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Permit number: AR0021768

AUTHORIZATION TO DISCHARGE 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.),

Russellville City Corporation
P.O. Box 3186
Russellville, AR 72811

is authorized to discharge from a facility located at

south of the city of Russellville, two miles south of Highway 64, in Section 22, Township 7 North, Range 20 West in Pope County, Arkansas.

Latitude: 35° 14' 56"; Longitude: 93° 06'50"

to receiving waters named:

Whig Creek thence to the Arkansas River in Segment 3F of the Arkansas River Basin.

The outfalls are located at the following coordinates:

Outfall 001: Latitude: 35° 14' 57"; Longitude: 93° 06' 50"

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

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Signed this day of

_____

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

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PART I
PERMIT REQUIREMENTS

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

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

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow[1]	N/A	Report	Report	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	609	10	15	once/weekday	24-hr composite
(Nov-Apr)	913	15	23	once/weekday	24-hr composite
Total Suspended Solids (TSS)					
(May-Oct)	913	15	23	once/weekday	24-hr composite
(Nov-Apr)	1217	20	30	once/weekday	24-hr composite
Ammonia Nitrogen (NH3-N)	243	4	6	once/weekday	24-hr composite
Dissolved Oxygen[2]	N/A	6.0 (Inst. Min.)		once/weekday	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	1000	2000	once/weekday	Grab
Total Residual Chlorine (TRC)[3]	N/A	Report (Inst. Max)		once/weekday	Grab
Zinc, Total Recoverable[5]	5.2	86 µg/l	172 µg/l	once/month	24-hr composite
Nitrates (NO3-N)	Report	Report	Report	once/weekday	24-hr composite
Copper, Total Recoverable[5]	Report	Report µg/l	Report µg/l	once/month	24-hr composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/weekday	Grab
Chronic Biomonitoring[4]	N/A	N/A	N/A	once/quarter	24-hr composite
Pimephales promelas (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail Growth (7-day NOEC)TGP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP6C		Report %		once/quarter	24-hr composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	24-hr composite
Ceriodaphnia dubia (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail Reproduction (7-day NOEC)TGP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP3B		Report %		once/quarter	24-hr composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	24-hr composite

1 Report monthly average and daily maximum as MGD.
2 Instantaneous Minimum. Dissolved Oxygen must be equal or exceed the permit limit at all times.
3 See Condition No. 12 of Part III.
4 See Condition No. 9 of Part III.
5 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. No visible sheen (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 following location(s): at the outfall 001, following the final treatment unit.

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

During the period beginning three years after effective date and lasting until date of expiration, the permittee is authorized to discharge from outfall serial number 001 -treated municipal wastewater. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow[1]	N/A	Report	Report	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	609	10	15	once/weekday	24-hr composite
(Nov-Apr)	913	15	23	once/weekday	24-hr composite
Total Suspended Solids (TSS)					
(May-Oct)	913	15	23	once/weekday	24-hr composite
(Nov-Apr)	1217	20	30	once/weekday	24-hr composite
Ammonia Nitrogen (NH3-N)	243	4	6	once/weekday	24-hr composite
Dissolved Oxygen[2]	N/A	6.0 (Inst. Min.)		once/weekday	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	1000	2000	once/weekday	Grab
Total Residual Chlorine (TRC)[3]	N/A	0.1 mg/l (Inst. Max)		once/weekday	Grab
Zinc, Total Recoverable[5]	5.2	86 µg/l	172 µg/l	once/month	24-hr composite
Nitrates (NO3-N)	609	10	15	once/weekday	24-hr composite
Copper, Total Recoverable[5]	0.56	9.24 µg/l	18.54 µg/l	once/month	24-hr composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/weekday	Grab
Chronic Biomonitoring[4]	N/A	N/A	N/A	once/quarter	24-hr composite
Pimephales promelas (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail Growth (7-day NOEC)TGP6C		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP6C		Report %		once/quarter	24-hr composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	24-hr composite
Ceriodaphnia dubia (Chronic)[4]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Pass/Fail Reproduction (7-day NOEC)TGP3B		Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	24-hr composite
Coefficient of Variation TQP3B		Report %		once/quarter	24-hr composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	24-hr composite

1 Report monthly average and daily maximum as MGD.
2 Instantaneous Minimum. Dissolved Oxygen must be equal or exceed the permit limit at all times.
3 See Condition No. 12 of Part III.
4 See Condition No. 9 of Part III.
5 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. No visible sheen (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 following location(s): at the outfall 001, following the final treatment unit.

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SECTION B. SCHEDULE OF COMPLIANCE

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

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

The permittee shall comply with the following schedule of compliance:

TRC, Nitrates, and Total Recoverable Copper	
Action	Compliance Date
Submit Progress Report	1 year after effective date of permit
Submit Progress Report	2 years after effective date of permit
Achieve compliance with final limits	3 years after effective date of permit

PART II
STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

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

2. Penalties for Violations of Permit Conditions

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

3. Permit Actions

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

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

4. Toxic Pollutants

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

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

5. Civil and Criminal Liability

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

6. Oil and Hazardous Substance Liability

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

7. State Laws

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

8. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any 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 122.64 and 124.5 (d), as adopted in APCEC Regulation No. 6 and the provisions of APCEC Regulation No. 8.

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

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

b. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

2. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. Duty to Mitigate

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

4. Bypass of Treatment Facilities

a. **Bypass not exceeding limitation.**

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

b. **Notice**

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

c. **Prohibition of bypass**

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

5. Upset Conditions

a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology base 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's signed and certified as required by Part II.d.11 and all other reports required by Part II.D. (Reporting Requirements), shall be submitted to the Director at the following address:

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

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

6. **Additional Monitoring by the Permittee**

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 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) analyses were formed;
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 Part122.29(b).
b. The alternation or addition could significantly change the nature or increase the quality of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40CRF Part 122.42 (a)(1).

For POTW Dischargers:

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

2. **Anticipated Noncompliance**

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

3. **Transfers**

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

4. **Monitoring Reports**

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

5. **Compliance Schedule**

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

of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

6. **Twenty-four Hour Report**

a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:
   (1) a description of the noncompliance and its cause;
   (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   (3) steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.

b. The following shall be included as information which must be reported within 24 hours:
   (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
   (2) Any upset which exceeds any effluent limitation in the permit and
   (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part III of the permit to be reported within 24 hours.

c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

7. **Other Noncompliance**

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

8. **Changes in Discharge of Toxic Substances for Industrial Dischargers**

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

a. That any activity has occurred or will occur which would result in the discharge, in a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2)48 FR 14153, April 1983, as amended at 49 FR 38046, September 26, 1984).

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)(48 FR 14153, April 1, 1983, as amended at 49 FR 38046, September 26, 1984).

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

a. All permit applications shall be signed as follows:
(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
(i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation: or
(ii) The manager of one or more manufacturing, production, or operation facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
(2) For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or
(3) For a municipality, State, Federal, or other public agency; by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
(i) The chief executive officer of the agency, or
(ii) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

b. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person.

A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above.

(2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) The written authorization is submitted to the Director.

c. Certification. Any person signing a document under this section shall make the following certification:

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

12. **Availability of Reports**

Except for data determined to be confidential under 40 CFR Part 2 and Regulation 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Pollution and Ecology. 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 by the State of Arkansas in accordance with Act 211 of 1971, Act 1103 of 1991, Act 556 of 1993, and Regulation No. 3, as amended.

2. For publicly owned treatment works, the 30-day average percent removal for Biochemical Oxygen Demand and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR 133.102, as adopted by reference in ADEQ 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;

    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.) 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 Part 122.62 (a) (2), the permit may be modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

7. **Contributing Industries and Pretreatment Requirements**

A. The permittee shall operate an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403) and the approved POTW pretreatment program submitted by the permittee. The pretreatment program was approved on January 13, 1984 and modified on March 10, 1992. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

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

2. The frequency and nature of industrial user compliance monitoring activities by the permittee shall be commensurate with the character, consistency and volume of waste. However, in keeping with the requirements of 40 CFR 403.8(f)(2)(v), the permittee must inspect and sample the effluent from each Significant Industrial User at least once a year. This is in addition to any industrial self-monitoring activities;

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

4. The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3(t), this control shall be achieved through permits or equivalent individual control mechanisms issued to each such user. Such control mechanisms must be enforceable and contain, at a minimum, the following conditions:

a. Statement of duration (in no case more than five years;

b. Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;

c. Effluent limits based on applicable general pretreatment standards, categorical pretreatment standards, local limits, and State and local law;

d. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on the applicable general pretreatment standards in 40 CFR 403, categorical pretreatment standards, local limits, and State and local law;

e. Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines.

