PCB-1248	0.00	0.00	**********	**********	0.00	0.0140	0.0140	0.00	4.500E-04	4.00E-04	0.00	NO	NO	NO
126. PCB-1260	0.00	0.00	**********	**********	0.00	0.0140	0.0140	0.00	4.500E-04	4.00E-04	0.00	NO	NO	NO
127. PCB-1016	0.00	0.00	**********	**********	0.00	0.0140	0.0140	0.00	4.500E-04	4.00E-04	0.00	NO	NO	NO
128. Toxaphene	0.00	0.00	0.73	0.73	0.00	0.00020	0.0002	0.00	4.500E-04	0.0063	0.00	NO	NO	NO
130. Chlorpyrifos	0.00	0.00	0.083	0.083	0.00	0.041	0.041	0.00	**********	**********	0.00	NO	NO	NO

	Reported Value (Cd) (ug/l)	Cd^2.13 (ug/l)	EPA Acute (ug/l)	STATE Acute (ug/l)	IWC Acute (ug/l)	EPA Chronic (ug/l)	STATE Chronic (ug/l)	IWC Chronic (ug/l)	EPA Bioacc. (ug/l)	STATE Bioacc. (ug/l)	IWC Bioacc. (ug/l)	Violation of Acute	Chr	Bio
ACID COMPOUNDS														
47. 2-Chlorophenol	0.00	0.00	4380	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
48. 2-4-Dichlorphenol	0.00	0.00	2020	**********	0.00	365	**********	0.00	**********	**********	0.00	NO	NO	NO
49. 2-4 Dimethylphenol	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
50. 4,6-Dinitro-o-Cresol	0.00	0.00	**********	**********	0.00	**********	**********	0.00	765.00	**********	0.00	NO	NO	NO
51. 2,4-Dinitrophenol	0.00	0.00	**********	**********	0.00	**********	**********	0.00	14000	**********	0.00	NO	NO	NO
52.-53. Nitrophenols	0.00	0.00	230	**********	0.00	150	**********	0.00	**********	**********	0.00	NO	NO	NO
54. 4 Chloro-3-methylphenol	0.00	0.00	30.00	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
55. Pentachlorophenol	0.00	0.00	14.99	14.99	0.00	9.46	9.46	0.00	82.00	**********	0.00	NO	NO	NO
56. Phenol	0.00	0.00	10200	**********	0.00	2560	**********	0.00	4600000	**********	0.00	NO	NO	NO
57. 2-4-6-Trichlorophenol	0.00	0.00	**********	**********	0.00	**********	**********	0.00	65.00	**********	0.00	NO	NO	NO
BASE-NEUTRAL COMPOUNDS														
58. Acenaphthene	0.00	0.00	1700	**********	0.00	520	**********	0.00	**********	**********	0.00	NO	NO	NO
59. Acenaphylene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
60. Anthracene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	110000.00	**********	0.00	NO	NO	NO
61. Benzidine	0.00	0.00	2500	**********	0.00	**********	**********	0.00	5.4E-03	**********	0.00	NO	NO	NO
62. Benzo(a) anthracene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.310	**********	0.00	NO	NO	NO
63. Benzo(a) pyrene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.310	**********	0.00	NO	NO	NO
64. 3,4-benzofouranthene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.310	**********	0.00	NO	NO	NO
65. Benzo(g,h,i)perylene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
66. Benzo(k) fluoranthene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.310	**********	0.00	NO	NO	NO
67. Bis(2-chloroethoxy)methane	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
68. Bis(2-cloroethly) Ether	0.00	0.00	**********	**********	0.00	**********	**********	0.00	14.00	**********	0.00	NO	NO	NO
69. Bis(2-Chloroisopropyl) eth	0.00	0.00	**********	**********	0.00	**********	**********	0.00	1.7E+05	**********	0.00	NO	NO	NO
70. Bis(2-ethylhexyl)phthalate	0.00	0.00	**********	**********	0.00	**********	**********	0.00	59.00	**********	0.00	NO	NO	NO
71. 4-Bromophenyl phenyl ether	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
72. Butylbenzy phthalate	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
73. 2-chloronapthalene	0.00	0.00	1600	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
74. 4-chlorophenyl phenyl ether	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
75. Chrysene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.310	**********	0.00	NO	NO	NO
76. Dibenzo(a,h)anthracene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.310	**********	0.00	NO	NO	NO
77-79. Dichlorobenzene(1,2-1,3-1,4)	0.00	0.00	1120	**********	0.00	763	**********	0.00	2600.0	**********	0.00	NO	NO	NO
80. 3,3' Dichlorobenzidine	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.770	**********	0.00	NO	NO	NO
81. Diethyl Phthalate	0.00	0.00	**********	**********	0.00	**********	**********	0.00	1.2E+05	**********	0.00	NO	NO	NO
82. Dimethyl phthalate	0.00	0.00	**********	**********	0.00	**********	**********	0.00	2.9E+06	**********	0.00	NO	NO	NO
83. Di-n-Butyl phthalate	0.00	0.00	**********	**********	0.00	**********	**********	0.00	1.2E+04	**********	0.00	NO	NO	NO
84. 2-4-Dinitrololuene	0.00	0.00	330	**********	0.00	230	**********	0.00	91.00	**********	0.00	NO	NO	NO
85. 2-6-Dinitrotoluene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
86. Di-n-octyl phthalate	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
87. 1,2-diphenylhydrazine	0.00	0.00	270	**********	0.00	**********	**********	0.00	5.400	**********	0.00	NO	NO	NO
88. Fluoranthene	0.00	0.00	3980	**********	0.00	**********	**********	0.00	370.00	**********	0.00	NO	NO	NO
89. Fluorene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	14000.000	**********	0.00	NO	NO	NO
90. Hexachlorobenzene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.00770	**********	0.00	NO	NO	NO
91. Hexachlorobutadiene	0.00	0.00	90.00	**********	0.00	9.30	**********	0.00	500.000	**********	0.00	NO	NO	NO
92. Hexachlorocyclopentadiene	0.00	0.00	7.00	**********	0.00	5.20	**********	0.00	1.70E+04	**********	0.00	NO	NO	NO
93. Hexachloroethane	0.00	0.00	980	**********	0.00	540	**********	0.00	89.00	**********	0.00	NO	NO	NO
Hexachlorocyclohexane	0.00	0.00	2.00	2.00	0.00	0.08	0.08	0.00	**********	**********	0.00	NO	NO	NO
94. Indeno(1,2,3-cd)pyrene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	0.31000	**********	0.00	NO	NO	NO
95. Isophorone	0.00	0.00	117000	**********	0.00	**********	**********	0.00	6000	**********	0.00	NO	NO	NO
96. Naphthalene	0.00	0.00	2300	**********	0.00	620	**********	0.00	**********	**********	0.00	NO	NO	NO
97. Nitrobenzene	0.00	0.00	27000	**********	0.00	**********	**********	0.00	1900.00	**********	0.00	NO	NO	NO
98. N-nitrosodimethylamine	0.00	0.00	**********	**********	0.00	**********	**********	0.00	81.00	**********	0.00	NO	NO	NO
99. N-nitrosodi-n-propylamine	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
100. N-nitrosodiphenylamine	0.00	0.00	**********	**********	0.00	**********	**********	0.00	160.00	**********	0.00	NO	NO	NO
101. Phenanthrene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
103. 1,2,4-trichlorobenzene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO

	Reported Value (Cd) (ug/l)	Cd*2.13 (ug/l)	EPA Acute (ug/l)	STATE Acute (ug/l)	IWC Acute (ug/l)	EPA Chronic (ug/l)	STATE Chronic (ug/l)	IWC Chronic (ug/l)	EPA Bioacc. (ug/l)	STATE Bioacc. (ug/l)	IWC Bioacc. (ug/l)	Violation of Acute	Chr	Bio
DIOXIN														
18. 2-3-7-8-TCDD	0.00	0.00	0.01	**********	0.00	**********	**********	0.00	1.40E-07	1.00E-09	0.00	NO	NO	NO
VOLATILE COMPOUNDS														
19. Acrolein	0.00	0.00	68.00	**********	0.00	21.00	**********	0.00	780.00	**********	0.00	NO	NO	NO
20. Acrylonitrile	0.00	0.00	7550	**********	0.00	2600	**********	0.00	6.60	**********	0.00	NO	NO	NO
21. Benzene	0.00	0.00	5300	**********	0.00	**********	**********	0.00	710.00	**********	0.00	NO	NO	NO
22. Bromoform	0.00	0.00	**********	**********	0.00	**********	**********	0.00	3600.00	**********	0.00	NO	NO	NO
23. Carbon Tet	0.00	0.00	35200	**********	0.00	**********	**********	0.00	44.00	**********	0.00	NO	NO	NO
24. Chlorobenzene	0.00	0.00	250.00	**********	0.00	50.00	**********	0.00	2.10E+04	**********	0.00	NO	NO	NO
25. Chlorodibromomethane	0.00	0.00	**********	**********	0.00	**********	**********	0.00	340.00	**********	0.00	NO	NO	NO
26. Chloroethane	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
27. 2-Chloroethylvinyl ether	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
28. Chloroform	0.00	0.00	28900	**********	0.00	1240	**********	0.00	4700.00	**********	0.00	NO	NO	NO
29. Dichlorobromomethane	0.00	0.00	**********	**********	0.00	**********	**********	0.00	220.00	**********	0.00	NO	NO	NO
30. 1-1-Dichloroethane	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
31. 1-2-Dichloroethane	0.00	0.00	118000	**********	0.00	20000	**********	0.00	990.00	**********	0.00	NO	NO	NO
32. 1-1-Dichloroethylene	0.00	0.00	11600	**********	0.00	**********	**********	0.00	32.00	**********	0.00	NO	NO	NO
33. 1,2 Dichloropropane	0.00	0.00	23000	**********	0.00	5700	**********	0.00	**********	**********	0.00	NO	NO	NO
34. 1,3 Dichloropropylene	0.00	0.00	6060	**********	0.00	244.00	**********	0.00	1700.00	**********	0.00	NO	NO	NO
35. Ethylbenzene	0.00	0.00	32000	**********	0.00	**********	**********	0.00	29000.00	**********	0.00	NO	NO	NO
37. Methyl Chloride	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
36. Methyl bromide	0.00	0.00	**********	**********	0.00	**********	**********	0.00	4000.00	**********	0.00	NO	NO	NO
38. Methylene chloride	0.00	0.00	**********	**********	0.00	**********	**********	0.00	16000.00	**********	0.00	NO	NO	NO
39. 1-1-2-2-Tetrachloroethane	0.00	0.00	9320	**********	0.00	2400	**********	0.00	110.00	**********	0.00	NO	NO	NO
40. Tetrachloroethylene	0.00	0.00	5280	**********	0.00	840	**********	0.00	88.50	**********	0.00	NO	NO	NO
41. Toluene	0.00	0.00	17500	**********	0.00	**********	**********	0.00	2.0E+05	**********	0.00	NO	NO	NO
42. 1,2-trans-dichloroethylene	0.00	0.00	**********	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
44. 1-1-2-Trichloroethane	0.00	0.00	18000	**********	0.00	9400	**********	0.00	420.00	**********	0.00	NO	NO	NO
43. 1-1-1-Trichloroethane	0.00	0.00	18000	**********	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
45. Trichloroethylene	0.00	0.00	45000	**********	0.00	21900	**********	0.00	810.00	**********	0.00	NO	NO	NO
46. Vinyl Chloride	0.00	0.00	**********	**********	0.00	**********	**********	0.00	5250.00	**********	0.00	NO	NO	NO

ATTACHMENT 1

Priority Pollutant Scan Calculation

Permittee	City of Marion		
Receiving Stream	Fifteen Mile Bayou		
Permit number	AR0021971		Qd for:
Flow (Qd)	1.60	MGD	Municipalities = Design Flow
Flow (Qd)	2.47	CFS	Industrial Discharges = Highest monthly average flow of the last two years
7Q10 =	0.50	CFS	
Long Term Average =	1.50	CFS	TSS for
Using Diffusers	no	Yes/No	Gulf Coastal 5.5 mg/l Ouach Mount = 2 mg/l
pH =	7.50	S.U.	Ark River Valley = 3 mg/l Ozark Highands = 2.5 mg/l
Total Hardness	81.00	mg/l	Boston Mount = 1.3 mg/l Della = 8 mg/l
TSS	8	mg/l	
Chronic Aquatic Toxicity.	0.67		Total Hardness for:
Acute Aquatic Toxicity:	0.33		Arkansas River = 125 mg/l Red River = 211 mg/l
			Ouachita River = 28 mg/l St. Francis River = 103 mg/l

