ADEQ
ARKANSAS
Department of Environmental Quality

RESPONSE TO COMMENTS
FINAL PERMIT DECISION

This is our response to comments received on the subject draft permit in accordance with regulations promulgated at 40 CFR Part 124.17.

Permit No. : AR0050024 and AR0050024C

Applicant : Osage Basin Wastewater District

Prepared by : Marysia Jastrzebski, P. E.

Permit Action : ADEQ has made a decision to issue NPDES Permit No. AR0050024 for Osage Basin Wastewater District (OBWD). The draft permit was sent to public notice on February 10, 2004. Also, due to public interest, ADEQ scheduled a public hearing on the draft permit on August 3, 2004 to receive public comment on the permit. The following is the final permit decision and response to comments.

Date Prepared : November 1, 2004

The following comments have been received on the draft permit:

1**. EPA**

Letter from Claudia V. Hosh, Acting Chief, NPDES Permits Branch, EPA Region 6 (ISSUES # 1 through # 4)

2**. Public Notice Comments:**

Letter from Miles Tolbert, Secretary of the Environment, State of Oklahoma dated March 12, 2004 (ISSUES #5 and #6)
Letters from Theresa L. Pockrus dated February 27, 2004 and March 10, 2004. (ISSUES #7 through #10)

3. **Public Hearing Comments**:

Letter from Mark E. Courdin, Managing Member, Development Partners, LLC dated August 5, 2004 (ISSUES #30)
Letter from Karen Digby dated August 4, 2004 (ISSUES #30)
Letter from Walter C. Gray dated August 6, 2004 (ISSUES #30)
Letter from Denise Dearien dated August 10, 2004 (ISSUES #30)
Letter from Ed Brocksmith dated August 8, 2004 (ISSUES #1, #4, #7, and #29)

Letter from George Zeiler dated August 12, 2004 (ISSUES #1 through#4, #29, and #31)
Letter from Theresa L. Pockrus dated August 13, 2004 (ISSUES #11 through #20)
Letter from Dalton F. and La Joyce Vann dated August 11, 2004 (ISSUES #21 through #28)

Additionally, the following persons offered oral comments during the public hearing:

Pat C. Beeler, Gentry, AR (Issue #30)
Pat Morrison, Rogers, AR (Issue #30)
Jerry D. Patrick, Bakersfield, California (Issue #32)
Fred Wanger, Lowell, AR (Issue #30)
Lewis Wilmoth, Gentry, AR (Issue #30)
Bonnie C. Ralston, Tontitown , AR(Issue #30)
Roger Sweat, Siloam Springs, AR (Issue #32)
Phil Shuppe, North Little Rock, AR (Issue #30)
Cassie Elliot, Highfill, AR (Issue #30)
Niles Martin, Oklahoma City, Oklahoma (Issue #32)

- EPA, George Seiler (Issues 1 through 4) and Ed Brocksmith (Issues #1 and #4) submitted the following comments:

ISSUE #1

"In accordance with 40 CFR 124.8(a), the fact sheet should state that the receiving stream is listed on the Arkansas 2002, 303(d) list."

RESPONSE #1

The Department agrees. The Statement of Basis has been revised to include the following language addressing this issue:

"The receiving stream, Osage Creek is a tributary of the Illinois River, the Illinois River is listed on 1998 Oklahoma's 303d list due to nutrients levels.

The receiving stream, Osage Creek was intentionally not listed on the ADEQ 303 (d) list. Since Arkansas does not have numeric criteria for Phosphorus, and a previous intensive two year scientific study conducted by ADEQ (ADEQ publication WQ97-03-1) showed that all designated uses and applicable numeric criteria were being met, as well as compliance with Arkansas' narrative nutrient criteria, ADEQ believes there was no basis for listing this stream on the impaired water body list (303(d) list). However, EPA conducted a review of this and additional information for listing and disagreed with ADEQ's conclusion. As a result EPA added this stream onto the Arkansas 2002, 303(d) list.

In accordance with the requirements of 40 CFR Part 122.4(i) (prohibitions on issuance of a discharge permit to a new source/new discharger for a discharge to impaired waters), an

evaluation has been made to determine if the discharge will cause or contribute to a violation of water quality standards for those pollutants of concern.

Information and data provided in the application or additional information provided by the applicant indicate that phosphorus, which is a specific pollutant of concern, is expected to be present in the effluent.

The proposed new discharger may discharge Total Phosphorus into the impaired water. Therefore, the proposed permit establishes end-of-pipe (point of discharge) limits. There is no technology-based effluent limit found in 40 CFR § 122.44(a)(1), nor is there an Arkansas water quality numerical standard for Phosphorus in APC&EC Regulation No. 2 or 40 CFR § 122.44(d). However, on December 18, 2003, ADEQ entered into an agreement with Oklahoma which calls for certain existing dischargers to reduce the concentration of phosphorus in their effluent to 1 ppm, based on a 30-day average. Although not addressed in the Statement of Joint Principles and Actions entered into between Arkansas and Oklahoma concerning excess phosphorus in the Illinois River Basin, the proposed treatment plant has been designed to achieve total phosphorus concentrations of 1 mg/L. This is consistent with limits agreed to for existing large discharger under that agreement. The proposed permit limit for Total Phosphorus for the Osage Basin Wastewater District is consistent with the effluent limitations included in other major facilities in the Illinois River Basin. A TMDL reopener clause will be established in the permit to include more stringent limits, if necessary, based on final loading allocations in the completed and approved TMDL."

ISSUE #2

"The permit must include an average weekly final discharge limitation for Phosphorus in order to meet the requirements under the federal regulations at 40 CFR 122.45(d)(2) for continuous discharge from POTWs."

RESPONSE #2

The Department agrees. A weekly average final discharge limit of 2 mg/l has been included in the permit. However, there is no technology-based effluent limit found in 40 CFR § 122.44(a)(1), nor is there an Arkansas water quality numerical standard for Total Phosphorus in APC&EC Regulation No. 2 or 40 CFR § 122.44(d). The permittee voluntarily agreed to design and operate a wastewater treatment plant capable of meeting a monthly average effluent limit of 1 mg/l.

ISSUE #3

"The new discharger will discharge to a stream listed as impaired by Phosphorus on the EPA approved Arkansas 2002, 303(d) list. … To meet requirements at 40 CFR 122(4)(i), the fact sheet must demonstrate that the new discharger meets NPDES requirements for impaired waterbodies and that the new discharge will not cause or contribute to a violation of water quality standards for Phosphorus."

RESPONSE #3

The Department agrees. Language found in the EPA's document "Proposed Template for Fact Sheet/Statement of Basis to Address Discharges to State 303(d) Listed Streams" has been included in the permit. See phosphorus discussion in Response No. 4 below.

ISSUE #4

"This new discharger is also upstream from the State of Oklahoma and ultimately discharges to a waterbody that is listed as impaired by Phosphorus on Oklahoma's EPA approved 2002, 303(d) list. The fact sheet must address any impacts the discharge may have on the impairment as well as any conditions in the permit to address the water quality impairment in the downstream state."

RESPONSE #4

The Department agrees. The permittee submitted rationale and calculations indicating that replacing septic systems by the proposed OBWD WWTP will reduce the loading of Total Phosphorus to Osage Creek. The Statement of Basis has been revised to include the following language:

"**Oklahoma Water Quality Standards Evaluation**

Phosphorus Discussion

Note: Information primarily from Dissolved Oxygen Wasteload Allocation report (FTN 2003).

The new discharge would be from a regional wastewater treatment plant (WWTP) that is being proposed by the Osage Basin Wastewater District (OBWD), which is comprised of two small towns (Tontitown and Highfill). The proposed WWTP would collect wastewater from these towns, all of which are currently on septic systems.

The geology of the Osage Creek watershed is characterized as fractured and dissolved carbonate terrain (karst) that is highly susceptible to groundwater pollution from land application of animal wastes and other waste disposal practices (MacDonald et al 1976). The fracturing and dissolution of the rock create subsurface "conduits" through which surface water and pollutants are transported to groundwater (Ogden 1979; Steele and Adamski 1987). There are many springs in the Osage Creek watershed as shown on the US Geological Survey (USGS) 7.5 minute topographic maps.

Researchers at the University of Arkansas have indicated that septic systems are another potentially significant source of nonpoint pollution in this area (MacDonald et al 1976; Ogden 1979; Steele and Adamski 1987; Smith and Steele 1990; Graening and Brown 2000). This research has indicated that, in parts of the Illinois River basin, septic systems have caused elevated levels of coliform bacteria and nitrates in groundwater. Elevated concentrations of phosphorus are also expected for the same reasons.

