Permit Number: AR0036692
AFIN: 57-00042

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

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. § 1251 et seq.),

The applicant's mailing and physical address is:

City of Mena
323 Polk 53
Mena, AR 71953

is authorized to discharge treated municipal wastewater from a facility located as follows: approximately 1.5 miles southeast of Mena on County Road 53 about a mile east of Arkansas Highway 8 in Polk County, Arkansas.

Latitude: 34° 33' 23"; Longitude: 94° 11' 17"

to receiving waters named:

unnamed tributary of Prairie Creek, thence to Prairie Creek, thence to the Ouachita River in Segment 2F of the Ouachita River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 34° 33' 48"; Longitude: 94° 11' 14"

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 expiration date for permit coverage past the expiration date.

Response to Comments is attached to this permit.

Effective Date: March 1, 2012
Expiration Date: February 28, 2017

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

9 JAN 12
Issue Date

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 from a treatment system consisting of a bar screen followed by a 2-cell aerated lagoon system followed by continuous backwash rapid sand filters followed by chlorine disinfection and post aeration with a design flow of 3.1 MGD.

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Maximum)	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	259	10	15	two/week	composite
Total Suspended Solids (TSS)	388	15	22.5	two/week	composite
Ammonia Nitrogen (NH3-N)					
(April)	127	4.9	12	two/week	composite
(May)	78	3	4.5	two/week	composite
(June-October)	55	2.1	4.5	two/week	composite
(November-March)	153	5.9	12	two/week	composite
Dissolved Oxygen (DO)	N/A	7.1, (Inst. Min.)		two/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	1000	2000	two/week	grab
Total Residual Chlorine (TRC)[1]	N/A	<0.1 mg/l (Inst. Max.)		two/week	grab
Total Phosphorus (TP)	Report	Report	Report	once/month	grab
Nitrate + Nitrite Nitrogen (NO3 + NO2-N)	Report	Report	Report	once/month	grab
Total Recoverable Copper (Cu)[3,4]	0.3	10.5 µg/L	21 µg/L	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	two/week	grab
Chronic WET Limits[2]					
Pimephales promelas (Chronic)	Daily Average Minimum	7-day Minimum			
Whole Effluent Lethality (7-day NOEC) 22414	Not < 100%	Not < 100%		once/quarter	composite
Ceriodaphnia dubia (Chronic)					
Whole Effluent Lethality (7-day NOEC) 22414	Not < 100%	Not < 100%		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

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.		
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
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. 8 of Part II. (TRC Condition).
2 See Condition No. 11 of Part II (WET Limit Requirements).
3 See Condition No. 9 of Part II (Metal MQL Requirements).
4 Copper is report only beginning on the effective date and lasting three years after the effective date.

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. Flow is measured at v-notch weir at the discharge from the chlorine contact chamber. All other parameters are taken at the composite sampler following the post aeration unit.

All and each unauthorized Sanitary Sewer Overflow (SSO) must be reported to ADEQ. See Condition No. 6 of Part II.

SECTION B. PERMIT COMPLIANCE

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

The permittee shall adopt, implement, and enforce a Pretreatment Ordinance within twelve (12) months after the effective date of this permit.

Compliance with the Final Effluent Limitations for Copper is required three years after the effective date of the permit. The permittee shall submit progress reports addressing the progress towards attaining the Final Effluent Limitations for Copper according to the following schedule:

ACTIVITY	DUE DATE
Progress Report[1, 2]	One (1) year from effective date
Progress Report[1, 3]	Two (2) years from effective date
Final Report[1, 4]	Three (3) years from effective date

[1] If the permittee is already in compliance with the final permit limit, only documentation demonstrating compliance with the final limit will be required for the progress report.

[2] If the permittee is not in compliance with the Final Limitations following one (1) year of sampling, the initial Progress Report must detail how the permittee plans to come into compliance with the Copper limits within the remaining 2 years of the Interim period. Options must be provided that were considered along with which option* was selected. Any Best Management Practices (BMPs) that have been instituted to reduce the Copper levels in the influent must also be discussed. If a study will be performed, a milestone schedule for the study must be provided.

* During the interim period, the permittee has the option to undertake any study deemed necessary to meet the final Copper limitations. Any additional treatment (including chemical addition) must be approved and construction approval granted prior to final installation.

[3] The second Progress Report must contain an update on the status of the chosen option from the initial Progress Report. If the facility is not meeting any of the milestones provided in the initial Progress Report, the facility must update the milestone schedule to show how the final limits will be met by the deadline.

[4] The final Progress Report must be submitted following the final compliance date and include a certification that the final effluent limits were met on the effective date and that the limits are still being met.

PART II
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class III 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. After a minimum of 12 months of copper data is collected, the permittee can request the Department to re-evaluate this data to determine if the facility still shows reasonable potential to cause or contribute to an exceedance of the water quality standards. After review of this new data, the Department may remove the final copper limitations by a major permit modification if the Department concludes that the discharge no longer shows reasonable potential to cause or contribute to an exceedance of the water quality standards. However, if Prairie Creek is still listed on the State's approved 303(d) list as impaired due to copper, then copper limitations may still be required. During the interim period, the permittee has the option to undertake any study deemed necessary to demonstrate that the discharge is not causing or contributing to the copper impairment in Prairie Creek.

6. 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.

7. Best Management Practices (BMPs) are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.

8. 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.

