Permit Number: AR0034347
AFIN: 27-00022

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

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

The applicant's mailing address is:

City of Sheridan
P.O. Box 486
Sheridan, AR 72150

The facility address is:

City of Sheridan
Gatzke Drive
Sheridan, AR 72150

is authorized to discharge from a facility located as follows: approximately 500 feet southeast of the cul-de-sac at the south end of Gatzke Drive off Hwy 270 East in Grant County, Arkansas.

Latitude: 34° 18' 13.5"; Longitude: 92° 23' 21.2"

to receiving waters named:

Big Creek, thence to Hurricane Creek, thence to the Saline River, thence to the Ouachita River in Segment 2C of the Ouachita River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 34° 17' 54"; Longitude: 92° 22' 42"

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

Response to Comments are included.

Issue Date: July 31, 2010
Effective Date: September 1, 2010
Expiration Date: August 31, 2015

Steven L. Drown

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

PART I
PERMIT REQUIREMENTS

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

During the period beginning on the effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below from a treatment system consisting of 3-cell stabilization pond system followed by a holding pond utilizing a hydrograph controlled release with a design flow of 0.676 MGD.

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Effluent Flow	N/A	Report, MGD	Report, MGD (Daily Maximum)	continuous	totalizing meter
Upstream Flow in Big Creek	N/A	Report, MGD	Report, MGD (Daily Maximum)	continuous[1]	meter
Minimum Upstream Flow in Big Creek before Discharge is Allowed					
(January – February)	N/A	N/A	3.2 MGD Minimum	continuous	meter
(March – December)	N/A	N/A	6.5 MGD Minimum	continuous	meter
Effluent Flow as a Percentage of Upstream Flow in Big Creek					
(January – February)	N/A	N/A	30% Maximum	continuous	calculate
(March – December)	N/A	N/A	20% Maximum	continuous	calculate
Carbonaceous Biochemical Oxygen Demand (CBOD5)	N/A	30.0	45.0	three/month	composite
Total Suspended Solids (TSS)	N/A	90.0	135.0	three/month	composite
Ammonia Nitrogen (NH3-N)					
(January - February)	N/A	12.0	18.0	three/month	composite
(March, April, November, December)	N/A	10.0	15.0	three/month	composite
(May – October)	N/A	4.0	6.0	three/month	composite
Dissolved Oxygen (DO)					
(January - February)	N/A	7.0, (Instantaneous Min.)		three/month	grab
(March, April, November, December)	N/A	6.0, (Instantaneous Min.)		three/month	grab
(May – October)	N/A	5.0, (Instantaneous Min.)		three/month	grab

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.		
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(April - September)	N/A	200	400	three/month	grab
(October - March)	N/A	1000	2000	three/month	grab
pH	N/A	Minimum 6.0 s.u.	Maximum 10.0 s.u.	three/month	grab
Total Recoverable Lead	0.0039	3.4 µg/l	6.9 µg/l	once/month	composite
Chronic WET Testing[2]	N/A	Report		once/quarter	composite
Pimephales promelas (Chronic)[2]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC)TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite
Ceriodaphnia dubia (Chronic)[2]		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail production (7-day NOEC)TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite

1 When discharging.
2 See Condition No. 9 of Part II.

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

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after final treatment at the following monitoring coordinates: Latitude: 34° 17' 54" Longitude: 92° 22' 42"

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

SECTION B. PERMIT COMPLIANCE

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

Compliance with all limits is required on the effective date of the permit.

PART II
OTHER CONDITIONS

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

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

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

4. Other Specified Monitoring Requirements

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

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

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

5. Sanitary Sewer Overflow (SSO):

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

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

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

B. Immediate Reporting

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

At a minimum the report shall identify:

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

C. Discharge Monitoring Reports (DMRs)

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

1. The location(s) of overflow;
2. The receiving water (If there is one);
3. The duration of overflow;
4. Cause of overflow;
5. The estimated volume of overflow (MG);
6. A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);
7. The estimated date and time when the overflow began and stopped or will be stopped;
8. The cause or suspected cause of the overflow;
9. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;

10. If reasonably made, an estimate of the number of persons who came into contact with wastewater from the overflow; and
11. Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps.

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

7. Contributing Industries and Pretreatment Requirements

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

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

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

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

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

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

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

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

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

   B. The permittee shall require any indirect discharger to the treatment works to comply with

the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

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

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

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

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

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

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

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

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

Pollutant	MQL (µg/l)
Total Recoverable Lead	0.5

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

MQL = 3.3 X MDL

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

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
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	31% (Jan – Feb) 23% (March-Dec)
EFFLUENT DILUTION SERIES (%):	13, 17, 23, 31, 41 (Jan-Feb) 10, 13, 17, 23, 31 (Mar-Dec)
TESTING FREQUENCY	Once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

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

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA-821-R-02-013, or the most recent update thereof. A minimum of five (5) replicates with eight

(8) organisms per replicate must be used in the control and in each effluent dilution of this test.

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

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

2. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

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

If any valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit. In addition:

a. Part I Testing Frequency Other Than Monthly

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

ii. IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity

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

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

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

b. Part I Testing Frequency of Monthly

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

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

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

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

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

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

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

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

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

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

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

b. Statistical Interpretation

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

ii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration

(NOEC) as described in EPA/821/R-02-013 or the most recent update thereof.