Although not addressed in the Statement of Joint Principles and Actions entered into between Arkansas and Oklahoma concerning excess phosphorus in the Illinois River Basin, the proposed treatment plant has been designed to achieve total phosphorus concentrations of 1 mg/L. This is consistent with limits agreed to for existing large discharger under that agreement. Using an effluent concentration of 1 mg/L and a design flow rate of 0.5 MGD, the total phosphorus load for the proposed OBWD discharge would be 4.2 lbs/day, or 690 kg/yr. This would represent approximately 0.3% of the average load of total phosphorus in the Illinois River near the Arkansas state line during 1997 – 2000 (approximately 227,000 kg/yr; Nelson and Soerens 2001). Similar estimates of total phosphorus loads for the Illinois River basin in Arkansas have been developed by the USGS (2001) and by the NRCS (1988).

A simple mass balance was performed to quantify the expected increase in phosphorus concentrations in Osage Creek downstream of the proposed OBWD discharge (neglecting decreases in phosphorus loading due to septic systems being taken out of service). This mass balance used an effluent flow rate of 0.5 MGD, an effluent concentration of 1 mg/L, an upstream flow rate of 122 cfs, and an upstream concentration of 0.84 mg/L. The upstream flow rate is the long term average flow for Osage Creek near Elm Springs (USGS 2002) and the upstream concentration is an average total phosphorus concentration for Osage Creek near Elm Springs (ADEQ 2002). The mass balance (based on conservative mixing) shows that the OBWD discharge would be expected to increase the average concentration of total phosphorus in Osage Creek by approximately 0.001 mg/L, which is less than Detection Level (DL) of 0.01 mg/l .

Although the proposed OBWD discharge would cause a small increase in the point source Phosphorus load in the Illinois River basin, it should cause a decrease in the nonpoint source Phosphorus load by discontinuing the use of septic systems in several communities. Concentrations of total Phosphorus measured in septic tank effluent have been reported to range from 5 mg/L to 22 mg/L (EPA 2002;Tables 3-18, 3-19, 4-10, and 4-11). In most watersheds, very little of Phosphorus from septic tanks effluent would reach the groundwater or surface water. However, there are two factors that increase the impact of septic systems on groundwater and surface water in the Osage Creek and Illinois River watersheds. First, the geology of these watersheds is characterized as karst (as noted above), and the potential for Phosphorus from septic tanks to impact groundwater and surface water is greatest in karst regions (EPA 2002). Second, soils have only a finite capacity to retain Phosphorus (EPA 2002), and soils in the Illinois River basin have received large amounts of animal waste for many years (NRCS 1988). As noted above, research in the Osage Creek and Illinois River watersheds has suggested that septic systems may be having a significant impact on the quality of groundwater and surface water. Switching from the use of septic systems (discharging at 5 to 22 mg/L) to the proposed OBWD WWTP (discharging at approximately 1 mg/L) should greatly reduce the amount of total Phosphorus entering the environment. Assuming that the volume of wastewater is not affected by switching from septic systems to the WWTP (and that the sludge from the WWTP is disposed of such that it does not contribute Phosphorus loading to the watershed), the reduction in Phosphorus loading to the environment can be estimated by multiplying the design flow (0.5 MGD) by the difference in Phosphorus concentrations between septic system effluent and the WWTP effluent. If the Phosphorus concentration of septic system effluent is assumed to be 13 mg/L (middle of range between 5 and 22 mg/L) and the WWTP concentration is 1 mg/L, then the reduction in Phosphorus loading would be about 50 lbs/day. This is 12 times the load that

would be added to Osage Creek from the WWTP. Although Osage Creek would not experience this entire 50 lbs/day reduction in Phosphorus loading, it is expected that discontinuing the use of septic systems in these communities would cause some reduction in nonpoint source Phosphorus loading to Osage Creek over time. Specific estimates of the septic system phosphorus loading that actually reaches Osage Creek are provided below.

Because the proposed OBWD discharge would represent only a small percentage of the Phosphorus load for the Illinois River basin in Arkansas and it should cause reductions in nonpoint source Phosphorus loadings, the proposed discharge is unlikely to cause violations of either Arkansas' narrative nutrient standard or Oklahoma's numeric Phosphorus standard.

Information from Septic Tank Survey report (ESI 2004):

In January and February 2004, the Town of Highfill performed a study to assess the wastewater disposal systems in the Town. The study was performed by Bailey Environmental Services, Inc. of Springdale, Arkansas. The study identified 171 residences in the Town with individual sewage disposal systems. Only 18 of the 171 systems were permitted by the Arkansas Department of Health. The study revealed that 74 (43%) of the systems had some type of problem including surfacing sewage, sewage backup, and surface discharge of "gray water". A copy of the report on the wastewater disposal for the Town of Highfill prepared by Bailey Environmental Services, Inc. is contained in the Appendix of the septic tank survey report.

The Town of Tontitown recently conducted a survey to identify the existing wastewater disposal systems in the Town. The survey found a total of 557 septic tank systems, 406 residential and 151 commercial. Of the 557 systems, 193 (35%) are permitted by the Arkansas Department of Health. The Washington County Health Department was contacted concerning information on malfunctioning septic systems in the Town. Apparently, their record system does not allow them to produce a list of complaints or investigations for a specific geographical location in the county. However, they did report that they had their share of malfunctioning septic systems in Tontitown, many of them with the systems serving the large commercial establishments. A copy of the letter from the Washington County Public Health Center concerning malfunctioning septic systems is contained in the Appendix of the septic tank survey report.

Requirement not to cause or contribute to violation of water quality standards:

According to 40 CFR 122.4(i), no permit may be issued "to a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards." As noted in Section 6.a.i. of the Statement of Basis, Osage Creek is listed on 2002 Arkansas's 303d list. Therefore, the calculations below are presented to indicate that the proposed OBWD discharge will not cause or contribute to any violations of water quality standards. These calculations demonstrate that the reduction in phosphorus loading due to discontinuing the use of septic systems will be larger than the phosphorus loading that the OBWD WWTP will discharge into Osage Creek.

Load of total phosphorus entering Osage Creek from OBWD proposed discharge:

Monthly average permit limit for total phosphorus = 1 mg/L

Assumed volume of wastewater = 100 gallons per person per day

Population to be served by the OBWD facility (ESI 2004):

Tontitown:	942 (current)	3,500 (future)
Highfill:	379 (current)	1,500 (future)
Total:	1,321 (current)	5,000 (future; design condition for Phase I)

Load of total phosphorus from OBWD discharge into Osage Creek:

Load based on current population = 1,321 persons × 100 gallons/person/day × 1 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg = 1.1 lbs/day

Load based on future population = 5,000 persons × 100 gallons/person/day × 1 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg = 4.2 lbs/day

Load of total phosphorus entering Osage Creek from septic systems:

Estimated concentration of total phosphorus from septic systems = 13 mg/L (FTN 2003)

Percentage of septic systems NOT permitted by Arkansas Dept. of Health (ESI 2004):
Highfill = (171 – 18) ÷ 171 = 89%
Tontitown = (557 – 193) ÷ 557 = 65%

Percentage of septic systems WITH surface discharge or similar problem:
Highfill = 43% (ESI 2004)
Tontitown = 43% × (65% ÷ 89%) = 31%
(assume that percent of systems with surface discharge or similar problem is proportional to percent of systems not permitted by Arkansas Dept. of Health)

Weighted average percentage of septic systems WITH surface discharge or similar problem = (43% × 171 + 31% × 557) ÷ (171 + 557) = 34%

This assumes all malfunctioning systems results in surfacing sewage. This is a conservative approach which is similar to that used in TMDL development.