9. The permittee may use any EPA approved method based on 40 CFR Part 136 provided the MQL for the chosen method is equal to or less than what has been specified in chart below:

Pollutant	MQL (µg/l)
Total Recoverable Copper	0.5

The permittee may develop a matrix specific method detection limit (MDL) in accordance with Appendix B of 40 CFR Part 136. For any pollutant for which the permittee determines a site specific MDL, the permittee shall send to ADEQ, NPDES Permits Branch, a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that a site specific MDL was correctly calculated. A site specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

MQL = 3.3 X MDL

Upon written approval by Permits Branch, the site specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) calculations and reporting requirements.

10. Contributing Industries and Pretreatment Requirements

A. The permittee shall adopt, implement and enforce a Pretreatment Ordinance within twelve (12) months after the effective date of this permit. It is recommended to follow the template in EPA's "Model Pretreatment Ordinance" dated January 2007. This Model Ordinance can be located and downloaded at: http://www.adeq.state.ar.us/water/branch_permits/individual_permits/pretreatment/default.htm.

B. 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.

C. 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.

D. 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).

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

1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL:	001
REPORTED ON DMR AS FINAL OUTFALL:	TX1Q
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	32%, 42%, 56%, 75%, 100%
LETHAL LIMIT	Not < 100%
TESTING FREQUENCY	Once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

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

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

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

c. The conditions of this item are effective beginning with the effective date of the WET limit. When the testing frequency stated above is less than monthly and the effluent fails the lethal or sub-lethal endpoint at or below the required limit specified in Item 1.a., the permittee shall be considered in violation of this permit limit and the frequency for the affected species will increase to monthly until such time compliance with the No Observed Effect Concentration (NOEC) effluent limitation is demonstrated for a period of three consecutive months, at which time the permittee may return to the testing frequency stated in PART I of this permit. During the period the permittee is out of compliance, test results shall be reported on the DMR for that reporting period. The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.

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

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

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

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

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

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

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

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

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

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

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

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

b. Statistical Interpretation

i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA-821-R-02-013 or the most recent update thereof.

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

iii. If the conditions of Test Acceptability are met in Item 2.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 3 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water where the receiving stream is classified as intermittent or where the receiving stream has no flow due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.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 2.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 3.a below; and

(D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

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

ii. The permittee must collect all three flow-weighted composite samples within the monitoring period. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination,

biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.

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

iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section

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

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

3. REPORTING

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

terminated early for any reason, the full report must be submitted for agency review.

b. The permittee shall report the Whole Effluent Toxicity values for the 30-Day Average Minimum and the 7-Day Minimum under Parameter No. 22414 on the DMR for that reporting period in accordance with PART III.D.4 of this permit.

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

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

A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit. Only ONE set of WET test data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal effects results for each species during the reporting period. The full reports for all invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for Agency review.

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

i. Pimephales promelas (Fathead minnow)

A. If the No Observed Effect Concentration (NOEC) for survival is less than or equal to 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 or equal to 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 or equal to the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP3B

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

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

D. If the NOEC for reproduction is less than or equal to 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

4. 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'C (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:

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

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

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

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).

5. TOXICITY RE-OPENER

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

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

6. MONITORING FREQUENCY REDUCTION

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

a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters or first twelve consecutive months (in accordance with Item 1.a.) of testing for a test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the Ceriodaphnia dubia).

b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 2.a. above. In addition the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.

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

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

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

PART III
STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

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

2. Penalties for Violations of Permit Conditions

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

3. Permit Actions

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

A. Violation of any terms or conditions of this permit; or
B. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
D. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
E. Failure of the permittee to comply with the provisions of APCEC Regulation No. 9 (Permit fees) as required by Part III.A.10. herein.

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

4. Toxic Pollutants

Notwithstanding Part III.A.3., if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APCEC Regulation No. 2, as amended, or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standards or prohibition and the permittee so notified.

The permittee shall comply with effluent standards, narrative criteria, or prohibitions established under APCEC Regulation No. 2, as amended, or Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part III.B.4.a.), and "Upsets" (Part III.B.5.b), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statues or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

6. Oil and Hazardous Substance Liability

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

7. State Laws

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

8. Property Rights

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

9. Severability

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

10. 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 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.

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.4), 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.

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. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2 and APCEC Regulation No. 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

13. Penalties for Falsification of Reports

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject to civil penalties specified in Part III.A.2. and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

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.

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.
8. **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.
9. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
10. **"Director"** means the Director of the Arkansas Department of Environmental Quality.
11. **"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.

12. **"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.
13. **"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.
14. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
15. **"Industrial User"** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
16. **"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.
17. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
18. **"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).
19. **"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.
20. **"POTW"** means a Publicly Owned Treatment Works.
21. **"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.
22. **"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.
23. **"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.
24. **"Treatment works"** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
25. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond

the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless of improper operations.

26. **"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.
27. **"MGD"** shall mean million gallons per day.
28. **"mg/l "**shall mean milligrams per liter or parts per million (ppm).
29. **"µg/l"** shall mean micrograms per liter or parts per billion (ppb).
30. **"cfs"** shall mean cubic feet per second.
31. **"ppm"** shall mean parts per million.
32. **"s.u."** shall mean standard units.
33. **"Weekday"** means Monday – Friday.
34. **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.

Final Fact Sheet

This Fact Sheet is for information and justification of the permit limits only. Please note that it is not enforceable. This final permitting decision is for renewal of the discharge Permit Number AR0036692 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 57-00042 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 facility and mailing address is:

   City of Mena
   323 Polk 53
   Mena, AR 71953

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: 7/1/2006
   Previous Permit Expiration Date: 6/30/2011

   The permittee submitted a permit renewal application on 12/27/2010. The discharge permit is being 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
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 three years (April 2008 to April 2011) were reviewed during the permit renewal process. There was one violation for pH which occurred in September 2008 and there were three violations for NH3-N which occurred in May 2008, May 2009, and April 2011 noted during the review of permit data.