5. The permittee shall evaluate, at least once every two years, whether each Significant Industrial User needs a plan to control slug discharges. If the POTW decides that a slug control plan is needed, the plan shall contain at least the minimum elements required in 40 CFR 403.8 (f)(2)(v).

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

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

B. The permittee shall establish and enforce specific limits to implement the provisions of 40 CFR Parts 403.5(a) and (b), as required by 40 CFR Part 403.5(c). Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

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

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

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

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

D. The permittee shall prepare annually a list of Industrial Users which during the preceding twelve months were in significant noncompliance with applicable pretreatment requirements. For the purposes of this Part, significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part 403.8(f)(2)(vii) [rev. 7/24/90] or criteria established in the approved POTW pretreatment program. This list is to be published annually in the largest daily newspaper in the municipality during the month of February.

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

1. An updated list of all significant industrial users. For each industrial user listed, the following information shall be included:

   a. Standard Industrial Classification (SIC) code and categorical determination.

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

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

(1) total number of inspections performed;
(2) total number of sampling visits made;

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

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

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

(3) Significant Noncompliance (SN) - in accordance with requirements described in d. above.

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

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

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

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

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

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

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

E. The permittee shall provide adequate notice 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 Section 301 and 306 of the Act if it were directly discharging those pollutants; and

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

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

8. 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 below, the biosolids **may not** be land applied.

Pollutant	Ceiling Concentrations
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

5. CUMULATIVE CONCENTRATION LIMITS: When the cumulative amount of any pollutant land applied to a specific site exceeds any of the loading rates listed below, no more biosolids may be land applied the specific site.

	Cumulative Pollutant Loading Rate	
Element	kg/ha	(lbs/ac)
Arsenic	41	(37)
Cadmium	39	(35)
Copper	1500	(1350)
Lead	300	(270)
Mercury	17	(15)
Nickel	420	(378)
Selenium	100	(90)
Zinc	2800	(2520)

6. The biosolids generator must issue a signed certification stating that the Pathogen Reduction, Vector Attraction Reduction, and Pollutant Concentration Limits have been met for each time the biosolid is released for disposal. The State requirements on Pathogen Reduction, Vector Attraction Reduction, and Pollutant Concentration Limits are the same as those listed in Federal; Regulation 40 CFR Part 503. All the above information must be made available to the permittee before the material is delivered. Concurrently, a signed copy of each certification must be also submitted to ADEQ's Water Division.

7. Proper containers shall be utilized to transport the biosolids. No biosolids material shall be allowed to be blown out of containers, truck beds, or spilled during transportation.

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. Transportation equipment must be leak-proof and kept in a top sanitary conditions 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 take all necessary measures to reduce obnoxious and offensive odors. Equipment will be maintained and operated to prevent spillage and leakage.

14. Disposal of biosolids in a floodplain will not restrict the flow of the base flood, reduce the temporary storage capacity of the floodplain, or result in a washout of solid waste, so as to pose a hazard to human life, wildlife or land and water uses.

15. Biosolids will not be spread within 25 feet of rock outcrops; 50 feet of property lines; 200 feet of drinking water well; 100 feet of lakes, ponds, springs, streams, wetlands, and sinkholes; 300 feet of occupied buildings and streams classified as an "extraordinary resource stream."

16. All new land application sites must have a waste management plan approved by the Department prior to land application of biosolids. This may require 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 glass or plastic containers and kept refrigerated or frozen to prevent any change in composition.

      (2) Quarterly grab 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 Nitrogen	Total Potassium
Nitrite Nitrogen	Ammonia Nitrogen
Arsenic	Cadmium
Chromium	Copper
Lead	Mercury
Nickel	Selenium
Zinc	pH (SU)

   b. Soils Analysis

      (1) 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
Selenium	Mercury
Nickel	pH
Zinc	C.E.C. (mequivalent/100 grams)
Salt Content (micro mohs/cm)	

   c. 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 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.

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

1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL: 001

CRITICAL DILUTION (%): 100

EFFLUENT DILUTION SERIES (%): 32, 42, 56, 75, 100

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: 40 CFR Part 136

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

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

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

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

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

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

a. Part I Testing Frequency Other Than Monthly

i. The permittee shall conduct a total of two (2) additional tests for any species that demonstrates significant lethal effects at or below the critical dilution. The two additional tests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two additional tests in lieu of routine toxicity testing. The full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.

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

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

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

b. Part I Testing Frequency of Monthly

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

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

i. 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 endpoints 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 nonlethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the fathead minnow test.

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

b. Statistical Interpretation

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/600/4-91/002 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/600/4-91/002 or the most recent update thereof.

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

c. Dilution Water

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

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

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

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

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

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

d. Samples and Composites

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

ii. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an 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 4 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 collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

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

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

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/600/4-91/002, 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 II.C.7 of this permit. The permittee shall submit full reports upon the specific request of the Department. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for review.

b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and

reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for ADEQ review.

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

i. Pimephales promelas (fathead minnow)

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

(B) If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6C.

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

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

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

ii. Ceriodaphnia dubia

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

(B) If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3B.

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

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

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

5. Monitoring Frequency Reduction

a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for one or both test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution without a major modification. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the fathead minnow) and not less than twice per year for the more sensitive test species (usually the Ceriodaphnia dubia).

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

c. SUB-LETHAL FAILURES - If a statistically significant sub-lethal effect is demonstrated at or below the critical dilution during any quarterly test, the permittee shall conduct two retests. The retests shall be conducted monthly during the next two consecutive months.

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

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

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

6. TOXICITY REDUCTION EVALUATION (TRE)

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

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

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

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (800) 553-6847, or by writing:

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

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

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

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

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

b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:

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

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

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

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

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

10. If any individual analytical test results is less than the minimum quantification level (MQL) listed below, a value of zero (0) may be used for that individual result for the Discharge Monitoring report (DMR) calculations and reporting requirements.

Outfall 001		
Pollutant	EPA Method	MQL (µg/l)
Total Recoverable Zinc	200.7	20
Total Recoverable Copper	220.2	10

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

11. **Storm Water Pollution Prevention Plan Requirements**

A. **General**

(1) If your facility already has a storm water pollution prevention plan (SWPPP) in place, then you shall continue the implementation of this SWPPP. If you do not have a SWPPP, then you shall prepare a SWPPP for your facility within 60 days of the effective starting date of this permit. Your SWPPP must be prepared in accordance with good engineering practices. Your SWPPP must:

(a) Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from your facility;

(b) Describe and ensure implementation of practices which you will use to reduce the pollutants in storm water discharges from the facility; and

(c) Assure compliance with the terms and conditions of this permit.

(2) No Exposure Exclusions, as allowed by 40 CFR 122.26(g), can be obtained for the storm water discharges from the facility as long as all of the required conditions for applicability can be certified. These required conditions can be found in the federal regulation. The No Exposure Exclusion application form can be obtained from the Storm Water section of the ADEQ. Application for this exclusion must be made on the form obtained from the ADEQ.

B. **Contents of Plan**

(1) **Pollution Prevention Team**

(a) You must identify the staff individual(s) (by name or title) that comprise the facility's storm water Pollution Prevention Team. Your Pollution Prevention Team is responsible for assisting the facility/plant manager in developing, implementing, maintaining and revising the facility's SWPPP. Responsibilities of each staff individual on the team must be listed.

(2) **Site Description**

(a) Your SWPPP must include the following:

i. *Activities at Facility.* Description of the nature of the industrial activity(ies) at your facility;

ii. *General Location Map.* A general location map (e.g., U.S.G.S. quadrangle, or other map) with enough detail to identify the location of your facility and the receiving waters within one mile of the facility;

iii. A legible site map identifying the following:

(a) Directions of storm water flow (e.g., use arrows to show which ways storm water will flow);

(b) Locations of all existing structural BMPs;

(c) Locations of all surface water bodies;

(d) Locations of potential pollutant sources identified under Section B(4)(a) of this Part and where significant materials are exposed to precipitation;

(e) Location where major spills or leaks identified under Section B(5) of this Part have occurred;

(f) Locations of the following activities where such activities are exposed to precipitation: fueling stations, vehicle and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes, and liquid storage tanks;

(g) Locations of storm water outfalls and an approximate outline of the area draining to each outfall;

(h) Location and description of non-storm water discharges;

(i) Locations of the following activities where such activities are exposed to precipitation: processing and storage areas; access roads, rail cars and tracks; the location of transfer of substance in bulk; and machinery;

(j) Location and source of runoff from adjacent property containing significant quantities of pollutants of concern to the facility (an evaluation of how the quality of the runoff impacts your storm water discharges may be included).