Weighted average percentage of septic systems WITHOUT surface discharge or similar problem = 100% – 34% = 66%

Assumed percent of total phosphorus that reaches Osage Creek from septic systems WITH surface discharge or similar problem = 100%

Assumed percent of total phosphorus that reaches Osage Creek from septic systems WITHOUT surface discharge or similar problem = 10%

Assumed volume of wastewater = 100 gallons per person per day

Population on septic systems (ESI 2004):

Tontitown:	942 (current)	3,500 (future)
Highfill:	379 (current)	1,500 (future)
Total:	1,321 (current)	5,000 (future; design condition for Phase I)

Load of total phosphorus from septic systems into Osage Creek:

Load based on current population = 1,321 persons × 100 gallons/person/day × 13 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg × (34% × 100% + 66% × 10%) = 5.8 lbs/day

Load based on future population = 5,000 persons × 100 gallons/person/day × 13 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg × (34% × 100% + 66% × 10%) = **22.0 lbs/day**

In summary, the current septic system load is 5.8 lbs/day and the proposed plant will produce 4.2 lbs/day. Consequently, the OBWD WWTP will offset the phosphorus load by approximately 28%. Therefore switching from septic systems to the proposed OBWD WWTP should reduce the loading of total phosphorus to Osage Creek. Additional benefits may be derived from the OSWB WWTP because it will allow for increased control over the ultimate disposal of sludge.

Calculation of the Total Phosphorus Load at the Arkansas-Oklahoma border:

The effluent from this facility discharges into Osage Creek. Osage Creek flows approximately 6 miles to its confluence with the Illinois River. The Illinois River flows approximately an additional 14.7 miles before entering the State of Oklahoma. The following equation is used to estimate total load at the State Line:

$L_s = L_o \text{ X } e^{K \text{ x } S}$, where:

L_o = initial load, in lbs/day
L_s = load at distance S, in lbs/day
K = decay coefficient
S = distance, in miles

Assume:
L_o = 4.17 lbs/day (at a design flow of 0.5 MGD and 1 mg/l concentration)
$K_{\text{Osage Creek}}$ = - 0.036/mile
$K_{\text{Illinois River}}$ = - 0.017/mile

The Total Phosphorus Load at the confluence with the Illinois River:

$L_s = 4.17 \text{ lbs/day X } e^{-0.036 \text{ X } 7} = 3.24 \text{ lbs/day}$

Total Phosphorus Load at the state line:

$L_s = 3.24 \text{ lbs/day} \times e^{-0.017 \times 14.7} = 2.52 \text{ lbs/day}$

This load is considered negligible compared to the total load.

- Mr. Tolbert submitted the following comments:

ISSUE #5

1. Osage Creek is currently included on the Arkansas Section 303(d) list. The Illinois River downstream in Oklahoma is also included on the 303(d) as impaired by Phosphorus. It does not appear that issuance of this permit will comply with EPA requirements for new discharges to 303(d) listed waters or with EPA Regional Guidance Chart "Water Quality Assessment NPDES Permit issuance Actions", dated September 30, 2003.

2. The Statement of Basis does not include an evaluation of potential impacts the proposed discharge would have on Oklahoma's Water Quality Standards.

3. The final limits contain a monthly average limit for phosphorus of 1 mg/l, yet no weekly average limits are established.

RESPONSE #5

The Department concurs. Please see responses #2 through #4 above.

ISSUE #6

The Statement of Basis declares that sludge will be hauled offsite to a landfill. Part III of the permit states that sludge may be disposed of by land application. Which method of sludge disposal is allowed under the permit? The commentator requested that additional conditions regarding the sludge application be include in the permit.

RESPONSE #6

The Department acknowledges this comment. According to the submitted application sludge will be hauled offsite to a landfill. This permit does not authorize land application of sludge. Condition No. 4 of Part III., Other Conditions, has been removed from the final permit.

- Theresa Pockrus (Issues 7 through 20) and Ed Bocksmith (Issue #7) submitted the following comments:

ISSUE #7 (Summary of comments 1 through 6 of the letter dated February 27, 2004)

The draft construction permit be denied because the permittee has not followed Ark. Code Ann. § 14-235-203. In particular, a municipality must meet certain feasibility requirements before it

can place a wastewater treatment facility or exercise its powers of eminent domain. These feasibility studies have not been performed.

RESPONSE # 7

The Arkansas Department of Environmental Quality (the Department) has been given the power to administer and enforce all laws and regulations relating to **water pollution** pursuant to the Arkansas Water and Air Pollution Control Act (AWAPCA)**.** See A.C.A. §8-4-201. The power with which the Department is vested has been granted in order to meet the requirements of §402(b) of the Federal Water Pollution Control Act Amendments of 1972 (also known as the "Clean Water Act"), codified at 33 U.S.C. § 1342, along with other federal laws. A.C.A. §8-4-208. The general focus of the AWAPCA is the control of point source discharges of pollutants by imposing limits and standards through a permitting program. The Department is granted regulatory and enforcement capabilities to the extent allowed by the AWAPCA and regulations adopted pursuant thereto. The Department's authority is limited by the AWAPCA and other relevant state environmental laws or regulations pertaining to the regulation of pollution. Osage Basin Waste Water Treatment District was organized pursuant to the Wastewater Treatment Districts Act. A.C.A. § 14-250-101, et. seq. The powers of eminent domain exercised under the Joint County and Municipal Solid Waste Disposal Act, A.C.A. § 14-233-101, *et. seq.*, do not appear to apply to wastewater treatment districts. A.C.A. § 14-250-103. Ark. Code Ann. § 14-235-203 regulates municipal sewage systems. Therefore, this issue is outside of the scope of ADEQ's permitting authority.

ISSUE #8(Comment 7 of the letter dated February 27, 2004)

All property owners outside the corporate boundaries of the member cities or the District are expressly excluded from access to service of the system.

RESPONSE #8

The Department acknowledges this comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, this issue is outside the scope of ADEQ's permitting authority.

ISSUE #9(Summary of comments 8 & 9 of the letter dated February 27, 2004)

Insufficient provisions have been made to prevent contamination of the creek and its watershed area due to overflow or back-flushing during times of flooding and no provisions have been made to clean up affected properties or to remove any contamination from the creek or its watershed in the event of overflow or backflushing.

RESPONSE #9

Part II of the final NPDES permit requires the permittee to operate and maintain the wastewater treatment facility in such way as to prevent contamination of the receiving stream. Failure to take precautions to prevent such occurrences is punishable by fines up to 10,000 dollars per day.

ISSUE #10(Summary of comments 10, 11, and 12 of the letter dated February 27, 2004)

The City of Cave Springs continues to actively exercise voting privileges within the district. "Construction of this treatment plant is based on the false premise and assertion that the member cities and district itself cannot "grow" without this treatment facility." " A Hearing is requested on these comments."

RESPONSE #10

The Department acknowledges these comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, these issues are outside the scope of ADEQ's permitting authority. A Public Hearing was held on August 3, 2004 by ADEQ.

ISSUE #11 (Summary of comments 1 through 8 and 27 of the letter dated August 13, 2004)

Comments 1 through 8 and 27 addressed the advantages of a regional wastewater plant (regional authority, a/k/a NACA). In particular, a commenter stated that a truly regional facility is proposed less than 1.5 miles upstream from the Osage Basin project and ADEQ should encourage all NWA entities to join the regional authority and discourage a proliferation of small plants by denying the Osage Basin permit request.

RESPONSE #11

The Department supports a concept of a regional wastewater plant. However, the decision to deny the application for a new NPDES permit cannot be based solely on the fact that another wastewater facility may be proposed in the vicinity at some future date.

ISSUE #12(Summary of comments 12, through 16, 20, and 21 of the letter dated August 13, 2004)

Comments 12 through 16, 20, and 21 address revenues, proposed cost of operation, voting on funding, funding through Arkansas Soil and Water Department, estimates of cost of construction, and the specific documents required by Arkansas Soil and Water.

RESPONSE #12

The Department acknowledges these comments. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, these issues are outside the scope of ADEQ's permitting authority.

ISSUE # 13 (Comment 9 of the letter dated August 13, 2004)

The disposal of sludge has not been resolved.

RESPONSE #13

Please see Response #7 above.

ISSUE # 14 (Comment 10 of the letter dated August 13, 2004)

Less than half of the existing septic tanks in Tontitown and Highfill will actually be connected to the Osage Basin treatment facility, undermining the argument that a treatment plant would introduce less Phosphorus into the ecosystem than currently existing septic systems.

RESPONSE #14

The Department does not have information indicating that only half of the existing septic tanks will be connected to the proposed treatment facility. However, based on the submitted information connection of any malfunctioning septic system to the treatment facility should result in less Phosphorus being introduced to the Osage Creek. Letter from Mayor Dan Watson stays "It is the intention of the City of Tontitown for every residence and commercial establishment in the area where sewer mains are constructed to connect to the public sere system"

ISSUE #15 (Comment 17 of the letter dated August 13, 2004)

The discharge permit does not identify the Phosphorus level of the effluent to be discharged into the receiving stream.