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

c. Dilution Water

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

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

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

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

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

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

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

(D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the

discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

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

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

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

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

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

vi. MULTIPLE OUTFALLS: If the provisions of this section are

applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in item 1.a. above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.

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

4. REPORTING

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

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

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

i. Pimephales promelas (Fathead minnow)

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

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

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

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

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

ii. Ceriodaphnia dubia

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

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

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

(D) If the NOEC for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B

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

5. TOXICITY REDUCTION EVALUATIONS (TREs)

TREs for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TREs as follows: a sub-lethal TRE (TRE_{SL}) is triggered based on three sub-lethal test failures while a lethal effects TRE (TRE_L) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRE_{SL} where there are no effects at effluent dilutions of less than 76% effluent.

a. Within ninety (90) days of confirming persistent toxicity, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity

Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and includes the following:

i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures' (EPA-600/6-91/003) and 'Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I' (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity'c (EPA/600/R-92/080) and 'Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/081), as appropriate.

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

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

ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and

conduct chemical specific analyses when a probable toxicant has been identified;

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

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

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

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

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

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

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

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

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

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

critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

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

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

6. MONITORING FREQUENCY REDUCTION

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

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

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

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

PART III
STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

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

2. Penalties for Violations of Permit Conditions

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

3. Permit Actions

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

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

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

4. Toxic Pollutants

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

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

5. Civil and Criminal Liability

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

6. Oil and Hazardous Substance Liability

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

7. State Laws

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

8. Property Rights

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

9. Severability

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

10. Applicable Federal, State or Local Requirements

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

11. Permit Fees

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

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

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

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

2. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of

treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. Duty to Mitigate

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

4. Bypass of Treatment Facilities

A. Bypass not exceeding limitation

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

B. Notice

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

C. Prohibition of bypass

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

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

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

5. Upset Conditions

A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements

of Part III.B.5.b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

B. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
   1. An upset occurred and that the permittee can identify the specific cause(s) of the upset;
   2. The permitted facility was at the time being properly operated.
   3. The permittee submitted notice of the upset as required by Part III.D.6.; and
   4. The permittee complied with any remedial measures required by Part III.B.3.

C. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. Written approval must be obtained from the ADEQ prior to removal of substances. Additionally, the permittee shall give at least 120 days prior notice to the Director of any change planned in the permittee's sludge disposal practice or land use applications, including types of crops grown (if applicable). Produced sludge shall be disposed of by land application only when meeting the following criteria:

A. Sewage sludge from treatment works treating domestic sewage (TWTDS) must meet the applicable provisions of 40 CFR Part 503; and
B. The sewage sludge has not been classified as a hazardous waste under state or federal regulations.

7. Power Failure

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

SECTION C – MONITORING AND RECORDS

1. Representative Sampling

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

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

2. Flow Measurement

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

Calculated Flow Measurement

For calculated flow measurements that are performed in accordance with either the permit requirements or a Department approved method (i.e., as allowed under Part II.4), the +/- 10% accuracy requirement described above is waived. This waiver is only applicable when the method used for calculation of the flow has been reviewed and approved by the Department.

3. Monitoring Procedures

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

4. Penalties for Tampering

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

5. Reporting of Monitoring Results

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form provided by the Department or other form/method approved in writing by the Department (e.g., electronic submittal of DMR once approved). Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR form postmarked

no later than the 25th day of the month or submitted electronically by 6:00 p.m. of the 25th (after NETDMR is approved), following the completed reporting period beginning on the effective date of the permit. When mailing the DMRs, duplicate copies of the forms signed and certified as required by Part III.D.11 and all other reports required by Part III.D, shall be submitted to the Director at the following address:

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

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

6. Additional Monitoring by the Permittee

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

7. Retention of Records

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

8. Record Contents

Records and monitoring information shall include:

A. The date, exact place, time and methods of sampling or measurements, and preservatives used, if any;
B. The individuals(s) who performed the sampling or measurements;
C. The date(s) and time analyses were performed;
D. The individual(s) who performed the analyses;
E. The analytical techniques or methods used; and
F. The measurements and results of such analyses.

9. Inspection and Entry

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

A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
D. Sample, inspect, or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice within 180 days and provide plans and specification (if applicable) to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility. In no case are any new connections, increased flows, removal of substances, or significant changes in influent quality permitted that cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance

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

3. Transfers

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

4. Monitoring Reports

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

5. Compliance Schedule

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

6. Twenty-four Hour Report

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

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

C. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours to the Enforcement Section of the Water Division of the ADEQ.

7. Other Noncompliance

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

8. Changes in Discharge of Toxic Substances for Industrial Dischargers

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

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

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

9. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The

permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. Information shall be submitted in the form, manner and time frame requested by the Director.

10. Duty to Reapply

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

11. Signatory Requirements

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

A. All **permit applications** shall be signed as follows:

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

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

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

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

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

12. Availability of Reports

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

13. Penalties for Falsification of Reports

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

14. Applicable Federal, State or Local Requirements

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

PART IV
DEFINITIONS

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

1. **"Act"** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **"Administrator"** means the Administrator of the U.S. Environmental Protection Agency.
3. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.
4. **"Applicable effluent standards and limitations"** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
5. **"Applicable water quality standards"** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APCEC) Regulation No. 2, as amended.
6. **"Bypass"** As defined at 122.41(m).
7. **"Composite sample"** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of four discrete samples. May be "time-composite"(collected at constant time intervals) or "flow proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).
8. **Daily Discharge"** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
   A. **Mass Calculations**: For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of pollutant discharged over the sampling day.
   B. **Concentration Calculations**: For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
8. **Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month. The 7-day average for Fecal Coliform Bacteria (FCB) or E-Coli is the geometric mean of the values of all effluent samples collected during the calendar week in colonies per 100 ml.
9. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
10. **"Director"** means the Director of the Arkansas Department of Environmental Quality.
11. **"Dissolved oxygen limit"**, shall be defined as follows:
    A. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month;
    B. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.