For the following receiving enter 0.06 in cell "C17 White River = 116 mg/l

Mississippi, Arkansas, Red River,	Gulf Coastal = 31 mg/l	Ouachita Mount = 31 mg/l
White (Below confluence with Black River)	Ozark Highlands = 148 mg/l	Ark River Valley = 25 mg/l
Ouachita (below Confluence with Little Miss. River	Boston Mount = 25 mg/l	Della = 81 mg/l

Upstream Flow (Qb) = 0.34 (Chronic) 0.17 (Acute)
Pollutant Concentration Upstream (Cb) = 0 ug/l
Water Effect Ratio(WER) 1.00
Cancer Risk Level: 1.00E-05 (STATE); 1.00e-6 (EPA)

IWC = Instream concentration of pollutant after mixing with the receiving stream
IWC = (Cd*Qd + Cb*Qb)/(Qb +Qd)
Cd = Pollutant concentration in the effluent (ug/l) : Reported value as Total

	Reported Value (Cd) (ug/l)	Cd*2.13 (ug/l)	EPA Acute (ug/l)	STATE Acute (ug/l)	IWC Acute (ug/l)	EPA Chronic (ug/l)	STATE Chronic (ug/l)	IWC Chronic (ug/l)	EPA Bioacc. (ug/l)	STATE Bioacc. (ug/l)	IWC Bioacc. (ug/l)	Violation of Acute	Chr	Bio
METALS and CYANIDE														
1. Antimony Total	0.00	0.00	9000	**********	0.00	1600	**********	0.00	4300	**********	0.00	NO	NO	NO
2. Arsenic Total	0.00	0.00	662.95	**********	0.00	349.89	**********	0.00	1.40	**********	0.00	NO	NO	NO
3. Beryllium Total	0.00	0.00	130.00	**********	0.00	5.30	**********	0.00	**********	0.076	0.00	NO	NO	NO
4. Cadmium Total*	0.00	0.00	**********	11.94	0.00	**********	3.58	0.00	**********	**********	0.00	NO	NO	NO
6. Chromium (Tri)*	0.50	1.07	**********	2256.37	1.00	**********	731.94	0.94	**********	**********	0.66	NO	NO	NO
7. Chromium (hex)	0.00	0.00	**********	15.71	0.00	**********	10.58	0.00	**********	**********	0.00	NO	NO	NO
8 Copper Total*	8.00	17.04	**********	38.87	15.97	**********	26.41	15.01	**********	**********	10.60	NO	NO	NO
9 Lead Total*	0.00	0.00	**********	269.04	0.00	**********	10.48	0.00	**********	**********	0.00	NO	NO	NO
10. Mercury Total*	0.00	0.00	**********	6.46	0.00	**********	0.0120	0.00	0.15	**********	0.00	NO	NO	NO
12. Nickel Total*	0.00	0.00	**********	2603.30	0.00	**********	289.12	0.00	4600	**********	0.00	NO	NO	NO
13 Selenium Total	0.00	0.00	**********	20.00	0.00	**********	5.00	0.00	**********	**********	0.00	NO	NO	NO
14. Silver Total*	0.00	0.00	**********	7.8153	0.00	**********	**********	0.00	**********	**********	0.00	NO	NO	NO
15. Thallium Total	0.00	0.00	1400	**********	0.00	40.00	**********	0.00	6.30	**********	0.00	NO	NO	NO
16. Zinc Total*	0.00	0.00	**********	319.04	0.00	**********	291.33	0.00	**********	**********	0.00	NO	NO	NO
129. Phenols, Total	0.00	0.00	**********	**********	**********	**********	**********	**********	**********	**********	0.00			NO
17 Cyanide Total	0.00	0.00	**********	22.36	0.00	**********	5.20	0.00	220000	**********	0.00	NO	NO	NO

* See linear partition coefficient (Page 6)

n. Construction Permit No. AR0021971 issued on October 6, 2005.
o. Site visit conducted on 6/13/2006.
p. "No exposure certification for stormwater" submitted on 7/3/2006.

21. **NPDES POINT OF CONTACT.**

For additional information, contact:

Shane Byrum
NPDES Branch, Water Division
Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913
Telephone: (501) 682-0622

10. Dissolved oxygen limits have changed from an instantaneous minimum to a monthly average minimum.
11. The 7-day average concentration limit for CBOD5 was corrected to more accurate value.
12. The interim 7-day average concentration limit for NH3-N was corrected to more accurate value for May-October.
13. Total Residual Chlorine final limit was added.
14. Interim limits for TRC and NH3-N are included.

17. Storm water pollution prevention plan requirements

The permittee submitted "No exposure certification for exclusion from NPDES Stormwater" to the Department on 7/3/2006, therefore storm water pollution prevention plan requirements were deleted in the final permit.

18. SCHEDULE OF COMPLIANCE

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

Compliance is required on the effective date of the permit.

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. NPDES application No. AR0021971 received 01/04/2006.
b. Arkansas Water Quality Management Plan(WQMP).
c. Regulation No. 2.
d. Regulation No. 6.
e. 40 CFR Parts 122, 125, 133 and 403.
f. NPDES permit file AR0021971.
g. Discharge Monitoring Reports (DMRs).
h. "Arkansas Water Quality Inventory Report 2000 (305B)", ADEQ.
i. Memo from Mo Shafii to NPDES 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.

chronic biomonitoring tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead Minnow (*Pimephales promelas*) are 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/600/4-91/002, July 1994 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).

15. **Sample Type and Sampling Frequency**

Regulations promulgated at 40 CFR Part 122.44(i) require permit to establish monitoring requirements which assure compliance with permit limitations.

Requirements for sample type and sampling frequency were based on recommended frequencies for self-monitoring of discharges within the flow of 1 to 5 MGD.