(3) **Receiving Waters and Wetlands**

(a) You must provide the name of the nearest receiving water(s), including intermittent streams, dry sloughs, arroyos and the areal extent and description of wetland or other special aquatic sites that may receive discharges from your facility.

(4) **Summary of Potential Pollutant Source**

(a) You must identify each separate area at your facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading/unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. For each separate area identified, the description must include:

i. *Activities in Area.* A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and

ii. *Pollutants.* A list of the associated pollutant(s) or pollutant parameter(s) (e.g., crankcase oil, iron, biochemical oxygen demand, pH, etc.) for each activity. The pollutant list must include all significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of three (3) years before being covered under this permit and the present.

(5) **Spills and Leaks**

(a) You must clearly identify areas where potential spills and leaks, which can contribute pollutants to storm water discharges, can occur, and their accompanying drainage points. For areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility to be covered under this permit, you must provide a list of significant spills and leaks of toxic or hazardous pollutants that occurred during the three (3) year period prior to the starting date of this permit. Your list must be updated if significant spills or leaks occur in exposed areas of your facility during the time you are covered by the permit.

(b) Significant spills and leaks include, but are not limited to releases of oil or hazardous substances in excess of quantities that are reportable under CWA 311 (see 40 CFR 110.10 AND 40 CFR 117.21) or section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Significant spills may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

(6) **Sampling Data**

(a) You must provide a summary of existing storm water discharge sampling data taken at your facility. All storm water sampling data collected during the term of this permit must also be summarized and included in this part of the SWPPP.

(7) **Storm Water Controls**

(a) Description of Existing and Planned BMPs. Describe the type and location of existing non-structural and structural best management practices (BMPs) selected for each of the areas where industrial materials or activities are exposed to storm water. All the areas identified in Section B(4)(a) of this Part should have a BMP(s) identified for the areas discharges. For areas where BMPs are not currently in place, describe appropriate BMPs that you will use to control pollutants in storm water discharges. Selection of BMPs should take into consideration:

i. The quantity and nature of the pollutants, and their potential to impact the water quality of receiving waters;

ii. Opportunities to combine the dual purposes of water quality protection and local flood control benefits (including physical impacts of high flows on streams - e.g., bank erosion, impairment of aquatic habitat, etc.);

iii. Opportunities to offset the impact impervious areas of the facility on ground water recharge and base flows in local streams (taking into account the potential for ground water contamination.)

(b) BMP Types to be Considered. The following types of structural, non-structural, and other BMPs must be considered for implementation at your facility. Describe how each is, or will be, implemented. This requirement may have been fulfilled with area-specific BMPs identified under Section B(7)(a) of this Part, in which case the previous descriptions are sufficient. However, many of the following BMPs may be more generalized or non site-specific and therefore not previously considered. If you determine that any of these BMPs are not appropriate for your facility, you must include an explanation of why they are not appropriate. The BMP examples listed below are not intended to be an exclusive list

of BMPs that you may use. You are encouraged to keep abreast of new BMPs or new applications of existing BMPs to find the most cost effective means of permit compliance for your facility. If BMPs are being used or planned at the facility which are not listed here (e.g., replacing a chemical with a less toxic alternative, adopting a new or innovative BMP, etc.), include descriptions of them in this section of the SWPPP.

(c) Non-Structural BMPs

i. *Good Housekeeping:* You must keep all exposed areas of the facility in a clean, orderly manner where such exposed areas could contribute pollutants to storm water discharges. Common problem areas include: around trash containers, storage areas and loading docks. Measures must also include: a schedule for regular pickup and disposal of garbage and waste materials; routine inspections for leaks and conditions of drums, tanks and containers.

ii. *Minimizing Exposure:* Where practicable, industrial materials and activities should be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff.

iii. *Preventive Maintenance:* You must have a preventive maintenance program which includes timely inspection and maintenance of storm water management devices, (e.g., cleaning oil/water separators, catch basins) as well as inspecting, testing, maintaining and repairing facility equipment and systems to avoid breakdowns or failures that may result in discharges of pollutants to surface waters.

iv. *Spill Prevention and Response Procedures:* You must describe the procedures which will be followed for cleaning up spills or leaks. Those procedures, and necessary spill response equipment, must be made available to those employees that may cause or detect a spill or leak. Where appropriate, you must explain existing or planned material handling procedures, storage requirements, secondary containment, and equipment (e.g., diversion valves), which are intended to minimize spills or leaks at the facility. Measures for cleaning up hazardous material spills or leaks

must be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265.

v. *Routine Facility Inspections:* In addition to or as part of the comprehensive site evaluation required under Section G of this Part, you must have qualified facility personnel inspect all areas of the facility where industrial materials or activities are exposed to storm water. The inspections must include an evaluation of existing storm water BMPs. Your SWPPP must identify how often these inspections will be conducted. You must correct any deficiencies you find as soon as practicable, but no later than 14 days from the date of the inspection. You must document in your SWPPP the results of your inspections and the corrective actions you took in response to any deficiencies or opportunities for improvement that you identify.

vi. *Employee Training:* You must describe the storm water employee training program for the facility. The description should include the topics to be covered, such as spill response, good housekeeping, and material management practices, and must identify periodic dates (e.g., every 6 months during the months of July and January) for such training. You must provide employee training for all employees that work in areas where industrial materials or activities are exposed to storm water, and for employees that are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance people). The employee training should inform them of the components and goals of your SWPPP.

(d) Structural BMPs

i. *Sediment and Erosion Control:* You must identify the areas at your facility which, due to topography, land disturbance (e.g., construction), or other factors, have a potential for significant soil erosion. You must describe the structural, vegetative, and/or stabilization BMPs that you will be implementing to limit erosion.

ii. *Management of Runoff:* You must describe the traditional storm water management practices (permanent structural BMPs other than those which control the generation or

source(s) of pollutants) that currently exist or that are planned for your facility. These types of BMPs typically are used to divert, infiltrate, reuse, or otherwise reduce pollutants in storm water discharges from the site. Factors to consider when you are selecting appropriate BMPs should include: 1) the industrial materials and activities that are exposed to storm water, and the associated pollutant potential of those materials and activities; and 2) the beneficial and potential detrimental effects on surface water quality, ground water quality, receiving water base flow (dry weather stream flow), and physical integrity of receiving waters. Structural measures should be placed on upland soils, avoiding wetlands and flood plains, if possible. Structural BMPs may require a separate permit under section 404 of the CWA before installation begins.

iii. *Example BMPs:* BMPs you could use include but are not limited to: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices).

(e) Other Controls

i. No solid materials, including floatable debris, may be discharged to waters of the United States, except as authorized by a permit issued under section 404 of the CWA. Off-site vehicle tracking of raw, final, or waste materials or sediments, and the generation of dust must be minimized. Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas must be minimized. Velocity dissipation devices must be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).

C. **Maintenance**

(1) All BMPs you identify in your SWPPP must be maintained in effective operating condition. If site inspections required by Section B(7)(c)(v) of this Part identify BMPs that are not operating effectively, maintenance must be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. In the case of non-structural BMPs, the effectiveness of the BMP must be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

D. **Non-Storm Water Discharges**

(1) **Certification of Non-Storm Water Discharges**

(a) Your SWPPP must include a certification that all discharges (i.e., outfalls) have been tested or evaluated for the presence of non-storm water. The certification must be signed in accordance with Part II Section D.11 of the individual permit, and include:

i. The date of any testing and/or evaluation;

ii. Identification of potential significant sources of non-storm water at the site;

iii. A description of the results of any test and/or evaluation for the presence of non-storm water discharges;

iv. A description of the evaluation criteria or testing method used; and

v. A list of the outfalls or onsite drainage points that were directly observed during the test.

vi. If you are unable to provide the certification required (testing for non-storm water discharges), you must notify the Director 180 days after the effective starting date of this permit to be covered by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification must describe:

vii. The reason(s) why certification was not possible;

viii. The procedure of any test attempted;

ix. The results of such test or other relevant observations; and

x. Potential sources of non-storm water discharges to the storm sewer.

xi. A copy of the notification must be included in the SWPPP at the facility. Non-storm water discharges to waters of the United States which are not authorized by an NPDES permit are unlawful, and must be terminated.

E. **Allowable Non-storm Water Discharges**

(1) Certain sources of non-storm water are allowable under this permit. In order for these discharges to be allowed, your SWPPP must include:

(a) An identification of each allowable non-storm water source;

(b) The location where it is likely to be discharged; and

(c) Descriptions of appropriate BMPs for each source.