12. **"E-Coli"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For E-Coli, report the monthly average as a 30-day geometric mean in colonies per 100 ml.
13. **"Fecal Coliform Bacteria (FCB)"**a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
14. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
15. **"Industrial User"** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
16. **"Instantaneous Maximum"** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.
17. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
18. **"Monthly average"** means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. For Fecal Coliform Bacteria (FCB) or E-Coli, report the monthly average, (see 30-day average below).
19. **"National Pollutant Discharge Elimination System"** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.
20. **"POTW"** means a Publicly Owned Treatment Works.
21. **"Severe property damage"** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in products.
22. **"Sewage sludge"** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW.
23. **"7-day average"** Also known as Average weekly. means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
24. **"Treatment works"** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
25. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond

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

26. **"Visible sheen"** means the presence of a film or sheen upon or a discoloration of the surface of the discharge. A sheen can also be from a thin glistening layer of oil on the surface of the discharge.
27. **"MGD"** shall mean million gallons per day.
28. **"mg/l "**shall mean milligrams per liter or parts per million (ppm).
29. **"µg/l"** shall mean micrograms per liter or parts per billion (ppb).
30. **"cfs"** shall mean cubic feet per second.
31. **"ppm"** shall mean parts per million.
32. **"s.u."** shall mean standard units.
33. **"Weekday"** means Monday – Friday.
34. **Monitoring and Reporting:**
    When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25th of the month following the monitoring period end date.

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

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

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

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

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

Final Statement of Basis

This Statement of Basis is for information and justification of the permit limits only. Please note that it is not enforceable. This final permitting decision is for renewal of the discharge Permit Number AR0034347 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 27-00022 to discharge to Waters of the State.

1. **PERMITTING AUTHORITY.**

   The issuing office is:

   Arkansas Department of Environmental Quality
   5301 Northshore Drive
   North Little Rock, Arkansas 72118-5317

2. **APPLICANT.**

   The applicant's mailing address is:

   City of Sheridan
   P.O. Box 486
   Sheridan, AR 72150

   The facility address is:

   City of Sheridan
   Gatzke Drive
   Sheridan, AR 72150

3. **PREPARED BY.**

   The permit was prepared by:

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

4. **PERMIT ACTIVITY.**

Previous Permit Effective Date:	3/1/2005
Previous Permit Modification Date:	8/1/2008
Previous Permit Expiration Date:	2/28/2010

The permittee submitted a permit renewal application on 8/31/2009. The current discharge permit is being reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

DOCUMENT ABBREVIATIONS

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

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

TRC - total residual chlorine
TSS - total suspended solids
UAA - use attainability analysis
WQMP - water quality management plan
WET - Whole effluent toxicity
WWTP - wastewater treatment plant

DMR Review:

The Discharge Monitoring Reports (DMR's) for June 2006 – June 2009 were reviewed during the permit renewal process. There was 1 NH3-N violation in May 2009, 1 DO violation in March 2009, and 1 violation of the discharge flow as a percentage of stream flow in October 2006 noted during the review of permit data. These violations were isolated events that were promptly corrected, therefore no further permitting action is necessary.

Legal Order Review:

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

Site Visits/Inspections

A routine compliance inspection was performed on July 17, 2008. The inspection report stated that the permittee was in compliance with the requirements of the permit at the time of inspection.

5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT.

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

1. The critical dilution and dilution series has changed for whole effluent toxicity testing based on the worst case dilution ratio allowed by the permitted HCR scenarios.
2. A total lead mass limit was added to comply with the TMDL report finalized on August 14, 2008 which established a wasteload allocation for total lead from this point source.
3. Total lead concentration limits were added to prevent the facility from contributing to the lead impairment.
4. The requirement to monitor and report upstream flow has been clarified to require continuous upstream monitoring only when the facility is discharging.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

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

Latitude: 34° 17' 54" Longitude: 92° 22' 42"

The receiving waters named:

Big Creek, thence to Hurricane Creek, thence to the Saline River, thence to the Ouachita River in Segment 2C of the Ouachita River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 08040203 and reach # 904 is a Water of the State classified for primary and secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

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

A. 303(d) List:

The receiving stream (Big Creek) is listed on the 2008 303(d) list for Turbidity. A final TMDL report was issued on March 21, 2008. The report states that turbidity in the receiving stream represents inorganic suspended solids and that the suspended solids discharged by point sources in Big Creek are assumed to consist primarily of organic solids rather than inorganic solids. Therefore, no further permitting action is needed because the discharge of organic suspended solids from point sources are already addressed by the permit limits for TSS.