16. **Changes from the previously issued permit**

Permittee is responsible for reading the permit in detail carefully and becoming familiar with all the changes even they are not listed below.

1. Design flow of facility has increased to 1.6 MGD.
2. NH3-N limits have changed based on new toxicity standards in Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2.
3. Mass limits for CBOD5, TSS, and NH3-N have changed to reflect the increase in design flow.
4. Whole Effluent Toxicity testing has been added since this facility is now classified as a major municipality.
5. Flow sample type has been changed from Instantaneous to Totalizing Meter.
6. Sample frequency for all parameters except flow have been changed from three/month to three/week.
7. A schedule of compliance has been included for Ammonia and Total Residual Chlorine limits.
8. pH limits are now expressed as 6.0-9.0 s.u.
9. Fecal Coliform Bacteria limits for October – March have been corrected.

14. **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, and EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies, revised March 13, 2000. 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
Chronic Biomonitoring	Once/quarter

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

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

The calculations for dilution used for chronic biomonitoring are as follows:

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

Qd = Design flow or Average flow = 1.6 MGD = 2.47 cfs
7Q10 = 0.5 Cfs
Qb = Background flow = 0.67 X 7Q10 = 0.335 cfs
CD = (2.47) / (2.47 + 0.335) X 100 = 88%

Toxicity tests shall be performed in accordance with protocols described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are **28%, 37%, 50%, 66%, and 88%** (See **Attachment I** of CPP). The low-flow effluent concentration (critical dilution) is defined as **88%** effluent. The requirement for

13. **Final Limitations**

The following effluent limitations requirements were placed in the permit based on the more stringent of the technology-based, water quality-based or previous NPDES permit limitations:

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous NPDES 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
CBOD5	15	22.5	25	40	15	23	15	22.5
TSS	20	30	30	45	20	30	20	30
NH3-N								
(April)	2.4	5.9	N/A	N/A	10	15	2.4	5.9
(May-Oct)	2.4	5.9	N/A	N/A	5	8	2.4	5.9
(Nov-Mar)	6.7	12	N/A	N/A	10	15	6.7	12
Dissolved Oxygen								
(May-Oct)	4.0 (Monthly Avg Min)		N/A		4.0 (Inst. Min)		4.0 (Monthly Avg Min)	
(Nov-Apr)	6.0 (Monthly Avg Min)		N/A		6.0 (Inst. Min)		6.0 (Monthly Avg Min)	
FCB (col/100ml)								
(Apr-Sept)	200	400	N/A	N/A	200	400	200	400
(Oct-Mar)	1000	2000	N/A	N/A	200*	400*	1000	2000
TRC (Inst. Max)	N/A		< 0.1 mg/l		N/A		<0.1 mg/l	
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6-9 s.u.		6.0-9.0 s.u.	

*FCB limits for October-March were incorrectly applied in previous permit for an extraordinary resource waterbody. The receiving stream is not listed as an extraordinary resource waterbody, therefore the limits were corrected to Regulation 2 standards for secondary contact during October – March.

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 Regulation No. 2 for aquatic life protection are based on dissolved metals concentrations and hardness values (See Page 6 of **Attachment 1**). However, Federal Regulations cited at 40 CFR Part 122.45(c) require that effluent limitations for metals in NPDES permits be expressed as total recoverable (See Pages 1 and 6 of **Attachment 1**). 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 2** 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	15, 7, 6.5, 6 Geometric Mean = 8	10
Chromium, Total	3, 0.4, 0.4, 0.17 Geometric Mean = 0.5	10

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**.)

12. **Total Residual Chlorine (TRC) Requirements**

The final TRC limit of <0.1 mg/l is based on a memo from EPA Region VI dated August 22, 2002. The permittee shall monitor and report TRC for an interim period of three years following the effective date. Following the three year interim period the specified limits for TRC will become effective. The permittee has the option to undertake any study deemed necessary to meet the final limitations during the interim period. Any additional treatment must be approved and construction approval granted prior to final installation.

Chronic Toxicity: Flow = 0.335 cfs, for comparison with chronic aquatic toxicity. This flow is 67 percent of the 7-day, 10-year low-flow (7Q10) for the receiving stream. The 7Q10 of 0.5 cfs is based on USGS data.

Acute Toxicity: Flow = 0.165 cfs, for comparison with acute aquatic toxicity. This flow is 33 percent of the 7Q10 for the receiving stream.

(f) Bioaccumulation

Flow = 1.5 cfs, for comparison with bioaccumulation criteria. This flow is 3 times the 10-year low-flow (7Q10) for the receiving stream based on Section 4.6 of EPA's Technical Support Document for Water-Quality based Toxics Control. This section states that permitting authorities may choose a multiplication factor of 3 x 7Q10 to estimate stream design flow for human health protection.

(g) Drinking Water

Flow = 0.5 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 = 81 mg/l, based on attachment VI of CPP.

pH = 7.5 s.u., based on compliance data from ADEQ Station FRA0028, which is in Fifteen Mile Bayou near Proctor, Arkansas.

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

(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 NPDES 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 = 1.6 MGD = 2.47 cfs

C_b = 0 µg/l

Q_b = (See below):

(e) Aquatic Toxicity

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 NPDES Permitting" and the "Post Third Round NPDES 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 NPDES 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 NPDES permits. State narrative and numerical water quality standards from the 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

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.

Qb = Critical flow of the receiving stream = 0.335 cfs. This flow is 67 percent of the 7-day, 10-year low-flow (7Q10) for the receiving stream.
Cb = background concentration = 0.1 mg/l (from MultiSMP model ran on 4/25/06)
The following pH and temperature were used for Delta Ecoregion:

Month	pH s.u.	Temperature C	IWC (Monthly Avg)	IWC (7-day Average)
April-October	7.1	30	2.1 mg/l	5.2 mg/l
November -March	7.1	14	5.9 mg/l	14.7 mg/l

Calculations of ammonia toxicity limits are presented as follows:

Cd = (IWC(Qd + Qb) – CbQb)/Qd
Cd = (2.1(2.48+0.335) – (0.1 x 0.335)) / 2.48
Cd = 2.37 mg/L (April – October)(monthly average)

Cd = (5.2(2.48+0.335) – (0.1)(0.335)) / 2.48
Cd = 5.89 mg/L (April – October)(daily maximum)

Cd = (5.9(2.48+0.335) – (0.1)(0.335) / 2.48
Cd = 6.68 mg/L (November – March)(monthly average)

Cd = (14.7(2.48+0.335) – (0.1)(0.335) / 2.48
Cd = 16.67 mg/L (November – March)(daily maximum)

D.O. based ammonia limits were compared with toxicity based ammonia limits and the more stringent of the two were placed in the permit. This comparison is presented in the table below.

