

Permit Number: AR0021865

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

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

City of Eureka Springs
3174 E. Van Buren
Eureka Springs, AR 72632

is authorized to discharge from a facility located as follows: 100 Highway 23 North, in Section 10, Township 20 North, Range 26 West in Carroll County, Arkansas.

Latitude: 36° 25' 15"; Longitude: 93° 44' 06"

to receiving waters named:

Leatherwood Creek thence to Table Rock Lake, thence to the White River in Segment 4K of the White River Basin.

The outfalls are located at the following coordinates:

Outfall 001 (old): Latitude: 36° 25' 30"; Longitude: 93° 44' 06"

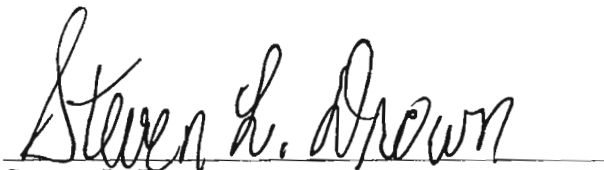
Outfall 001 (new): Latitude: 36° 25' 15"; Longitude: 93° 44' 06"

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

Issue Date: August 31, 2007

Effective Date: December 1, 2007

Expiration Date: November 30, 2012



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

**PART I
PERMIT REQUIREMENTS**

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 (old)³ - treated municipal wastewater.

During the period beginning on the effective date and lasting until 30 days after the new treatment system starts operation, the permittee is authorized to discharge from Outfall 001 (old). Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow ¹	N/A	Report	Report	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	58.4	10.0	15.0	three/month	3-hr composite
Total Suspended Solids (TSS)	87.6	15.0	22.5	three/month	3-hr composite
Ammonia Nitrogen (NH3-N)					
(May-Oct)	14.6	2.5	3.8	three/month	3-hr composite
(Nov-Apr)	29.2	5.0	7.5	three/month	3-hr composite
Dissolved Oxygen ²	N/A	6.5 (Monthly Avg. Min.)		three/month	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	200	400	three/month	grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	58.4	10.0	15.0	three/month	3-hr composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	three/month	grab

- 1 Report monthly average and daily maximum as MGD.
- 2 See item #27(a) of Part IV (Dissolved Oxygen).
- 3 See Condition No. 10 of Part III.

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit.

**PART I
PERMIT REQUIREMENTS**

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 (new)³ - treated municipal wastewater.

During the period beginning 30 days after the new treatment system starts operation and lasting until the expiration date, the permittee is authorized to discharge from Outfall 001 (new). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow ¹	N/A	Report	Report	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	75.1	10.0	15.0	three/month	3-hr composite
Total Suspended Solids (TSS)	112.6	15.0	22.5	three/month	3-hr composite
Ammonia Nitrogen (NH3-N)					
(April)	Report	Report	3.9	three/month	3-hr composite
(May-Oct)	18.8	2.5	3.8	three/month	3-hr composite
(Nov-Mar)	37.6	5.0	7.5	three/month	3-hr composite
Dissolved Oxygen ²	N/A	6.5 (Monthly Avg. Min.)		three/month	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	200	400	three/month	grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	75.1	10.0	15.0	three/month	3-hr composite
Total Phosphorus	7.5	1.0	2.0	three/month	3-hr composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	three/month	grab

- 1 Report monthly average and daily maximum as MGD.
- 2 See item #27(a) of Part IV (Dissolved Oxygen).
- 3 See Condition No. 10 of Part III.

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit.

SECTION B. SCHEDULE OF COMPLIANCE

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

Compliance with all parameters at outfall 001 (old) is required upon the effective date of the permit and lasting until 30 days after the new treatment system begins operation.

Compliance with all parameters at outfall 001 (new) is required beginning 30 days after the new treatment system begins operation and lasting until expiration date of the permit.

PART II STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; 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 ten thousand dollars (\$10,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

3. Permit Actions

This permit may be modified, revoked and reissued, or terminated for 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 II.A.10. herein.

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

4. Toxic Pollutants

Notwithstanding Part II.A.3., if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under 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 II.B.4.a.), and "Upsets" (Part II.B.5.b), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statutes or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

6. Oil and Hazardous Substance Liability

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

7. State Laws

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

8. Property Rights

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

9. Severability

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

10. Permit Fees

The permittee shall comply with all applicable permit fee requirements for wastewater discharge permits as described in APCEC Regulation No. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR Parts 122.64 and 124.5 (d), as adopted in APCEC Regulation No. 6 and the provisions of APCEC Regulation No. 8.