The receiving stream (Big Creek) is listed on the 2008 303(d) list for Lead. A TMDL report was finalized on August 14, 2008. This report set forth a wasteload allocation for this point source of 0.0039 lb/day for Total Lead. Pursuant to 40 CFR Part 122.44(d)(1)(vii)(B), when developing water quality-based effluent limits, the permitting authority shall ensure that effluent limits are consistent with the requirements of any available wasteload allocation for the discharge set forth in an approved TMDL. Therefore, the wasteload allocation set forth in the TMDL was included in the permit as a permit limit with monthly monitoring and reporting requirements. A compliance schedule for lead was not included because a review of the reported flow rates and lead concentrations for August 2008 through July 2009 indicated that the facility exceeded 0.0039 lb/day only one time and all the other months showed compliance with the specified wasteload allocation for lead. Therefore, the data shows that the facility is currently capable of meeting the load allocation. Total Lead concentration limits are also included in the permit to ensure that any effluent from this point source will not add to the impairment. The calculation of these concentration limits are shown in section 13.C. of this statement of basis.

The receiving stream (Big Creek) is listed on the 2008 303(d) list for dissolved oxygen. A final TMDL report was issued on January 16, 2007. This report sets forth recommended

permit limits for minimum upstream flow, effluent flow as a percentage of upstream flow, CBOD5, NH3-N, and DO, in order to maintain the dissolved oxygen in Big Creek within water quality standards. The recommended limits in the TMDL are incorporated into this permit.

B. **Endangered Species**:

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

C. **Anti-Degradation**:

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

8. OUTFALL AND TREATMENT PROCESS DESCRIPTION.

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

A. Design Flow: 0.676 MGD

B. Type of Treatment: 3-cell stabilization pond system followed by a holding pond utilizing a hydrograph controlled release

C. Discharge Description: treated municipal wastewater

D. Facility Status: This facility is classified as a minor municipal since the design flow of the facility 0.676 MGD is less than 1.0 MGD.

9. ACTIVITY.

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

10. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

This facility receives industrial process wastewater from a Significant Industrial User (SIU), Kohler Company. In accordance with the previous permit, the City of Sheridan collected influent and effluent data from August 2008 to July 2009. Based on this effluent data and the history of no Whole Effluent Toxicity test failures during the previous permit term, the Department has determined that development of a pretreatment program is not required at this time and standard boilerplate Pretreatment Prohibitions (40 CFR Part 403.5[b]) and reporting requirements are deemed appropriate at this time.

11. SEWAGE SLUDGE PRACTICES.

Sludge generated at this facility remains in the lagoons on site. The sludge depth in the primary pond was measured on 1/9/2009 with a Sludge Judge and it was determined that it was at acceptable levels.

12. PERMIT CONDITIONS.

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

Final Effluent Limitations

Outfall 001- treated municipal wastewater

1. Conventional and/or Toxic Pollutants

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	continuous	totalizing meter
Upstream Flow in Big Creek	N/A	Report, MGD	Report, MGD	continuous	meter
Minimum Upstream Flow in Big Creek before Discharge is Allowed					

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.		
(January – February)	N/A	N/A	3.2 MGD Minimum	continuous	meter
(March – December)	N/A	N/A	6.5 MGD Minimum	continuous	meter
Effluent Flow as a Percentage of Upstream Flow					
(January – February)	N/A	N/A	30% Maximum	continuous	calculate
(March – December)	N/A	N/A	20% Maximum	continuous	calculate
Carbonaceous Biochemical Oxygen Demand (CBOD5)	N/A	30.0	45.0	three/month	composite
Total Suspended Solids (TSS)	N/A	90.0	135.0	three/month	composite
Ammonia Nitrogen (NH3-N)					
(January - February)	N/A	12.0	18.0	three/month	composite
(March, April, November, December)	N/A	10.0	15.0	three/month	composite
(May – October)	N/A	4.0	6.0	three/month	composite
Dissolved Oxygen (DO)					
(January – February)	N/A	7.0 (Inst. Min.)		three/month	grab
(March, April, November, December)	N/A	6.0 (Inst. Min.)		three/month	grab
(May – October)	N/A	5.0 (Inst. Min.)		three/month	grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
(April – September)	N/A	200	400	three/month	grab
(October – March)	N/A	1000	2000	three/month	grab
Total Recoverable Lead	0.0039	3.4 µg/l	6.9 µg/l	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 10.0 s.u.	three/month	grab
Chronic WET Testing	N/A	Report		once/quarter	composite
Pimephales promelas (Chronic)		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC)TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite
Ceriodaphnia dubia (Chronic)		7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail production (7-day NOEC)TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite

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.		
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite

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

13. BASIS FOR PERMIT CONDITIONS.

The following is an explanation of the derivation of the conditions of the final permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the decisions as required under 40 CFR Part 124.7.