Comparision of Oxygen-based vs. Toxicity-based NH3-N limits						
	Oxygen-based (mg/L)		Toxicity-based (mg/L)		**Permit Limits (mg/L)**	
	Avg	Max	Avg	Max	**Avg**	**Max**
April	8	12	2.4	5.9	**2.4**	**5.9**
May - Oct	5	7.5	2.4	5.9	**2.4**	**5.9**
Nov - Mar	8	12	6.7	16.7	**6.7**	**12**

Notes:

- 7-day average = 4-day Average in Regulation No. 2
- Monthly Average = 30-day Average in Regulation No. 2

2. **Toxics Pollutants-Priority Pollutant Scan (PPS)**

   i. Post Third Round Policy and Strategy

The following pollutants were reported above the required MQL:

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Arsenic	2.78	0.5
Copper	1.8	0.5
Nickel	4.69	0.5

ADEQ has determined from the submitted information that the discharge does not pose the reasonable potential to cause or contribute to an exceedance above a water quality standard.

14. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS.

After dechlorination and prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR Part 136 as less than 0.1 mg/l. Thus, the "no measurable TRC concentration" for chlorine becomes the permit limit. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.

15. WHOLE EFFLUENT TOXICITY.

Section 101(a)(3) of the Clean Water Act states that ".....it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." In addition, 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 toxicity (WET) testing is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. It is the national policy of EPA to use bioassays as a measure of toxicity to allow evaluation of the effects of a discharge upon a receiving water (49 Federal Register 9016-9019, March 9, 1984). EPA Region 6 and the State of Arkansas are now implementing the Post Third Round Policy and Strategy established on September 9, 1992, and EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies, revised March 13, 2000. Whole effluent toxicity testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The whole effluent toxicity testing procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS	FREQUENCY
Chronic WET	Once/quarter

Requirements for measurement frequency are based on the CPP.

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

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

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

Qd = Design flow = 1.6 MGD = 2.47 cfs
7Q10 = 0.5 cfs
Qb = Background flow = 0.67 X 7Q10 = 0.335 cfs
CD = (2.47) / (2.47 + 0.335) X 100 = 88%

Toxicity tests shall be performed in accordance with protocols described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are 28%, 37%, 50%, 66%, and 88% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 88% effluent. The requirement for chronic WET tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead minnow (*Pimephales promelas*) are representative of organisms indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

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

This permit may be reopened to require further WET testing studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if WET testing data submitted to the Department shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in 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).

Administrative Records

During the past five years there have been two *P. promelas* lethal and sub-lethal WET test failures below the critical dilution, the second of which occurred during March 2011. During the past five years there has been one *C. dubia* lethal and sub-lethal WET test below the critical dilution. In March of 2011 the facility began dechlorination using sulfur dioxide gas. In response to the March test failures, and after dechlorination began, the facility reported two consecutive monthly passing retests for all WET testing parameters. The facility has reported no WET failures since dechlorination began. After installation of dechlorination, the effluent showed a significant reduction in residual chlorine values as indicated by the reported values on the discharge monitoring reports. The average TRC value reported from March 2007 to February 2011 (prior to dechlorination) was 0.96 mg/l with reported values as high as 1.94 mg/l. Since dechlorination began in March 2011, all effluent TRC values reported have been < 0.1 mg/l.

In accordance with the November 2004 EPA guidance document titled "National Whole Effluent Toxicity (WET) Implementation Guidance under the NPDES Program" [EPA 832-B-04-003], data received on or before March 2011 can and should be considered unrepresentative of the current effluent since the facility began a new process of dechlorination using sulfur dioxide gas after March 2011. Any data received and considered after this point should be considered representative of the current effluent.

Section 4.1.4 of the 2004 EPA Guidance referenced above provides that the "effluent data used as the basis for effluent characterization should be representative of the monitored activity (*i.e.*, the discharge under current conditions with current treatment and management practices at the plant [40 CFR 122.41 (j) (1)]." The guidance also conveys that WET data may not be representative if such data was obtained prior to "significant treatment, pretreatment, or pollution prevention modifications." When the WET data is no longer representative, the EPA Region 6, WET Permitting Strategy, May 2005 (pg. 3) indicates that the permitting authority (*i.e.* ADEQ) may "exclude such data in the [reasonable potential] determination... because the data pre-date current operating conditions and treatment at the facility."

At this time, there is insufficient evidence to support the inclusion of limits since no WET failures have occurred after installing dechlorination. Additional WET testing data is needed to confirm the effects of adding dechlorination, therefore WET limits are not required at this time. The inclusion of requirements for retests for failures will provide sufficient documentation concerning the necessity for a TRE, and the potential for inclusion of WET limits if appropriate. The following information summarized toxicity test submitted by the permittee during the term of the current permit at outfall 001:

DRAFT

Permit Number:	AR0021971		AFIN:	18-00110	Outfall Number: 001
Date of Review:	2/8/2012		Reviewer:	M. Barnett	
Facility Name:	City of Marion				
Previous Dilution series:	28, 37, 50, 66, & 88	Proposed Dilution Series:		28, 37, 50, 66, & 88	
Previous Critical Dilution:	88	Proposed Critical Dilution:		88	
Previous TRE activities:	None				