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

- a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- b. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance, and testing functions required to insure compliance with the conditions of this permit.

2. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the

conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. Duty to Mitigate

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

4. Bypass of Treatment Facilities

a. Bypass not exceeding limitation

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

b. Notice

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

c. Prohibition of bypass

- (1) Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal or preventive maintenance; and
 - (c) The permittee submitted notices as required by Part II.B.4.b.

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

5. Upset Conditions

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

6. Removed Substances

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

7. Power Failure

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

SECTION C – MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance.

Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharges shall be monitored.

2. Flow Measurement

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

3. Monitoring Procedures

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

4. Penalties for Tampering

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

5. Reporting of Monitoring Results

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form (EPA No. 3320-1). Permittees are required to use preprinted DMR forms provided by ADEQ, unless specific written authorization to use other reporting forms is obtained from ADEQ. Monitoring results obtained during the previous calendar month shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month following the completed reporting period to begin on the effective date of the permit. Duplicate copies of DMR forms signed and certified as required by Part II.D.11. and all other reports required by Part II.D., shall be submitted to the Director at the following address:

NPDES Enforcement Section
Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

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

6. Additional Monitoring by the Permittee

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

7. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

8. Record Contents

Records and monitoring information shall include:

- a. The date, exact place, time and methods of sampling or measurements, and preservatives used, if any;
- b. The individuals(s) who performed the sampling or measurements;
- c. The date(s) and time analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The measurements and results of such analyses.

9. Inspection and Entry

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

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
- d. Sample, inspect, or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice and provide plans and specification to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:

For Industrial Dischargers

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

For POTW Dischargers:

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

2. Anticipated Noncompliance

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

3. Transfers

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

4. Monitoring Reports

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

5. Compliance Schedule

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

6. Twenty-four Hour Report

- a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:
 - (1) a description of the noncompliance and its cause;
 - (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - (3) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- b. The following shall be included as information which must be reported within 24 hours:
 - (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
 - (2) Any upset which exceeds any effluent limitation in the permit and
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit to be reported within 24 hours to the Enforcement Section of the Water Division of the ADEQ.
- c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours to the Enforcement Section of the Water Division of the ADEQ.

7. Other Noncompliance

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

8. Changes in Discharge of Toxic Substances for Industrial Dischargers

The permittee shall notify the Director as soon as he/she knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 CFR Part 122.42(a)(1); or
- b. That any activity has occurred or will occur which would result in any discharge on a non-routine or infrequent basis of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 CFR Part 122.42(a)(2).

9. Duty to Provide Information

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

10. Duty to reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated in APCEC Regulation No. 6.

11. Signatory Requirements

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

- a. All **permit applications** shall be signed as follows:

- (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

- (ii) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- (2) For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or
- (3) For a municipality, State, Federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (i) The chief executive officer of the agency, or
 - (ii) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- b. All **reports** required by the permit and **other information** requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described above.
 - (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) The written authorization is submitted to the Director.
- c. Certification. Any person signing a document under this section shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

12. Availability of Reports

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

13. Penalties for Falsification of Reports

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

PART III OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class III by the State of Arkansas in accordance with Act 211 of 1971, Act 1103 of 1991, Act 556 of 1993, and APCEC Regulation No. 3, as amended.
2. For publicly owned treatment works, the 30-day average percent removal for Carbonaceous Biochemical Oxygen Demand (CBOD5) and Total Suspended Solids (TSS) shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR Part 133.102, as adopted by reference in APCEC Regulation No. 6.
3. Produced sludge shall be disposed of by land application only when meeting the following criteria:
 - a. Sewage sludge from treatment works treating domestic sewage (TWTDS) must meet the applicable provisions of 40 CFR Part 503; and
 - b. The sewage sludge has not been classified as a hazardous waste under state or federal regulations.
4. The permittee shall give at least 120 days prior notice to the Director of any change planned in the permittee's sludge disposal practice or land use applications, including types of crops grown (if applicable).
5. The permittee shall report all overflows with the Discharge Monitoring Report (DMR) submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of overflow; observed environmental impacts from the overflow; action taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). All overflows which endanger health or the environment shall be orally reported to this department (Enforcement Section of Water Division), within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment, shall be provided within 5 days of the time the permittee becomes aware of the circumstance.
6. In accordance with 40 CFR Parts 122.62 (a)(2) and 124.5, this permit may be reopened for modification or revocation and/or reissuance to require additional monitoring and/or effluent limitations when new information is received that actual or potential exceedance of State water quality criteria and/or narrative criteria are determined to be the result of the permittee's discharge(s) to a relevant water body or a Total Maximum Daily Load (TMDL) is established or revised for the water body that was not available at the time of the permit

issuance that would have justified the application of different permit conditions at the time of permit issuance.