(d) Except for flows from fire fighting activities, you must identify in your SWPPP all sources of allowable non-storm water that are discharged under the authority of this permit.

(e) If you include mist blown from cooling towers amongst your allowable non-storm water discharges, you must specifically evaluate the potential for the discharges to be contaminated by chemicals used in the cooling tower and determined that the levels of such chemicals in the discharges would not cause or contribute to a violation of an applicable water quality standard after implementation of the BMPs you have selected to control such discharges.

F. **Comprehensive Site Compliance Evaluation**

(1) **Frequency and Inspectors**

(a) You must conduct facility inspections at least once a year. The inspections must be done by qualified personnel provided by you. The qualified personnel you use may be either your own employees or outside consultants that you have hired, provided they are knowledgeable and possess the skills to assess conditions at your facility that could impact storm water quality and assess the

effectiveness of the BMPs you have chosen to use to control the quality of your storm water discharges. If you decide to conduct more frequent inspections, your SWPPP must specify the frequency of inspections.

(2) **Scope of the Compliance Evaluation**

(a) Your inspections must include all areas where industrial materials or activities are exposed to storm water, as identified in Section B(4)(a) of this Part, and areas where spills and leaks have occurred within the past 3 years. Inspectors should look for: a) industrial materials, residue, or trash on the ground that could contaminate or be washed away in storm water; b) leaks or spills from industrial equipment, drums, barrels, tanks, or similar containers; c) offsite tracking of industrial materials or sediment where vehicles enter or exit the site; d) tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and e) for evidence of, or the potential for, pollutants entering the drainage system. Storm water BMPs identified in your SWPPP must be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they must be inspected to see whether BMPs are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations must be inspected if possible.

(3) **Follow-up Actions**

(a) Based on the results of the inspections, you must modify your SWPPP as necessary (e.g., show additional controls on the map required by Section B(2)(a)(iii) of this Part and revise the description of controls required by Section B(7)(a) of this Part to include additional or modified BMPs designed to correct the problems identified. You must complete revisions to the SWPPP within 14 calendar days following the inspection. If existing BMPs need to be modified or if additional BMPs are necessary, implementation must be completed before the next anticipated storm event. If implementation before the next anticipated storm event is impracticable, they must be implemented as soon as practicable.

(4) **Compliance Evaluation Report**

(a) You must insure a report summarizing the scope of the inspection, name(s) of personnel making the inspection, the date(s) of the inspection, and major observations relating to the implementation of the SWPPP is completed and retained as part of the SWPPP for at least three years from the date permit coverage expires or is terminated. Major observations should include: the location(s) of discharges of pollutants from the site; and location(s) of BMPs that need to be maintained; location(s) where additional BMPs are needed that did not exist at the time of inspection. You must retain a record of actions taken in accordance with Part II Section C.7 (Retention of Records) of this permit as part of the storm water pollution prevention plan for at least three years from the date that permit coverage expires or is terminated. The inspection reports must identify any incidents of non-compliance. Where an inspection report does not identify any incidents of non-compliance, the report must contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. Both the inspection report and any reports of follow-up actions must be signed in accordance with Part II Section D (Reporting Requirements) of this permit.

(5) **Credit As a Routine Facility Inspection**

(a) Where compliance evaluation schedules overlap with inspections required under Section B(7)(c)(v) of this Part, your annual compliance evaluation may also be used as one of the Section B(7)(c)(v) of this Part , routine inspections.

G. **Maintaining Updated SWPPP**

(1) You must amend the storm water pollution prevention plan whenever:

(a) There is a change in design, construction, operation, or maintenance at your facility which has a significant effect on the discharge, or potential for discharge, of pollutants from your facility;

(b) During inspections or investigations by you or by local, State, Tribal or Federal officials it is determined the SWPPP is ineffective in eliminating or significantly minimizing pollutants from sources identified under Section B(4) of this Part, or is otherwise not achieving the general objectives of controlling pollutants in discharges from your facility.

H. **Signature, Plan Review and Making Plans Available**

(1) You must sign your SWPPP in accordance with Part II Section D.11, and retain the plan on-site at the facility covered by this permit (see Part II Section C.7 for records retention requirements).

(2) You must keep a copy of the SWPPP on-site or locally available to the Director for review at the time of an on-site inspection. You must make your SWPPP available upon request to the Director, a State, Tribal or local agency approving storm water management plans, or the operator of a municipal separate storm sewer receiving discharge from the site. Also, in the interest of public involvement, EPA encourages you to make your SWPPPs available to the public for viewing during normal business hours.

(3) The Director may notify you at any time that your SWPPP does not meet one or more of the minimum requirements of this permit. The notification will identify provisions of this permit which are not being met, as well as the required modifications. Within thirty (30) calendar days of receipt of such notification, you must make the required changes to the SWPPP and submit to the Director a written certification that the requested changes have been made.

(4) You must make the SWPPP available to the USFWS or NMFS upon request.

I. **Additional Requirements for Storm Water Discharges Associated With Industrial Activity From Facilities Subject to EPCRA Section 313 Reporting Requirements.**

(1) Potential pollutant sources for which you have reporting requirements under EPCRA 313 must be identified in your summary of potential pollutant sources as per Section B(4) of this Part. Note this additional requirement only applies to you if you are subject to reporting requirements under EPCRA 313.

12. If TRC test results are less than Detection Level Achieved (DL), a value of zero (0) may be used for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

Total residual chlorine (TRC) in the effluent composite sample shall be measured and reported both at the time of sample termination and at the time of toxicity test initiation. The permittee shall ensure that the effluent composite used in toxicity testing is representative of normal facility residual chlorine discharge concentration.

PART IV
DEFINITIONS

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

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

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

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

8. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month. The 7-day average for fecal coliform bacteria is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/100 ml.

9**. "Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).

10. **"Director"** means the Administrator of the U.S. Environmental Protection Agency and/or the Director of the Arkansas Department of Environmental Quality.

11. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.

12. **"Industrial User**" means a nondomestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly-owned treatment works.

13. **"National Pollutant Discharge Elimination System"** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the Clean Water Act.

14**. "POTW"** means a Publicly Owned Treatment Works.

15. **"Severe property damage"** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in products.

16. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.

17. **"Sewage sludge"** means the solids, residues, and precipitate separated from or created in sewage by the unit processes a publicly-owned treatment works. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff that are discharged to or otherwise enter a publicly-owned treatment works.

18. **"7-day average"** discharge limitation, other than for fecal coliform bacteria, is the highest allowable arithmetic means of the values for all effluent samples collected during the calendar week. The 7-day average for fecal coliform bacteria is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/100 ml. The DMR should report the highest 7-day average obtained during the calendar month. For reporting purposes, the 7-day average values should be reported as occurring in the month in which the Saturday of the calendar week falls in.

19. **"30-day average"**, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.

For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.

20. **"24-hour composite sample"** consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.

21. **"12-hour composite sample"** consists of 12 effluent portions, collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
22. **"6-hour composite sample"** consists of six effluent portions collected no closer together than one hour(with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
23. **"3-hour composite sample"** consists of three effluent portions collected no closer together than one hour(with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
24. **"Treatment works"** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
25. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack or preventive maintenance, or careless of improper operations.
26. **"For Fecal Coliform Bacteria"**, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
27. **"Dissolved oxygen limit"**, shall be defined as follows:

a. When limited in the permit as a monthly minimum, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month;

b. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.

28. **The term "MGD"** shall mean million gallons per day.
29. **The term "mg/l "**shall mean milligrams per liter or parts 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 part per million.
33. **The term "s.u."** shall mean standard units.
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 shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the Discharge Monitoring report shall be submitted by the 25th of the month following the monitoring period end date.

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

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

(2) is defined as a fixed three month period (or any part of the fixed three month period) of or dependent upon the seasons specified in the permit for a seasonal effluent characteristic with a monitoring requirement frequency of once/quarter that does not does not coincide with the fixed calendar quarter. Seasonal calendar quarters 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.

DRAFT

Fact Sheet

for renewal of draft NPDES Permit Number AR0021768 to discharge to Waters of the State

1. **PERMITTING AUTHORITY.**

The issuing office is:

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

2. **APPLICANT.**

The applicant is:

Russellville City Corporation
P.O. Box 3186
Russellville, AR 72811

3. **PREPARED BY.**

The permit was prepared by:

Shane Byrum
NPDES Branch, Water Division

4. **DATE PREPARED.**

The permit was prepared on 09/02/2004.