Legal Order Review:

There are currently no active Consent Administrative Orders (CAOs) or Notice of Violations (NOVs) for this facility.

Inspections

The latest inspection on this facility was performed on 10/5/2010. This inspection revealed that the bar screen at the plant was inadequate (bar spacing too large) and the automatic composite sampler was collecting samples based on time rather than flow weighted. The facility submitted a response to these items and ADEQ subsequently issued a letter on 12/7/2010 stating that the responses adequately addressed the issues found in the inspection. Also, since the inspection the facility has replaced the old bar screen with a new bar screen which has the correct bar spacing.

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. Facility and outfall coordinates were revised to more accurate values.
2. Annual influent monitoring for CBOD5 and TSS was added in order to demonstrate compliance with 85% removal efficiency required in 40 CFR 133.102.
3. Effluent limits for copper were added which become effective after three years.
4. Schedule of compliance was included for new copper limits and the adoption of a Pretreatment Ordinance.
5. Dissolved oxygen limit is now expressed as an Instantaneous Minimum rather than a Monthly Average Minimum.
6. Definition of composite sample has changed.
7. Monitoring and reporting requirements were added for Nitrate+Nitrite Nitrogen and Total Phosphorus in accordance with the CPP to gather data on nutrient loading to the receiving stream.
8. Sample frequency was reduced from three/week to two/week for CBOD5, TSS, NH3-N, DO, FCB, TRC, and pH based on past performance of the treatment plant.

9. Pretreatment language changes have been added requiring the permittee to adopt, implement and enforce a Pretreatment Ordinance within twelve (12) months after the effective date of this permit.
10. Ammonia limits were revised for the months of April and May based on site-specific values for pH and temperature measured in Prairie Creek.

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: 34° 33' 48" Longitude: 94° 11' 14"

The receiving waters are named:

unnamed tributary of Prairie Creek, thence to Prairie Creek, thence to the Ouachita River in Segment 2F of the Ouachita River Basin. The receiving stream (unnamed tributary of Prairie Creek) with USGS Hydrologic Unit Code (H.U.C) of 8040101 and reach # 048 is a Water of the State classified for secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

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

A. 303(d) List:

The receiving stream for this discharger is an unnamed tributary of Prairie Creek which is in Segment 2F of the Ouachita River Basin. The discharge travels approximately 0.7 miles in the unnamed tributary before confluence with Reach 048 of Prairie Creek. Reach 048 of Prairie Creek is on the State's 2008 303(d) list as impaired due to turbidity, and the source of turbidity is listed as surface erosion. A TMDL for turbidity was finalized on March 27, 2008. This TMDL states that the total suspended solids affecting the turbidity represents inorganic suspended solids consisting of soil and sediment particles from soil erosion or sediment resuspension. The suspended solids discharged by point sources in the Prairie Creek basin are assumed to consist primarily of organic solids rather than inorganic solids. Discharges of organic suspended solids from point sources are already addressed through the permitting of point sources to maintain water quality standards for DO. Therefore, the wasteload allocations (WLAs) to support this TMDL will not require any changes to the permit concerning inorganic suspended solids.

Reach 048 of Prairie Creek is also on the State's currently approved 303(d) list as impaired due to dissolved oxygen, and the source of the impairment is listed as unknown. At this time, a TMDL has not been issued for dissolved oxygen. Since the permit already contains limits for dissolved oxygen, no further permitting action is needed concerning dissolved oxygen.

Reach 048 of Prairie Creek is also on the State's currently approved 303(d) list as impaired due to copper, and the source of the impairment is listed as unknown. At this time, a TMDL has not been issued for copper. The copper effluent data provided in the application indicates that copper is present in the effluent at concentrations which are above detection levels. Detection levels, where applicable, are consistent with EPA-defined minimum quantification levels (MQLs). Therefore, the proposed permit establishes effluent limits for copper, which were developed from the water quality standards using procedures in the CPP, to ensure that the discharge will not contribute copper to Prairie Creek at levels which may exacerbate the impairment of the receiving water's designated uses.

B. **Endangered Species**:

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

The Department of Arkansas Heritage identified the following species of conservation concern which are known to be present in the Ouachita River within five miles downstream of the outfall:

Lampsilis powellii, Arkansas Fatmucket - federal concern (threatened)
Toxolasma lividus, Purple Lilliput - state concern
Villosa lienosa, Little Spectaclecase – state concern

The limits in the permit are designed to protect all beneficial uses of the receiving waters, including propagation of desirable species of fish and other aquatic life, which includes the above species of concern. Therefore, ADEQ has determined that the final permit limits will serve to help protect the species of concern identified above.

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: 3.1 MGD

B. Type of Treatment: bar screen followed by a 2-cell aerated lagoon system followed by continuous backwash rapid sand filters followed by chlorine disinfection and post aeration

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.