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

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

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
CBOD5	30.0	45.0	30	45	30.0	45.0	30.0	45.0
TSS	90.0	135.0	90	135	90.0	135.0	90.0	135.0
NH3-N								
(January, February)	12.0	18.0	N/A	N/A	12.0	18.0	12.0	18.0
(March, April, November, December)	10.0	15.0	N/A	N/A	10.0	15.0	10.0	15.0
(May-October)	4.0	6.0	N/A	N/A	4.0	6.0	4.0	6.0

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
DO								
(January, February)	7.0 (Inst. Min.)		N/A		7.0 (Inst. Min.)		7.0 (Inst. Min.)	
(March, April, November, December)	6.0,(Inst. Min.)		N/A		6.0 (Inst. Min.)		6.0 (Inst. Min.)	
(May – October)	5.0 (Inst. Min.)		N/A		5.0 (Inst. Min.)		5.0 (Inst. Min.)	
FCB (col/100 ml)								
(Apr-Sept)	200	400	N/A	N/A	200	400	200	400
(Oct-Mar)	1000	2000	N/A	N/A	1000	2000	1000	2000
Total Rec. Lead	3.4 µg/l	6.9 µg/l	N/A	N/A	N/A	N/A	3.4 µg/l	6.9 µg/l
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0 – 10.0 s.u.		6.0 - 10.0 s.u.*	

*The permittee submitted a letter dated 1/26/2010 which certifies that no inorganic chemicals are added as part of the treatment process and pH values greater than 9.0 s.u. are not caused by industrial sources. Therefore, pursuant to 40 CFR 133.102(c), pH limits of 6.0 – 10.0 s.u. are continued from the previous permit.

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

Parameter	Water Quality or Technology	Justification
CBOD5	Water Quality	TMDL report for DO dated 1/16/2007
TSS	Technology	40 CFR 133.103(c) and EPA Region 6 letter dated 5/19/1998
NH3-N	Water Quality	TMDL report for DO dated 1/16/2007
DO	Water Quality	Reg. 2.505 and TMDL report for DO dated 1/16/2007
Fecal Coliform Bacteria	Water Quality	Reg. 2.507
Total Rec. Lead	Water Quality	Mass limits are based on the TMDL report for Lead finalized on 8/14/2008. Concentration limits are based on Reg. 2.508 and the CPP.
pH	Technology	40 CFR 133.102(c)

B. **Anti-backsliding**

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

The final permit maintains the requirements of the previous permit.

C. **Limits Calculations**

1. Mass limits:

   The mass limit for total lead is based on the TMDL report finalized on August 14, 2008 which assigns a wasteload allocation of 0.0038 lb/day to this point source.

2. Daily Maximum Limits:

   Daily Maximum limits = Monthly average limits X 1.5 - 2

3. Ammonia-Nitrogen (NH3-N):

   The water quality effluent limitations for Ammonia are based on the recommended limits given in the final TMDL report for DO dated 1/16/2007.

4. Total Recoverable Lead:

   In accordance with the requirements of 40 CFR 122.4(i) (prohibitions on issuance of a discharge permit for a discharge to impaired waters) and effluent samples for Lead taken between 8/20/2008 through 12/1/2009, the data indicates that lead is present in the effluent at concentrations which are above detection levels. Detection levels, where applicable, are consistent with EPA-defined minimum quantification levels (MQLs). Therefore, the proposed permit establishes Total Recoverable Lead concentration limits, which are based on the water quality criteria for lead set forth in Reg. 2.508, to ensure that the discharge will not contribute Lead to the receiving water at levels which may exacerbate the impairment of the receiving water's designated uses.

   The total recoverable lead concentration limits are calculated as follows:

   <u>January – February</u>

   During this time period the facility is limited to 30% of the upstream flow with a minimum upstream flow of 3.2 MGD (4.96 cfs).

   Qb = chronic background flow = 67% of 4.96 cfs = 3.32 cfs
   Qb = acute background flow = 33% of 4.96 cfs = 1.64 cfs

Qd = facility flow = HCR limited to 30% of 4.96 cfs = 1.48 cfs
Cb = total lead background concentration = 3.1 ppb (set equal to chronic WQS for calculation of concentration limits necessary to prevent contribution to the impairment)
WQS (chronic) = 3.1 ppb (total lead)
WQS (acute) = 79.4 ppb (total lead)

Determine Wasteload Allocations (chronic and acute):

WLAc = [(WQS x (Qd + Qb) – (Cb x Qb)] / Qd
WLAc = [(3.1 x (1.48 + 3.32) – (3.1 x 3.32)] / 1.48
WLAc = 3.1 ppb

WLAa = [(WQS x (Qd + Qb) – (Cb x Qb)] / Qd
WLAa = [(79.4 x (1.48 + 1.64) – (3.1 x 1.64)] / 1.48
WLAa = 163.9 ppb

Next, determine Long Term Averages (chronic and acute):

LTAc = 0.72 x WLAc
LTAc = 0.72 x 3.1
LTAc = 2.23 ppb

LTAa = 0.57 x WLAa
LTAa = 0.57 x 163.9
LTAa = 93.42 ppb

Select the limiting LTA (LTA with lowest value)

LTA = 2.23 ppb

Calculate average monthly limit (AML) and daily maximum limit (MDL),

AML = LTA x 1.55
AML = 2.23 x 1.55
AML = 3.4 ppb (January – February)

MDL = LTA x 3.11
MDL = 2.23 x 3.11
MDL = 6.9 ppb (January – February)

March - December

During this time period the facility is limited to 20% of the upstream flow with a minimum upstream flow of 6.5 MGD (10.05 cfs).