5. **PREVIOUS PERMIT ACTIVITY.**

Effective Date: 02/01/1998
Modification Date: N/A
Expiration Date: 01/31/2003

The permittee has submitted a permit renewal application on 07/01/2002 . It is proposed that the current NPDES permit 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 outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 14' 57" Longitude: 93° 06' 50"

The receiving waters named:

Outfall 001:

Whig Creek then to Arkansas River in Segment 3F of the Arkansas River Basin. The receiving stream is a Water of the State classified for secondary contact recreation, raw water source for public, industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

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

i. **303d List**

The receiving stream for Outfall 001 (Whig Creek) is listed on the 303d list as being impaired. Nitrates and Copper are listed as the sources of impairment. A TMDL was established for nitrates for Whig Creek on December 8, 2000, and is being included in this permit at outfall 001. A TMDL was established for Dissolved Copper for Whig Creek in November, 2003, and is being included in this permit at outfall 001 in the form of Total Recoverable Copper as required by 40 CFR 122.45 (c).

ii. **Endangered Species**:

No comments were received from the U.S. Fish and Wildlife Service (USF&WS). Therefore; no permit action is needed. The drafted permit and Fact Sheet 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: 7.3 MGD

b. Type of treatment: screening, primary clarifiers, biotowers, intermediate clarifiers, trickling filters, activated sludge, final clarification, and chlorine disinfection

c. Discharge Description: treated municipal wastewater

A quantitative and qualitative description of the discharge described in the NPDES Permit Application Forms received 07/01/2002 are available for review.

8. **INDUSTRIAL WASTEWATER CONTRIBUTIONS.**

a. **INDUSTRIAL USERS**

This facility does receive significant industrial wastewater. Based on the applicant's effluent compliance history and the type of industrial contributions, standard pretreatment program implementation requirements are deemed appropriate at this time.

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

9. **SEWAGE SLUDGE PRACTICES.**

The sludge produced at the treatment plant will be disposed of at the following locations:

Field	Section	Township	Range
1	22	7 North	20 West
2	21	7 North	20 West
3	21	7 North	20 West

10. **PERMIT CONDITIONS.**

The Arkansas Department of Environmental Quality has made a tentative 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 Regulations under 40 CFR 403 and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et. seq.).

a. **Interim Effluent Limitations**

Outfall 001- treated municipal wastewater

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

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report	Report	Once/day	Totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	609	10	15	Once/weekday	24-hr composite
(Nov-Apr)	913	15	23	Once/weekday	24-hr composite
Total Suspended Solids (TSS)					
(May-Oct)	913	15	23	Once/weekday	24-hr composite
(Nov-Apr)	1217	20	30	Once/weekday	24-hr composite
Ammonia Nitrogen (NH3-N)	243	4	6	Once/weekday	24-hr composite
Dissolved Oxygen	N/A	6.0 (Inst. Min.)		Once/weekday	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	1000	2000	Once/weekday	Grab
Total Residual Chlorine	N/A	Report (Inst. Max)		Once/weekday	Grab
Zinc, Total Recoverable	5.2	86 µg/l	172 µg/l	Once/month	24-hr composite
Copper, Total Recoverable	Report	Report µg/l	Report µg/l	Once/month	24-hr composite
Nitrates	Report	Report	Report	Once/weekday	24-hr composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	Once/weekday	Grab
Chronic Biomonitoring	N/A	See Page #11g below		Once/quarter	24-hr composite

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

b. **Final Effluent Limitations**

Outfall 001- treated municipal wastewater

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

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report	Report	Once/day	Totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	609	10	15	Once/weekday	24-hr composite
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Total Suspended Solids (TSS)					
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Ammonia Nitrogen (NH3-N)	243	4	6	Once/weekday	24-hr composite
Dissolved Oxygen	N/A	6.0 (Inst. Min.)		Once/weekday	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	1000	2000	Once/weekday	Grab
Total Residual Chlorine	N/A	0.1 (Inst. Max)		Once/weekday	Grab
Zinc, Total Recoverable	5.2	86 µg/l	172 µg/l	Once/month	24-hr composite
Copper, Total Recoverable	0.56	9.24 µg/l	18.54 µg/l	Once/month	24-hr composite
Nitrates	609	10	15	Once/weekday	24-hr composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	Once/weekday	Grab
Chronic Biomonitoring	N/A	See Page #11g below		Once/quarter	24-hr composite

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

11. **BASIS FOR PERMIT CONDITIONS**.

The following is an explanation of the derivation of the conditions of the draft 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 124.7 (48 FR 1413, April 1, 1983).

a. **Technology-Based versus Water Quality-Based Effluent Limitations and Conditions**

Following regulations promulgated at 40 CFR Part 122.44 (1) (2) (ii), the draft permit limits are based on either technology-based effluent limits pursuant to 40 CFR Part 122.44 (a) or on State water quality standards and requirements pursuant to 40 CFR Part 122.44 (d), whichever are more stringent.

b. **Technology-Based Effluent Limitations and/or Conditions**

i. **General Comments**

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

Total Residual Chlorine (TRC) Requirements

A review of the Discharge Monitoring Report (DMR) data for TRC in the current permit from 4/30/2000 through 4/30/2002 shows the highest daily maximum TRC of 1.12 mg/l. The long term average of the daily maximum values over this same period was 0.553 mg/l. The facility has a critical dilution of 100%, and thus, at the edge of the mixing zone, concentrations of TRC are at least 0.553 mg/l (0.553 x 100%) based on the long term average. EPA considers concentrations at the edge of the mixing zone higher than 0.011 mg/l to be toxic to aquatic organisms. The concentrations seen at the edge of the mixing zone at the facility during this time is higher than EPA's criteria for chlorine toxicity (chronic and acute). Therefore, TRC limits and a schedule of compliance have been included based on Regulation No. 2, Section 2.409 and the Department's Continuing Planning Process (CPP), App. D, Part V, which states "If the toxicity test results show toxicity problems, a schedule of compliance is required...".

c. **State Water Quality Numerical Standards Based Limitations**

i. **Conventional and Non-Conventional Pollutants**

Final effluent limits for CBOD5, TSS, NH3-N, and DO have been based on Arkansas Water Quality Management Plan verified on 4/8/04. The calculation of the loadings (lbs per day) uses a design flow of 7.3 MGD and the following equation (See below). Fecal coliform bacteria and pH limitations are based on chapter 5, Sections 2.507 and 2.504 of Regulation No. 2 as amended, respectively.

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

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

i. **General Comments**

Effluent limitations and/or conditions established in the draft permit are in compliance with the Arkansas Water Quality Standards and the applicable Water Quality Management Plan.

ii. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act(CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited...". To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations by Toxic Pollutants"(49 FR 9016-9019,3/9/84). In support of the national policy, Region 6 adopted the "Policy for post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in non-conformance with the provisions of 40 CFR Part 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

iii. **Implementation**

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

determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

iv. **Priority Pollutant Scan**

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

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

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

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

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

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

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

where:

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

The following values were used in the IWC calculations:

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

Q_e = 7.3 MGD = 11.3 cfs

C_b = 0 µg/l

Q_b = (See below):

(e) Aquatic Toxicity

Chronic Toxicity: Flow = 0 cfs, for comparison with chronic aquatic toxicity. This flow is 67 percent of the 7-day, 10-year low-flow (7Q10) for the receiving stream. The 7Q10 of 725 cfs is based on "The Arkansas Geological Commission's Identification and Classification of Perennial Streams of Arkansas, 1983".

Acute Toxicity: Flow = 0 cfs, for comparison with acute aquatic toxicity. This flow is 33 percent of the 7Q10 for the receiving stream.

(f) Bioaccumulation

Flow = 0 cfs, for comparison with bioaccumulation criteria. This flow is the long term average (LTA) of the receiving stream.

(g) Drinking Water

Flow = 0 cfs, for comparison with drinking water criteria. This flow is the 7Q10 for the receiving stream.

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

Hardness = 25 mg/l, based on attachment VI of CPP.

pH = 7 s.u., utilizing ADEQ accumulated data for Station ARK0067.

v. **Water Quality Standards for Metals and Cyanide**

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

The **Water-effect ratio** (WER) is assigned a value of 1.0 unless scientifically defensible study clearly demonstrates that a value less than 1.0 is necessary or a value greater than 1.0 is sufficient to fully protect the designated uses of the receiving stream from the toxic effects of the pollutant.