RESPONSE #15

The design calculations submitted with the application for the construction permit indicated a target Total Phosphorus concentration of 1 mg/l. The final discharge permit includes the effluent limitations of 1 mg/l for Total Phosphorus.

ISSUE #16(Summary of comments 18 and 19 of the letter dated August 13, 2004)

EPA and the State of Oklahoma's concerns regarding construction and discharge have not been addressed.

RESPONSE #16

All of the EPA and the State of Oklahoma's concerns have been addressed in Responses #1 through #7. Furthermore, EPA approved the final permit in its letter dated December 22, 2004 .

ISSUE #17(Comment 22 of the letter dated August 13, 2004)

ADEQ is charged with the responsibility of monitoring systems for compliance with State and federal laws. ADEQ should not be relieved of the responsibility of monitoring compliance of

wastewater systems with all state laws applicable to the establishment and operation of those systems by political entities.

RESPONSE #17

The Arkansas Department of Environmental Quality (the Department) has been given the power to administer and enforce all laws and regulations relating to **water pollution** pursuant to the Arkansas Water and Air Pollution Control Act (AWAPCA)**.** See A.C.A. §8-4-201. The power with which the Department is vested has been granted in order to meet the requirements of §402(b) of the Federal Water Pollution Control Act Amendments of 1972 (also known as the "Clean Water Act"), codified at 33 U.S.C. § 1342, along with other federal laws. A.C.A. §8-4-208.

The general focus of the AWAPCA is the control of point source discharges of pollutants by imposing limits and standards through a permitting program. The Department is granted regulatory and enforcement capabilities to the extent allowed by the AWAPCA and regulations adopted pursuant thereto. Therefore, the commenter's following statements are overly broad:

ADEQ is charged with the responsibility of monitoring systems for compliance with state and federal laws. ADEQ should not be relieved of the responsibility of monitoring compliance of wastewater systems with **all** [emphasis added] state laws applicable to the establishment and operation of those systems by political entities.

The Department's authority is limited by the AWAPCA and other relevant state environmental laws or regulations pertaining to the regulation of pollution. The standard permit language for all dischargers, whether or not the discharger is a political entity, requires monitoring and reporting for the specific parameters set forth in the individual permit. See Standard Permit, Part II, Sections C and D. The Department conducts periodic inspections of the permitted facilities to ensure compliance with the permit requirements.

ISSUE #18(Summary of Comments 23 and 24 of the letter dated August 13, 2004)

Osage Basin was organized pursuant to A. C. A. § 14-250-101. Osage Basin has no powers of eminent domain over lands located outside its corporate charter. Osage Basin cannot exercise powers of eminent domain because it has failed to comply with the certain requirements of A. C. A.

RESPONSE #18

Please see response # 7 above.

ISSUE #19(Comment 25 of the letter August 13, 2004)

The proposed treatment plant is not large enough to accommodate the hook-up of all properties located within the corporate city limits being serviced by septic tanks. Neither it is large enough to service the five year growth projections of the cities.

RESPONSE #19

Based on the information submitted by the permittee:

Population on septic systems (ESI 2004):

Tontitown:	942 (current)	3,500 (future)
Highfill:	379 (current)	1,500 (future)
Total:	1,321 (current)	5,000 (future; design condition for Phase I)

The system has a design flow of 0.5 million gallons per day (MGD). Assuming 100 gallons of wastewater is generated per person per day the proposed wastewater treatment plant is capable of serving 5,000 people.

100 gallons /day –person X 5,000 persons = 500, 000 gallons/day (gpd)

(500,000 gallons /day) / 1,000,000 gallons/million gallons) = 0.5 MGD

ISSUE #20(Comment 26 of the letter dated August 13, 2004)

The area in which Osage Basin seeks to build its treatment plant and discharge is recognized as an Ecologically Sensitive Waterbody.

RESPONSE #20

The Department acknowledges this comment, however, the specific location in which OBWD proposes to build the wastewater treatment plant and discharge their effluent is not designated as an Ecologically Sensitive Waterbody. The section approximately 4 miles downstream from the discharge location is designated as an Ecologically Sensitive Waterbody.

- Dalton F. and La Joyce Vann (Issues 21 through 28) submitted the following comments:

ISSUE #21 (issues from page 1 of August 11, 2004, statement)

"Water calculations: April 2000 and January 2002 do not appear congruent to December 2003 Arkansas Oklahoma Water Quality Agreement"

"Environmental. Impact Studies have not been presented. Historical sites are affected by interceptor lines. Aquatic and mammal life exist in Logan Cave. Wetlands at Hwy 412 Illinois River Bridge. Logan Aquifer, Karst Formation atop a fault area"

RESPONSE #21

The Department acknowledges this comment. It is not clear what water calculations are questioned, however, the December 2003 Arkansas-Oklahoma Water Quality Agreement specifically addresses the Total Phosphorus issue. The final permit for Osage Basin includes the

effluent limitations of 1 mg/l for Total Phosphorus consistent with limits agreed upon in the said agreement.

All other comments are acknowledged. Environmental Impact (EI) studies are not required prior to issuance of this permit. Approval of the collection system (including interceptors) in Arkansas is under the authority of the Arkansas Department of Health. The existence of aquatic life in the receiving stream has been considered in issuance of this permit. All other issues are outside the scope of ADEQ's authority. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, these issues are outside the scope of ADEQ's permitting authority.

ISSUE #22(issues from page 2 of August 11, 2004, statement)

The following comments submitted in regard to ADEQ Public Hearing dated August 3, 2004:
"Meeting: greatly appreciated by the members of Lick Branch Watershed area
Comments: public and community affronted by the "conquer and divide" procedure"

Additional comments regarding interceptor lines have been also submitted.

RESPONSE #22

The Department acknowledges this comment, however, all procedures of Section 2.1.8 of the Arkansas Pollution Control and Ecology Commission Regulation No. 8 regarding Public Hearing have been followed.

The design and location of the interceptor lines are outside the scope of ADEQ's permitting authority. Review of the design and location of the interceptor lines is under the authority of Arkansas Department of Health (ADH).

ISSUE #23 (issues from page 4 of August 11, 2004, statement)

The comments addressed flooding and debris flowing in the stream, concerns over security of plant site (flood seasons, open aeration basin, open clarifier, electrical outage, equipment malfunction, vandalism), distance from Tontintown and Highfill to the wastewater treatment facility, and that the residents of unincorporated areas of Benton County will not receive service from the Osage Basin Wastewater District.

RESPONSE #23

The Department acknowledges this comment, however, all issues, except those related to the wastewater treatment facility are outside the scope of ADEQ's permitting authority. Issues related to electrical outage, equipment malfunction, proper operation and maintenance are addressed in Section B of Part III of the final NPDES permit.

ISSUE #24(Issues from page 5 of August 11, 2004 and page 6 of August 3, 2004 statement)

"The proposed Northwest Arkansas Conservation Authority, a district for a regional wastewater treatment plant can accommodate the district with adequate physical plant, financial justification, cost efficiency service to the consumer and certified wastewater treatment plant personnel"

Additionally, the commenter stated that she refuses to provide easement access to land requested of 12647 Dalla Rosa Road, Gentry, Arkansas.

RESPONSE #24

The Department acknowledges this comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, these issues are outside the scope of ADEQ's permitting authority.

ISSUE #25(issues from page 1 of August 3, 2004, statement)

Several comments regarding creation of the Osage Basin Wastewater District have been included. Additionally, a commenter questioned whether the projected 20 year population growth justifies estimated construction costs of $12 million dollars and whether the phase I cost would place undue financial stress to the patron users of the remaining cities.

RESPONSE #25

The Department acknowledges this comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, these issues are outside the scope of ADEQ's permitting authority

ISSUE #26

Letter from La Joyce Vann stated the following comments: 1. Residents of Benton County of Arkansas will not receive service from the OBWD. 2. "I cannot support the Osage Basin Wastewater District proposal …." 3. " I publically[publicly] refuse to provide easement to land requested …" "Osage River[Creek] flows into the Illinois Rive", "Recreational and municipal water supplies are threatened by Illinois River ….." The Osage Creek must be protected from a discharge of excess phosphorus from the OBWD

RESPONSE #26

The Department acknowledges this comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, these issues are outside the scope of ADEQ's permitting authority. Total phosphorus limit of 1 mg/l has been included in the permit.