7. Other Specified Monitoring Requirements

The permittee may use alternative appropriate monitoring methods and analytical instruments other than as specified in Part 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 NPDES Section of the Water Division of the ADEQ for use of the alternate method or instrument.
- The method and/or instrument is in compliance with 40 CFR Part 136 or acceptable to the Director; and
- All associated devices are installed, calibrated, and maintained to insure the accuracy of the measurements and are consistent with the accepted capability of that type of device. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

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

8. Contributing Industries and Pretreatment Requirements

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

1. pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
2. pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;
3. solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
4. any pollutant, including oxygen demanding pollutants (e.g., BOD),

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

5. heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 deg. C (104 deg. F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
 6. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
 8. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
- B. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.
- C. The permittee shall provide adequate notice to the Department of the following:
1. any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 or 306 of the Act if it were directly discharging those pollutants; and
 2. any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.
 3. Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

9. ADDITIONAL CONDITIONS FOR LAND APPLICATION OF BIOSOLIDS

A. GENERAL REQUIREMENTS:

1. Only biosolids which are not classified as a hazardous waste under state or federal regulations may be land applied.
2. Plant Available Nitrogen (PAN) will not be applied at a rate exceeding the annual nitrogen uptake of the crop. At no time will the nitrogen application rate (PAN/acre-year) be allowed to exceed the site specific rate approved by the Department.
3. Biosolids with Polychlorinated Biphenyls (PCB's) concentrations equal or greater than 50 mg/kg (dry basis) will not be land applied at any time.
4. **CEILING CONCENTRATIONS** (milligrams per kilogram, dry weight basis): If the biosolids to be land applied exceed any of the pollutant concentrations listed in **Table 1** below, the biosolids shall not be land applied.

TABLE 1	
Element	Concentration (mg/kg)
Arsenic	75
Cadmium	85
Chromium	*
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

* This value is being reevaluated by US EPA

5. **POLLUTANTS LIMITS:** When bulk biosolids are applied to agricultural land, forest, a public contact site, or reclamation site, the permittee shall not exceed the Cumulative Pollutant Loading Rate values listed in **Table 2**, or the Pollutant Concentration values listed in **Table 3**.

TABLE 2		
<u>Element</u>	Cumulative Pollutant Loading Rate	
	<u>Kg/ha</u>	<u>lbs/ac</u>
Arsenic	41	37
Cadmium	39	35
Chromium	*	*
Copper	1,500	1,350
Lead	300	270
Mercury	17	15
Molybdenum	*	*
Nickel	420	378
Selenium	100	90
Zinc	2,800	2,520

*These values are being reevaluated by US EPA.

TABLE 3	
<u>Element</u>	Monthly Average Concentration (mg/kg)
Arsenic	41
Cadmium	39
Chromium	*
Copper	1,500
Lead	300
Mercury	17
Molybdenum	*
Nickel	420
Selenium	36
Zinc	2,800

*These values are being reevaluated by US EPA.

6. The biosolids generator must issue a signed certification stating that the Pathogen Reduction, Vector Attraction Reduction, and Pollutant Concentration Limits have been met. The State requirements on Pathogen Reduction, Vector Attraction Reduction, and Pollutant Concentration Limits are the same as those listed in 40 CFR Part 503. All the above information must be made available to the land-applicator before the biosolids materials are delivered. Concurrently, a signed copy of each certification must be also submitted to the ADEQ Water Division.
7. Biosolids can only be stored in accordance with the permit and the approved waste management plan, if provisions are made in the plan for that purpose. The utilization of improvised field storage sites or any other site not approved by the Department is strictly prohibited.
8. Transportation of the biosolids must be such that will prevent the attraction, harborage or breeding of insects or rodents. It must not produce conditions harmful to public health, the environment, odors, unsightliness, nuisances, or safety hazards.