Frequency recommendation by species

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

TEST DATA SUMMARY

	Vertebrate		Invertebrate		
TEST DATE	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC	
6/5/2007	88	88	88	88	
9/5/2007	88	88	88	88	
12/5/2007	88	88	88	88	
3/5/2008	88	88	88	88	
6/5/2008	88	88	88	88	
9/5/2008	88	88	88	88	
12/5/2008	88	88	88	88	
3/5/2009	88	88	88	88	
6/5/2009	88	88	88	88	
9/1/2009	88	88	88	88	
12/31/2009	**28**	**28**	88	**28**	
3/31/2010	88	88	88	88	
6/30/2010	88	88	88	88	
9/30/2010	88	88	88	88	
12/31/2010	88	88	88	88	
3/31/2011	**50**	**50**	66	88	1st quarter
4/30/2011	88	88	88	88	retest 1
5/31/2011	88	88	88	88	retest 2
6/30/2011	88	88	88	88	
9/30/2011	88	88	88	88	
12/31/2011	88	88	88	88	

Failures are noted in BOLD

NOTE: SO2 dechlorination installed March 2011

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	28	28	66	28
TU at Min Observed	3.57	3.57	1.52	3.57
Count	21	21	21	21
Failure Count	2	2	1	1
Mean	1.293	1.293	1.154	1.252
Std. Dev.	0.555	0.555	0.083	0.531
CV	0.4	0.4	0.1	0.4
RPMF	1.2	1.2	1.1	1.2
Reasonable Potential	3.771	3.771	1.467	3.771
100/Critical dilution	1.136	1.136	1.136	1.136
Does Reasonable Potential Exist	Yes	Yes	Yes	Yes

PERMIT ACTION

P. promelas lethal - monitoring
P. promelas sub-lethal - monitoring
C. dubia lethal - monitoring
C. dubia sub-lethal - monitoring

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16. SAMPLE TYPE AND FREQUENCY.

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 CFR Part 122.48(b)] and to ensure compliance with permit limitations [40 CFR Part 122.44(i)(l)]. Requirements for sample type and sampling frequency have been based on the current discharge permit for Flow, TSS, NH3-N, FCB, TRC, and WET. Monitoring frequency for TP and $NO_3 + NO_2 - N$ was set at once/quarter based on the minimum required frequency specified in sections 5.36 and 5.37 of the CPP. The permit writer conducted a review of effluent data from the past 24 months for all parameters and determined that CBOD5, DO, and pH were eligible for monitoring frequency reductions. The ratio of the long term average of the data for each of these parameters to the monthly average permit limit was calculated. This determined what frequency reduction each of these parameters were eligible for based on section 4.8.2 of the CPP. This monitoring frequency reduction for CBOD5, DO, and pH is being granted only once and no further reductions for these parameters will be granted (See Condition No. 9 of Part II of the permit).

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
CBOD5	three/week	6-hr Composite	two/week	composite[1]
TSS	three/week	6-hr Composite	three/week	composite[1]
NH3-N	three/week	6-hr Composite	three/week	composite[1]
DO	three/week	grab	once/week	grab
FCB	three/week	grab	three/week	grab
TRC	three/week	grab	three/week	grab
TP	n/a	n/a	once/quarter	grab
$NO_3 + NO_2$ - N	n/a	n/a	once/quarter	grab
pH	three/week	grab	once/week	grab
Chronic WET testing	once/quarter	24-hr composite	once/quarter	composite[2]

1 "6-hr composite" changed to "composite" for CBOD5, TSS, and NH3-N in accordance with revised definition of "composite" in Part IV of the permit.

2 Composite sample for WET testing is defined in Part II.8.3.d of the permit as a minimum of 12 subsamples gathered at equal time intervals during a 24-hr period.

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17. STORMWATER REQUIREMENTS

The facility had previously submitted "No exposure certification for exclusion from NPDES Stormwater" on 7/3/2006. A tracking number ARR000189 was subsequently issued for this no exposure exclusion, but this expired on 2/1/2011. The facility was informed of this expiration and a new no exposure certification form was emailed to the facility on 1/24/2012. The facility submitted a new certification on 2/7/2012.

18. PERMIT COMPLIANCE.

A Schedule of Compliance has not been included in this permit. Compliance with all permit requirements is required on the effective date of the permit.

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. AR0021971 received 8/18/2011.
B. Arkansas Water Quality Management Plan (WQMP).
C. APCEC Regulation No. 2.
D. APCEC Regulation No. 3.
E. APCEC Regulation No. 6.
F. 40 CFR Parts 122, 125, 133 and 403.
G. Discharge permit file AR0021971.
H. Discharge Monitoring Reports (DMRs).
I. "Arkansas Water Quality Inventory Report 2008 (305B)", ADEQ.
J. Continuing Planning Process (CPP).
K. Technical Support Document For Water Quality-based Toxic Control.
L. Inspection Report dated 11/30/2011.

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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 via email to the Corps of Engineers, the Regional Director of the U.S. Fish and Wildlife Service, the Department of Arkansas Heritage, the EPA, and the Arkansas Department of Health.

22. **POINT OF CONTACT.**

For additional information, contact:

Shane Byrum
Permits Branch, Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317
Telephone: (501) 682-0618

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Permit Number: AR0021971
AFIN: 18-00110

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

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

The applicant's mailing address is:

City of Marion
P.O. Box 717
Marion, AR 72364

The facility address is:

City of Marion
5054 Hardin Road
Marion, AR 72364

is authorized to discharge treated municipal wastewater from a facility located as follows: west of Highway 118 just south of Union Pacific Railroad in Crittenden County, Arkansas.

Latitude: 35° 11' 25"; Longitude: 90° 13' 42"

to receiving waters named:

Fifteen Mile Bayou to Black Fish Bayou, thence to the St. Francis River in Segment 5A of the St. Francis River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 11' 25"; Longitude: 90° 14' 15"

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

Effective Date:
Expiration Date:

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

Issue Date

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PART I
PERMIT REQUIREMENTS

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

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

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	N/A	Report, MGD	Report, MGD (Daily Maximum)	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	200	15	22.5	two/week[3]	composite
Total Suspended Solids (TSS)	267	20	30	three/week	composite
Ammonia Nitrogen (NH3-N)					
(April - October)	32	2.4	5.9	three/week	composite
(November - March)	90	6.7	12	three/week	composite
Dissolved Oxygen (DO)					
(May-Oct)	N/A	4.0, (Inst. Min.)		once/week[3]	grab
(Nov-Apr)	N/A	6.0, (Inst. Min.)		once/week[3]	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(Apr-Sept)	N/A	200	400	three/week	grab
(Oct-Mar)	N/A	1000	2000	three/week	grab
Total Residual Chlorine (TRC)[1]	N/A	<0.1 mg/l (Inst. Max.)		three/week	grab
Total Phosphorus (TP)	Report	Report	Report	once/quarter	grab
Nitrate + Nitrite Nitrogen (NO3 + NO2-N)	Report	Report	Report	once/quarter	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/week[3]	grab
Chronic WET Testing[2]	N/A	Report		once/quarter	composite
Pimephales promelas (Chronic)[2]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC)TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite

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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.		
Ceriodaphnia dubia (Chronic)[2]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail production (7-day NOEC)TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite

1 See Condition No. 7 of Part II. (TRC Condition).
2 See Condition No. 8 of Part II (WET Testing Condition).
3 See Condition No. 9 of Part II (Monitoring frequency reduction for CBOD5, DO, and pH).