Qb = chronic background flow = 67% of 10.05 cfs = 6.73 cfs
Qb = acute background flow = 33% of 10.05 cfs = 3.32 cfs
Qd = facility flow = HCR limited to 20% of 10.05 cfs = 2.01 cfs
Cb = total lead background concentration = 3.1 ppb (set equal to chronic WQS for calculation of concentration limits necessary to prevent contribution to the impairment)
WQS (chronic) = 3.1 ppb (total lead)
WQS (acute) = 79.4 ppb (total lead)

Determine Wasteload Allocations (chronic and acute):

WLAc = [(WQS x (Qd + Qb) – (Cb x Qb)] / Qd
WLAc = [(3.1 x (2.01 + 6.73) – (3.1 x 6.73)] / 2.01
WLAc = 3.1 ppb

WLAa = [(WQS x (Qd + Qb) – (Cb x Qb)] / Qd
WLAa = [(79.4 x (2.01 + 3.32) – (3.1 x 3.32)] / 2.01
WLAa = 205.4 ppb

Next, determine Long Term Averages (chronic and acute):

LTAc = 0.72 x WLAc
LTAc = 0.72 x 3.1
LTAc = 2.23 ppb

LTAa = 0.57 x WLAa
LTAa = 0.57 x 205.4
LTAa = 117.1 ppb

Select the limiting LTA (LTA with lowest value)

LTA = 2.23 ppb

Calculate average monthly limit (AML) and daily maximum limit (MDL),

AML = LTA x 1.55
AML = 2.23 x 1.55
AML = 3.4 ppb (March - December)

MDL = LTA x 3.11
MDL = 2.23 x 3.11
MDL = 6.9 ppb (March - December)

D. **208 Plan (Water Quality Management Plan)**

The 208 Plan, developed by the ADEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. Changes to the 208 Plan include adding a total lead limit of 3.4 µg/l and 0.0039 lb/day based on the TMDL report which was finalized on August 14, 2008.

14. **WHOLE EFFLUENT TOXICITY.**

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

Whole effluent toxicity (WET) testing is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality

characteristics. It is the national policy of EPA to use bioassays as a measure of toxicity to allow evaluation of the effects of a discharge upon a receiving water (49 Federal Register 9016-9019, March 9, 1984). EPA Region 6 and the State of Arkansas are now implementing the Post Third Round Policy and Strategy established on September 9, 1992, and EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies, revised March 13, 2000. Whole effluent toxicity testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The whole effluent toxicity testing procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS	**FREQUENCY**
Chronic WET	Once/quarter

Requirements for measurement frequency are based on the CPP.

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

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

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

January – February

Qd = HCR allowable discharge flow at minimum upstream flow of 3.2 MGD
= 30% of 3.2 MGD = 0.96 MGD = 1.49 cfs
Qb = Background critical flow
= 67% of minimum upstream flow = 0.67 X 3.2 MGD = 2.14 MGD = 3.32 cfs
CD = (Qd) / (Qd + Qb) X 100
CD = 1.49 cfs / (1.49 cfs + 3.32 cfs) X 100
CD = 31%

March – December

Qd = HCR allowable discharge flow at minimum upstream flow of 6.5 MGD
= 20% of 6.5 MGD = 1.3 MGD = 2 cfs
Qb = Background critical flow
= 67% of minimum upstream flow = 0.67 X 6.5 MGD = 4.35 MGD = 6.75 cfs
CD = (Qd) / (Qd + Qb) X 100
CD = 2 cfs / (2 cfs + 6.75 cfs) X 100
CD = 23%

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:

January - February

13%, 17%, 23%, 31%, and 41% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 31% effluent.

February – December

10%, 13%, 17%, 23%, and 31% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 23% effluent.

The requirement for chronic WET tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead minnow (*Pimephales promelas*) are indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen conductivity, and alkalinity shall be reported according to EPA/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 WET testing studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if WET testing data submitted to the Department shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in ADEQ Regulation No. 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

Administrative Records

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

Permit Number: AR0034347 AFIN: 27-00022 Outfall Number: 001
Date of Review: 12/30/2009 Reviewer: M. Barnett
Facility Name: City of Sheridan
January - February
Previous Dilution series: 10, 14, 18, 24, 32 Proposed Dilution Series: 13, 17, 23, 31, 41
Previous Critical Dilution: 24 Proposed Critical Dilution: 31
March - December
Previous Dilution series: 6, 8, 11, 14, 19 Proposed Dilution Series: 10, 13, 17, 23, 31
Previous Critical Dilution: 14 Proposed Critical Dilution: 23
Previous TRE activities: None

Frequency recommendation by species
Pimephales promelas (Fathead minnow): once per quarter
Ceriodaphnia dubia (water flea): once per quarter

TEST DATA SUMMARY

TEST DATE	Vertebrate		Invertebrate	
	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC
Sep-05	48.4	48.4	48.4	48.4
Dec-05	48.4	48.4	48.4	48.4
Mar-06	48.4	48.4	48.4	48.4
Jun-06	48.4	36.3	48.4	48.4
Dec-06	48.4	48.4	48.4	48.4
Mar-07	48.4	48.4	48.4	48.4
Jun-07	48.4	48.4	48.4	48.4
Sep-07	48.4	48.4	48.4	48.4
Dec-07	48.4	48.4	48.4	48.4
Sep-08	19	19	19	19
Dec-08	19	19	19	19
Mar-09	19	14	19	19
Jun-09	19	14	19	19
Sep-09	19	19	19	19

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	19	14	19	19
TU at Min Observed	5.26	7.14	5.26	5.26
Count	14	14	14	14
Failure Count	0	0	0	0
Mean	3.208	3.526	3.208	3.208
Std. Dev.	1.590	2.016	1.590	1.590
CV	0.5	0.6	0.5	0.5
RPMF	1.4	1.5	1.4	1.4
Reasonable Potential	1.032	1.500	1.032	1.032

PERMIT ACTION

There have been no lethal or sub-lethal failures for *P. promelas* or *C. dubia* during the past five years, therefore WET limits are not appropriate at this time.