9. The containers used for the transportation of the biosolids must be of the closed type. Transportation equipment must be leak-proof and kept in a top sanitary condition at all times. Biosolids must be enclosed or covered as to prevent littering, vector attraction, or any other nuisances.
10. The permittee will be responsible for assuring that the land owner, of any land application site not owned by the permittee, and the waste applicator, if different from the permittee, abide by the conditions of this permit.
11. Biosolids will be spread evenly over the application area and in no way biosolids will be allowed to enter the waters of the State.
12. Biosolids will not be applied to slopes with a gradient greater than 15%; or to soils that are saturated, frozen or covered with snow, during rain, or when precipitation is imminent.
13. The permittee will not cause any underground drinking water source to exceed the limitations in 40 CFR Part 257, Appendix I.
14. The permittee will not cause or contribute to the taking of life or the destruction or adverse modification of the critical habitat of any known endangered or threatened species of plant, fish or wildlife.
15. The permittee will take all necessary measures to reduce obnoxious and offensive odors. Equipment will be maintained and operated to prevent spillage and leakage.
16. Disposal of wastewater biosolids in a flood plain will not restrict the flow of the base flood, reduce the temporary storage capacity of the flood plain, or result in a washout of solid waste, so as to pose a hazard to human life, wildlife or land and water uses.
17. Biosolids will not be spread within 50 feet of rock outcrops and property lines; 100 feet of lakes, ponds, springs, streams, wetlands and sinkholes; 200 feet of drinking water wells; 300 feet of occupied buildings and streams classified as an "extraordinary resource water body."
18. All new land application sites must have a waste management plan approved by the Department prior to land application of wastewater biosolids. This change normally requires a permit modification.

B. MONITORING AND REPORTING REQUIREMENTS:

1. The permittee will be responsible for the biosolids analyses, soil analyses, and a reporting schedule that must include the following:

a. Biosolids Analysis

- (1) Biosolids samples collected must be representative of the treated biosolids to be land applied. The samples are to be stored in appropriate containers and kept refrigerated or frozen to prevent any change in composition.
- (2) Quarterly representative samples of the land-applied biosolids will be analyzed and results expressed in dry basis in mg/kg, except as otherwise indicated:

Volatile Solids(%)	Total Kjeldahl Nitrogen
Total Solids(%)	Total Phosphorus
Nitrate +Nitrate Nitrogen	Total Potassium
Ammonia Nitrogen	Arsenic
Cadmium	Copper
Lead	Mercury
Nickel	Selenium
Zinc	pH (SU)

(3) Soils Analysis

Each land application site will be soil tested in the Spring prior to application for the following parameters:

Nitrate-Nitrogen	Potassium
Phosphorus	Magnesium
Arsenic	Cadmium
Copper	Lead
Mercury	Nickel
Selenium	Zinc
pH	
Cation Exchange Capacity (me/100g)	
Salt Content (micro-mohs/cm)	

b. Reporting

- (1) Annual reports will be sent to the Department and to the owner of the land receiving biosolids prior to May 1, which must include the following:

The biosolids and soil analyses conducted under section a. above (including a statement that the analyses were performed in accordance with EPA Document SW-846, "Test Methods for Evaluation of Solid Waste," or other procedures approved by the Director), application dates and locations, volumes of biosolids applied (in dry tons/acre-year and gallons/acre-year of biosolids), methods of disposal, identity of hauler, and type of crop grown, amounts of nitrogen applied, total elements added that year (lbs/acre), total elements applied to date, and copies of soil analyses for each site.

- (2) The permittee will also maintain copies of the above records for Department personnel review at the biosolids generating facility.

10. Within 30 days after startup of the new treatment system, the limits for Outfall 001 (new) shall become effective. The limits for Outfall 001 (old) will no longer be effective after startup of the new treatment system. The permittee shall notify the Department in writing within 10 days after the new treatment system begins operation.

PART IV DEFINITIONS

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

1. **“Act”** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **“Administrator”** means the Administrator of the U.S. Environmental Protection Agency.
3. **“Applicable effluent standards and limitations”** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
4. **“Applicable water quality standards”** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APCEC) Regulation No. 2, as amended.
5. **“Bypass”** means the intentional diversion of waste streams from any portion of a treatment facility.
6. **“Daily Discharge”** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. *Mass Calculations:* For pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total mass of pollutant discharged over the sampling day. *Concentration Calculations:* For pollutants with limitations expressed in other units of measurement, determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the “daily discharge” determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during that sampling day by using the following formula: where C= daily concentration, F=daily flow and n=number of daily samples

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

7. **“Monthly average”** means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month. For Fecal Coliform Bacteria (FCB) report the monthly average (see 30-day average below).