10. **INDUSTRIAL WASTEWATER CONTRIBUTIONS.**

The permittee receives process wastewater from two significant industrial users (SIUs) as defined by 40 CFR Part 403.3(v). One of the SIUs (Street & Performance, Inc.) manufactures custom automotive parts and assembles custom automobile engines. The manufacturing process includes aluminum casting and milling, spray coating, buffing and polishing, and electroplating. Wastewaters produced from the electroplating operations generates several hazardous waste constituents such as barium, cadmium, copper, and chromium. According to the 2006 Hazardous Waste Annual Report, this SIU is a large quantity generator of hazardous waste. In May 2007, one of the employees of this SIU reported to the City of Mena that he witnessed the draining of a tank (either rinse waters or Nickel-Chrome plating bath) via a garden hose to a box drain adjacent to the building which drains directly into the city's sewer system. In June 2007, the city sampled the box drain where the alleged incident occurred and discovered an elevated chromium level (46 mg/L). On the same day that the alleged incident occurred, the POTW experienced a fish kill in one of the wastewater treatment lagoons. The SIU ceased discharging into the POTW in June 2007 after learning that the wastewater had elevated levels of metal constituents. In July 2007, ADEQ hazardous waste division conducted a Compliance Evaluation Inspection on this SIU, where several violations of hazardous waste regulations were noted. The hazardous waste division of ADEQ issued a Consent Administrative Order (CAO) in response to the findings of the inspection with a civil penalty of $16,500. The CAO contained numerous required actions related to bringing the SIU into compliance with all hazardous waste regulations in APC&EC Regulation No. 23. The Hazardous Waste Division confirmed that the SIU completed all required actions in accordance with the CAO and the CAO has been closed out.

In order to better monitor this SIU's discharges to the POTW, the water division has included requirements in this permit for the City of Mena to adopt a pretreatment ordinance which should provide the City of Mena the authority to better monitor the SIU contributions to the POTW so that episodes such as the one in 2007 will not occur in the future.

11. SEWAGE SLUDGE PRACTICES.

Sludge generated by the treatment system remains in the lagoons. The facility cleaned the sludge out of the ponds in 2004. The facility reported in the renewal application submitted in December 2010, that the sludge had accumulated to a depth of about 4 feet in the first lagoon in about 12 of the 25 acres. The facility has recently submitted requests to two engineering firms to provide cost estimates for the land application of the sludge and related costs of acquiring a land application permit and developing a sludge management plan. A review of the last three years of effluent data indicates that the current sludge levels are not affecting the facility's ability to meet permit limits at this time. The Department held a meeting with the permittee on August 23, 2011 to discuss the sludge issue and it was emphasized that the city should take a proactive approach to sludge management as opposed to waiting until the sludge buildup started affecting the treatment plant's ability to comply with permit limits.

12. PERMIT CONDITIONS.

The Arkansas Department of Environmental Quality has made a determination to issue a final permit for the discharge described in the application. Permit requirements are based on federal regulations (40 CFR Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 CFR Part 403 and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et. seq.).

A. 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)	259	10	15	two/week	composite

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.		
Total Suspended Solids (TSS)	388	15	22.5	two/week	composite
Ammonia Nitrogen (NH3-N)					
(April)	127	4.9	12	two/week	composite
(May)	78	3	4.5	two/week	composite
(June-October)	55	2.1	4.5	two/week	composite
(November-March)	153	5.9	12	two/week	composite
Dissolved Oxygen (DO)	N/A	7.1 (Inst. Min.)		two/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
	N/A	1000	2000	two/week	grab
Total Residual Chlorine (TRC)	N/A	<0.1 mg/l (Inst. Max.)		two/week	grab
Total Phosphorus (TP)	Report	Report	Report	once/month	grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	Report	Report	Report	once/month	grab
Total Recoverable Copper (Cu)[1]	0.3	10.5 µg/L	21 µg/L	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	two/week	grab
Chronic WET Limits					
	Daily Average Minimum	7-day Minimum			
Pimephales promelas (Chronic) Whole Effluent Lethality (7-day NOEC) 22414	Not < 100%	Not < 100%		once/quarter	composite
Ceriodaphnia dubia (Chronic) Whole Effluent Lethality (7-day NOEC) 22414	Not < 100%	Not < 100%		once/quarter	composite
Pimephales promelas (Chronic)		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
Ceriodaphnia dubia (Chronic)		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 Copper is report only beginning on the effective date and lasting three years after the effective date.

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

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
CBOD5	10	15	25	40	10	15	10	15
TSS	N/A	N/A	15	22.5	15	22.5	15	22.5
NH3-N								
(April)	4.9	12	N/A	N/A	2.1	5.2	4.9*	12*
(May)	3	4.5	N/A	N/A	2.1	4.5	3*	4.5*
(June-October)	2.1	4.5	N/A	N/A	2.1	4.5	2.1	4.5
(Nov-March)	5.9	12	N/A	N/A	5.9	12	5.9	12
DO	7.1 (Inst. Min.)		N/A		7.1 (Monthly Avg. Min.)		7.1 (Inst. Min.)	
FCB (col/100 ml)	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
Total Rec. Copper	10.5 µg/L	21 µg/L	N/A	N/A	N/A	N/A	10.5 µg/L	21 µg/L
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 Limit	N/A		Report		Report		Report	

*NH3-N limits were recalculated and revised from the previous permit based on site specific values of pH and temperature measured in Prairie Creek in April and May.