P. promelas lethal - WET Monitoring
P. promelas sub-lethal - WET Monitoring
C. dubia lethal - WET Monitoring
C. dubia sub-lethal - WET Monitoring

15. SAMPLE TYPE AND FREQUENCY.

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 CFR Part 122.48(b)] and to ensure compliance with permit limitations [40 CFR Part 122.44(i)(l)].

Requirements for sample type and sampling frequency have been based on the current discharge permit for all parameters except for Total Recoverable Lead. Requirements for sample type and sampling frequency for Total Recoverable Lead have been based on the CPP.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Effluent Flow	continuous	totalizing meter	continuous	totalizing meter
Upstream Flow	continuous	meter	continuous	meter
Effluent Flow as a percentage of Upstream Flow	continuous	calculate	continuous	calculate
CBOD5	three/month	3-hr composite	three/month	composite
TSS	three/month	3-hr composite	three/month	composite
NH3-N	three/month	3-hr composite	three/month	composite
DO	three/month	grab	three/month	grab
FCB	three/month	grab	three/month	grab
Total Rec. Lead	N/A	N/A	once/month	composite
pH	three/month	grab	three/month	grab

16. PERMIT COMPLIANCE.

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

Compliance with all effluent limits is required on the effective date of the permit.

17. MONITORING AND REPORTING.

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

18. ANTIDEGRADATION.

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

19. SOURCES.

The following sources were used to draft the permit:

A. Application No. AR0034347 received 8/31/2009.
B. Arkansas Water Quality Management Plan (WQMP).
C. APCEC Regulation No. 2.
D. APCEC Regulation No. 3.
E. APCEC Regulation No. 6.
F. 40 CFR Parts 122, 125, 133 and 403.
G. Discharge permit file AR0034347.
H. Discharge Monitoring Reports (DMRs).
I. "Arkansas Water Quality Inventory Report 2008 (305B)", ADEQ.
J. Continuing Planning Process (CPP).
K. Technical Support Document For Water Quality-based Toxic Control.
L. Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR Part 131.36.
M. Inspection Report dated 10/10/2008 and 7/17/2008.
N. "TMDL for Dissolved Oxygen for Big Creek Near Sheridan, AR", FTN Associates, January 16, 2007.
O. "TMDL for Lead and Siltation/Turbidity for Big Creek near Sheridan, Arkansas", Tetra Tech, finalized on August 14, 2008.
P. File review and engineering study dated February 3, 2009 by McClelland Consulting Engineers.

20. POINT OF CONTACT.

For additional information, contact:

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RESPONSE TO COMMENTS
FINAL PERMITTING DECISION

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

Permit No.: AR0034347

Applicant: City of Sheridan

Prepared by: Shane Byrum

Public Notice Date: The draft permit was publicly noticed on or about 5/12/2010.

Date Prepared: July 2, 2010

The following comments have been received on the draft permit:

Correspondence from Philip Massirer (FTN) to Shane Byrum (ADEQ) dated June 11, 2010.

ISSUE #1

FTN requests that ADEQ investigate the calculations for critical dilution for whole effluent toxicity testing and, if appropriate, use 100% of the upstream flow (rather than 67%), because the City's effluent is already limited to no more than 30% of the upstream flow.

RESPONSE #1

The Department has reviewed the calculations for determining the critical dilution for whole effluent toxicity testing. The Department believes that the calculation is technically correct. Mixing zones are related to the cross-sectional area of the receiving stream, while background flow is a function of the flow volume of the receiving stream. In accordance with the CPP, both of these items are required to be considered in calculating a critical dilution for purposes of whole effluent toxicity.

In accordance with the CPP, the Department used 67% of the upstream flow (Qb) in order to apply a mixing zone in the calculations. The value of Qb is the minimum upstream flow specified in the permit as part of the HCR requirements. The application of the 67% mixing zone in the calculations ensures that at least 33% of the receiving stream cross-sectional area is reserved for free passage of aquatic organisms. The application of mixing zones is required by the CPP for all waterbodies.

The HCR limits in the permit limit the discharge to 30% of upstream flow (Jan-Feb) and 20% of upstream flow (Mar-Dec). These percentages were used to calculate the dilution ratio between facility flow and upstream flow. After combining these dilution ratios with the application of the mixing zone percentage, this yields the critical dilution for whole effluent toxicity. This is illustrated in the following calculations:

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

January – February

Qd = HCR allowable discharge flow at minimum upstream flow of 3.2 MGD
= 30% of 3.2 MGD = 0.96 MGD = 1.49 cfs
Qb = Background critical flow
= 67% of minimum upstream flow = 0.67 X 3.2 MGD = 2.14 MGD = 3.32 cfs
CD = (Qd) / (Qd + Qb) X 100
CD = 1.49 cfs / (1.49 cfs + 3.32 cfs) X 100
CD = 31%

March – December

Qd = HCR allowable discharge flow at minimum upstream flow of 6.5 MGD
= 20% of 6.5 MGD = 1.3 MGD = 2 cfs
Qb = Background critical flow
= 67% of minimum upstream flow = 0.67 X 6.5 MGD = 4.35 MGD = 6.75 cfs
CD = (Qd) / (Qd + Qb) X 100
CD = 2 cfs / (2 cfs + 6.75 cfs) X 100
CD = 23%