8. **“Daily Maximum”** discharge limitation means the highest allowable “daily discharge” during the calendar month. The 7-day average for Fecal Coliform Bacteria (FCB) is the geometric mean of the values of all effluent samples collected during the calendar week in colonies per 100 ml.
9. **“Department”** means the Arkansas Department of Environmental Quality (ADEQ).
10. **“Director”** means the Administrator of the U.S. Environmental Protection Agency and/or the Director of the Arkansas Department of Environmental Quality.
11. **“Grab sample”** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
12. **“Industrial User”** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
13. **“National Pollutant Discharge Elimination System”** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.
14. **“POTW”** means a Publicly Owned Treatment Works.
15. **“Severe property damage”** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in products.
16. **“APCEC”** means the Arkansas Pollution Control and Ecology Commission.
17. **“Sewage sludge”** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff that are discharged to or otherwise enter a POTW.
18. **“7-day average”** discharge limitation, other than for Fecal Coliform Bacteria (FCB), is the highest allowable arithmetic mean of the values for all effluent samples collected during the calendar week. The 7-day average for Fecal Coliform Bacteria (FCB) is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/100 ml. The Discharge Monitoring Report should report the highest 7-day average obtained during the calendar month. For reporting purposes, the 7-day average values should be reported as occurring in the month in which the Saturday of the calendar week falls in.
19. **“30-day average”**, other than for Fecal Coliform Bacteria (FCB), is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for Fecal Coliform Bacteria (FCB) is the geometric mean of the values for all effluent samples collected during a calendar month. For Fecal Coliform Bacteria (FCB), report the monthly average as a 30-day geometric mean in colonies per 100 ml.

20. **“24-hour composite sample”** consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
21. **“12-hour composite sample”** consists of 12 effluent portions, collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
22. **“6-hour composite sample”** consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
23. **“3-hour composite sample”** consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
24. **“Treatment works”** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
25. **“Upset”** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless of improper operations.
26. **“For Fecal Coliform Bacteria (FCB)”**, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
27. **“Dissolved oxygen limit”**, shall be defined as follows:
 - a. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month;
 - b. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
28. **The term “MGD”** shall mean million gallons per day.
29. **The term “mg/l”** shall mean milligrams per liter or parts per million (ppm).
30. **The term “µg/l”** shall mean micrograms per liter or parts per billion (ppb).
31. **The term “cfs”** shall mean cubic feet per second.
32. **The term “ppm”** shall mean parts per million.
33. **The term “s.u.”** shall mean standard units.

34. **The term “Instantaneous Maximum”** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.

35. **Monitoring and Reporting:**

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

MONTHLY:

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

QUARTERLY:

(1) is defined as a fixed calendar quarter or any part of the fixed calendar quarter for a non-seasonal effluent characteristic with a measurement frequency of once/quarter.

Fixed calendar quarters are: January through March, April through June, July through September, and October through December; or

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

SEMI-ANNUAL:

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

ANNUAL or YEARLY:

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

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

Final Statement of Basis

for renewal of NPDES Permit Number AR0021865 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 is:

City of Eureka Springs
3174 E. Van Buren
Eureka Springs, AR 72632

3. PREPARED BY.

The permit was prepared by:

Shane Byrum
NPDES Branch, Water Division
(501) 682-0618
byrum@adeq.state.ar.us

4. DATE PREPARED.

The permit was prepared on 08/15/2007.

5. PREVIOUS PERMIT ACTIVITY.

Effective Date: 12/01/2002
Modification Date: N/A
Expiration Date: 11/30/2007

The permittee submitted a permit modification application on 12/28/2005 and renewal application on 09/01/2006. Since the permit expires before the new treatment system is scheduled to be completed, the modification was incorporated into the reissued NPDES permit to be reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfalls are located at the following coordinates:

Outfall 001 (old): Latitude: 36° 25' 30" Longitude: 93° 44' 06"

Outfall 001 (new): Latitude: 36° 25' 15" Longitude: 93° 44' 06"

The receiving waters named:

Leatherwood Creek thence to Table Rock Lake, thence to the White River in Segment 4K of the White River Basin. The receiving stream is a Water of the State classified as a losing stream segment, raw water source for public, industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

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

i. 303(d) List:

The receiving stream (Leatherwood Creek) is not listed on the approved Arkansas 303(d) list. However, Table Rock Lake is listed on the Missouri 303(d) list for nutrients. The State of Missouri Water Quality Standards November 1999 Phosphorus rule for Table Rock Lake, 10 CSR 20.7.015(3)(G), states "... Existing discharges with a design flow of 0.1 million gallons per day to 1.0 million gallons per day must comply with an effluent limit of 1.0 mg/l of phosphorus as monthly average within 4 years. In addition, these facilities must comply with the 0.5 mg/l phosphorus as a monthly average within eight years." Therefore, a total phosphorus limit has been included in this permit at Outfall 001 (new) effective 30 days after start of operation of the new treatment system.

ii. Endangered Species:

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

7. OUTFALL AND TREATMENT PROCESS DESCRIPTION.

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

- a. Design Flow: Outfall 001 (old): 0.7 MGD
Outfall 001 (new): 0.9 MGD

b. Type of Treatment:

Outfall 001 (old): Screening, degritting, primary clarifier, biotower, solids contact and reaeration, final clarifier, ultraviolet disinfection, aerobic sludge digestion, and sludge press dewatering.

Outfall 001 (new): Screening, degritting, 2-tank sequencing batch reactor (SBR), post-aeration, ultraviolet disinfection, aerobic sludge digestion, and sludge press dewatering. The primary clarifier and solids contact/reaeration tank from the old treatment process will remain on site and used as sludge holding tanks, if necessary, for any extra sludge generated due to optional chemical addition for phosphorus removal.

c. Discharge Description: treated municipal wastewater.

8. ACTIVITY.

Under the standard industrial classification (SIC) code 4952 and North American Industry Classification System (NAICS) code of 22132, the applicant's activities are the operation of a sewage treatment plant.

9. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

NO INDUSTRIAL USERS

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

10. SEWAGE SLUDGE PRACTICES.

Sludge management consists of aerobic digestion of sludge, followed by press dewatering, and hauling the dewatered sludge cake to a compost site where it is composted with yard waste. The compost is either given away to the public or land applied at the following locations:

Section 31, Township 20 North, Range 25 West, 40 acres
Section 36, Township 20 North, Range 26 West, 40 acres

11. PERMIT CONDITIONS.

The Arkansas Department of Environmental Quality has made a final determination to issue a permit for the discharge described in the application. Permit requirements are based on NPDES regulations (40 CFR Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 CFR Part 403 and regulations promulgated pursuant to the Arkansas Water

and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et. seq.).

a. **Final Effluent Limitations**

Outfall 001(old) - treated municipal wastewater

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

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow (MGD)	N/A	Report	Report	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	58.4	10.0	15.0	three/month	3-hr composite
Total Suspended Solids (TSS)	87.6	15.0	22.5	three/month	3-hr composite
Ammonia Nitrogen (NH3-N)					
(May-Oct)	14.6	2.5	3.8	three/month	3-hr composite
(Nov-Apr)	29.2	5.0	7.5	three/month	3-hr composite
Dissolved Oxygen	N/A	6.5 (Monthly Avg Min)		three/month	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
	N/A	200	400	three/month	Grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	58.4	10.0	15.0	three/month	3-hr composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	three/month	Grab

ii. **Solids, Foam, and Free Oil:** There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

b. Final Effluent Limitations

Outfall 001 (new) - treated municipal wastewater

i. Conventional and/or Toxic Pollutants

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow (MGD)	N/A	Report	Report	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)	75.1	10.0	15.0	three/month	3-hr composite
Total Suspended Solids (TSS)	112.6	15.0	22.5	three/month	3-hr composite
Ammonia Nitrogen (NH3-N)					
(April)	Report	Report	3.9	three/month	3-hr composite
(May-Oct)	18.8	2.5	3.8	three/month	3-hr composite
(Nov-Mar)	37.6	5.0	7.5	three/month	3-hr composite
Dissolved Oxygen	N/A	6.5 (Monthly Avg Min)		three/month	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
	N/A	200	400	three/month	Grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	75.1	10.0	15.0	three/month	3-hr composite
Total Phosphorus	7.5	1.0	2.0	three/month	3-hr composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	three/month	Grab

ii. **Solids, Foam, and Free Oil:** There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

12. 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 tentative decisions as required under 40 CFR Part 124.7 (48 FR 1413, April 1, 1983).

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

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

a. **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)(i)(A)], which state in part that final effluent limitations for reissued permits must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitations.