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

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

Metals criteria established in Regulation No. 2 for aquatic life protection are based on dissolved metals concentrations and hardness values (See Page 6 of **Attachment 1**). However, Federal Regulations cited at 40 CFR 122.45(c) require that effluent limitations for metals in NPDES permits be expressed as total recoverable (See Pages 1 and 6 of **Attachment 1**). Therefore, a dissolved to the total recoverable metal conversion must be implemented. This involves determining a linear partition coefficient for the metal of concern and using this coefficient to determine the fraction of metal dissolved, so that the dissolved metal ambient criteria may be translated to a total effluent limit. The formula for converting dissolved metals to total recoverable metals for streams and lakes are provided in **Attachment 2** and Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR 131.36.

vii. **Results of the comparison of the submitted information with the appropriate water quality standards and criteria**

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

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Total Recoverable Zinc	76*	20

*Highest monthly average reported during previous two years.

The accuracy of the existing Total Zinc limits were verified and continued from the previous permit pursuant to 40 CFR 122.44(l). Total Copper limits have been included based on the final TMDL report dated November, 2003. This report states that the revised NPDES permit will limit total copper by concentration and mass. Procedures used to develop these limits are shown below, and the calculation of the limits are shown in Attachment 6.

(a) **Aquatic Toxicity**

(i) **Pollutants with numerical water quality standards**

ADEQ has determined from the TMDL Report dated November, 2003, entitled (Whig Creek Basin TMDL For Copper", that there is a reasonable potential for the discharge to cause an instream excursion above the acute and/or chronic numeric standards as specified in the Interim Final Rule published in the Federal Register on May 4, 1995 and/or Arkansas Water Quality Standards, Reg. No. 2 (See **Attachment 1**.)

ADEQ has identified the following toxicants in the discharge in amounts which could potentially have a toxic impact on the receiving stream:

Pollutant	IWC, µg/l	Chronic AWQS, µg/l
Dissolved Copper	4.26*	3.47

*Average instream concentration measured from 1/23/95 to 3/11/03 at Station AR0067 as stated in the final TMDL report, November, 2003.

Pollutant	IWC, µg/l	Acute AWQS, µg/l
Dissolved Copper	4.26*	4.61

*Average instream concentration measured from 1/23/95 to 3/11/03 at Station AR0067 as stated in the final TMDL report, November, 2003.

Permit Action

Under Federal Regulation 40 CFR 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 above have been derived in a manner consistent with the Technical Support Document (TSD) for Water Quality-based Toxics Control (EPA, March 1991), the State's implementations procedures, and 40 CFR 122.45(c).

Permit Limit Determination

The instream waste load allocation (WLA), which is the level of effluent concentration that would comply with the water quality standard (WQS) of the receiving stream, is calculated for both chronic and acute WLA using the following equations:

$WLA_c = (WQS \times (Q_d + Q_b) - Q_b \times C_b))/Q_d$

where:

WLA_c =	chronic waste load allocation (μg/l)
Q_d =	discharge flow (cfs)
Q_b =	0.67 X 7Q10 (cfs)
C_b =	background concentration (μg/l)
WQS =	chronic aquatic toxicity standards expressed as Total Recoverable which are converted from the dissolved standard (μg/l)

and;

$WLA_a = (WQS \times (Q_d + Q_b) - Q_b \times C_b))/Q_d$

where:

WLA_a =	acute waste load allocation (μg/l)
Q_d =	discharge flow (cfs)
Q_b =	0.33 X 7Q10 (cfs)
C_b =	background concentration (μg/l)
WQS =	acute aquatic toxicity standards expressed as Total Recoverable which are converted from the dissolved standard (μg/l)

The long term average (LTA) effluent concentration is then calculated based on the chronic and acute WLA as follows:

$LTA_c = 0.72 \text{ X } WLA_c$
$LTA_a = 0.57 \text{ X } WLA_a$

The lowest of these two (2) values is selected as being the limiting LTA. The limiting LTA is then used to calculate the monthly average (AML) and daily maximum (DML) for the final limits. AML and DML are calculated as follows:

AML = 1.55 X Limiting LTA
DML = 3.11 X Limiting LTA

Limits included in the permit are as follows:

Arkansas Numerical Aquatic Toxicity Limits		
Parameter	AML*, µg/l	DML*, µg/l
Total Recoverable Copper	9.24	18.54
*See **Attachment 6** for calculations		

Final Limitations

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

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous NPDES Permit		Draft Permit	
	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
CBOD								
(May-Oct)	10	15	25	40	10	15	10	15
(Nov-Apr)	15	23	25	40	15	23	15	23
TSS								
(May-Oct)	15	23	30	45	15	23	15	23
(Nov-Apr)	20	30	30	45	20	30	20	30
NH3-N	4	6	N/A	N/A	4	6	4	6
DO (inst. Min)	6.0		N/A		6.0		6.0	
FCB (col/100ml)								
(Apr-Sept)	1000	2000	N/A	N/A	200*	400*	1000	2000
(Oct-Mar)	1000	2000	N/A	N/A	1000	2000	1000	2000
TRC	N/A		0.1 (Inst. Max)		N/A	Report	0.1 (Inst. Max)	
Nitrates	10	15	N/A	N/A	N/A	N/A	10	15
Zinc, Total Rec.	86 µg/l	172 µg/l	N/A	N/A	86 µg/l	172 µg/l	86 µg/l	172 µg/l
Copper, Total Rec	9.24 µg/l	18.54 µg/l	N/A	N/A	N/A	N/A	9.24 µg/l	18.54 µg/l
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6-9 s.u.		6.0-9.0 s.u.	

*These FCB limits were in error in previous permit since receiving stream is not classified for primary contact recreation.

e. **Biomonitoring**

Section 101(a)(3) of the Clean Water Act states that ".....it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." In addition, ADEQ is required under 40 CFR Part 122.44(d)(1), adopted by reference in Regulation 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act. Arkansas has established a narrative criteria which states "toxic materials shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with the normal propagation, growth and survival of aquatic biota."

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

TOXICITY TESTS	FREQUENCY
Chronic Biomonitoring	Once/quarter

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

Since dilution ratio is less than 100:1 (7Q10 : Design Flow), chronic biomonitoring requirements will be included in the permit.

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

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

Qd = Design flow = 7.3 MGD = 11.3 cfs
7Q10 = 0 Cfs
Qb = Background flow = (0.25) X 7Q10 = 0 cfs
CD = (11.3) / (11.3 + 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 **Attachment I** of CPP). The low-flow effluent concentration (critical dilution) is defined as **100%** effluent. The requirement for chronic biomonitoring tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead Minnow (*Pimephales promelas*) are indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen conductivity, and alkalinity shall be reported according to EPA/600/4-91/002, July 1994 and shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

This permit may be reopened to require further biomonitoring studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if biomonitoring data submitted to the Department shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in ADEQ Regulation No. 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

f. **Sample Type and Sampling Frequency**

Regulations promulgated at 40 CFR 122.44(i)(l) require permit to establish monitoring requirements which assure compliance with permit limitations. Requirements for sample type and sampling frequency at Outfall 001 have been based on the current NPDES permit for Flow, CBOD5, TSS, NH3-N, DO, FCB, Zinc, and pH. The Copper sample type and frequency is based on the same type and frequency as those established for Zinc. The TRC and Nitrate sample type and frequency is based on the same type and frequency as those established for CBOD5.

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

1. Facility design flow has been upgraded from 6.5 to 7.3 MGD.
2. Condition dealing with odor was removed from Part III.
3. Mass limits were revised based on new design flow.
4. Reporting requirements for biomonitoring have changed.
5. Stormwater pollution prevention plan language added to Part III.
6. Additonal Pretreatment requirements were included in Part III.
7. Interim monitoring and reporting requirements for Nitrates were added.
8. Final limits were added for Nitrates.
9. Facility mailing address has changed.
10. Averaging period for TRC changed from 7-day average to instantaneous.

11. Final limits for TRC were added.
12. A schedule of compliance has been included for TRC, Nitrates, and Copper.
13. Bacteria limits were corrected for April through September since the receiving stream is not classified for primary contact recreation.
14. Interim monitoring and reporting requirements were added for Total Copper.
15. Final limitations were added for Total Copper.
16. Parts II and IV have been revised.

i. **Storm water pollution prevention plan requirements**

Storm water pollution prevention plan requirements are included based on Storm water General Permit ARR000000 Part B.4.ix which requires SWPPP for POTW's with discharges greater than 1.0 MGD. However; in lieu of storm water pollution prevention plan requirements the permittee may submit "No exposure certification for exclusion from NPDES Storm water " to the Department during the public comment period and storm water pollution prevention plan requirements will be deleted in the final permit.

12. SCHEDULE OF COMPLIANCE.

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

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

The permittee shall comply with the following schedule of compliance:

TRC, Nitrates, and Total Recoverable Copper	
Action	Compliance Date
Submit Progress Report	1 year after effective date of permit
Submit Progress Report	2 years after effective date of permit
Achieve compliance with final limits	3 years after effective date of permit

13. **OPERATION AND MONITORING.**

The applicant is at all times required to properly operate and maintain the treatment facility; to monitor the discharge on a regular basis; and report the results monthly. The monitoring results will be available to the public.