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

Parameter	Water Quality or Technology	Justification
CBOD5	Water Quality	MultiSMP Models dated 2/3/1993 (critical season) and 12/10/1996 (primary season)
TSS	Technology	Best Engineering Judgement based on the previous permit and 40 CFR 122.44(l)
NH3-N		
(April)	Water Quality	Reg. 2.512 (monthly average). Limits were revised from previous permit based on site specific values of pH and temperature measured in Prairie Creek in April. New monthly average limit is toxicity-based using maximum pH of 6.9 s.u. and maximum temperature of 18°C measured in Prairie Creek from 2006-2010 at OUA0040. MultiSMP Model dated 2/3/1993 (7-day avg)
(May)	Water Quality	Reg. 2.512 (monthly average). Limits were revised from previous permit based on site specific values of pH and temperature measured in Prairie Creek in April. New monthly average limit is toxicity-based using maximum pH of 6.8 s.u. and maximum temperature of 22°C measured in Prairie Creek from 2006-2010 at OUA0040. MultiSMP Model dated 2/3/1993 (7-day avg)
(June-October)	Water Quality	Reg. 2.512 (monthly average) MultiSMP Model dated 2/3/1993 (7-day avg)
(November-March)	Water Quality	Reg. 2.512 (monthly average) MultiSMP Model dated 12/10/1996 (7-day avg)
DO[1]	Water Quality	Reg. 2.505
Fecal Coliform Bacteria	Water Quality	Reg. 2.507
TRC	Technology	Best Engineering Judgement based on the previous permit and Reg. 2.508
Total Recoverable Copper	Water Quality	Reg. 2.508 and Section IV of Toxic Control Implementation Procedure in Appendix D of CPP
Total Phosphorus[2]	Technology	Nutrient Control Implementation Plan in Appendix D of the CPP
Nitrate + Nitrite Nitrogen[2]	Technology	Nutrient Control Implementation Plan in Appendix D of the CPP
pH	Water Quality	Reg. 2.504
Chronic WET Limit	Technology	Based on previous permit and 40 CFR 122.44(l) and Section III of the Toxic Control Implementation Procedure in Appendix D of CPP

1 Dissolved oxygen limit is the same as previous permit, but the limit is now expressed as an instantaneous minimum instead of a monthly average minimum.
2 Report only.

B. Anti-backsliding

The final 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 final permit adds effluent limits for Total Recoverable Copper effective after three years, and also adds monitoring/reporting requirements for Nitrate+Nitrite Nitrogen and Total Phosphorus.

The final permit maintains the requirements of the previous permit except for revised limits for NH3-N during April and May. The permit writer calculated new toxicity-based ammonia criteria for the months of April and May based on the maximum temperature and pH measured in Prairie Creek during these months. Revising the ammonia limitations from the previous permit during April and May, based on new values collected on the receiving stream temperature and pH during these months, is considered new information, thus, is not considered backsliding.

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 3.1 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 1.5 times the oxygen-based monthly average limit derived from the MultiSMP model dated 2/3/1993.

The 7-Day Average limit for FCB is based on Reg. 2.507.

The 7-Day Average limit for Copper is based on Section IV of Toxic Control Implementation Procedure in Appendix D of CPP.

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. The limits for the months of April and May were revised from the previous permit based on new temperature data measured in the receiving stream (Prairie Creek) during the past five years during those months. The toxicity-based ammonia criteria for April and May were determined from the maximum temperature and pH measured in each of the months of April and May. The toxicity-based criteria for April is based on a temperature of 18°C and a pH of 6.9 s.u. The toxicity-based criteria for May is based on a temperature of 22°C and a pH of 6.8 s.u. These were the highest values measured at the monitoring station during each of those months. To be conservative, the highest values of temperature and pH were used since the ammonia criteria is more stringent at higher temperatures and pH.

A comparison of the toxicity-based limits and the oxygen-based limits is shown in the table below:

NH3-N Chronic Toxicity Criteria vs. Oxygen-based criteria						
	Toxicity-Based		Oxygen-Based		Permit Limits	
Month	Monthly Average	7-day Average	Monthly Average	7-day Average	Monthly Average	7-day Average
April	4.9	12.2	8	12	4.9	12
May	3.9	9.7	3	4.5	3	4.5
Jun-Oct	2.1	5.2	3	4.5	2.1	4.5
Nov-March	5.9	14.7	8	12	5.9	12

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. Updates to the 208 Plan have been made to include monthly average toxicity-based ammonia limits of 4.9 mg/l for April and 3.0 mg/l for May.

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).

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 the calculations:

Parameter	Value	Source
Effluent Flow = Q	3.1 MGD = 4.79 cfs	Design Flow of WWTP
Background Flow = 7Q10	0 cfs	"Identification and Classification of Perennial Streams of Arkansas," Arkansas Geological Commission, R. A. Hunrichs, 1983.
TSS	2 mg/l	CPP (Ouachita Mountain Ecoregion)
Hardness as CaCo3	31 mg/l	CPP (Ouachita Mountain Ecoregion)
pH	6.7 s.u.	Average value at ADEQ Station OUA0040 (2004-2009)

The following pollutants were reported above the required MQL:

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Total Recoverable Copper	8*	0.5
Total Recoverable Nickel	14*	0.5
Total Recoverable Phenols	8*	5
Total Recoverable Zinc	16*	20

*Geometric mean of 13 data points consisting of 12 monthly samples collected from June 2006 – May 2007, and one priority pollutant scan sample taken in August 2010.

ADEQ has determined from the submitted information that the discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard as follows:

(a) **Aquatic Toxicity**

Substance	Concentration (C_e) µg/l	C_e X 2.13	IWC µg/l	Water Quality Standards (WQS)	
				Acute, µg/l	Chronic, µg/l
Total Recoverable Copper	8	17	17	12.67	9.37

Instream Waste Concentrations (IWC's) have been calculated in the manner described in the CPP.

As can be seen in the table above, the calculated level for the following pollutants are sufficiently higher than the water quality standards. Therefore, the limits for those pollutants are calculated in the manner described in the CPP and are included in the permit as follows:

Final Limits		
Substance	AML, µg/l	DML, µg/l
Total Recoverable Copper	10.5	21

14. **TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS.**

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

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

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

Implementation

Arkansas has established a narrative water quality standard under the authority of Section 303 of the CWA which states "toxic materials shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with the normal propagation, growth and survival of aquatic biota."