ISSUE #27(issues from page 3 and 4, of August 3, 2004, statement)

Several comments dealing with "Karst" formation, general provisions of compliance requirements in Washington and Benton Counties, AR and Adair County, OK.

RESPONSE #27

The Department acknowledges this comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, these issues are outside the scope of ADEQ's permitting authority

ISSUE #28(issues from page 5 of August 3, 2004, statement)

There are several comments regarding lines and risers, flooding, the cities agreements not addressing contaminated water flowing into the creek due to overflow or back-flushing, storm water, or unexpected influx of wastewater, and the preferred regional service of NACA. Additionally, a commenter stated that "the physical mechanics of the plant have never been explained in depth. The end product is a pellatized product for disposal in a designated location".

RESPONSE #28

The Department acknowledges this comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, all issues are outside the scope of ADEQ's permitting authority. In regard to overflow, The permittee shall report all overflows with the Discharge Monitoring report (DMR) submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of overflow; observed environmental impacts from the overflow; action taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary.) **Overflows which endanger health or the environment shall be orally reported to this department (Enforcement Section of Water Division), within 24 hours from the time the permittee becomes aware of the circumstance.** A written report of overflows which endanger health or the environment, shall be provided within 5 days of the time the permittee becomes aware of the circumstance. Additionally; Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless: Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

The Department assumes that by the term "pellatized product", the commenter refers to sludge generated at the facility. Sludge will be disposed at a landfill.

- The following issues not previously addressed were submitted by various persons:

ISSUE #29

The draft permit does not adequately provide for testing and reporting of Phosphorus discharged to the impaired stream. Testing and reporting should occur on a weekly basis as is required in permits for the Illinois River in Oklahoma.

RESPONSE #29

The Department disagrees. There is no federal guideline on monitoring frequency requirements. The federal regulations requires that the monitoring frequency can not be less than once per year. The monitoring frequency of twice per month is consistent with the monitoring frequencies required for total phosphorus in all other permits issued in the State of Arkansas.

ISSUE #30

Several written and oral comments were received during the public notice and public hearing in favor of the proposed wastewater treatment plant and raising specific issue addressing future economic development, immediate need for a wastewater treatment facility, quality of life, enhancement to the quality of life, fast growth of the area, etc.

RESPONSE #30

The Department acknowledges these comments. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, all issues are outside the scope of ADEQ's permitting authority.

ISSUE #31

The City of Tontitown is now geographically about twice as large as it was when this present permitting effort and associated studies began and progressed. Please assure that this geographic change is included in plant sizing, operations, and maintenance, and the ability to expand without negative impact is considered.

RESPONSE #31

The Department acknowledges this comment. The final permit is issued for the wastewater treatment facility with a design flow of 0.5 million gallons per day (MGD). New applications for a construction permit and modification of the NPDES discharge permit must be submitted and permits issued prior to any expansion of the treatment facility.

ISSUE #32

One commenter stated that nobody has approached him about going across his property but somebody already put out survey stakes. He expressed concern over the health hazard created by

manhole covers being as much as 5 feet under water, not being able to tie to the system, and effect this new treatment facility will have on the farming operation. He supports concept of the regional facility and expressed his desire to fight this project.
Two commenters expressed their concerns over flooding in the area. One of these commentaries questioned whether increased water levels could cause him to lose access to his property.

RESPONSE #32

The Department acknowledges these comment. In accordance with 40 CFR 124.17(a) (2), the Department must respond only to comments which are related to the NPDES permit. Therefore, all issues are outside the scope of ADEQ's permitting authority.

ADEQ Note (Issue #33):

The following changes were made to the permit after Public Notice:

1. An upstream monitoring station will be established in the final permit. The permittee will be required to perform monthly sampling for Total Phosphorus and submit this information on the Discharge Monitoring Reports. The sampling point will be approximately 400 feet upstream of the discharge location. The coordinates are:

   Latitude: 36 degrees 11' 52" ; Longitude: 94 degrees 19' 48"

2. pH limitations have been corrected from 6-9 s.u. to 6.0 to 9.0 s.u.

3. Mass limit for total phosphorus has been included in the final permit.

4. Condition number 4 of Part III in regard to the land application has been removed.

Permit number: AR0050024

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

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

Osage Basin Wastewater District
P.O. Box 305
Tontitown, AR 72770

is authorized to discharge from a facility located at intersection of Washington County Roads #88 and #83 (Brush Creek Road), in Section 31, Township 18 North, Range 31 West in Washington County, Arkansas.

Latitude: 36° 11' 33"; Longitude: 94° 19' 48"

to receiving waters named:

Osage Creek thence to the Illinois River in Segment 3J of the Arkansas River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 36° 11' 54"; Longitude: 94° 19' 52"

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

This permit shall become effective on February 1, 2005.

This permit and the authorization to discharge shall expire at midnight, January 31, 2010.

Signed this 31st day of December, 2004.

_____

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

PART I
PERMIT REQUIREMENTS

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

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

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow[1]	N/A	Report	Report	Five/week	Instantaneous
Carbonaceous Biochemical Oxygen Demand (CBOD5)	41.7	10	15	Two/month	Grab
Total Suspended Solids (TSS)	62.6	15	23	Two/month	Grab
Ammonia Nitrogen (NH3-N)					
(May-Oct)	8.3	2	3	Two/month	Grab
(Nov-Apr)	16.7	4	6	Two/month	Grab
Dissolved Oxygen[2]	N/A	5 (Inst. Min.)		Two/month	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(April- September)	N/A	200	400	Two/month	Grab
(October- March)	N/A	1000	2000	Two/month	Grab
Phosphorus, Total	4.2	1 mg/l	2 mg/l	Two/month	Grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	Two/month	Grab

1 Report monthly average and daily maximum as MGD.
2 Instantaneous Minimum. Dissolved Oxygen must be equal or exceed the permit limit at all times.

There shall be no discharge of distinctly visible solids, scum or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits or sludge banks. No visible sheen (Sheen means an iridescent appearance on the surface of the water).
Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit.

PART I
PERMIT REQUIREMENTS

SECTION A. UPSTREAM MONITORING AND REPORTING REQUIREMENTS: OUTFALL 01A-Upstream Monitoring

During the period beginning on effective date and lasting until date of expiration, the permittee shall monitoring the following

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Total Phosphorus	N/A	Report	Report	Once/month	Grab

1 See Part III, Condition No. 8.

SECTION B. SCHEDULE OF COMPLIANCE

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

Compliance is required on the effective date of the permit.

PART II
STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

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

2. Penalties for Violations of Permit Conditions

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

3. Permit Actions

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

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

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

4. Toxic Pollutants

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

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

5. Civil and Criminal Liability

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

6. Oil and Hazardous Substance Liability

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

7. State Laws

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

8. Property Rights

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

9. Severability

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

10. Permit Fees

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

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

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

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

2. Need to Halt or Reduce not a Defense

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

3. Duty to Mitigate

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

4. Bypass of Treatment Facilities

a. **Bypass not exceeding limitation.**

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

b. **Notice**

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

c. **Prohibition of bypass**

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

5. **Upset Conditions**

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

occurrence of an upset has the burden of proof.

6. **Removed Substances**

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

7. **Power Failure**

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

SECTION C: MONITORING AND RECORDS

1. **Representative Sampling**

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

2. **Flow Measurement**

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

3. **Monitoring Procedures**

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

commercial laboratory. At a minimum, spikes and duplicate samples are to be analyzed on 10% of the samples.

4. Penalties for Tampering

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

5. Reporting of Monitoring Results

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

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

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

6. Additional Monitoring by the Permittee

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

7. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the

sample, measurement, report or application. This period may be extended by request of the Director at any time.

8. **Record Contents**

Records and monitoring information shall include:

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

9. **Inspection and Entry**

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

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

SECTION D – REPORTING REQUIREMENTS

1. **Planned Changes**

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

For Industrial Dischargers

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part122.29(b).

b. The alternation or addition could significantly change the nature or increase the quality of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40CRF Part 122.42 (a)(1).

For POTW Dischargers:

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

2. **Anticipated Noncompliance**

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

3. **Transfers**

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

4. **Monitoring Reports**

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

5. **Compliance Schedule**

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

6. **Twenty-four Hour Report**

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

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

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

7. **Other Noncompliance**

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

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

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

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

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2)(48 FR 14153, April 1, 1983, as amended at 49 FR 38046, September 26, 1984).