14. **SOURCES.**

The following sources were used to draft the permit:

a. NPDES application No. AR0021768 received 07/01/2002.
b. Arkansas Water Quality Management Plan (WQMP).
c. Regulation No. 2.
d. Regulation No. 6.
e. 40 CFRs 122, 125, 133 and 403.
f. NPDES permit file AR00 21768.
g. Discharge Monitoring Reports (DMRs).
h. "Arkansas Water Quality Inventory Report 2000 (305B)", ADEQ.
i. The Arkansas Geological Commission Map, "Identification and Classification of Perennial Streams of Arkansas", dated 1983.
j. Continuing Planning Process (CPP).
k. Report entitled, "Whig Creek TMDL for Nitrate", December 8, 2000, by US EPA Region 6 with cooperation from the Arkansas Department of Environmental Quality.
l. Report entitled, "Whig Creek Basin TMDL for Copper", November, 2003, by Parsons.
m. Report entitled "Master Plan for Wastewater Treatment", June, 1996, by Garver & Garver Engineers.

15. **PUBLIC NOTICE.**

The public notice describes the procedures for the formulation of final determinations and shall provide for a public comment period of 30 days. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision. A request for a public hearing shall be in writing and shall state the nature of the issue(s) proposed to be raised in the hearing. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers, and to the Regional Director of the U.S. Fish and Wildlife Service on a case-by-case basis, and the EPA and Arkansas Department of Health prior to the publication of that notice.

16. **NPDES POINT OF CONTACT.**

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

ADEQ
ARKANSAS
Department of Environmental Quality

December 16, 2004

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7002 0860 0007 6828 1353)

Les Church, General Manager
Russellville City Corporation
P.O. Box 3186
Russellville, AR 72811

RE: Application to Discharge to Waters of the State Permit Number AR0021768

Dear Mr. Church:

Enclosed is the public notice, Fact Sheet, and a copy of the permit which the Arkansas Department of Environmental Quality has drafted under the authority of the National Pollutant Discharge Elimination System and the Arkansas Water and Air Pollution Control Act. A copy of the final permit will be mailed to you when the Department has made a final permit decision.

Federal law requires that all draft NPDES permits prepared by this Department complete a 30 day public notice period. The enclosed public notice will be published by ADEQ in the local paper of general circulation. Act 163 of 1993 requires the permit applicant to bear the expense of the notice's publication. Therefore, an invoice will be sent to you for the cost of publishing the public notice. Until this Department receives proof of publication and proof of payment of the publication, no further action will be taken on your NPDES permit.

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

Under the provisions of federal and state laws and regulations, all persons, including applicants, who believe any condition of a draft permit is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period. Once a final permit is issued by the Director and becomes effective, the permittee must comply with all terms and conditions of the permit, or be subject to enforcement actions for any instances of noncompliance during the duration of the permit, usually five (5) years. Consequently, **it is imperative that you, as the applicant, thoroughly review the enclosed documentation for accuracy, applicability, and your ability to comply with all conditions therein. Comments must be received at ADEQ prior to the close of the public comment period as shown in the enclosed public notice.**

Should you have any questions concerning any part of the permit, please feel free to contact the Arkansas Department of Environmental Quality, NPDES Branch, at (501) 682-0622.

Sincerely,

Martin Maner, P.E.
Chief, Water Division

MM:sb

Enclosure

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Arkansas Department of Environmental Quality NPDES authorization to discharge to Waters of the State, permit number AR0021768.

The applicant's mailing address is:

Russellville City Corporation
P.O. Box 3186
Russellville, AR 72811

The discharge from this facility is made into Whig Creek then to the Arkansas River in Segment 3F of the Arkansas River Basin. The receiving stream is a Water of the State classified for secondary contact recreation, raw water source for public, industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses. The facility is located as follows: south of the city of Russellville, two miles south of Highway 64; Latitude: 35° 14' 56"; Longitude: 93° 06' 50" in Section 22, Township 7 North, Range 20 West in Pope County, Arkansas, and the outfalls are located at the following coordinates:

Outfall 001: Latitude: 35° 14' 57" Longitude: 93° 06' 50"

The sludge produced at the treatment plant will be disposed of at the following locations:

Field	Section	Township	Range
1	22	7 North	20 West
2	21	7 North	20 West
3	21	7 North	20 West

A Fact Sheet is available upon request. Under the standard industrial classification (SIC) code 4952 the applicant's activities are the operation of a municipal treatment plant.

Changes from the previously issued permit are as follows:

1. Facility design flow has been upgraded from 6.5 to 7.3 MGD.
2. Condition dealing with odor was removed from Part III.
3. Mass limits were revised based on new design flow.
4. Reporting requirements for biomonitoring have changed.
5. Stormwater pollution prevention plan language added to Part III.
6. Additional Pretreatment reqirements were included in Part III.
7. Interim monitoring and reporting requirements for Nitrates were added.
8. Final limits were added for Nitrates.
9. Facility mailing address has changed.
10. Averaging period for TRC changed from 7-day average to instantaneous.
11. Final limits for TRC were added.
12. A schedule of compliance has been included for TRC, Nitrates, and Total Copper.
13. Bacteria limits were corrected for April through September since the receiving stream is not classified for primary contact recreation.
14. Interim monitoring and reporting requirements were added for Total Copper.
15. Final limitations were added for Total Copper.
16. Parts II and IV have been revised.

ARKANSAS Department of Environmental Quality NPDES AUTHORIZATION
TO DISCHARGE TO Waters of the State, PERMIT NUMBER AR0021768

This is to give notice that the Arkansas Department of Environmental Quality has developed Draft Permit for the following applicant under the National Pollutant Discharge Elimination System and the Arkansas Water and Air Pollution Control Act. Development of the draft permit(s) was based on a preliminary staff review.

Arkansas Department of Environmental Quality NPDES authorization to discharge to Waters of the State, permit number AR0021768.

The applicant's mailing address is:

Russellville City Corporation
P.O. Box 3186
Russellville, AR 72811

The discharge from this facility is made into Whig Creek then to the Arkansas River in Segment 3F of the Arkansas River Basin. The receiving stream is a Water of the State classified for secondary contact recreation, raw water source for public, industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses. The facility is located as follows: south of the city of Russellville, two miles south of Highway 64; Latitude: 35° 14' 56"; Longitude: 93° 06' 50" in Section 22, Township 7 North, Range 20 West in Pope County, Arkansas, and the outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 14' 57" Longitude: 93° 06' 50"

The sludge produced at the treatment plant will be disposed of at the following locations:

Field	Section	Township	Range
1	22	7 North	20 West
2	21	7 North	20 West
3	21	7 North	20 West

A Fact Sheet is available upon request. Under the standard industrial classification (SIC) code 4952 the applicant's activities are the operation of a municipal treatment plant.

Changes from the previously issued permit are as follows:

1. Facility design flow has been upgraded from 6.5 to 7.3 MGD.
2. Condition dealing with odor was removed from Part III.
3. Mass limits were revised based on new design flow.
4. Reporting requirements for biomonitoring have changed.
5. Stormwater pollution prevention plan language added to Part III.
6. Additional Pretreatment reqirements were included in Part III.
7. Interim monitoring and reporting requirements for Nitrates were added.
8. Final limits were added for Nitrates.
9. Mailing address has been changed.
10. Averaging period for TRC changed from 7-day average to instantaneous.
11. Final limits for TRC were added.
12. A schedule of compliance has been included for TRC, Nitrates, and Total Copper.
13. Bacteria limits were corrected for April through September since the receiving stream is not classified for primary contact recreation.
14. Interim monitoring and reporting requirements were added for Total Copper.
15. Final limitations were added for Total Copper.
16. Parts II and IV have been revised.

The permit(s) will become effective on or after February 1, 2005 unless:

Comments are received and/or public hearing is requested prior to January 15, 2005, in which case the permit will be effective on or after March 1, 2005.

The ADEQ contact person for submitting written comments, requesting information regarding the draft permit, and/or obtaining copies of the permit and the Fact Sheet is:

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

NPDES comments and public hearing procedures may be found at 40 CFR 124.10 and 124.12 (49 Federal Register 14264, April 1, 1983, as amended at 49 Federal Register 38051, September 26, 1984). The period during which written comments on the draft permit may be submitted extends for 30 days from the date of this notice. During the comment period, any interested person may request a public hearing by filing a written request which must state the issues to be raised. A public hearing will be held if ADEQ finds a significant degree of public interest.