Whole effluent toxicity testing conducted by the permittee has shown potential ambient toxicity to be the result of the permittee's discharge to receiving stream or water body, at the appropriate instream critical dilution. Pursuant to 40 CFR 122.44(d)(1)(v), ADEQ has determined from the permittee's self reporting that the discharge from this facility does have the reasonable potential to cause, or contribute to an instream excursion above the narrative standard within the applicable State Water Quality Standards, in violation of Section 101(a)(3) of the Clean Water Act. Therefore, the draft permit continues both monthly average and 7-day minimum effluent limitations for lethality following Regulations promulgated by 40 CFR 122.44(d)(1)(v). These effluent limitations for lethality (7-day NOEC) will be continued to be applied at outfall 001. The daily average lethality (7-day NOEC) and 7-day minimum lethality (7-day NOEC) value shall not be less than 100% (Critical Dilution) effluent for outfall 001.

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

TOXICITY TESTS	FREQUENCY
Chronic WET	Once/quarter

Requirements for measurement frequency are based on the CPP.

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

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

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

Qd = Design flow = 3.1 MGD = 4.79 cfs
7Q10 = 0 cfs
Qb = Background flow = 0.67 X 7Q10 = 0 cfs
CD = (4.79) / (4.79 + 0) X 100 = 100%

Toxicity tests shall be performed in accordance with protocols described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are 32%, 42%, 56%, 75%, and 100% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 100% effluent. The requirement for chronic WET tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead minnow (*Pimephales promelas*) are representative of organisms indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

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

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

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

Permit Number:	AR0036692	AFIN:	57-00042	Outfall Number:	001
Date of Review:	9/1/2011	Reviewer:	M. Barnett		
Facility Name:	City of Mena				
Previous Dilution series:	32, 42, 56, 75, 100	Proposed Dilution Series:	32, 42, 56, 75, 100		
Previous Critical Dilution:	100	Proposed Critical Dilution:	100		
Previous TRE activities:		1993 & 2003			

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	
9/6/2006	100	100	100	100	
12/6/2006	100	100	100	100	
3/6/2007	100	100			
3/6/2007	**75**	**32**	100	100	*
4/6/2007	**75**	**32**	100	**32**	*
6/6/2007	**75**	**75**			*
7/6/2007	100	100	**56**	**56**	*
8/6/2007	100	**42**	100	100	*
9/6/2007	100	100	100	100	
12/6/2007	100	100	100	100	
3/6/2008	100	100	100	100	
6/6/2008	100	100	100	100	
9/6/2008	100	100	100	100	
12/6/2008	100	100	100	100	
3/6/2009	100	100	100	100	
6/6/2009	100	100	100	100	
9/6/2009	100	100	100	100	
12/31/2009	100	100	100	100	
3/31/2010	100	100	100	100	
6/30/2010	100	100	100	100	
9/30/2010	100	100	100	100	
12/31/2010	100	100	100	100	
3/31/2011	100	100	100	100	
6/30/2011	**75**	**75**	**75**	**0**	
7/31/2011	100	100	100	100	retest 1
8/30/2011	100	100	100	100	retest 2

Failures are noted in BOLD

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	75	32	56	31
TU at Min Observed	1.33	3.13	1.79	3.23
Count	26	24	24	24
Failure Count	4	5	2	3
Mean	1.051	1.242	1.047	1.214
Std. Dev.	0.123	0.621	0.171	0.625
CV	0.1	0.5	0.2	0.5
RPMF	1.1	1.3	1.1	1.3
Reasonable Potential	1.467	4.063	1.964	4.194
100/Critical dilution	1.000	1.000	1.000	1.000
Does Reasonable Potential Exist	Yes	Yes	Yes	Yes

PERMIT ACTION

P. promelas lethal - Limit - 100%
P. promelas sub-lethal - monitoring
C. dubia lethal - Limit - 100%
C. dubia sub-lethal - monitoring

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

In the past five years there has been one *P. promelas* and one *C. dubia* sub-lethal WET test below the critical dilution. The facility then reported no additional failures in the two consecutively monthly retests required by their permit. At this time, there is insufficient evidence to support the inclusion of sub-lethal limits. Additional data is needed to confirm the necessity of sub-lethal limits; therefore they are not required at this time.

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

The permittee receives process wastewater from two significant industrial users (SIUs) as defined by 40 CFR Part 403.3(v). One of these SIUs (Street & Performance, Inc.) manufactures custom automotive parts and assembles custom automobile engines. In May 2007, one of the employees of this SIU reported to the City of Mena that he witnessed the draining of a tank (either rinse waters or Nickel-Chrome plating bath) via a garden hose to a box drain adjacent to the building which drains directly into the city's sewer system. In June 2007, the city sampled the box drain where the alleged incident occurred and discovered an elevated chromium level (46 mg/L). On the same day that the alleged incident occurred, the POTW experienced a fish kill in one of the wastewater treatment lagoons. The SIU ceased discharging into the POTW in June 2007 after learning that the wastewater had elevated levels of metal constituents. In July 2007, ADEQ hazardous waste division conducted a Compliance Evaluation Inspection on this SIU, where several violations of hazardous waste regulations were noted. The hazardous waste division of ADEQ issued a Consent Administrative Order (CAO) in response to the findings of the inspection with a civil penalty of $16,500. The CAO contained numerous required actions related to bringing the SIU into compliance with all hazardous waste regulations in APC&EC Regulation No. 23. The Hazardous Waste Division confirmed that the SIU completed all required actions in accordance with the CAO and the CAO has been closed out.