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the discharge from the final treatment unit (chlorine disinfection).

All and each unauthorized Sanitary Sewer Overflow (SSO) must be reported to ADEQ. See Condition No. 5 of Part II.

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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 effluent limitations.

The permittee shall achieve compliance with the following reporting requirements in accordance with the following schedule:

Within 30 days after the effective date of this permit, the permittee shall measure the sludge depth and water depth in at least four locations in each lagoon and report these results to the Permits Branch of the Water Division.

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PART II
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class II by the State of Arkansas in accordance with APCEC Regulation No. 3.

2. For publicly owned treatment works, the 30-day average percent removal for 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. The permittee must monitor the influent and effluent CBOD5 and TSS at least once per year and calculate the percent removal to ensure compliance with the required 85 percent removal. This information must be maintained on site and provided to Department personnel upon request.

3. In accordance with 40 CFR Parts 122.62 (a)(2) and 124.5, this permit may be reopened for modification or revocation and/or reissuance to require additional monitoring and/or effluent limitations when new information is received that actual or potential exceedance of State water quality criteria and/or narrative criteria are determined to be the result of the permittee's discharge(s) to a relevant water body or a Total Maximum Daily Load (TMDL) is established or revised for the water body that was not available at the time of the permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

4. Other Specified Monitoring Requirements

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

   - The monitoring and analytical instruments are consistent with accepted scientific practices;
   - The requests shall be submitted in writing to the Permits Section of the 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 approved in accordance with 40 CFR Part 136.5; 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.

5. Sanitary Sewer Overflow (SSO):

   A. An overflow is any spill, release or diversion of sewage from a sanitary sewer collection system, including:

      1. An overflow that results in a discharge to waters of the state; and

      2. An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral), even if that overflow does not reach waters of the state.

   B. Immediate Reporting

      All overflows shall be reported to the Enforcement Branch of the Water Division by telephone (501-682-0638), facsimile (501-682-0910), or by using the Department web site at waterenfsso@adeq.state.ar.us within 24 hours from the time the permittee becomes aware of the circumstance.

      At a minimum the report shall identify:

      1. The location(s) of overflow;
      2. The receiving water (If there is one);
      3. The duration of overflow;
      4. Cause of overflow; and
      5. The estimated volume of overflow (MG).

   C. Discharge Monitoring Reports (DMRs)

      The permittee shall report every month all overflows with the Discharge Monitoring Report (DMR) submittal. These reports shall be summarized and reported in tabular format with the minimum following information. The permittee may use the ADEQ Forms which may be obtained from the following web sites:
      http://www.adeq.state.ar.us/water/branch_permits/pdfs_forms/sso_tabular_report.pdf
      or http://www.adeq.state.ar.us/water/branch_enforcement/forms/sso_report.asp

      1. The location(s) of overflow;
      2. The receiving water (If there is one);
      3. The duration of overflow;
      4. Cause of overflow;
      5. The estimated volume of overflow (MG);

6. A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);
7. The estimated date and time when the overflow began and stopped or will be stopped;
8. The cause or suspected cause of the overflow;
9. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
10. If reasonably made, an estimate of the number of persons who came into contact with wastewater from the overflow; and
11. Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps.

6. Contributing Industries and Pretreatment Requirements

A. The following pollutants may not be introduced into the treatment facility:

(1) pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

(2) pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

(3) solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference* or Pass Through**;

(4) any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Pass Through** or Interference* with the POTW;

(5) heat in amounts which will inhibit biological activity in the POTW resulting in Interference*, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 deg. C (104 deg. F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;

(6) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference* or Pass Through**;

(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

(8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

B. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

C. The permittee shall provide adequate notice to the Department of the following:

(1) any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 or 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.

Any 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.

* According to 40 CFR Part 403.3(k) the term *Interference* means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

** According to 40 CFR 403.3(p) the term *Pass Through* means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

7. After dechlorination and prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR Part 136 as less than 0.1 mg/l. Thus, the "no measurable TRC concentration" for chlorine becomes the permit limit. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.

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

   1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	88
EFFLUENT DILUTION SERIES (%):	28-37-50-66-88
TESTING FREQUENCY	once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

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

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

b. The NOEC (No Observed Effect Concentration) is herein defined as the greatest effluent dilution at and below which toxicity (lethal or sub-lethal) that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.

c. 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.

2. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

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

If a frequency reduction, as specified in Item 6, has been granted and any subsequent valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit. In addition:

a. Part I Testing Frequency Other Than Monthly

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

ii. IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section. The permittee shall notify ADEQ in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of-intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests. A TRE required based on lethal effects should consider any sub-lethal effects as well.

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

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

b. Part I Testing Frequency of Monthly

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

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

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

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

iii. 60% of the surviving control females must produce three broods. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.

iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

v. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sub-lethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

vi. If a test passes, yet the percent coefficient of variation between replicates is greater than 40% in the control (0% effluent) and/or in the critical dilution for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test, the test is determined to be invalid. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

vii. If a test fails, test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%.