ISSUE #2

FTN states that wasteload allocations do not always require permit limits and requests that the lead limits be removed from the permit. ADEQ references 40 CFR 122.44(d)(1)(vii)(B) as a basis for including lead limits in the permit. FTN argues that this regulation does not explicitly or implicitly require permit limits to always be imposed just because there is an approved wasteload allocation for a point source. FTN argues that this regulation merely states that any limit placed in the permit must be consistent with the assumptions and requirements of the TMDL, and that the permitting authority has flexibility in implementing TMDLs. FTN also provided a list of four facilities that do not have permit limits for certain parameters even though those discharges were assigned wasteload allocations in TMDLs that were approved for the receiving streams.

RESPONSE #2

In accordance with 40 CFR 122.44(d)(1)(iii), if the permitting authority determines that a discharge causes or contributes to an in-stream excursion above the allowable water quality standard for a pollutant, then the permit must contain effluent limits for that pollutant. Effluent data collected from the City of Sheridan's discharge and reported to ADEQ indicate that lead is present in amounts greater than the MQL of 0.5 µg/l in 15 of the 35 values reported from 8/20/2008 to 5/21/2010. Since lead is present in detectable amounts in the City of Sheridan's discharge, the Department concludes that the city is contributing to the lead impairment in Big Creek. Furthermore, in Table 1-1 of the TMDL report, it states that the cause of the lead impairment in Big Creek is a municipal point source, and Section 2.6 of the report states that the City of Sheridan's wastewater treatment plant is the only facility with a point source discharge in

the Big Creek watershed. For the above reasons, a mass limit for lead is included in the permit that is consistent with the wasteload allocation specified in the TMDL report for this point source in accordance with 40 CFR 122.44(d)(1)(vii)(B). In regards to the four other facilities that were mentioned, TMDL reports are reviewed during the permit renewal process and permits are issued on a case-by case basis to be consistent with the statements and assumptions in the applicable TMDL. The statements and assumptions that are included in a TMDL report are considered for only those specific point sources identified in the report. The two TMDL reports mentioned in the comment are not applicable to the City of Sheridan and are not considered in this particular permitting decision. The draft permit for the City of Sheridan was reviewed and determined to be consistent with the statements and assumptions in the TMDL report as well as all state and federal requirements. Therefore, no changes to the final permit are required.

ISSUE #3

FTN states that the City's discharge is not likely to exceed the allowable mass loading for lead. All of the lead data collected at the city's discharge were reviewed and FTN believes that the data from EPA Method 200.7 are not representative and should be excluded from use in calculations related to permitting or compliance. After excluding the data from EPA Method 200.7, all the remaining effluent concentrations are below the instream criterion (3.1 µg/l of total recoverable lead based on a site-specific hardness of 28.5 mg/l). Because the City's effluent concentrations are below the instream criterion, the discharge is not exceeding its allowable mass loading, nor is there any reasonable potential for the discharge to exceed the allowable loading. Therefore, permit limits for lead are not necessary and should be deleted from the permit.

FTN states that it appears that ADEQ's only rationale for including concentration limits for lead is to ensure the City's discharge does not cause or contribute to any violation of lead criteria in Big Creek. No reasonable potential calculation was in the statement of basis, therefore FTN is not sure how ADEQ concluded that the City's discharge would be likely to cause or contribute to downstream violations of lead criteria. FTN requests that ADEQ determine whether or not concentrations limits for lead are necessary based on the results of a reasonable potential calculation using the effluent data collected to date with the Method 200.7 results excluded from the dataset. It is obvious that the results will show that there is not reasonable potential for the City's discharge to cause or contribute to any violations of lead criteria in Big Creek. Therefore, the permit limits for lead are not necessary.

RESPONSE #3

The lead values reported using Method 200.7 were rechecked and confirmed to be correct according the laboratory. In addition, Method 200.7 is an EPA approved valid test method. For these reasons, the Department does not have any justification to discard these values. Regardless of the Method 200.7 results, lead is still being detected above the MQL in the city's discharge using Method 200.8, and even though these values are below the instream criterion, the detected values indicate that the city is still contributing toward the lead impairment in Big Creek. In addition, using all the lead values reported from both test methods, the facility shows reasonable potential to exceed the water quality standard for lead. Therefore, in accordance with 40 CFR 122.44(d)(1)(iii), lead limits are required to be included in the permit.

Section 5.7.1 of EPA's Technical Support Document for Water Quality-based Toxics Control recommends that permit limits on both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards. The dilution ratio at this facility using the worst case scenario allowed by the HCR percentages is approximately 3.3 which is less than 100. In addition, 40 CFR 122.45(f)(2) allows for pollutants which are limited in terms of mass to also be limited in terms of other units of measurement. Therefore, to be consistent with the TMDL, water quality standards, and technical support document, both mass and concentration limits are being included in the permit.

The calculation of the concentration limits is presented in Section 13.C.4. of the statement of basis. This calculation assumes an upstream background concentration of lead to be equal to the water quality standard because the stream is officially listed as impaired for lead. Setting the background concentration equal to the water quality standard when calculating discharge limits ensures that the calculated limits will not contribute to the impairment.