9. **Duty to Provide Information**

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

10. **Duty to reapply**

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

11. **Signatory Requirements**

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

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

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

12. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2 and Regulation 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Pollution and Ecology. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits and effluent data shall not be considered confidential.

13. Penalties for Falsification of Reports

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

PART III
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed by the State of Arkansas in accordance with Act 211 of 1971, Act 1103 of 1991, Act 556 of 1993, and Regulation No. 3, as amended.

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

3. Produced sludge shall be disposed of by land application only when meeting the following criteria:

    a. Sewage sludge from treatment works treating domestic sewage (TWTDS) must meet the applicable provisions of 40 CFR Part 503;

    b. The sewage sludge has not been classified as a hazardous waste under state or federal regulations;

4. The permittee shall report all overflows with the Discharge Monitoring report (DMR) submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of overflow; observed environmental impacts from the overflow; action taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary.) Overflows which endanger health or the environment shall be orally reported to this department (Enforcement Section of Water Division), within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment, shall be provided within 5 days of the time the permittee becomes aware of the circumstance.

5. In accordance with 40 CFR Part 122.62 (a) (2), the permit may be modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

6. Contributing Industries and Pretreatment Requirements

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

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

        2. pollutants which will cause corrosive structural damage to the POTW, but

in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

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

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

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

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

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

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

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

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

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

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

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

7. This permit may be reopened to include any limitations and/or requirements based on

the final loading allocations in the completed and approved TMDL for the Illinois River.

8. A sampling point will be approximately 400 feet upstream of the discharge location.

The coordinates will be:

Latitude: 36 degrees 11' 52" Longitude: 94 degrees 19' 48"

PART IV
DEFINITIONS

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

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

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

7. **Monthly average**: means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. For Fecal Coliform Bacteria (FCB) report the monthly average see 30-day average below.
8. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month. The 7-day average for fecal coliform bacteria is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/100 ml.
9**. "Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
10. **"Director"** means the Administrator of the U.S. Environmental Protection Agency and/or the Director of the Arkansas Department of Environmental Quality.

11. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
12. **"Industrial User**" means a nondomestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly-owned treatment works.
13. **"National Pollutant Discharge Elimination System"** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the Clean Water Act.
14**. "POTW"** means a Publicly Owned Treatment Works.
15. **"Severe property damage"** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in products.
16. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.
17. **"Sewage sludge"** means the solids, residues, and precipitate separated from or created in sewage by the unit processes a publicly-owned treatment works. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff that are discharged to or otherwise enter a publicly-owned treatment works.
18. **"7-day average"** discharge limitation, other than for fecal coliform bacteria, is the highest allowable arithmetic means of the values for all effluent samples collected during the calendar week. The 7-day average for fecal coliform bacteria is the geometric mean of the values of all effluent samples collected during the calendar week in colonies/100 ml. The DMR should report the highest 7-day average obtained during the calendar month. For reporting purposes, the 7-day average values should be reported as occurring in the month in which the Saturday of the calendar week falls in.
19. **"30-day average"**, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.
For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
20. **"24-hour composite sample"** consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
21. **"12-hour composite sample"** consists of 12 effluent portions, collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
22. **"6-hour composite sample"** consists of six effluent portions collected no closer together than one hour(with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
23. **"3-hour composite sample"** consists of three effluent portions collected no closer together than one hour(with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

24. **"Treatment works"** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
25. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack or preventive maintenance, or careless of improper operations.
26. **"For Fecal Coliform Bacteria"**, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
27. **"Dissolved oxygen limit"**, shall be defined as follows:
a. When limited in the permit as a monthly minimum, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month;
b. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
28. **The term "MGD"** shall mean million gallons per day.
29. **The term "mg/l "**shall mean milligrams per liter or parts million (ppm).
30. **The term "µg/l"** shall mean micrograms per liter or parts per billion (ppb).
31. **The term "cfs"** shall mean cubic feet per second.
32. **The term "ppm"** shall mean part per million.
33. **The term "s.u."** shall mean standard units.
34**. Monitoring and Reporting:**
When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is Monthly or more frequently, the Discharge Monitoring Report shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the Discharge Monitoring report shall be submitted by the 25th of the month following the monitoring period end date.

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

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

monitoring requirement frequency of once/quarter that does not does not coincide with the fixed calendar quarter. Seasonal calendar quarters May through July, August through October, November through January, and February through April.

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

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

Final Statement of Basis

for issuance of NPDES Permit Number AR0050024 to discharge to Waters of the State

1. **PERMITTING AUTHORITY.**

The issuing office is:

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

2. **APPLICANT.**

The applicant is:

Osage Basin Wastewater District
P.O. Box 305
Tontitown, AR 72770

3. **PREPARED BY.**

The permit was prepared by:

Marysia Jastrzebski, P.E.
NPDES Branch, Water Division

4. **DATE PREPARED.**

The permit was prepared on October 29, 2003.

5. **PREVIOUS PERMIT ACTIVITY.**

New permit.

The permittee submitted a permit application on 04/25/2003. It is proposed that the NPDES permit be issued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

6. **RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.**

The outfall is located at the following coordinates:

Latitude: 36° 11’ 54” Longitude: 94° 19’ 52”

The receiving waters named:

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

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

i. **303d List**

The receiving stream, Osage Creek is a tributary of the Illinois River, the Illinois River is listed on 1998 Oklahoma's 303d list due to nutrients levels.

The receiving stream, Osage Creek was intentionally not listed on the ADEQ 303 (d) list. Since Arkansas does not have numeric criteria for Phosphorus, and a previous intensive two year scientific study conducted by ADEQ (ADEQ publication WQ97-03-1) showed that all designated uses and applicable numeric criteria were being met, as well as compliance with Arkansas' narrative nutrient criteria, ADEQ believes there was no basis for listing this stream on the impaired water body list (303(d) list). However, EPA conducted a review of this and additional information for listing and disagreed with ADEQ's conclusion. As a result EPA added this stream onto the Arkansas 2002 303(d) list.

In accordance with the requirements of 40 CFR Part 122.4(i)(prohibitions on issuance of a discharge permit to a new source/new discharger for a discharge to impaired waters), an evaluation has been made to determine if the discharge will cause or contribute to a violation of water quality standards for those pollutants of concern.

Information and data provided in the application or additional information provided by the applicant indicate that phosphorus, which is a specific pollutant of concern, is expected to be present in the effluent.

The proposed new discharger may discharge Total Phosphorus into the impaired water. Therefore, the proposed permit establishes end-of-pipe (point of discharge) limits. There is no technology-based effluent limit found in 40 CFR § 122.44(a)(1), nor is there an Arkansas water quality numerical standard for Phosphorus in APC&EC Regulation No. 2 or 40 CFR § 122.44(d).). However, on December 18, 2003, ADEQ entered into an agreement with Oklahoma which calls for certain existing dischargers to reduce the concentration of phosphorus in their effluent to 1 ppm, based on a 30-day average. Although not addressed in the Statement of Joint Principles and Actions entered into between Arkansas and Oklahoma concerning excess phosphorus in the Illinois River Basin, the proposed treatment plant has been designed to achieve total phosphorus concentrations of 1 mg/L. This is consistent with limits agreed to for existing large discharger under

that agreement. The proposed permit limit for Total Phosphorus for the Osage Basin Wastewater District is consistent with the effluent limitations included in other major facilities in the Illinois River Basin. TMDL reopener clause will be established in the permit to include more stringent limits, if necessary, based on final loading allocations in the completed and approved TMDL.

ii. **Endangered Species**:

No comments were received from the U.S. Fish and Wildlife Service (USF&WS). Therefore; no permit action is needed.

iii. **Ammonia Calculations**

The effluent limitations for Ammonia Nitrogen are in compliance with the EPA Ammonia Nitrogen toxicity criteria. No further action is necessary.

7. OUTFALL AND TREATMENT PROCESS DESCRIPTION.

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

a. Design Flow: 0.5 MGD

b. Type of treatment: Activated sludge, biological and chemical participation phosphorus removal for target effluent limit of 1 mg/l in NPDES discharge permit, clarification, filtration, UV disinfection, and post-aeration.

c. Discharge Description: treated municipal wastewater

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

8. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

a. **NO INDUSTRIAL USERS**

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

9. SEWAGE SLUDGE PRACTICES.

Sludge will be hauled off site to a landfill as necessary.