The final permit maintains the requirements of the previous permit.

b. **Technology-Based Effluent Limitations And/Or Conditions**

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

ii. **Phosphorus Limitations:**

The receiving stream (Leatherwood Creek) is not listed on the approved Arkansas 303(d) list. However; Table Rock Lake is listed on the Missouri 303(d) list for nutrients. The State of Missouri Regulation effective November 1999 states “..... Existing discharges with a design flow of 0.1 million gallons per day to 1.0 million gallons per day must comply with an effluent limit of 1.0 mg/l of phosphorus as monthly average within 4 years. In addition, these facilities must comply with the 0.5 mg/l phosphorus as a monthly average within eight years.” Therefore, a total phosphorus limit has been included in the permit for Outfall 001 (new).

c. **State Water Quality Numerical Standards Based Limitations Outfall 001 (new)**

The monthly average water quality-based limits for CBOD5, TSS, NO3+NO2-N, and DO have been based on the current NPDES permit and 40 CFR Part 122.44(l). The calculation of the loadings (lbs per day) uses a design flow of 0.9 MGD and the following equation (See below). These limitations are included in the updated Arkansas Water Quality Management Plan (AWQMP). Fecal Coliform Bacteria and pH limitations are based on Chapter 5, Sections 2.507 and 2.504 of APCEC Regulation No. 2 as amended, respectively.

$$\text{Daily Maximum limits} = \text{Monthly average limits} \times 1.5$$

$$\text{lbs/day} = \text{Concentration (mg/l)} \times \text{Flow (MGD)} \times 8.34$$

Ammonia-Nitrogen (NH3-N) Outfall 001 (new):

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

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

$$C_d = (IWC(Q_d + Q_b) - C_b Q_b) / Q_d,$$

Where:

C_d = effluent limit concentration (mg/l)

IWC = Ammonia toxicity standard for Ecoregion

Q_d = design flow = 0.9 MGD = 1.4 cfs

The 7Q10 of 0 cfs is based on "Identification and Classification of Perennial Streams of Arkansas", Arkansas Geological Commission Map

Q_b = Critical flow of the receiving stream = 0 cfs. This flow is 67 percent of the 7-day, 10-year low-flow (7Q10) for the receiving stream.

C_b = background concentration = 0 mg/l

The following pH and temperature were used for Ozark Highlands Ecoregion:

Month	pH s.u.	Temperature °C	IWC (Monthly Avg)	IWC (Daily Max)
April-October	7.6	29	MR	3.9 mg/l
November-March	7.6	14	MR	10.3 mg/l

MR – Monitor and Report

Notes:

- Daily Max = 4-day Average in APCEC Regulation No. 2
- Monthly Average = 30-day Average in APCEC Regulation No. 2

Calculations of Toxicity-Based Limits:

Since receiving stream critical flow is zero, then Cd = IWC.

Comparison between Arkansas Water Quality Standard DO based limits and calculated toxicity limits for Ammonia Nitrogen (NH3-N):

Month	DO Based Limits		Calculated Toxicity Limits		Final Water Quality Limits	
	Monthly Avg. (mg/l)	Daily Max (mg/l)	Monthly Avg. (mg/l)	Daily Max (mg/l)	Monthly Avg. (mg/l)	Daily Max (mg/l)
(April)	5.0	7.5	MR	3.9	MR*	3.9
(May-Oct)	2.5	3.8	MR	3.9	2.5	3.8
(Nov-Mar)	5.0	7.5	MR	10.3	5.0	7.5

* Monitoring and reporting requirements are being included in the permit because the monthly average limit cannot exceed the daily maximum limit.

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 proposed to include total phosphorus to the existing water quality limitations and other information for this discharger:

May-October: CBOD5/TSS/NH3-N/DO/TP = 10/15/2.5/6.5/1.0 mg/l
 November-April: CBOD5/TSS/NH3-N/DO/TP = 10/15/5.0/6.5/1.0 mg/l
 Design flow: 0.9 MGD
 Background flow of the receiving stream (7Q10): 0 cfs

13. FINAL LIMITATIONS.

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

Outfall 001 (old)

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous NPDES Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
CBOD5	10.0	15.0	25	40	10	15	10.0	15.0
TSS	15.0	22.5	30	45	15	23	15.0	22.5
NH3-N								
(May-Oct)	2.5	3.8	N/A	N/A	2.5	3.8	2.5	3.8
(Nov-Apr)	5.0	7.5	N/A	N/A	5	7.5	5.0	7.5
DO	6.5 Monthly Avg Min		N/A		6.5 Instantaneous Min		6.5 Monthly Avg Min	
FCB (col/100 ml)	200	400	N/A	N/A	200	400	200	400
NO3+NO2-N	10.0	15.0	N/A	N/A	10	15	10.0	15.0
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6-9 s.u.		6.0-9.0 s.u.	