Due to WET failures occurring during the same time period of the documented episode in 2007 with the Street & Performance facility, the Department has a reasonable basis to believe that the WET failures were caused by the unlawful actions of the SIU, rather than a lack of proper operation of the POTW. Therefore, based on the consistent compliance with WET limits prior to and after the incident, the Department does not believe it is reasonable to impose sub-lethal WET limits on the POTW at this time. The permit contains a reopener clause which will allow the permit to be reopened to include additional WET limits at any time during the permit term in the event that sub-lethal failures begin occurring.

In order to better monitor this SIU's discharges to the POTW, the water division has included requirements in this permit for the City of Mena to adopt, implement, and enforce a Pretreatment Ordinance within 12 months after the permit effective date which should provide the City of Mena the authority to better monitor the SIU contributions to the POTW so that episodes such as the one in 2007 will not occur in the future.

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)].

A review of the past two years of effluent data for CBOD5, TSS, NH3-N, DO, TRC, FCB, and pH indicates that the facility is eligible for a performance-based monitoring frequency reduction. Therefore, based on EPA's "Interim Guidance for Performance-Based Reduction of NPDES Permit Monitoring Frequencies" (April 1996), the permit writer determined that the sample frequency for the above listed parameters were eligible for a reduced sampling frequency from three/week to two/week, based on data reported during the past two years.

The sample frequency for Whole Effluent Toxicity is continued from the previous permit. The sample frequency for Copper, Phosphorus, and Nitrate+Nitrite-Nitrogen was established at once/month based on the best engineering judgement of the permit writer.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
CBOD5	three/week	24-hr composite	two/week	composite
TSS	three/week	24-hr composite	two/week	composite
NH3-N	three/week	24-hr composite	two/week	composite
DO	three/week	grab	two/week	grab
FCB	three/week	grab	two/week	grab
pH	three/week	grab	two/week	grab
TRC	three/week	grab	two/week	grab
TP	n/a	n/a	once/month	grab
$NO_3 + NO_2$ - N	n/a	n/a	once/month	grab
Copper	n/a	n/a	once/month	composite
Chronic WET	once/quarter	24-hr composite	once/quarter	composite

17. STORMWATER REQUIREMENTS

The permittee currently has a stormwater no exposure certification (tracking # ARR000145) which was issued on 3/26/2010 and expires on 6/30/2014. Therefore, stormwater pollution prevention plan requirements are not included in this permit.

18. PERMIT COMPLIANCE.

A Schedule of Compliance has been included in this permit for the requirement to adopt, implement, and enforce a Pretreatment Ordinance. A schedule of compliance of 12 months after the permit effective date is being allowed which should provide the city ample time to adopt a pretreatment ordinance, implement the ordinance, and start enforcing the ordinance. The pretreatment ordinance will enable the city to better monitor and control the SIU contributions to the wastewater treatment facility.

A Schedule of Compliance has been included in this permit for the new effluent limitations for Copper. Compliance with all permit requirements is required in accordance with the schedule provided in Part IB of the permit. The Department has chosen to exercise its discretion provided for in Reg. 2 to allow a 3 year Schedule of Compliance for the new Copper limit. A review of the copper data collected on the effluent from June 2006 to May 2007 indicates that the new copper limit would have been exceeded 3 out of 12 months (25% of the time) during this time period. Therefore, a 3 year compliance schedule will give the facility time to evaluate whether operational changes at the water treatment and/or wastewater treatment facilities can reduce copper to sufficient levels to consistently meet effluent limits. The compliance schedule will also allow the facility time to explore and evaluate possible treatment technologies that will enable the facility to comply with the copper effluent limits on a consistent basis.

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. AR0036692 received 12/27/2010.
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 AR0036692.
H. Discharge Monitoring Reports (DMRs).
I. "Arkansas List of Impaired Waterbodies 2008 (303(d) list)", ADEQ.
J. "Identification and Classification of Perennial Streams of Arkansas", Arkansas Geological Commission, R.A. Hunrichs, 1983.
K. Continuing Planning Process (CPP).
L. Technical Support Document For Water Quality-based Toxic Control.
M. Inspection Report dated 10/5/2010.

N. Monitoring results for priority metals conducted June 2006 to May 2007 on influent and effluent.
O. ADEQ memo dated 1/21/2011 concerning recommendations for changes to permit based on 303(d) list.
P. Consent Administrative Order LIS 08-040 issued 4/8/2008 to Street & Performance, Inc.
Q. Comments received on draft permit from City of Mena on 12/05/2011.
R. Letter from The Department of Arkansas Heritage to ADEQ dated 12/16/2011.
S. Temperature and pH values measured in Prairie Creek at monitoring station OUA0040 during April and May of 2006 to 2010 for determination of toxicity-based ammonia criteria during April and May.

21. 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

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.: AR0036692

Applicant: City of Mena
Mena Wastewater Treatment Plant

Prepared by: Shane Byrum

Public Notice Date: The draft permit was publicly noticed on or about 11/17/2011.

The following comments have been received on the draft permit:

- Correspondence from Mike Spencer, Mena Wastewater Superintendent, to Shane Byrum, ADEQ dated November 29, 2011.
- Correspondence from Mary Timmons, Mena Water Utilities Manager, to Shane Byrum, ADEQ dated November 21, 2011.
- Correspondence from Katie Shannon, Department of Arkansas Heritage, to Shane Byrum, ADEQ dated December 16, 2011.