10. **PERMIT CONDITIONS.**

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

a. **Final Effluent Limitations**

Outfall 001- treated sanitary wastewater

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

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow (MGD)	N/A	Report	Report	Five/week	Instantaneous
Carbonaceous Biochemical Oxygen Demand (CBOD5)	41.7	10	15	Two/month	Grab
Total Suspended Solids (TSS)	62.6	15	23	Two/month	Grab
Ammonia Nitrogen (NH3-N)					
(May-Oct)	8.3	2	3	Two/month	Grab
(Nov-Apr)	16.7	4	6	Two/month	Grab
Dissolved Oxygen	N/A	5 (Inst. Min.)		Two/month	Grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
(April-September)	N/A	200	400	Two/month	Grab
(October-March)	N/A	1000	2000	Two/month	Grab
Phosphorus, Total	4.2	1 mg/l	2 mg/l	Two/month	Grab
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	Two/month	Grab

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

b. Upstream Monitoring Station

Upstream Monitoring Station 01A (Latitude: 36 degrees 11' 52" Longitude: 94 degrees 19' 48"

A sampling point will be approximately 400 feet upstream of the discharge location.

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Total Phosphorus	N/A	Report	Report	Once/month	Grab

11. **BASIS FOR PERMIT CONDITIONS**.

The following is an explanation of the derivation of the conditions of the final permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the tentative decisions as required under 40 CFR 124.7 (48 FR 1413, April 1, 1983).

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

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

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

i. **General Comments**

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

PHOSPHORUS

There is no technology-based effluent limit found in 40 CFR § 122.44(a)(1), nor is there an Arkansas water quality numerical standard for Phosphorus in APC&EC Regulation No. 2 or 40 CFR § 122.44(d). Several cities in the Illinois River Basin have voluntarily

agreed to a monthly average effluent limitation of 1 mg/l Total Phosphorus upon the completion of the construction and process changes necessary to achieve this level of nutrient removal. The Osage Basin Wastewater District has voluntarily agreed to design and operate the wastewater treatment plant capable of meeting a monthly average effluent limit of 1 mg/l. Additionally, an average weekly final effluent limitation of 2.0 mg/l has been added to the proposed permit. This limitation is consistent with the effluent limitations included in other NPDES permits and consistent with Section 5.4.2 (page 104) of the "Technical Support Document for Water Quality-based Toxics Control". Upstream (400 ft above the discharge point) monitoring and reporting requirements for total phosphorus have been included in the permit.

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

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

Final effluent limits basis is a MultiSMP Model performed by FTN Associates and approved by the Department. These limitations are included in the updated Arkansas Water Quality Management Plan (WQMP). The calculation of the loadings (lbs per day) uses a design flow of 0.5 MGD and the following equation (See below). Fecal Coliform Bacteria and pH limitations are based on Chapter 5, Sections 2.507 and 2.504 of Regulation No. 2 as amended, respectively.

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

d. **Oklahoma Water Quality Standards Evaluation**

Phosphorus Discussion

Information primarily from Dissolved Oxygen Wasteload Allocation report (FTN 2003):

The new discharge would be from a regional wastewater treatment plant (WWTP) that is being proposed by the Osage Basin Wastewater District (OBWD), which is comprised of two small towns (Tontitown and Highfill). The proposed WWTP would collect wastewater from these towns, all of which are currently on septic systems.

The geology of the Osage Creek watershed is characterized as fractured and dissolved carbonate terrain (karst) that is highly susceptible to groundwater pollution from land application of animal wastes and other waste disposal practices (MacDonald et al 1976). The fracturing and dissolution of the rock create subsurface "conduits" through which surface water and pollutants are transported to groundwater (Ogden 1979; Steele and Adamski 1987). There are many springs in the Osage Creek watershed as shown on the US Geological Survey (USGS) 7.5 minute topographic maps.

Researchers at the University of Arkansas have indicated that septic systems are another potentially significant source of non point pollution in this area (MacDonald et al 1976; Ogden 1979; Steele and Adamski 1987; Smith and Steele 1990; Graening and Brown 2000). This

research has indicated that, in parts of the Illinois River basin, septic systems have caused elevated levels of coliform bacteria and nitrates in groundwater. Elevated concentrations of phosphorus are also expected for the same reasons.

Although not addressed in the Statement of Joint Principles and Actions entered into between Arkansas and Oklahoma concerning excess phosphorus in the Illinois River Basin, the proposed treatment plant has been designed to achieve total phosphorus concentrations of 1 mg/L. This is consistent with limits agreed to for existing large discharger under that agreement. Using an effluent concentration of 1 mg/L and a design flow rate of 0.5 MGD, the total phosphorus load for the proposed OBWD discharge would be 4.2 lbs/day, or 690 kg/yr. This would represent approximately 0.3% of the average load of total phosphorus in the Illinois River near the Arkansas state line during 1997 – 2000 (approximately 227,000 kg/yr; Nelson and Soerens 2001). Similar estimates of total phosphorus loads for the Illinois River basin in Arkansas have been developed by the USGS (2001) and by the NRCS (1988).

A simple mass balance was performed to quantify the expected increase in phosphorus concentrations in Osage Creek downstream of the proposed OBWD discharge (neglecting decreases in phosphorus loading due to septic systems being taken out of service). This mass balance used an effluent flow rate of 0.5 MGD, an effluent concentration of 1 mg/L, an upstream flow rate of 122 cfs, and an upstream concentration of 0.84 mg/L. The upstream flow rate is the long term average flow for Osage Creek near Elm Springs (USGS 2002) and the upstream concentration is an average total phosphorus concentration for Osage Creek near Elm Springs (ADEQ 2002~~b~~). The mass balance (based on conservative mixing) shows that the OBWD discharge would be expected to increase the average concentration of total phosphorus in Osage Creek by approximately 0.001 mg/L, which is not measurable.

Although the proposed OBWD discharge would cause a small increase in the point source Phosphorus load in the Illinois River basin, it should cause a decrease in the non point source Phosphorus load by discontinuing the use of septic systems in several communities. Concentrations of total Phosphorus measured in septic tank effluent have been reported to range from 5 mg/L to 22 mg/L (EPA 2002;Tables 3-18, 3-19, 4-10, and 4-11). In most watersheds, very little of Phosphorus from septic tanks effluent would reach the groundwater or surface water. However, there are two factors that increase the impact of septic systems on groundwater and surface water in the Osage Creek and Illinois River watersheds. First, the geology of these watersheds is characterized as karst (as noted above), and the potential for Phosphorus from septic tanks to impact groundwater and surface water is greatest in karst regions (EPA 2002). Second, soils have only a finite capacity to retain Phosphorus (EPA 2002), and soils in the Illinois River basin have received large amounts of animal waste for many years (NRCS 1988). As noted above, research in the Osage Creek and Illinois River watersheds has suggested that septic systems may be having a significant impact on the quality of groundwater and surface water. Switching from the use of septic systems (discharging at 5 to 22 mg/L) to the proposed OBWD WWTP (discharging at approximately 1 mg/L)-should greatly reduce the amount of total Phosphorus entering the environment. Assuming that the volume of wastewater is not affected by switching from septic systems to the WWTP (and that the sludge from the WWTP is disposed of such that it does not contribute Phosphorus loading to the watershed), the reduction in Phosphorus loading to the environment can be estimated by multiplying the design flow

(0.5 MGD) by the difference in Phosphorus concentrations between septic system effluent and the WWTP effluent. If the Phosphorus concentration of septic system effluent is assumed to be 13 mg/L (middle of range between 5 and 22 mg/L) and the WWTP concentration is 1 mg/L, then the reduction in Phosphorus loading would be about 50 lbs/day. This is 12 times the load that would be added to Osage Creek from the WWTP. Although Osage Creek would not experience this entire 50 lbs/day reduction in Phosphorus loading, it is expected that discontinuing the use of septic systems in these communities would cause some reduction in nonpoint source Phosphorus loading to Osage Creek over time. Specific estimates of the septic system phosphorus loading that actually reaches Osage Creek are provided below.

Because the proposed OBWD discharge would represent only a small percentage of the Phosphorus load for the Illinois River basin in Arkansas and it should cause reductions in nonpoint source Phosphorus loadings, the proposed discharge is unlikely to cause violations of either Arkansas' narrative nutrient standard or Oklahoma's numeric Phosphorus standard.