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

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

b. Statistical Interpretation

i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the

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

ii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA/821/R-02-013 or the most recent update thereof.

iii. If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water 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., 7 days);

(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 a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above. Unless otherwise stated in this section, a composite sample for WET shall consist of a minimum of 12 subsamples gathered at equal time intervals during a 24-hour period.

ii. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples, on use, are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.

iii. The permittee must collect all three flow-weighted composite samples within the monitoring period. Second and/or third composite samples shall not be collected into the next monitoring period; such tests will be determined to be invalid. Monitoring period definitions are listed in Part IV.

iv. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to between 0 and 6 degrees Centigrade during collection, shipping, and/or storage.

v. If the flow from the outfall(s) being tested ceases during the

collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

vi. 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.

vii. If chlorination is part of the treatment process, the permittee shall not allow the sample to be dechlorinated at the laboratory. At the time of sample collection the permittee shall measure the TRC of the effluent. The measured concentration of TRC for each sample shall be included in the lab report submitted by the permittee.

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.7 of this permit. The permittee shall submit full reports. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. 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 WET test data for each species is to be recorded on the DMR for each reporting period. The data submitted

should reflect the LOWEST lethal and sub-lethal effects results for each species during the reporting period. The full reports for all invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for Agency review.

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

i. Pimephales promelas (Fathead minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP6C

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

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

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

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

ii. Ceriodaphnia dubia

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

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

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

(D) If the NOEC for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter

No. TGP3B

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

5. TOXICITY REDUCTION EVALUATIONS (TREs)

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

a. Within ninety (90) days of confirming persistent toxicity, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and includes the following:

i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures' (EPA-600/6-91/003) and 'Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I' (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the

methods specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/080) and 'Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/081), as appropriate.

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

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

ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

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:

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

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

3. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant toxicity at the critical dilution.

A copy of the TRE Activities Report shall also be submitted to the state agency.

d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming toxicity in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant toxicity at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

6. MONITORING FREQUENCY REDUCTION

a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters or first twelve consecutive months (in accordance with Item 1.a.) of testing for one or

both test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the Ceriodaphnia dubia).

b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. above. In addition the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.

c. SUB-LETHAL OR SURVIVAL FAILURES - If any test fails the survival or sub-lethal endpoint at any time during the life of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

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

9. This permit includes a reduced monitoring frequency for CBOD5, DO, and pH. No further monitoring frequency reduction for these parameters will be granted.

10. Within 30 days after the effective date of this permit, the permittee shall measure the sludge depth and water depth in at least four locations in each lagoon and report these results to the Permits Branch of the Water Division.

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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.11 herein.

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

4. Toxic Pollutants

Notwithstanding Part III.A.3, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under 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 for "Bypass of Treatment Facilities" (Part III.B.4), and "Upset" (Part III.B.5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statues or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

8. Property Rights

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

9. Severability

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

10. Applicable Federal, State or Local Requirements

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

11. Permit Fees

The permittee shall comply with all applicable permit fee requirements 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 III.B.4.b and 4.c.

B. Notice

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

C. Prohibition of bypass

1. Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal or preventive maintenance; 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 prior to removal of substances. Additionally, 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). 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.

7. Power Failure

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

SECTION C – MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharge shall be monitored.

2. Flow Measurement

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

Calculated Flow Measurement

For calculated flow measurements that are performed in accordance with either the permit requirements or a Department approved method (i.e., as allowed under Part II.3), the +/- 10% accuracy requirement described above is waived. This waiver is only applicable when the method used for calculation of the flow has been reviewed and approved by the Department.

3. Monitoring Procedures

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

4. Penalties for Tampering

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

5. Reporting of Monitoring Results

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

Enforcement Branch
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.

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SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice within 180 days and provide plans and specification (if applicable) to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility. In no case are any new connections, increased flows, removal of substances, 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 III.D.4, 5, and 6, at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.6.

8. Changes in Discharge of Toxic Substances for Industrial Dischargers

The 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:

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

2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively; 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:

   (a) The chief executive officer of the agency, or
   (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

B. All **reports** required by the permit and **other information** requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above.
2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); 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. <u>Availability of Reports</u>

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 (Ark. Code Ann. § 8-4-101 et seq.).

14. Applicable Federal, State or Local Requirements

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

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PART IV
DEFINITIONS

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

1. **"Act"** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **"Administrator"** means the Administrator of the U.S. Environmental Protection Agency.
3. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.
4. **"Applicable effluent standards and limitations"** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
5. **"Applicable water quality standards"** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APCEC) Regulation No. 2, as amended.
6. **"Bypass"** As defined at 122.41(m).
7. **"Composite sample"** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.
8. **Daily Discharge"** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
   A. **Mass Calculations**: For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of pollutant discharged over the sampling day.
   B. **Concentration Calculations**: For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
9. **Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month. The 7-day average for Fecal Coliform Bacteria (FCB) or E-Coli is the geometric mean of the values of all effluent samples collected during the calendar week in colonies per 100 ml.
10. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
11. **"Director"** means the Director of the Arkansas Department of Environmental Quality.
12. **"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.

13. **"E-Coli"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For E-Coli, report the monthly average as a 30-day geometric mean in colonies per 100 ml.
14. **"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.
15. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
16. **"Industrial User"** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
17. **"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.
18. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
19. **"Monthly average"** means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. For Fecal Coliform Bacteria (FCB) or E-Coli, report the monthly average, (see 30-day average below).
20. **"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.
21. **"POTW"** means a Publicly Owned Treatment Works.
22. **"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.
23. **"Sewage sludge"** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW.
24. **"7-day average"** Also known as Average weekly. means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
25. **"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.

26. **"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.
27. **"Visible sheen"** means the presence of a film or sheen upon or a discoloration of the surface of the discharge. A sheen can also be from a thin glistening layer of oil on the surface of the discharge.
28. **"MGD"** shall mean million gallons per day.
29. **"mg/l "**shall mean milligrams per liter or parts per million (ppm).
30. **"µg/l"** shall mean micrograms per liter or parts per billion (ppb).
31. **"cfs"** shall mean cubic feet per second.
32. **"ppm"** shall mean parts per million.
33. **"s.u."** shall mean standard units.
34. **"Weekday"** means Monday – Friday.
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.

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

B. **BI-MONTHLY:**
is defined as two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently.

C. **QUARTERLY:**
1. is defined as a **fixed calendar quarter** or any part of the fixed calendar quarter for a non-seasonal effluent characteristic with a measurement frequency of once/quarter. Fixed calendar quarters are: January through March, April through June, July through September, and October through December; 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.

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

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