Outfall 001 (new)

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous NPDES Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
CBOD5	10.0	15.0	25	40	N/A	N/A	10.0	15.0
TSS	15.0	22.5	30	45	N/A	N/A	15.0	22.5
NH3-N								
(April)	Report	3.9	N/A	N/A	N/A	N/A	Report	3.9
(May-Oct)	2.5	3.8	N/A	N/A	N/A	N/A	2.5	3.8
(Nov-March)	5.0	7.5	N/A	N/A	N/A	N/A	5.0	7.5
DO	6.5 Monthly Avg Min		N/A		N/A		6.5 Monthly Avg Min	
FCB (col/100 ml)	200	400	N/A	N/A	N/A	N/A	200	400
NO3+NO2-N	10.0	15.0	N/A	N/A	N/A	N/A	10.0	15.0
Total Phosphorus	N/A	N/A	1.0	2.0	N/A	N/A	1.0	2.0
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		N/A		6.0-9.0 s.u.	

14. 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)(1)]. The monitoring frequencies are based on best engineering judgment of the permit writer, taking into account the nature of the facility and the previous permit information.

Outfall 001 (old)

Parameter	Previous Permit		Final Permit	
	Sample Type	Frequency of Sample	Sample Type	Frequency of Sample
Flow	totalizing meter	once/day	totalizing meter	once/day
CBOD5	3-hr composite	three/month	3-hr composite	three/month
TSS	3-hr composite	three/month	3-hr composite	three/month
NH3-N	3-hr composite	three/month	3-hr composite	three/month
Dissolved Oxygen	grab	three/month	grab	three/month
FCB	grab	three/month	grab	three/month
NO3+NO2-N	3-hr composite	three/month	3-hr composite	three/month
pH	grab	three/month	grab	three/month

Outfall 001 (new)

Parameter	Previous Permit		Final Permit	
	Sample Type	Frequency of Sample	Sample Type	Frequency of Sample
Flow	N/A	N/A	totalizing meter	once/day
CBOD5	N/A	N/A	3-hr composite	three/month
TSS	N/A	N/A	3-hr composite	three/month
NH3-N	N/A	N/A	3-hr composite	three/month
Dissolved Oxygen	N/A	N/A	grab	three/month
FCB	N/A	N/A	grab	three/month
NO3+NO2-N	N/A	N/A	3-hr composite	three/month
Total Phosphorus	N/A	N/A	3-hr composite	three/month
pH	N/A	N/A	grab	three/month

15. 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. Design flow has increased to 0.9 MGD.
2. The 7-day average TSS concentration limit changed from 23 mg/l to 22.5 mg/l at outfall 001 (old).
3. Total Phosphorus limits were added for outfall (new).
4. Limits for all parameters except fecal coliform bacteria are expressed to nearest tenth.
5. New treatment system is under construction.
6. Outfall 001 (new) has been added for the new treatment system.
7. Parts II, III, and IV have changed.
8. Operator class required was added to Part III.
9. Dissolved oxygen limits has changed from an instantaneous minimum to a monthly average minimum at outfall 001 (new).
10. Facility coordinates were revised to front gate location.
11. Facility mailing address has changed.
12. Condition No. 10 has been added to Part III.

16. SCHEDULE OF COMPLIANCE.

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

Compliance is required on the effective date of the permit.

17. 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.

18. SOURCES.

The following sources were used to draft the permit:

- a. NPDES application No. AR0021865 received 09/01/2006.
- b. Arkansas Water Quality Management Plan (WQMP).
- c. APCEC Regulation No. 2.
- d. APCEC Regulation No. 6.
- e. 40 CFR Parts 122, 125, 133 and 403.
- f. NPDES permit file AR0021865.
- g. Discharge Monitoring Reports (DMRs).

- h. "Arkansas Water Quality Inventory Report 2004 (305B)", ADEQ.
- i. Memo from Mo Shafii to NPDES Engineers dated March 28, 2005
- j. "Identification and Classification of Perennial Streams of Arkansas", Arkansas Geological Commission.
- k. Continuing Planning Process (CPP).
- l. Technical Support Document For Water Quality-based Toxic Control.
- m. Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR Part 131.36.
- n. Inspection performed on 11/29/2005.
- o. Construction permit issued on 5/23/2006.

19. NPDES POINT OF CONTACT.

For additional information, contact:

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