Information from Septic Tank Survey report (ESI 2004):

In January and February 2004, the Town of Highfill performed a study to assess the wastewater disposal systems in the Town. The study was performed by Bailey Environmental Services, Inc. of Springdale, Arkansas. The study identified 171 residences in the Town with individual sewage disposal systems. Only 18 of the 171 systems were permitted by the Arkansas Department of Health. The study revealed that 74 (43%) of the systems had some type of problem including surfacing sewage, sewage backup, and surface discharge of "gray water". A copy of the report on the wastewater disposal for the Town of Highfill prepared by Bailey Environmental Services, Inc. is contained in the Appendix of the septic tank survey report.

The Town of Tontitown recently conducted a survey to identify the existing wastewater disposal systems in the Town. The survey found a total of 557 septic tank systems, 406 residential and 151 commercial. Of the 557 systems, 193 (35%) are permitted by the Arkansas Department of Health. The Washington County Health Department was contacted concerning information on malfunctioning septic systems in the Town. Apparently, their record system does not allow them to produce a list of complaints or investigations for a specific geographical location in the county. However, they did report that they had their share of malfunctioning septic systems in Tontitown, many of them with the systems serving the large commercial establishments. A copy of the letter from the Washington County Public Health Center concerning malfunctioning septic systems is contained in the Appendix of the septic tank survey report.

Requirement not to cause or contribute to violation of water quality standards:

According to 40 CFR 122.4(i), no permit may be issued "to a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards." As noted in Section 6.a.i. of the Statement of Basis, Osage Creek is listed on Arkansas 2002, 303d list. Therefore, the calculations below are presented to indicate that the proposed OBWD discharge will not cause or contribute to any violations of water quality standards. These calculations demonstrate that the reduction in phosphorus loading due to

discontinuing the use of septic systems will be larger than the phosphorus loading that the OBWD WWTP will discharge into Osage Creek.

Load of total phosphorus entering Osage Creek from OBWD proposed discharge:

Monthly average permit limit for total phosphorus = 1 mg/L

Assumed volume of wastewater = 100 gallons per person per day

Population to be served by the OBWD facility (ESI 2004):

Tontitown:	942 (current)	3,500 (future)
Highfill:	379 (current)	1,500 (future)
Total:	1,321 (current)	5,000 (future; design condition for Phase I)

Load of total phosphorus from OBWD discharge into Osage Creek:

Load based on current population = 1,321 persons × 100 gallons/person/day × 1 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg = 1.1 lbs/day

Load based on future population = 5,000 persons × 100 gallons/person/day × 1 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg = 4.2 lbs/day

Load of total phosphorus entering Osage Creek from septic systems:

Estimated concentration of total phosphorus from septic systems = 13 mg/L (FTN 2003)

Percentage of septic systems NOT permitted by Arkansas Dept. of Health (ESI 2004):
Highfill = (171 – 18) ÷ 171 = 89%
Tontitown = (557 – 193) ÷ 557 = 65%

Percentage of septic systems WITH surface discharge or similar problem:
Highfill = 43% (ESI 2004)
Tontitown = 43% × (65% ÷ 89%) = 31%
(assume that percent of systems with surface discharge or similar problem is proportional to percent of systems not permitted by Arkansas Dept. of Health)

Weighted average percentage of septic systems WITH surface discharge or similar problem = (43% × 171 + 31% × 557) ÷ (171 + 557) = 34%

This assumes all malfunctioning systems results in surfacing sewage. This is similar to approaches used in TMDL development.

Weighted average percentage of septic systems WITHOUT surface discharge or similar problem = 100% – 34% = 66%

Assumed percent of total phosphorus that reaches Osage Creek from septic systems WITH surface discharge or similar problem = 100%

Assumed percent of total phosphorus that reaches Osage Creek from septic systems WITHOUT surface discharge or similar problem = 10%

Assumed volume of wastewater = 100 gallons per person per day

Population on septic systems (ESI 2004):

Tontitown:	942 (current)	3,500 (future)
Highfill:	379 (current)	1,500 (future)
Total:	1,321 (current)	5,000 (future; design condition for Phase I)

Load of total phosphorus from septic systems into Osage Creek:

Load based on current population = 1,321 persons × 100 gallons/person/day × 13 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg × (34% × 100% + 66% × 10%) = **5.8 lbs/day**

Load based on future population = 5,000 persons × 100 gallons/person/day × 13 mg/L × 3.785 L/gal × 1.0E-6 kg/mg × 2.205 lb/kg × (34% × 100% + 66% × 10%) = **22.0 lbs/day**

In summary, the current septic system load is 5.8 lbs/day and the proposed plant will produce 4.2 lbs/day. Consequently, the OBWD WWTP will offset the phosphorus load by approximately 28%. The loading of total phosphorus to Osage Creek. Therefore switching from septic systems to the proposed OBWD WWTP should reduce the loading of total phosphorus to Osage creek. Additional benefits may be derived from OSBWD WWTP because it will allow for increased control over the ultimate disposal of sludge.

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USGS. 2002. Water Resources Data, Arkansas, Water Year 2001. Water-Data Report AR-01-1. Prepared by J.E. Porter, D.A. Evans, and L.M. Remsing, US Geological Survey, Little Rock, Arkansas.

Calculation of the Total Phosphorus Load at the Arkansas-Oklahoma border:

The effluent from this facility discharges into Osage Creek. Osage Creek flows approximately 6 miles to its confluence with the Illinois River. The Illinois River flows approximately additional 14.7 miles before entering the State of Oklahoma. The following equation is used to estimate total load at the State Line:

$L_s = L_o \text{ X } e^{K \text{ x } S}$, where:

L_o = initial load, in lbs/day
L_s = load at distance S, in lbs/day
K = decay coefficient
S = distance, in miles

Assume:

L_o = 4.17 lbs/day (at a design flow of 0.5 MGD and 1 mg/l concentration)
$K_{\text{Osage Creek}}$ = - 0.036/mile
$K_{\text{Illinois River}}$ = - 0.017/mile

The Total Phosphorus Load at the confluence with the Illinois River:

$L_s = 4.17$ lbs/day X $e^{-0.036 \text{ X } 7} = 3.24$ lbs/day

Total Phosphorus Load at the state line:

$L_s = 3.24$ lbs/day X $e^{-0.017 \text{ X } 14.7} = 2.52$ lbs/day

This load is considered negligible compared to the total load.

e. **Final Limitations**

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

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous NPDES Permit		Final Permit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
CBOD5	10	15	25	40	N/A	N/A	10	15
TSS	15	23	30	45	N/A	N/A	15	23
NH3-N								
(May-Oct)	2	3	N/A	N/A	N/A	N/A	2	3
(Nov-Apr)	4	6	N/A	N/A	N/A	N/A	4	6
DO (Inst. Min)	5		N/A		N/A		5	
Phosphorus, Total	N/A	N/A	1	2	N/A	N/A	1	2
FCB (col/100ml)								
(April-Sept)	200	400	N/A	N/A	N/A	N/A	200	400
(October-March)	1000	2000	N/A	N/A	N/A	N/A	1000	2000
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		N/A		6.0-9.0 s.u.	

Upstream Monitoring Station-01A

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous NPDES Permit		Final Permit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
Phosphorus, Total	N/A	N/A	Report	Report	N/A	N/A	Report	Report

f. **Sample Type and Sampling Frequency**

Regulations promulgated at 40 CFR 122.44(i)(l) require permit to establish monitoring requirements which assure compliance with permit limitations. Requirements for sample type and sampling frequency were based on recommended frequencies for self-monitoring of discharges within the flow of 0.1 to 0.5 MGD

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

This is a new permit.

12. **SCHEDULE OF COMPLIANCE.**

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

Compliance is required on the effective date of the permit.

13. **OPERATION AND MONITORING.**

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

14. **SOURCES.**

The following sources were used to finalize the permit:

a. NPDES application No. AR0050024 received 04/25/2003.
b. Arkansas Water Quality Management Plan(WQMP).
c. Regulation No. 2.
d. Regulation No. 6.
e. 40 CFR 122, 125, 133.

f. Letter dated November 3, 2003 from Dan Watson, Chairman to Marysia Jastrzebski.
g. EPA Letter from Hosch, EPA Region 6 to Morteza Shafii, ADEQ.
h. FTN Associates Ltd "*Dissolved Oxygen Wasteload Allocation For Lower Osage Creek, Arkansas(Reach 11110103-030)*", September 5, 2003.
i. EPA's "*Technical Support Document for Water Quality-based Toxics Control*".
j. EPA letter dated December 22, 2004.

16. **NPDES POINT OF CONTACT.**

For additional information, contact:

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