ISSUE #1

The Department of Arkansas Heritage stated that the Ouachita River has been recognized on the state's Registry of Natural and Scenic Rivers and on the Nationwide Rivers Inventory.

This agency has also identified the following species of conservation concern which are known to be present in the Ouachita River within five miles downstream of the outfall:

Lampsilis powellii, Arkansas Fatmucket - federal concern (threatened)
Toxolasma lividus, Purple Lilliput - state concern
Villosa lienosa, Little Spectaclecase – state concern

RESPONSE #1

ADEQ acknowledges that the Ouachita River has been recognized on the state's Registry of Natural and Scenic Rivers (NSR) and on the Nationwide Rivers Inventory. However, since the direct receiving stream is Prairie Creek, the designations described in the fact sheet relate to Prairie Creek and not the Ouachita River. Therefore, no changes to the receiving stream description is required in the fact sheet.

ADEQ has added the identified species of conservation concern to Section 7.B. of the Fact Sheet (Endangered Species Section). The limits in the permit are designed to protect all beneficial uses

of the receiving waters, including propagation of desirable species of fish and other aquatic life, which includes the above species of concern. Therefore, ADEQ has determined that the final permit limits will serve to help protect the species of concern identified above.

ISSUE #2

The draft permit includes new copper monitoring requirements starting on the effective date and lasting for three years, and new copper limits which become effective three years after the permit effective date. The permittee requests that a condition be added to the permit to allow for the removal of the copper limits and monitoring requirements if copper data collected within the first 12 months of the permit is consistently below the water quality standards.

The permittee states that all copper data submitted with the application except for one sample were collected prior to Mena Water Utilities requiring the Street & Performance facility to meet 40 CFR 433 Metal Finishing standards, and prior to the date that ADEQ Hazardous Waste Division issued and closed a CAO for this industry as discussed in Section 10 of the Fact Sheet. The permittee states that control of the discharge from this industry to the Mena collection system has reduced copper in the wastewater plant's discharge as evidenced by the August 2010 effluent total recoverable copper concentration of 2.8 µg/l measured in the PPS scan for the permit renewal application.

RESPONSE #2

In accordance with 40 CFR 122.44(d)(1)(i), when the 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. Since the copper effluent data collected thus far shows reasonable potential to cause or contribute to an exceedance above the water quality standards, the permit must include effluent limits for copper. However, the Department agrees to include the following language in Part II.5 of the final permit to give the facility the opportunity to demonstrate that the discharge is not causing or contributing to the impairment or an exceedance of the water quality standards:

"After a minimum of 12 months of copper data is collected, the permittee can request the Department to re-evaluate this data to determine if the facility still shows reasonable potential to cause or contribute to an exceedance of the water quality standards. After review of this new data, the Department may remove the final copper limitations by a major permit modification if the Department concludes that the discharge no longer shows reasonable potential to cause or contribute to an exceedance of the water quality standards. However, if Prairie Creek is still listed on the State's approved 303(d) list as impaired due to copper, then copper limitations may still be required. During the interim period, the permittee has the option to undertake any study deemed necessary to demonstrate that the discharge is not causing or contributing to the copper impairment in Prairie Creek."

ISSUE #3

The facility stated that as temperature drops there is a corresponding decline in the populations of nitrifying bacteria within the lagoon system, thus during the colder months there is a decrease in nitrification making it more difficult to meet ammonia limits. The facility stated that the more stringent ammonia limits in the spring are difficult to meet and the facility requests that the less stringent limits for November-March time period be extended to the months of April and May.

RESPONSE #3

ADEQ agrees to revise the ammonia limitations for April and May based on a review of the pH and temperature values that have been measured during these months during the past five years in the receiving stream (Prairie Creek, ADEQ Station OUA0040). However, the 7-day average ammonia limit for May will remain unchanged because the 7-day average oxygen-based ammonia limits for May are more stringent than the 7-day average toxicity-based criteria.

The toxicity-based ammonia criteria found in Reg. 2.512 are based on temperature and pH. The ammonia criteria become more stringent as the temperature and pH increase. Therefore, the maximum temperature and pH measured in April and May was used to derive the toxicity-based ammonia criteria for these months. The maximum temperature and pH measured in the receiving stream in April was 18°C and 6.9 s.u., respectively. The maximum temperature and pH measured in the receiving stream in May was 22°C and 6.8 s.u., respectively. The following table compares the toxicity-based criteria in Reg. 2.512 versus the dissolved oxygen-based criteria from the MultiSMP model. The more stringent of the toxicity-based and oxygen-based limits are included in the permit.

NH3-N Chronic Toxicity Criteria vs. Oxygen-based criteria						
	Toxicity-Based		Oxygen-Based		Permit Limits	
Month	Monthly Average	7-day Average	Monthly Average	7-day Average	Monthly Average	7-day Average
April	4.9	12.2	8	12	4.9	12
May	3.9	9.7	3	4.5	3	4.5
Jun-Oct	2.1	5.2	3	4.5	2.1	4.5
Nov-March	5.9	14.7	8	12	5.9	12

In accordance with 40 CFR 122.44(l), when a permit is renewed the effluent limitations in the renewed permit may not be less stringent than those of the previous permit, unless technical errors were made or new information is available that would have justified less stringent limits. Revising the ammonia limitations from the previous permit during April and May, based on new values collected on the receiving stream temperature and pH during these months, is considered new information, thus, is not considered backsliding. Since the 7Q10 flow of the receiving stream is zero, the permit limits are equal to the more stringent of the instream ammonia toxicity-based or oxygen-based standards shown in the table above.