ADEQ will notify the applicant, and each person who has submitted written comments or requested notice, of the final permit decision. A final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit. Any interested person who has submitted comments may appeal a final decision by ADEQ in accordance with the Arkansas Department of Environmental Quality Regulation No. 8 (Administrative Procedures).

Attachment 1

Attachment 2

Linear Partition Coefficients for Priority Metals in Streams and Lakes*

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

$Kp = Kpo \times TSS^a$

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

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

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

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

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

**** Texas Environmental Advisory Council, 1994

Attachment 3

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

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

TSS(15th percentile)		
Receiving Stream	TSS	Unit
Arkansas River:		
Ft. Smith to Dardanelle Dam	12.0	mg/l
Dardanelle Dam to Terry L&D	10.5	mg/l
Terry L&D to L&D #5	8.3	mg/l
L&D #5 to Mouth	9.0	mg/l
Red River	33	mg/l
Ouachita River:		
above Caddo River	2.0	mg/l
below Caddo River	5.5	mg/l
White River:		
above Beaver Lake	2.5	mg/l
Bull Shoals to Black River	3.3	mg/l
Black River to Mouth	18.5	mg/l
St. Francis River	18	mg/l

For all other discharges use the following ecoregion TSS:

TSS (15th percentile)		
Ecoregion	TSS	Unit
Ouachita	2	mg/l
Gulf Coastal	5.5	mg/l
Delta	8	mg/l
Ozark Highlands	2.5	mg/l
Boston Mountains	1.3	mg/l
Arkansas River Valley	3	mg/l

Attachment 7

BIOMONITORING FREQUENCY RECOMMENDATION AND RATIONALE FOR ADDITIONAL REQUIREMENTS

Permit Number: **AR0021768**
Facility Name: **City Corporation – Russellville Water and Sewer System**
Previous Critical Dilution: **100%** Proposed Critical Dilution: **100%**
Date of Review: **6-13-03** Name of Reviewer: **Clem**

Number of Test Performed during previous 5 years by Species:
Pimephales promelas **(Fathead minnow) : 8**
Ceriodaphnia dubia **(water flea): 8**

Failed Test Dates during previous 5 years by Species:
Pimephales promelas **(Fathead minnow):** None
Ceriodaphnia dubia **(water flea):** None

Previous TRE Activities: None

Frequency Recommendation by Species:
Pimephales promelas **(Fathead minnow): once/quarter**
Ceriodaphnia dubia **(water flea): once/quarter**

Additional Requirements (including WET Limits) Rationale/Comments Concerning Permitting:

Rationale: *Continuing Planning Process, 2000, Appendix D.1.b.* "For permittees with a design flow greater than or equal to 2 MGD and no known problems, the toxicity testing frequency shall be four times a year for both species."

Attachment 5

MONITORING RESULTS (1) FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: _____, 20_ TO _____, _20____
TREATMENT PLANT : City of_____ NPDES PERMIT #AR00
AVERAGE POTW FLOW: ___MGD % IU FLOW: __%

METALS, CYANIDE and PHENOLS (Total)	MAHL mg/l (2)	Influent Dates Sampled (mg/l) Once/quarter				WQ level/ limit mg/l (2)	Effluent Dates Sampled (mg/l) Once/quarter				Laboratory Analysis (See Attachment PPS)	
											EPA Method Used (1)	Detection Level Achieved (ug/l)
Antimony	N/A					N/A						
Cadmium												
Copper												
Lead												
Mercury												
Nickel												
Selenium												
Silver												
Zinc												
Chromium												
Cyanide												
Arsenic						N/A						
Molybdenum						N/A						
Phenols	N/A					N/A						
Beryllium	N/A					N/A						
Thallium	N/A					N/A						
Flow, MGD	N/A					N/A						
(3)												

(1) It is advised that the influent and effluent samples are collected considering flow detention time through each plant. **Analytical MQLs should be used so that the data can also be used for Local Limits assessment and NPDES application purpose.**

(2) This value was calculated during the development of TBLL based on State WQ Standards and implementation procedures.

(3) Record the name of any pollutant [40 CFR 122, Appendix D, Table II and/or Table V] detected and the quantity in which they were detected.

MAHL - Maximum Allowable Headworks Level

WQ - Water Quality

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ATTACHMENT PPS

METALS AND CYANIDE	RECOMMENDED EPA TEST METHOD	
	REQUIRED MQL (µg/L)	EPA APPROVED TEST METHOD
Antimony , Total Recoverable	60	200.7
Arsenic , Total Recoverable	10	206.2
Beryllium, Total Recoverable	5	200.7
Cadmium , Total Recoverable	1	213.2
Chromium Total Recoverable	10	200.7
Chromium (6+) Dissolved	10	218.4
Copper, Total Recoverable	10	220.2
Lead, Total Recoverable	5	239.2
Mercury, Total Recoverable	0.2	245.1
Nickel, Total Recoverable	40	200.7
Selenium, Total Recoverable	5	270.2
Silver, Total Recoverable	2	272.2
Thallium, Total Recoverable	10	279.2
Zinc, Total Recoverable	20	200.7
Phenols, Total Recoverable	5	420.1
Cyanide, Total Recoverable	20	335.2

ATTACHMENT A

PRETREATMENT PROGRAM STATUS REPORT

UPDATED SIGNIFICANT INDUSTRIAL USERS LIST

Industrial User	SIC Code	Categorical Determination	Control Document		New User	Times Inspected	Times Sampled	Compliance Status				Permit Limits
								Reports				
			Y/N	Last Action				BMR	90-day Compliance	Semi Annual	Self Monitoring	

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ATTACHMENT B

SIGNIFICANT VIOLATIONS - ENFORCEMENT ACTIONS TAKEN

Industrial User	Nature of Violation		Number of Action Taken					Penalties Collected	Compliance Schedule		Current Status	Comments
	Reports	Limits	N.O.V.	A.O.	Civil	Criminal	Other		Date Issued	Date Due		

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ATTACHMENT C
PRETREATMENT PERFORMANCE SUMMARY (PPS)

NOTE: ALL QUESTIONS REFER TO THE INDUSTRIAL PRETREATMENT PROGRAM AS APPROVED BY THE EPA. THE PERMITTEE SHOULD NOT ANSWER THE QUESTIONS BASED ON CHANGES MADE TO THE APPROVED PROGRAM WITHOUT DEPARTMENT AUTHORIZATION.

I. General Information

Control Authority Name _____

Address _____

City _____ State/Zip _____

Contact Person _____ Position _____

Contact Telephone _____ NPDES Permit Nos. _____

Reporting Period _____ _____

(Beginning Month and Year) (Ending Month and Year)

Total Number of Categorical IUs _____

Total Number of Significant Noncategorical IUs _____

II. Significant Industrial User Compliance

	SIGNIFICANT INDUSTRIAL USERS	
	Categorical	NonCategorical
1) No. of SIUs Submitting BMRs/Total No. Required.	__/__	N/A*
2) No. of SIUs Submitting 90-Day Compliance Reports/No. Required.	__/__	N/A*
3) No. of SIUs Submitting Semiannual Reports/ Total No. Required.	__/__	__/__
4) No. of SIUs Meeting Compliance Schedule/ Total No. Required to Meet Schedule	__/__	__/__

5) No. of SIUs in Significant Noncompliance/
Total No. of SIUs . . . . . / /

6) Rate of Significant Noncompliance for all
SIUs (categorical and noncategorical) . . /

III. Compliance Monitoring Program

	SIGNIFICANT INDUSTRIAL USERS	
	Categorical	NonCategorical
1) No. of Control Documents Issued/Total No. Required.	/	/
2) No. of Nonsampling Inspections Conducted. .	/	/
3) No. of Sampling Visits Conducted.	/	/
4) No. of Facilities Inspected (nonsampling) .	/	/
5) No. of Facilities Sampled	/	/

IV. Enforcement Actions

	SIGNIFICANT INDUSTRIAL USERS	
	Categorical	NonCategorical
1) No. of Compliance Schedules Issued/No. of Schedules Required	/	/
2) No. of Notices of Violations Issued to SIUs		
3) No. of Administrative Orders Issued to SIUs		
4) No. of Civil Suits Filed.		
5) No. of Criminal Suits Filed		
6) No. of Significant Violators (attach newspaper publication).		
7) Amount of Penalties Collected (total dollars/IUs assessed)	/	/
8) Other Actions (sewer bans, etc.).		

The following certification must be signed in order for this form to be considered complete:

I certify that the information contained herein is complete and accurate to the best of my knowledge.

_____

Authorized Representative Date